

Black Bear Management Report and Plan, Game Management Unit 17:

Report Period 1 July 2018–30 June 2023, and
Plan Period 1 July 2023–30 June 2028

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Cover Photo: Black bear with cubs. ©2021 ADF&G. Photo by Arin Underwood.

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Purpose of this Report

This report provides a record of survey and inventory management activities for black bears (*Ursus americanus*) in Game Management Unit 17 during the 5 regulatory years 2018–2022, along with plans for the next 5 regulatory years 2023–2028. 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

Game Management Unit 17 (18,800 mi²) consists of the area north of Bristol Bay from Cape Newenham to Etolin Point (on the east bank at the mouth of the Nushagak River), encompassing the drainages of the Nushagak and Mulchatna Rivers to the east, the Wood-Tikchik and Togiak Lakes, Togiak River, and the Wood River Mountains to the west, and Hagemeister Island and the Walrus Islands south of Togiak Bay (Fig. 1). Maps for Unit 17 boundaries are found at [ADF&G website](#).

Unit 17 is further divided into 3 administrative units: Unit 17A, dominated by the Togiak River watershed; Unit 17B, associated with the upper Nushagak and upper Mulchatna River watersheds; and Unit 17C, defined by the lower Nushagak River watershed. Ecoregions include the Bristol Bay lowlands, Kuskokwim Mountains, Wood River Mountains, Neacola Mountains, Nushagak Hills, and Stuyahok Hills.

Summary of Status, Trend, Management Activities, and History of Black Bear in Unit 17

Unit 17 is located at the western edge of the North American range of black bears and minimal information is available about black bears in this area. Black bears were assumed to be scarce in the area; however, in recent years observations by the public and department staff suggest black bears may be more common than previously thought. Observations by the public and department biologists include black bears foraging in the spring and fall in the Muklung Hills, along the east face of the Wood-Tikchik Mountains, the upper lakes in Wood-Tikchik State Park, and far north and east into the upper Mulchatna watershed. During a Mulchatna caribou herd (MCH) calf mortality study conducted in 2011–2014 and 2017–2019, black bears were identified as the predator in 13 of 183 (7%) caribou neonate mortalities; typically, >1 calf mortality by black bears was documented each May of the study. Black bear predation on caribou calves was documented in the timbered areas of the Mulchatna, Nushagak, and Tikchik Rivers (D. J. Demma, Research Biologist, ADF&G, Palmer, personal communication).

In Unit 17, black bears are relatively less common than brown bears along salmon streams and near human settlements, a pattern primarily attributed to displacement by brown bears. However, no research activities have been conducted on black bears in Unit 17, so little information exists on the density, habitat use, denning, and other aspects of this bear population.

Prior to RY93, there were no hunt report or sealing requirements for black bear hunters in Unit 17; the department did not allocate funding for black bear management and consequently there was no method to monitor or assess the harvest. Beginning in RY94, black bear hunters were required to present their harvested bears for sealing by ADF&G staff or a department-appointed sealer.

From RY94 to RY13, the season dates for black bear hunting in Unit 17 were August 1 to March 15, with an annual bag limit of 2 bears for residents and 1 bear for nonresidents. In spring 2013, the Board of Game passed a department proposal to increase the black bear bag limit to 3 per year with no closed season, in order to align Unit 17 black bear hunting regulations with adjacent management areas.

Management Direction

EXISTING WILDLIFE MANAGEMENT PLANS

Direction, goals, and guidelines from *Alaska Wildlife Management Plans: Southwestern Alaska* (ADF&G 1976) have been used by the department over the years to provide guidance when informing the Alaska Board of Game.

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.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has made a negative finding for customary and traditional use of black bears in Unit 17.

Intensive Management

Black bears are not identified as important for providing high levels of harvest for human consumption. Black bears are included in the predator control plan on the western calving grounds of the Mulchatna caribou herd for the benefit of increasing calf survival (5AAC 92.111; ADF&G 2023).

MANAGEMENT OBJECTIVES

Maintain existing populations of black bears and attempt to monitor the sex and age structure of the population through harvest and sealing data.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Monitor black bear abundance through sealing data, anecdotal reports, and field observations.

Data Needs

Unitwide population estimates and trends are not available for black bears in Unit 17. Anecdotal reports from hunters and wildlife viewers and field observations by field staff act as proxies for these data.

Methods

Department biologists may informally discuss observations of black bears with other ADF&G staff working in the area, hunters, and other users of the backcountry (e.g., where and when seen, presence and number of cubs, and habitat use and behavior).

Results and Discussion

Field observations and anecdotal reports during RY18–RY22 were consistent with sealing data and indicate that the black bear population in Unit 17 is at a low density with a stable population trend.

Sealing data is discussed under Activity 2.1.

Recommendations for Activity 1.1

Discontinue. Activities to assess the Unit 17 black bear population status and trend have not been needed to achieve or evaluate the management goals and objectives.

2. Mortality-Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor black bear harvest through sealing records.

Data Needs

Information obtained during the sealing process is used to monitor the relative health and trend of the black bear population and to evaluate potential population impacts of black bear harvest under sustained-yield management. In some cases, harvest can be an index of abundance and trend, such as an abrupt increase or decline of harvest over several years of similar hunting pressure.

Methods

Harvest information is collected by measuring the skulls of black bears and recording the sex and age of harvested bears, as well as location of harvest and hunter-specific information including use of commercial services and guides, method of transportation, and method of take. Sealing must be conducted by ADF&G staff or a state-appointed sealer within 30 days of the kill. Harvest data is entered into ADF&G's Wildlife Information Network (WinfoNet).

Season and Bag Limit

Since RY13, and throughout this reporting period, there was no closed season for black bear hunting in Unit 17, and a bag limit of 3 black bears for residents and nonresidents.

Results and Discussion

Harvest by Hunters-Trappers

Black bear harvest in Unit 17 is low. The 5-year total reported harvest for RY18–RY22 was 22 black bears, composed of 27% female and 73% male bears (Table 1). During this reporting period, all black bears were harvested from Unit 17B.

With small annual harvests, there is little data from hunt records and sealing certificates to evaluate. Still, a downward trend is apparent since sealing began in 1994. During RY97–RY08, the average annual black bear harvest was 14 bears per year; during RY09–RY22, the average annual harvest was 5 bears per year. (Table 1). Historically, black bear harvest was opportunistic and associated with hunters traveling to Unit 17 for Mulchatna caribou; however, the nonresident hunting season for Mulchatna caribou has been closed since RY09 and is likely the main cause in the decline of black bear harvest in Unit 17.

Hunter Residency and Success

During this reporting period, the number of successful hunters each year ranged from 1 to 7, and 81% of the harvest was by nonresidents (Table 2). The average annual harvest for RY18–RY22 was 4 black bears per year (Table 1).

Harvest Chronology

Most black bear harvest in Unit 17 occurs in August and September, with only occasional harvest occurring in October and during the spring season (Table 3).

Transport Methods

In Unit 17, the most common mode of transportation for bear hunting is by airplane. Occasionally, bear hunters also use boats, all-terrain vehicles (ATV), snowmachines, highway vehicles, and traveling on foot (Table 4).

Table 1. Black bear harvest data from sealing records, Units 17B and 17C, southwestern Alaska, regulatory years 1997–2022.

Regulatory year	Unit 17B				Unit 17C				Unit 17 total			
	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
1997	10	5	0	15	2	1	0	3	12	6	0	18
1998	16	12	0	28	1	0	0	1	17	12	0	29
1999	14	4	0	18	2	0	0	2	16	4	0	20
2000	8	2	0	10	0	0	0	0	8	2	0	10
2001	7	1	1	9	1	0	0	1	8	1	1	10
2002	4	4	0	8	0	0	0	0	4	4	0	8
2003	7	6	0	13	0	0	0	0	7	6	0	13
2004	14	8	0	22	0	0	0	0	14	8	0	22
2005	5	1	0	6	1	0	0	1	6	1	0	7
2006	7	4	0	11	2	1	0	3	9	5	0	14
2007	2	1	0	3	2	0	0	2	4	1	0	5
2008	1	4	1	6	0	0	0	0	1	4	1	6
2009	2	3	0	5	0	0	0	0	2	3	0	5
2010	5	2	0	7	0	0	0	0	5	2	0	7
2011	9	2	0	11	1	0	0	1	10	2	0	12
2012	1	0	0	1	2	0	0	2	3	0	0	3
2013	2 ^a	2	0	4	0	0	0	0	2	2	0	4
2014	1	1	0	2	1	0	0	1	2	1	0	3
2015	3	1	0	4	1	0	0	1	4	1	0	5
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	4	1 ^a	0	5	1	0	0	1	5	1	0	6
2018	3	3	0	6	0	0	0	0	3	3	0	6
2019	1	0	0	1	0	0	0	0	1	0	0	1
2020	4	2	0	6	0	0	0	0	4	2	0	6
2021	2	0	0	2	0	0	0	0	2	0	0	2
2022 ^b	6	1	0	7	0	0	0	0	6	1	0	7

^a Mortality was a bear taken by defense of life or property (DLP). In RY13, only 1 of the males was taken by DLP.

^b In spring 2023, the department removed 3 male and 2 female black bears from Unit 17B under the predator removal program, as outlined in the intensive management plan for the Mulchatna caribou herd (ADF&G 2023). These 5 black bear mortalities are not included in Table 1.

Table 2. Unit 17 successful black bear harvest by residency, southwestern Alaska, regulatory years 1997–2022.

Regulatory year	Local resident (%)	Nonlocal resident (%)	Nonresident (%)	Total successful hunters
1997	0	11	89	18
1998	0	10	90	29
1999	0	0	100	20
2000	0	20	80	10
2001	0	30	70	10
2002	0	13	87	8
2003	0	15	85	13
2004	0	5	95	21
2005	14	0	86	7
2006	7	7	86	14
2007	40	20	40	5
2008	0	0	100	6
2009	0	20	80	5
2010	0	0	100	7
2011	8	33	59	12
2012	0	0	100	3
2013	0	33	67	3
2014	0	33	67	3
2015	0	0	100	5
2016	—	—	—	0
2017	0	16	84	6
2018	0	33	67	6
2019	0	0	100	1
2020	0	0	100	6
2021	0	50	50	2
2022	0	16	84	6

Table 3. Unit 17 black bear harvest chronology by percentage of harvest, southwestern Alaska, regulatory years 1997–2022.

Regulatory year	Percent of harvest						<i>n</i> ^a
	Aug	Sept	Oct	Apr	May	Jun	
1997	33	67	0	0	0	0	18
1998	10	90	0	0	0	0	29
1999	15	85	0	0	0	0	20
2000	20	70	10	0	0	0	10
2001	30	70	0	0	0	0	10
2002	38	62	0	0	0	0	8
2003	31	69	0	0	0	0	13
2004	19	81	0	0	0	0	21
2005	29	57	0	0	14	0	7
2006	14	86	0	0	0	0	14
2007	20	60	20	0	0	0	5
2008	0	100	0	0	0	0	6
2009	0	100	0	0	0	0	5
2010	0	100	0	0	0	0	7
2011	17	83	0	0	0	0	12
2012	0	67	0	33	0	0	3
2013	0	100	0	0	0	0	3
2014	33	67	0	0	0	0	3
2015	20	60	0	20	0	0	5
2016	—	—	—	—	—	—	0
2017	16	84	0	0	0	0	6
2018	16	84	0	0	0	0	6
2019	0	100	0	0	0	0	1
2020	0	100	0	0	0	0	6
2021	0	100	0	0	0	0	2
2022	14	58	0	0	14	14	7

^a Sample size (*n*) is the number of hunt reports with date of harvest information.

Table 4. Unit 17 transport methods for black bear hunters by percentage of harvest, southwestern Alaska, regulatory years 1997–2022.

Regulatory year	Percent of Harvest						<i>n</i> ^a
	Airplane	Boat	ATV	Snow-machine	Highway vehicle	Foot	
1997	89	0	0	0	0	11	18
1998	72	28	0	0	0	0	29
1999	85	10	5	0	0	0	20
2000	70	30	0	0	0	0	10
2001	100	0	0	0	0	0	10
2002	100	0	0	0	0	0	8
2003	100	0	0	0	0	0	13
2004	95	5	0	0	0	0	21
2005	86	0	0	0	14	0	7
2006	93	0	0	0	7	0	14
2007	40	40	20	0	0	0	5
2008	100	0	0	0	0	0	6
2009	80	20	0	0	0	0	5
2010	100	0	0	0	0	0	7
2011	75	25	0	0	0	0	12
2012	33	33	0	33	0	0	3
2013	67	0	0	0	0	33	4
2014	100	0	0	0	0	0	3
2015	100	0	0	0	0	0	5
2016	0	0	0	0	0	0	0
2017	83	0	0	0	0	17	6
2018	83	17	0	0	0	0	6
2019	100	0	0	0	0	0	1
2020	100	0	0	0	0	0	6
2021	100	0	0	0	0	0	2
2022	100	0	0	0	0	0	7

^a Sample size (*n*) is the number of hunt reports with mode of transport information.

Other Mortality

There were no black bear mortalities reported under defense of life or property permits (DLP) during this reporting period. In May 2023, 5 black bears were removed by the department in Unit 17B under the predator removal program, as outlined in the intensive management plan for the Mulchatna caribou herd (ADF&G 2023).

Alaska Board of Game Actions and Emergency Orders

In RY22, the BOG amended the MCH intensive management plan to allow the removal of predators by department staff using helicopters (ADF&G 2023).

Recommendations for Activity 2.1.

Continue collecting bear sealing and harvest information. Although the relationship between skull sizes, age structure of the population, and population estimates is not completely clear, this is the only information collected to monitor populations long term. We continue to support the mandatory sealing of black bears.

3. Habitat Assessment-Enhancement

No habitat assessment of enhancement activities for the benefit of black bears took place in Unit 17 during RY18–RY22, and none are planned for RY23–RY27.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Harvest data and copies of sealing forms are stored on ADF&G's WinfoNet.

Agreements

There were no agreements between the department and outside entities to conduct management for black bears in Unit 17 during the reporting period.

Permitting

There are no permits required to manage black bears in Unit 17 during the reporting period.

Conclusions and Management Recommendations

The status of the Unit 17 black bear population is unknown. Harvest data suggests that the population is low density, as expected by a population at the extreme edge of their range. Harvest during the reporting period ranged from 1–7 bears per year, and there are no concerns about sustainability at this time. Data collected from black bear sealing will continue to be used to monitor the black bear population in Unit 17.

II. Project Review and RY23–RY27 Plan

Review of Management Direction

The existing management and goals seem to appropriately direct the management of black bears in Unit 17 and there is no concern over the black bear population in Unit 17 at this time.

MANAGEMENT DIRECTION

GOALS

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

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

The Alaska Board of Game has made a negative finding for customary and traditional use of black bears in Unit 17.

Intensive Management

Black bears are not identified as important for providing high levels of harvest for human consumption. Black bears are included in the predator control plan on the western calving grounds of the Mulchatna caribou herd for the benefit of increasing calf survival (5AAC 92.111; ADF&G 2023).

MANAGEMENT OBJECTIVES

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

There are no plans to directly estimate black bear abundance in Unit 17 for RY23–RY27.

2. Mortality-Harvest Monitoring

ACTIVITY 2.1. Monitoring black bears harvest through sealing records.

Data Needs

Since 1994, all black bears harvested in Unit 17 have been legally required to be sealed. Data collected during the process includes location of harvest, sex, age, measurements of hides and skulls, as well as hunter-specific information including use of commercial services, guides, method of transportation, and method of take. These data is used to monitor the health of the bear population and to evaluate potential population impacts of black bear harvest. In some cases, harvest can be an index of abundance and trend, such as an abrupt increase, peak, or decline of harvest over several years of similar hunting pressure.

Methods

No change from methods detailed in the report section.

3. Habitat Assessment-Enhancement

No habitat assessment and enhancement activities to benefit black bears in Unit 17 are planned for RY23–RY27

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Data Recording and Archiving

Harvest data and copies of sealing forms are stored on ADF&G's Wildlife Information Network (WinfoNet).

Agreements

There are no agreements between the department and outside entities to conduct management for black bears in Unit 17 during RY23–RY27.

Permitting

There are no permits required to manage black bears in Unit 17 during RY23–RY27.

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