Species Management Report and Plan ADF&G/DWC/SMR&P–2026–1

Black Bear Management Report and Plan, Game Management Unit 1A:

Report Period 1 July 2018–30 June 2023, and

Plan Period 1 July 2023–30 June 2028

Ross Dorendorf

2026

Alaska Department of Fish and Game Division of Wildlife Conservation

Species Management Report and Plan ADF&G/DWC/SMR&P-2026-1

Black Bear Management Report and Plan, Game Management Unit 1A:

Report Period 1 July 2018–30 June 2023, and

Plan Period 1 July 2023–30 June 2028

PREPARED BY:

Ross Dorendorf
Area Biologist

APPROVED BY:

Roy Churchwell
Management Coordinator

PUBLISHED BY:

Sally Kieper
Technical Reports Editor

Alaska Department of Fish and Game
Division of Wildlife Conservation
PO Box 115526
Juneau, AK 99811-5526

Hunters are important founders of the modern wildlife conservation movement. They, along with trappers and sport shooters, provided funding for this publication through payment of federal taxes on firearms, ammunition, and archery equipment, and through state hunting license and tag fees. These taxes and fees fund the federal Wildlife Restoration Program and the State of Alaska's Fish and Game Fund, which provided funding for the work reported on in this publication.

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 Roy Churchwell, Management Coordinator for Region 1 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.

This document, published in PDF format only, should be cited as:

Dorendorf, R. 2026. Black bear management report and plan, Game Management Unit 1A: Report period 1 July 2018–30 June 2023, and plan period 1 July 2023–30 June 2028. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2026-1, Juneau.

Please contact the authors or the Division of Wildlife Conservation at (907) 465-4190 if you have questions about the content of this report.

Cover Photo: Black bear at Anan bear viewing platform. ©2011 ADF&G. Photo by Boyd Porter.

Contents

Purpose of this Report 1
I. RY18–RY22 Management Report 1
Management Area 1
Summary of Status, Trend, Management Activities, and History of Black Bears in Unit 1A 3
Management Direction 4
  Existing Wildlife Management Plans 4
  Goals 4
  Codified Objectives 4
    Amounts Reasonably Necessary for Subsistence Uses 4
    Intensive Management 4
  Management Objectives 4
  Management Activities 4
    1. Population Status and Trend 4
    2. Mortality-Harvest Monitoring and Regulations 5
    3. Habitat Assessment-Enhancement 10
  Nonregulatory Management Problems or Needs 10
    Human–Bear Conflicts 10
    Data Recording and Archiving 11
    Agreements 11
    Permitting 11
Conclusions and Management Recommendations 11
II. Project Review and RY23–RY27 Plan 12
Review of Management Direction 12
  Management Direction 12
  Goals 12
  Codified Objectives 12
    Amounts Reasonably Necessary for Subsistence Uses 12
    Intensive Management 12
  Management Objectives 12
  Review of Management Activities 12
    1. Population Status and Trend 12
    2. Mortality-Harvest Monitoring 13
    3. Habitat Assessment-Enhancement 13
  Nonregulatory Management Problems or Needs 13
    Human-Bear Conflicts 13
    Data Recording and Archiving 13
    Agreements 13
    Permitting 14
References Cited 14

List of Figures

Figure 1. Map of Game Management Unit 1A boundaries, Southeast Alaska, regulatory years 2018–2022. 2

Figure 2. Male-to-female ratio of the black bear reported harvest during regulatory years 2018–2022, Unit 1A, Southeast Alaska. 8

Figure 3. Average skull size (length plus width) of harvested black bears during regulatory years 2018–2022, Unit 1A, Southeast Alaska. 8

Figure 4. Number of black bears harvested by resident and nonresident hunters during regulatory years 2018–2022, Unit 1A, Southeast Alaska. 9

List of Tables

Table 1. Black bear mortality by sex, regulatory years 2018–2022, Unit 1A, Southeast Alaska... 7

Purpose of this Report

This report provides a record of survey and inventory management activities for black bears (*Ursus americanus*) in Game Management Unit 1A for the 5 regulatory years 2018–2022 and plans for survey and inventory management activities in the next 5 regulatory years, 2023–2027. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY23 = 1 July 2023–30 June 2024). 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

Game Management Unit 1A (Unit 1A, GMU 1A) encompasses 5,252 mi^2 of the southern mainland and adjacent islands south of Lemesurier Point, including all drainages into Behm Canal, excluding all drainages into Ernest Sound, and bounded to the east and south by the Canadian border. The unit is bounded to the west by Clarence Straight. Larger islands included in the unit are Revillagigedo, Annette, and Gravina islands (Fig. 1). The Ketchikan Gateway Borough has an estimated population of 13,865 (U.S. Census Bureau 2018). Smaller outlying communities include Metlakatla (estimated population 1,375), Hyder (estimated population 87), and Meyers Chuck (estimated population 25). Mean temperatures range from a low of 30°F (⁻1°C) in January to a high of 64°F (18°C) in August, with 141 inches (358 cm) of rain annually (U.S. Climate Data 2019). The dominant habitat type in GMU 1A below 2,000 feet (600 m) elevation is temperate rain forest consisting of Sitka spruce (*Picea sitchensis*), western hemlock (*Tsuga heterophylla*), red cedar (*Thuja plicata)*, and Alaska yellow cedar (*Chamaecyparis nootkatensis*). Other lower elevation habitats include muskeg and stands of red alder (*Alnus rubra*) and black cottonwood (*Populus balsamifera trichocarpa)* along major rivers and riparian areas. Old-growth forests are interspersed with a patchwork of even-aged forest stands at different successional stages, the latter resulting from extensive clear-cut logging and a few natural windthrow events. Mainland areas above 2,000 feet elevation are predominately rock, ice, and open alpine.

Most land in GMU 1A is administered by the U.S. Forest Service, including the 2.3 million-acre Misty Fjords National Monument. This monument is the largest wilderness area in Alaska's national forests and the second largest in the nation. There are also private, state, and Native lands within GMU 1A.

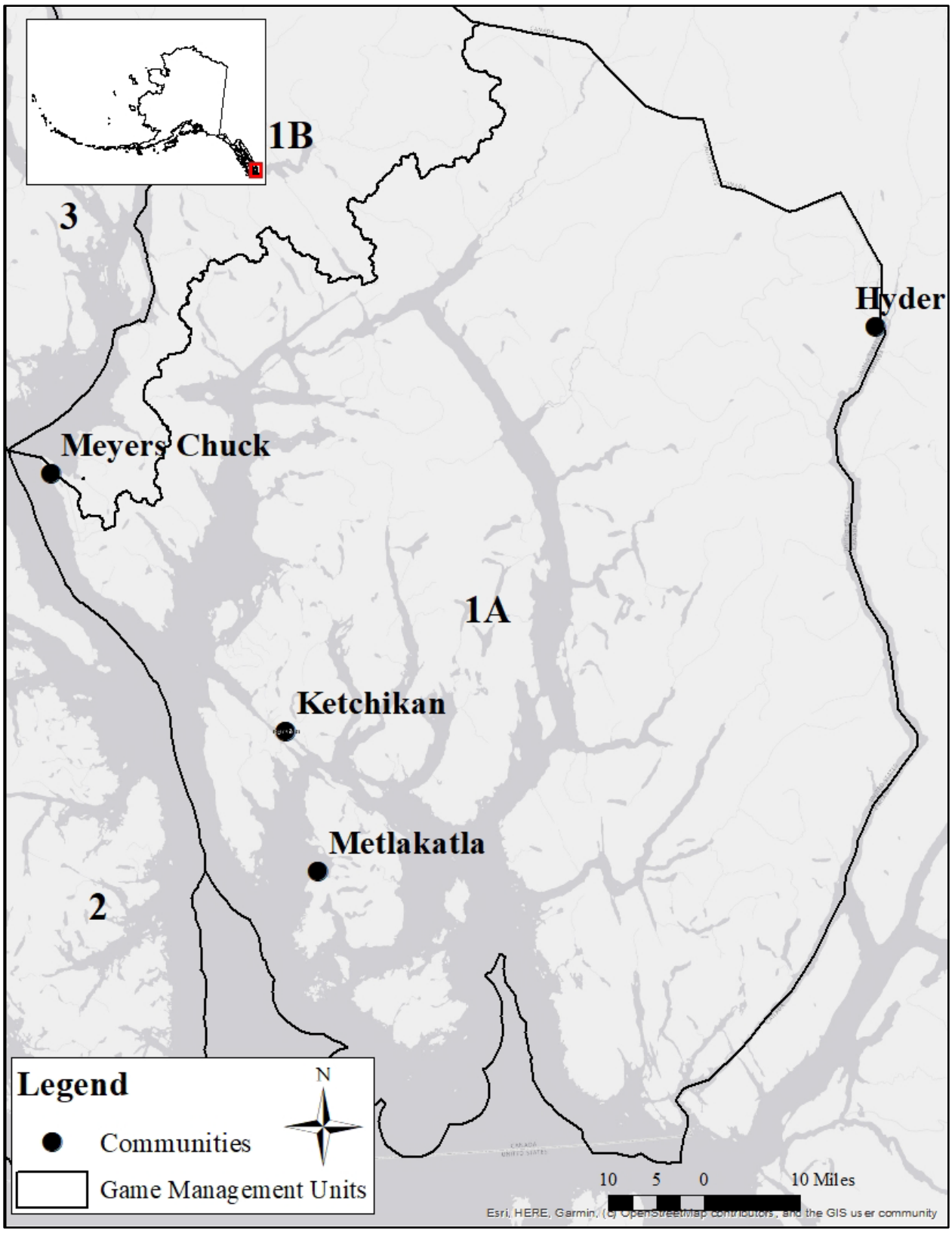

Figure 1. Map of Game Management Unit 1A boundaries, Southeast Alaska, regulatory years 2018–2022.

Summary of Status, Trend, Management Activities, and History of Black Bears in Unit 1A

There is a long tradition of hunting black bears in GMU 1A for food, hides, and skulls. ADF&G collects biological data through a mandatory sealing process from harvested bears. Harvest information gained from sealing records includes average skull sizes, average ages, and sex ratios that provide an indication of black bear population trends. Reports from unsuccessful hunters can provide helpful information for management, but due to a lack of harvest ticket reporting by hunters, the information gathered about unsuccessful hunts is too sparse to be useful in guiding management. The Board of Game (BOG, board) created a black bear draw hunt in 2010 for nonresidents in GMU 1A (DL016) that was implemented in RY12, which reduced harvest in GMU 1A compared to previous regulatory years. The harvest from RY10 through RY11 averaged 80 bears per year compared to 55 bears harvested in RY12 (Bethune and Porter 2014). At their 2019 Southeast region meeting, the BOG removed the nonresident draw for nonresidents from GMU 1A due to the lack of hunting pressure and chronically undersubscribed draw hunts. Thereafter, residents and nonresidents could hunt black bears in GMU 1A using a harvest ticket.

True black bear density in GMU 1A is unknown because density estimate studies in Southeast Alaska have not been conducted. Black bear density in GMU 1A was previously calculated based on studies conducted in western Washington state, where black bear populations were estimated to be 1.4 bears/mi^2 (3.63/km^2; Poelker and Hartwell 1973). Using information from western Washington and applying it to GMU 1A, Wood (1990) and Larsen (1995) calculated a slightly higher density of 1.5 bears/mi^2 for most of the forested islands and lower densities for the mainland and less productive island habitats. However, black bear density was estimated to be 0.58/mi^2 on nearby Kuiu Island in GMU 3 (1.51/km^2; Peacock et al. 2011), which may be a more appropriate estimate to use for management.

The loss of old growth, which is typically targeted for timber harvest, reduces denning habitat for black bears. Black bears in Southeast Alaska rely on large diameter trees in old growth stands for dens (Porter et al. 2021). Large diameter stumps left behind after logging still provide denning habitat, however the life of those structures is limited. Leaving a no-harvest buffer around known denning trees could conserve black bear denning habitat by minimizing potential disturbance and prevent the abandonment of dens (Linnell et al. 2000). When known dens are within timber sale units, ADF&G determines an appropriate buffer recommendation, and the department also assists with identifying the locations of dens prior to timber harvest. However, few known den locations have been documented in GMU 1A.

Residents of Ketchikan and surrounding communities commonly call the department about human-bear conflicts. Tasks include responding to complaints, explaining proper garbage handling techniques, and providing public safety precautions. Department staff work with the Alaska Wildlife Troopers, Ketchikan Police Department, and the Ketchikan landfill manager to reduce human-bear conflicts. Staff use public service messages and conduct local education programs for awareness and prevention of human-bear conflicts.

Management Direction

Existing Wildlife Management Plans

Black bear management in Unit 1A is guided by the *Southeast Alaska Black Bear Management Plan* that was created for the 1976 *Alaska Wildlife Management Plans* proposal (ADF&G 1976).

Goals

Provide opportunity for black bear hunting and viewing under the sustained yield principle, using the best science available, to benefit the people of Alaska and conserve black bear populations.

Codified Objectives

Amounts Reasonably Necessary for Subsistence Uses

During the 2000 Board of Game meeting, the board made a positive cultural and traditional use determination for black bears in Unit 1A (5 AAC 99.025). During their 2008 meeting, the board set the amount reasonably necessary for subsistence (ANS) at 5–10 black bears for Unit 1A, outside the Ketchikan nonsubsistence area.

Intensive Management

Not applicable.

Management Objectives

1. Maintain a male-to-female harvest ratio of 3:1.
2. Maintain an average male spring skull size of 17.5 inches.
3. Minimize human-bear conflicts by providing information and assistance to the public and to other agencies.

Management Activities

1. Population Status and Trend

No additional management activities other than harvest monitoring occurred during the RY18–RY22 reporting period.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Black bear sealing.

Data Needs

Black bear sealing data helps determine if management goals are being met. Determination of sex ratios and skull sizes in the overall harvest helps monitor substantial change within the population.

Methods

Sealing refers to the process where hunters present the required specimens of a harvested black bear to ADF&G or an appointed sealer, biological information is collected, and a locking tag is placed on the skull, and hide if applicable. During RY18–RY22, hunters were required to salvage the skull, hide, and meat from 1 January to 31 May; and from 1 June to 31 December, they could choose to salvage the hide or the meat in addition to the skull. Bears were required to be sealed within 30 days of kill. Biological and hunt information collected at the time of sealing included sex, skull size (length plus width), pelage color, date and location of kill, number of days hunted, transportation method, hunter use of commercial services or guide, use of bait station, and percent of meat salvaged. For nonhunting mortalities (e.g., defense of life or property), information on the type of mortality is recorded as well. Sealers collected premolars from the skulls, and ADF&G sent them to Matson's Laboratory in Manhattan, Montana for cementum annuli age determination. Other biological samples collected at the time of sealing include muscle tissue and fur, which may be used for active research projects (i.e., stable isotope analyses to estimate bear diets, investigating which genes code for coat color characteristics), or may be cataloged for future projects.

Season and Bag Limit

GMU 1A black bear hunting seasons and bag limits

Season dates	Hunter residency	Regulatory years	Bag limit
1 September–30 June	Resident	2018–2022	2 bears by harvest ticket, not more than 1 may be a blue or glacier bear
	Nonresident	2018–2019	1 bear by harvest ticket with registered guide
			1 bear, if not using a registered guide, hunting is by drawing permit only (DL016)
	Nonresident	2020–2022	1 bear by harvest ticket

Results and Discussion

Harvest by Hunters

Annual black bear harvest was stable during the 5-year reporting period and averaged 62 black bears per year (range = 35–85; Table 1). Harvest during RY18–RY22 was lower than RY13–RY17 (average 68; Dorendorf 2020). This is only a slight decrease from the previous reporting period and is likely not connected to a change in the population. Hunters harvested fewer bears in RY22 for unknown reasons (Table 1).

The management objective of harvesting 3 males per female was met during this reporting period, except in RY20 (Table 1; Fig. 2). Black bear hunters tend to target larger size bears which are mostly males, and regulations prohibit the harvest of cubs or females with cubs (5 AAC 92.260), which aids in meeting our management objective. The skull size of male bears harvested in the spring during RY18–RY22 averaged 18.1 inches, meeting the management objective (Fig. 3).

The management objectives focused on harvest statistics establish baseline information on harvested bears. Hunter selectivity and harvest restrictions prevent the department from using harvest information to characterize the overall population (Gilbert et al. 1978, Bunnell and Tait 1980, Fraser et al. 1982). However, the data suggest that the black bear population in GMU 1A is healthy; there has been a stable or increasing annual harvest, the targeted average male spring skull size of at least 17.5 inches has been maintained, and the harvest has been comprised of more males than females. The age of harvested males averaged 8-years old (range = 7–10) and harvested females averaged 11-years old (range = 7–13). This is nearly identical to the previous reporting period (RY13–R17) when harvested males age averaged 8-years old (range = 8–9) and females averaged 10-years old (7–12), which also indicates a stable population (Dorendorf 2020).

Black bear harvest was centered around access points near developed areas, particularly near Ketchikan on Revillagigedo Island. Harvest on the mainland was limited compared to Revillagigedo Island, likely due to access difficulties due to distance and weather conditions. The presence of coastal brown bears on the mainland portions of Unit 1A may also contribute to reduced opportunity for black bear harvest.

Permit Hunts

Draw permit hunt DL016 was issued to nonresidents without guides in RY18–RY19. The total permit allocation of 75 was not reached during RY18–RY19 which allowed distribution of undersubscribed permits over the counter. When draw hunts were established in nearby GMU 2, it was anticipated that a number of hunters would move to adjacent units, and the draw hunt in GMU 1A was intended to restrict this influx of hunters, but no increase in hunters occurred in GMU 1A. Due to this, the BOG changed the hunt back to a harvest ticket hunt for all nonresidents in GMU 1A.

Hunting black bears with dogs, or with the use of bait, requires a permit in GMU 1A. No permits were issued to hunt bears with dogs, and 2 bears were taken over bait in GMU 1A during RY18–RY22.

Table 1. Black bear mortality by sex, regulatory years 2018–2022, Unit 1A, Southeast Alaska.

Regulatory year	Season	Hunter harvest					Nonhunting mortality[a]				Total estimated mortality[b]					
		Male	Female	Unk[c]	Total	Baited[d]	Male	Female	Unk[c]	Total	Male	(%)	Female	(%)	Unk[c]	Total
2018	Fall	15	8	1	24	0	2	0	2	4	17	(61)	8	(29)	3	28
	Spring	41	6	0	47	0	1	1	0	2	42	(86)	7	(14)	0	49
	Unk[c]	0	0	0	0	0	1	1	0	2	1	(50)	1	(50)	0	2
	Total	56	14	1	71	0	4	2	2	8	60	(76)	16	(20)	3	79
2019	Fall	15	7	0	22	0	3	6	0	9	18	(58)	13	(42)	0	31
	Spring	36	8	0	44	1	0	0	0	0	36	(82)	8	(18)	0	44
	Unk[c]	0	0	0	0	0	0	1	0	1	0	(0)	1	(100)	0	1
	Total	51	15	0	66	0	3	7	0	10	54	(71)	22	(29)	0	76
2020	Fall	13	14	0	27	0	5	5	0	10	18	(49)	19	(51)	0	37
	Spring	46	11	1	58	1	0	0	0	0	46	(79)	11	(19)	1	58
	Unk[c]	0	0	0	0	0	0	0	0	0	0	(0)	0	(0)	0	0
	Total	59	25	1	85	0	5	5	0	10	64	(67)	30	(32)	1	95
2021	Fall	5	3	0	8	0	0	1	0	1	5	(56)	4	(44)	0	9
	Spring	37	6	0	43	0	0	0	0	0	37	(86)	6	(14)	0	43
	Unk[c]	0	0	0	0	0	1	0	1	2	1	(50)	0	(0)	1	2
	Total	42	9	0	51	0	1	1	1	3	43	(80)	10	(19)	1	54
2022	Fall	1	1	0	2	0	0	1	0	1	1	(33)	2	(67)	0	3
	Spring	27	6	0	33	0	0	0	0	0	27	(82)	6	(18)	0	33
	Unk[c]	0	0	0	0	0	0	0	0	0	0	(0)	0	(0)	0	0
	Total	28	7	0	35	0	0	1	0	1	28	(78)	8	(22)	0	36

[a] Includes defense of life or property kills, research mortalities, and other known human-caused mortality.
[b] Percent by sex based only on known harvest total.
[c] Unk stands for unknown.
[d] Reported bear harvest over bait.

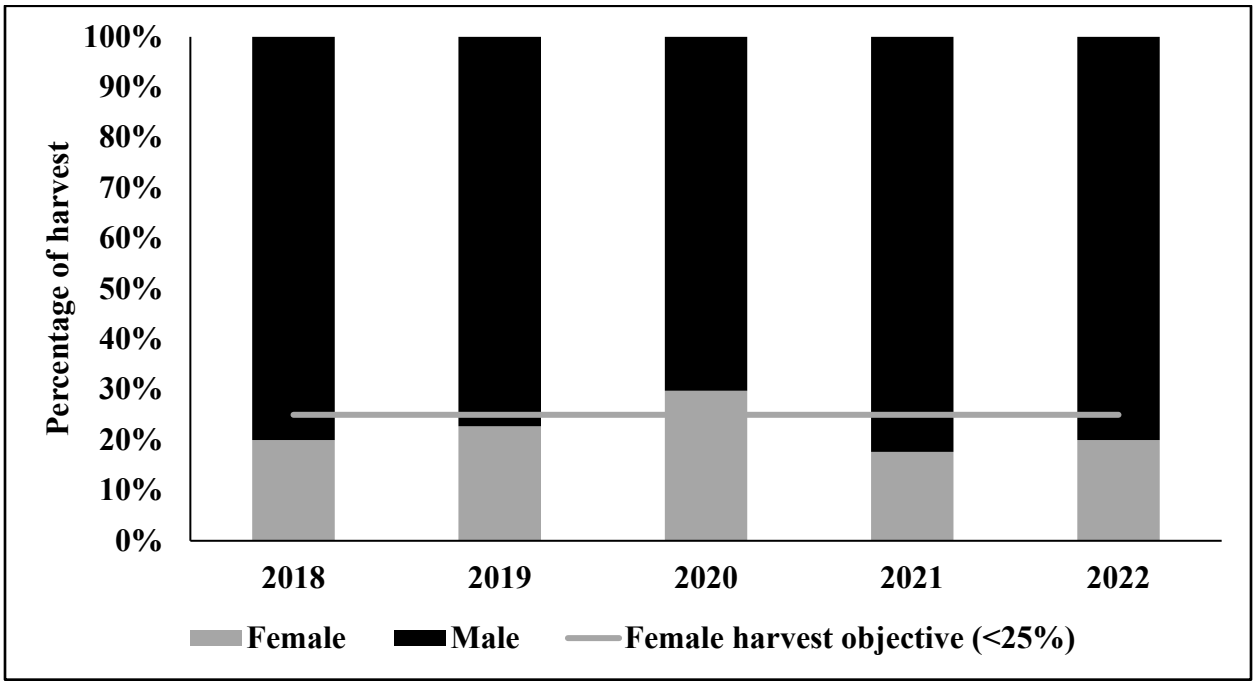

Figure 2. Male-to-female ratio of the black bear reported harvest during regulatory years 2018–2022, Unit 1A, Southeast Alaska.

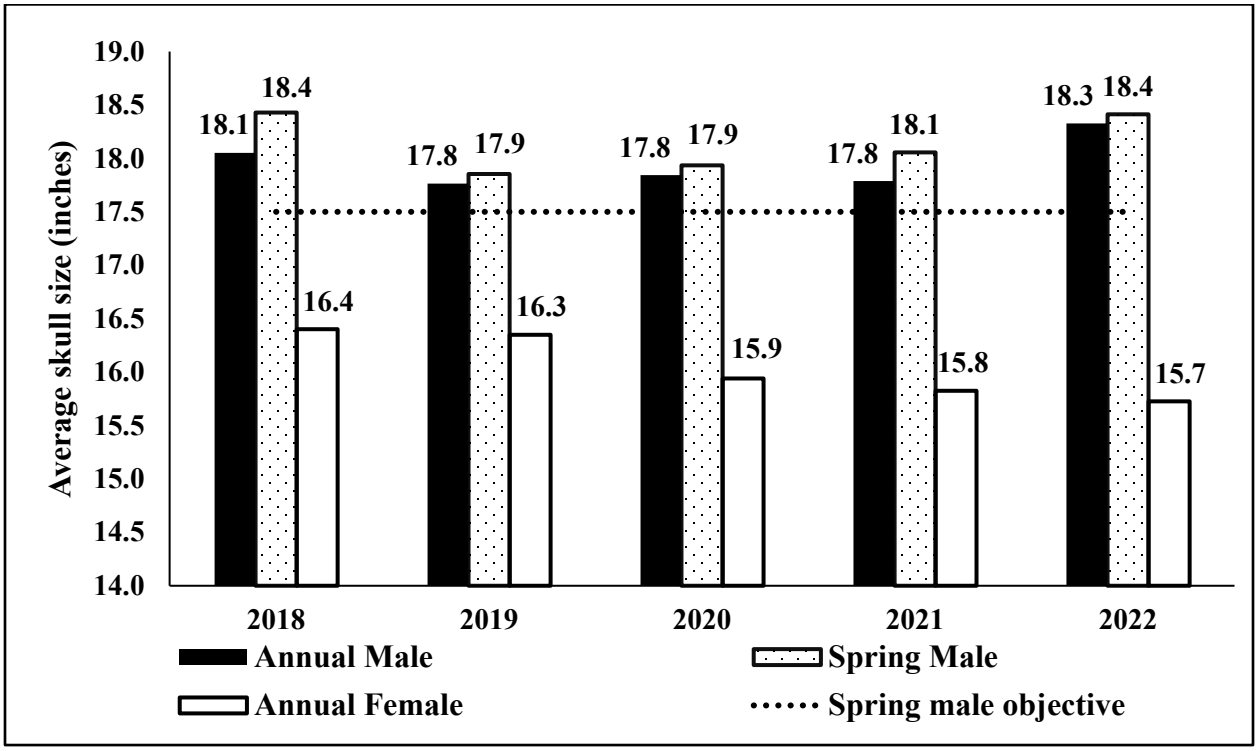

Figure 3. Average skull size (length plus width) of harvested black bears during regulatory years 2018–2022, Unit 1A, Southeast Alaska.

Hunter Residency and Success

Residents harvested more black bears in GMU 1A during RY18–RY22 compared to nonresidents (Fig. 4). In RY19 (spring 2020), the spring bear hunt was discontinued for nonresidents in consideration of the COVID-19 pandemic, which reduced black bear harvest from nonresidents. Harvest by residents increased in RY19 and RY20, perhaps due to more residents participating in black bear hunting, as participation in outdoor activities in general appeared to increase during COVID-19 restrictions.

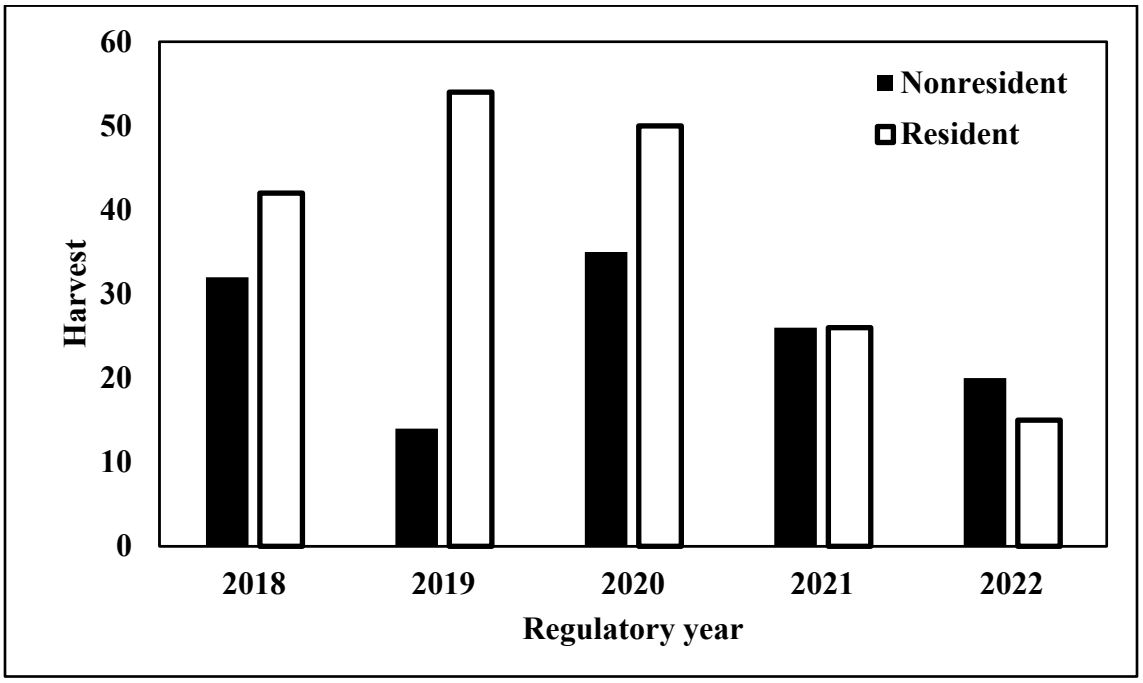

Figure 4. Number of black bears harvested by resident and nonresident hunters during regulatory years 2018–2022, Unit 1A, Southeast Alaska.

Harvest Chronology

Spring is the most popular time of year to harvest a black bear; 73% of harvest occurred from March to June, and 27% of harvest occurred during September through November. May was the most popular month to harvest bears because during May most bears have awoken from hibernation, they have not yet shed excessively, and the meat is considered to taste better because bears have not begun to feed heavily on fish yet. Bears become less available for harvest in October as they initiate denning activity, and some hunters avoid harvesting in the fall due to the quality of meat. The chronology of harvest was similar during all of RY18–RY22.

Transport Methods

Most hunters accessed areas to hunt black bears by boat (average = 80%) and highway vehicle (average = 14%). The vast amount of shoreline in GMU 1A makes using a boat an efficient method for locating bears in the spring; hunters are able to access grass flats at river mouths where they empty into the ocean, and these areas are commonly used by bears that are emerging

from their dens. Ketchikan's limited road system offers some highway and off-highway vehicle access for bear hunting.

Other Mortality

Communities in GMU 1A, especially Ketchikan, had issues with bears getting into trash and other attractants. Occasionally, this has posed a danger to the lives and safety of the public and has led to bears being humanely killed by department staff, other agencies, or by members of the public in defense of life or property (DLP). During the reporting period, a total of 10 bears were killed and reported with DLP forms, however documentation of DLP is incomplete for GMU 1A. Agency kills totaled 13 and the department documented 15 bears that were killed by vehicle collision during RY18–RY22.

Natural mortality factors, which are not quantified, include predation, intraspecies competition, disease, and accidents. It is unknown what the unrecovered hunting mortality is for black bears. Forest understory is dense, and frequent rainfall complicates the task of tracking and recovering wounded animals. A black bear study in GMU 2 using limited data reported an estimated 25% nonrecovery rate by hunters (Bethune 2014), and the nonrecovery rate may be similar for GMU 1A.

Alaska Board of Game Actions and Emergency Orders

The BOG removed black bear draw hunt DL016 at their 2019 Southeast region meeting. This decision also removed the stipulation that nonresidents who did not hunt with a draw permit were required to hunt with a guide or someone within the second degree of kindred. Nonresidents hunted under a harvest ticket during RY20–RY22. The department did not issue any emergency orders affecting black bears in GMU 1A during this reporting period.

Recommendations for Activity 2.1

Continue sealing black bears in GMU 1A and gathering critical data to help make informed management decisions. These data enable the department to monitor characteristics and changes within the harvested black bear population in GMU 1A.

3. Habitat Assessment-Enhancement

ADF&G did not conduct habitat assessment or enhancement for black bears in GMU 1A during RY18–RY22.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Human–Bear Conflicts

Access to trash, livestock, and bird feeders continued to create human-bear conflicts in GMU 1A communities during this reporting period. The city of Ketchikan enacted ordinances to control when trash may be placed for pickup, but these ordinances are rarely enforced (Bethune and Porter 2014). There is a significant reduction in bear conflicts when trash cans are replaced with bear-resistant canisters (Barrett et al. 2014; Johnson et al. 2018). However, the city of Ketchikan did not transition to bear-resistant receptacles during RY18–RY22.

Department staff provided information on ways to reduce human-bear conflicts through news releases, radio communication, television advertisements, phone calls, and public presentations. Efforts to reduce conflicts were supported by the Alaska Wildlife Troopers, U.S. Forest Service, Ketchikan Police Department, Ketchikan Indian Community, Ketchikan landfill staff, and other organizations.

The ADF&G office provides rental deterrence equipment such as electric fences, motion-activated noise makers, and other tools for residents having issues with black bears. Residents are encouraged to purchase their own fence, noise maker, etc., for future use while borrowing equipment on a short-term basis.

Data Recording and Archiving

- Sealing information is scanned and the data are uploaded into the department's Wildlife Information Network (WinfoNet) database.
- Teeth samples are sent to Matson's Laboratory in Manhattan, Montana for aging and the data are then recorded in WinfoNet.
- Historical survey notes and data sheets are stored in the Ketchikan area office files.
- Memos, data forms, and other information are stored in the Ketchikan area office shared hard drive.

Agreements

There were no formal agreements during RY18–RY22.

Permitting

None.

Conclusions and Management Recommendations

The harvest of black bears in GMU 1A was stable during RY18–RY22 and the department's management objectives were met. The combination of male-to-female harvest ratios, skull-size data, and harvest information provides insight to the status of the population. All harvest objectives were met for RY18–RY22.

Department staff continued to educate the public and provide solutions to human-bear conflicts within communities of GMU 1A. It is critical to continue educating the public on ways to avoid and reduce human-bear conflicts. Managers should continue to search for new information and methods to reduce human-bear conflicts.

No changes to the current management strategy are recommended. However, striving for better indices of abundance and meaningful metrics to determine the status of the population should be considered with the use of new technology and methods. Monitoring harvest through sealing

certificates provides crucial data for management and the department recommends that sealing be continued. Harvest ticket data could add a meaningful measure of hunter effort; however, unsuccessful hunters commonly forget to submit hunt reports. Combining sealing certificate information along with hunt report information into one form could simplify the process. Additional efforts to encourage unsuccessful hunters to report their hunting effort could benefit black bear management.

II. Project Review and RY23–RY27 Plan

Review of Management Direction

Management Direction

No change in management direction from the RY18–RY22 report period.

Goals

No change in goals from the RY18–RY22 report period.

Codified Objectives

Amounts Reasonably Necessary for Subsistence Uses

The Board of Game made a positive cultural and traditional determination for black bears (5 AAC 99.025) for GMU 1A during their 2000 meeting. They then set the amount reasonably necessary for subsistence during their 2008 meeting at 5–10 black bears for GMU 1A outside the Ketchikan nonsubsistence area.

Intensive Management

Not applicable.

Management Objectives

1. Maintain a male-to-female harvest ratio of 3:1.
2. Maintain an average male skull size in the spring harvest of 17.5 inches.
3. Minimize human-bear conflicts by providing information and assistance to the public and to other agencies.

Review of Management Activities

1. Population Status and Trend

No additional management activities other than harvest monitoring are planned for RY23–RY27.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Black bear sealing.

Data Needs

Black bear sealing data help determine if management goals are being met.

Methods

Hunters present specimens from their harvested black bear to DWC or an appointed sealer. Hunters are required to salvage the skull, hide, and meat from 1 January to 31 May. Hunters are required to salvage the skull and meat or the skull and hide from 1 June to 31 December. Bears are required to be sealed within 30 days of kill. Biological and hunt information collected at the time of sealing includes sex, skull size (length and width), pelage color, date and location of kill, number of days hunted, transportation method, hunter use of commercial services or guide, use of bait station, and percent of meat salvaged. For nonhunting mortalities (e.g., defense of life or property), information on the type of mortality is recorded as well. A premolar is collected from the skull and sent to Matson's Laboratory in Manhattan, Montana for cementum annuli age determination. Other biological samples collected at the time of sealing include muscle tissue and fur, which may be used for active research projects (i.e., stable isotope analyses to estimate bear diets, investigating which genes code for coat color characteristics), or may be cataloged for future projects.

3. Habitat Assessment-Enhancement

The department will continue to report on general land management alterations related to black bear habitat in future reports. No habitat enhancement is anticipated.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Human-Bear Conflicts

Department staff will continue to provide education, consultation, and aid other agencies and the public in managing human-bear conflicts. The department will also continue its rental program for the public to borrow bear deterrence equipment such as electric fences and motion-activated noise makers, and other gear. Trained ADF&G personnel will continue to be available to respond to conflicts as they arise when appropriate and necessary.

Data Recording and Archiving

Historical survey notes, data sheets, and sealing certificates are digitized and scanned for permanent storage on the Ketchikan area office shared drive. Hard copies will no longer be stored in the Ketchikan area office. All harvest and sealing data are stored on WinfoNet.

Agreements

No new agreements anticipated.

Permitting

None.

References Cited

Alaska Department of Fish and Game. 1976. Southeast Alaska black bear management plan. Pages 31–42 [*In*]Alaska wildlife management plans: A public proposal for the management of Alaska's wildlife: Southeastern Alaska. Draft proposal subsequently approved by the Alaska Board of Game. Division of Game, Federal Aid in Wildlife Restoration Project W-17-R, Juneau.

Barret, M. A., D. J. Telesco, S. E. Barrett, K. M. Widness, and E. H. Leone. 2014. Testing bear-resistant trash cans in residential areas of Florida. Southeastern Naturalist 13(1):26–39. https://doi.org/10.1656/058.013.0102

Bethune, S., and B. Porter. 2014. Unit 1A black bear management report. Chapter 1, pages 1-1 through 1-20 [*In*] P. Harper and Laura 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.

Bethune, S. 2014. Unit 2 black bear management report. Chapter 5: pages 5-1 through 5-26 [*In*] P. Harper and Laura A. McCarthy, editors. Black bear management report of survey and inventory activities 1 July 2010–30 June 2012. Alaska Department of Fish and Game, Species Management Report, ADF&G/DWC/SMR-2014-5, Juneau.

Bunnell, F. L., and D. E. N. Tait. 1980. Bears in models and in reality: Implications to management. Proceedings of the Fourth International Conference on Bear Research and Management, 20–24 February 1977, Kalispell, MT.

Dorendorf, R. 2020. Black bear management report and plan, Game Management Unit 1A: Report period 1 July 2013–30 June 2018, and plan period 1 July 2018–30 June 2023. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2020-27, Juneau.

Fraser, E., J. Gardner, G. Kolenosky, and S. Strathearn. 1982. Estimation of harvest rate of black bears from age and sex data. Wildlife Society Bulletin 10(1):53–57.

Gilbert, J., W. Kordek, J. Collins, R. Conley. 1978. Interpreting sex and age data from legal kills of bears. Proceedings of the Fourth Eastern Black Bear Workshop, 3–6 April 1978, Greenville, ME.

Johnson, H., D. Lewis, S. Lischka, and S. Breck. 2018. Assessing ecological and social outcomes of a bear-proofing experiment. Journal of Wildlife Management 82(6):1102–1114. https://doi.org/10.1002/jwmg.21472

Larsen, D. N. 1995. Black bear harvests and management, Prince of Wales and adjacent islands. Unpublished report, Alaska Department of Fish and Game, Division of Wildlife Conservation, Ketchikan.

Linnell, J. D. C., J. E. Swenson, R. Andersen, and B. Barnes. 2000. How vulnerable are denning bears to disturbance? Wildlife Society Bulletin 28(2):400-413.

Peacock, E., K. Titus, D. L. Garshelis, M. M. Peacock, and M. Kuc. 2011. Mark-recapture using tetracycline and genetics reveal record-high bear density. Journal of Wildlife Management 75(6):1513–1520. https://doi.org/10.1002/jwmg.171

Poelker, R. J., and H. D. Hartwell. 1973. Black bear of Washington. Biological Bulletin No. 14. Federal Aid Project W-71-R. Olympia, Washington.

Porter, B., D. P. Gregovich, A. P. Crupi, G. W. Pendleton, and S. W. Bethune. 2021. Black bears select large woody structures for dens in Southeast Alaska. The Journal of Wildlife Management https://doi.org/10.1002/jwmg.22097

U.S. Census Bureau. 2018. QuickFacts Ketchikan Gateway Borough, Alaska. https://www.census.gov/quickfacts/ketchikangatewayboroughalaska (Accessed 16 February 2019).

U.S. Climate Data. 2019. Climate data for Ketchikan, Alaska. https://www.usclimatedata.com/climate/ketchikan/alaska/united-states/usak0125 (Accessed 16 February 2019).

Wood, R. E. 1990. Black bear survey-inventory progress report. Pages 1–6 [*In*] S. O. Morgan, editor. Annual report of survey-inventory activities 1 January 1988-30 December 1988: Part IV - black bear. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Study 17.0, Juneau.


ALASKA
DEPARTMENT OF FISH AND GAME