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BLACK BEAR

Susan M. Abbott, Editor
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Project Title: **Southeast Black Bear Population Management**

Overview: Black bears are distributed throughout southeast Alaska (Units 1-5), except in Unit 4 (Admiralty, Baranof, Chichagof and associated islands). Harvests were low, compared with estimated populations; however, they were rapidly increasing in some areas.

Project Location: GMU 1A and 2 (8,911 miles^2).
Unit 1A - Ketchikan area including mainland areas draining into Behm and Portland Canals.

Unit 2 - Prince of Wales and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait.

Project Objectives and Activities: In Subunit 1A maintain an average skull size of at least 17.2 inches for males harvested in the spring. Monitor the hunt and seal all black bears harvested and presented for sealing.

In GMU 2 maintain an average spring skull size of 19.1 inches for males, or a regulatory year average of 18.8 inches for males harvested. Monitor the hunt and seal all black bears harvested and presented for sealing.

Work Accomplished During the Project Segment Period: Eighty-four and 213 black bears harvested from GMUs 1A and 2, respectively, were sealed during 1990-91. Skull measurements, identification of sex, and a tooth were obtained from most of the bears presented for sealing. Fall bear teeth were aged and hunters were sent letters informing them of their bears' ages. Spring bear teeth are currently being aged.

Progress Towards Meeting Project Objectives: The Subunit 1A objective of maintaining an average skull size of at least 17.2 inches for males taken during spring was again met. Skulls from 57 males averaged 18.0 inches.

The average skull size for 92 males taken in Unit 2 during spring was 18.9 inches; 0.2 inches below the stated objective of 19.1 inches. Similarly, the average skull size for the 128 males taken during the regulatory year from Unit 2 was 0.2 inches below the state objective (18.6 inches versus 18.8).

Although the objectives for Unit 2 were not met, the population is believed to be doing fine at this time. To ensure that a downward trend is not in the making, special attention will

be given to skull size measurements during the upcoming season. A continued decline in the average skull size may indicate future regulatory changes are needed.

Bear ages determined from teeth collected during fall 1990 indicated average ages of 4.0 and 8.0 years for males and females in GMU 1A, respectively. Ages of bears in GMU 2 averaged 3.9 and 4.8 years for males and females, respectively. Until additional age data become available in the future, it is impossible to detect or suggest any age trends. Teeth collected during future seasons will be aged so that comparisons can be made with existing data.

Project Location: Unit 1B and 3 (5,900 mi^2)
Southeast Mainland from Cape Fanshaw to Lemesurier Point and islands of the Petersburg, Kake and Wrangell area

Project Objectives: Maintain a mean skull size of at least 17.0 inches for males and a ratio of 3 males:1 female in the harvest.

Work Accomplished during the Project Segment Period: All bears killed in these areas must be sealed within 30 days of taking. A total of 152 bears were sealed from the 2 units. Of these, 2 were non-sport kills. Additional anecdotal information was collected from hunters, biologists, officers of Fish and Wildlife Protection, and other knowledgeable observers. When possible, skulls were measured and the sex of the harvested bear determined.

Progress Towards Meeting Project Objectives: Seven and 145 black bears were killed in Units 1B and 3, respectively. In Unit 1B the sex ratio was 7 males:0 female and the average male skull size was 18.1 inches. For Unit 3 the total harvest was 145; the sex ratio was 8 males:1 female. The average male skull size in Unit 3 was 18.5 inches. Project objectives were exceeded.

The kill by non-residents dropped to less than half of the total (73 bears out of a total of 152). Guided hunters killed fewer bears than last year when the bag limit for non-residents was 2. Most hunters continued to be selective, passing up several bears before taking one.

Black bear populations continued to be high throughout Units 1B and 3. Hunting pressure was very high on Mitkof Island and some of the bays on Kuiu Island. However, sex ratios and average skull sizes indicated no excessive harvest is occurring.

The reduction in kill of 35% from last year is difficult to explain. The reduction seemed evenly spread between fall and spring seasons. The fall kill was lower and this was before

the non-resident bag limit reduction. The non-resident kill was lower but does not account for the total difference.

Project Location: Unit 1C (7,600 mi^2)
The southeast Alaska mainland and the islands of Lynn Canal and Stephens Passage lying between Cape Fanshaw and the latitude of Eldred Rock, including Sullivan Island and the drainage of Berners Bay.

Project Objectives: Maintain a mean skull size of at least 17.3 inches for males and a male:female harvest ratio of 3:1.

Reduce by 50% the number of nuisance bear problems resulting from improper refuse handling and disposal.

Work Accomplished During the Project Segment Period: Harvest data were collected through the mandatory sealing process. All successful hunters were required to present hides and skulls for sealing within 30 days of take. Skulls were measured and sex of the harvested bear was determined at the time of sealing. Harvest-related data and anecdotal information were collected at that time. Additional information was solicited from hunters and other observers.

Problem black bears involved in garbage-related incidents were captured and radio-collared to monitor the effects of both chemical and physical deterrents. A cooperative research project between ADF&G and the University of Alaska-Fairbanks to determine the value of such deterrents in reducing bear-garbage incidents was completed in 1990. Educational and enforcement efforts aimed at reducing garbage availability and subsequent habituation of black bears to human foods were continued. This was a cooperative effort between the ADF&G and the City and Borough of Juneau.

Progress Towards Meeting Project Objectives: Management objectives for black bears in Unit 1C were met. Skull sizes for males averaged 17.6 inches, and males composed 88% of the harvest (>3:1 males:females). Nuisance bear problems increased this year, the first increase since 1987. Three bears were taken in garbage related DLP actions. The number of garbage-using sows accompanied by cubs suggests that problems may increase again next year. More effort needs to be put into making garbage unavailable to bears.

Project Location: Unit 1D (2,700 mi^2)
That portion of the southeast Alaska mainland lying north of the latitude of Eldred Rock, excluding Sullivan Island and the drainage of Berners Bay

Project Objectives: Maintain a population capable of sustaining an annual harvest of at least 25 black bears.

Work Accomplished During the Project Segment Period: Harvest data were collected through the mandatory sealing process. All successful hunters were required to present hides and skulls for sealing within 30 days of take. Harvest-related data and anecdotal information were also collected at that time. Skulls were measured at the time of sealing, and the sex of the harvested bears was determined, when possible.

Progress Towards Meeting Project Objectives: After a 2 year decline, black bear harvests in this subunit have returned to historic levels and exceed management goals. Thirty-five bears were taken. Males continued to make up the majority of the harvest (59%). Average skull size for males was also up slightly this year (16.7) from the previous year (16.3) and remains near the long-term average of 17 inches.

Project Location: 5A and 5B (6,235 $miles^2$)
Cape Fairweather to Icy Bay, eastern gulf coast

Project Objectives and Activities: Maintain a 3:1 male:female ratio in the harvest and a population capable of supporting an annual harvest of at least 20 bears.

Monitor the hunt and seal all black bears harvested and presented for sealing.

Measure all skulls and determine the sex of sealed bears.

Work Accomplished During the Project Segment Period: Black bears were sealed in Yakutat and Anchorage.

Progress Towards Meeting Project Objectives: The male to female ratio in the harvest was 3.6:1, higher than the objective of 3:1. Thirty-four bears were killed. This is higher than the 1985-1989 mean (23 bears), but within the range of those years' harvests. Seven blue

color-phase bears were taken, the highest ever recorded. Nonresidents, Alaska residents, and Yakutat residents took 79%, 12%, and 9%, respectively.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	$31.3	$11.8	$43.1
Actual	$32.8	$13.0	$45.8
Difference	-$1.5	-$1.2	-$2.7

Explanation of difference: Costs were greater than originally estimated for GMU 1C. Increased activity of bears in Juneau caused by garbage problems, created additional costs increase for handling nuisance animals.

Submitted by:

Bruce Dinneford
Regional Management Coordinator

Project Title: **Southcentral Black Bear Population Management**

Project Location: Unit 6 (10,150 mi^2)
Prince William Sound and north Gulf Coast

Units 7 and 15 (8,400 mi^2)
Kenai Peninsula

Units 9 and 10 (36,250 mi^2)
Alaska Peninsula and Unimak Island

Unit 11 (12,800 mi^2)
Wrangell Mountains

Unit 13 (23,400 mi^2)
Nelchina Basin

Unit 14 (6,600 mi^2)
Upper Cook Inlet

Unit 16 (12,300 mi^2)
West side of Cook Inlet

Unit 17 (18,800 mi^2)
Northern Bristol Bay

Project Objectives:

Unit 6

Maintain a black bear population that will sustain a 3-year average annual harvest of 200 bears composed of at least 75% males and a minimum average male skull size of 17 inches.

Units 7 and 15

Maintain a black bear population that will sustain a 3-year average annual harvest of 200 bears composed of at least 60% males.

Unit 14

Maintain a black bear population that will sustain a 3-year average annual harvest of 100 black bears composed of at least 60% males.

Units 9, 11, 13, 16, and 17

Maintain existing populations of black bears with a sex and age structure that will sustain a harvest composed of at least 60% males.

Work Accomplished During the Project Segment Period:

Unit 6. Twenty-five black bears (15 males and 10 females) were harvested during fall 1990, while 231 bears (180 males, 43 females, and 8 unknown sex) were killed during spring 1991. Complete harvest data were unavailable. The spring 1991 harvest and hunter success appeared about the same as in recent years.

Units 7 and 15. Harvest data were unavailable. Apparently few black bears were harvested during autumn 1990, as fewer than normal hides were sealed in local offices. Most bears taken in fall were incidental to moose hunting. The severe 1989-90 winter may have reduced moose hunting effort which would account for the bear harvest decline.

The spring 1991 black bear hunting effort and reported success appeared higher than last year.

Unit 9. Black bears were distributed in low densities in northern parts of Subunits 9A and 9B. Sealing was not required, so very little was known about the harvest. Reported harvests, primarily by subsistence hunters in Unit 9, averaged about 2 bears per year for the last 10 years.

Unit 11. Hunters killed 11 black bears in Unit 11 during the 1989-90 season, one more than the 18-year average of 10 bears a year. Harvest data for the 1990-91 season were preliminary, as sealing certificates for spring 1991 were still being processed. Eight black bears were harvested during the fall season, including 7 males and 1 female. During fall, 75% (6) of the harvest was taken incidental to hunting other species. Two black bears were taken on guided hunts.

Unit 13. Hunters killed 64 black bears in Unit 13 during the 1990-91 season. The 5-year (1984-88) average harvest was 86 bears per year. Harvest data for the 1990-91 season were preliminary as sealing certificates were still being processed. Forty bears were killed during the fall 1990 season which included 31 (78%) males, 8 (20%) females, and 1 (2%) sex unknown. The fall 1990 preliminary harvest figure was similar to that observed during fall 1989 when 42 bears were reported killed. If the spring 1991 harvest was also similar then the total 1990-91 harvest should change little from previous years. Subunits 13D and 13E remain the most important black bear hunting areas, accounting for 33% and 55%, respectively, of the total unitwide harvest. Guided hunting for black bears increased during fall 1990 when 36% of the total harvest was taken on guided hunts.

Unit 14. During 1990-91 a minimum of 65 black bears were sealed in Unit 14. These data were preliminary as sealing certificates were still being processed. Forty bears were killed in Subunit 14A, 6 in Subunit 14B, and 19 in Subunit 14C. One bear was killed by a highway vehicle and 3 were killed in defense of life or property. Males comprised 65% of the reported harvest. A minimum of 136 hunters registered for at least 1 black bear bait station for the spring season in Unit 14A ; 41 bait stations were registered for Unit 14B. Thirty bears were reported killed over bait. For the period 1988-1991, the mean annual harvest was 86 bears, comprised of 63% males.

Unit 16. A minimum of 99 black bears were sealed for all of Unit 16 for the 1990-91 season. Thirty bears were reported killed in Subunit 16A and 68 in Subunit 16B. Sex was identified for 91 bears of which 71% were males. A minimum of 95 hunters registered at least one black bear bait station in Unit 16. Thirty-one bears were reported killed over bait.

Unit 17. Hunters were not required to report or seal black bears harvested in Unit 17, so there was no systematic way to assess the number of bears killed, the sex or age composition of the harvest, or the distribution of harvest. Black bears occur in this unit, and a few were taken by local residents. An unknown number were incidentally taken by other hunters. Surveys to identify important black bear habitat were not conducted.

Progress Towards Meeting Project Objectives:

Unit 6

The 1991 spring bear harvest (231 bears) increased dramatically over the previous year's total harvest (162 bears). The impacts of the Exxon Valdez oil spill probably affected the bear harvest in 1989. The high percentage of males (78%) in the spring harvest suggested the bear population was being harvested within a sustainable-yield level.

Units 7 and 15

Regulations allowing a spring-baiting season and year-long general season with a bag limit of 3 bears coincided with the Department's primary objective to maintain the existing bear population.

Unit 9

There were no black bear management activities for Unit 9. Incidental information suggested objectives were met.

Unit 11

The harvest in Unit 11 remained fairly low over the past 11 years. Unit 11 has some good black bear habitat and frequent sightings suggest bears were fairly abundant. The low harvest reflected a lack of hunting pressure rather than low bear numbers. The proportion of males in the harvest exceeded the 60% management guideline which exceeded the 60% guideline in this unit. No changes in season dates and bag limits were proposed as current guidelines were being met.

Unit 13

The projected 1990-91 black bear harvest was expected to be similar to 1989-90. Harvests the past 2 years appeared somewhat lower than harvests reported between 1984-88. The reason for this decline was not known, especially since we do not have a measure of the overall hunting effort. Most of Subunits 13D and 13E were good black bear habitat and bears were considered abundant. Preliminary composition data for the 1990 season indicates the proportion of males in the harvest exceeded the 60% management guideline for Unit 13. No changes in season dates and bag limits were proposed as current management guidelines appeared to have been met.

Unit 14

The 1990-91 harvest was substantially less than the previous 2 years which caused the 3-year average to fall well below objective harvest levels. Composition of the harvest for the 3-year period met minimum objective levels. A slightly later den emergence and a shortened baiting season were partially responsible for reduced harvest during spring 1991. The Unit 14 bear population was thought to be at a moderate level and declining.

Unit 16

The 1990-91 harvest was below sustainable levels. Males comprised 71% of the harvest which met objectives for the unit. Den emergence was slightly later than usual resulting in reduced availability of bears for hunters during spring 1991. The black bear population in Unit 16 was thought to be moderately high and stable.

Unit 17

It is difficult to assess the black bear population status until mandatory sealing is required. Incidental black bear take by hunters pursuing other game could be a problem in parts of the unit. The Department should propose to the Board of Game either a sealing requirement or some other method for hunters to report their harvest. This action would allow a more direct assessment of management status.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	25.4	0.4	25.8
Actual	25.4	0.7	26.1
Difference	0	+0.3	+0.3

Submitted by:

Kenneth W. Pitcher and John N. Trent
Regional Management Coordinators

Project Title: **Interior Black Bear Population and Habitat Management**

Project Location: Units 12 (10,000 mi^2) and 20 (50,400 $mi^{2)}$ Upper Tanana and White River drainage, including the northern Alaska Range east of the Robertson River, and the Mentasta, Nutzotin, and northern Wrangell Mountains and Tanana Valley, Central Alaska Range, White Mountains, and Tanana Hills

Project Objectives and Activities

Unit 12

Manage for a black bear population to sustain an average annual harvest of at least 30 bears.

Seal bears, analyze harvest data.

Work Accomplished During the Project Segment Period:

During this report period, 26 black bears were reported taken in Unit 12. Twenty were males and 6 were females. Nineteen were taken during spring and 7 were harvested during fall. Males comprised 77% of the harvest.

Progress Towards Meeting Project Objectives:

Recent reported harvests were near or below the objective for managing the black bear population at a level capable of sustaining a harvest of 30 bears. The percent of males in the harvest during the past 2 years indicates that this objective is being met.

Unit 20

Project Objectives and Activities:

Subunit 20A

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

Subunit 20B

Manage for a sustained annual harvest of $\leq$150 black bears, of which at least 55% are males.

Subunits 20C and 20F

Manage for a harvest of black bears that maintains 50% or more males in the combined harvests from both subunits from the most recent 3 years.

Subunit 20D

Prepare management objectives that are specific, reasonable, time-related, and relevant to stated management goals for the next annual progress report.

Subunit 20E

Manage for a black bear population capable of sustaining annual harvests of at least the current annual average of 14 bears per year.

Work Accomplished During the Project Segment Period:

Subunit 20A

Forty-two black bears (28 males, and 14 females) were reported taken in Subunit 20A during FY91. Sixty-nine percent of the harvested bears were taken in spring. The FY91 harvest was nearly twice the FY90 harvest of 23 bears.

Subunit 20B

Hunters reported taking 138 black bears (87 males, 49 females) and 2 bears of undetermined sex in Subunit 20B in FY91. Ninety-one percent of the harvested bears were taken during spring. The FY91 harvest represented a 64% increase over the FY90 harvest of 84 bears.

Subunit 20C

Hunters reported taking 21 bears in Subunit 20C (15 males and 6 females) in FY91. Seventy-six percent of the bears were reported taken during spring. The FY91 harvest was similar to the harvest of 11 bears taken in FY90.

Subunit 20D

Sixteen black bears were sealed during this report period in Subunit 20D. Eleven bears were taken south of the Tanana River -- 82% males (n = 9) and 18% females (n = 2). Five bears were taken north of the Tanana River -- 83% males (n = 5) and 17% females (n = 1).

Subunit 20E

Hunters reported taking 11 black bears in Subunit 20E during this report period. Six were taken during fall, and five were taken in spring. Four were males and seven were females.

Subunit 20F

Hunters reported taking 29 bears in Subunit 20F (18 males, 9 females and 2 bears of undetermined sex) during FY91. Eighty-three percent of the harvest occurred in spring. The FY91 harvest was more than triple the FY90 harvest of 9 bears.

Progress Towards Meeting Project Objectives:

Subunit 20A

The combined harvests during FY89-91 contained 64% males, which meets the management objective of maintaining at least 55% males in the combined harvests of the preceding 3 years.

During 1991, a 3-year study of black bears on the Tanana Flats in Subunit 20A was completed. One of the results of that study was an estimate of bear densities in a lightly exploited Interior black bear population. Those results will be analyzed the next report period and harvest objectives will be formulated based on population estimates derived from those densities.

Subunit 20B

Although substantially higher than previous years, the FY91 annual harvest of 138 black bears meets the harvest objective of less than 150 bears per year for Subunit 20B. The combined harvests of FY89-91 contained 68% males, well above the harvest objective of at least 55% males in the harvest.

Subunits 20C and 20F

The combined harvests for FY89-91 contained 68% males, well above the management objective of at least 50% males in the harvest.

Subunit 20D

Management objectives were developed during this report period. Bears were sealed and harvest was analyzed. Harvest during this report period met management objectives.

The following objectives were established for Subunit 20D:

Manage for a harvest not to exceed 15 black bears south of the Tanana River and 15 black bears north of the Tanana River. Reevaluate harvest goals when estimates of black bear density are available.

Subunit 20E

Black bear hunting pressure in Subunit 20E is light. While the harvest of 11 bears during this report period was slightly less than the harvest of 15 bears last year, the management objective to maintain a population capable of sustaining a harvest of 15 bears annually is being met.

Segment Period Project Costs:

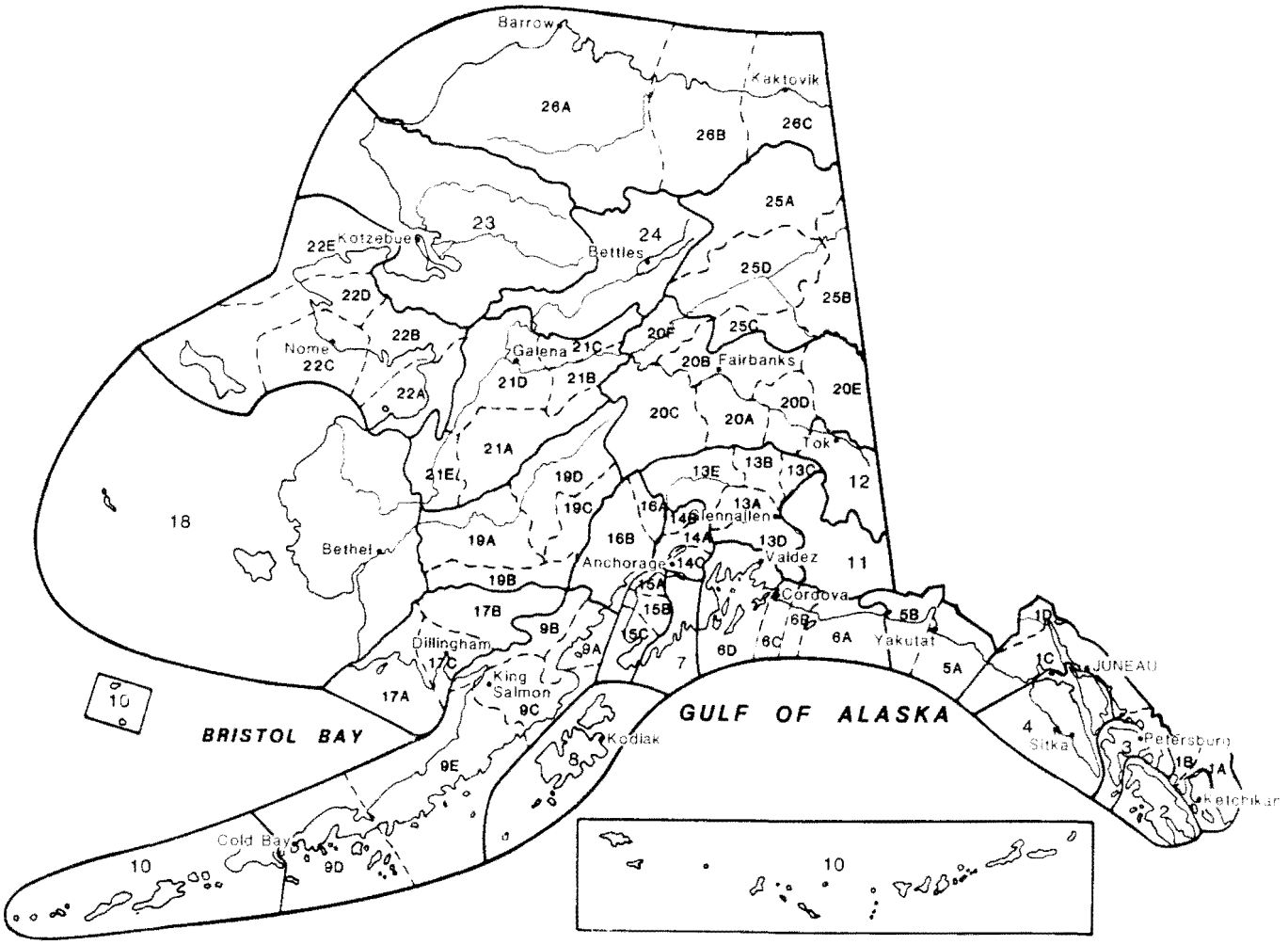
	Personnel	Operating	Total
Planned	12.0	3.0	15.0
Actual	10.7	2.2	12.9
Difference	+1.3	+0.8	+2.1

Explanation: Excess salary reallocated to brown bear, and excess operating reallocated to caribou.

Submitted by:

Kenton P. Taylor
Regional Management Coordinator

Alaska Game Management Units



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