

CHAPTER 18: BLACK BEAR MANAGEMENT REPORT

From: 1 July 2010
To: 30 June 2013¹

LOCATION

GAME MANAGEMENT UNITS: 20A, 20B, 20C, and 20F (34,079 mi²)

GEOGRAPHIC DESCRIPTION: Central–lower Tanana and middle Yukon River drainages

BACKGROUND

Black bears live throughout Interior Alaska. We estimate there are 2,900–4,600 black bears in the 4 units discussed in this report; however, only a few studies of black bear ecology or population dynamics have been completed in Interior Alaska. In 2010, Gardner et al. (2012) conducted a black bear density estimate in the central Tanana Flats of Unit 20A. During 2003–2007, population estimates of black bears in Unit 19D near McGrath were part of a larger study of moose, predation and predator removal (Keech et. al. 2011). A population estimate was also conducted in 2010 in the Yukon Flats near Beaver (J. Caikoski, ADF&G, unpublished data, Fairbanks, 2010). During 1988–1991 a cooperative project conducted by the Alaska Department of Fish and Game (ADF&G) with support from the U.S. Army yielded important information about black bear reproduction, mortality, and density on the Tanana Flats (Hechtel 1991). A portion of that project involved a study of black bear habitat use and denning ecology (Smith 1994). In 1967, Hatler completed a master's thesis on Interior Alaska black bear ecology (Hatler 1967). Johnson (1982) investigated production of offspring by female black bears in Units 20A and 20B.

Black bears provide an important source of meat, hides, and recreation for hunters in some areas. Because of the size of the Fairbanks human population, interest in hunting black bears is high, especially during spring. Information we obtain about black bear ecology and population dynamics has helped ADF&G ensure that the current year-round season and 3-bear bag limit is sustainable.

MANAGEMENT DIRECTION

MANAGEMENT GOALS

- Protect and maintain the black bear population and its habitat in concert with other components of the ecosystem.
- Provide the greatest sustained opportunity to participate in hunting black bears.

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

- Protect human life and property in human-bear interactions.

MANAGEMENT OBJECTIVES

Sex ratio of the harvest is a key indicator of appropriate levels of harvest used for management in these units; therefore, management objectives call for a minimum percentage of males in the harvest.

- Maintain a black bear population that sustains a harvest of at least 55% males in the combined harvests for the most recent 3 years in all units.
- Maintain the defense of life or property (DLP) take of less than 10% of the total bear take in Unit 20B.

METHODS

We collected annual harvest data from sealing reports and harvest tickets of black bears killed by hunters and DLP. Prior to regulatory year (RY) 2009 (regulatory year begins 1 July and ends 30 June, e.g., RY09 = 1 July 2009–30 June 2010), sealing was the only reporting requirement for black bears in Units 20A, 20B, 20C, and 20F. During RY10–RY12, hunters in Units 20A, 20C, and 20F reported harvest using harvest ticket reports. Hunters in Unit 20B reported using harvest tickets as well as having harvested bears sealed. Black bear sealing certificates included data on kill date and location, sex, skull size, amount of meat salvaged, DLP kills, hunter residency, incidental take, commercial services used, and baiting. Harvest tickets included data on days hunted, whether a bear was harvested, kill date, sex, location, commercial services used, and transportation. We recorded the distribution of bears killed using uniform coding units. During sealing, we collected premolars and sent them to Matson’s Laboratory (Milltown, Montana) for sectioning and age determination. To determine if we met management objectives in each unit, we calculated the percentage of males harvested by dividing known-sex males by all known-sex bears harvested. This allowed us to conservatively determine if we were meeting the objectives.

Since RY89, hunters have been required to register bait stations before hunting black bears over bait in spring. We also prepared hunter information leaflets and held free clinics to summarize black bear baiting regulations and encourage hunters to harvest males instead of females.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

Current estimates for the number of black bears in the central and lower Tanana River and middle Yukon River drainages included 600–850 bears in the Tanana Flats in Unit 20A, 950–1,500 bears in Unit 20B, 780–1,250 in the portion of Unit 20C outside Denali National Park, and 600–950 in Unit 20F. We based our population estimates on Gardner et al.’s (2012) density estimate of 12–19 black bears/100 mi² (46–75/1,000 km²), excluding cubs of the year, inhabiting the Tanana Flats study area. This estimate is similar to Hechtel’s (1991) estimate in the same area. This density is also similar to the estimate of 18 bears/100 mi² in a portion of Unit 19D near McGrath (Keech et al. 2011), but is much lower than the 40 bears/100 mi² estimated to inhabit the portion of Unit 25D near the village of Beaver (J. Caikoski, unpublished data). We applied Gardner et al.’s (2012) density estimate to the estimated amount of suitable black bear habitat in

each unit. Based on estimates by Gardner et al., Keech et al., and Caikoski, it is likely that the black bear populations in Units 20A, 20B, 20C, and 20F are near the upper end of our estimated ranges.

Population Composition

No estimate of population composition is available for this black bear population. Sex ratios in the harvest were not representative of sex ratios in the population because females with cubs were protected by regulation. In addition, behavioral differences of male and female bears may have resulted in higher vulnerability of males, and many hunters try to select adult males.

Distribution and Movements

The distribution of black bears shifts seasonally. During spring, bears use moist lowlands where early growing vegetation, especially *Equisetum*, makes up the bulk of their diet (Hatler 1967). Dispersal of young occurs in the spring usually before the breeding season. Immature males disperse longer distances from maternal home ranges than immature females. During fall, black bears feed primarily on berries. Black bears usually den after freeze-up in autumn, and denning habitat can be found within most bear home ranges. Mean home range sizes of marked black bears in the Tanana Flats were 23 mi² for adult females, 32 mi² for subadult females, 230 mi² for adult males, and 93 mi² for subadult males (Hechtel 1991).

MORTALITY

Harvest

Season and Bag Limit. The black bear hunting season was open year-round in Unit 20 with a bag limit of 3 bears. Baiting is restricted to 15 April–30 June. The taking of cubs (first year of life) and females accompanied by cubs was prohibited.

Alaska Board of Game Actions and Emergency Orders. No changes were made by the Board of Game during RY10–RY12. The Board of Game made major changes to black bear regulations during RY07–RY09. In March 2008, the board added a requirement for hunters in many units, including Unit 20, to be in possession of a black bear harvest ticket. In January 2010, the board classified black bears as furbearers as well as big game. Although the board did not open a black bear trapping season, this furbearer classification and other regulatory changes have allowed hunters to legally sell black bear hides and parts, except gall bladders. In March 2010 the board eliminated sealing requirements in Unit 20 (except in Unit 20B) for black bear hides and skulls that remain in the state. Hides sent out of state for tanning continue to require sealing. The board also changed the salvage requirement for black bears harvested 1 June–31 December by allowing hunters in Unit 20B to salvage the skull and either the hide or meat, and allowing hunters in the remainder of Unit 20 to salvage either the hide or meat with no requirement to salvage the skull. The board also increased the maximum number of bait stations registered by guides from 2 to 10, beginning in spring 2011.

Prior to 2009, nonresident military personnel stationed in Alaska could hunt on military lands without a hunting license or the \$225 nonresident metal locking black bear tag. The legislature amended Alaska Statute (AS) 16.05.340, effective 1 January 2009, to require these nonresident military hunters who hunted on any land in Alaska (including military lands) to purchase a

nonresident military hunting license at the resident-hunter rate of \$25.00. These nonresident military personnel continue to be exempt from purchasing a black bear metal locking tag.

Harvest by Hunters. In Unit 20A the average annual black bear harvest during RY10–RY12 was 30 bears with a range of 28–34 bears and 63% male (Table 1). This is slightly lower than the average annual harvest of 32 bears during RY05–RY09.

In Unit 20B the average annual harvest of black bears during RY10–RY12 was 114 bears with a range of 96–133 bears and 71% males (Table 1). This is lower than the average annual harvest of 133 bears during RY05–RY09.

In Unit 20C the average annual harvest of black bears during RY10–RY12 was 29 bears with a range of 27–32 bears and 78% males (Table 1). This is lower than the average annual harvest of 35 bears during RY05–RY09.

In Unit 20F the average annual harvest of black bears during RY10–RY12 was 35 bears with a range of 28–45 bears and 73% known to be males (Table 1). This is slightly lower than the average annual harvest of 36 bears during RY05–RY09.

In all units combined, the average annual reported harvest during RY10–RY12 was 208 bears, compared to an average annual reported harvest of 237 bears during RY05–RY09 (Table 1). The range during RY05–RY12 was 185–276. Several factors may contribute to the variability in harvest, including changes in military deployment, inclement weather that may have hampered hunters or use of transportation methods, and availability of alternative food sources which may have made bears less vulnerable.

The estimated maximum sustainable exploitation rate for Interior black bear populations is approximately 12% (Hechtel 1991). Based on our population estimates for each unit and the mean harvest during RY10–RY12, we estimated the harvest rate to be 3.5–5% in Unit 20A, 7.6–12% in Unit 20B, 2.3–3.7% in Units 20C, and 3.6–5.8% in Unit 20F. The harvest rate in Unit 20B has been estimated at or above the estimated maximum harvest rate many times over the last decade.

To further rule out the possibility that black bears were overharvested in Unit 20B, we examined age and skull size of bears harvested during RY89–RY12. During times of overharvest, older and larger animals are expected to become scarcer in populations, thus, skull size and average age is expected to decrease over time. In RY07–RY09 the average skull size was 16.0 inches for males and 15.6 for females compared to 16.1 for males and 15.8 for females during RY10–RY12 (Table 2). The average skull size during RY07–RY12 suggests that hunters continued to harvest adult bears despite sustained high harvests. Therefore, enough bears lived to adulthood for a consistent harvest of adult bears. Similarly, data from RY89 to RY09 show no decrease in mean age of harvested bears. The mean age of harvested black bears during RY89–RY97 was 4.9 (Seaton 2008) compared to 5.2 during RY10–RY12 (Table 3). This trend is contrary to the expectation that if the population is overharvested, age and skull size would decrease over time.

Distribution of Harvest. Most black bear harvest occurred at bait stations during the spring baiting season within the road-accessible portions of Unit 20B. The density of bait stations decreased with distance from Fairbanks and the road system. Some hunters intentionally

travelled farther from the road system and farther from Fairbanks to hunt black bears, possibly to avoid crowding by other hunters and to find better hunting.

Registration of Bait Stations. Black bear baiting is limited to the spring season (15 April–30 June), and hunters using baits were limited to 2 bait stations, and were required to register bait stations prior to set-up and post a sign at bait stations that included their hunting license number.

Hunters who registered black bear bait stations increased from 220 hunters registering 314 bait stations in spring 1989 when registration became mandatory to a peak of 615 hunters registering 1,154 bait stations in RY91 (Seaton 2008). Those numbers have steadily decreased to an average of 468 hunters registering an average of 684 bait stations during RY05–RY12 (Table 4). During years of high military deployment, such as RY05 and RY10, the number of registered bait stations was noticeably lower than other years.

Harvest at Bait Stations. A large proportion of the black bear harvest continues to be taken over bait stations. During RY89–RY91, 64% of black bear harvest occurred at bait stations (Seaton 2008). The average was 77% during RY05–RY09 (Table 4). Since RY09, when sealing was not required for all black bears taken in Units 20A, 20C and 20F, the data were not collected on whether harvested bears were taken over a bait station. Based on historical records and the number of bait stations registered, it is likely the same. In Unit 20B, 75% of the black bear harvest was taken over black bear bait stations during RY10–RY12.

Hunter Residency and Success. During RY10–RY12, most black bears (83%) were taken by residents of Alaska, with 74% by local residents of Unit 20 (Table 5).

Harvest tickets and reports were required beginning in RY09, so we do not yet have a long-term data set to compare trends in the area. In RY09 harvest report data showed that the success rate was 15% for hunters in Unit 20A, 19% in Unit 20B, 29% in Unit 20C, and 51% in Unit 20F. A total of 154 hunters reported hunting in Unit 20A, 543 in Unit 20B, 66 in Unit 20C, and 63 in Unit 20F. During RY10–RY12, 20% of hunters took bears in Unit 20A, 16% in Unit 20B, 29% in Unit 20C, and 48% in Unit 20F. An average of 153 hunters reported hunting annually in Unit 20A, 515 in Unit 20B, 81 in Unit 20C, and 73 in Unit 20F. Data from harvest ticket reports do not match sealing data in Unit 20B where both reporting methods were required. In RY10, 82 bears were reported on harvest tickets and 114 were sealed. In RY11, 98 bears were reported on harvest tickets and 133 were sealed. In RY12, 74 were reported on harvest tickets and 97 were sealed. During RY10–RY12, 26% of the bears that were sealed were not reported on harvest tickets.

Harvest Chronology. During RY10–RY12, 83% of the harvest occurred during May and June (Table 6), which coincides with emergence from dens and the baiting season. Factors that influenced harvest chronology for black bears included the opportunity to use bait, vulnerability of bears, hide quality, and seasonal activity of hunters.

Transport Methods. During RY10–RY12, the most common methods of transportation used (in descending order) by successful black bear hunters were 4-wheelers, boats, highway vehicles, and airplanes (Table 7).

Defense of Life or Property. During RY10–RY12, 4 black bears were recorded as taken under DLP provisions. Only 1 of these bears was taken in Unit 20B. With a year-round season and a bag limit of 3 black bears, some black bears that might have otherwise been taken under the DLP regulations were taken under the general hunting regulations.

Other Mortality

Causes of natural mortality of black bears include predation, food shortages that result in undernourished cubs and yearlings (Rogers 1977), and flooding of natal dens (Alt 1984). Hechtel (1991) reported several instances of natural mortality. During the spring 1996 recollaring effort, a bear died after being immobilized, but necropsy results revealed the presence of extensive cancerous tissue in several internal organs.

Bear baiting has become an important issue for anti-hunting groups in the United States. Their efforts have succeeded in eliminating this black bear hunting method in some western states, especially during the spring. Such campaigns have sometimes been predicated on the likelihood of cubs being orphaned when their mothers are killed at bait stations or during spring hunts. Our records show little evidence of this, despite the fact that most harvest takes place during May and June (Table 6). It is also likely that the elevated harvest of spring black bears around Fairbanks has decreased nuisance-problem bears in and around the urban areas. A ballot initiative in November 2004 failed to outlaw bear baiting in Alaska. The practice in Alaska will probably continue to receive close scrutiny; however it proves to be an important tool for harvesting black bears in flat, forested areas.

CONCLUSIONS AND RECOMMENDATIONS

We met our management objective for sex ratio of the black bear harvests. The average percentage of males in the harvest during RY10–RY12 was 71%, which was above the minimum objective of 55%.

Based on the population estimates for individual units, the average annual harvest rates for RY10–RY12 were at or below the maximum sustainable exploitation rate of 12% in Units 20A (5–7%), 20B (8–12%), 20C (4–6%), and 20F (6–10%). The harvest rate in Unit 20B has been sustained at the estimated maximum harvest rate of 12% or higher for 16 of the 21 years during RY89–RY09. This sustained high harvest rate suggests that estimates of maximum harvest rate were inaccurate, immigration from adjacent units was high, or our population estimate was lower than the true population.

The population estimates for RY10–RY12 were adjusted to more closely represent densities found by Gardner et al. (2012) and Keech et al. (2011), therefore they are likely more representative of the true population than previous management reports. However, the extrapolated density estimate from Unit 20A to Unit 20B may be a source of inaccuracy. It is also possible that black bear populations can sustain higher than 12% harvest in some areas when distribution of harvest is considered. For instance, Unit 20B harvest is concentrated along roads, and bears may be harvested above the level at which they can reproduce in these areas, making these areas “sink” populations that are replenished by immigration of bears from populations farther from roads. When the surrounding inaccessible and essentially unharvested areas are considered as “source” populations, immigration into the roaded areas may allow a higher

sustainable harvest than previously predicted. We investigated the theoretical overharvest of Unit 20B black bears through age and skull size analysis, and success rates at bait stations. Average skull size remained consistent, average age has not decreased, and harvest was consistent. Considering these factors, it is highly unlikely that black bears have been overharvested in Unit 20B during the last 24 years.

We met our objective of maintaining a DLP take of less than 10% of the total bear take in Unit 20B. Only 1 DLP bear was harvested in Unit 20B during RY10–RY12, representing a fraction of the total harvest. Relatively high black bear harvest in this area may be a factor in the reduction of potential problems. We also provided the public with information to reduce garbage availability to bears and worked to reduce the need for DLP kills. We should continue to closely monitor public interest in black bear hunting and subsequent harvest.

With the requirement for hunters to report hunting effort via harvest ticket reports in Units 20A, 20C, and 20F, and to report hunting effort via harvest tickets and sealing in Unit 20B, we are adjusting to the data received by the department. Although days hunted and number of unsuccessful hunters is important data, the accuracy of harvest reported via harvest ticket reports is in question. In Unit 20B there was a 28% difference between the number of bears sealed and the number reported on harvest tickets during RY10–RY12. During the next report it is likely that we will be able to apply a correction factor based on these data to apply to the units where sealing is not required.

REFERENCES CITED

- Alt, G. L. 1984. Black bear cub mortality due to flooding of natal dens. *Journal of Wildlife Management* 48:1432–1434.
- Gardner, C. L., N. J. Pamperin, B. D. Taras, K. A. Kellie, and R. D. Boertje. 2012. Spring black bear density and moose calving distribution in the U.S. Army's Tanana Flats Training Area, Game Management Unit 20A, Interior Alaska. Alaska Department of Fish and Game, Division of Wildlife Conservation, Research Report to U.S. Army, Fairbanks.
- Hatler, D. F. 1967. Some aspects in the ecology of the black bear (*Ursus americanus*) in Interior Alaska. Thesis, University of Alaska Fairbanks.
- Hechtel, J. L. 1991. Population dynamics of black bear populations, Fort Wainwright, Alaska. Alaska Department of Fish and Game, Division of Wildlife Conservation, Natural Resources Report 91-2, U.S. Army 6th Infantry Division (Light), Fairbanks.
- Johnson, D. M. 1982. Reproductive characteristics of black bears in Interior Alaska. Alaska Department of Fish and Game, Division of Game, Research Final Report 1 July 1980–30 June 1981, Federal Aid in Wildlife Restoration Study 17.4R, Juneau.
- Keech, M. A. , M. S. Lindberg, R. D. Boertje, P. Valkenburg, B. D. Taras, T. A. Boudreau, and K. B. Beckmen. 2011. Effects of predator treatments, individual traits, and environment on moose survival in Alaska. *Journal of Wildlife Management* 75:1361–1380.

Rogers, L. L. 1977. Social relationships, movements, and population dynamics of black bears in northeastern Minnesota. Dissertation, University of Minnesota, Minneapolis.

Seaton, C. T. 2008. Units 20A, 20B, 20C, and 20F black bear. Pages 217–233 [In] P. Harper, editor. Black bear management report of survey and inventory activities 1 July 2004–30 June 2007. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 17.0, Juneau.

Smith, M. E. 1994. Black bear denning ecology and habitat selection in Interior Alaska. Thesis, University of Alaska Fairbanks.

PREPARED BY:

Anthony L. Hollis
Wildlife Biologist II

APPROVED BY:

Jackie J. Kephart
Assistant Management Coordinator

REVIEWED BY:

Laura A. McCarthy
Publications Technician II

Carl A. Roberts
Wildlife Technician III

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

Hollis, A. L. 2014. Units 20A, 20B, 20C, and 20F black bear. Chapter 18, pages 18-1 through 18-15 [In] P. Harper and L. A. McCarthy, editors. Black bear management report of survey and inventory activities 1 July 2010–30 June 2013. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2014-5, Juneau.

The State of Alaska is an Affirmative Action/Equal Opportunity Employer. Contact the Division of Wildlife Conservation at (907) 465-4190 for alternative formats of this publication.

Table 1. Units 20A, 20B, 20C, and 20F black bear harvest^a, regulatory years^b 2005–2012.

Regulatory year	Area	Fall				Spring				Annual total			
		Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
2005	20A	0	3	0	3	15	6	0	21	15	9	0	24
	20B	7	6	0	13	68	39	0	107	75	45	0	120
	20C	0	0	0	0	17	7	0	24	17	7	0	24
	20F	0	4	0	4	12	5	0	17	12	9	0	21
	Total	7	13	0	20	112	57	0	169	119	70	0	189
	(% M)	(35)				(66)				(63)			
2006	20A	2	2	0	4	18	12	0	30	20	14	0	34
	20B	13	4	0	17	76	47	1	124	89	51	1	141
	20C	0	1	0	1	16	14	0	30	16	15	0	31
	20F	1	1	0	2	28	10	0	38	29	11	0	40
	Total	16	8	0	24	138	83	1	222	154	91	1	246
	(% M)	(67)				(62)				(63)			
2007	20A	3	2	0	5	21	7	0	28	24	9	0	33
	20B	8	2	0	10	72	44	0	116	80	46	0	126
	20C	3	3	0	6	26	19	0	45	29	22	0	51
	20F	0	1	0	1	19	8	1	28	19	9	1	29
	Total	14	8	0	22	138	78	1	217	152	86	1	239
	(% M)	(64)				(64)				(64)			
2008	20A	8	11	0	19	21	4	0	25	29	15	0	44
	20B	24	9	0	33	74	44	0	118	98	53	0	151
	20C	2	2	0	4	24	12	0	36	26	14	0	40
	20F	3	1	0	4	29	7	1	37	32	8	1	41
	Total	37	23	0	60	148	67	1	216	185	90	1	276
	(% M)	(62)				(69)				(67)			
2009	20A	3	2	0	5	14	6	0	20	17	8	0	25
	20B	15	7	0	22	72	35	0	107	87	42	0	129
	20C	7	1	1	9	9	11	1	21	16	12	2	30
	20F	3	1	0	4	33	12	0	45	36	13	0	49
	Total	28	11	1	40	128	64	1	193	156	75	2	233
	(% M)	(70)				(67)				(68)			

Regulatory year	Area	Fall				Spring				Annual total			
		Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
2010	20A	3	0	0	3	15	10	0	25	18	10	0	28
	20B	12	3	0	15	83	15	0	98	95	18	0	113
	20C	5	0	0	5	19	7	1	27	24	7	1	32
	20F	3	0	0	3	22	3	0	25	25	3	0	28
	Total (% M)	23 (88)	3	0	26	139 (79)	35	1	175	162 (81)	38	1	201
2011	20A	3	5	0	8	16	7	3	26	19	12	3	34
	20B	24	7	0	31	58	44	0	102	82	51	0	133
	20C	2	0	0	2	18	5	2	25	20	5	2	27
	20F	1	6	1	8	26	11	0	37	27	17	1	45
	Total (% M)	30 (61)	18	1	49	118 (62)	67	5	190	148 (62)	85	6	239
2012	20A	3	4	0	7	15	6	0	21	18	10	0	28
	20B	11	6	0	17	56	23	0	79	67	29	0	96
	20C	2	1	0	3	20	6	0	26	22	7	0	29
	20F	2	3	0	5	21	5	1	27	23	8	1	32
	Total (% M)	18 (56)	14	0	32	112 (73)	40	1	153	130 (70)	54	1	185

^a Includes defense of life or property kills. Parentheses indicate percentage of bears of known sex that were male. Data for 1989–1992 from counts of sealing certificates.

^b Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).

Table 2. Unit 20B harvested black bear mean skull size^a regulatory years^b 2005–2012.

Regulatory year	Males	<i>n</i>	Females	<i>n</i>
2005	16.4	75	15.5	45
2006	16.7	89	15.6	51
2007	15.9	80	15.8	45
2008	16.4	96	15.9	55
2009	15.8	88	15.0	41
2010	16.7	95	16.2	19
2011	16.6	82	15.5	51
2012	15.0	68	15.7	29

^a Skull size equals total length plus zygomatic width in inches.

^b Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).

Table 3. Unit 20B harvested black bear mean ages, regulatory years^a 2005–2012.

Regulatory year	Mean age	<i>n</i> ^b
2005	5.3	108
2006	5.2	32
2007	5.0	39
2008	5.0	200
2009	5.0	30
2010	4.5	79
2011	6.0	101
2012	5.0	8

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).

^b Age data not available for some bears.

Table 4. Units 20A, 20B, 20C, and 20F black bear bait station registration and harvest, regulatory years^a 2005–2012.

Regulatory year	Baiting		Harvest			Success
	Hunters registering bait stations	Bait stations	Taken over bait (%)	Not taken ^b over bait (%)	Total harvest ^c	Taken over bait divided by hunters registering bait stations (%)
2005	399	623	159 (85)	27 (15)	186	(40)
2006	463	687	201 (82)	43 (18)	244	(43)
2007	468	676	196 (82)	42 (18)	238	(42)
2008	463	668	184 (68)	87 (32)	271	(40)
2009	556	788	165 (71)	68 (29)	233	(30)
2010 ^d	479	538				
2011 ^d	468	767				
2012 ^d	445	725				

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).

^b Not taken over bait harvest includes bears taken outside of the baiting season.

^c Total harvest does not include harvest for which it was not known if baits were used.

^d Prior to regulatory year 2009, sealing was the only reporting requirement for Units 20A, 20B, 20C, and 20F. During regulatory years 2010–2012, hunters in Units 20A, 20C, and 20F reported bear harvest using harvest tickets, but sealing was still required for black bear hides and skulls sent out of state. Hunters in Unit 20B reported harvest using harvest tickets and by having their harvested bear(s) sealed.

Table 5. Units 20A, 20B, 20C, and 20F successful hunter residency, regulatory years^a 2005–2012.

Regulatory year	Residents			Nonresident	Unk	Total successful hunters ^c
	Local ^b (%)	Nonlocal (%)	Total (%)			
2005	144 (76)	7 (4)	151 (80)	38 (20)	0	189
2006	176 (72)	8 (3)	184 (76)	59 (24)	0	243
2007	174 (73)	11 (5)	185 (77)	54 (23)	0	239
2008	208 (77)	11 (4)	219 (81)	53 (20)	0	272
2009	184 (81)	14 (6)	198 (87)	28 (12)	0	226
2010	126 (74)	14 (8)	140 (82)	26 (15)	4	170
2011	161 (78)	15 (7)	176 (85)	24 (12)	7	207
2012	118 (71)	17 (10)	135 (81)	29 (17)	3	167

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).

^b Resident of Unit 20.

^c Excludes data from defense of life or property kills that were not taken as a legal harvest.

Table 6. Units 20A, 20B, 20C, and 20F black bear harvest chronology by month, regulatory years^a 2005–2012.

Unit	Regulatory year	Harvest chronology by month (%)							
		Jul	Aug	Sep	Oct–Apr	May	Jun		
20A	2005	0 (0)	0 (0)	3 (13)	0 (0)	12 (50)	9 (38)		
	2006	1 (3)	0 (0)	3 (9)	0 (0)	15 (45)	14 (42)		
	2007	1 (3)	1 (3)	4 (12)	0 (0)	9 (26)	19 (56)		
	2008	1 (2)	6 (14)	11 (26)	0 (0)	14 (33)	11 (26)		
	2009	0 (0)	1 (4)	4 (16)	0 (0)	10 (40)	10 (40)		
	2010	0 (0)	0 (0)	3 (12)	0 (0)	7 (28)	15 (60)		
	2011	0 (0)	1 (3)	7 (20)	0 (0)	11 (31)	16 (46)		
	2012	0 (0)	1 (4)	6 (21)	0 (0)	1 (4)	20 (71)		
20B	2005	3 (3)	1 (1)	9 (8)	0 (0)	35 (29)	72 (60)		
	2006	4 (3)	2 (1)	11 (8)	0 (0)	43 (31)	81 (57)		
	2007	2 (2)	3 (2)	5 (4)	0 (0)	30 (24)	86 (68)		
	2008	3 (2)	6 (4)	22 (15)	0 (0)	33 (22)	85 (57)		
	2009	1 (1)	1 (1)	19 (15)	1 (1)	53 (41)	54 (42)		
	2010	2 (2)	4 (4)	9 (8)	0 (0)	46 (41)	52 (46)		
	2011	5 (4)	5 (4)	20 (15)	1 (1)	32 (24)	70 (53)		
	2012	0 (0)	3 (3)	14 (15)	0 (0)	9 (10)	70 (73)		
20C	2005	0 (0)	0 (0)	0 (0)	0 (0)	6 (25)	18 (75)		
	2006	0 (0)	0 (0)	1 (3)	0 (0)	4 (13)	26 (84)		
	2007	3 (6)	0 (0)	3 (6)	0 (0)	11 (22)	33 (66)		
	2008	0 (0)	1 (3)	2 (5)	1 (3)	11 (28)	25 (63)		
	2009	1 (3)	1 (3)	5 (17)	0 (0)	13 (43)	10 (33)		
	2010	1 (3)	0 (0)	2 (6)	2 (6)	4 (13)	23 (72)		
	2011	0 (0)	1 (4)	1 (4)	0 (0)	7 (26)	18 (67)		
	2012	0 (0)	1 (3)	2 (7)	0 (0)	0 (0)	27 (90)		
20F	2005	2 (10)	0 (0)	2 (10)	0 (0)	3 (14)	14 (67)		
	2006	0 (0)	1 (3)	1 (3)	0 (0)	12 (30)	26 (65)		
	2007	1 (3)	0 (0)	0 (0)	0 (0)	6 (21)	22 (76)		
	2008	1 (2)	1 (2)	2 (5)	0 (0)	19 (46)	18 (44)		
	2009	0 (0)	1 (2)	3 (6)	0 (0)	25 (52)	19 (40)		
	2010	1 (4)	0 (0)	2 (7)	0 (0)	5 (18)	20 (71)		
	2011	3 (7)	1 (2)	4 (10)	1 (2)	9 (21)	25 (58)		
	2012	0 (0)	0 (0)	5 (16)	0 (0)	0 (0)	27 (84)		

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).

Table 7. Units 20A, 20B, 20C, and 20F black bear harvest by transport method, regulatory years^a 2005–2012.

Unit	Regulatory year	Harvest by transport method (%)											n
		Airplane	Dog/ Horse	Boat	4-wheeler	Snowmachine	Other ORV	Highway vehicle	Walk	Other/Unk			
20A	2005	5 (21)	0 (0)	11 (46)	7 (29)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	24		
	2006	10 (29)	0 (0)	16 (47)	4 (12)	0 (0)	0 (0)	3 (9)	0 (0)	1 (3)	34		
	2007	11 (33)	1 (3)	14 (42)	4 (12)	0 (0)	0 (0)	2 (6)	1 (3)	0 (0)	33		
	2008	12 (30)	1 (3)	14 (35)	9 (23)	0 (0)	0 (0)	0 (0)	3 (8)	1 (3)	40		
	2009	6 (29)	0 (0)	8 (38)	6 (29)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	21		
	2010	3 (11)	0 (0)	12 (43)	2 (7)	0 (0)	2 (7)	3 (11)	0 (0)	6 (21)	28		
	2011	11 (31)	0 (0)	10 (29)	8 (23)	0 (0)	1 (3)	4 (11)	0 (0)	1 (3)	35		
	2012	8 (29)	0 (0)	8 (29)	8 (29)	0 (0)	4 (14)	0 (0)	0 (0)	0 (0)	28		
20B	2005	8 (7)	0 (0)	18 (15)	65 (54)	0 (0)	0 (0)	16 (13)	13 (11)	0 (0)	120		
	2006	11 (8)	0 (0)	29 (21)	77 (55)	0 (0)	0 (0)	17 (12)	7 (5)	0 (0)	141		
	2007	8 (6)	0 (0)	20 (16)	59 (47)	1 (1)	2 (1)	28 (22)	8 (6)	0 (0)	126		
	2008	6 (4)	1 (1)	26 (17)	84 (56)	0 (0)	2 (2)	24 (16)	7 (5)	0 (0)	150		
	2009	16 (13)	0 (0)	23 (18)	53 (42)	0 (0)	2 (2)	17 (14)	14 (11)	0 (0)	125		
	2010	1 (1)	0 (0)	31 (27)	56 (49)	0 (0)	1 (1)	18 (16)	7 (6)	0 (0)	114		
	2011	5 (4)	0 (0)	26 (20)	63 (48)	0 (0)	2 (2)	33 (25)	2 (2)	0 (0)	131		
	2012	2 (2)	0 (0)	28 (29)	47 (49)	0 (0)	0 (0)	16 (17)	3 (3)	0 (0)	96		
20C	2005	4 (17)	0 (0)	19 (79)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	24		
	2006	1 (3)	0 (0)	26 (84)	3 (10)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	31		
	2007	8 (16)	0 (0)	37 (73)	3 (6)	0 (0)	0 (0)	1 (2)	2 (4)	0 (0)	51		
	2008	6 (15)	0 (0)	28 (70)	0 (0)	0 (0)	0 (0)	2 (5)	4 (10)	0 (0)	40		
	2009	6 (21)	0 (0)	12 (43)	5 (18)	0 (0)	2 (7)	0 (0)	3 (11)	0 (0)	28		
	2010	14 (44)	0 (0)	14 (44)	3 (9)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	32		
	2011	13 (46)	0 (0)	11 (39)	1 (4)	0 (0)	0 (0)	0 (0)	2 (7)	1 (4)	28		
	2012	13 (39)	0 (0)	14 (42)	1 (3)	0 (0)	2 (6)	3 (9)	0 (0)	0 (0)	33		
20F	2005	1 (5)	0 (0)	5 (24)	1 (5)	0 (0)	0 (0)	14 (67)	0 (0)	0 (0)	21		
	2006	0 (0)	0 (0)	4 (10)	20 (50)	0 (0)	1 (3)	9 (23)	4 (10)	2 (5)	40		
	2007	0 (0)	0 (0)	6 (21)	10 (34)	0 (0)	0 (0)	11 (38)	2 (7)	0 (0)	29		
	2008	0 (0)	0 (0)	7 (17)	14 (34)	0 (0)	0 (0)	16 (39)	4 (10)	0 (0)	41		
	2009	1 (2)	0 (0)	8 (16)	17 (35)	0 (0)	0 (0)	20 (41)	3 (6)	0 (0)	49		
	2010	1 (4)	0 (0)	8 (29)	7 (25)	0 (0)	1 (4)	9 (32)	2 (7)	0 (0)	28		
	2011	0 (0)	0 (0)	12 (26)	11 (24)	0 (0)	1 (2)	15 (33)	2 (4)	5 (11)	46		
	2012	0 (0)	0 (0)	6 (19)	18 (56)	0 (0)	0 (0)	6 (19)	2 (6)	0 (0)	32		

^a Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2005 = 1 July 2005–30 June 2006).