

Caribou Management Report and Plan, Game Management Units 7 and 15:

Report Period 1 July 2012–30 June 2017, and
Plan Period 1 July 2017–30 June 2022

Jason Herreman



2020

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Species management reports and plans provide information about species that are hunted or trapped and management actions, goals, recommendations for those species, and plans for data collection. Detailed information is prepared for each species every 5 years by the area management biologist for game management units in their areas, who also develops a plan for data collection and species management for the next 5 years. This type of report is not produced for species that are not managed for hunting or trapping or for areas where there is no current or anticipated activity. Unit reports are reviewed and approved for publication by regional management coordinators and are available to the public via the Alaska Department of Fish and Game's public website.

This species management report and plan was reviewed and approved for publication by Dave Battle, Acting Management Coordinator for the Division of Wildlife Conservation.

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Contents

Purpose of this Report.....	1
I. 2012–2016 Management Report	1
Management Area	1
Summary of Status, Trend, Management Activities, and History of Caribou in Units 7 and 15 ...	5
Management Direction.....	6
Existing Wildlife Management Plans	6
Goals	6
Codified Objectives	6
Amounts Reasonably Necessary for Subsistence Uses	7
Intensive Management	7
Management Objectives.....	7
Management Activities	7
1. Population Status and Trend	7
2. Mortality-Harvest Monitoring and Regulations.....	8
3. Habitat Assessment–Enhancement	15
Nonregulatory Management Problems or Needs	15
Data Recording and Archiving	15
Agreements	16
Permitting.....	16
Conclusions and Management Recommendations	16
II. Project Review and RY17–RY21 Plan	16
Review of Management Direction	16
Goals	17
Codified Objectives	17
Amounts Reasonably Necessary for Subsistence Uses	17
Intensive Management	17
Management Objectives.....	17
Kenai Lowlands Caribou Herd	17
Kenai Mountain, Killey River, and Fox River Caribou Herds	17
Review of Management Activities.....	17
1. Population Status and Trend	17
2. Mortality–Harvest Monitoring.....	18
3. Habitat Assessment–Enhancement	18
Nonregulatory Management Problems or Needs	18
Data Recording and Archiving	18
Agreements	18
Permitting.....	18
References Cited	18

List of Figures

Figure 1. Map showing Game Management Unit 7 boundaries, Seward, Alaska.	2
Figure 2. Map showing Game Management Unit 15 boundaries, Kenai, Alaska.	4

List of Tables

Table 1. Minimum count herd surveys for caribou herds in Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	8
Table 2. Hunting seasons and bag limits for Kenai Peninsula caribou herds from regulatory years 2012 to 2016.	9
Table 3. Kenai Mountain herd harvest by sex and harvest effort from regulatory years 2012 to 2016.	10
Table 4. Killey River herd harvest by sex and harvest effort from regulatory years 2012 to 2016.	10
Table 5. Fox River caribou herd harvest by sex and harvest effort, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	11
Table 6. Hunter success by residency for the Kenai Mountain herd harvest, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	12
Table 7. Hunter success by residency for the Killey River herd harvest, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	12
Table 8. Hunter success by residency for the Fox River herd harvest, Kenai Peninsula Alaska, regulatory years 2012 to 2016.	13
Table 9. Kenai Mountains herd State harvest chronology by week, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	13
Table 10. Killey River herd harvest chronology by week, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	13
Table 11. Fox River herd harvest chronology by week, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	14
Table 12. Kenai Mountains herd, number of successful hunters by transport method, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	14
Table 13. Killey River herd, number of successful hunters by transport method, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	14
Table 14. Fox River herd, number of successful hunters by transport method, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.	14

Purpose of this Report

This report provides a record of survey and inventory management activities for caribou in Units 7 and 15 for the 5 regulatory years 2012–2016 and plans for survey and inventory management activities in the following 5 regulatory years 2017–2021. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY10 = 1 July 2010–30 June 2011). This report is produced primarily to provide agency staff with data and analysis to help guide and record its own efforts but is also provided to the public to inform it of wildlife management activities. In 2016 the Alaska Department of Fish and Game’s Division of Wildlife Conservation launched this 5-year report to more efficiently report on trends and describe potential changes in data collection activities over the next 5 years. It replaces the caribou management report of survey and inventory activities that was previously produced every 2 years.

I. RY12–RY16 Management Report

Management Area

Units 7 and 15 combined make up an area approximately 8,397 mi², which encompasses the Kenai Peninsula. The Kenai Peninsula has 3 major population centers including Seward, Kenai/Soldotna, and Homer, as well as numerous smaller towns interspersed throughout the Peninsula. The U.S. Fish and Wildlife Service is the largest land manager on the Kenai Peninsula with land in all units.

Unit 7 is approximately 3,520 mi² in area, and consists of the eastern portion of the Kenai Peninsula bounded by the western edge of the Kenai Mountains, the Russian River, and the Harding Ice Field on the west, and the western edge of the Sargent Ice Field and eastern edge of Spencer Glacier on the east (Fig. 1). The landscape of Unit 7 consists of mountainous terrain interspersed with river and creek drainages, a few large lakes, and ice fields. Riparian areas and hillsides are densely forested until reaching the alpine zone. Approximately 78% of Unit 7 is comprised of federally managed lands; 50% U.S. Forest Service, Chugach National Forest; 22% National Park Service, Kenai Fjords National Park; 5% U.S. Fish and Wildlife Service, Kenai National Wildlife Refuge; and 1% other federal land.

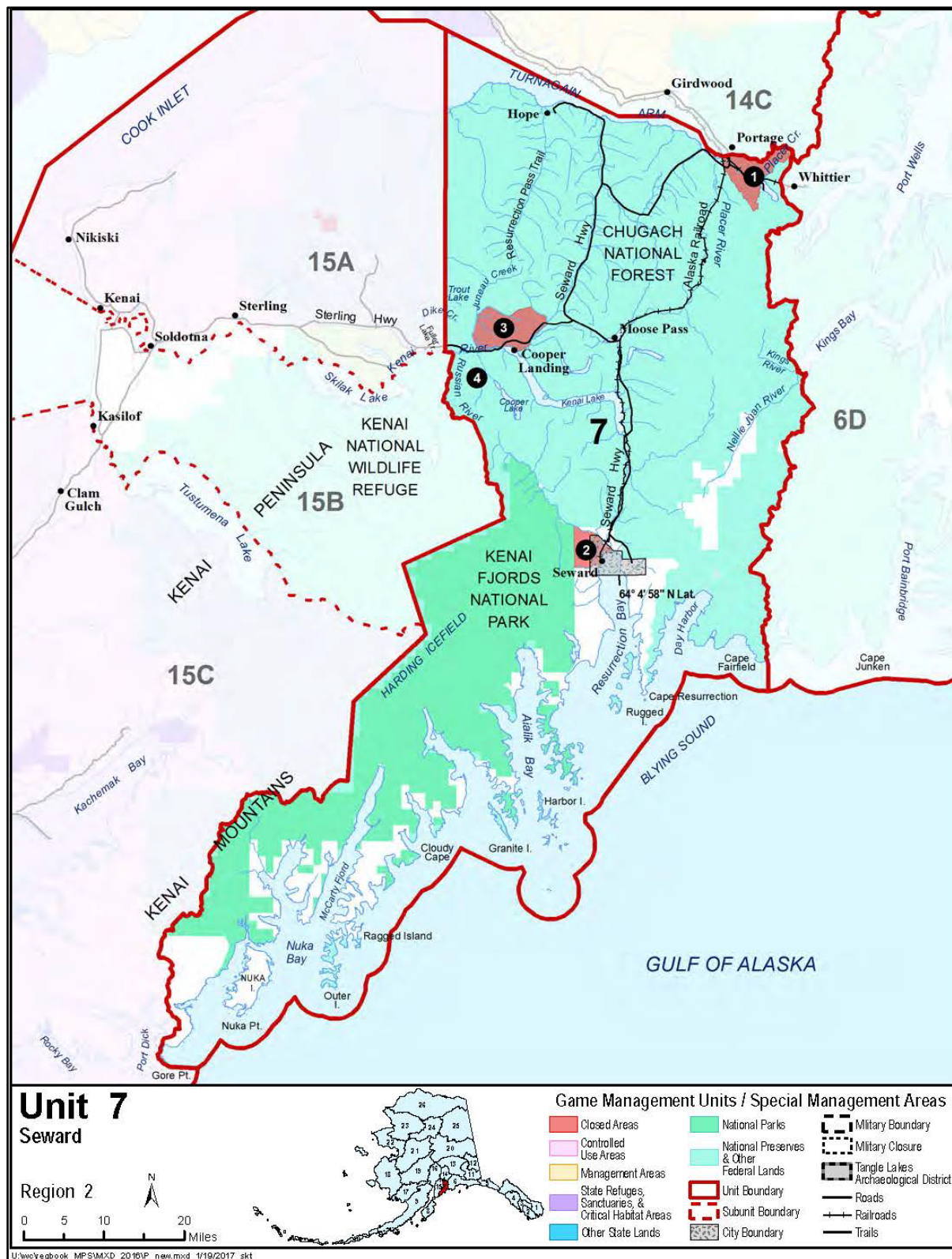


Figure 1. Map of Unit 7, Alaska boundaries, with indicators of controlled use areas (numbered circles) as found in the Alaska Hunting Regulations, administrative subunits, and federal lands.

Unit 15 incorporates the western portion of the Kenai Peninsula and is broken up into three subunits 15A (1,314 mi²), 15B (1,121 mi²), and 15C (2,441 mi²). Each subunit is significantly different in its topography, flora, and ecological history. Unit 15A is the most northern subunit separated from Unit 15B by the Kenai River and Skilak Lake. Unit 15C is the most southerly subunit separated from Unit 15B by the Tustumena Glacier, Tustumena Lake, and the Kasilof River (Fig. 2).

Unit 15A is relatively flat with a multitude of small lakes leading up to the foothills of the Kenai Mountains in the east. The dominant flora is a mixed spruce/hardwood climax community. The Kenai National Wildlife Refuge is the largest landholder in Unit 15A. No significant habitat disturbance has occurred in Unit 15A since the last large wildfire that occurred in 1969 and encompassed approximately 85,306 acres.

The Kenai National Wildlife Refuge is also the largest landholder in Unit 15B. The western portion of Unit 15B is similar to Unit 15A in topography and flora. As you go east however, Unit 15B becomes more mountainous and transitions into an alpine ecosystem. Forests within Unit 15B succumbed to widespread spruce bark beetle (*Dendroctonus rufipennis*) infestations that began in the 1990s. Unlike Unit 15A, Unit 15B recently experienced significant habitat turnover with the 2014 Funny River Fire that burned approximately 196,610 acres total, the majority of which was in Unit 15B. This fire burned in a mosaic pattern and should provide good wildlife habitat in the near future.

Unit 15C is significantly different from Units 15A and 15B. Refuge lands make up only a small portion of the unit in the northeast corner. The rest of Unit 15C is a mix of state, private, and municipal land ownership. The portion of Unit 15C north of Kachemak Bay and the Fox River peaks in the Caribou Hills and the Ninilchik Domes sloping down to the lowlands. Very few small lakes are present but numerous riparian areas exist which drain from the highlands. Dominant vegetation is a mosaic consisting of spruce (*Picea* sp.), willow (*Salix* sp.), reed grass (*Calamagrostis* sp.; particularly in salvage logged areas), alder (*Alnus* sp.), and some hardwood stands (*Betula* sp. and *Populus* sp.). The portion of Unit 15C north of Kachemak Bay has seen fairly consistent habitat disturbance over the past two decades in the form of wildfires, beetle kill, logging, and human development. The portion of Unit 15C south of Kachemak Bay and the Fox River consists of a very different ecotype compared to the northern portion of Unit 15C as it is comprised primarily of coastal temperate rain forest and subalpine habitat.

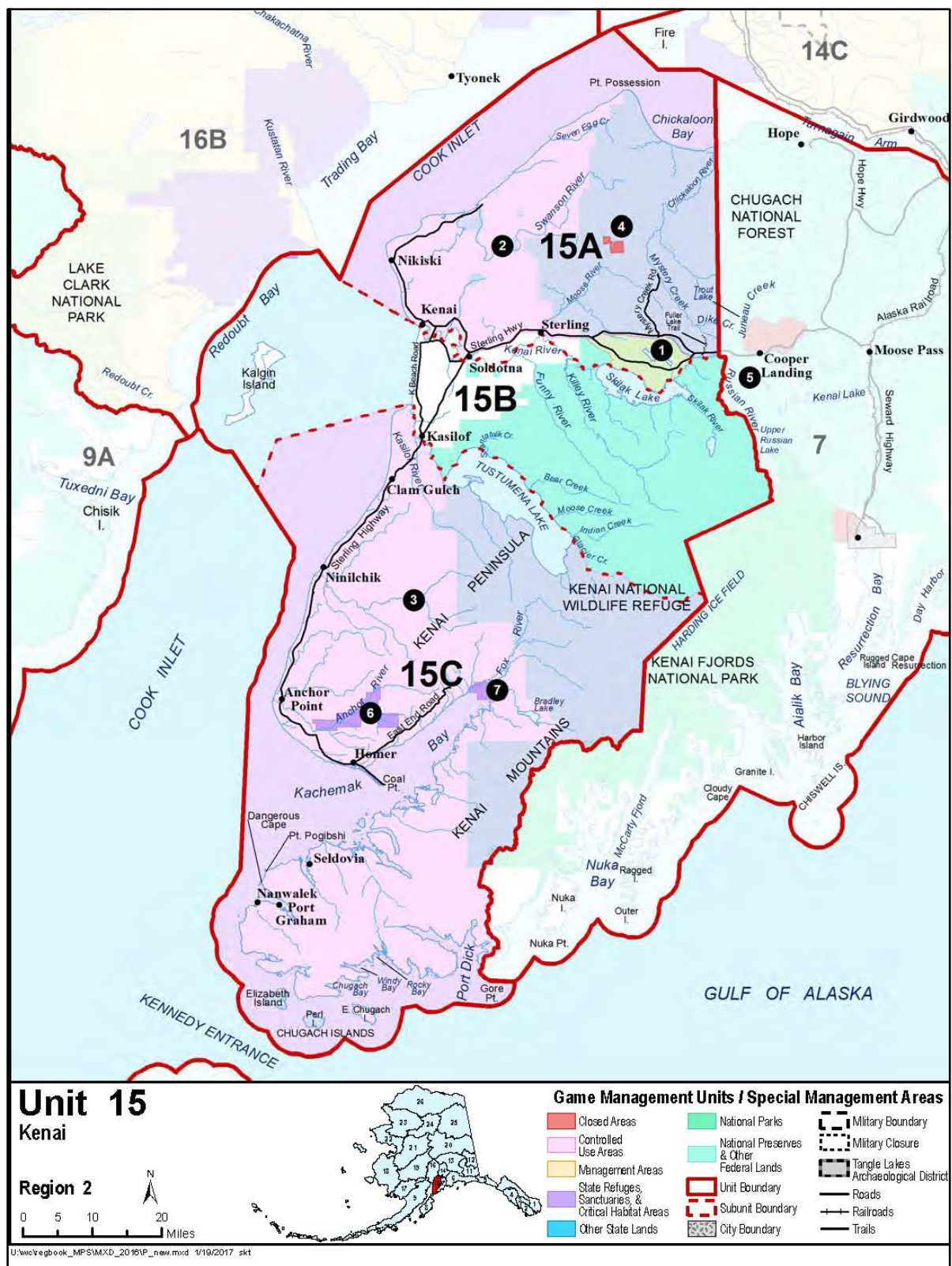


Figure 2. Map of Unit 15, Alaska boundaries, with indicators of controlled use areas (numbered circles) as found in the Alaska Hunting Regulations, administrative subunits, and federal lands.

Summary of Status, Trend, Management Activities, and History of Caribou in Units 7 and 15

Historical reports indicate caribou were abundant on the Kenai Peninsula before a series of large fires in the late 1800s, including a massive fire in 1883 (Sherwood 1974). This large-scale disturbance may have destroyed much of the lichen forage used by caribou and, due to long regeneration times for this important winter forage, may have influenced their population decline. Additionally, Allen (1901) reported that caribou "...are already very scarce on the Kenai Peninsula, and will doubtless soon be exterminated...native hunters kill the Moose and Caribou for their heads, disposing of them at good prices for shipment to San Francisco." It is likely large-scale fires coupled with unregulated hunting caused caribou to be extirpated from the Kenai Peninsula by the early twentieth century.

Currently there are 4 recognized herds on the Kenai Peninsula, which were established through reintroduction efforts. Reintroductions in 1965 and 1966 established the Kenai Mountain (KMCH) and Kenai Lowlands (KLCH) herds. Additional introductions in 1985 and 1986 established the Killey River (KRCH) and Fox River (FRCH) herds.

The KMCH in Unit 7 ranges over 870 mi² primarily in the drainages of Chickaloon River, Big Indian Creek, and Resurrection Creek. The herd grew to more than 200 animals 7 years after the 1965 reintroduction (Alaska Department of Fish and Game et al. 1994) and numbered more than 400 by the mid-1980s (Selinger 2003). The population declined twice after it exceeded 400 animals (Alaska Department of Fish and Game et al. 1994, Selinger 2003). Reasons for these declines are unknown, but do not appear to be related to hunting pressure. In recent years, the herd has declined to around 200 animals and is centered on the Big Indian Creek drainage. The herd has been hunted since 1972 when a registration hunt was first implemented. From 1972 to 1976, the department issued an unlimited number of registration permits, and the season was closed by emergency order when the harvest exceeded sustainable limits (Alaska Department of Fish and Game et al. 1994, Spraker 2001). In 1977, a limited drawing permit system was implemented and remains in place to this day. Past fluctuations in population size suggest the carrying capacity for this herd is 200–400 caribou and is restricted presumably due to limited winter range.

The KLCH summers north of the Kenai airport toward the Swanson River in Unit 15A and in the extreme northwestern portion of Unit 15B. The population winters from the headwaters of the Moose River to the outlet of Skilak Lake and in the area around Browns Lake. Its range encompasses about 746 mi², and animals can often be found in and around the communities of Soldotna, Kenai, and Sterling. Population numbers slowly increased to what was previously considered a harvestable number in 1981 (Holdermann 1981). Presently the herd is estimated at about 100 individuals. Growth in this population has likely been limited by predation. Free-ranging domestic dogs (*Canus lupus familiaris*), coyotes (*Canus latrans*), and wolves (*Canus lupus*) are the primary predators. Hunts were held in 1981, 1989, 1990, 1991, and 1992, but no permits have been issued since 1992 (Selinger 2005). The KLCH is the most visible herd on the Kenai and animals are frequently observed near the towns of Kenai and Soldotna during the summer. While establishing a huntable population remains an objective for this herd, it has become valued for providing viewing opportunities for residents and visitors.

The KRCH inhabits over 373 mi² including the upper drainages of the Funny and Killey rivers, and north to the Skilak River in Unit 15B. The KRCH is estimated to include around 500 individuals. This herd grew steadily to more than 700 animals until 2001, when avalanches killed over a quarter of the population (Selinger 2003). Due to the nature of the landscape, avalanches may be a significant limiting factor for KRCH. The KRCH has been hunted since 1994 under a limited drawing or registration permit system.

The FRCH has the smallest range of all Kenai herds extending about 75 mi² south of the Tustumena Glacier between upper Fox River and Truuli Creek in Unit 15C. The FRCH peaked in 1998 (Spraker 2001) and again in 2012 (Herreman 2015) at around 100 caribou. A survey in 2014 counted 90 caribou in the herd. A limited number of drawing permits were issued for this herd from 1995 to 2003 when it was thought the population could sustain a limited harvest (Spraker 2001, Selinger 2005). From 2004 to 2010, no hunting permits were issued due to low survey estimates. In 2010, 75 caribou were counted allowing us to again issue permits (Selinger 2013), and we have issued 10 drawing permits each year to hunt this herd since 2011.

It is possible there is occasional interchange of animals between the KRCH and the FRCH. To date, however, this has not been documented due to limited sample size of collared animals for these herds. No new animals have been collared since 2013. If interchange does occur, it would explain population fluctuations in the FRCH. The 2 herds are separated by a narrow (2 miles wide) glacial flat, and caribou tracks have been observed in that area.

Management Direction

EXISTING WILDLIFE MANAGEMENT PLANS

The 1976 Alaska Wildlife Management Plan (Alaska Department of Fish and Game 1976) contains two sections on Kenai caribou management: the Kenai Lowland Caribou Management Plan and the Kenai Mountains Caribou Management Plan. The Kenai Lowland plan set the following goals: 1). To provide for the optimum harvest of caribou, 2). To provide for an opportunity to view, photograph, and enjoy caribou. No harvest was to occur until the population reached 150 animals, at which time limited harvest could occur until the population reached 250 caribou, after which the annual increment could be harvested. The Kenai Mountain Plan set the goals: 1). To provide for the opportunity to take large-antlered caribou, 2). To provide for an optimum harvest of caribou, 3). To provide for the opportunity to view, photograph and enjoy caribou. Harvest was to be limited to maintain a population of 300 caribou with a 50 bull per 100 cows sex ratio post hunt.

Recent management objectives, harvest strategies, and subsequent changes have resulted from public comment, staff recommendations, and Board of Game actions, and have been reported in the division's previous species management reports. This report contains the current management plan for caribou in Units 7 and 15.

GOALS

The management goal is to provide optimum sustainable harvest for all caribou herds.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has not designated caribou a subsistence resource in Unit 7 or 15.

Intensive Management

The Alaska Board of Game has not designated caribou an Intensive Management species in Unit 7 or 15.

MANAGEMENT OBJECTIVES

KENAI MOUNTAINS CARIBOU HERD

Maintain a post hunt population of 300–400 animals.

KENAI LOWLANDS CARIBOU HERD

Increase the herd to a minimum of 150 animals. Hunting will be allowed once this objective is reached.

KILLEY RIVER AND FOX RIVER CARIBOU HERDS

Maintain viable caribou populations throughout suitable habitat and provide for opportunities to hunt these herds when deemed sustainable.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1.

Conduct herd composition surveys for each herd on a yearly basis.

Data Needs

Minimum population levels, sex ratios, and recruitment information are needed to inform guideline harvest levels and set tag distribution numbers.

Methods

Fixed wing aerial surveys are conducted on a yearly basis when appropriate conditions allow, consisting of adequate snow cover, visibility, and low turbulence.

Results and Discussion

KENAI MOUNTAINS HERD

Herd size is currently estimated at around 200 animals based on our last minimum count in 2015 (Table 1). No composition counts were conducted during the reporting period.

KENAI LOWLANDS HERD

The current herd size is estimated at 80 animals based on our most recent minimum count in 2015 and shows a declining trend (Table 1).

KILLEY RIVER HERD

The herd increased in size until 2015 and has since declined to around 350 animals (Table 1).

FOX RIVER HERD

This herd was relatively stable from 2013 to 2015 and has since declined to around 50 animals (Table 1).

Table 1. Minimum count herd surveys for caribou herds in Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Herd			
	FRCH	KLCH	KMCH	KRCH
2012	105	114	–	340
2013	70	97	130	178
2014	90	88	120	374
2015	85	80	194	481
2016	47	81	178	339

Note: Herds represented in table include: Fox River Caribou Herd (FRCH), Kenai Lowlands (KLCH), Kenai Mountains (KMCH), and Killey River (KRCH) herds.

Recommendations for Activity 1.1

Continue to conduct aerial surveys on an annual basis.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1.

Monitor harvest through permit reports.

Data Needs

Harvest must be assessed to avoid overharvest.

Methods

Harvest data are collected through permit reports and data are entered into an ADF&G's Wildlife Information Network database (WinfoNet). Harvest data is summarized by regulatory year (RY), which begins 1 July and ends June 30 (e.g., RY15 = 1 July 2015–30 June 2016).

Season and Bag Limit

Hunting seasons and bag limits are listed in Table 2. The most current seasons and bag limits may be found online at:

<http://www.adfg.alaska.gov/index.cfm?adfg=wildliferegulations.hunting>.

Table 2. Hunting seasons and bag limits for Kenai Peninsula caribou herds from regulatory years 2012 to 2016.

Herd	Season	Federal season	Bag limit	Federal bag limit
Fox River Kenai	10 Aug–20 Sept	—	1 caribou	—
Lowlands	No open season	—	1 caribou	—
Kenai Mountains ¹	10 Aug–31 Dec	10 Aug–31 Dec	1 caribou	1 caribou
Kille River ²	10 Aug–20 Sept	—	1 caribou	—

¹ The federal season that occurred from RY12–RY13 included Hope residents only; from RY14–RY15 the federal season included residents of Hope and Cooper Landing.

² The bag limit from RY12–RY14 was 1 bull, from RY15–RY16 the bag limit was 1 caribou.

Results and Discussion

Harvest by Hunters

KENAI MOUNTAINS HERD

The season for resident and nonresident hunters in Unit 7 north of the Sterling Highway and west of the Seward Highway has been 10 August–31 December since 1999. The bag limit was 1 caribou by drawing permit (DC001) with 250 permits issued each year from 1996 to 2013. The average annual harvest was 21 caribou during this period. Starting in 2014, the number of permits available was drastically reduced to 50, and was at 25 permits at the end of this reporting period. Harvest averaged 23 caribou in the first part of the reporting period, which is similar to the historical average of 24. When permit numbers were drastically reduced in 2014, harvest declined significantly (Table 3). In 2010, the federal subsistence hunt was established, which has had an average annual harvest of 2 caribou.

Table 3. Kenai Mountain herd harvest by sex and harvest effort from regulatory years 2012 to 2016.

Regulatory year	State-managed hunt				Federal subsistence hunt				Total harvest
	Permits issued	Number of hunters	Bull harvest	Cow harvest	Permits issued	Number of hunters	Bull harvest	Cow harvest	
2012	250	88	12	12	19	12	2	0	26
2013	250	119	13	6	19	13	0	0	19
2014	50	19	3	0	40	22	2	2	7
2015	25	9	1	0	27	12	0	1	2
2016	25	15	1	0	46	17	2	0	3

KENAI LOWLANDS HERD

The season has been closed since 1993.

KILLEY RIVER HERD

The season for resident and nonresident hunters in the portion of Unit 15B that is south and west of Killey River, in the Kenai National Wildlife Refuge, was 10 August–20 September. From 2004 to 2013, the bag limit was 1 bull by drawing permit (DC608), with 25 permits issued annually. Since 2014, the number of permits issued has increased significantly with the highest at 70 permits in 2015. The average annual harvest increased from 6 bulls in the previous reporting period (Herreman 2015) to 15 during the current reporting period reflecting the increase in permits (Table 4).

Table 4. Killey River herd harvest by sex and harvest effort from regulatory years 2012 to 2016.

Regulatory year	Permits issued	Number of hunters	Harvest		Total harvest
			bulls	cows	
2012	25	18	6	0	6
2013	25	9	6	0	6
2014	40	20	11	0	11
2015	70	43	25	4	29
2016	50	26	14	7	21

FOX RIVER HERD

The season for resident and nonresident hunters in a portion of Unit 15C south of Tustumena Glacier is 10 August–20 September. Drawing permits (DC618) were issued for the 2011 season for the first time since 2003 and the hunt has remained open with a bag limit of 1 caribou per hunter. Ten permits have been issued each year with an average annual harvest of 3 caribou during this reporting period (Table 5).

Table 5. Fox River caribou herd harvest by sex and harvest effort, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Permits issued	Number of hunters	Bull harvest	Cow harvest	Total harvest
2012	10	3	2	1	3
2013	10	2	1	0	1
2014	10	6	4	0	4
2015	10	5	3	1	4
2016	10	5	3	1	4

Hunter Residency and Success

Residency and success rates for the KMCH, KRCH, and FRCH state managed caribou hunts are shown in Tables 6, 7, and 8, respectively. Resident hunters account for the majority of harvest in these populations; KMCH 96%, KRCH 84%, and FRCH 100% (5-year average). The 5-year average success rate for hunters is 15% for KMCH, 60% for KRCH, and 75% for FRCH (Tables 6–8).

Harvest Chronology

Harvest chronologies for the KMCH, KRCH, and FRCH state caribou hunts are shown in Tables 9, 10, and 11, respectively. The majority of harvest within these herds occurs during the month of August and tapers off towards the end of each areas respective season.

Transport Methods

Transport methods for the KMCH, KRCH, and FRCH state caribou hunts are shown in Tables 12, 13, and 14, respectively. Caribou in these populations are off the road system and in areas where methods of access are restricted by land management agencies. Therefore, access to the hunting grounds requires long hikes, horseback trips, or access via floatplane on limited lakes. KMCH hunters primarily accessed their hunt area by highway vehicle, KRCH hunters by floatplane or boat, and FRCH hunters by boat.

Table 6. Hunter success by residency for the Kenai Mountain herd harvest, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Successful					Unsuccessful				Total hunters
	Local resident ^a	Nonlocal resident	Non-resident	Total	Percent success	Local resident ^a	Nonlocal resident	Non-resident	Total	
2012	0	23	1	24	27	4	59	1	64	88
2013	1	18	0	19	16	4	92	4	100	119
2014	0	3	0	3	16	0	16	0	16	19
2015	0	0	1	1	11	0	8	0	8	9
2016	0	1	0	1	7	0	14	0	14	15

^a Local = residents of Unit 7.

Table 7. Hunter success by residency for the Killey River herd harvest, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Successful					Unsuccessful				Total hunters
	Local resident ^a	Nonlocal resident	Non-resident	Total	Percent success	Local resident ^a	Nonlocal resident	Non-resident	Total	
2012	3	3	0	6	33	6	4	2	12	18
2013	5	1	0	6	67	1	1	1	3	9
2014	0	7	4	11	55	0	8	1	9	20
2015	0	27	2	29	67	0	12	2	14	43
2016	0	15	6	21	78	0	6	0	6	27

^a Local = residents of Unit 15.

Table 8. Hunter success by residency for the Fox River herd harvest, Kenai Peninsula Alaska, regulatory years 2012 to 2016.

Regulatory year	Successful					Unsuccessful				
	Local ^a resident	Nonlocal resident	Non-resident	Total	Percent success	Local ^a resident	Nonlocal resident	Non-resident	Total	Total hunters
2012	2	1	0	3	100	0	0	0	0	3
2013	0	1	0	1	50	0	0	1	1	2
2014	0	4	0	4	67	1	1	0	2	6
2015	0	4	0	4	80	0	1	0	1	5
2016	0	4	0	4	80	0	0	1	1	5

^a Local = residents of Unit 15.**Table 9. Kenai Mountains herd harvest chronology by week, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.**

Regulatory year	Harvest periods week ending													Total harvest
	11 Aug	18 Aug	25 Aug	1 Sep	8 Sep	15 Sep	22 Sep	29 Sep	6 Oct	13 Oct	20 Oct	15 Dec	Unknown	
2012	7	6	5	1	1	0	1	1	0	1	1	0	2	26
2013	3	5	3	3	0	3	0	0	1	0	0	1	0	19
2014	0	0	2	0	0	0	0	1	0	0	0	0	1	4
2015	0	0	0	0	0	0	0	0	1	0	0	0	0	1
2016	0	0	0	1	0	0	0	0	0	0	0	0	0	1

Table 10. Killey River herd harvest chronology by week, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Harvest periods week ending							Total harvest
	11 Aug	18 Aug	25 Aug	1 Sep	8 Sep	15 Sep	22 Sep	
2012	1	1	3	0	1	0	0	6
2013	0	2	0	0	1	0	3	6
2014	3	3	2	0	0	2	1	11
2015	4	7	2	1	9	6	0	29
2016	5	7	2	2	3	2	0	21

Table 11. Fox River herd harvest chronology by week, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Harvest Periods Week Ending							Total harvest
	11 Aug	18 Aug	25 Aug	1 Sep	8 Sep	15 Sep	22 Sep	
2012	1	1	0	0	1	0	0	3
2013	0	0	0	0	0	1	0	1
2014	1	1	2	0	0	0	0	4
2015	1	0	0	1	1	0	1	4
2016	0	1	1	0	2	0	0	4

Table 12. Kenai Mountains herd, number of successful hunters by transport method, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Airplane	Horse	ATV/ORV	Highway vehicle	Snow-machine	Other/Unknown	Foot	Hunters
2012	1	13	—	52	—	10	12	88
2013	4	7	1	85	7	6	9	119
2014	—	1	—	12	—	4	2	19
2015	1	—	—	6	—	—	2	9
2016	—	—	—	12	—	—	3	15

Table 13. Killey River herd, number of successful hunters by transport method, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Airplane	Horse	Boat	ATV/ORV	Highway vehicle	Foot	Hunters
2012	8	3	5	—	2	—	18
2013	3	1	5	—	—	—	9
2014	13	—	7	—	—	—	20
2015	27	5	9	—	1	1	43
2016	18	3	5	1	—	—	27

Table 14. Fox River herd, number of successful hunters by transport method, Kenai Peninsula, Alaska, regulatory years 2012 to 2016.

Regulatory year	Airplane	Boat	Foot	Hunters
2012	—	3	—	3
2013	1	1	—	2
2014	—	6	—	6
2015	—	4	1	5
2016	1	4	—	5

Other Mortality

The KLCH is believed to experience significant mortality from predation on calves and adults by domestic dogs, roadkill, and possible poaching. The other Kenai caribou herds are less accessible, and therefore significant mortality by unnatural causes is unlikely.

Alaska Board of Game Actions and Emergency Orders

There were no Board of Game actions regarding Kenai Peninsula caribou during this report period.

Recommendations for Activity 2.1

Continue to monitor harvest through permit reports.

3. Habitat Assessment–Enhancement

ACTIVITY 3.1.

No habitat assessment work is currently being conducted for caribou management in Units 7 and 15.

Data Needs

Information on the current state of caribou habitat in Units 7 and 15 would be beneficial for management of this species.

Methods

Not applicable.

Results and Discussion

Not applicable.

Recommendations for Activity 3.1

Modification of current caribou habitat assessment and enhancement work should be considered as time and funding allows. Development of a cost and time effective tool to monitor caribou habitat would be beneficial for the management of this species.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

No nonregulatory management problems or needs have been identified at this time.

Data Recording and Archiving

- Permit reports are entered into the WinfoNet database at <http://winfonet.alaska.gov/index.cfm>.
- Electronic records of the survey results, track files, and animal locations are stored on the Homer office shared drive (O):DWC/ADF&G-Homer Files/Species Data/.

Agreements

No specific management agreements exist for caribou.

Permitting

No specific permits exist for caribou.

Conclusions and Management Recommendations

Caribou studies on the Kenai Peninsula have been conducted through cooperative efforts of the Alaska Department of Fish and Game, Kenai National Wildlife Refuge, and the U.S. Forest Service. Each herd has unique limiting factors impacting its growth. Monitoring and research decreased this reporting period due to budgets, limited staffing, among other constraints. We no longer conduct annual composition surveys on the Kenai caribou herds and have switched to minimum count surveys.

Kenai caribou herds are small in number and have small distinct home ranges when compared to other herds in the state (Harper 2013). Habitat is likely the most limiting factor for Kenai caribou. As such, these herds lack the potential to support more than minimal hunting opportunities.

In 2010, the Federal Subsistence Board determined customary and traditional use of the KMCH by residents of Hope (and Sunrise) and established a federal season. This determination was made even though over 80% of the caribou taken by Hope hunters from 1980 to 2010 were harvested outside of the Kenai Peninsula. Furthermore, the “long-term use” determination for customary and traditional use was given to Hope residents despite caribou being extirpated from the Peninsula from 1915 to 1965 with limited hunting starting only in 1972. The Federal Subsistence Board determined the extirpation of caribou was “beyond the control of the community” even though historical accounts suggest uncontrolled hunting pressure would likely lead to the extirpation of caribou (Allen 1901). This determination was extended to the community of Cooper Landing in 2014. Similar to Hope, 92% of caribou taken by Cooper Landing hunters from 1980 to 2014 occurred outside of the Kenai Peninsula. Federal seasons may challenge the successful management of the small caribou herds on the Kenai Peninsula if subsistence harvest increases to the point it represents a significant portion of the harvest. A split federal–state management system for the KMCH caribou will continue to challenge managers to maintain this herd at sustainable levels.

II. Project Review and RY17–RY21 Plan

Review of Management Direction

The existing management direction and goals appropriately direct management of caribou in Units 7 and 15. The management direction in these units ensures that caribou will persist as part of the natural ecosystem while allowing for some hunting opportunity.

GOALS

The management goal is to provide optimum sustainable harvests.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

No change is expected.

Intensive Management

No change is expected.

MANAGEMENT OBJECTIVES

The management objectives for the Kenai Mountain Caribou Herd are now changed to match the Killey River and Fox River Caribou Herds. All other management objectives will remain the same.

Kenai Lowlands Caribou Herd

Increase the herd to a minimum of 150 animals. Hunting will be allowed once this objective is reached.

Kenai Mountain, Killey River, and Fox River Caribou Herds

Maintain viable caribou populations throughout suitable habitat and provide for opportunities to hunt these herds when deemed sustainable.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1.

Conduct minimum count surveys for each herd on a yearly basis.

Data Needs

No change from RY12–RY16 reporting period.

Methods

No change from RY12–RY16 reporting period.

2. Mortality–Harvest Monitoring

ACTIVITY 2.1.

Monitor harvest through permit reports.

Data Needs

No change from RY12–RY16 reporting period.

Methods

No change from RY12–RY16 reporting period.

3. Habitat Assessment–Enhancement

ACTIVITY 3.1.

Develop and implement habitat assessment and enhancement protocols as time and budgets allow.

Data Needs

An estimate of range carrying capacity for each herd would be beneficial for management purposes.

Methods

Methods for habitat assessment and enhancement are to be developed.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

No change from prior reporting period.

Agreements

No change from prior reporting period.

Permitting

The department does not expect to seek or issue any caribou specific permits in units 7 or 15 during RY17–RY21.

References Cited

Alaska Department of Fish and Game. 1976. Alaska wildlife management plans: A public proposal for the management of Alaska's wildlife: Southcentral Alaska. Draft proposal subsequently

approved by the Alaska Board of Game. Division of Game, Federal Aid in Wildlife Restoration Project W-17-R, Juneau.

Alaska Department of Fish and Game, U.S. Forest Service, and U.S. Fish and Wildlife Service 1994. Kenai Peninsula caribou management plan. Division of Wildlife Conservation, Soldotna.

Allen, J. A. 1901. Description of a new caribou from Kenai Peninsula, Alaska. Pages 143–148 [In] Bulletin of the American Museum of Natural History. Volume 14, Article 10. <http://hdl.handle.net/2246/732> (Accessed 5 August 2016).

Harper, P., editor. 2013. Caribou Management report of survey-inventory activities, 1 July 2010–30 June 2012. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR–2010–3, Juneau.

Herreman, J. K. 2015. Units 7 and 15 caribou. Chapter 1, Pages 1–1 through 1–14 [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.

Holdermann, D. 1981. Unit 15 caribou survey-inventory progress report. Pages 36–38 [In] R. A. Hinman, editor. Annual report of caribou survey-inventory activities 1 July 1980–30 June 1981: Part II–caribou, moose, and mountain goats. Alaska Department of Fish and Game, Division of Game, Federal Aid in Wildlife Restoration Jobs 3.0, 1.0, and 12.0, Juneau.

Selinger, J. 2003. Units 7 and 15 caribou. Pages 1–33 [In] C. Healy, editor. Caribou management report of survey-inventory activities 1 July 2000–30 June 2002. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.

Selinger, J. 2005. Units 7 and 15 caribou. Pages 1–19 [In] C. Brown editor. Caribou management report of survey-inventory activities 1 July 2002–30 June 2004. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.

Selinger, J. 2013. Units 7 and 15 caribou management report. Pages 1–12 [In] P. Harper, editor. Caribou management report of survey-inventory activities 1 July 2010–30 June 2012. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2013-3, Juneau.

Sherwood, M. 1974. The Cook Inlet collection: Two hundred years of selected Alaskan history. Alaska Northwest Publishing Company, Anchorage.

Spraker, T. H. 2001. Units 7 and 15 caribou. Pages 1–22 [In] C. Healy editor. Caribou management report of survey-inventory activities 1 July 1998–30 June 2000. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.

