
CHAPTER 13: BLACK BEAR MANAGEMENT REPORT

From: 1 July 2010
To: 30 June 2013

LOCATION

GAME MANAGEMENT UNITS: 14A and 14B (4,713 mi²)

GEOGRAPHIC DESCRIPTION: Upper Cook Inlet

BACKGROUND

Griese (1999) evaluated total available habitat and harvest trends and projected the black bear population was near 700 with a maximum sustainable harvest of 24–30 females. McDonough (2002) reported that the population likely remained at between 500 and 1,000 bears for all of Unit 14.

Prior to RY10 management goals and objectives were based on all 3 subunits of Unit 14. Annual harvests and the number of females was 80 bears annually and no more than 14 sows for Unit 14A and no more than 8 sows each for Units 14B & C. Between RY73 and RY10 the annual harvest exceeded 80 bears 29 of the 37 years. As recommended in the most recent previous management report (Peltier 2011), the management objective was changed from no more than 30% females in all of the Unit 14 harvest to no more than 40% females in the Unit 14A and 14B combined harvest for a 3-year period.

MANAGEMENT DIRECTION

MANAGEMENT GOALS

Since 1976 the management goal in Units 14A and 14B has been to provide the greatest opportunity possible to participate in hunting black bears. Given the lower numbers of moose in Unit 14B there has been an incentive to reduce the number of black bears to increase moose calf survival.

MANAGEMENT OBJECTIVES

The management objective has been to maintain a population largely unaffected by human harvest. The human-use objective has been to provide liberal opportunities to hunt black bears while ensuring that the percentage of females in the harvest does not exceed 40% in any 3-year period.

METHODS

Department staff monitored black bear mortality by collecting harvest information through the sealing of skulls and hides of bears taken by hunters or killed for other reasons. During sealing, skull measurements, sex identification, hunting effort, location, and date of kill were recorded.

Bears taken over bait, incidental harvest, and meat salvage were noted on the sealing reports. To hunt bears over bait, hunters were required to have a permit from the Alaska Department of Fish and Game with no more than 2 bait stations allowed per permit. Harvest data were organized and analyzed by regulatory year (RY). A regulatory year runs 1 July through 30 June (e.g., RY10 = 1 July 2010–30 June 2011).

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

The black bear population in Unit 14 was previously estimated as 530–1,080 by Griese (1996). Earlier estimates by Harkness (1990) and Grauvogel (1990) reported a population size of 750–1,050. Based on distance sampling models available from Earl Becker's bear survey work in Unit 16 (unpublished data), and harvest data trends, we believe the population was similar to those previous estimates or increasing during both this and the preceding reporting periods (Peltier 2008).

MORTALITY

Harvest

Season and Bag Limit. During this reporting period there was no closed season in Units 14A and 14B. In RY10 the bag limit was 1 black bear in Unit 14A, and 3 bears per year in Unit 14B. The limit was raised to 3 bears in Unit 14A in RY11; the limit was left at 3 bears for Unit 14B. Baiting was allowed by registration permit. Bear hunters wanting to use bait in Units 14A and 14B were required to successfully complete a bear bait hunting class in order to get a bear bait hunting registration permit from the department.

Board of Game Actions. In the spring of 2011 the Board of Game increased the bag limit for black bears in Unit 14A from 1 bear per year to 3 bears per year, and eliminated the need for sealing black bears in Unit 14B; both regulations became effective in RY12. In the same meeting, the board allowed guides and their assistant guides to establish up to 10 bait stations in total for both Units. The board also allowed hunters who have been airborne to take black bears at the bait station the same day they have flown, provided they are at least 300 feet from the airplane at the time of the taking; these regulations were expedited through the Department of Law and took effect in the spring of 2012.

Hunter Harvest. Black bear take was down slightly and the percentage of females in the harvest increased slightly during this reporting period (Tables 1 and 2). The average annual combined total black bear take for 14A and 14B decreased from 142 bears RY07–RY09 to 129 bears during this period. The percentage of females in the harvest increased from 40% (RY07–RY09 average) to 41%. The percentage of black bears taken over bait cannot be compared between the periods because that information was obtained through sealing and sealing is no longer required for bears harvested in Unit 14B.

Baiting Participation. Bear baiting participation decreased during this reporting period. The number of permittees per year averaged 209 compared to 280 during RY07–RY09 (Table 3). The total number of registered bait stations declined as well.

Hunter Residency and Success. Unit 14 residents on average took 80% of the harvest during this reporting period. Nonresident hunters reported an average annual harvest of 20 bears, an increase from an average annual harvest of 14 reported for RY07–RY09 (Table 4). Because both units have a multi-bear bag limit, success rates reflect the residency status of the hunter sealing each bear, and not the overall residency of all successful hunters (hunters may have harvested more than one bear in a regulatory year).

Harvest Chronology. Most black bears harvested in Units 14A and 14B are taken in the last 2 weeks of May and in the month of June (Table 5). The percentage of bears taken during the month of September increased during this reporting period. It is assumed that this change in the number of black bears taken in the fall reflect that hunters already in the field are taking bears during the fall moose hunting season as well as hunter motivation to take black bears.

Transport Methods. Most hunters used all-terrain (ATV) or off-road (ORV) vehicles as their primary mode of transportation (Table 6). Unit Highway vehicle was the second most common means of transportation and hunters heading into the field on foot the third. It is assumed that many of the hunters that reported taking bears on foot were probably hunting bears near their homes or seasonal cabins. Black bears taken in this manner may partially explain why few nuisance bears are reported in these Units, and why few bears are killed in defense of life or property (DLP).

Other Mortality

Nonhunting kills for Units 14A and 14B totaled 2 bears for RY10–RY12. This is a marked decrease from the 10 bears taken during the previous reporting period. There are few reports of bear-human conflicts in Units 14A and 14B, and the number of bears taken under the Defense of Life and Property Law is low. It is generally thought that problem bears are taken by licensed bear hunters during summer months, when nuisance bear activity tends to occur, and they are reported as part of the general season harvest. It is also possible that the reduction in defense of life or property bear mortality was partially due to unit residents becoming more aware of potential bear problems through bear awareness programs promoted by the department, various federal agencies, and community groups like the Bear Necessities Coalition of Talkeetna (Kavalok 2005).

CONCLUSIONS AND RECOMMENDATIONS

It is difficult to derive an accurate estimate of the black bear population in Units 14A and 14B. Difficulties in surveying black bear habitat, budget, and time constraints are likely to hinder completion of surveys in the near future. Line transect work by Becker in Units 16 and 13 may provide valuable insight into how to calculate a more robust population estimate for Unit 14.

Trends in bear harvest should continue to be monitored for indicators of undesirable effects on the black bear population. Based on our current analysis, black bear populations, especially in Subunit 14B, can withstand higher harvest rates, and a decrease in black bear densities may be desirable in Unit 14B to reduce black bear predation on moose calves.

The expanding human population and its encroachment into bear habitat in the Units 14A and 14B are expected to result in more bear-human conflicts and more bears being killed. Because of

the potential for increased bear-human conflicts in Unit 14, the department should continue providing the public information and how to coexist with bears.

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While this unit report was actually published in 2016, it is part of the set of 2014 unit species management reports, so we suggest citing the report as a 2014 report to maintain its relationship to the other 2014 unit reports.

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Table 1. Unit 14A black bear harvest, regulatory years^a 2007 through 2012.

Regulatory year	Reported						Estimated unreported kill ^d	Total estimated kill								
	Hunter kill			Nonhunting kill ^c				M	F (%)	Unk	Total					
	M	F	(%)	Unk	Total	Baited ^b										
2007																
Fall 07	13	12	(48)	0	25	0	1	0	0	2	14	(54)	12	(46)	2	28
Spring 08	39	27	(41)	0	66	38	0	0	0	7	39	(59)	27	(41)	7	73
Total	52	39	(40)	0	91	38	1	0	0	9	53	(58)	39	(42)	9	101
2008																
Fall 08	22	12	(35)	0	34	0	1	2	0	3	23	(62)	14	(38)	3	40
Spring 09	33	28	(46)	0	61	42	1	0	0	6	34	(55)	28	(45)	6	68
Total	55	40	(42)	0	95	42	2	2	0	9	57	(58)	42	(42)	9	108
2009																
Fall 09	7	10	(59)	0	17	0	2	1	0	2	9	(45)	11	(55)	2	22
Spring 10	44	31	(41)	0	75	58	0	0	0	8	44	(59)	31	(41)	8	83
Total	51	41	(45)	0	92	58	2	1	0	10	53	(57)	42	(43)	10	105
2010																
Fall 10	33	13	(28)	0	46	0	0	0	0	5	33	(72)	13	(28)	5	51
Spring 11	29	30	(51)	0	59	32	0	0	0	6	29	(49)	30	(51)	6	65
Total	62	43	(41)	0	105	32	0	0	0	11	62	(59)	43	(41)	11	116
2011																
Fall 11	18	14	(44)	0	32	0	0	1	0	3	18	(55)	15	(45)	3	36
Spring 12	29	19	(40)	0	48	25	0	0	0	5	29	(60)	19	(40)	5	53
Total	47	33	(42)	0	80	25	0	1	0	8	47	(58)	34	(42)	8	89
2012																
Fall 12	7	8	(53)	0	15	0	0	0	0	2	7	(47)	8	(53)	2	17
Spring 13	26	17	(40)	0	43	28	0	0	0	4	26	(60)	17	(40)	4	47
Total	33	25	(43)	0	58	28	0	0	0	6	33	(57)	25	(43)	6	64

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.

^b Bears reported taken over legally established bait stations.

^c Includes defense of life or property kills, illegal kills, and other known human-caused accidental mortality.

^d Assumes approximately 10% of reported harvest.

Table 2. Unit 14B black bear harvest, regulatory years^a 2007 through 2012.

Regulatory year	Reported						Estimated unreported kill ^d	Total estimated kill								
	Hunter kill			Nonhunting kill ^c				M	(%)	F	(%)	Unk	Total			
	M	F	(%)	Unk	Total	Baited ^b										
2007																
Fall 07	6	3	(33)	0	9	0	0	0	0	1	6	(67)	3	(33)	1	10
Spring 08	17	8	(32)	0	25	14	2	0	0	2	19	(70)	8	(30)	2	29
Total	23	11	(32)	0	34	14	2	0	0	3	25	(69)	11	(31)	3	39
2008																
Fall 08	6	5	(45)	1	12	0	0	0	0	1	6	(55)	5	(45)	2	13
Spring 09	13	10	(43)	0	23	11	0	0	0	2	13	(56)	10	(43)	2	25
Total	19	15	(44)	0	34	11	0	0	0	3	19	(56)	15	(44)	3	37
2009																
Fall 09	4	4	(50)	0	8	0	0	0	0	1	4	(50)	4	(50)	1	9
Spring 10	19	3	(14)	0	22	18	0	0	0	2	19	(86)	3	(14)	2	24
Total	23	7	(23)	0	30	18	0	0	0	3	23	(77)	7	(23)	3	33
2010																
Fall 10	19	9	(32)	0	28	0	0	0	0	3	19	(68)	9	(32)	3	31
Spring 11	16	8	(33)	0	24	9	0	0	0	2	16	(67)	8	(33)	2	26
Total	35	17	(33)	0	52	9	0	0	0	5	35	(67)	17	(33)	5	57
2011 ^e																
Fall 11	8	9	(53)	1	18	-	0	0	1	2	8	(47)	9	(53)	4	21
Spring 12	4	9	(69)	0	13	-	0	0	0	1	4	(31)	9	(69)	1	14
Total	12	18	(60)	1	31	-	0	0	1	3	12	(40)	18	(60)	5	35
2012 ^e																
Fall 12	6	0	(0)	0	6	-	0	0	0	1	6	(100)	0	(0)	1	7
Spring 13	4	4	(50)	0	8	-	0	0	0	1	4	(50)	4	(50)	1	9
Total	10	4	(29)	0	14	-	0	0	0	1	10	(71)	4	(29)	1	15

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.

^b Bears reported taken over legally established bait stations.

^c Includes defense of life or property kills, illegal kills, and other known human-caused accidental mortality.

^d Assumes approximately 10% of reported harvest.

^e Sealing of black bear hides and skulls was not required as of RY11.

Table 3. Unit 14 black bear hunter baiting participation, regulatory years^a 2003 through 2012.

Regulatory year	Number of permittees	Number of stations registered	
		Unit 14A	Unit 14B
2003	169	197	40
2004	194	201	55
2005	223	257	56
2006	237	234	83
2007	228	234	83
2008	311	309	91
2009	301	293	95
2010	270	266	80
2011	154	173	45
2012	202	222	52

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.

Table 4. Unit 14 reported successful hunter residency, regulatory years^a 2003 through 2012, by black bear harvested.

Regulatory year	Local ^b resident	(%)	Nonlocal resident	(%)	Nonresident	(%)	Successful hunters ^c
2003	90	(83)	2	(2)	16	(15)	108
2004	118	(88)	5	(4)	10	(8)	133
2005	110	(89)	0	(0)	13	(11)	123
2006	104	(90)	4	(3)	8	(7)	116
2007	105	(84)	3	(2)	17	(14)	125
2008	109	(85)	1	(1)	18	(14)	128
2009	114	(92)	1	(1)	7	(6)	122
2010	126	(81)	4	(3)	26	(16)	156
2011	82	(74)	5	(5)	24	(21)	111
2012	62	(86)	1	(1)	9	(13)	72

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.

^b Unit 14 residents.

^c The total number of successful hunters may include hunters who are counted more than once because the hunter took more than one black bear

Table 5. Unit 14 black bear reported hunter harvest chronology percent by month, regulatory years^a 2003 through 2012.

Regulatory year	Percent of harvest									<i>n</i>
	Jul– Aug	Sep 1–15	Sep 16–30	Oct	Nov– Mar	Apr	May 1–15	May 16–31	Jun	
2003	14	5	12	2	1	0	7	32	28	107
2004	11	5	8	5	0	2	14	27	30	132
2005	11	9	9	0	0	2	4	23	43	123
2006	9	5	11	1	0	2	8	34	30	115
2007	16	6	4	1	0	1	5	26	41	125
2008	24	6	5	1	0	1	6	19	38	130
2009	8	3	4	0	1	0	6	27	50	119
2010	17	14	15	2	0	1	6	17	28	156
2011	19	11	14	1	0	0	2	11	42	110
2012	15	10	1	3	0	0	1	11	59	72

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.

Table 6. Unit 14 black bear harvest percent by reported transport method, regulatory years^a 2003 through 2012.

Regulatory year	Percent of harvest								<i>n</i>
	Airplane	Horse	Boat	Snow Machine	ORV/ATV	Highway Vehicle	Foot	Other / Unknown	
2003	8	3	7	1	45	14	21	0	108
2004	9	0	10	0	50	17	14	0	132
2005	9	0	11	0	44	20	16	0	122
2006	16	0	12	0	40	20	13	0	116
2007	11	0	14	0	45	14	15	1	125
2008	8	0	16	0	42	20	13	1	126
2009	9	3	10	0	54	11	14	0	117
2010	10	1	14	0	40	13	19	3	156
2011	19	5	9	0	44	14	9	0	110
2012	8	0	8	0	55	15	10	4	72

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2012 = 1 July 2012–30 June 2013.