

**FEDERAL AID
ANNUAL PERFORMANCE REPORT**

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

STATE: Alaska

GRANT AND SEGMENT NO. W-33-6

PROJECT NO. 4.0

PERIOD: 1 July 2007 – 30 June 2008

PROJECT LOCATION: Statewide

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

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

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

Regionwide Activities:

ACTIVITY 1: 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. Regionwide, 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 209 bears were killed during the report period.

ACTIVITY 2: 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, Petersburg, Wrangell, Juneau, Haines, and Yakutat opportunistically collected tissue samples from brown bears harvested in these areas which will be used for DNA analysis.

ACTIVITY 3: 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: 0 DLP killed brown bears.

Unit 4: 8 DLP killed brown bears.

Unit 5: 0 DLP killed brown bears.

ACTIVITY 4: 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, Angoon, and Hoonah to provide educational material and regular public service reminders to address bear and refuse concerns. Sitka has created a Bear Awareness work group of federal, state and community organizations to address concerns in their community.

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 2008 to keep bears from accessing garbage.

ACTIVITY 5: 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.

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.

Efforts to radio-collar and learn about the movement of bears in the urban setting of Sitka are ongoing.

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 1,101 visitors visited the site during the reporting period. A brown bear was captured and radio-collared at Pack Creek in fall 2007, and some data on movement patterns of the bear has been collected.

Submitted by: Neil Barten, Region I Management Coordinator

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

Regionwide Activities:

ACTIVITY 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, and interviews with successful hunters. Collect harvest data, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

	Males	Females	Unknown	Total
<i>Unit 6:</i>	35	33		
<i>Unit 8:</i>	132 (72%)	52 (28%)		184
<i>Unit 9:</i>	432	177	1	609
<i>Unit 10:</i>	10	3	0	13
<i>Unit 11:</i>	14 (87%)	2 (13%)		16
<i>Unit 13</i>	86 (62%)	52 (38%)	1	139
<i>Unit 17:</i>	55	62		117

Unit 6: Collected harvest data, determine the sex, and extracted a tooth for aging from 68 brown bears. Age are still being analyzed.

Unit 7 & 15: Twenty-four bears were killed during the reporting period. This mortality does not include any harvest from hunting. Causes of mortality include defense-of-life-or-property kills, vehicle collisions, and illegal take. Only one subadult male bear was harvested.

Unit 8: We issued 728 hunting permits, 334 for the fall season and 394 in the spring. During the fall season, 245 hunters killed 76 bears. In the spring season 258 hunters killed 108 bears. One bear (male) was killed in the federal brown bear subsistence hunt. An additional 21 non-hunting mortalities were documented as follows: defense of life or property - 11 (three male, seven female, and one unknown); and, natural/unknown - 10 (one male, one female, and eight unknown sex).

The 2007/08 harvest of 184 bears was higher than the minimum annual harvest objective of 150 bears. Males composed 72% of the harvest, well above the minimum objective of 60% males. Intensive aerial survey data suggest the unit-wide bear population continues to be stable to slightly increasing.

ACTIVITY 2: Obtain estimates of ages of harvested bears by tooth sectioning.

Unit 7&15: Ages are still being determined.

Unit 8: This information is not available for this reporting period.

Unit 10: This information is not available for this reporting period.

Unit 11: Preliminary fall average age = 6.1.

Unit 13: Preliminary fall average age = 5.4.

Unit 17: Ages of brown bears were not available for this reporting period.

ACTIVITY 3: Conduct line-transect/double count censuses of brown bear populations and refine technique.

Unit 6: No line transect/double count censuses were attempted since other track and den surveys were completed.

Unit 7 & 15: No line transect/double count censuses were attempted in the Kenai Peninsula. Other methodology (through demographic data) were collected.

Unit 8: No line transect/double count censuses were attempted in the Kodiak Area due to budgetary priorities.

Unit 11 & 13: No brown bear census data was collected in 2007/08; past data is being analyzed.

Unit 6:

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

Conducted spring track and den surveys in Unit 6D on Hinchinbrook (148 sq. mi.) and Montague (210 sq. mi.) Islands. Total flight time was six hours. Population index was increasing on Montague and stable to increasing on Hinchinbrook.

Unit 7 and 15:

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

Wildlife conservation staff continue to participate in a variety of multiagency programs throughout the Kenai to implement this strategy.

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

Twenty bears were captured and radio collared during the report period.

Unit 8:

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

No intensive aerial survey of the brown bear populations were conducted during this reporting period. However, in May 2008, we used a Hughes 500D helicopter and rifle-fired darts to capture 17 brown bears (14 females and three males) on Kodiak and Sitkalidak Islands. We deployed GPS/VHF transmitters on 13 adult female bears as part of a new research project.

Implementation of Kodiak Archipelago Bear Conservation and Management Plan recommendations continued with the Kodiak Unified Bear Subcommittee as the group successfully conducted a three-day seminar (one credit) on responsible bear viewing at Kodiak College. The course was filled to capacity (24 students) and was well received.

We continued to make progress in our work with area villages to reduce the availability of human food and garbage to bears. The dump at Larsen Bay continues to be a success and is well maintained by local villagers. Port Lions completed fencing of its landfill,

including electric fence that was retrofitted to an 8-foot chain-link fence. Port Lions also installed bear resistant dumpsters outside of the fence and lighted the area. The village of Old Harbor is slated for similar landfill improvements next year.

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 due to aircraft 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: Bruce Bartley

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

Regionwide Activities:

ACTIVITY 1: Monitor the brown bear harvest through field observations, brown bear sealing reports, interviews with successful hunters and analyze data.

Monitored preliminary harvest of 219 brown bears through field observations, sealing reports and interviews with successful hunters, and analyzed harvest data.

ACTIVITY 2: 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 219 brown bears presented for sealing.

ACTIVITY 3: Obtain estimates of ages of harvested bears by tooth sectioning.

Submitted teeth collected from 219 bears during the sealing process to a laboratory for aging.

ACTIVITY 4: Monitor and analyze brown bear bait station permit distribution.

Monitored and analyzed distribution of 16 permitted brown bear bait stations.

ACTIVITY 5: 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.

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 Bear and Factors Influencing Their Populations in Region V

Regionwide Activities:

ACTIVITY 1: 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 2: Review and revise population objectives.

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

ACTIVITY 3: 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, 17 brown bears have been reported harvested in the general hunt in Unit 18 for the fall of 2007 and 2 for the spring of 2008.

Unit 22: Harvest data during 2007-2008 report a total harvest of 76 bears including 8 DLP bears. Sex composition of the harvest was 51 males, 23 females, and 2 bears of unknown sex. During the fall 2007 portion of the season 22 bears were taken and 46 bears were harvested during the spring 2008 portion. The reported annual harvest of 76 bears is a 25% decrease from the previous year of 101 bears. Average annual harvest for the preceding 10-year period is 87 bears per year.

Unit 23: This year, 18 bears were harvested through the general hunt for residents and 9 were harvested in the drawing hunt for non-residents. Additionally, 1 sealed bear experienced natural mortality and 3 bears were taken in Defense of Life or Property. Therefore, 31 bears were harvested. The average annual harvest for the last 10-years is 50 bears per year (range 31-72 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. Seven brown bears (4 males, 3 females) were reported taken in Unit 26A during the reporting period. Two bears were reported taken by nonresidents, 4 by nonlocal Alaskan residents, and one by residents of Unit 26A. Four 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 4: 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 three subsistence registration permits in Hunt RB699 during the reporting period. One hunter reported but did not take 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: One brown bear was reported taken under the subsistence brown bear registration hunt (RB697) in Unit 26A during this period.

ACTIVITY 5: 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, Regional Advisory Council meetings, 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 6: Collect data, determine sex, and extract a tooth for aging from brown bears presented for sealing.

Unit 18: Four female and 15 male bears were reported harvested in Unit 18. Teeth were extracted for aging when these bears were presented for sealing.

Unit 22: Data was collected from 76 brown bears (51 males, 23 females and 2 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 7: Obtain estimates of ages of sealed bears by tooth sectioning.

Unit 18: Premolars were extracted and sent to Matson's Lab for sectioning and aging but results for these samples are not available.

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 10-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: Ages ranged from 2 to 23. The average age was 11.5 years old.

ACTIVITY 8: 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 2007–2008.

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.

The reduced number of bears harvested (n=76) in 2007-2008 may be the result of poor hunting conditions rather than a change in population status. The high proportion of males in harvest (70%) suggests no change in population status. Since full results of tooth age analysis have not been received, the age of harvested bears has not been used to assess population condition. However, observations of bears in easily accessible areas along the Nome road system indicate they are becoming less numerous in contrast to anecdotal evidence from the public that indicates the population is highly productive. Reports of 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 not conducted in Unit 22 during the reporting period. Instead, survey effort was directed to three communities in Unit 23.

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 bears are observed opportunistically while surveying moose and caribou in the unit. General season hunter harvests are higher compared to the previous decade, especially in the Kilbuck Mountains, but subsistence harvests are much lower. The

Yukon River drainage in Unit 18 has seen very little harvest for many years and no bears were reported harvested from this area during the reporting period. 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.

Three community harvest assessments (Deering, Kivalina, Noatak) were conducted in Unit 23 during the reporting period; however, the results of these surveys 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 in conjunction with ADF&G, conducted a brown bear census in the Noatak Drainage near the Red Dog Mine during May/June 2008. Results of these censuses are not available at this time.

Submitted by: Peter Bente, Survey and Inventory Coordinator, Region V