Black Bear Management Report and Plan, Game Management Units 12 and 20E:

Report Period 1 July 2013–30 June 2018, and

Plan Period 1 July 2018–30 June 2023

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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 I. Parker McNeill, Management Coordinator for Region III for the Division of Wildlife Conservation, Fairbanks.

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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 Units 12 and 20E for the previous 5 regulatory years and plans for survey and inventory management activities in the 5 years following the end of that period. 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 more efficiently report on trends and to describe potential changes in data collection activities over the next 5 years. It replaces the black bear management reports of survey and inventory activities that were previously produced every 3 years.

I. RY13–RY17 Management Report

Management Area

Unit 12 is in east-central Alaska bounded by the Canada border on the east and is centered on 62°34′N latitude and 142°7′W longitude. Major drainages within the unit include the Nabesna and Chisana, which combine to form the Tanana River, and the White River drainage. Unit 12 encompasses 9,975 mi^2; approximately 4,900 mi^2, or that portion at or below 3,500 feet in elevation is likely generally suitable black bear habitat. Elevations within the unit range from 1,500 feet along the Tanana River to >12,000 feet in the Wrangell, Nutzotin, and Mentasta mountains.

Unit 20E is in east-central Alaska directly north of Unit 12, is bounded by the Canada border on the east, and is centered on 64°16′N latitude, 142°20′W longitude. Major drainages within the unit include the Fortymile, Charley, Ladue, and Seventymile river drainages. Unit 20E encompasses 10,680 mi^2, of which approximately 8,000 mi^2, or that portion at or below 3,500 feet in elevation, is likely generally suitable black bear habitat. The unit was described in detail by Gasaway et al. (1992) and generally consists of hills with elevations ranging from 1,000 to 5,000 feet. However, more mountainous areas, with elevations exceeding 6,000 feet, are found in the northwestern portion of the unit, and lowland areas (2,000–2,500 feet; Mosquito Flats) are found in the southwestern portion of the unit.

Vegetation types within both units vary and include lowland shrub and sedge meadows, mature black spruce (*Picea mariana*) and white spruce (*Picea glauca*) forest, recently burned areas dominated by shrubs and early successional forest species, deciduous forest, subalpine shrub, and alpine tundra. The climate is typical of Interior Alaska, where temperatures frequently reach 80°F in summer and -40°F in winter.

Summary of Status, Trend, Management Activities, and History of Black Bears in Units 12 and 20E

Black bears occur at moderate levels throughout much of Units 12 and 20E, and human harvest has historically been low relative to unit wide population levels. Black bears occur throughout forested habitats in both Units 12 and 20E, although specific densities or trends in population or composition are unknown because no black bear population or composition surveys have been conducted in either unit. Black bear harvest has historically been higher in Unit 12 compared to Unit 20E. In both units, harvest has been concentrated in areas accessible from the highway and trail systems. Furthermore, harvest in Unit 12 has been higher in the spring compared to the fall while in Unit 20E has been split evenly (approximately) between the 2 seasons. The black bear hunting season and bag limit for both units have been set at 3 bears (excluding cubs within 1 year of life and sows with cubs within 1 year of life) with no closed season with a spring baiting season of April 15–June 30 since RY89. Prior to RY89 the bag limit was the same, but the baiting season was unrestricted. However, even with the liberal season and bag limit that has been in place for >30 years, harvest has remained relatively low and has likely not had an impact on unitwide population dynamics.

Management Direction

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. The plan portion of this report contains the current management plan for black bear in Units 12 and 20E.

GOALS

During RY13–RY17 (and since RY90), the Units 12 and 20E black bear management goals were as follows:

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. The Units 12 and 20 (outside the Fairbanks Nonsubsistence Area 5 AAC 99.015(4)) black bear populations have a positive customary and traditional use finding, as determined by the Board of Game, with an amount necessary for subsistence uses of 40–60 black bears in Unit 12 and 20–30 black bears in Unit 20 outside of the Fairbanks Nonsubsistence Area.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

UNIT 12

M1. Manage for a harvest of black bears that maintains 55% or more males in the combined harvest during the most recent 3 years.

UNIT 20E

M2. Maintain at least 55% males in the harvest during the report period.

MANAGEMENT ACTIVITIES

1. Population Size, Status and Trend

Activities to assess the Unit 12 and 20E black bear population status and trend have not been needed to achieve or evaluate the management goals and objectives nor to evaluate the codified objective.

2. Mortality, Harvest Monitoring and Regulations

ACTIVITY 2.1. Monitor and analyze harvest data.

Data Needs

Harvest data are necessary to determine whether the codified and management objectives are achieved. In addition, bear bait station registration is necessary to monitor bait station distribution and to disseminate bear baiting information to the public and the Board of Game.

Methods

Harvest was estimated from mandatory harvest report cards and from sealing records. If timely harvest reports were not received, hunters who provided contact information received 1 reminder email and/or letter. Additional harvest-related information (e.g., skull size, whether the bear was taken over bait, incidental take, and meat/hide salvage) was collected during the optional sealing process, which for black bears harvested in Units 12 or 20E, is only required if they are to be removed from Alaska or sold.

Season and Bag Limit

During RY13–RY17, there was no closed season for black bears in Units 12 and 20E, and the bag limit was 3 bears. Harvest of cubs (in the first year of life) or females accompanied by cubs was prohibited. Bears could be taken over bait during April 15–June 30, and hunters were required to register all black bear bait stations with ADF&G. The minimum salvage requirements

included the meat during January 1–May 31, and either the meat or hide during June 1–December 31.

Results and Discussion

Harvest by Hunters

Total reported annual black bear harvest by hunters during RY13–RY17 averaged 48 and 20 bears per year in Units 12 and 20E, respectively (Tables 1 and 2). This is above the RY08–RY12 reported annual average harvest of 40 bears per year in Unit 12, while the Unit 20E annual average harvest remained unchanged. The management objective was met in both units, males composed 79% of the harvest during the 3 most recent years in Unit 12 (RY15–RY17), and 85% of the harvest during all 5 years in Unit 20E.

Beginning in RY10, information on black bear skull size and harvest over bait is only available from the optional process of sealing harvested bears. During RY13–RY17, 60% and 45% of reported harvested black bears were sealed in Units 12 and 20E, respectively. Average skull size of sealed male black bears averaged 16.9 inches ($n = 95$) and 17.2 inches ($n = 27$) in Units 12 and 20E, respectively, both of which are similar to the previous 5-year averages of 16.9 inches ($n = 100$) in Unit 12 and 17.0 inches ($n = 50$) in Unit 20E. Similar to prior reporting periods, the majority (89%) of black bears harvested during the spring in Unit 12 were taken over bait while a smaller proportion (42%) were taken over bait in Unit 20E. The annual average number of bear-bait stations registered in Unit 12 increased from 58 during RY08–RY12 to 80 during RY13–RY17; in Unit 20E there was a decrease from 17 during RY08–RY12 to 11 during RY13–RY17.

Hunter Residency

The proportion of harvest taken by nonresidents increased during this reporting period in Unit 12 while it remained similar in Unit 20E. Nonresidents harvested 29% of black bears taken during RY13–RY17 in Unit 12 compared to 16% during RY08–RY12 and 12% during RY03–RY07, while in Unit 20E nonresidents harvested 8% of the black bears taken during RY13–RY17 compared to 11% during RY08–RY12 (Tables 1 and 2). The increased nonresident harvest in Unit 12 was likely a byproduct of the allowance to take grizzly bears over bait beginning in RY12, which resulted in an increased interest in guided nonresident spring bear hunts over bait. Although many of these nonresident guided bear hunters are targeting grizzly bears, they sometimes will take a black bear either in addition to or in place of a grizzly bear. Of the nonresident hunters that harvested a black bear in Unit 12, 70% were guided during RY13–RY17 compared to 61% during RY08–RY12. However, 70% of the successful guided nonresident hunters harvested their bear(s) over bait during RY13–RY17 compared to only 21% during RY08–RY12.

Harvest Chronology

Like prior reporting periods, black bear harvest during RY13–RY17 occurred mainly during the spring (mostly May–June) in Unit 12 and was split relatively evenly between the spring and fall (mostly August–September) in Unit 20E (Tables 1 and 2).

Table 1. Unit 12 reported black bear harvest, Interior Alaska, regulatory years 2013–2017.

Regulatory year	Hunter kill				Hunter residency				Nonhunting kill[a]		
	M (%)		F	Unk	Total	Resident (%)		Nonresident (%)		M	F	Unk
2013												
Fall 2013	6	(55)	5	0	11	8	(73)	3	(27)	0	0	1
Spring 2014	27	(68)	13	0	40	31	(78)	9	(22)	0	0	0
Total	33	(65)	18	0	51	39	(77)	12	(23)	0	0	1
2014												
Fall 2014	7	(88)	1	0	8	7	(88)	1	(12)	0	0	0
Spring 2015	20	(65)	11	0	31	18	(58)	13	(42)	0	0	0
Total	27	(69)	12	0	39	25	(64)	14	(36)	0	0	0
2015												
Fall 2015	7	(100)	0	0	7	6	(86)	1	(14)	0	0	0
Spring 2016	32	(76)	10	0	42	27	(64)	15	(36)	0	0	0
Total	39	(80)	10	0	49	33	(67)	16	(33)	0	0	0
2016												
Fall 2016	2	(50)	2	0	4	3	(75)	1	(25)	0	0	0
Spring 2017	37	(80)	9	0	46	29	(63)	17	(37)	0	0	1
Total	39	(78)	11	0	50	32	(64)	18	(36)	0	0	1
2017												
Fall 2017	10	(77)	3	0	13	10	(77)	3	(23)	1	0	0
Spring 2018	31	(79)	8	0	39	33	(85)	6	(15)	0	0	0
Total	41	(79)	11	0	52	43	(83)	9	(17)	1	0	0
2013–2017 combined												
Fall	32	(74)	11	0	43	34	(79)	9	(21)	1	0	1
Spring	147	(74)	51	0	198	138	(70)	60	(30)	0	0	1
Total	179	(74)	62	0	241	172	(71)	69	(29)	1	0	2

Note: Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2013 = 1 July 2013–30 June 2014).

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

Table 2. Unit 20E reported black bear harvest, Interior Alaska, regulatory years 2013–2017.

Regulatory year	Hunter kill M (%)	F	Unk	Total	Hunter residency Resident (%)	Nonresident (%)	Nonhunting kill[a] M	F	Unk
2013									
Fall 2013	16 (100)	0	0	16	16 (100)	0 (0)	0	0	0
Spring 2014	9 (90)	1	0	10	10 (100)	0 (0)	0	0	0
Total	25 (96)	1	0	26	26 (100)	0 (0)	0	0	0
2014									
Fall 2014	7 (78)	2	0	9	9 (100)	0 (0)	1	0	0
Spring 2015	6 (86)	1	0	7	5 (71)	2 (29)	0	0	0
Total	13 (81)	3	0	16	14 (88)	2 (12)	1	0	0
2015									
Fall 2015	8 (73)	2	1	11	10 (91)	1 (9)	0	0	0
Spring 2016	7 (78)	2	0	9	7 (78)	2 (22)	0	0	0
Total	15 (75)	4	1	20	17 (85)	3 (15)	0	0	0
2016									
Fall 2016	4 (57)	3	0	7	6 (86)	1 (14)	0	0	0
Spring 2017	9 (90)	1	0	10	8 (80)	2 (20)	0	0	0
Total	13 (76)	4	0	17	14 (82)	3 (18)	0	0	0
2017									
Fall 2017	9 (90)	1	0	10	10 (100)	0 (0)	0	0	0
Spring 2018	11 (92)	1	0	12	12 (100)	0 (0)	0	0	0
Total	20 (91)	2	0	22	22 (100)	0 (0)	0	0	0
2013–2017 combined									
Fall	44 (83)	8	1	53	51 (96)	2 (4)	1	0	0
Spring	42 (88)	6	0	48	42 (88)	6 (12)	0	0	0
Total	86 (85)	14	1	101	93 (92)	8 (8)	1	0	0

Note: Regulatory year begins 1 July and ends 30 June (e.g., regulatory year 2013 = 1 July 2013–30 June 2014).

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

<u>Transport Methods</u>

Like prior reporting periods, 4-wheelers (48%) and highway vehicles (25%) continued to be the most common modes of transportation used by successful black bear hunters in Units 12 and 20E during RY13–RY17.

Other Mortality

Defense of life and property (DLP) black bear kills continue to occur at low levels in Units 12 and 20E. This is likely in part due to the liberal hunting season and bag limit, which often allows people the opportunity to harvest problem bears (except for cubs or sows with cubs) without the necessity to go through the DLP process. A total of 3 black bears were killed for DLP purposes during RY13–RY17, while 1 additional bear was killed in a snare that was left out illegally past the end of trapping season (Tables 1 and 2).

Alaska Board of Game Actions and Emergency Orders

No Board of Game actions or emergency orders were issued that directly related to Units 12 or 20E black bears during RY13–RY17. However, in spring 2012 the Board of Game approved the harvest of grizzly bears at permitted black bear bait stations during open bear baiting seasons in several units, including Units 12 and 20E. This was likely 1 reason why interest in bear baiting increased during RY13–RY17 in Unit 12, and this increase in bear baiting activity likely contributed to the slightly higher black bear harvest in Unit 12 during RY13–RY17 compared to previous reporting periods.

Recommendations for Activity 2.1

Continue.

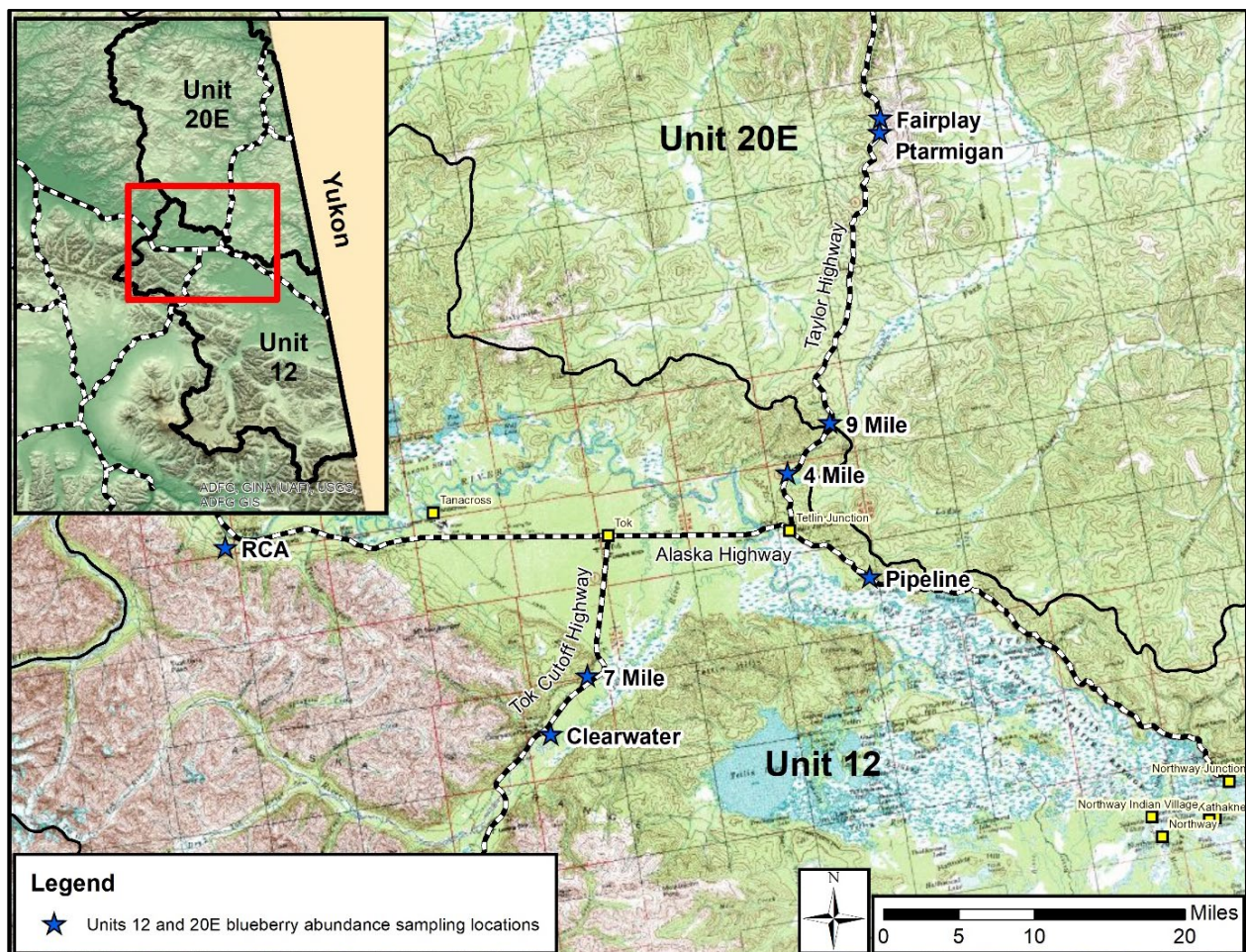## 3. Habitat Assessment-Enhancement

ACTIVITY 3.1. Habitat assessment.

Data Needs

Units 12 and 20E black bear harvest, including composition, varies annually, and food abundance may influence harvest. Black bear harvest success rates, overall harvest, and/or composition has been found to vary with natural food abundance in areas outside of Alaska including Ontario (Obbard et al. 2014), Minnesota (Noyce and Garshelis 1997), and West Virginia (Ryan et al. 2004). Hatler (1972) studied the food habits of black bears in Interior Alaska during 1964–1965 and concluded that although other fruits such as rose hips, highbush cranberries, and crowberries are occasionally important, blueberries are the most important fall food source to black bears in Interior Alaska. During the fall seasons with poor berry production, bears may travel more in search of berries and/or may be more attracted to other food sources such as hunter-killed moose, caribou, or other human foods; this increased travel could result in more vulnerability of bears to hunters. Additionally, it's plausible that fall berry production could influence spring harvest; if bears were to enter the den in fall with a lower body condition during years of poor berry production (compared to years of good berry production), these bears could then emerge from the den in even lower body condition and therefore might be more

vulnerable to human harvest for the same reasons as in the fall (e.g., increased travel to search for natural foods or a higher affinity to other food sources such as bait stations). Furthermore, past studies have shown that the female black bear proportion of the harvest was inversely related to food abundance, likely because females have smaller home ranges than males, and must therefore proportionally increase their home range to a larger degree than males to search for food during years of poor abundance, and this increase in their home range size increased their vulnerability to harvest (Noyce and Garshelis 1997, Ryan et al. 2004, Obbard et al. 2014). Therefore, blueberry abundance in Units 12 and 20E could influence both total harvest (fall and spring) and harvest composition, which relates to the management objective to maintain a minimum proportion of males in the harvest. The specific hypotheses were that fall, spring, and total black bear harvest, the proportion of females in the fall harvest, and the proportion of harvest that was reported as incidental would all be negatively correlated with blueberry abundance.

Methods

Eight permanent blueberry sampling areas were established in summer 2000 which included 5 in Unit 12, and 3 in Unit 20E (Fig. 1). Each sampling area included 5, 1-meter^2 plots distributed

Produced by ADF&G, 2021 using ArcGIS™ software (Esri, Redlands, California); base map source: ADFG, GINA (UAF), USGS, ADFG GIS.

Figure 1. Blueberry abundance sampling areas in Units 12 and 20E, Interior Alaska.

throughout the sampling area (Fig. 2). The sampling areas and individual plots were not selected randomly but were instead selected by both the presence of blueberry plants and to represent a variety of habitat types, aspects, elevations, and slopes. Each plot was marked with permanent wooden stakes and the total number of blueberries were counted in each plot during the end of July or early August. Blueberry abundance was assessed as the average number of blueberries counted per plot (or average number of blueberries/m^2) and was meant to be an index of blueberry abundance as opposed to an estimate of the number of blueberries/m^2 within Units 12 and 20E. The preliminary linear regression analysis was conducted using Microsoft Excel$^®$ software (Microsoft, Redmond, Washington). The analysis of the proportion of harvest that was reported as incidental was limited to RY00–RY08 because this information is only available for those animals that were sealed, and the sealing process became optional in RY09.
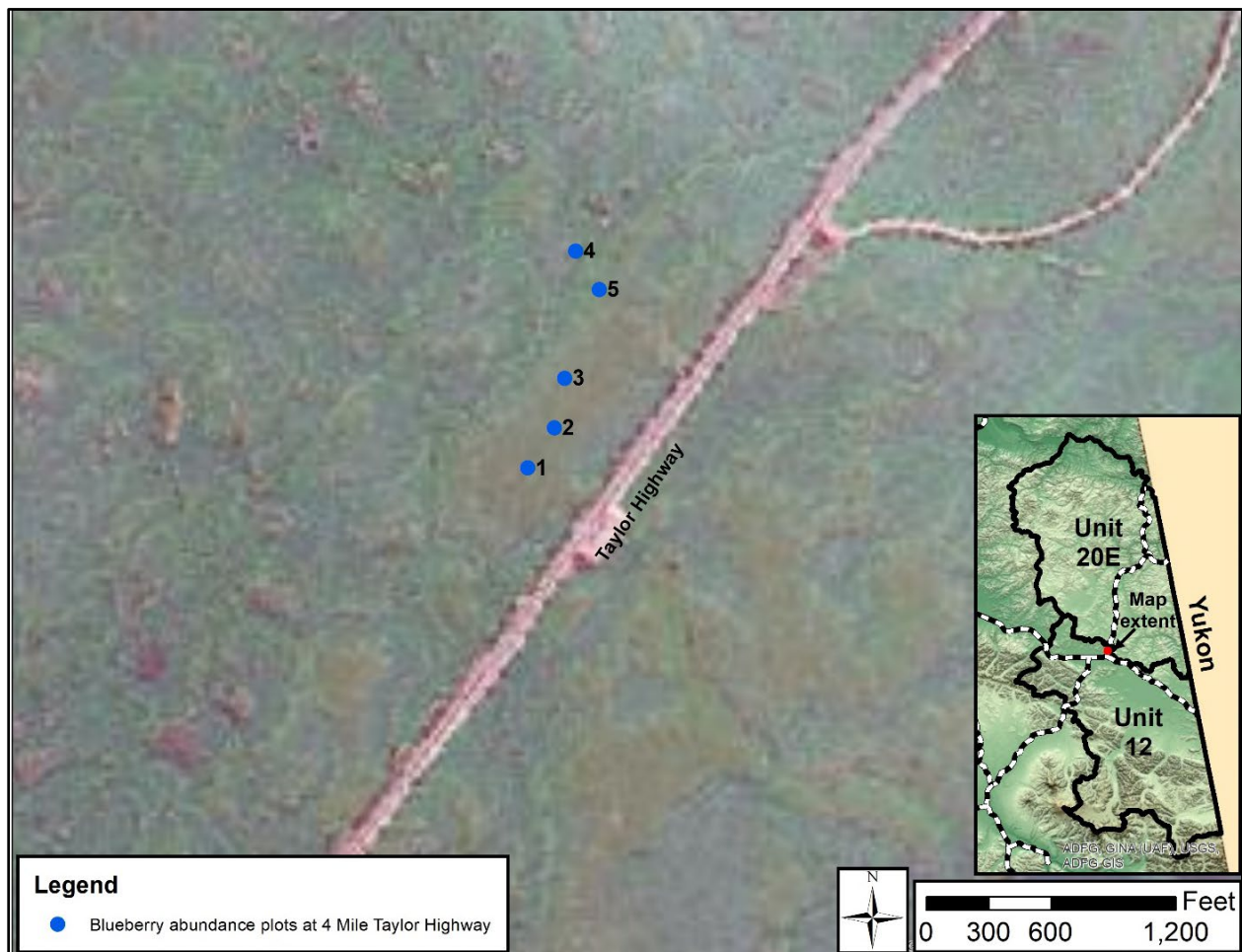

Produced by ADF&G, 2021 using ArcGIS™ software (Esri, Redlands, California); base map source: ADFG, GINA (UAF), USGS, ADFG GIS.

Figure 2. Blueberry plot layout at the 4 Mile Taylor Highway blueberry abundance sampling area in Unit 12, Interior Alaska.

Results and Discussion

Blueberry abundance was assessed at each of the 4 plots during RY00–RY17 except for RY02, RY09, and RY13. The average number of blueberries per plot (1 m^2) ranged from 5.5–93.8 ($\bar{x}$ =
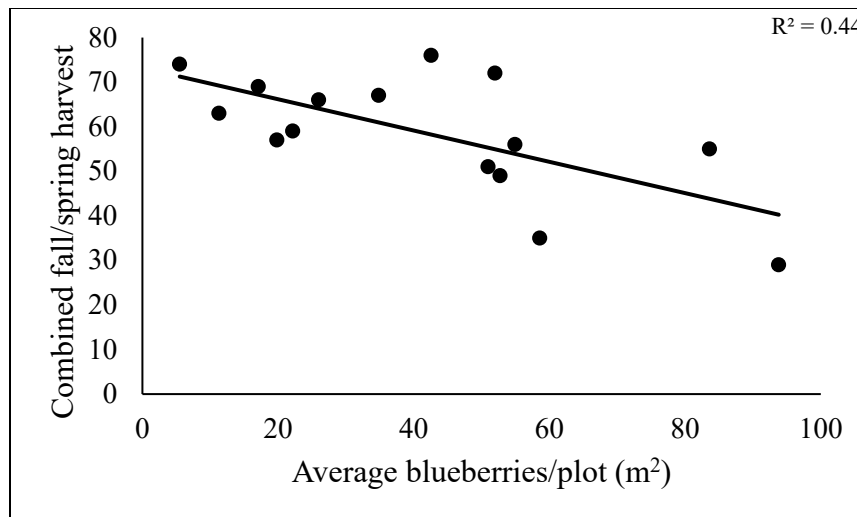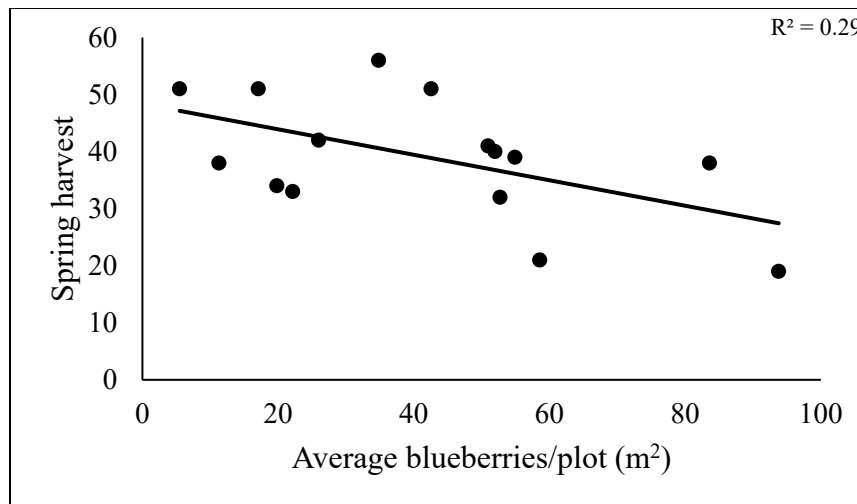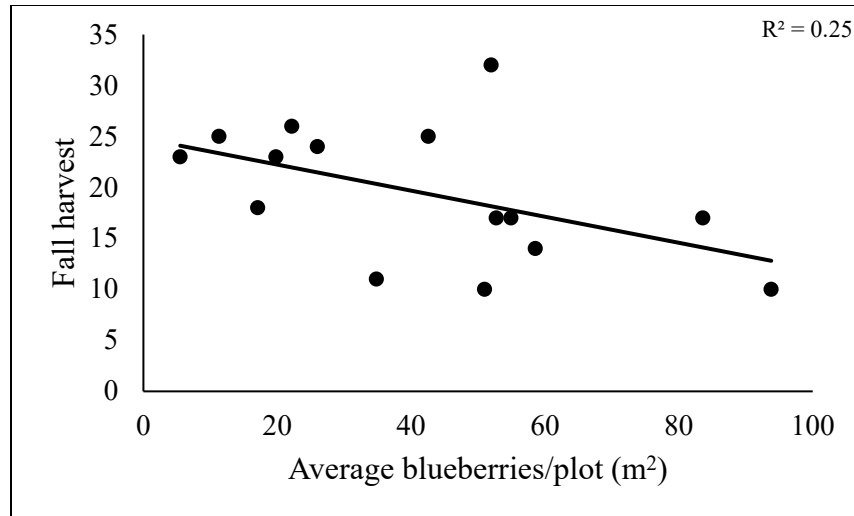
41.7; Fig. 3). Unit 12 and 20E fall, spring, and combined (fall and the following spring) black bear harvest ranged from 10–32 ($\bar{x} = 20$), 19–56 ($\bar{x} = 39$), and 29–76 ($\bar{x} = 59$), respectively. The preliminary analysis suggested a weak but significant negative correlation between fall harvest and blueberry plot abundance (F-statistic (F) = 4.29, beta (β) = -0.128, standard error (SE) = 0.062, R^2 = 0.25, p-value (p) = 0.0587; Fig. 4) and a significant negative correlation between blueberry plot abundance and both spring (F = 5.39, β = -0.223, SE = 0.096, R^2 = 0.29, p = 0.0371) and total combined harvest (F = 10.28, β = -0.351, SE = 0.109, R^2 = 0.44, p = 0.0068). Conversely, neither the percent female harvest nor percent incidental take was statistically correlated with blueberry plot abundance.
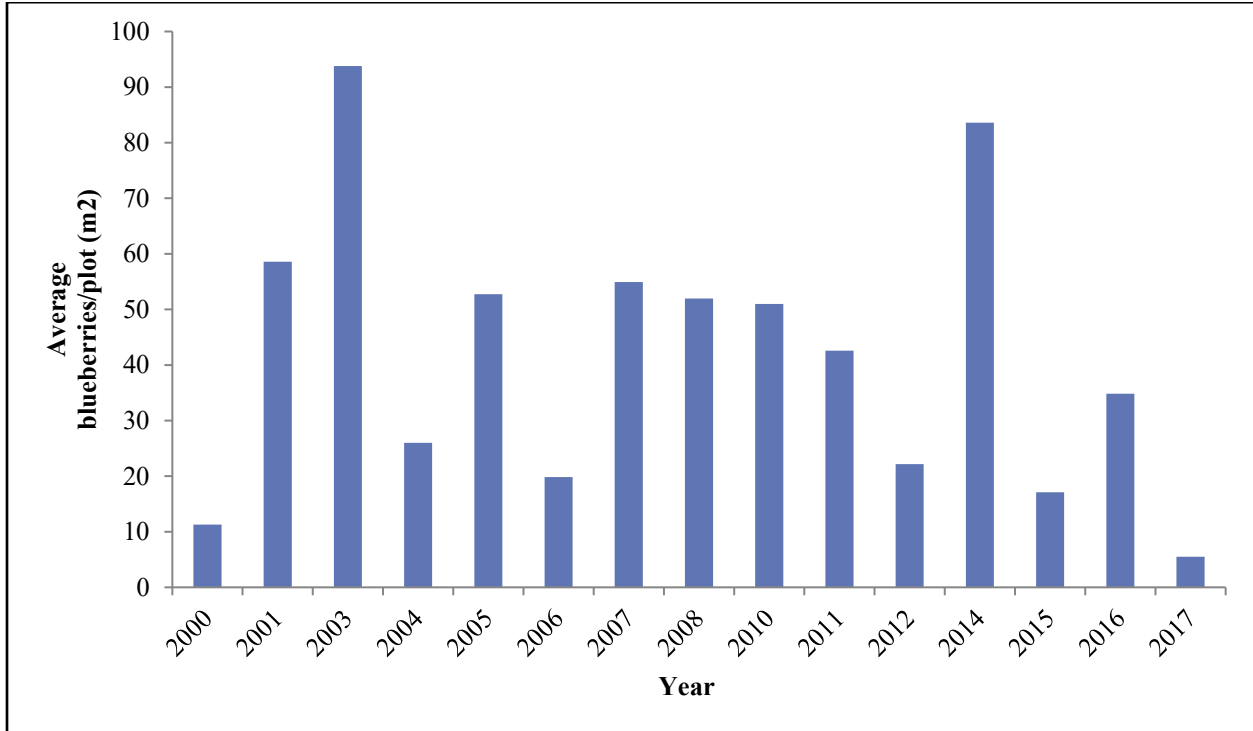
Figure 3. Average blueberry plot abundance (blueberries/meter^2) from blueberry sampling areas in Units 12 and 20E, Interior Alaska, 2000–2017 (no sampling occurred during 2002, 2009, or 2013).

Preliminary results suggest that black bear harvest in Units 12 and 20E is correlated with blueberry abundance. Harvest is higher both during fall seasons with poor berry production, and in spring seasons following falls that experienced poor berry production. The linear regression model predicts that for every 10-blueberry decrease in the average number of blueberries per 1 m^2 plot, the total Units 12 and 20E fall, spring, and combined fall/spring black bear harvest increases by 1.3 (90% confidence interval (CI) = 0.2–2.4), 2.2 (90% CI = 0.5–3.9), and 3.5 bears (90% CI = 1.6–5.4), respectively. Within the range of blueberry abundance observed on the blueberry plots during 2000–2017, the linear regression model predicts a total combined fall/spring harvest ranging from 40–71 black bears. Conversely, there was no correlation between blueberry abundance and percent females in the harvest. One possible reason

Figure 4. Fall, spring, and combined fall/spring black bear harvest in Units 12 and 20E versus average blueberry plot abundance (blueberries/meter^2) from blueberry sampling areas in Units 12 and 20E, Interior Alaska, regulatory years 2000–2017.

why harvest composition was not found to be correlated with berry abundance could be that there is a restriction prohibiting the taking of sows accompanied by cubs within 1 year of life and likely hunters are selecting against harvesting sows with yearlings in the fall, even though these sows are legal to harvest. Therefore, even if these sows with cubs/yearlings potentially became more vulnerable to hunters during years of poor berry production, they were either not legal to be harvested (with cubs within 1 year of life) or were potentially not selected by hunters to be harvested (with yearlings). Furthermore, the percent incidental take was not correlated with berry abundance, although only 8 years of data could be used in the analysis (RY00, RY01, and RY03–RY08). Reported incidental take is higher during the fall ($\bar{x} = 51\%$) than during the spring ($\bar{x} = 10\%$) and in both instances the variation in the proportion of incidental take appears unrelated to berry production. In summary, based upon the preliminary analysis, it appears that berry abundance does not correlate with black bear harvest composition or the proportion of incidental take in Units 12 and 20E, although it does appear to be negatively correlated with overall harvest and is therefore useful for black bear management in these units.

Recommendations for Activity 3.1

- Continue to monitor blueberry abundance and how it relates to black bear harvest composition, total harvest, and incidental take (when the information is available).

- Work with biometric staff to further analyze the data.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

None.

Data Recording and Archiving

- All harvest and sealing data are stored on an internal database housed on ADF&G's Wildlife Information Network (WinfoNet) server (http://winfonet.alaska.gov/index.cfm).
- All other electronic files are located on the Tok server (S:\Wells\Black bear and S:\Wells\Blueberries) with hard copy files stored in the filing cabinet in the Tok office conference room.

Agreements

None.

Permitting

None.

Conclusions and Management Recommendations

The management objective to maintain at least 55% males in the harvest was met in both Units 12 and 20E during RY13–RY17. Like prior reporting periods, the majority of the harvest in both units was composed of males and was taken by hunters using 4-wheelers or highway vehicles. Most of the harvest in Unit 12 was taken in the spring, while in Unit 20E it was split relatively

evenly between spring and fall. Total fall, spring, and combined fall/spring harvest has a negative correlation with blueberry abundance, while harvest composition and percent incidental take was not correlated with blueberry abundance. Overall, harvest in both units during RY13–RY17 likely had little impact on unitwide population dynamics, and no regulatory changes to the season or bag limits are recommended at this time. Furthermore, no changes are recommended to the management goals for either unit, although the management objectives for both units should be aligned to reflect an analysis of harvest composition based upon a 5-year running combined harvest.

II. Project Review and RY18–RY22 Plan

Review of Management Direction

MANAGEMENT DIRECTION

There are no changes to the management direction for black bears in Units 12 or 20E for RY18–RY22.

GOALS

The goals will remain as:

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. The Units 12 and 20 (outside the Fairbanks Nonsubsistence Area) black bear populations have a positive customary and traditional use finding, as determined by the Board of Game, with an amount necessary for subsistence uses of 40–60 black bears in Unit 12 and 20–30 black bears in Unit 20 outside of the Fairbanks Nonsubsistence Area.

Intensive Management

Not applicable.

MANAGEMENT OBJECTIVES

The management objective for both Units 12 and 20E will be modified slightly so that harvest composition will be analyzed based upon 5-year running combined totals. Specifically, the management objective will be:

M1. Maintain at least 55% males in the combined reported 5-year running total harvest. This
   objective will be considered separately for Units 12 and 20E.

REVIEW OF MANAGEMENT ACTIVITIES

1. Population Size, Status, and Trend

Activities to assess the Units 12 and 20E black bear population status and trend are not currently
necessary to achieve or evaluate the management goals and objectives or to evaluate the codified
objective.

2. Mortality, Harvest Monitoring, and Regulations

ACTIVITY 2.1. Monitor and analyze harvest data.

Data Needs

No change from prior reporting period. Harvest data are necessary to determine whether the
codified and management objectives are achieved. In addition, bear bait station registration is
necessary to monitor bait station distribution and to disseminate bear baiting information to the
public and the Board of Game.

Methods

No change from prior reporting period. Harvest will be estimated from mandatory harvest report
cards and from sealing records. Bear bait station distribution will be monitored via the
mandatory bear bait station registration process.

3. Habitat Assessment and Enhancement

ACTIVITY 3.1. Assess blueberry abundance at sampling plots in Units 12 and 20E.

Data Needs

No change from prior reporting period.

Methods

No change from prior reporting period other than biometric assistance should be used, if
available, to further analyze the data.

4. Management with Public Participation and Outreach.

ACTIVITY 4.1. Provide information to state and federal regulatory processes on
management of this species.

Data Needs

In order for those that engage in regulatory processes to understand the management and biology
of black bears in Units 12 and 20E, it is important for ADF&G staff to communicate and

coordinate with and attend meetings of Fish and Game Advisory Committees, the Alaska Board of Game, Federal Regional Advisory Councils, and local village councils. In addition, it is important for staff to review and analyze regulation proposals to the Alaska Board of Game and the Federal Subsistence Board.

Methods

Tok ADF&G staff will communicate and coordinate with and attend meetings of Fish and Game Advisory Committees, the Alaska Board of Game, Federal Regional Advisory Councils, and local village councils about Units 12 and 20E black bear biology and management, and review and analyze Units 12 and 20E regulation proposals to the Alaska Board of Game and the Federal Subsistence Board.

ACTIVITY 4.2. Work with local residents and businesses to reduce black bear/human problems and minimize attractants that may lead to DLPs. In addition, educate the public and remote workers on black bear awareness and safety and provide education and training on methods to reduce bear/human problems as requested.

Data Needs

Black bear/human conflict is inevitably negative to the public (e.g., safety concerns) and the local black bear population (e.g., DLP take); therefore, opportunistic outreach with local residents and businesses is needed to reduce black bear/human conflict.

Methods

Opportunistic outreach with local residents, businesses, and remote workers will occur as needed to reduce black bear/human conflict in Units 12 and 20E.

NONREGULATORY MANAGEMENT PROBLEMS OR NEEDS

None.

Data Recording and Archiving

- All harvest and sealing data are stored on an internal database housed on ADF&G's Wildlife Information Network (WinfoNet) server (http://winfonet.alaska.gov/index.cfm).

- Electronic copies of pertinent memoranda, data sheets, and data files are stored in the WinfoNet Data Archive.

- All other electronic files are located on the Tok server (S:\Wells\Black bear and S:\Wells\Blueberries) with hard copy files stored in the filing cabinet in the Tok office conference room.

Agreements

None.

Permitting

None.

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