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**CHAPTER 13: CARIBOU MANAGEMENT REPORT**

From: 1 July 2012  
To: 30 June 2014<sup>1</sup>

**LOCATION**

**GAME MANAGEMENT UNITS:** Portions of: 20F, 21B, 21C, 21D, 24A, 24B, and 25D (9,980 mi<sup>2</sup>)<sup>2</sup>

**HERDS:** Galena Mountain, Ray Mountains, Wolf Mountain, Hodzana Hills

**GEOGRAPHIC DESCRIPTION:** Galena Mountain, Kokrines Hills, Hodzana Hills, and Ray Mountains

**BACKGROUND**

Named for their distinct calving areas, the Galena Mountain (GMH), Wolf Mountain, Ray Mountains (RMH), and Hodzana Hills (HCH) caribou herds occur north of the Yukon River in the Kokrines Hills, Ray Mountains, and Hodzana Hills. Galena Mountain is northeast of Galena and west of the Melozitna River. GMH (less than 150 animals) typically calves east of Galena Mountain and winters west of the mountain. The Wolf Mountain herd (300–500 animals) calves and winters to the north and east of Wolf Mountain in the Melozitna and Little Melozitna river drainages. The Wolf Mountain herd and a portion of GMH are occasionally sympatric on a portion of their ranges near Black Sand Creek in Unit 21C during calving season. RMH (1,200–1,500 animals) calves in the Ray Mountains around Kilo Hot Springs and winters to the north in the Kanuti and Kilolitna River area, and to a lesser degree in the Tozitna drainage to the south.

Small groups of caribou in the Hodzana Hills, northeast of the Ray Mountains, were previously considered part of RMH. Since 2003, efforts have been made by the Alaska Department of Fish and Game (ADF&G) and federal Bureau of Land Management (BLM) to gather better information about this group of caribou, now known as HCH (Hollis 2007). HCH (700–1,000 animals) resides and calves mainly in the hills at the headwaters of the Dall, Kanuti, and Hodzana rivers.

The origin of these herds is unknown. Some residents speculated they were reindeer from a commercial operation in the Kokrines Hills that ended around 1935. However, evidence suggests these animals are caribou because 1) reindeer physical characteristics are not apparent, 2) reindeer alleles were not found when tested (Cronin et al. 1995), and 3) reindeer calve earlier than these 3 caribou herds (Saperstein 1997, Jandt 1998). Traditional ecological knowledge suggests that these herds are simply relict populations of once vast herds that migrated across

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<sup>1</sup> At the discretion of the reporting biologist, this unit report may contain data collected outside the report period.

<sup>2</sup> Area reflects estimates of annual herd ranges, not entire game management units.

western Alaska. Recent genetic analyses of these herds provides mixed support for this idea with some evidence that GMH and Wolf Mountain herds are distinct, although based on small sample sizes (Mager 2012).

These caribou herds are rarely hunted because they are relatively inaccessible during the hunting season, and few people outside the local area are aware of them. The combined average of reported and known unreported harvest from all 4 herds since 1991 was <10 caribou per year. All seasons were closed in the area of GMH beginning in regulatory year (RY; RY = 1 July–30 June, e.g., RY04 = 1 July 2004–30 June 2005) 2004 due to declines observed in that herd (Table 1).

## **MANAGEMENT DIRECTION**

### **MANAGEMENT GOALS**

- Ensure harvest does not result in a long-term population decline.
- Provide opportunity for people to participate in caribou hunting.

### **MANAGEMENT OBJECTIVES**

- Harvest up to 50 cows and up to 75 bulls from the Ray Mountains herd.
- Harvest up to 10 cows and up to 25 bulls from the Wolf Mountain herd.
- Harvest up to 10 cows and up to 25 bulls from the Galena Mountain herd.
- Harvest up to 10 cows and up to 25 bulls from the Hodzana Hills herd.

## **METHODS**

Caribou from these herds are monitored through cooperative radiotelemetry studies by ADF&G, U.S. Fish and Wildlife Service, and BLM. Radio collars are placed on both cows and short-yearlings and are used to locate the herds for composition counts, locate calving areas, and delineate seasonal ranges. The number of radiocollared caribou varies. During RY12–RY13 there were 3–8 active radio collars in GMH, 3–6 in the Wolf Mountain herd, 8 in the RMH, and 9 in the HCH.

Aerial surveys of the GMH and Wolf Mountain herds are difficult during fall and winter due to small group size and poor sightability in the dense black spruce forests where they occur. Similarly, fall aerial surveys of RMH and HCH are difficult due to frequent fog, clouds, and high winds.

Aerial surveys are typically conducted with helicopters (Robinson R-44) and fixed-wing aircraft (Piper PA-18 or Bellanca Scout) following techniques outlined by Eagan (1993). During RY12–RY13, fixed-wing aircraft were used in surveys for all 4 herds. In the Wolf Mountain herd we have had some success in estimating composition from fixed-wing aircraft by taking high-quality digital photographs of congregated groups and classifying each caribou from the photos. Herd size estimates are obtained using methods similar to the direct count aerial photocensus technique (Valkenburg et al. 1985) using digital photographs taken from fixed-wing aircraft.

We monitored hunting mortality using hunter harvest reports, and adjusted those results to account for a small amount of unreported harvest. Harvest reports submitted by hunters were entered into the statewide harvest database. These data were summarized for each regulatory year, and included total harvest, harvest location, hunter residency and success, harvest chronology, and the types of transportation used. Harvest data were summarized by regulatory year.

## RESULTS AND DISCUSSION

### POPULATION STATUS AND TREND

#### *Population Size*

Galena Mountain Herd. GMH has been difficult to census comprehensively, but the population probably declined from 250 to 500 prior to RY02 to less than 125 caribou by RY05. The highest number of caribou seen since RY05 was 162 animals in April 2012 (Table 1). We did not conduct a thorough survey to estimate population size or composition for GMH during RY12–RY13. The population probably declined because of predation and movement from GMH to the Wolf Mountain herd (Stout 2001). Because these caribou reside in dense black spruce forests it can be expected that counts will be variable due to poor sightability. GMH has had radiocollared animals since 1991. We found that radiocollaring more caribou did not increase the number of caribou found during fall surveys, but did demonstrate that during the rut caribou occupy dense black spruce habitat where sightability is low (Stout 2001). Conducting surveys in winter or during postcalving aggregations appears to provide the best estimates of population size for this herd. Regardless, it appears GMH is declining to a point where recovery is unlikely without substantial management intervention or infusion of caribou from another herd.

Wolf Mountain Herd. The first comprehensive fall composition survey of the Wolf Mountain herd was in October 1995, when 346 caribou were counted. We counted 368 caribou in June 2010 and 462 caribou in June 2011 (Table 2). We did not conduct a thorough survey to estimate population size for the Wolf Mountain herd during RY12–RY13. Since the Wolf Mountain herd is widely dispersed most of the year, surveys during summer or postcalving aggregations appear to provide the best estimates of population size for this herd.

Ray Mountains Herd. RMH was first thoroughly surveyed by ADF&G and BLM in fall 1983 when 400 caribou were counted. Surveys were regularly conducted during the 1990s and 2000s (Table 3). We did not conduct a thorough survey to estimate population size for RMH during RY12–RY13, therefore our most recent estimate is 1,213 caribou from July 2011. This estimate falls within a long-term range of average population sizes calculated by Horne et al. (2014) of 656–1,564 animals for the years 1994–2012.

Hodzana Hills Herd. Efforts since 2003 by ADF&G and BLM to gain better information on these animals included radiocollaring caribou east of the Dalton Highway in the Hodzana Hills (Table 4). Based on analysis of previously collected telemetry data from 2005 to 2009, Horne et al. (2014) estimated 1,000–1,500 animals in HCH. We did not conduct a thorough survey to estimate population size for HCH during RY12–RY13.

### *Population Composition*

During RY12–RY13 comprehensive composition data were not collected on GMH, Wolf Mountain, RMH, or HCH caribou.

### *Distribution and Movements*

Galena Mountain Herd. Based on radiotracking flights conducted in RY12–RY13, seasonal movements of GMH were consistent with movement information from earlier investigations of those herds (Stout 2001). Galena Mountain caribou usually migrate toward alpine areas east of Galena Mountain in April and calve on the alpine slopes of the southern Kokrines Hills in Unit 21C. From June to September most caribou are in alpine areas west of the Melozitna River. A few bulls have been seen along the Yukon River and north of Galena in September. During October these caribou migrate from alpine areas across Galena Mountain toward the Holtnakatna Hills and Hozatka Lakes in Unit 21D, where they winter.

Wolf Mountain Herd. Based on limited radiotracking flights, the seasonal movements of the Wolf Mountain herd during RY12–RY13 appeared consistent with previous observations (Stout 2001). A general migration pattern for the Wolf Mountain herd was surmised based on tracks observed during surveys in the early 1980s (Stout 2003). This pattern was confirmed and detailed through radiotracking studies (Stout 2003). The herd calved on the south-facing slopes of the Kokrines Hills south of Wolf Mountain in Unit 21C, spent most of the summer in the surrounding alpine habitat near Wolf Mountain, then moved northward toward Lost Lake on the Melozitna River in October. Generally, the Wolf Mountain herd can be found on or around Wolf Mountain, in the Kokrines Hills, in the Hot Springs Creek drainage, or in the Melozitna river drainage downstream from Lost Lake (Stout 2003).

Ray Mountains Herd. The limited radiotracking data collected during RY12–RY13 showed no deviation in locations of Ray Mountains caribou from that observed in previous investigations. Prior to October 1994 there were no radiocollared caribou in the Ray Mountains, and movements of the herd were not well known. Robinson (1988) found caribou north of the Ray Mountains and in the upper Tozitna river drainage in Unit 20F. Based on the trails found he suspected this herd made seasonal migrations between the 2 areas. During late October 1991, several hundred caribou were seen along the Dalton Highway near Old Man. In March 1992 groups of 10–20 bulls were regularly seen near Sithylenkat Lake and 200 caribou were seen in the Kanuti Lake area in Unit 24B.

Since radiocollaring began in October 1994 caribou have been located during winter primarily on the northern slopes of the Ray Mountains and during calving season on the southern slopes of the Ray Mountains in the upper Tozitna river drainages. Summer range is in the alpine areas of the Ray Mountains, frequently in the Spooky Valley area around Mount Henry Eakins and occasionally in the alpine areas south of the upper Tozitna River (Jandt 1998).

Hodzana Hills Herd. Since 2003, caribou that reside in the Hodzana Hills typically have been found in the headwaters of the Hodzana, Dall, and Kanuti rivers on the border of Units 24A and 25D. In October 2006 these caribou were found in the upper Hodzana River, with a few groups south of Caribou Mountain on the west side of the Dalton Highway. Radiotracking data obtained during 2007–2014 confirm that these areas are within the range of HCH (ADF&G, BLM

unpublished data, Fairbanks). In the past, caribou seen along the Dalton Highway near Finger Mountain were thought to be Ray Mountains caribou. Today we consider these animals to be Hodzana Hills caribou. Results from Horne et al. (2014) showed no overlap in ranges of RMH and HCH from 1994 to 2009 and confirmed that the 2 herds do not undertake significant migrations.

**MORTALITY**

*Harvest*

Some areas covered by this report, particularly Units 24 and 21D north of the Yukon River and west of the trans-Alaska pipeline, are seasonally occupied by caribou from the Western Arctic (WAH), Teshekpuk, and Central Arctic herds. Seasons and bag limits in those areas reflect harvest recommendations for those herds.

Seasons and Bag Limits during RY12–RY13.

Herd/Unit/Bag Limit	Resident/Subsistence Open Seasons	Nonresident Open Seasons
<i>Ray Mountains Herd</i>		
Unit 20F, north of the Yukon River. 1 caribou.	10 Aug–31 Mar (General hunt only)	10 Aug–30 Sep
<i>Galena Mountain Herd</i>		
Unit 21B, that portion north of the Yukon River and downstream from Ukawutni Creek.	No open season	No open season
<i>Wolf Mountain Herd</i>		
Remainder of Unit 21B. 1 caribou.	10 Aug–30 Sep	10 Aug–30 Sep
<i>Galena Mountain Herd</i>		
Unit 21C, that portion within the Dulbi river drainage and that portion within the Melozitna river drainage downstream from Big Creek.	No open season	No open season

Herd/Unit/Bag Limit	Resident/Subsistence Open Seasons	Nonresident Open Seasons
<i>Wolf Mountain Herd</i>		
Remainder of Unit 21C. 1 caribou.	10 Aug–30 Sep	10 Aug–30 Sep
<i>Galena Mountain Herd</i>		
Unit 21D, that portion north of the Yukon River and east of the Koyukuk River. 2 caribou.	Winter season may be announced	No open season
<i>Western Arctic Herd</i>		
Remainder of Unit 21D. RESIDENT HUNTERS: 5 caribou per day; however, cow caribou may not be taken 16 May–30 Jun. NONRESIDENT HUNTERS: 5 caribou total; however, cow caribou may not be taken 16 May–30 Jun.	1 Jul–30 Jun	1 Jul–30 Jun
<i>Ray Mountains Herd</i>		
Unit 24A, that portion south of the south bank of the Kanuti River. 1 caribou.	10 Aug–Mar 31	10 Aug–30 Sep
Unit 24B, that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna river drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River. 1 caribou.	10 Aug–31 Mar	10 Aug–30 Sep
<i>Ray Mountains and Hodzana Hills Herds</i>		
Unit 25D, that portion drained by the west fork of the Dall River, west of the 150°W longitude. 1 caribou.	10 Aug–31 Mar	10 Aug–30 Sep

Alaska Board of Game Actions and Emergency Orders. No Board of Game actions were taken during RY12–RY13 and no emergency orders were issued.

Harvest by Hunters. During RY12–RY13, 8 caribou (6 bulls, 2 cows) were reported taken from the 4 herds. All were harvested from the Ray Mountains ( $n = 6$ ) and Hodzana Hills ( $n = 2$ ) herds (Table 5).

Hunter access to the Ray Mountains herd is limited to lengthy snowmachine trips during the winter or to a few ridgetop landing areas. The Hodzana Hills caribou are accessible primarily by aircraft, with occasional access from the Dalton Highway. The Galena Mountain herd is most accessible for hunting when it crosses the Galena-Huslia winter trail during winter. However, that area is closed to prevent overharvest. The Wolf Mountain herd is rarely accessible for hunting because of the scarcity of aircraft landing areas. Moose hunters on the Melozitna River have rarely taken Wolf Mountain caribou incidentally in September. During RY12–RY13 the 8 caribou harvested in the Ray Mountains and Hodzana Hills herds were taken by 5 local residents, 2 nonlocal residents, and 1 nonresident (Table 6).

The total combined harvest reported for these herds continues to be less than 10 caribou per year (Table 5). In addition, 1–2 caribou are thought to be taken (but not reported) each year along the Yukon River near Ruby, and an additional 3–5 unreported caribou are likely taken along the Yukon River between Rampart and Tanana each year (Osborne 1995). These caribou, usually bulls, are occasionally found on remaining snowfields near the river in August or wander to the river during September. An additional 5–7 caribou are probably taken each year by hunters from Tanana who use snowmachines (Osborne 1995).

#### *Other Mortality*

Predation is likely the main limiting factor in these herds, but no studies to determine cause-specific mortality have been completed for these herds. Black bears were probably the primary predators on the calving ground of the Wolf and Galena Mountain herds (Paragi and Simon 1993). Grizzly bears are found throughout the calving ranges of all 4 herds, and calf mortality studies in other areas indicate that grizzlies are important predators of caribou calves (Boertje et al. 1995).

#### **NONREGULATORY MANAGEMENT PROBLEMS/NEEDS**

During summer 2014, General Communications, Inc. (GCI) initiated construction of 2 telecommunications towers within the ranges of the Galena Mountain herd (GMH) and Wolf Mountain herd (WMH). The towers are located at 65°05.183'N, 154°07.102'W (“Gold Mountain” site within range of GMH) and 64°53.333'N, 155°31.268'W (“Melozitna” site within range of WMH) in high elevation alpine habitat to maintain line of sight. In addition to the towers, each site will eventually include an enclosed generator for power production and associated fuel tanks. The department worked with GCI and its contractors to minimize potential disturbances to nearby caribou during the calving period (through 20 June) from construction activities by limiting access to the sites while caribou were present within 2.5 miles. Access to the sites for construction activities was granted on 10 June 2014 for the Gold Mountain site and 21 June 2014 for the Melozitna site. It is not known what effect, if any, the towers will have on caribou from these 2 herds and no research or monitoring projects are planned to specifically investigate the issue. While we lack specific data on the extent and concentration of calving areas for these 2 herds, it is believed that most calving takes place in close proximity to the 2 tower sites (G. Stout, Galena Area Wildlife Biologist, ADF&G, personal communication, 2015).

## CONCLUSIONS AND RECOMMENDATIONS

The mountains between Galena and the upper Hodzana River on the north side of the Yukon River contain 4 recognized caribou herds. These herds are relatively small compared to most other herds in Alaska and inhabit distinct geographical areas with minimal overlap. However, the calving areas of the GMH and Wolf Mountain herds occasionally overlap. Because the herds overlap only occasionally during calving season and only a small portion of GMH mixes with the Wolf Mountain herd during this time, we classify these as 2 distinct herds. Although open hunting seasons for caribou existed for most of these herds, few animals were harvested due to limited access. Poor survival due to predation is likely the primary factor restricting herd growth. Large body size and weight of calves and adults in RMH and GMH previously indicated good nutrition (Osborne 1995), although in 2005, fall calf weights in RMH were not consistent with this observation (M. Keech, Research Biologist, ADF&G, personal communication 2005).

The decline in GMH was not due to harvest; therefore, the first management goal, to ensure harvest does not result in a population decline, was met. However, the second goal, to provide opportunity for people to participate in caribou hunting, was not achieved for GMH because there was no open season. In addition, the management objective for this herd was not achieved because no harvest opportunity was available. All other management objectives were met, as harvest opportunity was available but did not exceed the objectives. Harvest of bulls and cows did not exceed desired levels for any of the herds.

To allow harvest of WAH caribou in Unit 21D east of the Koyukuk River and to protect the GMH and Wolf Mountain caribou herds, we recommend maintaining the restricted season for the smaller herds when WAH is not present. Maintaining radio collars in the GMH and Wolf Mountain herds will help us to distinguish these caribou from WAH.

The declining number of radio collars in each herd has affected our ability to adequately survey the herds to estimate population size and composition, therefore our recommendation is to maintain a modest number (~10) in each herd. Other management work on these herds will remain a low priority because of low harvest and relatively few animals in these herds.

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**PREPARED BY:**

Nathan J. Pamperin  
Wildlife Biologist II

**APPROVED BY:**

Jackie J. Kephart  
Assistant Management Coordinator

**REVIEWED BY:**

Torsten W. Bentzen  
Wildlife Biologist III

Laura A. McCarthy  
Publications Technician II

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Table 1. Galena Mountain caribou composition counts, Interior Alaska, 1991–2012.

Month/ Year	Cows	Calves(%)	Bulls	Unclassified	Total caribou observed
12/91 <sup>a</sup>					260
10/92 <sup>b</sup>	123	9 (5)	49		181
10/93 <sup>b</sup>	165	41 (16)	53		259
10/94 <sup>b</sup>	115	46 (25)	25		186
10/95 <sup>b</sup>	211	40 (13)	59		310
10/96 <sup>b</sup>	151	19 (8)	62		232
12/98 <sup>a</sup>					313
12/99 <sup>a</sup>					89
01/01 <sup>a</sup>					65
06/01 <sup>a</sup>					105
07/02 <sup>a</sup>					102
09/04 <sup>c</sup>	64	7 (8)	13		84
12/04 <sup>a</sup>					95
04/05 <sup>a</sup>					78
11/05 <sup>c</sup>	58	9 (12)	6		73
01/06 <sup>a</sup>					95
06/07 <sup>a</sup>					61
05/08 <sup>c</sup>	22	12 (34)	1		35
03/09 <sup>a</sup>		12 (13)			89
06/09 <sup>c</sup>		9 (18)	5		49
03/10 <sup>c</sup>	11				46
05/10 <sup>c</sup>	22	6 (20)	2		30
06/10 <sup>c</sup>	50	13 (19)	6		69
06/11 <sup>c</sup>	68	19 (20)	3	3	93
07/11 <sup>c</sup>	14	10 (42)			24
08/11 <sup>c</sup>	23	5 (15)	6		34
02/12 <sup>c</sup>	50	11 (7)	4	82	147
03/12 <sup>c</sup>	62	17 (12)		61	140
04/12 <sup>c</sup>	127	17 (10)	18		162
06/12 <sup>c</sup>	40	9 (17)	2	1	52

<sup>a</sup> Fixed-wing survey, no composition classifications.

<sup>b</sup> Helicopter survey, composition classifications.

<sup>c</sup> Fixed-wing survey, composition classification without photographs.

Table 2. Wolf Mountain caribou composition counts, Interior Alaska, 1991–2011.

Month/ Year	Cows	Calves (%)	Bulls	Unclassified	Total caribou observed
06/91 <sup>a</sup>	117	18 (12)	11		146
06/92 <sup>b</sup>					595
05/94 <sup>a</sup>	337	121 (26)	16		474
01/95 <sup>b</sup>					194
10/95 <sup>a</sup>	192	51 (15)	103		346
03/96 <sup>b</sup>					561
10/96 <sup>a</sup>	167	37 (14)	62		266
05/97 <sup>b</sup>					423
01/98 <sup>b</sup>					163
06/01 <sup>b</sup>					489
04/02 <sup>b</sup>					455
07/02 <sup>b</sup>					319
07/02 <sup>c</sup>		27 (5)			516
06/03 <sup>b</sup>					271
05/04 <sup>b</sup>					146
05/06 <sup>b</sup>					95
06/07 <sup>b</sup>					268
06/08 <sup>b</sup>		45 (18)			244
07/09 <sup>d</sup>	312	95 (22)	27		434
03/10 <sup>d</sup>	129		18	18	165
06/10 <sup>c</sup>		61 (17)			368
10/10 <sup>d</sup>	9	10 (17)	1	39	59
06/11 <sup>c</sup>					462

<sup>a</sup> Helicopter survey, composition classifications.

<sup>b</sup> Fixed-wing survey, no composition classifications.

<sup>c</sup> Photocensus (fixed-wing).

<sup>d</sup> Fixed-wing survey, composition classifications with photographs.

Table 3. Ray Mountains caribou composition counts and estimated population size, Interior Alaska, 1991–2011.

Survey date (month/year)	Bulls: 100 cows	Calves: 100 cows	% Calves	% Cows	% Small bulls	% Medium bulls	% Large bulls	% Total bulls	Composition sample size	Count or estimate of herd size
06/91		31						13 <sup>a</sup>		446
06/91			19							303 <sup>b</sup>
10/91 <sup>c</sup>										140 <sup>d</sup>
10/94 <sup>c</sup>										652
10/94 <sup>e</sup>	37	19	12	64	18	34	47	24	629	629
01/95 <sup>c</sup>										684
06/95 <sup>f</sup>										1,731
10/95 <sup>e</sup>	34	12	8	69	15	37	48	23	994	994
10/96 <sup>e</sup>	28	15	10	70	15	40	45	20	1,387	1,387
07/97 <sup>c</sup>										1,575
10/97 <sup>e</sup>	33	13	9	68	21	27	52	23	1,114	1,114
10/98 <sup>e</sup>	26	32	20	63	34	21	45	16	1,756	1,756
10/00 <sup>f</sup>	38	19	12	64	41	23	35	24	1,736	1,800
09/01 <sup>e</sup>	30	15	11	68	49	25	26	21	1,685	1,800
09/02 <sup>e</sup>	51	31	17	55	38	54	8	28	140	
10/03 <sup>e</sup>	33	18	12	66	44	26	30	22	921	
06/04 <sup>f</sup>									1,705	1,858
10/04 <sup>c</sup>									1,403	
10/05 <sup>e</sup>	35	20	7	69	42	23	35	24	795	
04/06 <sup>c</sup>									1,022	
10/06 <sup>e</sup>	27	10	7	73	39	29	32	20	815	
10/07 <sup>e</sup>	26	25	17	66	13	28	59	17	785	
09/08 <sup>e</sup>	47	28	16	57	45	29	26	27	780	
09/09 <sup>e</sup>	36	29	18	61				22	953	
02/10 <sup>d</sup>										1,060
07/11 <sup>f</sup>										1,213

<sup>a</sup> Includes 50 unclassified adults.

<sup>b</sup> Includes 245 unclassified adults.

<sup>c</sup> Fixed-wing survey, no composition classifications.

<sup>d</sup> Caribou Mountain portion only.

<sup>e</sup> Helicopter survey, composition classifications.

<sup>f</sup> Photocensus.

Table 4. Hodzana Hills caribou composition counts, Interior Alaska, 2003–2009.

Month/Year	Cows	Calves (%)	Bulls	Total caribou observed
10/03 <sup>a</sup>	173	43 (14)	90	306
06/04 <sup>b</sup>				242
10/04 <sup>b</sup>				136
06/05 <sup>b</sup>				318
10/05 <sup>a</sup>	661	111 (10)	343	1,115
04/06 <sup>b</sup>				320
10/06 <sup>a</sup>	247	20 (5)	122	389
09/07 <sup>a</sup>	201	38 (11)	122	361
09/08 <sup>a</sup>	232	64 (16)	99	395
09/08 <sup>b</sup>				880
09/09 <sup>a</sup>	527	93 (12)	155	775

<sup>a</sup> Helicopter survey, composition classifications.

<sup>b</sup> Fixed-wing survey, no composition classifications.

Table 5. Ray Mountains, Galena Mountain, Wolf Mountain, and Hodzana Hills caribou reported harvest, Interior Alaska, regulatory years<sup>a</sup> 2000–2013.

Regulatory year	Ray Mountains			Galena Mountain		Wolf Mountain		Hodzana Hills <sup>b</sup>	
	Bulls	Cows	Unk	Bulls	Cows	Bulls	Cows	Bulls	Cows
2000	2	0	0	2	0	0	0		
2001	1	2	0	0	0	0	0		
2002	2	0	0	0	0	0	0		
2003	2	0	0	0	0	0	0		
2004	2	1	0	0	0	0	0		
2005	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0
2007	3	0	0	0	0	0	0	1	0
2008	2	0	0	0	0	0	0	0	0
2009	1	0	0	0	0	0	0	0	0
2010	2	0	1	0	0	0	0	2	0
2011	2	0	1	0	0	0	0	4	0
2012	2	2	0	0	0	0	0	2	0
2013	2	0	0	0	0	0	0	0	0

<sup>a</sup> Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2000 = 1 July 2000–30 June 2001).

<sup>b</sup> Hodzana Hills caribou were considered part of the Ray mountain harvest prior to regulatory year 2005.

Table 6. Galena Mountain, Wolf Mountain, Ray Mountains, and Hodzana Hills caribou hunter residency and success, Interior Alaska, regulatory years<sup>a</sup> 2000–2013.

Regulatory year	Successful				Unsuccessful				Total hunters
	Local resident <sup>b</sup>	Nonlocal resident	Nonresident	Total	Local resident <sup>b</sup>	Nonlocal resident	Nonresident	Total	
2000	3	1	0	4	3	13	2	18	22
2001	1	2	0	3	0	20	8	28	31
2002	1	0	1	2	4	4	3	11	13
2003	0	2	0	2	1	13	1	15	17
2004	3	0	0	3	9	8	2	19	22
2005	0	0	0	0	10	1	1	12	12
2006	0	0	0	0	19	13	0	32	32
2007	0	3	1	4	8	11	2	21	25
2008	1	0	1	2	8	9	1	18	20
2009	0	1	0	1	12	6	0	18	19
2010	4	1	0	5	10	4	2	16	21
2011	4	2	1	7	6	3	2	11	18
2012	3	2	1	6	7	8	3	18	24
2013	2	0	0	2	14	4	3	21	23

<sup>a</sup> Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2000 = 1 July 2000–30 June 2001).

<sup>b</sup> Residents of Units 20, 21B, 21C, 21D, and 24.