

**FEDERAL AID
FINAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 25526
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**BROWN BEAR
SURVEY AND INVENTORY**

STATE: Alaska

GRANT AND SEGMENT NR.: W-33-5

PROJECT NR.: 4.0

PERIOD: 1 July 2006 – 30 June 2007

PROJECT TITLE: The Status of Alaska Brown Bears and Factors Influencing Their Populations

Project Location: Statewide

REPORT DESCRIPTION: This performance report describes brown bear survey and inventory activities. Region-wide activities are listed before specific activities by game management unit.

**The Status of Brown Bear
and Factors Influencing Their Populations in Region I**

Region-wide Activities

ACTIVITY 1: Prepare a biennial brown bear management report.

Brown bear management reports were written and submitted for each unit and sub-unit within the region where brown bears occur. These reports provide updated harvest and management information through the 2006 hunt.

ACTIVITY 2: Provide information to state and federal regulatory processes on brown bear management.

Information on brown bear harvest and management was supplied to state and federal regulatory bodies in response to proposals to change regulations within the region. This included seven proposals to the State Board of Game and one proposal to the Federal Subsistence Board.

ACTIVITY 3: Monitor the harvest by using and analyzing data from sealing records, registration permits, and interviews with hunters.

Brown bear skulls were measured and the sex determined as bears were sealed. Region-wide, all hunters are required to register for brown bear hunting and submit reports by the end of the season detailing their hunting efforts. Preliminary figures indicate that about 191 bears were killed during the report period.

ACTIVITY 4: Collect data on sex, age, body condition, and harvest from bears presented for sealing by hunters.

As part of the sealing process information on harvest location, along with biological information on the bear was collected. A tooth was extracted from each bear for later aging of the animal. As part of ongoing mainland brown bear research efforts, staff in Ketchikan and Wrangell opportunistically collected tissue samples from brown bears harvested in Unit 1A and 1B which will be used for DNA analysis.

ACTIVITY 5: Collect data on bears killed in defense of life and property.

Area biologists worked with FWP troopers, municipal police officers, and private citizens to collect information on defense of life or property (DLP) kills.

Unit 1C: 0 DLP killed brown bears.

Unit 1D: 2 DLP killed brown bears.

Unit 4: 4 DLP killed brown bears (1 of those was a sow with 2 cubs of the year which were orphaned and subsequently died), and 3 more were killed illegally.

Unit 5: 7 DLP killed brown bears.

ACTIVITY 6: Coordinate with community decision makers to reduce bear/garbage problems that may be detrimental to bears.

Unit 1D: Biologists continue to work with local governments in Haines and Skagway to decrease the number of complaints associated with bears and refuse. Since the closure of the Haines Landfill, problem bear reports continue to decline and are currently at very low levels. Skagway is fortunate to have an incinerator and very few bear complaints; department biologist assisted local police in researching additional refuse control measures such as bear-proof garbage cans.

Unit 4: Biologists continue to work with communities to provide bear education programs to reduce habituating bears to garbage. Efforts continue in Sitka to provide educational material and regular public service reminders via various media formats to supplement to efforts of Sitka's Bear Awareness work group of federal, state and community organizations.

Unit 5: Biologists met with members of the Yakutat city assembly, the Fish and Game Advisory Committee, the Solid Waste committee, the Police Department, and the city manager to address concerns with refuse management in Yakutat. Efforts focused on reconfiguring the landfill to deter bears from accessing garbage. Based on these discussions, an electric fence was purchased and will be installed during fall 2007 to keep bears from accessing garbage.

ACTIVITY 7: Coordinate with land managers and guides regarding guided hunter effort.

Biologists continue to work with guides and land managers to identify high use guiding areas and to monitor guided-hunter brown bear harvest.

ACTIVITY 8: Participate in planning efforts related to brown bear monitoring.

During the past year staffs have participated in discussions about the need for population information on mainland brown bears and other populations in the region. Staffs are also working with researcher in various field capacities to facilitate data collection for monitoring efforts.

Activities by Unit

Unit 4

ACTIVITY 1: Capture one or two urban brown bears opportunistically and monitor their movements using GPS radio collars to identify problem areas and to assist educational efforts towards better refuse management.

While efforts to locate the collar failed after repeated attempts, preparations have been made to capture another bear in a second attempt.

ACTIVITY 2: Monitor public use of the Pack Creek viewing area on the Stan Price State Wildlife Sanctuary.

Along with Forest Service personnel, ADF&G staff worked at the Pack Creek area throughout the summer months to manage public use of the facility and prevent dangerous encounters between bears and visitors. Approximately 1100 visitors visited the site during the reporting period. An attempt will be made to capture and collar up to three bears over the next three years to collect data concerning movements between watersheds in the Pack Creek vicinity and to supplement hair snare data from the area collected the last three years.

Submitted by: Dale L. Rabe, Region I Management Coordinator

The Status of Brown Bears and Factors Influencing Their Populations in Region II

Region-wide Activities

ACTIVITY 1: Draft a biennial brown bear management report.

Unit 6: Drafted a biennial brown bear management report (April 2007).

Unit 11: Biennial report will be completed in 2007.

Unit 13: Biennial report will be completed in 2007.

Unit 17: Drafted a biennial brown bear management report.

ACTIVITY 2: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters.

Unit 6: Harvest included 45 males and 10 females.

Units 7 & 15: There was no open hunting season during 2006/07. 31 bears (12 males, 15 females, and 4 unknown gender) were killed as result of defense-of-life-or-property (DLP), vehicle collisions, and illegal take in 2006/07 (preliminary data).

Unit 8: We issued 560 bear drawing permits, including 264 fall and 296 spring permits. During the fall season, 212 hunters killed 70 bears. In the spring season, 263 hunters killed 130 bears. The annual sport harvest was 200 bears, consisting of 151 males (76%) and 49 females. Three bears (two males) were killed in the federal subsistence hunt. An additional 36 mortalities were documented as follows: DLP 18 (11 male, 6 female, and 1 unknown), natural/unknown mortality 10 (2 male, 4 female, and 4 unknown sex), and illegal 8 (2 male and 3 female, and 3 unknown). The 2006/07 sport harvest of 200 bears was higher than the minimum annual harvest objective of 150 bears. Males composed 76% of the harvest, well above the minimum objective of 60% males. Intensive aerial survey data suggest that the unit-wide bear population continues to be stable to slightly increasing.

Unit 9: Preliminary harvest: 10 bears, 5 males, 4 females and one of unknown gender.

Unit 10: Preliminary harvest 7 bears, 6 males (86%) and 1 female.

Unit 11: Preliminary harvest: 12 bears, 7 males (58%) and 5 females.

Unit 13: Preliminary harvest: 122 bears, 69 males (57%), 53 females.

Unit 14: Preliminary harvest: 12 males, 8 females, Total 20

14A: 5 males, 2 females, Total 7

14B: 7 males, 4 females, Total 11

14C: 0 males, 2 females, Total 2

Unit 16: Total harvest: 106 bears, 73 males (69%) and 33 females.

16A: Preliminary harvest: 16, 8 males (50%) and 8 females.

16B: Preliminary harvest: 90, 65 males (72%) and 33 females.

Unit 17: Preliminary harvest: 112 bears, 72 males (63%) and 40 females.

ACTIVITY 3: Collect harvest data, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

Data collected, sex determined (see reports under activity above), and teeth extracted for aging from black bears presented for sealing. Information on other data gathered will be reported in future management reports.

ACTIVITY 4: Obtain estimates of ages of harvested bears by tooth sectioning.

Unit 6: Extracted a tooth for aging from 58 brown bears.

Unit 11: Preliminary fall average age for the 2006/07 season was 5.6 years.

Unit 13: Preliminary fall average age for the 2006/07 season was 5.6 years.

Unit 17: Teeth were extracted from 112 bears for aging.

ACTIVITY 5: Conduct line-transect/double count censuses of brown bear populations and refine technique.

Management priorities changed, therefore, and no line-transect/double count census data for brown bears was conducted in 2006/07.

Activities by Unit

Unit 6

ACTIVITY 1: Conduct Spring track and den surveys in Unit 6D.

We did not conduct spring track and den surveys in Unit 6D because of an unusually late spring and poor survey conditions.

Unit 7 & 15

ACTIVITY 1: Continue implementation of the Kenai brown bear conservation strategy.

Staff continued to work with Kenai residents to reduce bear/human interactions. Staff participated in the Russian River Interagency Coordination Group to find solutions to ongoing bear/human issues associated with important and popular fisheries.

ACTIVITY 2: Capture up to 10 brown bear to collar or to replace existing collars.

Thirteen bears were captured and radio-collared in October 2006 and May 2007.

Unit 8

ACTIVITY 1: Continue implementation of Unit 8 brown bear management plan.

Implementation of the recommendations of Kodiak Archipelago Bear Conservation and Management Plan continued in 2005/06 with the design and distribution of bear safety signs for popular sport fishing streams on Kodiak. The group also continued its efforts to implement a training and certification program for bear viewing guides on Kodiak.

We successfully completed an intensive aerial survey of the brown bear populations in the of Larsen Bay, and the Exxon Valdez Oil Spill Trustees to eliminate the use of the Larsen Bay dump by a plethora of bears. An electric fence was erected around the dump,

a burn box was installed, and bear-resistant dumpsters were deployed. The villages of Port Lions and Old Harbor are slated for similar landfill improvements next year. We also completed a cooperative effort with the Kodiak Brown Bear Trust, the University of Idaho, and the Kodiak National Wildlife Refuge to consolidate and analyze brown bear research and harvest data collected over the past two decades.

Unit 9

ACTIVITY 1: Encourage residents to reduce bear attractants that lead to defense of life or property kills (DLP).

Brown bears and humans continue to come into conflict in virtually every village in Unit 9. Efforts are being made to increase public awareness of new deterrent options.

ACTIVITY 2: Conduct population trend counts adjacent to heavily used salmon streams.

No surveys were conducted in 2006-07 due to poor weather and a lack of plane availability.

Unit 17

ACTIVITY 1: Work with local home and recreational cabin owners to reduce bear attractants and defense of life or property kills.

Provided information to install electric fences at fish drying racks, animal pens, and food storage areas to deter damage by bears and reduce DLP kills.

Submitted by: Gino DelFrate, Region II Management Coordinator

The Status of brown bears and Factors Influencing Their Populations in Region III

Region-wide Activities

ACTIVITY 1: Prepare a biennial brown bear management report.

Prepared a biennial brown bear management report.

ACTIVITY 2: Provide brown bear management information to State and Federal regulatory processes.

Provided information to 15 State fish and game advisory committees and 2 Federal regional advisory councils.

ACTIVITY 3: Monitor the brown bear harvest through field observations, brown bear sealing reports, interviews with successful hunters and analyze data.

Monitored harvest of 208 brown bears through field observations, sealing reports and interviews with successful hunters, and analyzed harvest data.

ACTIVITY 4: Collect data, determine sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

Collected data, determined sex, and extracted a tooth for aging from 208 brown bears presented for sealing.

ACTIVITY 5: Obtain estimates of ages of harvested bears by tooth sectioning.

Submitted teeth collected from 208 bears during the sealing process to a laboratory for aging.

Activities by Unit

Unit 12

ACTIVITY 1: Monitor blueberry abundance on permanent study plots to evaluate relationships between berry abundance and brown bear harvest

Monitored blueberry abundance within the Tanana River valley using 4 permanent transects (5 1-meter² plots/transect).

Unit 20E

ACTIVITY 1: Monitor blueberry abundance on permanent study plots to evaluate relationships between berry abundance and brown bear harvest

Monitored blueberry abundance within the Tanana River valley using 4 permanent transects (5 1-meter² plots/transect).

Submitted by: Roy A. Nowlin, Management Coordinator

The Status of Grizzly Bears and Factors Influencing Their Populations in Region V

Region-wide Activities

ACTIVITY 1: Prepare biennial regional brown bear management reports.

A brown bear management report was prepared during this reporting period.

ACTIVITY 2: Provide information to State and Federal regulatory processes on brown bear management.

Area management staff reviewed State and Federal regulatory proposals, attended regulatory process meetings, and presented brown bear information to the State Board of Game, State Fish and Game Advisory Committees, Federal Subsistence Board, and Federal Subsistence Regional Advisory Councils.

ACTIVITY 3: Review and revise population objectives.

Brown bear population objectives were reviewed with no revisions in Units 18, 22, 23, and 26A.

ACTIVITY 4: Monitor the brown bear harvest through field observations, analyses of brown bear sealing data, and interviews with hunters.

Unit 18: We made numerous field observations of brown bears while conducting surveys for other species in Unit 18; interviewed brown bear and other hunters regarding bears; and analyzed brown bear sealing data. To date, 15 brown bears have been reported harvested in the general hunt in Unit 18 for the fall of 2006 and 4 for the spring of 2007.

Unit 22: We reviewed harvest data and found a total reported harvest of 101 bears including 7 DLP bears. Sex composition of the harvest was 57 males, 44 females, and 0 bear of unknown sex. During the fall portion of the season 49 bears were taken, 45 bears were harvested during the spring portion and the 7 DLP bears were taken in July and August. The reported annual harvest of 101 bears was a 17% increase above the average annual harvest of 86 bears during the previous 10 years.

Unit 23: Harvest data for Unit 23 during 2006-2007 is not currently available. The average annual harvest for the last 10-years is 50 bears per year (range 30-78 bears per year).

Unit 26A: We recorded opportunistic field observations of brown bears while conducting surveys for other species, interviewed hunters, and analyzed brown bear sealing data. Eleven brown bears (7 males, 4 females) were reported taken in Unit 26A during the reporting period. Eight bears were reported taken by nonresidents, 2 by nonlocal Alaskan residents, and none by residents of Unit 26A. Eight bears were taken during August and 3 were taken in September. The average annual harvest for the last 10 years is 21 bears per year.

ACTIVITY 5: Analyze registration permit harvest data collected for subsistence hunts.

Unit 18: No brown bears were reported taken under the subsistence brown bear registration hunt (RB698) in Unit 18 during this period.

Unit 22: The Department administered one subsistence registration permit hunt (RB699) during the reporting period. Two Unit 22 residents registered for the hunt. One hunter hunted, but did not harvest a bear.

Unit 23: No brown bears were reported taken under the subsistence brown bear registration hunt (RB700) in Unit 23 during this period.

Unit 26A: No brown bears were reported taken under the subsistence brown bear registration hunt (RB697) in Unit 26A during this period.

ACTIVITY 6: Use public education programs and/or increased communication with the public to improve understanding of hunting regulations and the value of conserving brown bear populations, and to obtain better harvest data through increased harvest reporting.

Unit 18: We addressed bear conservation education in Unit 18 through opportunistic interviews with hunters, village police officers, berry pickers, and other interested members of the public.

Unit 22: At Advisory Committee and Regional Advisory Council meetings, at a public meeting in Unalakleet, and during individual contacts with local residents we discussed bear hunting regulations, the importance of harvest reporting, DLP bears, and methods to minimize human-bear conflicts.

Unit 23: We spoke to the public about the importance of reporting all bears killed while hunting or in defense of life and property.

Unit 26A: At public meetings and during individual contacts with local residents, we discussed bear hunting regulations, the importance of reporting harvest and DLP bears, and methods to minimize human-bear conflicts.

ACTIVITY 7: Collect data, determine sex, and extract a tooth for aging from brown bears presented for sealing.

Unit 18: Seven females and 12 male bears were reported harvested in Unit 18. Teeth were extracted for aging as these bears were presented for sealing.

Unit 22: Data was collected from 101 brown bears (57 males, 44 females and 0 of unknown sex) taken in Unit 22 during the reporting period. Teeth were extracted for aging when these bears were presented for sealing.

Unit 23: Teeth were extracted at the time of sealing from all bears taken during the reporting period for aging.

Unit 26A: All bears were sealed outside the unit where other staff collected data and teeth.

ACTIVITY 8: Obtain estimates of ages of sealed bears by tooth sectioning.

Unit 18: Ages from bears harvested last fall range from 2 to 18. The average age was 7 years old but the sample size is very small (N=12). Samples from the spring of 2007 have not been analyzed yet.

Unit 22: Age information for bears taken during this reporting period was not available at the time of this report. The mean age of all bears taken in Unit 22 was 6.7 yrs for each of the last 2 regulatory years. The previous ten year average age for bears harvested in Unit 22 is 6.2 years.

Unit 23: Age information for bears taken during this reporting period was not available at the time of this report. The average age of all bears taken in Unit 23 during 2001-2002 through 2005-2006 was 7 yrs (7 yrs for males and 6 yrs for females).

Unit 26A: Premolars were extracted and sent to Matson's Lab for sectioning and aging but results for these samples are not available.

ACTIVITY 9: Communicate and coordinate with local residents to reduce bear/human problems, improve understanding of defense of life or property (DLP) situations, and reduce need for DLP kills.

Unit 18: We continued to promote the use of electric fences around fish camps, hunting camps, and other applications as a way to reduce bear problems. Few bear problems were reported and no DLP bears were reported taken in 2006 –2007.

Unit 22: In the last 3 years reports of problem bears and DLPs have been increasing. We continued to promote the use of electric fences around camps and loaned an electric fence to a camp on the Fish River. The fences have proved themselves effective at preventing bear problems at camps. Copies of the bear safety video, "Staying Safe in Bear Country" and the pamphlet "Bear Facts – The Essentials for Traveling in Bear Country" are available from the Nome Fish & Game office.

Unit 23: We spoke to numerous hunters, especially hunters who reside outside of Unit 23 who call for information, about bear safety. We also spoke with local residents about preventing DLP situations and the need to report bears taken under such circumstance.

Unit 26A: Problematic human/bear interactions appear to be rare in this unit. Efforts to improve knowledge of DLP regulations and use of registration permits for subsistence hunting of bears has reduced the wasteful taking of bears and has improved attitudes about dealing with problematic bears.

Unit 22

ACTIVITY 1: Assess population trends through field observations and analyses of sealing data.

Neither the number of bears harvested (101) nor the sex composition (56 % male) of the 2006 harvest or the age structure of the 2005 harvest (average age 7.1 years) indicate a change in population status. However, observations indicate bears are becoming less numerous in easily accessible areas along the Nome road system. Anecdotal evidence indicates the population is productive. Staff and resident observations report sows with twins are normal, sows with three cubs are common and sows with 4 cubs are occasionally reported.

ACTIVITY 2: Analyze harvest data collected from selected communities in Unit 22.

Community based harvest assessment surveys were organized in Brevig Mission and Elim but data from these surveys is not yet available.

Units 18, 23 and 26A

ACTIVITY 1: Monitor population trends through field observations, censuses, registration permit hunt reports, and analysis of sealing data.

Unit 18: Brown bear are observed opportunistically while surveying moose and caribou in the unit. General season hunter harvests are higher in the Kilbuck Mountains than in the recent past but subsistence harvests are much lower. The Yukon Drainage portion of Unit 18 has seen very little harvest for many years. In this reporting period no bears were reported harvested in that portion of the unit. From hunt reports and our observations we do not think that bears are being over-harvested.

Unit 23: Harvest data indicates there has been little change in the sex or age structure of bear populations in Unit 23 since the early 1960s despite increasing harvest levels. This is consistent with our opportunistic observations of bears. However, modeling exercises indicate harvest data is insensitive to biological changes in bear populations so these results should be viewed with caution.

Unit 26A: Opportunistic observation of brown bears during surveys for other species and the observations of hunters and pilots indicate that brown bears are relatively plentiful, and most users indicate the current population level of brown bears is satisfactory. The analysis of sealing data indicate that the proportion of males and the age structure of harvest in Unit 26A is healthy and suitable for maintaining the current population level of brown bears in Unit 26A.

ACTIVITY 2: Analyze harvest data collected from selected communities in Unit 23.

One community harvest assessment (Kiana) was conducted in Unit 23 during the reporting period; however, the results of this survey are not available. Previous community harvest assessments suggest the harvest of brown bears by residents of Unit 23 is low.

ACTIVITY 3: Analyze harvest data collected from selected communities in Unit 26A.

We estimated local harvest by using data from ADF&G Subsistence Division, the North Slope Borough and other community-based harvest assessment studies. We determined that the mean number of bears harvested in Unit 26A villages per year ranges from 6–12 bears annually.

ACTIVITY 4: Investigate techniques (census or survey program) to assess population status in Unit 23 and, if appropriate, complete a census/survey in a selected portion of the unit in late May/early June.

The National Park Service has conducted 3 brown bear censuses within Unit 23 during this and previous reporting periods while attempting to develop a new technique. Results

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of these censuses are not available. The Department and NPS may cooperatively census brown bears in the northwest portion of Unit 23 during spring 2008.

Submitted by: Peter Bente, Region V Management Coordinator