
CHAPTER 17: BROWN BEAR MANAGEMENT REPORT

From: 1 July 2012

To: 30 June 2014

LOCATION

GAME MANAGEMENT UNIT: 18 (42,000 mi²)

GEOGRAPHIC DESCRIPTION: Yukon-Kuskokwim Delta

BACKGROUND

Brown/grizzly bears exist at moderate density and the population is stable in Unit 18. Highest densities are in the Kilbuck Mountains southeast of Bethel and in the Andreafsky Mountains-Nulato Hills north of the Yukon River. Typically, few bears are reported harvested.

Traditionally, bears were important as food animals for the Yupik people of Unit 18, and some of their customs surrounding bear hunting were inconsistent with the general hunting regulations. A brown bear working group made up of representatives of Unit 18 villages was established in 1994 as a vehicle for local input on brown bear issues. After consultation with this group, the Western Alaska Brown Bear Management Area (WABBMA) was established for subsistence hunting, and regulations were modified to more closely match local cultural needs and to improve harvest reporting. WABBMA included all of Units 18 and 17, and parts of Units 9 and 19A where a subsistence registration permit hunt was administered for hunters who pursued bears primarily for their meat.

Future administration of the subsistence brown bear hunt will be on a game management unit basis rather than through WABBMA, and the working group is no longer active. However, a good working relationship with the local public was established and is an important part of bear management in Unit 18.

MANAGEMENT DIRECTION

MANAGEMENT GOALS

- Maintain a viable brown bear population in Unit 18.
- Obtain brown bear population and harvest information.
- Minimize adverse interactions between bears and the public.
- Maintain productive working relationships with local residents and other agencies.

MANAGEMENT OBJECTIVES

- Monitor harvest through the sealing program, subsistence registration permit reports, and contacts with the public.
- Obtain brown bear population information within the Togiak National Wildlife Refuge (TNWR) portion of Unit 18 by cooperating with TNWR staff in a census effort.
- Provide educational material through the media and informal channels to improve compliance with brown bear hunting regulations and harvest reporting requirements.
- Inform the public of methods to minimize bear-human conflicts by reducing the attractiveness of fish camps, dumps, and other attractants.
- Communicate and cooperate with Association of Village Council Presidents, subsistence brown bear hunters, local village councils, Alaska Fish and Game advisory committees, the Federal Subsistence Regional Advisory Council, and the U.S. Fish and Wildlife Service to regulate subsistence bear hunting.

METHODS

Harvest data are summarized by regulatory year (RY), which begins 1 July and ends 30 June (e.g., RY12 = 1 July 2012–30 June 2013). During RY12 and RY13 we monitored the general hunt harvest through our standard sealing requirements. We also contacted village leaders, local media, village natural resource personnel, hunters, and law enforcement personnel, and relayed reports of illegal activities to the Alaska Department of Public Safety, Division of Alaska Wildlife Troopers.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Population Size

To date, there have been no unitwide brown bear census efforts or projects completed in Unit 18. In 2002 and 2003, portions of Unit 18 and adjoining units within TNWR were censused by refuge staff, providing a midpoint density of 40.3 bears per 1,000 km² as a comparative value for similar habitats found in the remainder of Unit 18 (Walsh et al. 2006). Since one-third of the study area included high quality bear habitat in Unit 18, we extrapolated approximate densities from the TNWR study to all of Unit 18 to estimate the unitwide population at 550 bears. We think the population is stable and includes approximately 350 bears in the Kilbuck Mountains and 200 bears in the Andraefsky Mountains and along the Yukon River. Few brown bears exist elsewhere in Unit 18.

Population Composition

There were no activities to determine brown bear population composition in Unit 18, but sex composition of the general hunt harvest is available in Table 1. During this reporting period, 70% of the bears taken were males, compared to 67% of all the bears taken since 1997.

Distribution and Movements

Drainages that include salmon streams in Unit 18, such as the Kisaralik and Kwethluk rivers in the Kilbuck Mountains, and the Andrafsky River north of St. Marys, support greater brown bear densities than elsewhere in the unit. Lowland habitats along the forested riparian corridors of the Yukon River and tributaries of the Kuskokwim River support moderate densities of brown bears. Other lowland habitats, including the vast treeless lowland of the Yukon-Kuskokwim Delta, contain very few bears.

MORTALITY

Harvest

Seasons and Bag Limits (RY12 and RY13).

Unit and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
<i>Unit 18, General Hunt</i> 1 bear every regulatory year.	1 Sep–31 May (General hunt only)	1 Sep–31 May (General hunt only)
<i>Unit 18, Subsistence Hunt</i> 1 bear per regulatory year by registration permit (RB698).	1 Sep–31 May (Subsistence hunt only)	No open season

Alaska Board of Game Actions (BOG) and Emergency Orders. BOG reauthorized the brown bear tag fee exemption associated with subsistence registration permit hunting in the unit. At its November 2011 meeting, BOG removed the tag fee for residents during the general season hunts. The general hunt tag fee exemption regulation was implemented in RY12. There were no emergency order actions by the department during the reporting period.

Harvest by Hunters. During RY12 the Unit 18 reported harvest was 34 bears (0 subsistence and 34 general season), and during RY13 the reported harvest was 22 bears (0 subsistence and 22 general season; Table 1). Most of the total reported harvest occurred in the area south of the Kuskokwim River (77%). Harvests during the reporting period were 1) higher than the 10-year average of 18.3 bears/year, and 2) close to a 6% harvest rate of the estimated population in Unit 18 inferred from census work completed in adjacent areas. This level of harvest is not believed to be excessive given the low percentage (30%) of females harvested. Additional harvest statistics for the general hunt are shown in Table 1.

Harvests of brown bears have increased in the past decade. Hunter access is primarily by aircraft and limited to a few lakes and landing areas where high hunting pressure occurs. However, there are large areas throughout Unit 18 that provide refuge for bears because they are not accessible by hunters. There has been a slight increase in bears harvested north of the Yukon River as more commercial services have been available to hunters to access the area. Brown bear harvests are within the anticipated increase associated with liberalized seasons and bag limits. Total harvests and are not believed to be impacting the population status in the unit.

Defense of life or property (DLP) losses are reported infrequently. By their nature, DLP instances are unplanned; people involved in DLP kills are unprepared for dealing with a dead bear, and they generally have poor knowledge of proper procedures. Along the Yukon River we established an electric fence around a fish camp as a demonstration project to reduce nuisance encounters with bears. Results were encouraging and we anticipate public acceptance of this technique, although expense will be an impediment to wide-scale use. We made progress with DLP reporting, but we probably don't hear about many of the bears killed under DLP circumstances. We did not have any DLP bears during this reporting period. In the past we have had as many as 6 reported in a single regulatory year.

Permit Hunts. Subsistence registration permits (RB698) are available to hunters who take bears primarily for the meat. Prior to 2005 the subsistence permit included multiple units within the WABBMA area. Now, each unit in the previous management area has a separate subsistence permit as a way to make bear hunting regulations more suitable for local residents who include bear meat as part of their subsistence fare. Under this permit, hunters must salvage the meat for human consumption, the bag limit is 1 bear per regulatory year, resident tag fees are exempted, the hide and skull need not be salvaged, hunters must report their hunting activity after receiving a prompt by mail, and the sealing requirement is eliminated unless the hide or skull is removed from a unit with subsistence hunts. If a bear is presented for sealing under this last provision, the trophy value of the hide is destroyed by removing the skin of the head and the front claws, and these parts are retained by the department. Harvest statistics for the subsistence hunt are shown in Table 2.

In some cases, hunters get a subsistence registration permit so they can shoot a bear causing problems in camp during hunts for other big game. They often don't want to shoot a bear, but if they have to, they also don't care to relinquish it to the state as required by DLP regulations.

Hunter Residency and Success. During RY12 general hunts, 20 of 34 brown bears were harvested by nonresidents. During RY13 general hunts, 4 residents and 18 nonresidents harvested bears. Nonresident harvests are expected to remain relatively stable because nonresident hunters are required to use a guide or be accompanied by a resident relative within second degree kindred. Also, both federal refuges in Unit 18, the Yukon Delta National Wildlife Refuge (YDNWR) and TNWR, limit the number of guides operating on refuge lands. YDNWR has issued permits to 3 bear hunting guides to operate within the refuge and TNWR has issued a permit to 1 guide to operate within the portion of TNWR within Unit 18. Recently, YDNWR allowed both moose and brown bears to be hunted by guided hunters north of the Yukon River, specifically the Andreafsky River drainage. Each of the federally permitted guides are allowed to take up to 5 bears per calendar year, and there are no plans by either refuge to change that number. Because of this cap on the number of guides in federal refuges, we expect nonresident brown bear harvest to remain low.

General hunt regulations require hunters to report by having their bear sealed. However, this reporting mechanism does not measure the number of unsuccessful hunters, so success rates are unavailable for this group of hunters.

Harvest Chronology. Prior to the arrival of caribou in Unit 18 in the mid-1990s, most of the bears taken in Unit 18 were killed in the spring. This pattern was variable and depended on snow

conditions that allowed travel by snowmachine, which provided greater access. More recently the fall harvest has exceeded the spring harvest, which was originally attributed to caribou hunters opportunistically taking bears. Even though fewer caribou hunters are hunting in the fall, the seasonality of fall brown bear harvest continues to occur. Additional harvest chronology data are found in Table 1.

Transport Methods. In RY12, 28 successful hunters used airplanes to access their hunting areas, 2 used a snowmachine, 1 used a boat, and 1 used an off-road vehicle. In RY13, 20 successful hunters used airplanes, and 2 used a boat. During this reporting period spring snow conditions were poor for bear hunting using a snowmachine.

The hunters who use subsistence permits typically use snowmachines. Since the subsistence season is open 1 September–31 May, and spring hunting is preferred by subsistence hunters, snowmachines are more practical.

Other Mortality

No other mortality was documented during this reporting period.

HABITAT

Assessment

Unit 18 contains approximately 14,000 km² of fair to excellent brown bear habitat in the Kilbuck and Andreafsky Mountains. Additional lowland riparian habitats surrounded by tundra support moderate densities of brown bears along the Yukon River and tributaries of the Kuskokwim River. Most brown bear habitat in Unit 18 is protected by YDNWR and TNWR, and land status is not expected to change.

Enhancement

No enhancement is necessary or anticipated.

NONREGULATORY MANAGEMENT PROBLEMS/NEEDS

The WABBMA Working Group was a useful platform for public involvement in bear issues in Unit 18 but was disbanded due to budget considerations. Public input will still be necessary and will be accomplished through local advisory committee and regional advisory council meetings.

CONCLUSIONS AND RECOMMENDATIONS

Brown bear harvests ranged 22–34 bears per year during the reporting period and represented a 6% harvest rate on the estimated population in Unit 18. We think most of the harvest is now by residents and nonresidents that are specifically targeting brown bears in Unit 18. We anticipate little change in the number of bears harvested by nonresident hunters due to guide requirements for hunters and restrictions on the number of guides allowed to operate on federal refuge lands, which compose the majority of hunt areas in Unit 18.

Based on harvest rates and a high proportion of males in the harvest (70%), we recommend no changes to seasons and bag limits for general season hunts. Subsistence hunts have low

participation and success and should be continued as a registration permit hunt to allow use of a subsistence resource.

Progress was made toward improving DLP reporting, especially along the Yukon River, where we established an electric fence around a fish camp as a demonstration project. This not only provided evidence of the efficacy of this technique, but also offered a focus for education efforts regarding DLP issues. We should continue these efforts.

REFERENCES CITED

Walsh, P., J. Reynolds, G. Collins, B. Russel, M. Winfree, and J. Denton. 2006. Brown bear population density on the Togiak National Wildlife Refuge and BLM Goodnews Block, southwest Alaska. U.S. Fish and Wildlife Service, Dillingham, Alaska.

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Table 1. Unit 18 general season brown bear harvests by sex and river drainage, Southwest Alaska, regulatory years^a 1997–2013.

Regulatory year	Total harvest	South of Kuskokwim River				North of Yukon River			
		Fall harvest		Spring harvest		Fall harvest		Spring harvest	
		Male	Female	Male	Female	Male	Female	Male	Female
1997	4	2	1	1					
1998	13	3	2	5	1	1	1		
1999	5	1	1	3					
2000	5		1	3	1				
2001	8	2	3	2	1				
2002	14	5	5	4					
2003	15	8	5		1	1			
2004	39	14	19	2		1		3	
2005	24	13	7	3				1	
2006	22	11	7	4					
2007	33	19	6	3	1			4	
2008	31	15	8	4	1			3	
2009	25	14	5	2	1			3	
2010	28	16	3	2	2	2		3	
2011	44	17	12	8	1	2		1	3
2012	34 ^b	11	7	6	1	2	4	2	
2013	22	9	2	6		4	1		

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 1997 = 1 July 1997–30 June 1998.

^b Total includes one harvest that the date of kill and location was not reported.

Table 2. Subsistence brown bear permits and harvest in Western Alaska Brown Bear Management Area (WABBMA)^a and Unit 18, Southwest Alaska, regulatory years^b 1999–2013.

Regulatory year	Permits issued	Permits returned	Number hunting	Bears harvested in WABBMA ^a	Bears harvested in Unit 18
1999	85	63	27	8	2
2000	26	20	9	1	1
2001	69	56	19	3	1
2002	63	58	22	5	2
2003	63	52	17	3	2
2004	29	27	7	0	0
2005	27	19	11	– ^c	0
2006	4	3	2	– ^c	0
2007	3	3	1	– ^c	0
2008	0	0	0	– ^c	0
2009	2	2	0	– ^c	0
2010	1	1	0	– ^c	0
2011	2	2	1	– ^c	0
2012	0	0	0	– ^c	0
2013	0	0	0	– ^c	0

^a WABBMA includes Units 9, 17, 18 and portions of Unit 19; data available 1996–2005.

^b Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 1999 = 1 July 1999–30 June 2000.

^c In regulatory year 2005 the administration of the subsistence permits changed from a management-area basis to a game management unit basis; no data on WABBMA harvest.