
CHAPTER 10: CARIBOU MANAGEMENT REPORT

From: 1 July 2012

To: 30 June 2014¹

LOCATION

GAME MANAGEMENT UNITS: 19A, 19B, 19C, 19D, 21A, and 21E (55,343 mi²)

MCGRATH AREA HERDS: Beaver Mountains, Sunshine Mountains, Farewell-Big River, Rainy Pass, and Tonzona

GEOGRAPHIC DESCRIPTION: Unit 19, all drainages into the Kuskokwim River upstream from a straight line drawn between Lower Kalskag and Paimiut. Unit 21A, the Innoko river drainage upstream from and including the Iditarod river drainage; Unit 21E, the Yukon river drainage from Paimiut upstream to, but not including, the Blackburn Creek drainage; and the Innoko river drainage downstream from the Iditarod river drainage.

BACKGROUND

Historically, caribou have played an important role in the McGrath area. During the 1800s, caribou occurred sporadically in far greater numbers over a greater range than at present (Murie 1935). Discussions with village elders and reports of early explorers corroborate this, although documentation is poor (Hemming 1971).

Several small herds continue to exist in the McGrath area. Current data are scant but recognized herds south of the Kuskokwim River include the Tonzona, Farewell-Big River (previously called Big River), and Rainy Pass herds. Herds north of the Kuskokwim River include the Beaver Mountains (previously called Kuskokwim Mountains) and Sunshine Mountains herds. Hunting effort and harvest for the 5 McGrath area caribou herds has been low.

In addition to the smaller resident herds discussed in this report, the Mulchatna caribou herd once roamed throughout the Kuskokwim basin, but as numbers dwindled in the late 1990s the bulk of this herd retreated to the south (Whitman 1997). The Mulchatna herd has declined substantially from a peak of over 200,000 animals in the mid-1990s (Woolington 2011).

Significant numbers of caribou from the Western Arctic herd have wintered in Unit 21E as recently as the early 1990s (Machida 1995). Large numbers of caribou from the Mulchatna herd also used Unit 21E during the same time (L. Van Daele, Wildlife Biologist, ADF&G

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

memorandum, 1998, Kodiak). However, coincident with the return of Western Arctic caribou to the Seward Peninsula during the mid- to late 1990s, (Dau 2001) caribou sightings became rare in Unit 21E.

MANAGEMENT DIRECTION

MANAGEMENT OBJECTIVES

Farewell-Big River herd (Unit 19)

- Provide for a harvest of up to 100 bull caribou.

Rainy Pass herd (Units 16B and 19C)

- Provide for a harvest of up to 75 bull caribou.

Sunshine and Beaver Mountains herds (Units 19A, 19D, 21A, and 21E)

- Provide for a combined harvest of up to 25 caribou from the Sunshine Mountains and Beaver Mountains herds.

Tonzona herd (Units 19C and 19D)

- Provide for a harvest of up to 50 caribou.

METHODS

We conducted a minimum population count in June 2013 for the Sunshine Mountains and Beaver Mountains herds. Survey flights were conducted from Piper PA-18 Super Cub aircraft in late June when conditions are most likely to concentrate caribou on snow patches and on higher, open terrain where they seek insect relief. We enumerated caribou observed from the air and recorded their numbers and locations.

In July 2014 we conducted a similar survey-reconnaissance flight of the Tonzona caribou herd in a portion of the herd's range from the Herron River in the east to the Tonzona River in the west. We did not attempt minimum counts for the Farewell-Big River or Rainy Pass herds during this reporting period; however, current population size and recent trends in abundance for McGrath area caribou herds were also inferred from incidental observations and hunter information.

Population and harvest data were summarized by regulatory year (RY), which begins 1 July and ends 30 June (e.g., RY13 = 1 July 2013–30 June 2014). These data do not include Unit 19 Mulchatna herd harvest, which is reported elsewhere (Woolington 2013).

The statewide harvest reporting system is used to estimate harvest. The department sends reminders to hunters who fail to report their harvests, resulting in higher reporting rates. While data with higher reporting rates are closer to actual effort and harvest figures, they should still be interpreted as minimums.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

Beaver Mountains and Sunshine Mountains. In June 2013 we counted 488 caribou including 49 calves within the range of both herds combined. This is fewer than the 851 caribou including 113 calves counted during a June 2012 survey. However, the difference is more likely due to better survey conditions in 2012 than a decrease in caribou numbers. Including a correction for caribou we believe we missed, we assume that the Beaver Mountains and Sunshine Mountains caribou herds combined are at least stable with 1,000–1,250 caribou.

Tonzona. We searched the area reported by Del Vecchio et al. (1995) as summer range during our survey in July 2014. We were only able to find 11 caribou (8 adults and 3 calves), but trees and lack of radio collars hampered this search. We received reports from experienced guides operating within this area that there are more caribou than what we found, and we made multiple additional opportunistic observations of groups of over 50 caribou and tracks suggesting that more caribou were present. We believe this herd numbers about 500–750 caribou.

Rainy Pass, Farewell-Big River. We have few population data for the Rainy Pass and Farewell-Big River herds, but we believe each of these herds numbers about 500–750 caribou. During surveys for bison and Dall sheep, we regularly see caribou primarily in groups of 20–50 along with scattered groups numbering from 1–9 up to about 250. Reports from hunters, guides, and pilots of sightings of similar size groups appear to corroborate the general distribution and total number of caribou in the area. Individuals with years of experience in the area report seeing more caribou in recent years.

Population Composition

No composition surveys were conducted during RY12–RY13. However, in June 2013 during a minimum count of the Beaver Mountains and Sunshine Mountains herds, 10% of the caribou enumerated were calves.

Distribution and Movements

Beaver Mountains. Current distribution of the Beaver Mountains herd is thought to include habitats from Swinging Dome in the south through the Beaver Mountains to the Innoko River in the north. Caribou are regularly found in this area during summer surveys, but their annual range may extend beyond these areas. Few movement data are available, but reports from the public indicate that caribou are found west of the Beaver Mountains. This information is corroborated by our observation of caribou and caribou tracks during winter surveys for other species.

In the early 1980s, Pegau (1986) radiocollared caribou in the Beaver and Sunshine Mountains. Radiocollared caribou from the Beaver Mountains ranged south almost to Horn Mountain. Calving was in the Beaver Mountains, but postcalving groups occurred throughout the herd's range. Wintering areas included the north side of the Kuskokwim Mountains from the Iditarod River east to the Dishna River.

Sunshine Mountains. The Sunshine Mountains caribou are found predominantly in the drainages of the Nixon Fork, from the Innoko River to Von Frank Mountain, and in the headwaters of the Susulatna and Nowitna Rivers, including Fossil Mountain and the Cripple Creek Mountains. Calving occurs throughout the range but is common on the Nixon Flats. Wintering areas are primarily in the drainages of the Nixon Fork. In midsummer these caribou are found predominantly in the Sunshine Mountains; however, small groups were regularly observed on the Nixon Flats throughout RY12–RY13.

During our survey of the Beaver Mountains and Sunshine Mountains herd ranges in June 2013, small groups of caribou were found continuously, and it is likely that these 2 herds were mixed. However, Pegau (1986) did not document range overlap between these herds during his 4-year study.

Tonzona. We do not have current data on range, movement, or distribution of this herd. However, Del Vecchio et al. (1995) reported that the Tonzona herd was distinct from the Denali herd and ranged from the Herron River to the lower Tonzona River near Telida and north to Otter Lake. Summer concentrations were found in the northern foothills of the Alaska Range, and winter range consisted of lower elevations from Telida up the Swift River and north to the Otter Lake area.

Farewell-Big River. There is little recent information on the range of the Farewell-Big River herd. It is thought to include habitats within the South Fork Kuskokwim river drainage southwest to the Swift River. Summering areas are in the foothills of the north side of the Alaska Range. Wintering areas are in the flats north of the summer range.

Pegau (1986) radiocollared caribou in the Farewell-Big River herd near Farewell in the early 1980s. During the first year of the study these caribou remained in the Farewell area, but some moved near the Swift River the following year and did not return for at least 2 years.

Rainy Pass. The range of the Rainy Pass herd is not well known. The herd has been found from the confluence of the Post River south through Rainy Pass to the west side of Cook Inlet. Caribou have been observed throughout the mountains in summer in both Units 16B and 19C. Identified wintering areas of radiocollared individuals included the Post Lake area, upper South Fork, and upper Ptarmigan Valley (Boudreau 2003).

MORTALITY

Harvest

Season and Bag Limit during RY12–RY13.

Herd, Unit, Bag limit	Resident Open Season	Nonresident Open Season
<i>Mulchatna, Farewell-Big River</i> Units 19A and 19B. RESIDENT HUNTERS: 2 caribou, not more than 1 bull may be taken and only 1 caribou may be taken 1 Aug–31 Jan. NONRESIDENT HUNTERS:	1 Aug–15 Mar	No open season

Herd, Unit, Bag limit	Resident Open Season	Nonresident Open Season
<i>Tonzona, Farewell-Big River, Rainy Pass</i> Unit 19C. RESIDENT AND NONRESIDENT HUNTERS: 1 bull.	10 Aug–20 Sep	10 Aug–20 Sep
<i>Beaver Mountains, Tonzona, Farewell-Big River</i> Unit 19D, except the drainages of the Nixon Fork River. RESIDENT HUNTERS: 1 bull; or 1 caribou; or 5 caribou. NONRESIDENT HUNTERS: 1 bull.	10 Aug–20 Sep 1 Nov–31 Jan May be announced	10 Aug–20 Sep
<i>Sunshine Mountains</i> Remainder of Unit 19D. RESIDENT AND NONRESIDENT HUNTERS: 1 bull.	10 Aug–20 Sep	10 Aug–20 Sep
<i>Beaver Mountains, Sunshine Mountains</i> Unit 21A. RESIDENT AND NONRESIDENT HUNTERS: 1 bull.	10 Aug–20 Sep	10 Aug–20 Sep
<i>Beaver Mountains, Western Arctic herd</i> Unit 21E. RESIDENT AND NONRESIDENT HUNTERS: 1 caribou and 2 additional caribou during winter if season announced.	10 Aug–30 Sep	10 Aug–30 Sep

Alaska Board of Game Actions and Emergency Orders. No changes were made to caribou regulations during RY12–RY13.

Harvest by Hunters. Reported harvest remained low for local caribou herds in the McGrath area during RY09–RY13 (Table 1). Hunter effort increased from 92 in RY09 to 162 in RY13. However, effort is still considered low, with an average of 114 hunters annually over this period (Table 2a). In general, harvest and effort varied by herd during RY09–RY13 but remained low (Tables 2b–2g). The average harvest during RY09–RY13 was 31 animals, of which 98% were bulls (Table 1).

Hunter Residency and Success. During RY09–RY13 local hunters, defined as hunters from Units 19C, 19D, 21A and 21E, took 3% of the reported harvest of local caribou herds. Hunters from communities within Unit 19A were not included among local hunters because they reside within the range of the Mulchatna herd. During RY09–RY13 nonlocal residents took 35%, nonresidents took 61%, and hunters with unknown residency took 1% of harvested animals (Table 2a).

Harvest Chronology. Most caribou harvested during RY09–RY13 were taken in August (42%) and September (55%; Table 3).

Transport Methods. Aircraft were the most common means of hunter transportation to access McGrath area caribou herds. During RY09–RY13, 79% of successful caribou hunters used aircraft. Horses (10%) were the next most commonly used method of transportation followed by 4-wheelers (6%). Infrequently, boats (2%), ORVs (<1%), highway vehicles (<1%) and unknown methods (<1%) were also reported (Table 4).

Other Mortality

No specific data were collected concerning natural mortality rates or factors during RY12–RY13.

HABITAT

Biologists have not investigated caribou range conditions in Units 19, 21A, or 21E since at least 1996, but range is probably not limiting.

CONCLUSIONS AND RECOMMENDATIONS

Harvest remained low during RY12–RY13 for all McGrath area caribou herds and management objectives were met. The Farewell-Big River herd was managed to provide for a harvest of up to 100 bull caribou and an average of 11 were harvested. The objective for the Rainy Pass herd was for a harvest of up to 75 bull caribou, and the average reported harvest was 14. The objective for the Sunshine Mountains and Beaver Mountains herds was to provide for a combined harvest of up to 25 caribou, and the average reported harvest was 2 caribou. The Tonzona herd objective was a harvest of up to 50 caribou, and the average reported harvest was 8 caribou.

Recent movement and distribution data for the Farewell-Big River, Rainy Pass, and Tonzona caribou herds in Unit 19C are scant. We recommend deploying radio collars to better define these herds, their numbers, and movements as soon as budgets and office priorities allow.

During RY12–RY13 the number of caribou hunters in the area increased but remained low. This amount of effort most likely reflects the small size of the McGrath area caribou herds and may be influenced by the tendency for most caribou harvest to be opportunistic during hunts for other species. No changes to hunting regulations are recommended.

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Table 1. McGrath area^a caribou harvest by herd, Alaska, regulatory years^b 2009–2013.

Regulatory year	Beaver Mtns			Farewell-Big River			Rainy Pass			Sunshine Mtns			Tonzona			Unknown			Total harvest		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
2009	0	0	0	12	0	12	11	0	11	0	0	0	2	0	2	0	0	0	25	0	25
2010	0	0	0	11	0	11	12	0	12	1	0	1	2	0	2	0	0	0	26	0	26
2011	2	0	2	14	0	15 ^c	10	1	11	1	0	1	1	0	1	0	0	0	28	1	30 ^c
2012	0	0	0	9	0	10 ^c	7	0	7	0	0	1 ^c	7	1	8	4	0	4	27	1	30 ^c
2013	0	1	1	10	0	11 ^c	20	0	20	1	0	1	7	0	7	5	0	5	43	1	45 ^c

^a Excludes Mulchatna caribou herd animals taken in Unit 19.

^b Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^c Includes caribou of unknown sex.

Table 2a. McGrath area^a caribou hunter residency and success, Alaska, regulatory years^b 2009–2013.

Regulatory Year	Successful					Unsuccessful					Total hunters
	Local resident ^c	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^c	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	1	10	12	2	25 (27)	4	43	15	5	67 (73)	92
2010	0	11	15	0	26 (28)	3	44	20	1	68 (72)	94
2011	0	13	17	0	30 (29)	6	48	16	2	72 (71)	102
2012	2	7	21	0	30 (25)	8	50	32	0	90 (75)	120
2013	1	14	30	0	45 (28)	4	58	54	1	117 (72)	162

^a Excludes Mulchatna caribou herd animals taken in Unit 19.

^b Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^c Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 2b. Beaver Mountains herd caribou hunter residency and success, Alaska, regulatory years^a 2009–2013.

Regulatory year	Successful					Unsuccessful					Total hunters
	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	0	0	0	0	0 (0)	2	1	0	0	3 (100)	3
2010	0	0	0	0	0 (0)	1	7	0	0	8 (100)	8
2011	0	0	2	0	2 (67)	0	1	0	0	1 (33)	3
2012	0	0	0	0	0 (0)	4	6	1	0	11 (100)	11
2013	0	0	1	0	1 (10)	2	4	3	0	9 (90)	10

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^b Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 2c. Farewell-Big River herd caribou hunter residency and success, Alaska, regulatory years^a 2009–2013.

Regulatory year	Successful					Unsuccessful					Total hunters
	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	1	4	7	0	12 (23)	1	29	10	1	41 (77)	53
2010	0	4	7	0	11 (24)	0	22	12	1	35 (76)	46
2011	0	6	9	0	15 (33)	0	22	8	1	31 (67)	46
2012	2	3	5	0	10 (36)	0	12	6	0	18 (64)	28
2013	0	5	6	0	11 (29)	0	21	6	0	27 (71)	38

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^b Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 2d. Rainy Pass herd caribou hunter residency and success, Alaska, regulatory years^a 2009–2013.

Regulatory year	Successful					Unsuccessful					Total hunters
	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	0	6	3	2	11 (38)	0	10	4	4	18 (62)	29
2010	0	5	7	0	12 (48)	0	11	2	0	13 (52)	25
2011	0	6	5	0	11 (27)	1	23	5	1	30 (73)	41
2012	0	0	7	0	7 (15)	0	24	16	0	40 (85)	47
2013	0	6	14	0	20 (30)	0	18	29	0	47 (70)	67

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^b Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 2e. Sunshine Mountains herd caribou hunter residency and success, Alaska, regulatory years^a 2009–2013.

Regulatory year	Successful					Unsuccessful					Total hunters
	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	0	0	0	0	0 (0)	0	0	0	0	0 (0)	0
2010	0	1	0	0	1 (33)	1	1	0	0	2 (67)	3
2011	0	1	0	0	1 (25)	3	0	0	0	3 (75)	4
2012	0	0	1	0	1 (50)	1	0	0	0	1 (50)	2
2013	1	0	0	0	1 (50)	1	0	0	0	1 (50)	2

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^b Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 2f. Tonzona herd caribou hunter residency and success, Alaska, regulatory years^a 2009–2013.

Regulatory year	Successful					Unsuccessful					Total hunters
	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	0	0	2	0	2 (67)	0	1	0	0	1 (33)	3
2010	0	1	1	0	2 (29)	0	1	4	0	5 (71)	7
2011	0	0	1	0	1 (25)	0	0	3	0	3 (75)	4
2012	0	2	6	0	8 (62)	0	2	3	0	5 (38)	13
2013	0	3	4	0	7 (78)	0	0	2	0	2 (22)	9

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^b Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 2g. McGrath area hunter residency and success for caribou where herd identification was not known, Alaska, regulatory years^a 2009–2013.

Regulatory year	Successful					Unsuccessful					Total hunters
	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	Local resident ^b	Nonlocal resident	Nonresident	Unk	Total (%)	
2009	0	0	0	0	0 (0)	1	2	1	0	4 (100)	4
2010	0	0	0	0	0 (0)	1	2	2	0	5 (100)	5
2011	0	0	0	0	0 (0)	2	2	0	0	4 (100)	4
2012	0	2	2	0	4 (21)	3	6	6	0	15 (79)	19
2013	0	0	5	0	5 (14)	1	15	14	1	31 (86)	36

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

^b Local resident is any resident of Units 19C, 19D, 21A, or 21E.

Table 3. McGrath^a area caribou harvest chronology by month, Alaska, regulatory years^b 2009–2013.

Regulatory year	Harvest chronology by month									
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Unk	<i>n</i>
2009	7	18	0	0	0	0	0	0	0	25
2010	8	17	1	0	0	0	0	0	0	26
2011	12	18	0	0	0	0	0	0	0	30
2012	16	12	0	0	0	0	0	0	2	30
2013	23	21	0	0	0	0	0	0	1	45

^a Excludes Mulchatna caribou herd animals taken in Unit 19.

^b Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).

Table 4. McGrath^a area transportation method of successful caribou hunters, Alaska, regulatory years^b 2009–2013.

Regulatory year	Harvest by transport method								
	Airplane (%)	Horse (%)	Boat (%)	4-Wheeler (%)	Snowmachine (%)	ORV (%)	Highway vehicle (%)	Unk (%)	<i>n</i>
2009	20 (80)	3 (12)	0 (0)	2 (8)	0 (0)	0 (0)	0 (0)	0 (0)	25
2010	20 (77)	4 (15)	0 (0)	1 (4)	0 (0)	0 (0)	1 (4)	0 (0)	26
2011	23 (77)	2 (7)	0 (0)	4 (13)	0 (0)	0 (0)	0 (0)	1 (3)	30
2012	26 (87)	3 (10)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	30
2013	35 (78)	4 (9)	3 (7)	2 (4)	0 (0)	1 (2)	0 (0)	0 (0)	45

^a Excludes Mulchatna caribou herd animals taken in Unit 19.

^b Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2009 = 1 July 2009–30 June 2010).