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CHAPTER 14: BROWN BEAR MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014[1]

LOCATION

GAME MANAGEMENT UNIT: 14C (1,912 mi^2)

GEOGRAPHIC DESCRIPTION: Municipality of Anchorage

BACKGROUND

Unit 14C, comprising the Municipality of Anchorage, is a mosaic of large tracts of natural wildlife habitat and areas of human development. Forty percent of the state's human population (300,950 people) and numerous brown bears live in Unit 14C. As a result, the Unit 14C brown bear population has been influenced by habitat fragmentation and alteration, urbanization, and other human activities. Cumulatively, these factors have caused an increased number of brown bear-human conflicts and interactions.

As the number of outdoor recreationists and residential neighborhoods in prime bear habitat increase, so do brown bear-human encounters. Since 1990, 19 people have been injured and 2 killed by brown bears in Unit 14C. There are no documented maulings before the late 1980s, but the number of people injured in the last decade (2004–2014; n = 15) is higher than the number of people injured or killed in the previous decade (1994–2004; n = 5). During the last decade (2004–2014), 32 brown bears have been reported killed in Unit 14C in defense of life or property or by authorities because they constituted an immediate threat to public safety.

The Alaska Department of Fish and Game (ADF&G) has coordinated with other local, state, and federal agencies, as well as nonprofit organizations, to address urban bear issues. ADF&G has conducted 2 detailed public opinion surveys (Whittaker and Manfredo 1997, Responsive Management 2010), engaged other agencies and the public in an urban bear management issues, and created the Anchorage Bear Committee to facilitate coordination and cooperation on bear-related issues in the municipality. In 2008, ADF&G organized the Anchorage Bear Education Committee to help maximize the public benefits of bears while minimizing human-bear conflicts. Along with ADF&G, the education committee has developed web pages, brochures, classroom presentations, bear safety presentations, bear awareness seminars, bear-resistant trash container demonstrations, electric fence setup demonstrations, coloring books, bear safety videos, and other informational and educational activities and products to promote safe activities, minimize food conditioning of bears, and encourage land management practices compatible with bear conservation and public safety.

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

MANAGEMENT DIRECTION

MANAGEMENT GOALS

Maintain a healthy brown bear population while minimizing negative bear-human encounters and provide an opportunity to hunt brown bears under aesthetically pleasing conditions.

MANAGEMENT OBJECTIVES

1) Provide an opportunity to view and photograph brown bears.

2) Work with local residents to reduce bear attractants and defense of life or property kills.

3) Support a stable brown bear population by maintaining a mean annual human-caused mortality of up to 9 bears, with no more than 3 females >2 years of age.

METHODS

A significant amount of time is spent by Anchorage area staff managing bear-human interactions in Unit 14C. This includes responding to reports of resident conflicts with bears, conducting various educational efforts such as wildlife safety presentations, and coordinating with media or other agencies to inform the public about wildlife hazards.

Department staff or authorized sealers interviewed hunters when they presented bears for sealing of skulls and hides. Skulls were measured, sex of bears determined, a premolar tooth was extracted for age determination, and information on date and location of kill and hunter effort were collected from successful hunters. All harvest information was entered into the statewide database and made available to staff for analysis. Harvest data were compared to previous years.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

There is currently no cost-effective way to census brown bears in a forested environment, as is found throughout the majority of Unit 14C. Farley et al. (2008) identified a minimum number of 36 brown bears using salmon streams within Elmendorf Air Force Base, Fort Richardson (now known as Joint Base Elmendorf-Richardson or JBER), the Eagle River drainage, and portions of the Anchorage Bowl. Recent public reports, human–bear encounters, and human-caused mortality suggest a viable brown bear population throughout Unit 14C, and, in general, the population appears stable.

MORTALITY

Harvest

Seasons and Bag Limits. The "Remainder of Unit 14C" was open to general harvest for brown bears 1 September–31 May, with a bag limit of 1 bear every 4 regulatory years (RY; regulatory year begins 1 July and ends 30 June, e.g., RY10 = 1 July 2010–30 June 2011). Beginning in 2008, the Chugach State Park Management Area was opened to a drawing permit hunt 1 January–31 May, with a bag limit of 1 bear every regulatory year. In 2009, this drawing permit hunt was extended to include a fall season (day after Labor Day–31 May), and included the upper Eagle River Valley. In addition, beginning in 2009, an archery-only brown bear drawing hunt was opened within Chugach State Park in the Eklutna Management Area, from the day after

Labor Day through 31 May, with a bag limit of 1 bear every regulatory year. Harvesting cubs and sows accompanied by cubs was prohibited throughout Unit 14C. Residents were required to purchase a $25 tag for brown bear hunting. Nonresidents paid $500 for a brown bear tag and had to be accompanied by a guide or a resident relative within second degree of kindred.

There was no open season for brown bear hunting in the JBER, Anchorage, and Birchwood Management Areas.

Alaska Board of Game Actions and Emergency Orders. There were no Board of Game actions or emergency orders that impacted brown bears during this reporting period.

Harvest by Hunters. During this reporting period, hunters harvested an average of 2 bears each year (range 1–3; Table 1). This 2-year average is less than the average of 4 bears for RY10 and RY11. There were 0 female brown bears harvested during the reporting period.

Hunter Residency. During this report period, all bears were harvested by residents with 3 bears harvested by residents of Unit 14C and 1 by a nonlocal resident (Table 2).

Harvest Chronology. During the reporting period, 50% of bears were harvested in the fall and 50% were harvested in the spring (Table 3). Most bears were harvested in May (n = 2), followed by 1 in September and 1 in October.

Transport Methods. Most brown bear hunters used foot transport, highway vehicle, or all-terrain vehicles during the reporting period (Table 4). The variation appears to be a result of the small sample size during this reporting period and suggests that some hunters may be utilizing the fringes of Unit 14C where access by all-terrain vehicles, boat, and aircraft is possible.

Other Mortality

Defense of life or property is the primary cause of nonhunting mortality; however, in some years, agency kills and roadkills account for a large proportion of nonhunting mortality. There were 7 reported nonhunting mortalities in 2012 and 4 in 2013, the majority of which were subadult bears. However, we do not have an estimate for the number of bears killed each year and not reported. In Unit 14C, most brown bears shot in defense of life or property were killed from July to September.

HUMAN INJURIES CAUSED BY BROWN BEARS

During the reporting period, 1 person was injured by a brown bear in Unit 14C but 3 more were injured in July 2014 (Table 5). The severity of the injuries ranged from superficial scratches to severe lacerations and broken bones. All of the attacks happened in Chugach State Park or on JBER and resulted from surprising brown bears at close range.

CONCLUSIONS AND RECOMMENDATIONS

Management goals for brown bears in Unit 14C were met for the regulatory years covered in this reporting period. The high proportion of subadults killed in defense of life or property may explain the ability to maintain a high mortality rate without observing a decline in brown bear

numbers, as the removal of subadults has less of an impact on long-term population dynamics than removal of adult breeding age bears.

The average number of female bears >2 years of age known to be killed in the reporting period was 2.5 per year (including defense of life or property and other nonhunting mortality) indicating we are meeting our management objectives.

Brown bears in and around Anchorage are seen and reported often during the summer months, resulting in phone calls to the department from concerned citizens. However, with hundreds of encounters and sightings every year, relatively few people are injured annually by brown bears. All of the attacks on humans by brown bears have resulted from surprising bears at close range. In an effort to address our second management objective, bear safety education and informed planning of trails and development projects will potentially help mitigate future bear attacks.

There have been extensive efforts to educate Anchorage residents on how to live and recreate safely in bear country over the past 10 years. The Anchorage Bear Committee and the Anchorage Bear Education Committee have produced educational materials, safety videos, and public service announcements aimed at reducing bear-human conflicts in the Anchorage area. Recently, productions titled “Staying Safe in Bear Country” and “Living in Bear Country” have been produced with input from staff bear biologists, and made available to the public at ADF&G area offices and at the regional headquarters office (Wild Eye Productions 2005, 2008). In addition, ADF&G staff have given instructional presentations on installation of electric fences for livestock, as urban chicken rearing has become one of the top 3 bear conflict issues in Unit 14C. ADF&G staff have also met with waste services providers within the municipality to discuss issues with bears in trash and future prevention of this issue through bear-resistant containers.

A public opinion survey conducted by Responsive Management for ADF&G indicates that Anchorage residents would like to maintain the current population size of brown bears in Unit 14C (Responsive Management 2010). In addition, Anchorage residents support current management practices of removing individual bears that are a heightened public safety concern (Responsive Management 2010).

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Product names used in this publication are included for completeness but do not constitute product endorsement.

Table 1. Unit 14C brown bear harvest, Alaska, regulatory years[a] 2009–2013.

Regulatory year	Reported									Total estimated kill					
	Hunter kill					Nonhunting kill[b]									
	M	F	(%)	Unk	Total	M	F	Unk	Total	M	(%)	F	(%)	Unk	Total
2009															
Fall 2009	0	0	(0)	0	0	0	0	0	0	0	(0)	0	(0)	1	1
Spring 2010	2	0	(0)	0	2	0	1	2	3	2	(67)	1	(33)	3	6
Total	2	0	(0)	0	2	0	1	2	3	2	(67)	1	(33)	4	7
2010															
Fall 2010	0	1	(100)	0	1	0	0	0	0	0	(0)	1	(100)	1	2
Spring 2011	1	0	(0)	0	1	0	0	0	0	1	(100)	0	(0)	1	2
Total	1	1	(50)	0	2	0	0	0	0	1	(50)	1	(50)	2	4
2011															
Fall 2011	3	2	(40)	0	5	3	0	0	3	6	(75)	2	(25)	1	9
Spring 2012	1	0	(0)	0	1	1	2	1	4	2	(50)	2	(50)	2	6
Total	4	2	(33)	0	6	4	2	1	7	8	(67)	4	(33)	3	15
2012															
Fall 2012	0	0	(0)	0	0	2	2	1	5	2	(50)	2	(50)	2	6
Spring 2013	1	0	(0)	0	1	0	2	0	2	1	(33)	2	(67)	1	4
Total	1	0	(0)	0	1	2	4	1	7	3	(43)	4	(57)	3	10
2013															
Fall 2013	2	0	(0)	0	2	3	0	0	3	5	(100)	0	(0)	1	6
Spring 2014	1	0	(0)	0	1	1	0	0	1	2	(100)	0	(0)	1	3
Total	3	0	(0)	0	3	4	0	0	4	7	(100)	0	(0)	2	9

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2009 = 1 July 2009–30 June 2010.
[b] Includes defense of life or property kills, illegal kills, other known human-caused accidental mortality.

Table 2. Unit 14C brown bear successful hunter residency, Alaska, regulatory years[a] 2009–2013.

Regulatory year	Local resident[b] (%)	Nonlocal resident (%)	Nonresident (%)	Total successful hunters
2009	1 (50)	1 (50)	0 (0)	2
2010	1 (50)	0 (0)	1 (50)	2
2011	1 (17)	3 (50)	2 (33)	6
2012	1 (100)	0 (0)	0 (0)	1
2013	2 (67)	1 (33)	0 (0)	3

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2009 = 1 July 2009–30 June 2010.
[b] Unit 14C residents only.

Table 3. Unit 14C brown bear harvest chronology percent by month, Alaska, regulatory years[a] 2009–2013.

Regulatory year	Harvest chronology percent by month							
	Aug	Sep	Oct	Nov	Mar	Apr	May	*n*
2009	0	0	0	0	0	50	50	2
2010	0	50	0	0	0	0	50	2
2011	0	50	33	0	0	17	0	6
2012	0	0	0	0	0	0	100	1
2013	0	33	33	0	0	0	33	3

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2009 = 1 July 2009–30 June 2010.

Table 4. Unit 14C brown bear harvest percent by transport method, Alaska, regulatory years[a] 2009–2013.

Regulatory year	Harvest percent by transport method								
	Airplane	Horse	Boat	ATV/ORV[b]	Snowmachine	Highway vehicle	Foot	Unk	*n*
2009	0	0	50	0	0	0	50	0	2
2010	50	0	0	0	0	50	0	0	2
2011	17	0	0	17	0	33	33	0	6
2012	0	0	0	0	0	0	0	100	1
2013	0	0	0	33	0	33	33	0	3

[a] Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2009 = 1 July 2009–30 June 2010.
[b] ATV = all-terrain vehicles, ORV = off-road vehicles.

Table 5. Brown bear attacks in Unit 14C, Alaska, 2010–2014.

Date	Location	Activity of victim	Injuries suffered
15 June 2010	Bicentennial Park (Rovers Run Trail)	biker	bite wounds and scratches
21 August 2011	Chugach State Park (Prospect Heights Trail)	dog walker	scratches
12 May 2012	Private property adjacent to Chugach State Park	hiker	severe lacerations
10 June 2012	Chugach State Park (Penguin Creek)	hiker	single bite wound
11 June 2012	Chugach State Park (Eagle River Campground Trail)	hiker	bite wounds and broken foot
18 May 2014	JBER[a] (Poleline Road and Fossil Creek)	runner	severe injuries
7 July 2014	Chugach State Park (Bird Creek Trail)	runner	bite wounds
20 July 2014	JBER (North of Poleline and Artillery Road)	military training	bite wounds
24 July 2014	Chugach State Park (South Fork Eagle River)	hiker	bite wounds

[a] JBER = Joint Base Elmendorf-Richardson.