

**FEDERAL AID
ANNUAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

ANNUAL SURVEY AND INVENTORY

STATE: Alaska

GRANT AND SEGMENT NO. W-33-9

PROJECT NO.

PERIOD: July 1, 2010 – June 30, 2011

PROJECT LOCATION: Statewide

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

REPORT DESCRIPTION: This performance report describes Brown Bear survey and inventory activities. Activities are listed by game management unit.

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 194 bears were harvested in the region by hunters 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 across the region collected tissue samples from brown bears harvested anywhere on the mainland to 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: 1 brown bear was illegally killed.

Unit 1D: 4 DLP and 4 illegally killed brown bears.

Unit 4: 6 DLP killed brown bears

Unit 5: 3 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. Similar to regulations implemented in Juneau and Skagway, the Haines Borough adopted an ordinance to address bear attraction nuisances. Department biologists assisted state and local entities in researching additional refuse control measures such as bear-proof garbage and recycling cans. Since the closure of the Haines Landfill, problem bear reports continue. Skagway is fortunate to have an incinerator and very few bear complaints.

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, and landfill operators to address concerns with refuse management in Yakutat. Efforts focused on reconfiguring the landfill, and installing an electric fence to deter 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.

Activities by Unit

Unit 1D

ACTIVITY: Monitor brown bears deployed with GPS radio collars to assess habitat use and movements in the Chilkoot River corridor in Haines.

Area staff radio tracked the two brown bears along the Chilkoot River every few months, and collected two collars that released during this report period. Two additional GPS collars were deployed on sows with cubs.

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.

Two bears were captured and fitted with radio collars during this report period.

ACTIVITY 2: Capture one or two brown bears at Pack Creek and monitor their movements using GPS radio collars.

One female bear was captured and fitted with a radio collar during this report period.

Activity 3: Collect tissue samples from brown bears harvested on Baranof Island to provide additional biological information.

Tissue was collected from one brown bear that was captured and tagged at the southern tip of Baranof Island, at Port Armstrong.

Unit 5:

Activity 1: Affix 4-5 brown bears at the Yakutat landfill with GPS radio collars to understand their movement patterns in and around the community, and the public safety concerns this presents.

In conjunction with ongoing brown bear research efforts in Unit 5, four bears were captured and fitted with radio collars at the Yakutat landfill during this report period. Staff retrieved four collars from bears previously collared at the Yakutat landfill. Data from retrieved collars will be used in education programs, and in the data analysis for Unit 5 brown bears.

Submitted by: Neil L. Barten, Region I Management Coordinator

Region II

Regionwide:

Activity : Draft a biennial brown bear management report.

Brown Bear management report was submitted to Headquarters for publishing during the summer 2011.

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

These are standard activities accomplished in each office. See Area specific activities.

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

All bears taken in Region were presented to staff for specimen collection and sealing. See area specific activities for additional information.

Activity : Obtain estimates of ages of harvested bears by tooth sectioning.

For most bears taken in Region II a premolar was extracted and placed in a marked envelope. Teeth were bulk shipped to a contractor for aging and when available ages were provided to the Department to be entered into the states bear harvest database.

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

No census work was completed during this reporting period. Staff worked on refining the technique and reanalyzing previous collected information.

Activities by Unit:

Unit 6

ACTIVITY 1: Sealed 28 female and 36 male bears for a total harvest of 64 bears.

ACTIVITY 2: Collected teeth from 60 bears for aging.

ACTIVITY 3: Conducted spring track and den surveys in Unit 6D on Montague Island (210 linear mi.). Total flight time was 3.2 hours. Population index was stable on Montague.

ACTIVITY 4: Submitted a Brown Bear Management Report.

Units 7 & 15

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

We continue to implement the conservation strategy with sustainable hunting opportunities and continued public education on bear conservation measures.

ACTIVITY 2: Capture up to 20 brown bear to collar or to replace existing collars.

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

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

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

Twenty-four bears have been taken during the reporting period including twelve males, nine females and 3 unknown sex. This mortality includes four bears taken by legal hunting. Causes of mortality include defense-of-life-or-property kills, vehicle collisions, and illegal take.

Unit 14C

ACTIVITY 1: Monitored brown bear harvest through field observations, brown bear sealing reports and interviews with successful hunters.

Number of females harvested: 1

Number of males harvested: 1

ACTIVITY 2: Collected harvest data, determined the sex and extracted a tooth for aging from brown bears presented for sealing by hunters.

Submitted by: Gino Del Frate

Date: 2 September 2011

Region III

Regionwide Activities

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

Monitored preliminary harvest of 240 brown bears through field observations, sealing reports and interviews with successful hunters, and analyzed harvest data.

ACTIVITY 2: Collect harvest information and extract a tooth for aging from brown bears presented for sealing by hunters.

Brown Bear S&I
FY11 Annual Performance Report

Collected data, determined sex, and extracted a tooth for aging from 266 brown bears presented for sealing.

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

Submitted teeth collected from 266 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 61 bait stations in the McGrath area .

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.

ACTIVITY 6: Prepare brown bear management reports.

Prepared brown bear management reports.

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 along the southern 40 miles of the Taylor Highway using 4 permanent transects (5 1-meter² plots/transect).

Submitted by: Roy A. Nowlin, Management Coordinator

REGION IV

PROJECT LOCATION: Game Management Units 9-11, 13, 14A, 14B, 16 and 17

Regionwide:

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

All brown bears harvested in Region IV were sealed, and successful hunters were interviewed by Department staff.

ACTIVITY 2: 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 9:</i>	10	12	2	24

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<i>Unit 10:</i>	5	0	0	5
<i>Unit 11:</i>	10	7	0	17
<i>Unit 13:</i>	85	51	0	136
<i>Unit 14A:</i>	7	6	0	13
<i>Unit 14B:</i>	11	11	0	22
<i>Unit 16:</i>	89	60	0	149
<i>Unit 17:</i>	70	58	0	128

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

Unit 9: Preliminary fall average age = 10.4.

Unit 11: Preliminary fall average age = 8.8.

Unit 13: Preliminary fall average age = 6.3.

Unit 14A: Preliminary fall average age = 5.1.

Unit 14B: Preliminary fall average age = 8.0.

Unit 16: Preliminary fall average age = 7.7.

Unit 17: Preliminary fall average age = 8.0.

Teeth were collected from bears harvested in Unit 10, but that age data is not available yet.

ACTIVITY 4: Conduct line-transect/double count censuses of brown bear populations and refine technique.

No brown bear census data was collected in FY11. Data previously collected is currently being analyzed.

Activities by Unit:

Unit 9:

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

Residents calling in with bear issues are advised on the importance of proper stowage of attractants and on the use of electric fences. In addition, efforts are being made to make bear-resistant dumpsters available in King Salmon and Naknek.

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

No surveys were conducted in 2010-11 due to poor weather.

Unit 13:

ACTIVITY 1: Capture up to 45 brown bear to collar or to replace existing collars.

Twenty-three brown bears were collared this regulatory year. Additional information is reported in Nelchina Brown Bear AWP 4.41.

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. Worked with local public safety officials to deter damage by bears and reduce DLP kills.

Submitted by: Lem Butler, Region IV Management Coordinator

Region V

Regionwide 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, 22 brown bears have been reported harvested in the general hunt in Unit 18 for the fall of 2010 and 6 for the spring of 2011.

Unit 22: Harvest was 94 bears by hunting and 1 by Defense of Life and Property (DLP) for a total take of 95 bears, 61 of which were by residents and 34 were harvested by nonresidents. Sex composition of the harvest was 61 males, 34 females. During the fall 2010 portion of the season 38 bears were harvested and 57 bears were harvested during the spring 2011 hunt. The reported annual hunter harvest (n= 94) increased 2.0% from the previous year (n= 92) while the average annual harvest for the last 10-years is 93 bears per year (84-105).

Unit 23: This year, 38 bears were harvested through the general hunt for residents, 2 in the registration hunt for residents, and 15 were harvested in the drawing hunt for non-residents. Therefore, 56 bears were harvested. The average annual harvest for the last 10-years is 53 bears per year (range 33-78 bears per year).

Unit 26A: We recorded brown bear harvest through field observations, interviewed hunters, and analyzed brown bear sealing data and subsistence harvest. Eleven brown bears (9 males, 2 females) were reported taken in Unit 26A during the reporting period. Five were reported taken by nonresidents, 4 by nonlocal Alaskan residents, and 2 by residents of Unit 26A. Seven bears were taken during August, 3 were taken in September,

and 1 in June. The average annual harvest for the last 10 years is 15 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. Two hunters obtained registration permits and reported their hunts.

Unit 22: The Department administered 3 subsistence brown bear registration permits in Hunt RB699 during the reporting period. One hunter reported as did not hunt and the remaining two are unknown.

Unit 23: Two brown bears were reported taken under the subsistence brown bear registration hunt (RB700) in Unit 23 during this period. One was taken in the Spring and 1 was taken in the Fall. Both bears were males.

Unit 26A: One male brown bear was reported taken in September 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: The Department discussed brown bear hunting regulations, the importance of harvest reporting, Defense of Life & Property bears, and methods to minimize human-bear conflicts during Advisory Committee meetings, Regional Advisory Council meetings, local newspaper, and with individual local residents. Staff participated in brown bear awareness and education with local youth groups.

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: Data were collected from 28 sealed bears (22 males and 6 females and one unrecorded). Teeth were extracted for aging when these bears were presented for sealing.

Unit 22: Data were collected from 92 sealed bears (59 males, 32 females, and one unknown). Upper premolar teeth were extracted for aging when these bears were presented for sealing. Muscle samples (n=14, 8 males and 6 females) were collected from 2011 spring harvest for Dr. Matt

Cronin of University of Alaska Fairbanks (UAF) for a research project in cooperation with the Department.

Unit 23: Data were collected from 51 sealed bears (one natural mortality). Teeth were extracted for aging when these bears were presented for sealing.

Unit 26A: Data were collected from 10 sealed bears (8 males and 2 females). Teeth were extracted for aging when these bears were presented for sealing.

ACTIVITY 8: 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. The average age of bears from the 2009-2010 regulatory year is 5.6 for females and 8.6 for males.

Unit 22: Premolars were extracted and sent to Matson's Lab for sectioning and aging but results for the 2010-2011 period are not available. The average age of bears harvested in Unit 22 during 1997-1998 through 2009-2010 was 6.7 years.

Unit 23: Forty-two percent of the sealed bears have not been aged yet. However, the average age of bears taken in the 2010-2011 regulatory year that have been analyzed was 6. The average age of all bears taken in Unit 23 during 1999-2000 through 2007-2008 was 7 yrs (7 yrs for males and 9 yrs for females).

Unit 26A: Teeth were sent for aging but results for the 2010-2011 period are not available. The average age from 2000-2001 through 2009-2010 was 11 yrs for males and 8 yrs for females).

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 was reported taken in 2010-2011.

Unit 22: Reports of problem bears and DLPs continue throughout the unit. We promote the use of electric fences around camps, clean areas around camp, and work with rural communities to have nuisance bears reported to the Department. 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 circumstances.

Unit 26A: The number of brown bears breaking into cabins and entering villages has greatly increased in recent years. Efforts are being made to

improve knowledge of DLP regulations and expand the use of registration permits for subsistence hunting of bears. We are promoting the use of electric fences for people with remote cabins and bought and installed a fence to use as a demonstration.

Unit 22:

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

Annual reported harvest of male bears has consistently exceeded the female harvest, with male bears being approximately 66% of the harvest for the period 1961 through 2009. The 2010-2011 proportion of males harvested (68%), low harvest of females, and little change in mean age of harvested bears suggests little deviation in sex or age structure of the population. However, observations of bears in easily accessible areas along the Nome road system indicate they are likely 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 conducted in the communities of Wales, Koyuk, Golovin and Elim in Unit 22 during the reporting period. Results will be summarized in a report prepared by Division of Subsistence later this year.

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. A 3-year bear survey flown in 2000, 2001, and 2003 in a 20,000 km² area in Unit 26B and eastern Unit 26A resulted in a density estimate of 18.3 bears/1000 km². We saw 15 bears during our moose census in April 2011. 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.

Community harvest assessments were conducted in the communities of Kivalina and Noatak in Unit 23 during the reporting period. Results will be summarized in a report prepared by Division of Subsistence later this year. Previous community harvest assessments suggest the harvest of brown bears by residents of Unit 23 is low but accounts for more than sealing records indicate.

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: Continue cooperative efforts with NPS to develop non-MKR (mark-recapture) census techniques in selected portions of Unit 23 during late May/early June survey periods.

No new surveys or census efforts were attempted or completed during the reporting period. Final results of the May/June 2008 census in the Noatak River drainage near Red Dog Mine (surveys by National Park Service in conjunction with ADF&G) were not available; analysis is on-going.

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