Species Management Report and Plan ADF&G/DWC/SMR&P–2021–38

Black Bear Management Report and Plan, Game Management Unit 20D:

Report Period 1 July 2013–30 June 2018, and

Plan Period 1 July 2018–30 June 2023

Robert W. Schmidt

2021

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 Doreen Parker McNeill, Management Coordinator for the Division of Wildlife Conservation.

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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: ©ADF&G 2018. Photo of black bear from ADF&G game camera in northern Unit 20D near the Pogo Mine.

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Purpose of this Report

This report provides a record of survey and inventory management activities for black bear (*Ursus americanus*) in Unit 20D for the 5 regulatory years 2013–2017 and plans for survey and inventory management activities in the following 5 regulatory years, 2018–2022. A regulatory year (RY) begins 1 July and ends 30 June (e.g., RY14 = 1 July 2014–30 June 2015). This report is produced primarily to provide agency staff with data and analysis to help guide and record agency efforts but is also provided to the public to inform it of wildlife management activities. In 2016 the Alaska Department of Fish and Game's (ADF&G, the department) Division of Wildlife Conservation (DWC) launched this 5-year report to report more efficiently on trends and to describe potential changes in data collection activities over the next 5 years. It replaces the black bear management report of survey and inventory activities that was previously produced every 3 years.

I. RY13–RY17 Management Report

Management Area

Unit 20D, a subunit of Unit 20, is in Interior Alaska in the Central Tanana River Valley and covers approximately 5,637 mi^2. The community of Delta Junction is on the west side of the management unit and is located 100 miles southeast of Fairbanks. The northern portion of the unit consists of the Goodpaster, Volkmar, and Healy river valleys and the Tanana Highlands with elevations ranging from 851–6,444 feet. The southern portion consists of the Tanana River floodplain, the lower Delta River floodplain, the Delta Agricultural Project, the drainages of the Robertson, Johnson, and Gerstle rivers, and the northern foothills and mountains of the Alaska Range, with elevations varying up to 10,278 feet. Lowland vegetation is a mosaic of shrub and early successional dominated forests, climax bogs, and mature black spruce (*Picea mariana*) forest. Vegetation in the hills, foothills, and mountains grades from taiga at lower elevations into shrub dominated communities with alpine tundra at higher elevations. The climate is typical of Interior Alaska where temperatures frequently reach 80°F in summer and -40°F in winter. Snow depths are generally below 32 inches (Western Regional Climate Center 2006). Unique to the Delta Junction area from other interior communities are the strong southern Chinook winds often experienced through the winter. These winds bring mild temperatures to the mountains and foothill regions of southern Unit 20D. Ridgetops are often blown free of snow throughout the high country in southern Unit 20D. While the southern Chinook winds affect northern Unit 20D less, the area is still affected by these winds occasionally and even more so by the east winds that also occur regularly in the Delta Junction area.

Summary of Status, Trend, Management Activities, and History of Black Bears in Unit 20D

Black bears are widely distributed in Unit 20D. Most black bear harvest in Unit 20D occurs near the road system south of the Tanana River, in the northwestern portion of the unit along the Richardson Highway, and along major river systems.

In 2009 the Alaska Board of Game (board) passed a regulation that required black bear hunters in many units, including Unit 20D, to possess a black bear harvest ticket when hunting black bears. Beginning in regulatory year (RY) 2010, the board classified black bears as furbearers as well as big game. Although the board did not open black bear trapping seasons, this furbearer classification and other regulatory changes allowed hunters to legally sell black bear hides and parts, except gall bladders. The board subsequently amended these regulations so that sale of black bear meat remained illegal in RY10. Further RY10 regulatory changes in many units, including Unit 20D, eliminated sealing requirements, except for bears removed from Alaska or sold, and changed salvage requirement for black bears harvested during 1 June–31 December to allow hunters to salvage either the hide or meat with no requirement to salvage the skull. The board also increased the maximum number of bait stations allowed to be registered by guides from 2 to 10 and designated this regulation to take effect in spring 2011.

Management Direction

ADF&G will continue to manage black bears in Unit 20D at levels sufficient to provide for consumptive and nonconsumptive uses. Management will include tracking harvest levels through harvest ticket reports and anecdotal information gathered from hunters and collected by ADF&G staff while conducting other field work. ADF&G staff will also continue registering bear baits and responding to nuisance black bear complaints. Although sealing is not required for 20D black bears, we will also consider the voluntary sealing data we get while sealing when making management decisions.

Existing Wildlife Management Plans

Direction in the Interior-Western Alaska black bear management plan (ADF&G 1976) has been reviewed and modified through public comments, staff recommendations, and Alaska Board of Game actions over the years. A record of these changes can be found in the division's management report series. Bruning (2014) described recent management direction prior to this reporting period. The plan portion of this report contains the current management plan for black bear in Unit 20D.

Goals

G1. Protect, maintain, and enhance the black bear population and its habitat in concert with other components of the ecosystem.

G2. Provide the greatest sustained opportunity to participate in hunting black bears.

Codified Objectives

Amounts Reasonably Necessary for Subsistence Uses

C1. Unit 20D has a positive finding for customary and traditional use of black bears. The amount reasonably necessary for subsistence (ANS) for Unit 20 outside the Fairbanks Nonsubsistence area is 20–30. The ANS for black bears is not specified for the individual subunits of Unit 20.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

M1. Manage for a sustained yield of black bears with harvest not to exceed 15 black bears per year south of the Tanana River and 35 black bears per year north of the Tanana River.

MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Track black bear trends and abundance through harvest ticket reports, opportunistic sealing, and anecdotal black bear observations by the public and ADF&G staff (Objective M1).

Data Needs

Anecdotal black bear observations provide supplementary information to harvest data the department collects to help track the status of the black bear population in Unit 20D, so black bears can be managed for sustainable harvest. Harvest data are collected as part of Activity 2.1.

Methods

All anecdotal black bear observations made by the department or the public through the year are documented in the Delta Area office Shared Drive (S:) under black bear or in other species survey memos. All pertinent hard copies are stored in the Delta Area Biologist's lateral file cabinet. Most black bear harvest in Unit 20D occurs over bait. All bear bait stations need to be registered with ADF&G before anyone can hunt bears over bait, however several hunters may hunt over the same bait while only one person has to physically register the bait. The influx of people contacting ADF&G regarding bear baiting makes this an ideal time to gather information from hunters. The time of registration is therefore when most anecdotal information is gathered from the public/hunters. Most hunters are eager to share their hunting stories or bear sightings with the department, many of them even offer game camera pictures that were taken at their bait station.

Results and Discussion

Population Size

An accurate estimate of black bear population size and trend was not available for Unit 20D during RY13–RY17. However, based on Hechtel's (1991) estimate of 17.5 adult black bears/100 mi^2 in adjacent Unit 20A, DuBois (1993) estimated a population of approximately 750 adult black bears in Unit 20D. DuBois also estimated that approximately 525 bears were present north of the Tanana River and 225 bears south of the Tanana River. We understand this data is 30-years old and may not be completely relevant to current times. However, until we can generate a better population estimate with new technology, we use this population data as a place holder as an understanding that it's the best we have for now. We therefore rely heavily on

harvest data and trends in that data. The steady rate of harvest through the years shows the Unit 20D black bear population equals that of at least the above population estimate, has remained very stable over the years, and may now be on the rise. Harvest data will be discussed further in activity 2.1.

Distribution and Movements

Black bears are distributed throughout the bogs, riparian areas, spruce and mixed forest, and subalpine shrub of Unit 20D. They also utilize alpine habitat but are not year-round residents. No information has been available concerning movements.

Recommendations for Activity 1.1

Continue to record all black bear anecdotal observations and continue to actively encourage hunters and the rest of the public to report black bear observations they make while in the field to the department. This information can be used to supplement harvest data and help verify changes in the population that we think we may be seeing from the harvest data.

2. Mortality, Harvest Monitoring and Regulations

ACTIVITY 2.1. Harvest monitoring through harvest ticket report data and sealing records (Objective M1).

Data Needs

Annual harvest ticket report data are needed to track the number of harvested black bears and thereby help determine if the Unit 20D black bear population is changing and whether harvest rates are sustainable. If harvest rates begin to decline this could signal that the population is in decline and new regulations may be needed to slow the rate of harvest. Sealing data can also be useful in tracking harvest rates. However, sealing is no longer required for Unit 20D black bears, so only the bears that hunters wish to sell, send out of Alaska for tanning, and bears removed from Alaska permanently (i.e., nonresident hunters) are sealed. Therefore, this information can be used only as anecdotal information or supplementary to the harvest ticket data. Because this black bear population is not regularly surveyed, harvest data provide the main information used in managing Unit 20D black bears.

Methods

Harvest of black bear by hunters during the general season was monitored by requiring hunters to acquire black bear harvest tickets and report hunting activities that included the location hunted, how long they hunted, their mode of transportation, whether they killed a bear(s), where and when they killed a bear(s), the sex of bear(s) killed, and the type of weapon used to kill a bear(s). We (ADF&G) also collected harvest data through sealing of bears killed by hunters (although hunters are not required to have their bears sealed). Data collected during sealing of each harvested black bear included harvest date, how long they hunted, mode of transportation, sex, color phase, total skull length and zygomatic width, whether the meat was salvaged, hunter name and address, and location of harvest within Uniform Coding Units (UCU). UCUs are small, defined areas within Unit 20D bounded by watersheds or physiographic landscape features. Other mortalities of black bears, including take in defense of life or property (DLP),

were monitored by sealing the hides and skulls of bears killed. Data collected from bears killed in defense of life or property (DLP) included date of kill, location of kill, and sex of the bear. In addition, anyone killing a black bear in DLP is required to complete and submit a Defense of Life or Property Report form to the Alaska Department of Fish and Game (ADF&G). Data were summarized by regulatory year. One reminder letter was sent to holders of harvest tickets who did not report.

Season and Bag Limit

There was no closed season (season is open the entire year) on black bears in Unit 20D during RY13–RY17. The bag limit was 3 bears per year. Cubs or females accompanied by cubs were not legal to harvest. Black bear baiting was allowed from 15 April through 30 June; however, hunters using bait could not establish more than 2 bait stations at a time and were required to first obtain a permit issued by ADF&G. Guides using bait were allowed to register up to 10 stations.

Results and Discussion

Harvest by Hunters

Reported black bear harvest by hunters during RY13–RY17 ranged from a low of 29 in RY16 to a high of 47 in RY17 (Table 1) and did not exceed the Unit 20D combined harvest objective of 50 bears per year. The mean 5-year annual harvest by hunters was 37 bears per year. On average, 66% of the bears taken were males.

Twenty-five percent of black bears killed by hunters during RY13–RY17 were taken at bait stations, with annual take ranging from 5 bears in RY14 to 14 in RY15. The 5-year mean was 9 bears per year taken with bait (Table 1).

Harvest Locations

The Unit 20D harvest objective not to exceed 15 bears per year south of the Tanana River was met during regulatory years 2013, 2014, 2015, and 2016, with fewer than 15 bears harvested south of the Tanana River during each of these years. The harvest objective was not met during RY17, when 22 bears were harvested south of the Tanana River. The average harvest for RY13–RY17 south of the Tanana River was 15 bears (Table 2). The average harvest rate during the reporting period represented an estimated annual harvest of 7% of the estimated adult population south of the Tanana River.

Unit 20D harvest objective not to exceed 35 bears per year north of the Tanana River was met each year during RY13–RY17 (Table 2). The reported harvest north of the Tanana River ranged from 15 to 27 bears per year. The 5-year mean harvest north of the Tanana River was 22 bears per year. This harvest represented an annual estimated take of 4% of the estimated adult population north of the Tanana River.

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Table 1. Unit 20D, Alaska, black bear harvest, regulatory years[a] 2012–2018.

Regulatory year	Reported								Estimated kill		Total reported and estimated kill			
	Hunter kill					Nonhunting kill[c]								
	M (%)	F (%)	Unk	Total	Baited[b]	M	F	Unk	Unreported	Illegal	M (%)	F (%)	Unk	Total
2012														
Fall 2012	7 (70)	3 (30)	1	11	0	1	0	0	0	0	8 (73)	3 (27)	1	12
Spring 2013	8 (70)	3 (30)	0	11	6	1	0	0	0	0	9 (75)	3 (25)	0	12
Total	15 (57)	6 (43)	1	22	6	2	0	0	0	0	17 (74)	6 (26)	1	24
2013														
Fall 2013	5 (45)	5 (45)	1	11	0	0	0	0	0	0	5 (50)	5 (50)	1	11
Spring 2014	17 (68)	8 (32)	0	25	13	0	0	0	0	0	17 (68)	8 (32)	0	25
Total	22 (61)	13 (36)	1	36	13	0	0	0	0	0	22 (63)	13 (37)	1	36
2014														
Fall 2014	6 (75)	2 (25)	0	8	0	0	1	0	0	0	6 (67)	3 (33)	0	9
Spring 2015	20 (66)	10 (33)	0	30	5	0	0	0	0	0	20 (67)	10 (33)	0	30
Total	26 (68)	12 (32)	0	38	5	0	1	0	0	0	26 (67)	13 (33)	0	39
2015														
Fall 2015	7 (78)	2 (22)	0	9	0	0	0	0	0	0	7 (78)	2 (22)	0	9
Spring 2016	18 (69)	8 (31)	0	26	14	0	0	0	0	0	18 (69)	8 (31)	0	26
Total	25 (71)	10 (29)	0	35	14	0	0	0	0	0	25 (71)	10 (29)	0	35
2016														
Fall 2016	2 (100)	0 (0)	0	2	0	2	0	0	0	0	4 (100)	0 (0)	0	4
Spring 2017	19 (70)	8 (30)	0	27	7	1	0	0	0	0	20 (71)	8 (29)	0	28
Total	21 (72)	8 (28)	0	29	7	3	0	0	0	0	24 (75)	8 (25)	0	32
2017														
Fall 2017	6 (46)	7 (54)	0	13	0	0	0	0	0	0	6 (46)	7 (54)	0	13
Spring 2018	22 (65)	12 (35)	0	34	8	0	0	0	0	0	22 (65)	12 (35)	0	34
Total	28 (60)	19 (40)	0	47	8	0	0	0	0	0	28 (60)	19 (40)	0	47
2018														
Fall 2018	9 (82)	2 (18)	0	11	0	0	0	0	0	0	9 (82)	2 (18)	0	11
Spring 2019	19 (68)	9 (32)	0	28	9	0	1	0	0	0	19 (66)	10 (34)	0	29
Total	28 (72)	11 (28)	0	39	9	0	1	0	0	0	28 (70)	12 (30)	0	40

[a] Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2012 = 1 July 2012–30 June 2013).

[b] Number of animals harvested over bait is a minimum count, data is only collected if brought in for sealing.

[c] Includes defense of life or property kills, research mortalities, and other known human-caused accidental mortality.

Table 2. Unit 20D, Alaska, reported black bear harvest locations, regulatory years[a] 2012–2018.

Regulatory year	South of Tanana River No.	(%)	North of Tanana River No.	(%)	Unk	*n*
2012	12	(55)	10	(45)	0	22
2013	10	(28)	26	(72)	0	36
2014	11	(29)	27	(71)	0	38
2015	20	(57)	15	(43)	0	35
2016	14	(48)	15	(52)	0	29
2017	22	(47)	25	(53)	0	47
2018	20	(51)	19	(49)	0	39

[a] Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2012 = 1 July 2012–30 June 2013).

Permit Hunts

RY13 – 203 people that received black bear harvest tickets reported hunting in Unit 20D.

RY14 – 183 people that received black bear harvest tickets reported hunting in Unit 20D.

RY15 – 198 people that received black bear harvest tickets reported hunting in Unit 20D.

RY16 – 163 people that received black bear harvest tickets reported hunting in Unit 20D.

RY17 – 184 people that received black bear harvest tickets reported hunting in Unit 20D

Hunter Residency and Success

Most black bears killed in Unit 20D were taken by Alaska residents (Table 3). Based on reported harvest, the average annual number of successful local resident hunters during RY13–RY17 was 19, and the average annual number of successful nonlocal resident hunters was 17.

Table 3. Unit 20D, Alaska, black bear successful hunter residency, regulatory years[a] 2012–2018.

Regulatory year	Local[b] resident	(%)	Nonlocal resident	(%)	Nonresident	(%)	Unk	Total successful hunters
2012	7	(32)	12	(55)	3	(14)	0	22
2013	16	(44)	17	(47)	3	(8)	0	36
2014	29	(76)	8	(21)	1	(3)	0	38
2015	19	(54)	14	(40)	2	(6)	0	35
2016	15	(52)	14	(48)	0	(0)	0	29
2017	16	(34)	30	(64)	1	(2)	0	47
2018	23	(59)	16	(41)	0	(0)	0	39

[a] Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2012 = 1 July 2012–30 June 2013).
[b] Local residents are residents of Unit 20D.

Harvest Chronology

As in previous reporting periods most bears were harvested in May–June and August–September (Table 4).

Transport Methods

The most popular modes of transportation for black bear hunters in Unit 20D were boats and 3- or 4-wheelers (Table 5). This is a shift from RY10–RY12 when highway vehicles were used more than 3- or 4-wheelers by successful black bear hunters. Several hunters also reported using airboats or hunting on foot. See Table 5 for a complete list of transportation methods used by successful black bear hunters.

Other Mortality

There were 4 DLP nonhunting mortalities reported during RY13–RY17 (Table 1).

A human fatality occurred in June of 2017 near Pogo Mine in northern Unit 20D along the upper Goodpaster River. This area is frequented by both black and grizzly bears. On average, Pogo security conducts more than 50 black bear hazing events in the main camp area annually (some are repeat offenders); some years as many as 70 hazing events occur.

Alaska Board of Game Actions and Emergency Orders

There was no action taken by the Board of Game during RY13–RY17 regarding black bears in Unit 20D.

Recommendations for Activity 2.1

Continue to collect harvest data through harvest ticket reports and sealing records (when possible).

Table 4. Unit 20D, Alaska, black bear harvest chronology percent by month, regulatory years[a] 2012–2018.

Regulatory year	Harvest chronology percent by month									
	Jul	Aug	Sep	Oct	Nov	Apr	May	Jun	Unk	*n*
2012	0	9	36	5	0	0	5	45	0	22
2013	6	8	14	0	0	0	33	36	3	36
2014	0	8	13	0	0	0	37	42	0	38
2015	9	9	8	0	0	3	34	34	3	35
2016	0	0	7	0	0	0	52	41	0	29
2017	2	2	24	0	0	2	21	49	0	47
2018	5	10	13	0	0	0	26	46	0	39

[a] Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2012 = 1 July 2012–30 June 2013).

Table 5. Unit 20D, Alaska, black bear harvest percent by transport method, regulatory years[a] 2012–2018.

Regulatory year	Harvest percent by transport method										
	Airplane	Horse	Boat	3- or 4-wheeler	Snowmachine	ORV	Highway vehicle	Walk	Other	Air boat	*n*
2012	9	0	23	23	0	0	26	14	5[b]	0	22
2013	6	0	36	36	0	6	3	8	6	0	36
2014	0	0	39	42	0	3	8	5	0	3	38
2015	0	3	37	31	0	6	17	6	0	0	35
2016	0	0	38	24	0	10	14	0	[7]	7	29
2017	2	0	40	28	0	6	15	4	0	2	47
2018	15	5	33	31	0	0	3	13	0	0	39

[a] Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2012 = 1 July 2012–30 June 2013).

3. Habitat Assessment-Enhancement

ACTIVITY 3.1. No activity.

Data Needs

Data are not needed at this time. Black bear habitat appears sufficient to support viable black bear populations.

Methods

Not applicable.

Results and Discussion

No habitat assessment work occurred for black bears during RY13–RY17.

Recommendations for Activity 3.1

Activities to assess or enhance habitat for black bears are not necessary at this time to achieve the management goals and objectives or to evaluate codified objectives.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

Bear Presence and Concerns about Human–Bear Conflicts

The Delta area office received calls from the public about bear presence and human–bear concerns and responded to at least 3 calls per year. Most calls were addressed through telephone communication. However, we tend to respond in person to about 1 call a year dealing specifically with black bears. During the telephone and site visit responses, we assisted with identifying attractants, suggested bear deterrent techniques, interpreted bear behavior, and managed the presence of people to provide black bears the opportunity to leave an area.

A human fatality that occurred as a result of a black bear mauling in June 2017 near Pogo Mine in northern Unit 20D was the second human fatality caused by a black bear in Unit 20D in 4 years; the previous was in June 2013. As a result of this mauling, Alaska State Troopers, ADF&G staff, and Pogo staff investigated the site. Since the mauling, ADF&G staff has made several trips to the mine to make recommendations on how to better bear-proof the mine and improve bear safety and awareness training. Pogo followed these recommendations and even went above and beyond department recommendations. Pogo made following the newly adapted safety protocols mandatory for all workers on-site and workers caught not following these rules subject to termination. ADF&G staff agreed to stay in close communication with Pogo staff regarding ongoing bear activity in the area. The department also agreed to help the mine identify the volume of bear activity through summers 2018 and 2019 by deploying camera traps around the mine. ADF&G also planned to try and opportunistically capture black bears while on-site to mark them and therefore positively be able to identify them later. Part of the new mine policy was a 3-strike plan for bears at the mine (personal communication with Pogo mine officials), which was sent to ADF&G and Alaska Wildlife Troopers to review and determine its legality. The new Pogo safety plan states that bears that could be positively identified on the mine

grounds immediately threatening life or property 3 times would be euthanized. This differs from the current DLP regulations as the current DLP regulation reads a bear may be euthanized if life or property is in immediate danger from wildlife. If safe to do so Pogo staff will attempt to haze the bear away during the first 2 encounters. Findings on the departments' efforts on this project will be reported on in the next Unit 20D black bear species management report and plan.

Data Recording and Archiving

- Harvest data are stored on an internal database housed on a server (http://winfonet.alaska.gov/index.cfm).

- All other electronic data and files such as survey memos and reports are located on the Delta Area Biologists computer; bwschmidt Home Drive (H:) Black Bear and archived in WinfoNet Data Archive (project title: Delta area survey and inventory: Black Bear).

- Field data sheets, paper files, hard copies, etc. are located in the file cabinet located in Delta Junction Area Biologist office (MP 266.8, Richardson Highway, Delta Junction, Alaska).

Agreements

None.

Permitting

None.

Conclusions and Management Recommendations

Harvest levels during RY13–RY17 met management objectives and are sustainable. This is supported by data indicating static harvest since 1994 (DuBois 2011). In addition, anecdotal information from local residents and hunters in Unit 20D during RY13–RY17 indicated that black bears were numerous throughout the area. Based on this collective information, no changes in harvest regulations or management are recommended at this time.

During RY13–RY17, 4 black bears were killed in DLP. This is the most DLP black bear kills reported in Unit 20D since RY04–RY05. The DLP incidents are of interest, but we have no analysis of the increase in reports at this time. As stated above, one of the incidents resulted in a human fatality. This incident was investigated by ADF&G biologists and recommendations were made to Pogo Mine officials regarding bear safety. Pogo has gone above and beyond to ensure the work environment there is the safest it can be and have taken all possible steps to haze bears away rather than killing them. The bear responsible for the human fatality in 2017 was euthanized to confirm it was the individual responsible for the mauling. This individual is the only bear ever killed in relationship to mining activity with Pogo Mine in this area (personal communication with Pogo Mine), which shows Pogo has done great work to do what it can do to safely coexist with these animals.

We continued to provide the public with information on reducing bear–human conflicts. This was accomplished by direct communication with concerned or interested individuals and by distribution of agency educational materials. We suggest that prompt response to calls about concerns of bear presence and showing demonstrated interest when communicating with the public about nuisance bear issues are successful methods in reducing conflicts between black bears and people. Some members of the local community have responded positively to public education and outreach and have taken action to reduce black bear attractants and to increase their understanding of bear behavior.

DNA can be used to estimate bear populations and densities. Consideration should be given to developing a coordinated effort by Region III Division of Wildlife Conservation Research and Management staff in using DNA techniques to estimate black bear populations and densities in Unit 20D.

II. Project Review and RY18–RY22 Plan

Review of Management Direction

There are no changes in the management direction for black bears in Unit 20D. ADF&G will continue to manage black bears in Unit 20D at levels sufficient to provide for consumptive and nonconsumptive uses. Management will include tracking harvest levels through harvest ticket reports and anecdotal information gathered through hunters and information collected by ADF&G staff while conducting other field work. ADF&G staff will also continue registering bear baits and responding to complaints about human–black bear conflicts. Although sealing is not required for 20D black bears we will consider sealing data when making management decisions.

GOALS

G1. Protect, maintain, and enhance the black bear population and its habitat in concert with other components of the ecosystem.

G2. Provide the greatest sustained opportunity to participate in hunting black bears.

CODIFIED OBJECTIVES

Amounts Reasonably Necessary for Subsistence Uses

C1. Unit 20D has a positive finding for customary and traditional use of black bears. The ANS for Unit 20 outside the Fairbanks Nonsubsistence area is 20–30. The ANS for black bears is not specified for the individual subunits of Unit 20.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

This a slight change from the management objectives in the reporting section to reflect what we can realistically measure with confidence. Since our population estimate data is outdated and perhaps inaccurate, we are not comfortable with managing for a set number of bears to be harvested by hunters. It is more appropriate to manage based on a known measurement such as the percent males compared to females in the harvest.

M1. Manage for a sustained yield of black bears with a 3-year mean, annual, human-caused mortality composed of at least 55% males. Management actions will address black bear populations north and south of the Tanana River separately.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Status and Trend

ACTIVITY 1.1. Track black bear trends and abundance through harvest ticket reports, sealing, and anecdotal black bear observations by the public and ADF&G staff (Objective M1).

Data Needs

Anecdotal black bear observations are an important basis for determining the status of the black bear population in Unit 20D. Harvest data are collected through activity 2.1.

Techniques currently do not exist to generate a more accurate population estimate than the Dubois 1993 extrapolated estimate. However, ADF&G will work towards a more accurate up-to-date estimate if any biological concerns arise such as harvest data suggesting a steady decline in the population, provided the technology and funding are available then.

Methods

Same as during RY13–RY17.

2. Mortality, Harvest Monitoring, and Regulations

ACTIVITY 2.1. Monitor harvest through harvest ticket report data and sealing records (Objective M1).

Data Needs

Annual harvest ticket report data are needed to track the number of harvested black bears and thereby help evaluate population size and whether harvest rates are sustainable. If harvest rates begin to decline this could signal that the population is in decline and new regulations may be needed to slow the rate of harvest. Sealing data can also be useful in tracking harvest rates. However, sealing is not required for Unit 20D black bears, so only the bears that hunters wish to sell, send out of Alaska for tanning, or remove permanently from the state (for example, by nonresident hunters) are sealed. Therefore, this information can only be used as anecdotal information or supplementary to the harvest ticket data.

This black bear population has never had an accurate population estimate generated; the best estimate made was by Dubois (1993) which was an extrapolated estimate based on Hechtel's 1991 estimate in neighboring Unit 20A. Therefore, harvest data are the main information used in managing Unit 20D black bears.

Methods

Same as previously reported.

3. Habitat Assessment and Enhancement

ACTIVITY 3.1. No activity.

Data Needs

Data are not needed at this time. Black bear habitat appears sufficient to support viable black bear populations.

Methods

Not applicable.

4. Management with Public Participation and Outreach

ACTIVITY 4.1. Prepare information and data for and write a 5-year Black Bear management report and plan.

Data Needs

It is important to collect, compile, and store data needed to manage black bears in Unit 20D. Data and information on the status and trend of black bear populations and habitats is used to maintain and enhance this population and provide public use benefits on a sustained yield basis.

Methods

We will collect, compile, and store data needed to manage Unit 20D black bears and record this information in a written 5-year management report and plan.

ACTIVITY 4.2. Provide information to state and federal regulatory processes and the public on management of black bears in Unit 20D.

Data Needs

In order for regulatory bodies and the public who engage in regulatory processes to understand management and biology of Unit 20D black bears, it is important for staff to communicate and coordinate with Fish and Game Advisory Committees, and the Alaska Board of Game about Unit 20D black bear management and biology and review and analyze regulation proposals for the Alaska Board of Game.

Increasing public awareness of Unit 20D black bear population trends, disease, and management directions through newsletters, brochures, news releases, and other documents will provide the public with valuable information to make informed decisions when participating in these regulatory processes.

Methods

We will attend meetings of Fish and Game Advisory Committees and the Alaska Board of Game to provide information about Unit 20D black bear biology and management and review and analyze regulation proposals for the Alaska Board of Game.

ACTIVITY 4.3. Respond to issues and public reports involving black bears associated with bear–human conflict behavior including proper garbage and attractant management, human injuries resulting from bears, habituation, and bear–vehicle collisions.

Data Needs

It is important to educate the public and remote workers on black bear awareness and safety and provide education and training on methods to reduce bear–human problems to help reduce black bear encounters.

Methods

A prompt response to calls about concerns of bear presence and showing a demonstrated interest when communicating with the public about nuisance bear issues will be the standard approach when dealing with human–black bear interaction in Unit 20D.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

ADF&G staff will continue to respond as soon as possible to all black bear related inquires in Unit 20D. We will also stay in close communication with Pogo Mine staff regarding ongoing bear activity in the Pogo Mine area. The department has also agreed to help the mine identify the volume of bear activity through the summers of 2018 and 2019 by deploying camera traps around the mine. The department plans to try and opportunistically capture black bears while on-site to mark them and therefore positively be able to identify these animals later to determine if they are repeat offenders or not. The department hopes that the mine workers will find the results of this effort useful in helping it them complete their work in the safest manner possible, while making sure bears are not drawn into the area through human-caused food sources. This will give the bears of the area a chance to move through and out of the area without being attracted to human activity, so staff is not forced to kill bears under DLP regulations. Findings on the department's efforts on this project will be reported in this report during the next reporting period.

Data Recording and Archiving

- Harvest data are stored on an internal database housed on a server (http://winfonet.alaska.gov/index.cfm).

- All other electronic data and files such as survey memos and reports are located on the Delta Area Biologists computer; bwschmidt Home Drive (H:) Black Bear and archived in Winfonet Data Archive (project title: Delta area survey and inventory: Black Bear).

- Field data sheets, paper files, hard copies, etc. are located in the file cabinet located in Delta Junction Area Biologist office (MP 266.8, Richardson Highway, Delta Junction, Alaska).

Agreements

None.

Permitting

None.

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We would like to thank pogo mine for working closely with ADF&G staff by listening and acting on all recommendations made by department staff and for always keeping ADF&G in the loop regarding black bear activity in the vicinity of the mine. We would also like to thank them for their generosity to department staff while on-site by providing housing and meals.

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