Species Management Report and Plan ADF&G/DWC/SMR&P–2026–10

Black Bear Management Report and Plan, Game Management Units 7 and 15:

Report Period 1 July 2018–30 June 2023, and

Plan Period 1 July Plan Period 1 July 2023–30 June 2028

Jacob Pelham
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2026

Alaska Department of Fish and Game Division of Wildlife Conservation

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Species management reports and plans provide information about species that are hunted or trapped and management actions, goals, recommendations for those species, and plans for data collection. Detailed information is prepared for each species every 5 years by the area management biologist for game management units in their areas, who also develops a plan for data collection and species management for the next 5 years. This type of report is not produced for species that are not managed for hunting or trapping or for areas where there is no current or anticipated activity. Unit reports are reviewed and approved for publication by regional management coordinators and are available to the public via the Alaska Department of Fish and Game's public website.

This species management report and plan was reviewed and approved for publication by Jeff Selinger, Management Coordinator for Region II for the Division of Wildlife Conservation.

Species management reports and plans are available via the Alaska Department of Fish and Game's public website (www.adfg.alaska.gov) or by contacting Alaska Department of Fish and Game's Division of Wildlife Conservation, PO Box 115526, Juneau, AK 99811-5526; phone: (907) 465-4190; email: dfg.dwc.publications@alaska.gov. The report may also be accessed through most libraries, via interlibrary loan from the Alaska State Library or the Alaska Resources Library and Information Services (www.arlis.org). To subscribe to email announcements regarding new technical publications from the Alaska Department of Fish and Game, Division of Wildlife Conservation please use the following link: http://list.state.ak.us/mailman/listinfo/adfgwildlifereport.

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Cover Photo: Black bear in grass. ©2024 ADF&G. Photo by Marian Snively.

Contents

List of Figures

List of Tables

Purpose of this Report

This report provides a record of survey and inventory management activities for black bear (*Ursus americanus)* in Game Management Units 7 and 15 during the 5 regulatory years 2018–2022, along with plans for the next 5 regulatory years 2023–2027. A regulatory year (RY) begins on 1 July and ends on 30 June (e.g., RY22 = 1 July 2022–30 June 2023). This report is primarily produced to provide agency staff with data and analysis to help guide and record agency efforts. It is also made available to the public to inform them about wildlife management activities. The Alaska Department of Fish and Game's (ADF&G, the department) Division of Wildlife Conservation (DWC, the division) publishes these reports on a 5-year cycle to document trends and describe potential changes in data collection activities for black bears.

I. RY18–RY22 Management Report

Management Area

Units 7 and 15 combined make up an area approximately 8,397 mi^2, which encompasses the Kenai Peninsula. The Kenai Peninsula has 3 major population centers including Seward, Kenai-Soldotna, and Homer, as well as numerous smaller towns interspersed throughout the peninsula. The U.S. Fish and Wildlife Service is the largest land manager on the peninsula, with jurisdiction over land throughout Units 7, 15A, 15B, and 15C.

Unit 7 is approximately 3,520 mi^2 in area and consists of the eastern portion of the Kenai Peninsula bounded on the west by the western edge of the Kenai Mountains, the Russian River, and the Harding Ice Field, and on the east by the western edge of the Sargent Ice Field and the eastern edge of Spencer Glacier (Fig. 1). The landscape of Unit 7 consists of mountainous terrain interspersed with river and creek drainages, a few large lakes, and ice fields. Riparian areas and hillsides are densely forested below the alpine zone. Approximately 78% of Unit 7 is comprised of federally managed lands: 50% Chugach National Forest (U.S. Forest Service), 22% Kenai Fjords National Park (National Park Service), 5% Kenai National Wildlife Refuge (U.S. Fish and Wildlife Service), and 1% other federal land.

Unit 15 comprises the western portion of the Kenai Peninsula and is divided into 3 administrative units: Unit 15A (1,314 mi^2), Unit 15B (1,121 mi^2), and Unit 15C (2,441 mi^2). Each unit has distinct topography, flora, and ecological history. Unit 15A is the northernmost unit and is separated from Unit 15B by the Kenai River and Skilak Lake. Unit 15C is the southernmost unit and is separated from Unit 15B by the Tustumena Glacier, Tustumena Lake, and the Kasilof River (Fig. 2).

Unit 15A is relatively flat with a multitude of small lakes leading up to the foothills of the Kenai Mountains to the east. The dominant flora is a climax community of mixed spruce and hardwood. The Kenai National Wildlife Refuge is the largest landholder in Unit 15A. In 2019, the Swan Lake Fire burned more than 160,000 acres over the course of approximately four months. It ignited in June 2019 and was eventually brought under control in October 2019. The fire area is characterized by boreal forests dominated by spruce and birch trees, interspersed with wetlands such as bogs and marshes. The fire's spread and impact, and the effectiveness of

firefighting efforts, were influenced by natural features like rivers and rocky terrain, with some areas experiencing intense burns while others sustained lesser damage. The fire's aftermath left a lasting impact on the region's ecology, prompting ongoing research and management initiatives to facilitate recovery and enhance resilience in the face of future wildfire events. Prior to the Swan Lake Fire, the last large wildfire in the area occurred in 1969 and encompassed approximately 85,306 acres.

The Kenai National Wildlife Refuge is also the largest landholder in Unit 15B. The western portion of Unit 15B is similar to Unit 15A in topography and flora; however, toward the east Unit 15B becomes more mountainous and transitions into an alpine ecosystem. Forests in the area have succumbed to widespread spruce bark beetle (*Dendroctonus rufipennis*) infestations that began in the 1990s. Unit 15B also recently experienced significant habitat turnover due to the 2014 Funny River Fire that burned approximately 196,610 acres, the majority of which was in Unit 15B. This fire burned in a mosaic pattern and is beginning to provide good wildlife habitat (ADF&G 2023).

Unit 15C is significantly different from both Units 15A and 15B. Refuge lands make up only a small portion of the unit in the northeast corner. The rest of Unit 15C is a mix of state, private, and municipal land ownership. The portion of Unit 15C north of Kachemak Bay and the Fox River peaks in the Caribou Hills and the Ninilchik Domes, and slopes down to lowlands. Very few small lakes are present, but numerous riparian areas exist, draining from the highlands. Dominant vegetation is a mosaic consisting of spruce (*Picea* spp.), willow (*Salix* spp.), alder (*Alnus* spp.), reed grass (*Calamagrostis canadensis;* particularly in salvage-logged areas), and some hardwood stands (*Betula* spp. and *Populus* spp.). The portion of Unit 15C north of Kachemak Bay has seen consistent habitat disturbance over the past two decades in the form of wildfires, beetle kill, logging, and urban development. The portion of Unit 15C south of Kachemak Bay and the Fox River consists of a very different ecotype compared to the northern portion of Unit 15C, as it is comprised of hypermaritime forest and alpine habitat (Nowacki et al. 2001).

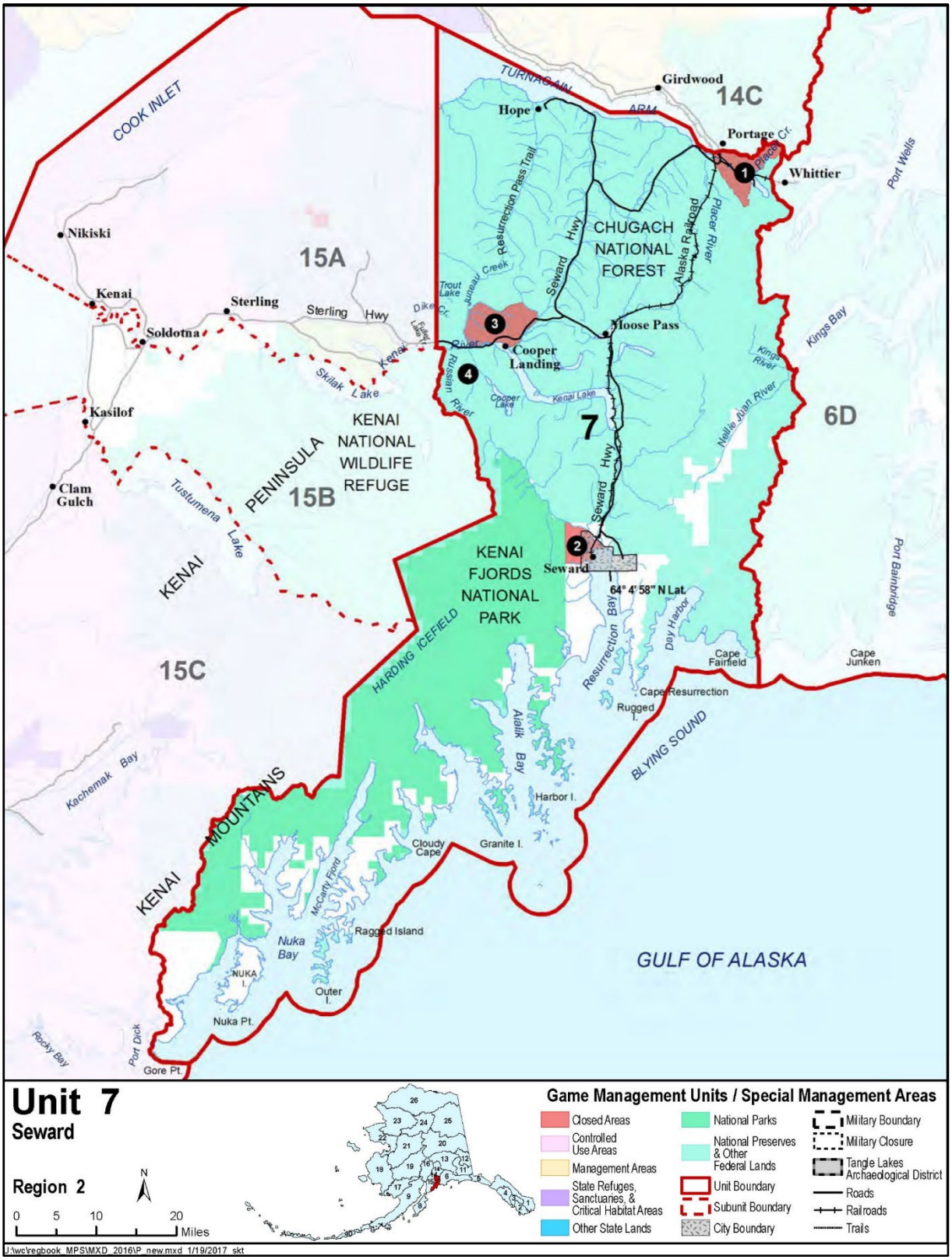

Figure 1. Map of Unit 7 boundaries with indicators of controlled use areas (numbered circles), administrative subunits, and federal lands as found in the Alaska Hunting Regulations, regulatory years 2018--2022.

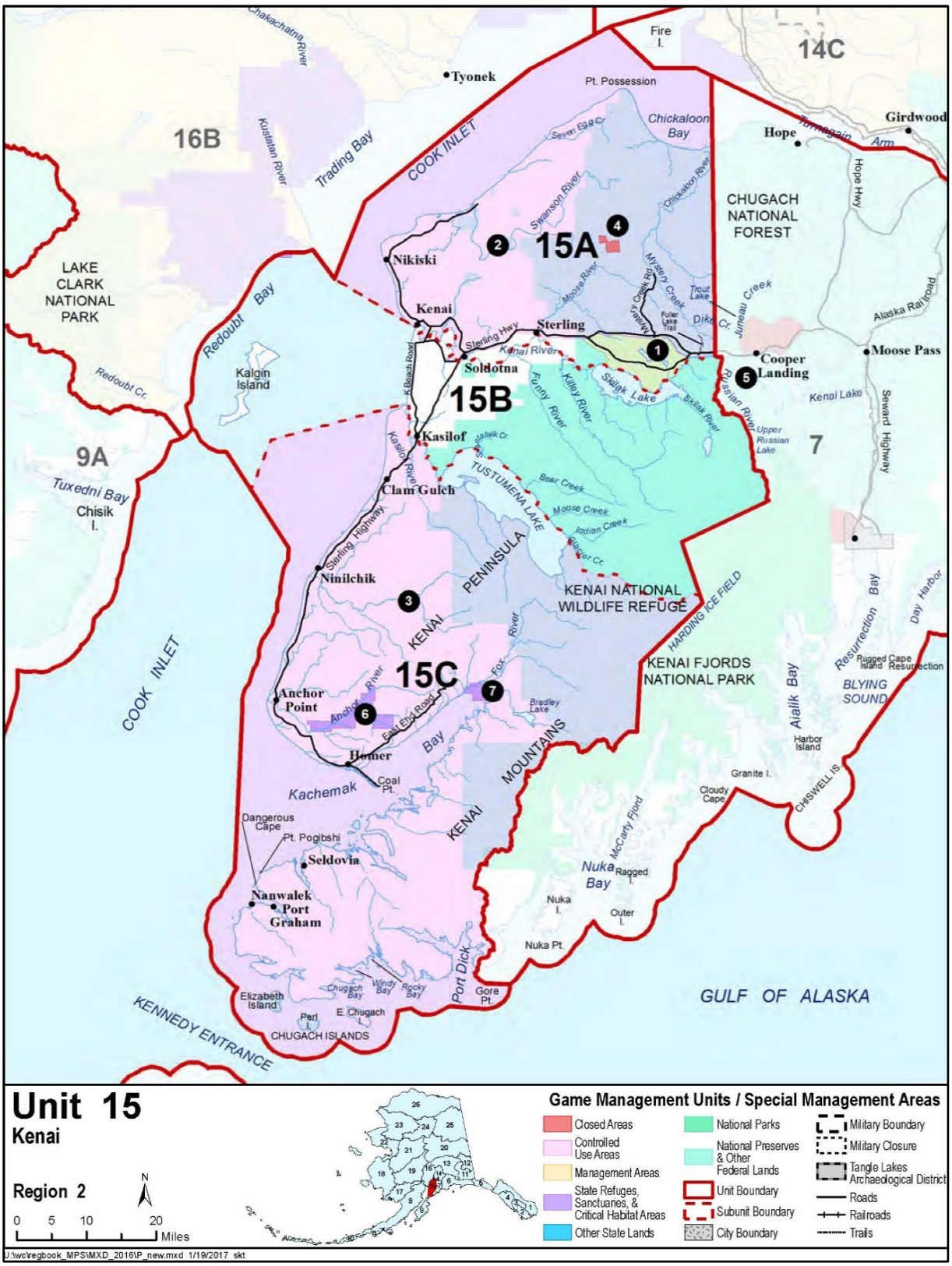

Figure 2. Map of Unit 15 boundaries with indicators of controlled use areas (numbered circles), administrative subunits, and federal lands as found in the Alaska Hunting Regulations, regulatory years 2018–2022.

Summary of Status, Trend, Management Activities, and History of Black Bears in Units 7 and 15

Several studies have been conducted on various ecological aspects of Kenai Peninsula black bears in Unit 15A including predation (Schwartz and Franzmann 1983, 1989; Franzmann and Schwartz 1986), food habits (Smith 1984), habitat (Schwartz and Franzmann 1991), dispersal (Schwartz and Franzmann 1992), and denning (Schwartz et al. 1987). No surveys have ever been conducted on the Kenai Peninsula to estimate black bear population size. Black bear densities in Unit 15A were estimated at 53 bears per 100 mi^2 (205 bears per 1,000 km^2) within the area that was burned in the 1947 wildfire and 69 bears per 100 mi^2 (265 bears per 1,000 km^2) in the 1969 burn area (Schwartz and Franzmann 1991).

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 important factors affecting distribution and movements of black bears as the fruits are an important food source (Schwartz and Franzmann 1991, McLellan 2011). Devil's club thrives in shaded areas and may be negatively affected by spruce beetle infestation when more light penetrates to the forest floor after the removal of the canopy. However, other berry-producing plants may be positively affected. Observational data indicate that black bears appear in greater densities along the southern outer coast of the Kenai Peninsula. This is probably due to high berry abundance, healthy salmon runs, and lower densities of competing brown bears.

Black bears have been managed as both a furbearer and a big game species, harvested by hunters for their hides and meat. Area residents value black bears as a meat resource, and it is often the first big game animal harvested by young hunters on the peninsula. In the last decade, black bear harvest has typically outpaced moose harvest on the Kenai Peninsula.

Management Direction

Existing Wildlife Management Plans

Alaska Wildlife Management Plans (ADF&G 1976), which contains a comprehensive section on black bear management for the Kenai Peninsula. The primary goal of the 1976 plan was to provide optimum harvest of black bears with a secondary goal of providing opportunity to view, enjoy, and photograph bears. Management guidelines set forth included:

- Maintain a moderate but productive black bear population.
- Encourage recreational hunting of black bears to achieve greater utilization of the resource.
- Increase public awareness of black bear behavior to reduce adverse bear-human interactions.
- Encourage public viewing of black bears.
- Regulate access and methods of hunter transport, if necessary, when in conflict with management objectives for other species.

Direction in the 1976 plan has been reviewed and modified through public comments, staff recommendations, and Board of Game actions over the years, and a record of these changes can be found in the division's species management reports.

GOALS

The current management goal for Kenai Peninsula black bears is to provide for optimum harvest and opportunity to view, enjoy, and photograph bears while limiting negative human-bear interactions.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has not established a customary and traditional use finding for black bears for Units 7, 15A, or 15B. A positive finding was established for Unit 15C outside the Anchorage-Matsu-Kenai Nonsubsistence Area with an ANS (amount reasonably necessary for subsistence uses) of 20–60 bears.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

Provide the opportunity to hunt black bears using seasons and bag limits to regulate the take so as not to exceed an average of 30% females in the harvest during any 3-year period.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Monitor black bear population status using standardized and reliable population metrics.

Data Needs

A reliable and timely metric is needed for monitoring population status and trajectory to inform management decisions regarding bag limits and season dates for black bear hunting. Current monitoring of the Kenai Peninsula black bear population is limited to analysis of teeth and skull morphometrics from harvested bears. However, skull morphometrics have not proven to be a sensitive metric for tracking changes in black bear populations because changes in skull size do not appear in the harvest data until several years after a population change was believed to have occurred.

Teeth from harvested bears must be sent to an outside lab for age determination and this is only done when funding allows. Additional metrics that have been considered for monitoring black bear population status include genetic sampling and monitoring population demographics from

collared animals. Genetic sampling would occur from live black bears, via hair snaring along established travel corridors and salmon streams, and through helicopter-based biopsy sampling during the fall. Genetic mark—recapture analysis has proven to be a reliable monitoring tool; however, these methods have not been implemented as part of this management activity due to logistical, staffing, and funding limitations.

Methods

Bear skull morphometric data from harvested bears are analyzed and compared between years and areas to look for changes in skull size that would indicate changes in the age structure of the population. Tooth samples are collected from harvested bears and sent out for age determination. Results are then analyzed to look at changes in harvest age structure that would indicate changes in population structure.

Results and Discussion

Based on continued monitoring of male and female black bear skull measurements from RY09 through RY23, skull morphometrics have not proven to be a sensitive indicator of short-term population changes. In Unit 15C, average female skull sizes remained relatively stable from RY09 to RY13, even as harvest numbers began to decline sharply in 2013 with little change in hunter effort. A noticeable reduction in mean skull size was first observed in RY15. Mean female skull size declined from $15^{11}/_{16}$ inches in RY14 to $14^{13}/_{16}$ inches in RY15, representing an approximate 5.6% decrease, while mean male skull size decreased from $16^{6}/_{16}$ inches to $15^{14}/_{16}$ inches over the same period for an approximated 3.1% decrease and continually declined from RY10 to RY15. Female skull size remained relatively reduced through RY16 before rebounding to values comparable to pre-RY13 levels by RY17. Male skull sizes exhibited greater interannual variability but similarly returned to near RY13 averages in subsequent years. By RY23, mean skull size reached 15 5/16 inches for females and $16^{12}/_{16}$ inches for males. Overall, these patterns suggest that skull morphometrics respond gradually and may be more indicative of long-term environmental or nutritional conditions rather than short-term changes in population abundance or harvest pressure (Fig. 3).

Recommendations for Activity 1.1

Future consideration should be given to collaring and monitoring a portion of the black bear population, particularly in areas of high harvest density as identified through harvest records, as a mechanism to establish basic population assessments. In addition, pending adequate funding and logistical support, the incorporation of live-animal genetic sampling methods should be considered to supplement harvest-based data. Together, these approaches would provide more timely, direct, and spatially explicit information on black bear population size, distribution, and connectivity, thereby strengthening the basis for informed management decisions and department responses to Board of Game proposals.

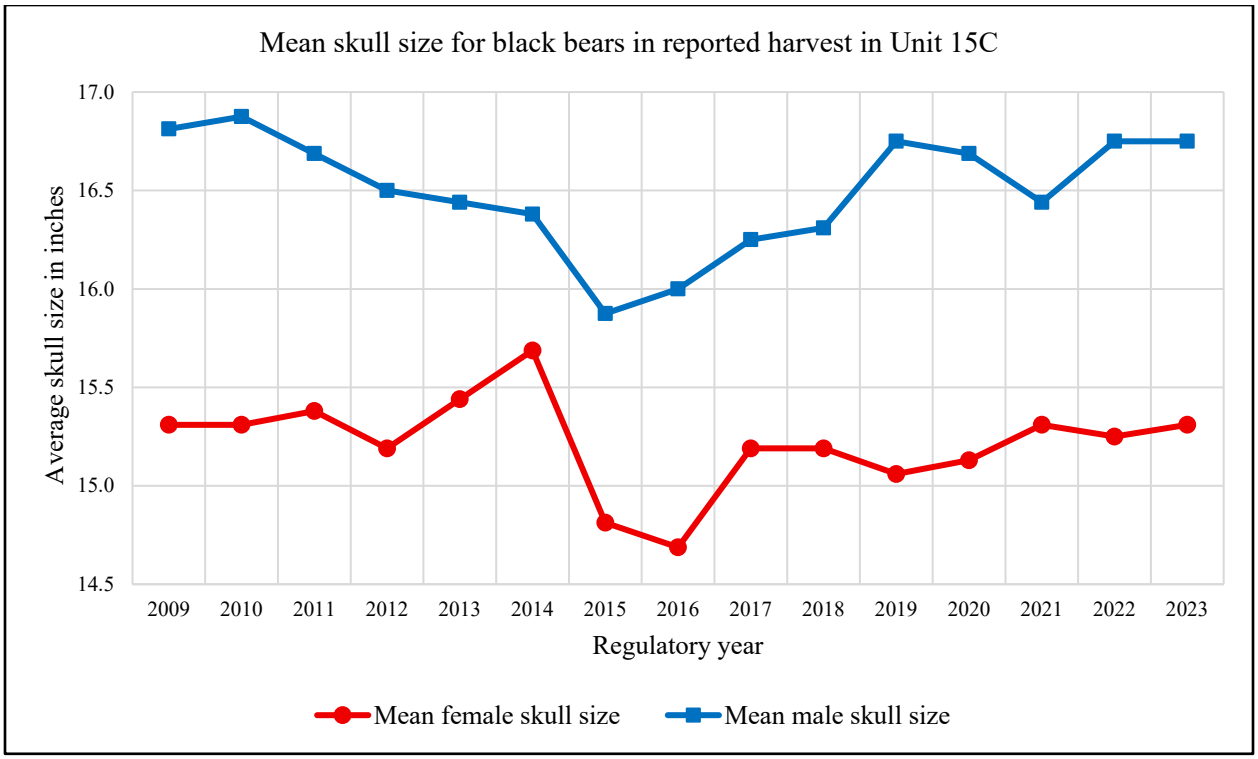

Figure 3. Mean skull size of harvested black bears in Unit 15C, Kenai Peninsula, Alaska, regulatory years 2009–2023.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor black bear harvest through sealing and harvest reports.

Data Needs

Reliable estimates of the sex, age, and number of animals harvested are needed to accurately track harvest and to evaluate the management objective.

Methods

All harvested black bears are required to be sealed at an ADF&G office or by a certified state sealer. During the sealing process a significant amount of information is recorded for each harvested bear, including sex, skull size, notes on any tattoos or marks, and a tooth is collected for age determination. All females are checked for evidence of lactation, which would indicate cubs. Additional hunter information is collected on the method of transport to the field, method of take, percentage of meat harvested, whether the animal was taken over bait or as an incidental harvest, and whether the hide was salvaged. If the animal is sealed at an ADF&G office, additional samples may be taken such as hair, tissue, and bone samples for future stable isotope analysis, and muscle samples for genetic analysis.

Season and Bag Limit

Black bear hunting has been open year-round on the Kenai Peninsula since 1980. From RY94 to RY08, the bag limit was 2 bears per regulatory year (1 bear from 1 July to 31 December, and 1

bear from 1 January to 30 June). In RY09, the bag limit was changed to 2 bears for residents (with no season restriction), and 1 bear for nonresidents. In RY10, 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 1 mile of a house, school, business, developed recreational facility, campground, or permanent dwelling; within one-quarter mile of publicly maintained roads, trails, or the Alaska Railroad; and along the shorelines of the Kasilof, Swanson, and Kenai rivers (including Kenai Lake) 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 baiting season was 15 April–15 June from 1988 through spring 2009. In spring 2010, the season was further liberalized to 15 April–30 June. Starting in spring 2013, it became legal to take bears same day airborne at bait stations.

Current season and bag limits can be found online at:
https://www.adfg.alaska.gov/index.cfm?adfg=hunting.regulations

Results and Discussion

Harvest by Hunters

During the most recent 3-year period, RY20–RY22, the total harvest was comprised of an average of 27% females, which is below our maximum harvest objective of 30%, and matches the previous reported 3-year average of 27% females in the RY15–RY17 harvest (Herreman 2022). When broken down by unit the 3-year averages for female harvest during RY20–RY22 were as follows: 26% in Unit 7; 30% in Unit 15A; 32% in Unit 15B; and 27% in Unit 15C. The high percentage of female bear harvest in Unit 15B should be noted going forward but given the small number of bears taken from 15B overall, this percentage does not currently raise concern. The 5-year average annual harvest for RY18–RY22 was 498 bears (Table 1), which is higher than the previous reported average of 313 bears for RY13–RY17 (Herreman 2022). The 5-year average annual harvest of black bears taken over bait increased slightly from 88 bears in RY13–RY17 to 121 bears in RY18–RY22 (Table 2). This may be related to an increased interest in bear baiting due to the legalization of brown bear harvest by bait in spring 2014. However, the highest proportion of the black bear harvest takes place south of Kachemak Bay, in the southern portion of Unit 15C (Fig. 2), where almost no baiting occurs as hunters do not find it necessary.

Hunter Residency and Success

Most successful black bear hunters on the Kenai Peninsula continue to be Alaska residents, with the majority being residents of Units 7 or 15 (Table 3). Hunter participation has shown a steady increase over time, with a notable spike in effort in RY20. The increase may be attributed to the perceived quality of bears available for harvest and indicate growing popularity of black bear hunting on the Kenai Peninsula.

Table 1. Black bear harvest by season and sex, Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2018–2022.

		July–December				January–June				Unknown month		Totals for regulatory year			
RY[a]	Unit	Male	Female	Unk[b]	Total	Male	Female	Unk[b]	Total	Male	Female	Male	Female	Unk[b]	Total
2018	7	32	13	0	45	74	18	0	92	1	0	107	31	0	138
	15A	7	5	0	12	28	15	0	43	1	0	36	20	0	56
	15B	10	6	0	16	9	3	0	12	0	0	19	9	0	28
	15C	51	17	0	68	101	24	0	125	1	2	153	43	0	196
	15Z[c]	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	Totals	100	42	0	142	212	60	0	272	3	2	315	104	0	419
2019	7	13	4	0	17	136	41	0	177	0	0	149	45	0	194
	15A	2	1	0	3	37	12	0	49	0	0	39	13	0	52
	15B	2	0	0	2	6	2	0	8	0	0	8	2	0	10
	15C	25	12	0	37	121	34	0	155	0	0	146	46	0	192
	15Z[c]	0	0	0	0	2	0	0	2	0	0	2	0	0	2
	Totals	42	17	0	59	302	89	0	391	0	0	344	106	0	450
2020	7	26	26	0	52	118	36	0	154	0	0	144	62	0	206
	15A	11	7	0	18	37	12	2	51	1	0	49	19	2	70
	15B	22	11	0	33	4	2	0	6	0	0	26	13	0	39
	15C	102	52	0	154	145	49	0	194	0	1	247	102	0	349
	15Z[c]	0	0	0	0	2	0	0	2	0	0	2	0	0	2
	Totals	161	96	0	257	306	99	2	407	1	1	468	196	2	666
2021	7	15	5	0	20	111	25	0	136	1	0	127	30	0	157
	15A	6	0	0	6	25	8	0	33	0	0	31	8	0	39
	15B	11	5	0	16	11	2	0	13	0	0	22	7	0	29
	15C	34	20	1	55	137	26	1	164	0	1	171	47	2	220
	15Z[c]	0	2	0	2	1	0	0	1	0	0	1	2	0	3
	Totals	66	32	1	99	285	61	1	347	1	1	352	94	2	448
2022	7	27	13	2	42	109	36	2	147	0	0	136	49	4	189
	15A	7	4	0	11	35	20	1	56	0	0	42	24	1	67
	15B	5	5	0	10	2	1	1	4	0	0	7	6	1	14
	15C	29	9	0	38	137	55	1	193	2	1	168	65	1	234
	15Z[c]	1	0	0	1	4	0	0	4	0	0	5	0	0	5
	Totals	69	31	2	102	287	112	5	404	2	1	358	144	7	509

Note: Harvest data are from sealing records.

[a] RY stands for regulatory year. A regulatory year begins 1 July and ends 30 June (e.g., RY19 is July–December 2019 and January–June 2020).

[b] Unk stands for unknown sex.

[c] 15Z represents an unknown location within Unit 15.

Table 2. Black bear bait stations and bears harvested over bait, Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2018–2022.

Regulatory year	Unit 7		Unit 15A		Unit 15B		Unit 15C		Units 7 and 15	
	Stations	Harvest	Stations	Harvest	Stations	Harvest	Stations	Harvest	Stations	Harvest
2018	157	59	73	27	5	3	76	14	311	103
2019	233	101	84	34	10	0	88	30	415	165
2020	182	68	66	32	15	3	65	13	328	116
2021	174	64	68	22	7	4	74	14	323	104
2022	155	69	73	34	8	0	73	12	309	115

Note: Bait harvest reported by hunters at time of sealing.

Table 3. Residency and success of black bear hunters, Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2018–2022.

Regulatory year	Successful hunters									Unsuccessful hunters								
	Unit resident		Nonlocal[a] resident		Nonresident		Unknown			Unit resident		Nonlocal[a] resident		Nonresident		Unknown		
	No.	%	No.	%	No.	%	No.	%	Total	No.	%	No.	%	No.	%	No.	%	Total
2018	181	54	97	29	58	17	1	0	337	572	57	368	36	71	7	0	0	1,011
2019	191	50	164	43	24	6	2	1	381	636	58	435	39	32	3	0	0	1,103
2020	246	47	147	28	131	25	1	0	525	587	57	363	35	79	8	0	0	1,029
2021	165	37	130	29	145	32	7	2	447	588	51	375	33	178	16	3	0	1,144
2022	187	41	133	29	129	29	3	1	452	635	54	392	33	149	13	1	0	1,177

Note: Data are from harvest ticket reports and may not reflect all known harvest.

Harvest Chronology

May is when the highest proportion of black bear harvest occurs. Harvest begins to increase again in August, potentially coinciding with caribou and sheep hunting activity, and continues into September (Table 4). September represents the highest fall harvest, possibly because it coincides with the peak of moose season, resulting in increased hunter presence and opportunity.

Transport Methods

On average, transport by boat remained the most common method used by successful bear hunters during RY18–RY22 with the use of a highway vehicle being the second most used mode of transportation (Table 5). Boat-based harvest is driven by hunting out of Homer and Seward and highway vehicle harvest is driven by the large amount of road accessible areas for black bear hunting in Unit 7.

Alaska Board of Game Actions and Emergency Orders

At its March 2019 meeting, the Board of Game adopted a positive customary and traditional use finding for black bears in 15C outside of the Anchorage-Matsu-Kenai Nonsubsistence Area with an ANS of 20–60 bears. No emergency orders were issued during RY18–RY22.

Recommendations for Activity 2.1

Black bear harvest is adequately monitored under the current system, and existing monitoring methods should continue.

Table 4. Chronology of black bear harvest, Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2018–2022.

Regulatory year	Jul		Aug		Sep		Oct		Nov		Dec		Jan		Mar		Apr		May		Jun		Unknown		Total reports
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2018	16	5	19	6	52	15	20	6	0	0	0	0	0	0	0	0	5	1	153	45	69	20	3	1	337
2019	6	2	25	7	18	5	6	2	0	0	0	0	0	0	3	1	23	6	203	53	96	25	1	0	381
2020	5	1	61	12	99	19	22	4	0	0	0	0	0	0	1	0	5	1	213	41	117	22	2	0	525
2021	5	1	24	5	52	12	10	2	1	0	0	0	0	0	0	0	6	1	238	53	110	25	1	0	447
2022	8	2	29	6	44	10	14	3	0	0	0	0	0	0	3	1	6	1	202	45	145	32	1	0	452

Note: Data are from harvest ticket reports and may not reflect all known harvest.

Table 5. Mode of transportation for successful black bear hunters, Units 7 and 15, Kenai Peninsula, Alaska, regulatory years 2018—2022.

Regulatory year	3- or 4-Wheeler		Airboat		Airplane		Boat		Foot		Highway vehicle		Horse/dog team		Offroad vehicle		Unknown		Total reports
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2018	44	13	1	0.3	14	4	144	43	19	6	102	30	2	0.6	5	1.5	6	1.8	337
2019	53	13	1	0.2	28	7	157	41	19	5	110	29	0	0.0	6	1.6	7	1.8	381
2020	45	9	2	0.4	45	9	262	50	25	5	125	24	1	0.2	12	2.3	8	1.5	525
2021	28	6	1	0.2	37	8	216	48	30	7	109	24	2	0.4	16	3.6	8	1.8	447
2022	29	6	0	0.0	22	5	207	46	26	6	147	33	2	0.4	10	2.2	9	2.0	452

Note: Data are from harvest ticket reports and may not reflect all known harvest.

3. Habitat Assessment-Enhancement

No activities were conducted to assess or enhance black bear habitat on the Kenai Peninsula during RY18–RY22, and no activities are planned for the next reporting period. The lack of data collection for black bear habitat can continue until a need for this information is identified.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Harvest ticket data does not match data produced through bear sealing; this appears to reflect a misunderstanding by hunters that once they have completed sealing, they do not need to submit a harvest report. An automated system is recommended for producing harvest reports from the sealing reports that do not have a coinciding harvest report. Until the databases can be automatically rectified, all harvest information should be taken solely from the sealing database and harvest report cards should only be used to track hunter effort.

Data Recording and Archiving

Data from sealing forms and harvest report cards are entered into ADF&G's Wildlife Information Network (WinfoNet). Paper copies are stored in filing cabinets at the ADF&G offices in Soldotna and Homer; electronic records are stored on the Homer Area Office shared network drive.

Agreements

None.

Permitting

No special permits are needed to conduct current black bear management activities in Units 7 or 15.

Conclusions and Management Recommendations

Black bear populations on the Kenai Peninsula continue to be resilient to harvest pressure and environmental variation. Due to their relatively high reproductive capacity and the available refuge habitat from hunters, it is unlikely that harvest will cause conservation concerns for black bears on the Kenai Peninsula in the near future. High harvest, however, can affect population structure and subsequent human-bear interactions, viewing opportunities, and quality hunting experiences. While harvest monitoring strategies amply document the harvest and provide opportunities to sample harvested animals, they do not provide timely information about population changes. Only dramatic population changes can be detected through harvest data, several years after a change occurs. Therefore, these data are not adequate for wildlife managers to address proposed regulation changes that require meaningful population abundance data. To fill this gap in data, a population monitoring mechanism should be developed to track population changes.

II. Project Review and RY23–RY27 Plan

Review of Management Direction

MANAGEMENT DIRECTION

Black bear populations in Units 7 and 15 appear to be stable, with management objectives met as females comprised less than 30% of the average harvest during RY20–RY22. In Unit 15C, females comprised an average of 26% of the harvest during RY20–RY22. Across the Kenai Peninsula, females accounted for an average of 27% of the harvest during RY20–RY22. The similarity between these values indicates a marginal difference in female harvest composition between Unit 15C and the peninsula-wide dataset. A stabilization of the age structure in the population was also observed (as noted in skull size changes; Fig. 3). During this reporting period, the department received positive comments from hunters and wildlife enthusiasts regarding black bear populations, and there was a decrease in reports of negative human-bear interactions. In the past, female harvest above 35% was found to lead to changes in the age structure and skull sizes of harvested black bears, as well as lower quality hunts as reported by hunters, and these changes coincided with an increase in nuisance concerns and negative human-bear interactions; therefore, female harvest above 35% should be avoided (Herreman 2022). The population appears to be stable under the current management objective, and the objective will remain to not exceed a harvest of greater than 30% females.

Management biologists will continue to rely on previous harvest data to guide decisions regarding seasons and bag limits; however, research should be conducted to help refine reasonable and timely management objectives for black bear populations in Units 7 and 15.

GOALS

The management goal for Kenai Peninsula black bears is to provide for optimum harvest and opportunity to view, enjoy, and photograph bears while limiting negative human-bear interactions.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has not established a customary and traditional use finding for black bears for Units 7, 15A, and 15B. A positive finding was established for Unit 15C outside the Anchorage-Matsu-Kenai Nonsubsistence Area with an ANS (amount reasonably necessary for subsistence uses) of 20–60 bears.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

Provide the opportunity to hunt black bears using seasons and bag limits to regulate the take so as not to exceed an average of 30% females in the harvest during any 3-year period.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Monitor black bear population status using standardized and reliable population metrics.

Data Needs

A reliable and timely metric is needed for monitoring population status and trajectory in order to inform management decisions regarding bag limits and season dates for black bear hunting. Skull size and tooth age analysis are not sensitive enough metrics to detect population level changes within a reasonable time frame for management action. To date, discussion with research staff has revolved around a few different possibilities including genetic mark–recapture using hair snares and biopsy darting, which appears to be the most promising. If a true mark–recapture analysis is not feasible from this method, it should still provide a harvest rate of marked animals, giving wildlife managers a reliable trend metric as a reference point for their decision-making.

Methods

Genetic samples from live black bears can be reliably obtained through hair snaring along bear travel corridors and salmon streams, as well as through biopsy samples taken from a helicopter during the fall, when bears are accessible in alpine areas. These samples can be genotyped to provide a set of known bears in the population. Tissue samples can be collected from all harvested bears, which can then be genotyped to provide a sample of harvested bears for comparison to known bears in the population. From this, a harvest rate can be calculated. A proportion of bears should be collared and tracked to determine if genetic sampling locations can accurately represent the population as a whole. If a more timely technique cannot be developed due to funding, available staff time, or other limitations, staff will continue to analyze skull and tooth data to conduct post hoc assessments of changes in bear populations.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitor black bear harvest through sealing and harvest reports.

Data Needs

No change from the RY18–RY22 reporting period.

Methods

No change from the RY18–RY22 reporting period.

3. Habitat Assessment-Enhancement

There is no habit assessment or enhancement work planned for black bears in Units 7 or 15 for RY23–RY27.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

No change from the RY18–RY22 reporting period.

Agreements

No change from the RY18–RY22 reporting period.

Permitting

The department does not expect to seek any black bear specific permits in Units 7 or 15 during RY23–RY27.

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