GAME MANAGEMENT UNITS 25A, 25B, 25D, 26B and 26C

NORTHEAST ALASKA AREA OFFICE

Area Biologist: Beth Lenart, Fairbanks
Assistant Area Biologist: Jason Caikoski, Fairbanks

DESCRIPTION

The Northeast Alaska area includes the drainages of the Upper Yukon basin in Game Management Units 25A, 25B, and 25D upstream from Fort Hamlin (upstream from the Dalton Highway Bridge on the Yukon River) and the eastern North Slope (Units 26B and 26C) from the Itkillik River drainage to the Canadian Border. The area encompasses 73,800 mi^2, including more than 26,000 mi^2 of arctic, alpine and subalpine tundra in the eastern Brooks Range and on the north slope, and over 40,000 mi^2 of boreal forest in Game Management Unit 25. The Upper Yukon basin is subject to frequent lightning-caused fires. Abundant successional and riparian shrub habitat and low snowfall provide excellent habitat for moose. The Yukon Flats includes numerous lakes and meadows and is a major waterfowl nesting area. Road access is limited to the Dalton and Steese Highways. The area includes the Arctic and Yukon Flats National Wildlife Refuges, small portions of the Gates of the Arctic and Yukon–Charley National Preserves, as well as large areas managed by the Bureau of Land Management, the State, and additional areas owned by Native corporations.

Game Management Units and areas are:

25A	—	21,300 mi^2
25B	—	9,100 mi^2
25D	—	17,600 mi^2
26B	—	15,500 mi^2
26C	—	10,300 mi^2
Total Area		73,800 mi^2

There are 9 communities (Arctic Village, Beaver, Birch Creek, Chalkyitsik, Circle, Fort Yukon, Kaktovik, Stevens Village, and Venetie) with a total population of about 1,700. In addition, the Prudhoe Bay complex is located in northern Unit 26B.

Advisory committees in the area include:

- Yukon Flats Fish and Game Advisory Committee
- North Slope Fish and Game Advisory Committee
- Eastern Interior Alaska Subsistence Regional Advisory Council

Conservation system units are:

- Yukon Flats National Wildlife Refuge, U.S. Fish and Wildlife Service (USFWS)
- Arctic National Wildlife Refuge, National Park Service (NPS)
- Yukon–Charlie Rivers National Preserve, NPS
- Gates of the Arctic National Preserve, NPS

Controlled use/management areas include:

- Dalton Highway Corridor Management Area

  The Dalton Highway Corridor Management Area (DHCMA) includes land 5 miles east and west of the Dalton Highway from the Yukon River north to the Arctic Ocean, with a total area of about 3,600 mi^2. The DHCMA was established in 1980 and some amendments were made in 1985 and 2002. The area was established based on a perceived need, primarily on the part of communities in Unit 26, to limit access by hunters. Alaska Statute 16.05.789 prohibits hunting with firearms within the corridor; however, regulation allows big game, small game, and fur animals to be hunted in the area by bow and arrow only. No motorized vehicle, except aircraft, boats, and licensed highway vehicles on publicly maintained roads, may be used to transport game or hunters within the DHCMA. Alaska Statute 19.40.210 prohibits the use of off-road vehicles within 5 miles of the highway right-of-way in this area. The DHCMA is achieving its original purpose.

- Prudhoe Bay Closed Area

  The Prudhoe Bay Closed Area encompasses the Prudhoe Bay industrial complex, and extends west to include the Kuparuk River area, with a total area of 432 mi^2. It was established prior to the DHCMA and was based on public safety and security issues associated with the extensive oil field facilities in the area. The area is closed to the taking of big game. In 2002 the Board of Game extended the restrictions on the use of motorized vehicles for hunting in the DHCMA to apply to the Prudhoe Bay Closed Area. This is consistent with statutory intent, and closed a loophole in the regulation. The public generally accepts the restrictions, although difficulty in locating the southern boundary has caused some confusion. The closed area appears to have achieved its purpose.

BLACK BEAR

STATUS: Black bears are common in Units 25D, 25B, and the southern portion of Unit 25A. Black bears are rare in the northern portion of Unit 25A and do not inhabit Units 26B and 26C. Population estimates are largely unknown except for an abundance survey the Department conducted in 2010 in a 530 mi^2 area in Unit 25D. We estimated 225 independent black bears in the study area. The relative precision at the 95% confidence level was 21.4%, resulting in a confidence interval of 186–283 independent black bears. This abundance estimate converts to a density estimate of 425 black bears per 1000 mi^2, which documents the highest known density of black bears in Interior Alaska.

MANAGEMENT ACTIVITIES: Sealing of black bears is not required in these units. However, local harvest was estimated from subsistence household surveys in 2008 and 2009. In 2009, CATG estimated 48 black bears were harvested. Additional harvest by non-local residents and non-residents is estimated at 20-40 black bears annually. Current harvest rates are low and well below sustained yield.

ISSUES: Predation by black bears on moose calves has been a long term concern by local residents of Unit 25D. Liberalization of seasons, bag limits, and method of take has occurred within the Unit to provide additional opportunity to harvest black bears. Current season and bag limits for black bears in Unit 25D are more liberal than most interior Units. In addition to a no closed season and a 3 bear annual bag limit, any bear may be harvested including cubs or sows accompanied by cubs. Both a spring and fall baiting season occurs and the use of artificial light associated with customary and traditional activities at den sites is allowed.

GRIZZLY BEAR

STATUS: An estimated 1,430–2,070 grizzly bears occur in the area, with populations north and south of the Brooks Range estimated at 460–710 and 870–1,360 bears, respectively. In most years, the harvest of bears is below current estimates of sustainable yield. Since the mid 1990s, bear populations probably have remained stable because habitat has changed little and harvest was conservative. Grizzly bears are considered to be at low to moderate density on the North Slope and moderate density south of the Brooks Range.

MANAGEMENT ACTIVITIES: Sealing, tooth aging, and compiling and analyzing harvest data are the primary management activities in all units. In Unit 25D, an objective to temporarily reduce the number bears was established with the implementation of the Yukon Flats Moose Management Plan in 2002. This resulted in liberalizing grizzly bear seasons and eliminating the grizzly tag fee requirement.

During the January 2012 statewide BOG meeting, the board authorized a Muskox Recovery program in Unit 26B that authorizes Department personnel to lethally remove up to 20 brown bears annually that are threatening or killing muskoxen. In 2012 and 2013, the department lethally removed 3 adult male brown bears each year.

ISSUES: Typically, management issues relate to season length and bag limits in Units 26B, 26C, and 25A and determining a sustainable harvest rate for each area.

In 2008, the Board liberalized seasons in Unit 26B to provide additional hunting opportunity because harvest rates had been low for the previous 5 years. In 2010, seasons were liberalized further to reduce brown bear predation on muskoxen. Because a predator control program was authorized by the Board during the January 2012 meeting, the 2010 liberalized seasons were no longer necessary. At the March 2012 meeting, the board

returned to the 2008 season in order to remain within sustained yield for bears in Unit 26B.

Beginning RY12, harvest objectives were changed in subunits 25A, 25B, 26B and 26C to manage for a 3-year mean annual human-caused brown bear mortality of ≤8% of the bears ≥2 years old of which no more than 40% in each subunit can be females. In Unit 26B, the bears lethally removed by the department are included in this mortality estimate. Prior to RY12, we managed for a 3-year mean annual human-caused brown bear mortality of ≤5% of the current estimated brown bear population in each subunit with at least 60% males. In Unit 25D, the objective has remained the same to manage for a temporary reduction in brown bear numbers and predation on moose.

Current issues involve reducing brown bear predation on muskoxen in Unit 26B and moose in Unit 25D. Regulations have been liberalized in both units in an attempt to achieve these objectives. In Unit 26B, liberalized seasons resulted in a higher harvest; however, data are inconclusive whether this was effective in reducing bear predation on muskoxen. Liberalized seasons in Unit 25D have had little effect on bear harvest levels.

Brown bears in Unit 26B are important to both the hunting and viewing public. Most of the brown bears harvested in Unit 26B are taken while hunting caribou during the fall season. Brown bears along the Dalton Highway provide viewing opportunities, particularly in June during mating season.

CARIBOU

CENTRAL ARCTIC HERD (CAH)

STATUS: The Central Arctic Caribou herd has grown substantially from 32,000 caribou in 2002 to 70,000 caribou in 2010. The CAH traditionally calved near the coast between the Colville and Kuparuk Rivers on the west side of the Sagavanirktok River and between the Sagavanirktok and the Canning Rivers on the east side. During the early 1990s, the greatest concentration of caribou calving in western Unit 26B shifted southwest as development of infrastructure related to oil production occurred in what was originally a major calving area. No directional shift in distribution of caribou calving east of the Sagavanirktok River was noted. During the 2000s, distribution of calving and postcalving caribou was similar among years. The CAH summer range extends from just west of the Colville River, eastward along the coast (and inland approximately 30 miles) to the Katakturuk River. The CAH winters in the northern and southern foothills and mountains of the Brooks Range. The herd's range often overlaps with the Porcupine caribou herd (PCH) on summer and winter range on the east side and the Teshekpuk (TCH) herd on summer and winter range on the west side and occasionally with the Western Arctic (WAH) in fall and winter to the west.

As the herd grew, large scale movements were documented with caribou moving eastward along the coast to the Canadian border and returning within a few weeks. In addition, during the past few winters, the CAH appears to have expanded its winter range

farther south on the south side of the Brooks Range, into more timbered areas, and east toward Arctic Village, frequently overlapping with the PCH.

The CAH population trend is probably stable. The department completed a photocensus in 2013, but there was substantial mixing with the PCH. We have not yet determined if this photocensus is useable. During regulatory year 2012-2013, the CAH experienced a high mortality rate, similar to other big game populations in the Interior, likely at least partially related to the late spring in 2013. Cold and snowy weather persisted on the North Slope for at least an additional month compared to most years.

Harvest pressure is low, with a harvest rate less of than 3% annually, consisting mostly of bulls (>90%). Currently, we estimate approximately 1,400 hunters harvest 1,000 caribou annually from an allowable harvest of 3,000 caribou.

MANAGEMENT ACTIVITIES: Parturition rates and calf:cow ratios are determined in early and late June by monitoring radiocollared cows. A photocensus is attempted every 2–3 years to estimate population size. Fall composition surveys will be conducted annually for the next 2 years and then biennially. Approximately 20–30 new radio collars are deployed annually on female caribou to maintain 60–80 active radio collars to assist in estimating parturition rates, calf:cow ratios, seasonal distribution, and conducting photocensuses and fall composition surveys. In addition, 5–10 radiocollared bulls are maintained to assist in photocensuses and composition surveys.

ISSUES: Current harvest is approximately 1,000 caribou and the intensive management harvest objective is 1,400–1,600 caribou. In 2010, the BOG liberalized the bag limit from 2 to 5 caribou for both resident and nonresident hunters to increase hunting opportunity and harvest. Although the number of caribou hunters increased by approximately 200 hunters in Unit 26B in 2010; the Department believes that most of the increase was due to displaced hunters from the Mulchatna and Fortymile caribou herds.. Some public were concerned that the 5 caribou bag limit in Unit 26B would attract more hunters. However, only 10 hunters harvested 5 caribou in 2010 and 15 hunters harvested 4 caribou. Similarly, in 2011, only 12 hunters harvested 5 caribou and 19 hunters harvested 4 caribou.

Although access is restricted along the Dalton Highway (AS 16.05.789 prohibits hunting with firearms and AS 19.40.210 prohibits off-road vehicle use within 5 miles of the Dalton Highway), a large number of hunters use the highway in August and early September and some controversial issues affecting caribou hunting in Unit 26B have occurred, particularly during the previous 10 years. The increase in the number of archers and other hunters using the Dalton Highway prompted several public proposals in previous years related to hunt quality and other conditions of the hunt. Some of the issues are wanton waste, poor hunter ethics, stalking caribou that are already being hunted, and traffic concerns with commercial industry. There has been disagreement among the hunting public as to reasonable solutions to these issues. These issues are present in any hunt that occurs along a road; although the conflicts with commercial trucking are likely more common along the Dalton Highway because it was not built to accommodate other

kinds of traffic. The Dalton Highway was originally constructed to facilitate building the oil pipeline and accessing the Prudhoe Bay oilfield complex. Commercial truck traffic remains the dominant traffic on this road. In addition to concerns directly along the highway, there has also been an increase in the number of hunters using boats to access areas off the highway, particularly the Ivishak River. Some hunters have expressed frustration related to hunting ethics (e.g. transporters going up and down the river dropping off hunters near other camps), similar to those observed along the highway. Therefore, even though the CAH could sustain a substantial increase in harvest, conflicts among hunters, and between hunters and commercial trucking companies, tour companies, and other users of the Dalton Highway would likely rise as the numbers of hunters increases.

Recognizing that the herd has grown substantially, there still are concerns that as more infrastructure is put in place, the calving grounds will shift to less preferred habitat and possibly affect the population if the herd is nutritionally stressed.

Other issues include increased mixing with the Porcupine and Teshekpuk caribou herds during censuses and fall composition surveys. Herds are identified according to where they calve. Distribution of caribou varies throughout the year and when overlap occurs during these important survey periods, the department is unable to collect the data to determine trends in population size and bull and calf: cow ratios.

PORCUPINE HERD (PCH)

STATUS: The Porcupine caribou herd (PCH) declined from 178,000 caribou in 1989 to 123,000 caribou in 2001. A photocensus was not conducted between 2001 and 2009 due to inadequate caribou aggregations. However, a successful photocensus was conducted in 2010 which resulted in a population estimate of 169,000 caribou. In 2013, a photocensus survey of the PCH was conducted and the results of that survey will be available in March.

The PCH migrates between Alaska and Yukon and Northwest Territories in Canada. In the 1980s and 1990s, most of the PCH calved along the coast in the Arctic National Wildlife Refuge, Alaska, often in the 1002 area. Since 2000, the PCH primarily calved farther east, between the Kongakut River in Alaska to the Babbage River, Yukon, in Ivvavik National Park. Caribou that calve in Canada move into Alaska shortly after calving. Postcalving distribution also changed in recent years in that the herd often does not remain on the coastal plain in large aggregations, but moves south into the mountains in the Brooks Range, including south of the Continental Divide. This distribution has made it extremely difficult to complete photocensuses because caribou are more scattered, in smaller groups, and in steep terrain. Winter distribution varies annually and in some years a portion or most of the PCH winters in Alaska between the Middle Fork Chandalar River and the border, while in other years most of the herd winters in Canada.

The PCH is lightly hunted in Alaska and harvest in Alaska is of minimal management concern. Between 50 and 125 caribou are reported harvested annually by nonlocal

residents of Alaska and nonresidents. We estimate that 400–700 caribou are harvested annually by Arctic Village and other Yukon Flats residents during years that a large proportion of the herd winters in Alaska. Historical harvest levels in Canada are largely unknown. However, harvest surveys conducted in 2010 and 2011 resulted in harvest estimates that ranged from 1,750–1,850 caribou, consisting mostly of bulls.

The PCH is internationally co-managed through an agreement with the U.S. and Canada and the establishment of the International Porcupine Caribou Board. The purpose of the agreement and role of the board is to promote international coordination and co-management of the PCH and its range. However, regulatory jurisdiction is segregated between countries.

MANAGEMENT ACTIVITIES: Parturition rates and calf:cow ratios are estimated in early and late June by monitoring radiocollared cows. A photocensus is attempted every 2–3 years to estimate population size. Fall composition surveys are conducted occasionally when funding is available. Approximately 20–30 new radio collars are deployed annually on female caribou to maintain 100–110 active radio collars to assist in estimating parturition rates, calf:cow ratios, seasonal distribution, and conducting photocensuses. In addition, 10–20 radiocollared bulls are maintained to assist in photocensuses and composition surveys.

ISSUES: Obtaining frequent photocensuses of the herd has been the primary management concern in Alaska. Poor herd aggregations resulted in nearly a decade long period (2001–2009) when the size of the herd was unknown. Although a photocensus was completed in 2010, obtaining reliable photocensuses of the herd on intervals of 2–3 years may continue to be challenging. Immediate concerns associated by a lack of a population estimate have been recently alleviated due to the successful photocensus surveys that occurred in 2010 and 2013. Other issues not related to poor aggregation or weather include increased mixing with the Central Arctic caribou herd during censuses and with the Central Arctic and Fortymile caribou herds during fall composition surveys. This mixing makes it challenging to obtain adequate data to determine trends in population size and bull and calf: cow ratios.

Regulating harvest and obtaining accurate harvest rates in Canada has been the primary management concern for wildlife management agencies in Canada. A decline in herd size during 1989–2001, followed by an absence of a population estimate derived from photocensuses during 2002–2009, prompted the development and implementation of a Harvest Management Plan (HMP) by the Porcupine Caribou Management Board (of Canada). The plan allows for unrestricted harvest when the PCH is $\geq$115,000, institutes a voluntary bull-only harvest if herd size is 80,000–115,000, institutes a mandatory bull only harvest with annual limits if herd size is 45,000–80,000, and prohibits harvest (except for ceremonial purposes) if herd size is $\leq$45,000. The plan also requires harvest reporting, regardless of herd size or harvest regime. The HMP was implemented for the 2010–2011 hunting season.

FURBEARERS

STATUS: Furbearers are common and distributed throughout Units 25A, 25B, and 25D. Furbearers are most abundant in the Yukon Flats in Unit 25D especially when lynx are at the apex of their population cycle. Currently, lynx are near the low of their population cycle. Species of most importance for local trappers include lynx, marten, fox and beaver. Observations by trappers, pilots, and Department staff indicate that the muskrat population in Unit 25D is increasing. Populations were low during the previous 10 to 15 years.

In Units 26B and 26C, arctic fox, red fox, wolf and wolverine are the most common furbearers. Fox and wolf populations fluctuate to a great extent, often as a result of rabies outbreaks.

MANAGEMENT ACTIVITIES: Sealing records, fur export reports, direct communication with trappers, and the results of a trapper questionnaire are used to monitor population and harvest levels of furbearers.

ISSUES: Trapping has been historically important in the culture and to the economy of the Yukon Flats, but trapping activity is presently low due to declining fur prices (except for marten) and other social and economic changes.

MOOSE

UNITS 25A, 25B, AND 25D

STATUS: Moose in Unit 25A are at a low density (~0.20 moose/mi^2) because much of Unit 25A consists of less suitable habitat including mountainous terrain and tundra of the Brooks Range. Most moose in Unit 25A are distributed in the lowlands and riparian habitats of major Brooks Range drainages. Annually, 100–120 hunters harvest 30–50 moose in Unit 25A. The number of hunters and harvest has been stable.

Moose in Units 25B and 25D are distributed throughout the area and are an important resource for local communities. However, population density is low compared to other areas in Interior Alaska, ranging from 0.20 moose/mi^2 to 0.35 moose/mi^2. There is widespread concern about the low density of moose in Units 25B and 25D, which includes substantial areas with excellent moose habitat. Limiting factors include predation by black bears, grizzly bears and wolves, as well as hunting. Predation by black bears and grizzly bears are the major source of calf moose mortality during summer, accounting for over 80% of the calves born during a 2-year study by the USFWS in western Unit 25D.

In Unit 25B, 75–100 hunters reported harvesting 30–40 moose annually. In eastern Unit 25D, 60–100 hunters reported harvesting 15–35 moose annually. In addition, 10–30 moose are reported taken annually in western Unit 25D under Tier II and federal subsistence permits. However, a large proportion of the harvest by local residents is not

reported. A harvest-monitoring project conducted by the Council of Athabascan Tribal Governments (CATG) indicates that local residents harvest 150–200 moose annually in 25D and 25B.

MANAGEMENT ACTIVITIES: Population and composition surveys in Unit 25D are conducted regularly in cooperation with the Council of Athabascan Tribal Governments (CATG) Natural Resources Department and Yukon Flats National Wildlife Refuge. A major management effort took place in 2001 and 2002 in which the Yukon Flats Cooperative Moose Management Plan was developed and implemented. This effort focused on community and agency initiatives that together could maintain or increase moose abundance, especially in key hunting areas near local communities. We continue to work from the 2002 Yukon Flats Cooperative Moose Management Plan.

ISSUES: Chronically low moose numbers in Unit 25D continue to be a major concern. Both local and nonlocal users are concerned about predation by wolves and bears and the illegal harvest of cow moose. Although the number of nonlocal moose hunters in Unit 25D is small (≤30), their presence is sufficient to cause concern among local residents.

Approximately 65% of Unit 25D is on federal land and the remainder is state and private owned lands. Identifying state, federal, and private lands and determining the appropriate regulation is often confusing and difficult for hunters in the field. Staff from ADF&G and Yukon Flats National Wildlife Refuge continue to work with the local advisory committees to align state and federal seasons when feasible.

Issues have arisen from the public regarding increased moose hunting in the Sheenjek and Coleen drainages in Unit 25A, which has resulted in publically authored proposals to the BOG to restrict hunting opportunity in this area. A proposal to close the Sheenjek and Coleen rivers to non-federally qualified users was submitted to the Federal Subsistence Board. Most of the Sheenjek and Coleen Drainages in Unit 25A are on Federally owned land. The available biological and harvest data indicates that harvest has been stable and is likely sustainable.

UNITS 26B AND 26C

STATUS: The moose population in Units 26B and 26C declined dramatically during the early 1990s, probably due to a combination of factors including disease, weather, predation by wolves and grizzly bears, and possibly insect harassment. In Unit 26B, the population gradually increased during the 2000s, and peaked at 550−650 moose during April 2006−2009. Beginning in April 2010, we observed fewer moose and a lower proportion of 11-month-old calves in the population. In April 2013, the population estimate was 400 moose. The proportion of 11-month-old calves during 2009−2013 was 9% compared to the previous 5 years of 15% during 2003–2008 when the population was increasing and peaked. During 1996−2005, moose hunting seasons in Unit 26B were closed. In 2006, harvestable surplus was estimated at 15 bulls in Unit 26B (excluding the Canning River drainage) and a moose season was opened to resident hunters because the population objectives were met. It includes a general season for 1 bull for 14 days during

February 15–April 15 and a limited drawing permit (up to 30 permits) for 1 bull during September 1–14. Since the season was opened in 2006, 3–11 moose were harvested annually under the drawing permit. Only 1 moose was reported harvested under the general season in 2011.

Moose numbers in central Unit 26C remained stable at approximately 50–60 moose during the 2000s. In fall 2011, moose were surveyed in southeastern Unit 26C in the upper Kongakut and Firth–Mancha drainages where 339 moose were observed. Including eastern Unit 26C, the population estimate in all of Unit 26C is over 400 moose, recognizing that the eastern portion has a migratory component to its population. Moose seasons in Unit 26C have been closed since 1996.

MANAGEMENT ACTIVITIES: Spring surveys are conducted annually to estimate population size and percent 11-month-old calves in the Unit 26B population.

ISSUES: The moose season was closed in 1996 in response to the dramatic decline in moose numbers and reopened in Unit 26B in 2006 to residents only. Beginning in 2010, fewer moose were observed in Unit 26B during April surveys compared to 2006 through 2009. There is some concern that the population may be declining again in this unit. ADF&G will continue to monitor the population and adjust the number of drawing permits according to a 3% harvest rate

The state season in Unit 26C remains closed, but a federal season is open and managed by Arctic National Wildlife Refuge using the central Unit 26C moose population for residents of Kaktovik. In the southeastern portion of Unit 26C, the Board of Game created a drawing hunt in the upper Kongakut and Firth/Mancha drainages during the March 2012 Board of Game meeting because the fall 2011 surveys in the area indicated there was harvestable surplus. However, this hunt area lies within the Arctic National Wildlife Refuge and was still closed to non-federally qualified users at that time the board met in 2012. Since then, the department submitted a proposal to the Federal Subsistence Board to remove the closure; but the Federal Subsistence Board did not pass the proposal and the area remains closed to non-federally qualified users.

MUSKOXEN

STATUS: During the mid 1990s, approximately 500–600 muskoxen inhabited northeastern Alaska (eastern Unit 26A, Unit 26B, and Unit 26C). In 1999, muskoxen numbers began to decline in Unit 26C. By 2001, we determined that the overall population size in northeast Alaska declined considerably, but the population dynamics were different in each unit. Abundance of calves, yearlings, and adults declined in Unit 26C beginning in 1999. In eastern Unit 26A and Unit 26B, abundance of calves and yearlings was stable during 1999–2006, but numbers of muskoxen declined during 2003–2006. During a census conducted in 2006, we observed 216 muskoxen in Unit 26B and eastern Unit 26A and 1 muskox in Unit 26C. Numbers remained relatively stable during 2007–2011. Groups of muskoxen migrate back and forth across the border between

Canada and Unit 26C. Therefore, in some years, 30–40 muskoxen may reside in Unit 26C.

Beginning in regulatory year 2006–2007, permits to hunt muskoxen were not issued in eastern Unit 26A and Unit 26B. All hunts remain in regulation and permits include a Tier II hunt in eastern Unit 26A and Unit 26B west of the Dalton Highway, and a Tier I registration and a drawing hunt in Unit 26B east of the Dalton Highway. Hunting in Unit 26C is managed by the Arctic National Wildlife Refuge.

Beginning in spring 2007, we initiated a research project to look at potential causes of muskoxen mortality, including nutrition, disease, predation, and re-distribution. Results indicated that the primary source of mortality on both adults and calves was brown bear predation.

MANAGEMENT ACTIVITIES: ADF&G works cooperatively with the Arctic National Wildlife Refuge to manage muskoxen in northeastern Alaska. In general, ADF&G directly manages the eastern Unit 26A and Unit 26B subpopulation and the Arctic National Wildlife Refuge manages the Unit 26C subpopulation. Activities include conducting annual composition and population estimate surveys in April, censuses every 3–5 years in April, deploying radio collars, radiotracking, and administering permit hunts when hunts are open. The structure of the permit hunts was developed in the North Slope Muskox Harvest Plan which was approved by the Board of Game in 1999.

During the January 2012 statewide Board of Game meeting, the board adopted a Muskox Recovery program in Unit 26B that authorizes Department personnel to annually remove up to 20 brown bears that are threatening or killing muskoxen in Unit 26B. The Department is authorized to use lethal means and the program began in April 2012.

ISSUES: Current issues involve reducing brown bear predation on muskoxen.

SHEEP

STATUS: Population size for the eastern Brooks Range is unknown, but sheep are distributed throughout the mountains. In the mid 1990s, sheep populations in Interior and northern Alaska declined substantially and these declines appeared to be correlated with deep snowfall during winters between 1988 and 1993. In general, sheep were far less abundant in the mid 1990s compared with the 1980s. Since the mid 1990s, survey data from a portion of eastern Unit 24A and western Unit 25A indicate that the population has been relatively stable.

Sheep hunting in the eastern Brooks Range continues to be desirable by consumptive users and the number of hunters and harvest has been increasing over the past decade. Current harvest ranges 220–230 rams taken by 460–525 hunters, annually, during the general season hunt in Units 25A, 26B, 26C, and eastern 24A. A small number of sheep are also taken in a winter registration hunt in Units 25A and 26C. Current sheep harvest in the eastern Brooks Range accounts for about 25% of the total statewide harvest.

MANAGEMENT ACTIVITIES: Beginning in 2002, population surveys were completed in most years in the upper Chandalar drainage in an area that has become popular for resident sheep hunters and guided nonresidents hunters. Survey results suggest that the sheep population and the proportion of legal rams have been stable in recent years. Sheep harvest and hunter effort are monitored based on harvest ticket reports.

ISSUES: The Federal Subsistence Board established the Arctic Village Sheep Management Area in Unit 25A in 1991, and its northern boundary was expanded in 1995. This area was closed to sheep hunting by non-federally qualified hunters and has been the subject of debate in connection with dual management. A portion of this area was re-opened in May 2007 to a full-curl general season hunt to comply with ANILCA. However, this area was again closed by the Federal Subsistence Board in 2012.

The number of hunters and guides in western Unit 25A and eastern Unit 24 has increased in recent years. Some guides and hunters have expressed concerns that the area is overcrowded and would like to see exclusive guide areas re-established. We have expanded population monitoring efforts in this area. Limited survey data suggests that current harvest levels are sustainable.

SMALL GAME

STATUS: The overall status of small game populations in the area are largely unknown. Anecdotal information suggests hare numbers were near their peak in 2008 and 2009 and are currently near the low of the 10-year population size cycle. Spruce and ruffed grouse are widespread south of the Brooks Range but relative abundance is unknown. Observations by Department staff indicate that ptarmigan are abundant in the Brooks Range.

MANAGEMENT/RESEARCH ACTIVITIES: None

ISSUES: None

WOLVES

STATUS: Wolves are widely distributed throughout Units 25A, 25B, and 25D and harvests are low relative to the total population (~4.4–5.3 wolves/1000 km^2). Annual harvest, primarily by trappers, has been relatively stable over the past 15 years and averages 50 wolves.

Wolves are present on the North Slope in Units 26B and 26C in low numbers (2.2–3.2 wolves/1000 km^2). Approximately 5–35 wolves are harvested annually, primarily by trappers, and likely have little effect on the population.

MANAGEMENT ACTIVITIES: Major activities include monitoring harvests, conducting periodic wolf population surveys, and communicating with residents and pilots to obtain anecdotal information on wolf numbers. Wolf surveys in portions of Units 25B and 25D were conducted in spring 2000, 2001, 2006 and 2009.

ISSUES: Wolf predation on moose is a concern, particularly in Units 25B and 25D. Local residents are currently exploring methods to increase wolf harvest and reduce moose predation by wolves.