

---

**CHAPTER 16: CARIBOU MANAGEMENT REPORT**

From: 1 July 2012

To: 30 June 2014<sup>1</sup>

**LOCATION**

**GAME MANAGEMENT UNIT:** Western half of Unit 25C and small portions of northern Unit 20B and eastern Unit 20F (3,090 mi<sup>2</sup>)

**HERD:** White Mountains

**GEOGRAPHIC DESCRIPTION:** White Mountains area north of Fairbanks

**BACKGROUND**

As recently as 1960, 30,000 caribou from the Fortymile caribou herd (FCH) regularly crossed the Steese Highway to calve and summer in the White Mountains (Jones 1961). As FCH declined throughout the 1960s, these caribou abandoned the traditional White Mountains calving area and remained southeast of the Steese Highway. However, in the late 1970s, public reports and incidental observations by biologists confirmed the year-round presence of caribou in the White Mountains, implying a small resident herd had existed for many years (Valkenburg 1988).

When the White Mountains caribou herd (WMCH) was first documented as a distinct herd in the late 1970s, it was thought to number 100–200 caribou (P. Valkenburg, ADF&G, personal communication, 2009). The federal Bureau of Land Management (BLM) estimated the herd's size at around 1,000 caribou in the mid-1980s (Valkenburg 1988), although the basis for this estimate is unknown. In a photocensus on 6 July 1992, J. Herriges (BLM) counted 832 caribou but extrapolated the estimate to 1,200 based on missing radiocollared animals and a rough estimate of herd composition. Based on surveys since the late 1970s, it seems most likely that the herd grew from about 150 in 1978 to around 1,000 in 1992, was stable until about 1999, then slowly declined to about 500–700 animals by the mid- to late 2000s (Table 1).

The White Mountains National Recreation Area is managed by BLM and encompasses most of WMCH's range. The recreation area was created by the Alaska National Interest Lands Conservation Act in 1980. In 1982 BLM and ADF&G initiated a cooperative project to determine the identity and distribution of caribou in the White Mountains. Caribou radiocollared during that project provided information on herd movements and distribution. WMCH also provided a low-density comparison population for the long-term Delta caribou herd research project.

---

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

Public use of the White Mountains is increasing, especially during late winter. BLM continues to improve access and increase recreational opportunities through development of roads, trails, and cabins. Despite this increased access, annual reported harvests have been low. In 1990, 2 drawing permit hunts (DC877 and DC878) were established to provide opportunity to hunt caribou in winter. DC877 allowed motorized access hunting, while DC878 was nonmotorized access only. Although 289 permits were issued for the first 3 seasons (89, 100, and 100, respectively), participation and success were low (6 caribou harvested). The number of permits available was increased to 250 (125 per hunt) during regulatory years (RY; regulatory year begins 1 July and ends 30 June, e.g., RY93 = 1 July 1993–30 June 1994) 1993 and 1994. However, the increase in available permits did not produce an increase in harvest, and participation dropped until there were more permits available than applicants. During the March 1998 Alaska Board of Game (board) meeting, drawing permit hunts DC877 and DC878 were changed to registration hunts RC877 and RC878 with an unlimited number of permits available. Regulations were further liberalized at the March 2000 board meeting. The fall general season bag limit was changed from 1 bull to 1 caribou, and RC877 and RC878 were combined to create RC879, with season dates of 1 November through 31 March and no motorized restrictions. However, the area open to hunting the White Mountains caribou herd was reduced because the FCH hunt boundary was moved northwest from the Steese Highway to Preacher and American Creeks, removing a portion of the eastern area for hunting White Mountains caribou. In March 2002 the board changed the fall caribou bag limit back to 1 bull because cow harvests in 2000 and 2001 approached sustainable limits. In RY12 WMCH was made part (Zone 4) of the Fortymile registration hunts RC860 and RC867.

## **MANAGEMENT DIRECTION**

### **MANAGEMENT GOALS**

- Ensure that increased recreational use and mining development do not adversely affect the White Mountains caribou herd.
- Provide the greatest sustained opportunity for hunting caribou.
- Provide an opportunity to view and photograph caribou.

### **MANAGEMENT OBJECTIVE**

- Maintain a stable or increasing population with a fall bull:cow ratio of at least 30 bulls:100 cows.

## **METHODS**

### **POPULATION STATUS AND TREND**

#### *Population Size*

Due to unfavorable weather and because the herd did not aggregate, we were unable to photocensus WMCH in 2012 and 2013.

#### *Population Composition*

We conducted composition surveys on 26 September 2012 and 10 October 2013 using an R-44 helicopter and a Bellanca Scout fixed-wing aircraft. The biologist in the fixed-wing aircraft

located the radiocollared caribou. A biologist in the R-44 helicopter attempted to classify all caribou that were in groups with radiocollared animals and also classify caribou found in a search of the surrounding area. We searched areas containing the majority of the radiocollared caribou and also classified caribou encountered while in transit between search areas. We assumed bulls and cows were thoroughly mixed since surveys were conducted during the month of the rut. Classification categories consisted of cows; calves; and large, medium, and small bulls. Observers identified bulls by the absence of vulva and classified bulls by antler characteristics (Eagan 1993). We tallied the composition of each group on a 5-position counter and recorded the tallies on a data sheet.

#### *Distribution and Movements*

We strived to maintain at least 20 radiocollared caribou in WMCH and relocate them a minimum of once per month (excluding December and January) to monitor distribution and movements.

### **MORTALITY**

#### *Harvest*

We estimated harvest by using data from returned harvest ticket and registration permit report cards. For RY12 and RY13, caribou harvested in the Beaver Creek drainage and west of Preacher and American Creeks in Unit 25C (Fortymile caribou hunt Zone 4) were considered WMCH animals; caribou harvested in the Chatanika river drainage in Unit 20B, Birch Creek drainage, and south and east of Preacher and American creeks were considered FCH animals. To separate harvest of the White Mountains herd from the Ray Mountains herd in Unit 20F, we considered caribou killed south of the Yukon River to be White Mountains herd animals. Harvest data were summarized by regulatory year.

## **RESULTS AND DISCUSSION**

### **POPULATION STATUS AND TREND**

#### *Population Size and Composition*

During fall composition surveys in 2012 and 2013 we classified 336 and 328 caribou, respectively (Table 1). We met our bull:cow ratio objective during 2012 but fell slightly below the objective during 2013.

Fall bull:cow ratios in WMCH have been variable (23–62 bulls:100 cows during 1983–2012). This probably reflects biased sampling because bulls are often segregated after the rut (e.g., surveys conducted in 1991 and 1995). Surveys conducted early in the fall (i.e., 29 September–6 October) tend to yield higher bull:cow ratios than surveys conducted later. Differences in composition among years may also be attributed to behavior of WMCH. Because these caribou are usually in small, scattered groups and can be in timbered areas, it is easy to miss groups, and this could affect overall composition estimates.

Low productivity (i.e., calf:cow ratios of 15–20, 2012 and 2013) suggests this herd is in decline.

#### *Distribution and Movements*

Calving in WMCH is often widespread and dispersed, which appears to have changed little since Durtsche and Hobgood (1990) observed calving behavior in the White Mountains. This

dispersed calving behavior is not unlike other small mountain herds (e.g., Barten et al. 2001, Bergerud et al. 2008). Calving occurs primarily in the higher elevations east of Beaver Creek, including the Nome, Fossil, Cache, and Preacher Creek drainages. Some scattered calving also occurs west of Beaver Creek. Postcalving aggregations occur from mid-June to late July east of Beaver Creek to Mount Prindle. Prior to RY02, WMCH caribou often moved north of Beaver Creek and wintered in upper Hess and Victoria Creeks and the upper Tolovana river drainages, although some wintered in the Preacher Creek drainage west of Circle. The western wintering area burned in 1988, followed by a perceived shift of caribou away from the western wintering area. Most of the herd wintered in the Preacher Creek drainage during RY04–RY09; the Beaver and Preacher Creek drainages during RY10–RY11; and the Beaver, Preacher, and Upper Birch creek drainages during RY12–RY13.

Fortymile herd caribou crossed to the north side of the Steese Highway in autumn 2008. On 9 October 2008, some mixing with WMCH was documented during a composition survey. When FCH traveled back toward the core of their traditional range in February and March 2009, some WMCH animals went with them. On 29 March and 22 April 2009, 5 radiocollared yearling and 2-year-old female WMCH caribou were found in the upper Salcha and Goodpaster Rivers, 80–120 miles from their typical winter range. These far-ranging White Mountains herd animals remained with FCH at least through April and had returned to WMCH by 16 June 2009 when we radiotracked the herd. Again, during winters 2012–2013 and 2013–2014, several radiocollared White Mountains caribou were located with Fortymile caribou in the upper Salcha and Goodpaster river drainages.

**MORTALITY**

*Harvest*

Season and Bag Limit (RY12–RY13).

Season/Hunt conditions	General hunt	Registration hunt
<i>Fall season</i>	10 Aug–20 Sep <sup>a,b</sup>	Hunt RC860 10 Aug–30 Sep <sup>a</sup> 10 Aug–20 Sep <sup>b</sup>
Hunt area	Units 20B and 20F west of the Elliott and Dalton Highways.	Units 20B and 20F east of the Elliott and Dalton Highways, and Unit 25C.
Bag limit	1 bull	1 bull
<i>Winter season</i>	None	Hunt RC867 1 Dec–31 Mar <sup>a</sup> Closed <sup>b</sup>
Hunt area		Units 20B and 20F east of the Elliott and Dalton Highways, and Unit 25C.
Bag limit		1 caribou

<sup>a</sup> Residents.

<sup>b</sup> Nonresidents.

Alaska Board of Game Actions and Emergency Orders. The board passed new regulations for RY12 that combined the FCH and WMCH seasons under 1 registration permit (RC860 during fall and RC867 during winter). An additional hunt zone (Zone 4: portions of Units 20B, 20F and 25C) was created to better manage WMCH harvest under these permits. Previous board actions are addressed in the background section of this report.

Harvest During Fall. Harvest during fall general season hunts was low from RY87 to RY99 ( $\bar{x}$  = 16.46; range 6–26). Fall harvest peaked in RY00 at 51 (Table 2) when Fortymile caribou herd animals came north of the Steese Highway and may have been the source of many of the 51 caribou taken. Additionally, RY00 was the first year that cow caribou were legal in the fall hunt, and harvest of cows contributed 20 of the 51 caribou in the reported harvest. The bag limit was changed to bull only in RY02, and FCH had not returned to the area in large numbers during the fall general season since RY00. Due to these factors, the fall harvest declined to previous levels through RY11. The fall hunt was converted to a registration permit hunt (RC860, Zone 4) in RY12, and harvest of bulls was unchanged ( $\bar{x}$  = 11.3, RY02–RY11;  $\bar{x}$  = 12.0, RY12–RY13).

Harvest During Winter. Historically, harvest has been low for winter registration hunt RC879 probably because the vast majority of the permits issued go unused (Table 3). This trend continued with 275 permits issued, 198 unused and 3 caribou reported taken in RY10 and 200 permits issued, 153 unused and 4 caribou reported taken in RY11. In RY12 the winter hunt was included in the Fortymile registration permit hunt (RC867, Zone 4), and harvest remained extremely low (0–3 caribou).

Based on sustainable harvest rates for the adjacent Delta caribou herd, also a small mountain herd, we manage the White Mountains herd at a harvest level of  $\leq 3\%$  (Seaton 2009). Based on an estimated population of 500–600 animals, harvest rates have averaged 3.09% (17/550) during the last 5-year period (RY09–RY13).

Hunter Residency and Success. During RY12 and RY13 all 27 White Mountains caribou were harvested by resident hunters residing outside of Unit 25C (Table 4). Success rates for all hunters were relatively low ( $\bar{x}$  = 12.9%) during this same period. The low success rates were probably due to the relative inaccessibility of caribou during both fall and winter hunts seasons.

Harvest Chronology. From RY90 (when winter seasons opened) through RY11, 86% (440/509) of the harvest occurred during the fall season (10 August–20 September). During RY12–RY13, 89% (24/27) of the harvest occurred during the fall season.

Transport Methods. The most common method of transportation used by successful hunters during the fall seasons of RY12 and RY13 was 3- or 4-wheelers ( $\bar{x}$  = 64%; Table 5). Because of limited participation and low harvests, transportation methods for the winter hunts have little meaning, but in hunts where motorized access was allowed during winter, the vast majority of harvest was by hunters who used snowmachines.

Winter travel in the White Mountains can be difficult for hunters, but extension of developed trails and cabins provided by BLM is making winter access easier. However, access trails have not been well developed in caribou wintering areas, and caribou frequent dense spruce forest in winter, making hunting difficult (Seaton 2011).

## **HABITAT ASSESSMENT AND ENHANCEMENT**

Much of the western portion of the White Mountains herd range burned in 1988, and much of the central portion of their range burned in 2004 and 2005. These fires have appeared to change seasonal movement patterns somewhat, but the long-term implications of these habitat changes are not yet understood. BLM continues to improve access to the White Mountains Recreation area, which includes most of the herd's range. This improved access may bring more human activity to portions of the herd's range and may degrade those habitats for the caribou through disturbance (Seaton 2011).

## **CONCLUSIONS AND RECOMMENDATIONS**

Fall bull:cow ratios during RY10–RY11 were at or slightly below our management objective of  $\geq 30$  bulls:100 cows. Because we were not able to conduct censuses of the herds in 2013 and 2014, we are uncertain if we met our objective to maintain a stable or increasing population. Successful completion of population censuses has been problematic due to unfavorable weather 3 of the last 4 years.

Mixing of the Fortymile and White Mountains caribou has and will continue to be a significant challenge in managing these herds as separate populations. Herd overlap, or mixing, already has created harvest allocation issues. Regulatory changes in RY12 that combined the Fortymile and White Mountains caribou herds seasons under one registration permit during the fall and winter hunts and adding Zone 4 to the hunt addresses allocation issues, at least temporarily. In addition, herd mixing has made it difficult to capture and radiocollar caribou belonging to WMCH, which makes it difficult to maintain an adequate sample size to estimate abundance, productivity, and survival. If FCH begins to use the White Mountains for calving, as they did in the past, that would leave us with no functional way of delineating the 2 herds. Likewise, if FCH growth and range expansion continues, it may completely engulf WMCH whereby management of the 2 herds as distinct populations will be moot.

When the FCH harvest was liberalized in RY00, hunting pressure on WMCH seemed to decrease. However, with BLM's improved access in this area, increased hunter effort and harvest during fall may occur in the future, particularly if opportunities to hunt other Interior caribou herds decline. To date, no measurable increases have been observed.

By working closely with BLM, we monitored increases in recreational uses and development. We should continue to participate in agency and public meetings about development of BLM lands in the White Mountains caribou herd's range. This cooperation will help effect better management strategies for the White Mountains caribou.

Protection of key seasonal ranges from mining and recreational development should be considered during any land use planning. Key ranges include known and historic calving areas, summer ranges, wintering areas, and movement corridors.

## **REFERENCES CITED**

Barten, N. L., R. T. Bowyer, and K. J. Jenkins. 2001. Habitat use by female caribou: tradeoffs associated with parturition. *Journal of Wildlife Management* 65:77–92.

- Bergerud, A. T., S. N. Luttich, and L. Camps. 2008. The return of caribou to Ungava. McGill-Queen's University Press, Montreal, Canada.
- Durtsche, B. M., and W. Hobgood. 1990. Distribution, movements and seasonal use areas of caribou in the White Mountains National Recreation Area, Alaska, 1982–1988. U.S. Department of the Interior, Bureau of Land Management BLM-Alaska Open File Report 29, Anchorage.
- Eagan, R. M. 1993. Delta herd caribou. Pages 122–147 [In] S. M. Abbott, editor. Caribou management report of survey and inventory activities 1 July 1990–30 June 1992. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Study 3.0, Juneau.
- Jones, F. F. 1961. Movements, distribution, and numbers: Steese–Fortymile herd. Pages 91–101 [In] Caribou Investigations. Annual Report of Progress 1 April 1960–31 March 1961. Alaska Department of Fish and Game, Division of Game, Federal Aid in Wildlife Restoration Project W-6-R-2, Juneau.
- Seaton, C. T. 2009. Unit 20A caribou. Pages 122–135 [In] P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2006–30 June 2008. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.
- Seaton, C. T. 2011. Units 25C, 20B, and 20F caribou. Pages 271–282 [In] P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.
- Valkenburg, P. 1988. Units 20B, 20F, 25C, and 25D White Mountains caribou. Pages 51–53 [In] S. O. Morgan, editor. Caribou management report of survey and inventory activities 1 July 1986–30 June 1987. Alaska Department of Fish and Game, Division of Game, Federal Aid in Wildlife Restoration Study 3.0, Juneau.
- Valkenburg, P., D. A. Anderson, J. L. Davis, and D. J. Reed. 1985. Evaluation of an aerial photocensus technique for caribou based on radio-telemetry. Pages 287–299 [In] T. C. Meredith, and A. M. Martell, editors. Proceedings of 2nd North American Caribou Workshop, Val Morin, Quebec, 17–20 October 1984. McGill Subarctic Research Station, Research Paper No. 40, Schefferville, Quebec, Canada.

**PREPARED BY:**

Donald D. Young, Jr.  
Wildlife Biologist III

**APPROVED BY:**

Jackie J. Kephart  
Assistant Management Coordinator

**REVIEWED BY:**

Torsten W. Bentzen  
Wildlife Biologist III

Laura A. McCarthy  
Publications Technician II

Please cite any information taken from this section, and reference as:

Young Jr., D. D. 2015. Units 25C, 20B, and 20F caribou. Chapter 16, pages 16-1 through 16-12 [In] P. Harper and L. A. McCarthy, editors. Caribou management report of survey and inventory activities 1 July 2012–30 June 2014. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2015-4, Juneau.

---

The State of Alaska is an Affirmative Action/Equal Opportunity Employer. Contact the Division of Wildlife Conservation at (907) 465-4190 for alternative formats of this publication.

---



Table 1. White Mountains caribou herd fall composition counts and estimated population size, Alaska, 1989–2014.

Date	Bulls:100 Cows	Large bulls: 100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Small bulls (% of bulls)	Medium bulls (% of bulls)	Large bulls (% of bulls)	Total bulls (%)	Composition sample size	Estimate of herd size
10/6/89	50	11	36	19	54	46	33	22	27	744	750–1,000
10/11/91	23	5	24	16	68	44	35	21	15	312	
10/29/91 <sup>a</sup>				15						324	761 <sup>b</sup> –1,000
10/13/92	39	12	23	14	62	52	18	30	24	247	832 <sup>b</sup> –1,200
9/27/93	48	21	22	13	59	34	23	43	28	497	
10/4/94	39	16	25	15	61	34	24	42	24	418	
10/16–17/95	36	10	31	19	60	44	27	29	22	418	
10/2/96	44	9	54	27	50	60	20	20	22	513	
10/2/97	34	11	38	22	58	50	19	31	20	341	
10/2/98	50	11	18	11	60	42	37	21	30	759	961 <sup>b</sup> –1,100
9/30/99	62	16	39	20	47	33	40	26	31	644	
9/29/00	54	11	13	8	60	40	40	20	32	399	687 <sup>b</sup> –800
9/25/01	57	11	26	14	55	46	36	19	31	441	700–800
9/24/02	34	7	29	18	61	44	35	21	21	405	
10/5/03	30	11	17	11	68	40	22	38	20	308	
10/5/04	35	6	23	15	63	32	49	18	22	321	642 <sup>b</sup> –733 <sup>c</sup>
10/6/05	44	18	21	13	61	33	27	40	27	391	514 <sup>b</sup>
10/16/06	36	9	20	13	64	43	31	26	23	362	
10/10/07	39	7	37	21	57	54	27	19	22	358	590 <sup>b</sup>
10/9/08 <sup>d</sup>	46	12	42	23	53	42	31	27	24	507	677 <sup>b</sup> –762 <sup>c</sup>
10/7/09	42	9	15	9	64	44	34	22	27	333	529 <sup>b</sup> –605 <sup>c</sup>
10/1/10	40	10	23	14	61	49	26	26	25	443	
10/4/11	50	14	24	14	58	42	30	27	29	435	423 <sup>b</sup> –517 <sup>c</sup>
9/26/12	31	10	15	10	68	25	41	34	21	336	
10/3/13	27	10	20	13	68	32	30	38	18	328	
2014 <sup>e</sup>											

<sup>a</sup> Conducted with fixed-wing aircraft instead of helicopter.

<sup>b</sup> Minimum count from summer census.

<sup>c</sup> Estimate based on radio-search technique (Valkenburg et al. 1985).

<sup>d</sup> Some mixing with the Fortymile caribou herd occurred; therefore this data is less representative of the White Mountains herd alone.

<sup>e</sup> No census or composition survey.

Table 2. White Mountains caribou harvest during fall season<sup>a</sup>, Alaska, regulatory years<sup>b</sup> 2000–2013.

Regulatory year	General season harvest			
	Bull	Cow	Unk	Total
2000	30	20	1	51
2001	15	8	0	23
2002	11	0	1	12
2003	6	0	0	6
2004	12	0	0	12
2005	6	0	0	6
2006	6	0	0	6
2007	11	0	0	11
2008	18	1	0	19
2009	11	0	0	11
2010	21	1 <sup>c</sup>	0	22
2011	7	1 <sup>c</sup>	0	8
2012 <sup>d</sup>	19	0	0	19
2013 <sup>d</sup>	5	0	0	5

<sup>a</sup> General season (excludes winter permit hunt harvest).

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

<sup>c</sup> Illegal take.

<sup>d</sup> White Mountains caribou harvest made part of Fortymile registration hunt RC860 (Zone 4).

Table 3. White Mountains caribou herd harvest during winter season, Alaska, regulatory years<sup>a</sup> 2000–2013.

Hunt	Regulatory year	Permits issued	Did not hunt (% <sup>b</sup> )	Unsuccessful hunters (%)	Successful hunters (%)		Bulls	Cows	Unk	Harvest
RC879	2000	333	137 (41)	186 (95)	10	(5)	4	6	0	10
	2001	405	260 (64)	128 (88)	17	(12)	15	1	1	17
	2002	313	200 (64)	111 (98)	2	(2)	2	0	0	2
	2003	259	198 (76)	60 (98)	1	(2)	1	0	0	1
	2004	137	104 (76)	32 (97)	1	(3)	1	0	0	1
	2005	186	142 (76)	43 (98)	1	(2)	1	0	0	1
	2006	271	222 (82)	49 (100)	0	(0)	0	0	0	0
	2007	410	300 (73)	109 (99)	1	(1)	0	1	0	1
	2008	233	181 (78)	49 (94)	3	(6)	2	1	0	3
	2009	111	62 (56)	39 (80)	10	(20)	9	1	0	10
	2010	275	198 (72)	74 (96)	3	(4)	2	1	0	3
RC867 <sup>c</sup>	2011	200	153 (77)	43 (91)	4	(9)	0	4	0	4
	2012	Unk	Unk	Unk	3	(50)	1	2	0	3
	2013 <sup>d</sup>									

<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> Includes those who did not report.

<sup>c</sup> The White Mountains caribou herd hunt was absorbed into the Fortymile caribou hunt (Zone 4). Permits were not segregated by zone, therefore the number of permits issued, number that did not hunt, and number that were unsuccessful cannot be determined.

<sup>d</sup> Winter hunt canceled.

Table 4. White Mountains caribou herd hunter residency and success, Alaska, regulatory years<sup>a</sup> 2008–2013.

Regulatory year	Successful				Unsuccessful				Total hunters
	Unit <sup>b</sup> resident	Non-Unit resident	Nonresident	Total (%)	Unit <sup>b</sup> resident	Non-Unit resident	Nonresident	Total (%)	
2008 <sup>c</sup>	13	3	3	19 (17)	59	31	6	96 (83)	115
2009 <sup>c</sup>	6	2	3	11 (10)	62	28	5	95 (90)	106
2010 <sup>c</sup>	15	4	3	22 (17)	65	32	7	104 (83)	126
2011 <sup>c</sup>	5	2	1	8 (8)	55	30	6	91 (92)	99
2012 <sup>d</sup>	0	22	0	22 (19)	0	81	10	91 (81)	113
2013 <sup>d</sup>	0	5	0	5 (5)	0	75	16	91 (95)	96

<sup>a</sup> Regulatory year (RY) begins 1 July and ends 30 June (e.g., RY08 = 1 July 2008–30 June 2009).

<sup>b</sup> Residents of Units 20 and 25C, RY08–RY11; residents of Unit 25C, RY12–RY13.

<sup>c</sup> Includes only fall general season hunts.

<sup>d</sup> Includes both fall (RC860, Zone 4) and winter (RC867, Zone 4) registration permit hunts.

Table 5. White Mountains caribou herd percent harvest by transport method, Alaska, regulatory years<sup>a</sup> 2008–2013.

Regulatory year	Percent harvest by transport method								<i>n</i>
	Airplane	Horse	Boat	3- or 4-Wheeler	Snowmachine	ORV <sup>b</sup>	Highway vehicle	Other/Unk	
2008 <sup>c</sup>	26	0	0	42	11	16	5	0	19
2009 <sup>c</sup>	18	0	0	73	9	0	0	0	11
2010 <sup>c</sup>	14	0	5	73	5	0	5	0	22
2011 <sup>c</sup>	0	0	0	63	0	0	25	13	8
2012 <sup>d</sup>	5	0	0	68	14	0	0	9	22
2013 <sup>d</sup>	20	0	20	60	0	0	0	0	8

<sup>a</sup> Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2008 = 1 July 2008–30 June 2009).

<sup>b</sup> Other off-road vehicles.

<sup>c</sup> Includes only fall general season hunts.

<sup>d</sup> Includes both fall (RC860, Zone 4) and winter (RC867, Zone 4) registration permit hunts.