Alaska Department of Fish and Game
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BROWN BEAR MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014

LOCATION

GAME MANAGEMENT UNITS: 14A and 14B (4,713 mi^2)

GEOGRAPHIC DESCRIPTION: Upper Cook Inlet

BACKGROUND

Since colonization of the Matanuska Valley began in the 1930s the area has changed significantly, first by agricultural settlement, then through increased development and urbanization (Peltier 2011). These changes altered brown bear abundance and distribution. Del Frate (2003) and Kavalok (2007) noted an increase in the number of reports of bears in urban areas, bears causing property damage, and human–bear encounters in Units 14A and 14B compared to the number reported 10–15 years earlier. The number of conflicts as reflected in the nonhunting kills through defense of life or property (DLP) has remained relatively constant since the early 2000s.

The differences in development between Units 14A and 14B has resulted in varying amounts of available habitat, and subsequently, differences in hunting opportunities and management strategies between the 2 units. In Unit 14A management emphasis has been placed on reducing bear-human conflicts. Unit 14B is less developed and human settlements are found only along the western edge of Unit 14B. In Unit 14B brown bear management has focused on reducing the number of nuisance complaints from seasonal cabin owners, providing hunting opportunity, and improving moose calf recruitment through an overall reduction in the bear population.

Previously, biologists have attempted to estimate brown bear abundance in Unit 14 based on anecdotal information. Grauvogel's 1990 estimate of 169–262 brown bears for all of Unit 14 was later refined by Harkness (1993) to 185–239 brown bears. Both estimates included Unit 14C. Building upon those previous estimates and extrapolating bear densities calculated for adjacent units, we developed an estimate of 30–60 brown bears in Unit 14A and 90–130 in Unit 14B in 2011 (Peltier 2011).

MANAGEMENT DIRECTION

MANAGEMENT OBJECTIVES

- Maintain a brown bear population that can sustain an annual harvest of 25 bears composed of at least 50% male.

- Maintain the brown bear population at a level that minimizes bear-human conflicts.

METHODS

Brown bear harvests are monitored through the mandatory sealing of all bears harvested in Units 14A and 14B within 30 days of the kill. Department staff or authorized sealers interviewed successful hunters to collect information on the date and location of kill, methods and transportation used, and the number of days they hunted prior to harvesting a bear. During the sealing process skulls were measured, sex was determined, and a premolar tooth was extracted for aging. All collected data were entered into the statewide database for analysis. Harvest data were summarized by regulatory year (RY) to evaluate trends. A regulatory year begins 1 July and ends 30 June, e.g., RY12 = 1 July 2012–30 June 2013.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

There are no practical methods to census brown bears in the forested environments that exist in the majority of Unit 14. Harvest data during the reporting period indicate that the population is stable.

MORTALITY

Harvest

Season and Bag Limit. In Unit 14A the season dates were 1 September–31 May, and the bag limit was 1 brown bear every 4 regulatory years. In Unit 14B, the season dates were 10 August–31 May, and the bag limit was 1 bear every regulatory year. Harvesting cubs or sows accompanied by cubs was prohibited.

Alaska Board of Game Actions. The Board of Game made no changes to brown bear hunting regulations in Units 14A or 14B during this reporting period.

Harvest by Hunters. Although average harvest by hunters decreased over the past 3 years to 21 bears from 27 bears during RY08–RY10 (Table 1), harvest has been stable over the last 10 years. During this period the percent of males in the harvest went from 52% to 57%.

Hunter Residency. Nonresidents accounted for 28.6% of the harvest from regulatory year 2004 to 2013 (Table 2). Nonlocal resident take of bears in Units 14A and 14B is small and typically less than 5%. In both units the majority of the bears taken are by local residents.

Harvest Chronology. Peak harvests occur in September and May (Table 3). During the past 10 years 52% of the harvest has occurred during September. This pattern of harvest has remained consistent over time and suggests that many of the brown bears harvested are taken opportunistically by moose hunters during the September moose season.

Transport Methods. In most years, successful bear hunters used all-terrain vehicles or off-road vehicles to get into the field; however in years with a snow persisting late into the spring, a greater proportion of successful bear hunters used snowmachines (Table 4). Aircraft was the second most common means of transportation used by successful bear hunters (17.9%), but highway vehicles (16.7%) and boats (12.4%) were also popular methods for accessing the area.

Other Mortality

Nonhunting mortality is primarily due to DLP situations. During the reporting period 6 of the 7 mortalities were caused by DLP. There was 1 bear killed by vehicle collision and no reported cases of illegal harvest (Table 1).

CONCLUSIONS AND RECOMMENDATIONS

During this reporting period bear harvest decreased, reversing a slow trend that began in the 1980s. At this time it is not possible to determine if this is a result of decreasing bear density or a decrease in hunter effort. The percentage of females in the harvest does not reflect a change in bear density. Nonetheless sex ratios, as well as age ratios, in the harvest should continue to be monitored to prevent overharvest of the reproductive segment of the population.

Brown bears are regularly seen during the summer in Units 14A and 14B, and often these sightings result in numerous calls to the department from concerned citizens. Staff should continue to educate the public on ways to avoid negative interactions with bears to reduce property damage, including garbage and food storage techniques, proper use of bird feeders, and the use of electric fences for livestock. Proper storage of attractants (i.e., animal feed, livestock, garbage, bird feeders) continues to be a problem in both units particularly in the more rural portions of the valley. Educational efforts that emphasize the relationship between problem bears and attractants need to continue in order to increase compliance and safety. Collaboration with community groups such as The Bear Necessities Coalition in Talkeetna, whose goal is to keep bears wild and people safe, has proven to be successful and should continue with our support. Information should also be distributed on how to respond to bear encounters to prevent conflicts and minimize the severity of attacks.

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

Peltier, T. C. 2015. Unit 14 brown bear. Chapter 13, Pages 13-1 through 13-8 [*In*] P. Harper and L. A. McCarthy, editors. Brown bear management report of survey-inventory activities 1 July 2012–30 June 2014. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2015-1, Juneau.

Table 1. Units 14A and 14B brown bear harvest, Southcentral Alaska, regulatory years[a] 2008–2013.

Regulatory year	Reported									Total estimated kill					
	Hunter kill						Nonhunting kill[b]								
	M	(%)	F	(%)	Unk	Total	M	F	Unk	M	(%)	F	(%)	Unk	Total
2008															
Fall 2008	10	(45)	12	(55)	0	22	2	1	0	12	(48)	13	(52)	0	25
Spring 2009	7	(87)	1	(13)	0	8	0	1	0	7	(78)	2	(22)	0	9
Total	17	(57)	13	(43)	0	30	2	2	0	19	(56)	15	(44)	0	34
2009															
Fall 2009	5	(36)	9	(64)	0	14	1	0	0	6	(40)	9	(60)	0	15
Spring 2010	5	(71)	2	(29)	0	7	0	1	0	5	(63)	3	(37)	0	8
Total	10	(48)	11	(52)	0	21	1	1	0	11	(48)	12	(52)	0	23
2010															
Fall 2010	16	(53)	14	(47)	0	30	1	2	0	17	(52)	16	(48)	0	33
Spring 2011	0	(0)	1	(100)	0	1	1	0	0	1	(50)	1	(50)	0	2
Total	16	(52)	15	(48)	0	31	2	2	0	18	(51)	17	(49)	0	35
2011															
Fall 2011	6	(55)	5	(45)	0	11	0	2	0	6	(46)	7	(54)	0	13
Spring 2012	5	(45)	6	(55)	0	11	2	1	1	7	(50)	7	(50)	1	15
Total	11	(50)	11	(50)	0	22	2	3	1	13	(48)	14	(52)	1	28
2012															
Fall 2012	9	(69)	4	(31)	0	13	4	1	0	13	(72)	5	(28)	0	18
Spring 2013	5	(83)	1	(17)	0	6	0	0	0	5	(83)	1	(17)	0	6
Total	14	(74)	5	(26)	0	19	4	1	0	18	(75)	6	(25)	0	24
2013															
Fall 2013	11	(50)	11	(50)	0	22	0	1	0	11	(48)	12	(52)	0	23
Spring 2014	0	(0)	1	(100)	0	1	0	0	0	0	(0)	1	(100)	0	1
Total	11	(48)	12	(52)	0	23	0	1	0	11	(46)	13	(54)	0	24

[a] A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2008 = 1 July 2008–30 June 2009.
[b] Includes defense of life or property, illegal kills, and other human-caused mortality unrelated to hunting.

Table 2. Successful brown bear hunters in Units 14A and 14B by residency, Southcentral Alaska, regulatory years[a] 2004–2013.

Regulatory year	Local[b] resident	(%)	Nonlocal resident	(%)	Nonresident	(%)	Total successful hunters
2004	5	(56)	0	(0)	4	(44)	9
2005	14	(64)	1	(4)	7	(32)	22
2006	9	(53)	0	(0)	8	(47)	17
2007	16	(59)	1	(4)	10	(37)	27
2008	24	(80)	0	(0)	6	(20)	30
2009	17	(81)	0	(0)	4	(19)	21
2010	19	(61)	4	(13)	8	(26)	31
2011	14	(64)	2	(9)	6	(27)	22
2012	14	(74)	1	(5)	4	(21)	19
2013	19	(83)	1	(4)	3	(13)	23

[a] A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2004 = 1 July 2004–30 June 2005.
[b] Unit 14 residents.

Table 3. Proportion of brown bear harvest in Units 14A and 14B by month, Southcentral Alaska, regulatory years[a] 2004–2013.

Regulatory year	Proportion of harvest by month									
	Aug	Sep	Oct	Nov	Mar	Apr	May	Jun	Jul	*n*
2004	0	45	0	0	0	33	22	0	0	9
2005	4	82	0	0	0	9	5	0	0	22
2006	0	41	6	0	0	41	12	0	0	17
2007	0	70	4	0	0	11	11	4	0	26
2008	0	57	17	0	3	3	20	0	0	30
2009	10	35	15	5	0	10	25	0	0	20
2010	26	61	6	0	0	6	3	0	3	31
2011	18	32	0	0	0	18	32	0	0	22
2012	16	37	11	5	0	16	11	0	0	19
2013	22	57	17	0	0	4	0	0	0	23

[a] A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2004 = 1 July 2004–30 June 2005.

Table 4. Proportion of brown bear harvest in Units 14A and 14B by transport method, Southcentral Alaska, regulatory years[a] 2004–2013.

Regulatory year	Percent of harvest by transport method								
	Airplane	Horse	Boat	ATV/ORV[b]	Snowmachine	Highway vehicle	Foot	Unknown	*n*
2004	10	0	10	20	30	10	20	0	9
2005	18	0	27	18	5	23	9	0	22
2006	23	0	6	23	24	12	12	0	17
2007	26	0	11	22	11	26	4	0	26
2008	20	0	17	47	3	3	10	0	30
2009	16	0	16	37	5	10	16	1	20
2010	19	0	23	13	0	19	16	10	31
2011	9	0	5	32	18	18	14	5	22
2012	21	0	0	16	21	37	5	0	19
2013	17	0	9	48	4	9	13	0	23

[a] A regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2004 = 1 July 2004–30 June 2005.
[b] ATV = all-terrain vehicles; ORV = off-road vehicles.