
CHAPTER 9: BLACK BEAR MANAGEMENT REPORT

From: 1 July 2010
To: 30 June 2013

LOCATION

GAME MANAGEMENT UNITS: 7 and 15 (8,397 mi²)

GEOGRAPHIC DESCRIPTION: Kenai Peninsula

BACKGROUND

Black bear densities in Unit 15A were estimated at 205 bears/1,000 km² within the 1947 burn and 265/1,000 km² in the 1969 burn (Schwartz and Franzmann 1991). No other surveys to assess population size have been conducted. There have been several studies conducted on black bears on the Kenai Peninsula looking at predation (Franzmann and Schwartz 1986; Schwartz and Franzmann 1983, 1989), food habits (Smith 1984), habitat (Schwartz and Franzmann 1991), dispersal (Schwartz and Franzmann 1992), and denning (Schwartz et al. 1987).

MANAGEMENT DIRECTION

MANAGEMENT OBJECTIVE

Provide the opportunity to hunt black bears using seasons and bag limits to regulate the take so as not to exceed an average of 40% females in the harvest during the most recent 3-year period.

METHODS

The department monitors the harvest of black bears through a mandatory sealing program established in 1973. Hides and skulls of all black bears reported killed are sealed with metal locking tags, and information is collected and entered on bear sealing forms. All of the harvest data is now kept at the department's Web-based database called WinfoNet. This report reflects updated tables using data from WinfoNet; therefore, data may differ slightly from past reports.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

The black bear population on the Kenai Peninsula appears stable. Using Schwartz and Franzmann's (1991) density estimates of 205 bears/1,000 km² and 265/1,000 km² from Unit 15A, both of which underestimated certain cohorts due to the limitations of their technique, and assumed higher densities along the southern outer coast, we estimate more than 4,000 black bears throughout Units 7 and 15.

Distribution and Movements

The distribution and abundance of devil's club (*Oplopanax horridus*) and other berry producing plants such as blueberries (*Vaccinium sp.*), crowberries (*Empetrum nigrum*), and currants (*Ribes sp.*) are an important factor affecting distribution and movements of black bears as the fruit is an important food source (Schwartz and Franzmann 1991, McLellan 2011). Devil's club may be negatively affected by spruce beetle infestation when more light penetrates to the forest floor after the removal of the canopy. Other berry producing plants however, may be positively affected. Black bears appear in greater densities along the southern outer coast, probably due to high berry abundance and healthy salmon runs coupled with lower densities of competing brown bears.

MORTALITY

Harvest

Season and Bag Limit. Black bear hunting has been open year-round on the Kenai Peninsula since 1980. From 1994 to 2008, the bag limit was 2 bears per regulatory year (1 bear July 1 – December 31, and 1 bear January 1– June 30). In 2009 the bag limit was changed to 2 bears for residents (no season restriction), and 1 bear for nonresidents. In 2010, the bag limit was further liberalized to 3 bears per regulatory year for both residents and nonresidents north of Bradley River, Bradley Lake, and Kachemak Creek, however nonresidents are limited to 1 bear south of these boundaries.

A permit is required to establish a bear baiting station. Hunting black bears with the use of bait is allowed except in the following locations: Resurrection Creek and its tributaries in Unit 7; within one mile of a house, school, business, developed recreational facility, campground, or permanent dwelling; within one quarter mile of publicly maintained roads or trails, the Alaska Railroad, or along the Kenai (including Kenai Lake), Kasilof, and Swanson rivers in Units 7 and 15. Baiting is also restricted within the Kenai National Wildlife Refuge. Completion of a bear baiting clinic is required by all bait permit holders in Units 7 and 15. The season was April 15 – June 15 from 1988 through the spring of 2009. In the spring of 2010, the season was further liberalized to April 15–June 30. Starting in spring of 2013 it became legal to take bears same day airborne at bait stations.

Board of Game Action and Emergency Orders. In the spring of 2012, the Board of Game passed regulations to allow same day airborne for black bears taken at bait stations and to allow guides to operate up to 10 bait stations.

Hunter Harvest. During the most recent 3-year period, the average harvest of females was 39% of the total harvest. As such, female harvest is near our maximum harvest objective of 40%. The 5-year average annual harvest, RY08–RY12, was 576 bears (Table 1). An annual average of 73 black bears were reported taken with the use of bait during the previous 5 years (Table 2). The major portion of black bear harvest occurs south of Kachemak Bay (Fig. 1). Since the increase in harvest limits, only 2 to 5 individuals per year have taken 3 bears in units 7 and 15. On average, 28 individuals per year take 2 or more bears. Sixty-five percent of these hunters take 1 or more females.

Hunter Residency and Success. The percentage of successful hunters that are Peninsula residents has increased in recent years, which may be a product of more local hunters focusing on black bears. The percentage of successful hunters who are nonresidents was relatively stable between 30% and 31% (Table 3), but decreased to 27% in 2012.

Harvest Chronology. May is the month when most of the black bear harvest occurs (Table 4). September is the month with the highest fall harvest.

Transport Methods. Transport by boat was the top method used by successful bear hunters (Table 5), which is probably driven by the popularity of hunting black bears in Kachemak Bay and around the outer coast in the southern part of the Kenai Peninsula. Hunters using highway vehicles represented the second most used transportation type.

CONCLUSIONS AND RECOMMENDATIONS

Black bears are an important big game species, leading all other big game species in the numbers of animals harvested annually for Units 7 and 15. Black bear hunting continues to increase in popularity likely because black bear is an alternative meat source to other big game animals and there is a lengthy hunting season and liberal bag limit. The department will continue to assess the sustainability of the harvest by monitoring the percentage of females in the harvest, skull size trends, and anecdotal assessments while flying surveys for other species, and by working to develop measures of biological productivity. We have been within our management objective using the current seasons and bag limits.

Although we have been within our management objectives, we have noticed high harvests recently. Anecdotal reports from hunters and community members suggest a decrease in the number of bears in the southern portion of Kachemak Bay. These reports combined with the high proportion of females in the harvest suggest that we may soon need to restrict the harvest in this portion of Unit 15C. We believe this area has been able to support the high harvest in recent years since most hunters only harvest animals within a short distance of the shoreline. This likely leaves a portion of the population unaffected by the majority of the harvest, creating source-sink dynamics for this area. Bears are still commonly seen during fall surveys for mountain goats in the alpine areas. Unfortunately, a good comparison of numbers between years is not possible due to how goat surveys are currently flown (3-year area rotation). If it is determined that restriction of the harvest is needed, we will identify various options (which will likely include returning to a 2 bear bag limit with only one bear allowed in spring and one in the fall, adjusting the season length, or possibly restricting the bag limit to one female per year) and present them to advisory committees and the Board of Game. We have discussed the need to gather data that would improve our understanding of the impacts current harvest rates have on black bear population dynamics in this area. There have been no funds however, committed to black bear research south of Kachemak Bay at this time.

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Table 1. Black bear harvest by season in Units 7, 15A, 15B, and 15C, 2008–2013.

Regulatory year	Unit	Fall				Spring				Fall + Spring			
		Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
2008-09	7	84	30		114	109	39		148	193	69		262
	15A	16	11	1	28	23	14		37	39	25	1	65
	15B	21	17		38	6	3	1	10	27	20	1	48
	15C	48	25		73	113	40		153	161	65		226
	Totals ^a	169	83	2	254	251	96	1	348	420	179	3	602
2009-10	7	46	33		79	89	29	1	119	135	62	1	198
	15A	15	10		25	38	19		57	53	29		82
	15B	25	19		44	8	2		10	33	21		54
	15C	79	35		114	132	38	1	171	211	73	1	285
	Totals	165	97		262	267	88	2	357	432	185	2	619
2010-11	7	47	26		73	92	33	1	126	139	59	1	199
	15A	9	5		14	43	32		75	52	37		89
	15B	11	8		19		1		1	11	9		20
	15C	76	68		144	113	68		181	189	136		325
	Totals	143	107		250	248	134	1	383	391	241	1	633
2011-12	7	45	40		85	68	45		113	113	85		198
	15A	7	9		16	20	14		34	27	23		50
	15B	10	12		22	3	2		5	13	14		27
	15C	52	38		90	147	71		218	199	109		308
	Totals	114	99		213	238	132		370	352	231		583
2012-13	7	28	27		55	58	30	1	89	86	57	1	144
	15A	8	3		11	17	13		30	25	16		41
	15B	16	9		25					16	9		25
	15C	39	23	1	63	101	65	1	167	140	88	5 ^b	233
	Totals	91	62	1	154	176	108	2	286	267	170	3	443

^a Includes one unknown sex bear taken from an unknown location in Unit 15 in the fall.

^b Includes 3 bears with unknown kill dates.

Table 2. Number of registered bait stations and baiting harvest in Units 7, 15A, 15B, and 15C, 2008–2013.

Spring Year	Unit 7		Unit 15A		Unit 15B		Unit 15C		Units 7&15	
	# stations	Harvest	# stations	Harvest	# stations	Harvest	# stations	Harvest	# stations	Harvest
2009	136	54	89	27	12	3	25	7	262	91
2010	137	44	91	36	11	3	21	7	260	90
2011	166	49	100	48	11	0	36	8	313	105
2012	132	25	126	19	3	2	41	6	302	52
2013	130	12	125	11	3	0	45	2	303	25

Table 3. Black bear harvest by residency in Units 7 and 15, 2008–2013.

Regulatory year	Residents						Nonresident (%)	Unk	Total successful hunters ^b	
	Local ^a	(%)	Nonlocal	(%)	Total	(%)				
2008–09	190	(32)	220	(37)	410	(69)	181	(30)	11	602
2009–10	236	(38)	182	(29)	418	(67)	189	(31)	12	619
2010-11	274	(43)	160	(25)	434	(68)	193	(30)	6	633
2011-12	250	(43)	149	(26)	399	(69)	181	(31)	3	583
2012-13	231	(52)	89	(20)	320	(72)	119	(27)	4	443

^aLocal residents are residents of the Kenai Peninsula.

^bIncludes nonsport mortality.

Table 4. Black bear harvest chronology in Units 7 and 15, 2008–2013 by percentage.

Regulatory year	July	Aug.	Sep.	Oct.	Nov.	Dec	Jan	Apr.	May	June	unk	Total harvest
2008-09	4.2	14	19.3	3	0.2	0	0	0.3	38	19.1	1.8	602
2009-10	3.1	13.9	20.2	3.6	0.3	0	0	0.8	39	17.3	1.6	619
2010-11	2.1	8.37	22.3	6.6	0	0.2	0.2	0.9	39	20.4	0	633
2011-12	1.7	12.3	19.2	3.3	0	0	0	1.2	38	24.2	0	583
2012-13	1.8	12.2	14	6.5	0.2	0	0	0.9	39	24.8	0.9	443

Table 5 Black bear harvest percentage by transportation method in Units 7 and 15, 2008–2013.

Regulatory year	Airplane	Dog/ Horse	Boat	ATV	Snow- machine	Other ORV	Highway Vehicle	Walk	Other/ Unk	Total harvest
2008-09	5.3	1.3	47.5	7.1	0.2	0.0	25.1	11.6	1.8	602
2009-10	5.3	1.6	48.6	6.3	0.0	0.6	23.9	7.8	5.8	619
2010-11	7.7	0.6	46.0	7.9	0.0	0.9	19.6	15.2	2.1	633
2011-12	3.4	1.5	53.7	8.6	0.2	0.0	20.2	11.5	0.9	583
2012-13	7.2	0.7	50.6	8.1	0.0	0.5	18.3	12.4	2.3	443

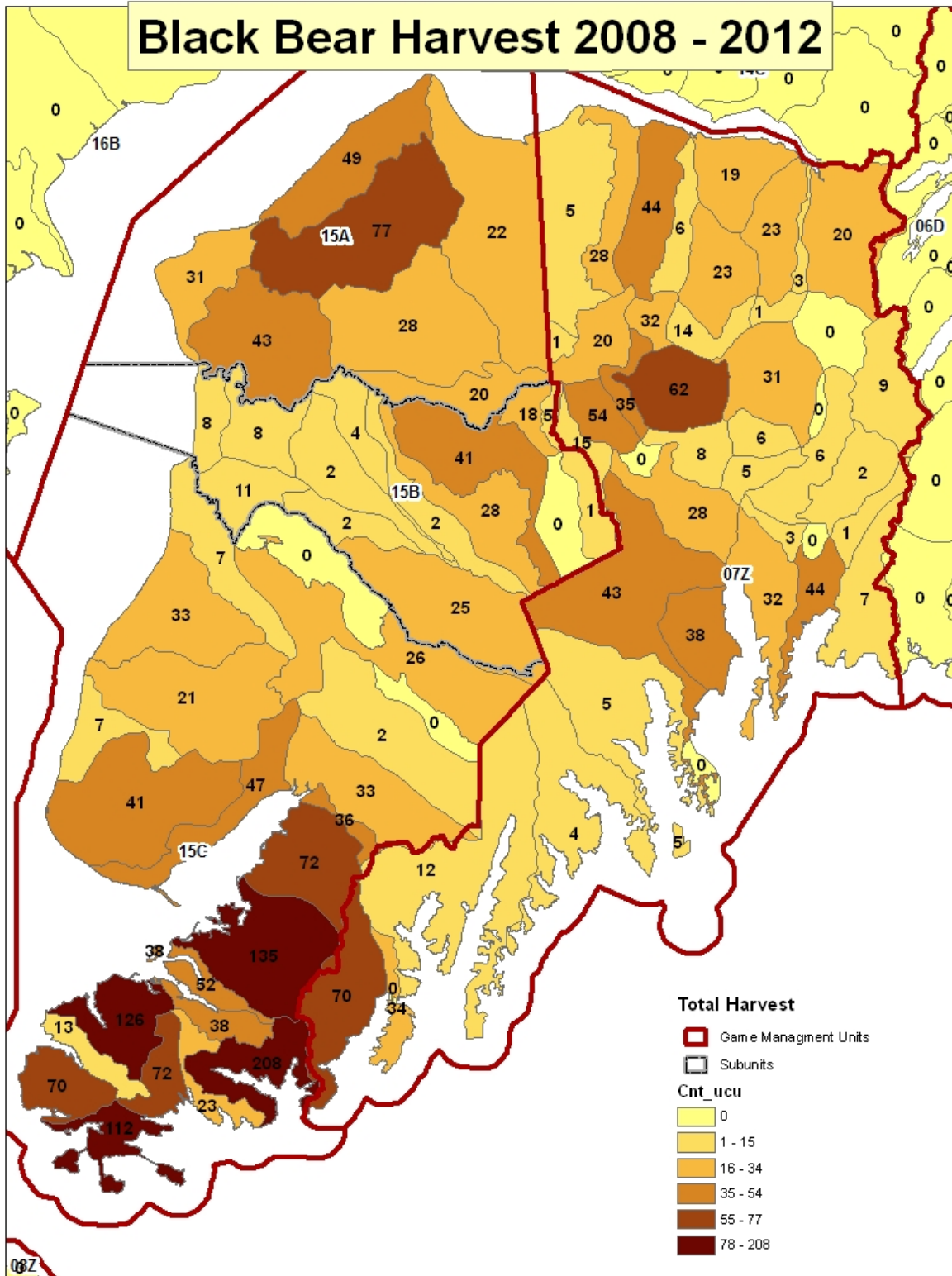


Figure 1. Black bear harvest density by UCU in Units 7 and 15, 2008–2012.