

# GAME MANAGEMENT UNITS 19, 21A AND 21E

## McGRATH AREA OFFICE

**Area Biologist: Roger Seavoy**  
**Assistant Area Biologist: Joshua Peirce**  
**Seasonal Wildlife Technician: Louise Standish**

### *DESCRIPTION*

The McGrath area encompasses over 55,000 mi<sup>2</sup> of diverse habitats in western Interior Alaska, ranging from mountainous alpine to black spruce taiga and open tundra. All drainages of the Kuskokwim River upstream of the village of Lower Kalskag are included, as well as a portion of the middle Yukon drainage (including the Innoko, Iditarod, and Anvik Rivers). Land status is diverse; parts of two National Parks administered by the National Park Service, two National Wildlife Refuges administered by the U.S. Fish and Wildlife Service, Bureau of Land Management (BLM) tracts, State lands, and Native Corporation lands are scattered throughout the area.

The McGrath area office is responsible for managing a wide variety of wildlife species, primarily big game and furbearers. Moose, caribou, grizzly bear, black bear, Dall sheep, and bison are present, and muskoxen are occasionally reported. Furbearers, particularly marten, are important for a variety of uses. Lowland areas (Units 19A, 19D, and 21E) are used largely by local, boat-borne hunters who generally reside within Units 18, 19A, 19D, or 21E. The upland units (19B, 19C, and 21A) are accessible largely by aircraft, and hunters using these upland units are generally from outside the area.

Seventeen villages in the area are represented with advisory committee seats and several village sites not represented remain important to area residents. There are four Fish and Game Advisory Committees, including the McGrath AC, the GASH AC representing the villages of Grayling, Anvik, Shageluk, and Holy Cross; the Central Kuskokwim AC representing the villages of Lower Kalskag, Kalskag, Aniak, Chuathbaluk, and Crooked Creek; and the Stony–Holitna AC or SHAC, representing the villages of Red Devil, Sleetmute, Stony River, and Lime Village.

### *MANAGEMENT AREAS*

**THE LIME VILLAGE MANAGEMENT AREA:** The Lime Village Management Area in Unit 19A was established in 1985 and includes an 830 mi<sup>2</sup> area around Lime Village where moose hunting is by Tier II permit only. This area continues to delineate this Tier II hunt.

**THE UPPER HOLITNA–HOHOLITNA MANAGEMENT AREA:** The Upper Holitna–Hoholitna Management Area was established in 1997 and includes all of Unit 19B within the Aniak, Kipchuk, Salmon, Holitna, and Hoholitna river drainages. In this area, all hunters are required to stop at department check stations, and moose and caribou taken by hunters using

aircraft must be transported out of the area by aircraft. This area was established to address a complaint that meat was not being completely salvaged and the requirement that hunters who fly into the management area must fly out of the area continues to address this salvage issue.

### ***CONTROLLED USE AREAS***

**UPPER KUSKOKWIM CONTROLLED USE AREA:** The Upper Kuskokwim Controlled Use Area (CUA) was originally established in 1981 across a broad area in central Unit 19D. Its purpose was to prevent the use of aircraft for moose hunting in order to reduce competition for moose by hunters using aircraft. In 2001, the CUA was enlarged as a temporary measure to restrict aircraft as predation control measures were contemplated. During March 2008, the board approved a proposal to change this CUA to a corridor near the portions of the rivers in proximity to the Upper Kuskokwim villages. Currently, this CUA includes that portion of Unit 19D extending 2 miles on either side of and including the Kuskokwim River upstream from the mouth of the Black River to the mouth of the Swift Fork, extending 2 miles on either side of and including the Takotna River, upstream of the mouth of the Takotna River to Takotna, and extending 2 miles on either side of, and including the South Fork River upstream from the mouth of the South Fork to Nikolai. Within this smaller 739 mi<sup>2</sup> area, moose hunting using aircraft for access is prohibited. This CUA continues to reduce competition for moose.

**HOLITNA–HOHOLITNA CONTROLLED USE AREA:** The Holitna–Hoholitna CUA was first implemented for the fall 1992 hunting season in Units 19A and 19B and reviewed again in 2008. It consists of the Holitna River downstream of Kasheglok, the Titnuk River downstream of Fuller Mountain, and the Hoholitna River downstream from the confluence of the South Fork of the Hoholitna River.

The Holitna–Hoholitna CUA was established to limit the number of hunters on those rivers by limiting the horsepower of their outboard motors to an aggregate of 40 hp. Prior to a 2006 moose hunting closure, the Holitna–Hoholitna CUA had accomplished its intended purpose of reducing hunting pressure. Once moose hunting reopens, this CUA is expected to continue to accomplish this purpose.

**PARADISE CONTROLLED USE AREA:** The Paradise CUA in Unit 21E consists of the area from the west bank of the Yukon River upstream from Paimiut to Eagle Island (45 miles upstream of Grayling) and from the mouth of the Iditarod River downstream along the east side of the Innoko River to Paimiut. It includes 1,954 mi<sup>2</sup> and was established in 1977 to reduce the competition for moose between hunters using boats and hunters using aircraft, who at the time, harvested more moose than local boat-borne hunters. Hunting now is largely by Yukon village residents who use boats. Two nonresident drawing permit hunts in Unit 21E were established beginning in fall 2006 to limit nonresident participation. This CUA has, and continues to, accomplish its intended purpose.

### ***SPECIAL HUNT AREAS:***

**NONRESIDENT CLOSED AREA IN UNITS 19A AND 19B:** The Unit 19A and 19B nonresident closed area includes a 4-mile wide corridor along portions of the Kuskokwim, Holitna, Titnuk, Hoholitna, and Aniak rivers, Aniak Slough, the Salmon, Kipchuk, Owhat, Kolmakof, Holokuk, Chineekluk, Veahna, Oskawalik rivers, Crooked Creek, George River, and the Buckstock and Doestock rivers. The area was established by an ad hoc group of local hunters and guides at the March 2002 Board of Game meeting to eliminate the conflict and competition between local residents, guided nonresidents and nonresident hunters dropped off by transporters. This area was reviewed by the Board in 2010. If and when nonresident hunting returns, this closed area is expected to accomplish its original purpose.

**THE TM680 MOOSE HUNT AREA:** In Unit 19A, downstream of the George River and Downey Creek drainages, moose hunting is limited through Tier II permits. This was first implemented in 2006.

## ***BISON***

**STATUS:** The Farewell Bison Herd ranges in Unit 19C and eastern Unit 19D. A June 2013 minimum count survey revealed 235 adults, and the herd appears to be increasing.

**MANAGEMENT ACTIVITIES:** We conduct aerial surveys during spring to assess minimum population size, annual calf production, and recruitment. The herd is radiotracked to determine distribution and to assist in population surveys. We deployed additional radio collars in April 2013 to better assess numbers and determine the range of this herd and approximately 30–35 collars remain active. Two drawing permit hunts are available, one in September and one in March. Management reports are completed every 2 years.

**ISSUES:** Bison habitat had aged as the Farewell burn shifted from grasses and sedges toward a more forested habitat. We had plans for controlled burns that were not carried out and encouraged fire management plans that allowed natural wildfires to burn. Natural fires occurred within the bison range during the summers 2009 and 2010. The 2010 fire in particular appears to be regenerating quality bison habitat and the herd appears to be increasing. Our population objective for this herd is 300 bison post-hunt/pre-calving but because the population is lower than 300 the number of drawing permits remains low.

This bison herd is proving important for bison conservation because of its genetic makeup. Nearly all studies of Lower 48 bison reveal incursions of cattle genes in the bison genome. The Farewell herd has not had any contact with cattle or cattle–bison crosses and recent examinations confirm that these are plains bison (without domestic cattle genes) that originated from Montana Bison Range stock. The parent stock in Montana now has cattle genes in the population. Therefore, the importance of maintaining a herd of adequate size to maintain genetic diversity is heightened. Our objective to maintain a herd of 300 bison is close to the number others have suggested is necessary to maintain genetic diversity.

## ***BLACK BEAR***

**STATUS:** Black bear populations vary throughout the management area in relation to habitat

quality. Although harvest reporting is not required in most of the McGrath management area, we believe harvest is light in all units.

**MANAGEMENT ACTIVITIES:** Harvest statistics are assessed for Unit 19D, where harvest tickets and reporting are required and we complete a management report every 3 years. The McGrath office periodically processes black bears taken under defense of life and property provisions throughout the area.

In association with predation control programs, we conducted a black bear population estimate in Unit 19D. This included removal of bears during May 2003 and 2004 when an estimated 96 independent black bears were reduced to 4 bears immediately post treatment by moving them from a 528-mi<sup>2</sup> area surrounding McGrath. By spring 2010, we estimated 123 black bears in that area.

**ISSUES:** Black bears have been identified as a primary source of moose calf mortality near McGrath. The board adopted liberal bear seasons and bag limits. The board also adopted a black and grizzly bear predation control program in a portion of Unit 19D, including public bear snaring by permittees, in an attempt to reduce bear predation on moose. Using black bear hunting and control methods, the public took 11 bears in the summers of 2010 and 21 bears in 2011. However, by 2012, participation waned and only 1 black bear was reported taken.

Within Unit 19A, during spring 2013, the department conducted a lethal bear removal effort in a 524 mi<sup>2</sup> area near Sleetmute and removed 84 black (and 5 grizzly) bears. Meat was salvaged and distributed to Unit 19A villages. This was the first year of a 2-year bear removal effort to improve moose calf survival and duplicate the moose population recovery achieved in McGrath.

## ***GRIZZLY BEAR***

**STATUS:** Grizzly bear populations vary throughout the management area in relation to habitat quality. Harvest is extremely light in the lowland units where bear densities are lower. In the uplands (mainly Units 19B and 19C), harvests are moderate to high.

**MANAGEMENT ACTIVITIES:** Harvest statistics are assessed annually and a management report is completed biennially. Most hunters are required to have their harvested grizzly sealed and resident hunters are no longer required to obtain metal locking tags prior to hunting. However, hunters interested in taking grizzly bears for meat may choose to obtain a registration permit to hunt in the Aniak River drainage in Units 19A and 19B and forgo the sealing requirement. The McGrath office periodically processes bears taken under defense of life and property provisions.

**ISSUES:** Grizzly bears have been identified as a primary source of moose calf mortality near McGrath. The board adopted liberal bear seasons and bag limits in Units 19A and 19D. The board also adopted a grizzly bear predation control program in a portion of Unit 19D, including public bear snaring by permittees, in an attempt to reduce bear predation on moose. No grizzly bear have been taken under bear control regulations in the 19D East bear control area. Five grizzly bears were removed during our bear removal effort in Unit 19A.

## ***CARIBOU***

### **MULCHATNA, RAINY PASS, TONZONA, FAREWELL–BIG RIVER, SUNSHINE MOUNTAIN, AND BEAVER MOUNTAINS.**

**(Several caribou herds are partially or wholly within the McGrath Area.)**

**STATUS:** The Mulchatna Caribou Herd population peaked in 1996 at 200,000 caribou and declined to 30,000–40,000 animals by summer 2008. During the period of rapid growth (early to mid 1990s) the herd greatly expanded its range, including instances when groups of Mulchatna caribou were found throughout most of the McGrath area. Currently, radiocollared Mulchatna herd caribou are regularly found in Unit 19A south of the Kuskokwim, throughout Unit 19B, western Unit 19C, and southern Unit 19D. The Department of Fish and Game office in Dillingham manages the Mulchatna herd.

The Sunshine Mountain, Beaver Mountain, Rainy Pass, Tonzona, and Farewell–Big River herds are small. The June 2012 minimum count surveys of the Beaver and Sunshine herds were conducted with ideal conditions and revealed a total of over 850 caribou and those herds are stable to increasing. Few data are available on the Rainy Pass, Tonzona, and Farewell–Big River caribou herds, but hunter reports, opportunistic sightings, and observations made during surveys for other species suggest that each of these herds number 500–750 animals.

**MANAGEMENT ACTIVITIES:** We periodically conduct minimum population surveys within the range of the Beaver-Sunshine herd in Units 19 and 21. The Dillingham area biologist generally informs us regarding work being done on the Mulchatna Herd. Harvest statistics are assessed annually and a management report is written every 2 years.

**ISSUES:** The Mulchatna herd has declined from its peak and steps are being taken to address that decline. Surveys of the Sunshine and Beaver Mountain herds suggest some growth while the Farewell–Big River, Rainy Pass, and Tonzona herds appear to remain small but stable.

## ***FURBEARERS***

**STATUS:** Overall, furbearer abundance is moderate to high. Marten continue to be the most important furbearer harvested in the area because of its quality, abundance, ease of pelt preparation, and a higher price paid to the trapper compared to other furs.

**MANAGEMENT ACTIVITIES:** We seal lynx, otter, and wolverine pelts when presented to us and we write a management report every 3 years. Annual aerial beaver cache surveys are conducted, we present trapping seminars in area villages, and we obtain trapper reports during fur sealing.

**ISSUES:** Trapping is still an important traditional and economic activity, although not as widespread as in previous years. Pelt prices for marten were high in 2012-13 and may prove sufficient to encourage full participation by trappers with established lines. For other furbearer species, there is an underutilized harvestable surplus.

## **MOOSE**

**STATUS:** The McGrath area has complex habitat and weather patterns and the status of moose populations varies considerably. In western Unit 19A, we estimated moose densities at 0.38 moose/mi<sup>2</sup> in 2006 and at 0.33 observable moose/mi<sup>2</sup> in 2010. Moose densities in eastern Unit 19A were estimated at 0.28 observable moose/mi<sup>2</sup> in 2005, 0.44 observable moose/mi<sup>2</sup> in 2008, and 0.25 observable moose/mi<sup>2</sup> in 2011. A correction for sightability was obtained during the 2011 survey which resulted in an estimate of 0.43 moose/mi<sup>2</sup>. All of these surveys have overlapping confidence intervals and no trend is detectable.

Limited funding preclude moose surveys in Unit 19B but moose populations are thought to be similar to those in portions of Unit 19A. Likewise, no population estimates are conducted in Unit 19C, although we conducted composition and trend surveys in Unit 19C in 2010 that suggest adequate bull:cow ratios.

In Unit 19D, the 2008 moose surveys indicated low to moderate densities (0.5 moose/mi<sup>2</sup>) in most of the area, but surveys of an 1,118 mi<sup>2</sup> area near McGrath show higher densities where predation control has been concentrated (about 1.2 moose/mi<sup>2</sup>). However, these densities are lower than they were in 2009 when moose density peaked at 1.6 moose/mi<sup>2</sup> and may have fallen since then due to deep snow and recovery of black bear numbers. Twinning rates remain above 25% near McGrath and we continue to manage for growth.

In Unit 21A the department assisted the USFWS to conduct a geospatial moose population survey and obtained a preliminary estimate of 0.2 observable moose/mi<sup>2</sup> or 2,442 moose.

The winter moose population in Unit 21E was estimated at 1.1 moose/mi<sup>2</sup> in March 2012. A radiotelemetry project allowed us to estimate sightability during this survey.

**MANAGEMENT ACTIVITIES:** We conduct geospatial moose population estimation surveys in eastern Unit 19A, central Unit 21E, and in Unit 19D near McGrath on a 3-year rotating basis as resources allow. Additionally, researchers have conducted moose surveys in smaller areas near McGrath more frequently since the predation control programs began in 2003. We have also conducted geospatial moose population estimation surveys opportunistically in western Unit 19A and have assisted the Innoko National Wildlife Refuge staff as they conduct moose surveys in Unit 21A.

We conduct annual spring twinning surveys in Units 19A, 19D and 21E. We also conduct fall composition and trend surveys in these areas as well as in portions of Units 19C, and 21A.

In addition to survey data, we use hunter harvest reports to assess seasons, bag limits, and other moose regulations. Two management reports are written every 2 years, one covering Unit 19 and a second covering Units 21A and 21E.

**ISSUES:** There is a great diversity of issues concerning moose in the McGrath area. In general, moose densities were low and remain so, except 19D where a predation control program has

been in place since winter 2003–2004. In areas with Intensive Management Plans, moose populations are either stable (as in Unit 21E where predation control has not been implemented), recovering (as in Unit 19D where wolf and bear predation control has been implemented), or we cannot detect recovery (as in eastern Unit 19A where wolf predation control has been implemented and bear control was recently initiated).

The McGrath area has conducted cooperative planning efforts with representatives of multiple user groups including: 1) the Adaptive Wildlife Management plan which focused on Unit 19D East in the 1990s, 2) the Central Kuskokwim Moose Management Plan (June 2004) covering 19A and 19B, and 3) the Yukon–Innoko Moose Management Plan for Unit 21E and a portion of Unit 21A (December 2006). These plans currently guide our moose management decisions, including guiding decisions made as we transition to operational plans.

## ***SHEEP***

### **ALASKA RANGE WEST (UNITS 9, 16, AND 19)**

**STATUS:** Sheep composition and trend surveys are conducted annually in Unit 19C in June or July, depending on weather. In 2010 we observed 34 lambs:100 ewes and almost 4% of observed sheep were full-curl rams but in 2013 we observed only 19 lambs:100 ewes and about 7% full-curl rams. The lower lamb ratios suggest that the number of 8 year old rams available to hunters will be lower when this cohort is likely to grow into legal size sheep.

**MANAGEMENT ACTIVITIES:** To monitor changes in population trend and sex and age ratios aerial sheep composition and trend surveys are conducted in the Unit 19 portion of the western Alaska Range. Sheep horns are sealed when presented at the McGrath office, but the bulk of the sheep taken in Unit 19C are sealed in the field by Department of Public Safety personnel. Harvest reports are analyzed for changes in harvest characteristics and a management report is completed every 3 years.

**ISSUES:** Resident hunters take fewer sheep than nonresidents and this trend is growing. Guides, transporters, and their clients complain of overcrowding and new guiding regulations are being contemplated. Department of Public Safety personnel suggest that the recently established sealing requirements have improved the quality of sheep taken.

## ***WOLF***

**STATUS:** Wolf populations vary throughout the McGrath management area in response to prey population availability and our management actions.

Wolf predation control programs have been implemented in Unit 19A since 2004 and in Unit 19D East since 2003. Wolf numbers have been reduced by 60%–80% from precontrol levels within the wolf control focus areas in each of these units while maintaining no fewer than 30–36 wolves in Unit 19A and 40 wolves in Unit 19D East.

A partial wolf survey in Unit 21E in March 2009 suggested high wolf densities, consistent with reports from hunters, trappers, and pilots.

In Units 19B, 19C, and 21A, hunters and trappers report high numbers of wolves and during surveys in these areas we see tracks consistent with these observations, but we have not conducted wolf surveys in these units.

**MANAGEMENT ACTIVITIES:** We periodically calculate wolf population estimates for each unit, based on interviews with control permittees, incidental observations, responses to trapper questionnaires, analyses of sealing documents, prey density estimates, habitat, and comparisons with other areas where population estimation surveys have been completed. Reconnaissance-style wolf surveys are occasionally conducted in Units 19A, 19D East, and 21E.

Wolf predation control has been conducted in the Unit 19D East Predation Control Area since winter 2003–2004. Wolf control is continuing in this area and was reauthorized during the March 2009 Board of Game meeting for a 5-year period beginning in RY09. It is due to be reconsidered during the March 2014 meeting.

Wolf predation control was first implemented in Unit 19A during winter 2004–2005. Wolf control is continuing in this area and was reauthorized during a March 2009 Board of Game meeting for a 5-year period beginning in RY09. It is also due to be reconsidered during the March 2014 meeting.

Wolf predation control may be conducted in Unit 21E if moose population estimates fall below a threshold level of 1 moose/mi<sup>2</sup>. This is consistent with the Yukon–Innoko Moose Management Plan which guides us to be proactive to prevent a decline in moose numbers. Current moose numbers are high enough that wolf predation control has not been implemented here.

Harvest statistics are assessed annually and a management report is written every 3 years.

**ISSUES:** The predation control in Units 19A and 19D East has been the dominant issue related to wolf management in the McGrath area. Associated with these are the moose management plans including the Adaptive Wildlife Management Team plan which focused on Unit 19D East in the 1990s, and our other plans including the Yukon–Innoko Moose Management Plan (December 2006) and Central Kuskokwim Moose Management Plan (June 2004) which guide wolf management as well as moose management.