

**BROWN BEAR
ANNUAL SURVEY AND INVENTORY
PERFORMANCE REPORT**

STATE: Alaska

GRANT AND SEGMENT NR: W-33-4

PROJECT NR: 4.0

PERIOD: 1 July 2005–30 June 2006

PROJECT LOCATION: Statewide

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

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

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

Regionwide Activities

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

Data were collected from registration permit hunt reports, with preliminary figures indicating that about 186 bears were killed during the report period, of which 10 were killed in defense of life or property (DLP).

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

Information on harvest location, along with biological information on the bear, was collected as bears were presented for sealing. Brown bear skulls were measured and the sex determined. A tooth was extracted from each bear for later aging of the animal. As part of ongoing mainland brown bear research efforts, staff in Petersburg opportunistically collected tissue samples that will be used for DNA analysis from 8 brown bears harvested in Units 1A, 1B and 3.

Activity: 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, discuss U.S. Forest Service guide use authorizations, and to monitor guided-hunter brown bear harvest. The Petersburg Area biologist met with Forest Service staff from the

Petersburg and Wrangell Ranger Districts to discuss guide use authorizations and implementation of the department's harvest guideline for brown bears in Unit 1B.

Activities by Unit

Unit 4

Activity: 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.

A juvenile brown bear male was captured in a residential neighborhood in September 2005, collared and released into an area outside of town. With liaison staff from the Sitka High School, students—as part of a science and community project—received a couple of sessions on brown bear behavior, capture techniques, and GIS mapping. The bear collar will be recovered and the data downloaded for analysis and mapping during the next school year.

Activity: 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 1200 visitors visited the site during the reporting period.

Total Regional Segment Period Project Costs (in thousands): \$37.5

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

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

Regionwide Activities

Activity: Draft a biennial brown bear management report.

No work was accomplished on this activity because the management report was not due this year.

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

Unit 6

The preliminary 2005–06 harvest was:

Males	35	Females	10	Total	45
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Units 7 and 15

There was not an open hunting season during 2005–06, so no mortalities resulted from hunting. The preliminary mortality for 2005–06 was:

Males	10	Females	7	Unknown sex	2	Total	19
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Causes of mortality include DLP kills, vehicle collisions, and illegal take.

Unit 8

Of 250 fall permits issued, 201 hunters went afield and reported harvesting 62 bears. Of 336 spring permits issued, 296 hunters went afield and reported harvesting 146 bears. The annual sport harvest was 208 bears, 158 males (76%) and 50 females (24%). Three male bears were killed in the federal brown bear subsistence hunt. An additional 20 non-sport mortalities were documented as follows: defense of life or property (DLP) – 12 (6 male, 6 female); natural/unknown – 6 (1 male, 1 female, and 4 unknown sex); and, illegal – 2 (1 male and 1 female).

The 2005–06 sport harvest of 208 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 unitwide bear population continues to be stable to slightly increasing.

Units 9 and 10

The preliminary 2005–06 harvest was:

Unit 9	Males	444	Females	185	Unknown	5	Total	634
Unit 10	Males	8	Females	0	Unknown	0	Total	8

Units 11 and 13

The preliminary 2005–06 harvest was:

GMU 13	Males	71 (55%)	Females	57 (45%)	Unk	0	Total	128
GMU 11	Males	12 (67%)	Females	6 (33%)	Unk	0	Total	18

Unit 14

The preliminary 2005–06 harvest was:

14A	Males	4	Females	4	Unknown	0	Total	8
14B	Males	8	Females	6	Unknown	0	Total	14
14C	Males	0	Females	0	Unknown	0	Total	0
14C (DLP)	Males	0	Females	2	Unknown	2	Total	4
Unit 14 Total	Males	12	Females	10	Unknown	0	Total	22

Unit 16

The preliminary 2005–06 harvest was:

16A	Males	5	Females	7	Unknown	0	Total	12
16B	Males	73	Females	35	Unknown	2	Total	110
Unit 16 Total	Males	78	Females	42	Unknown	2	Total	122

Unit 17

The preliminary 2005–06 reported harvest:

Males	67	Females	52	Unknown	0	Total	119
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Activity: Collect harvest data, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

Collected harvest data, determined sex, and extracted a tooth for aging from brown bears presented for sealing. See preliminary data above.

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

Ages from bears were unavailable during this reporting period. Ages will be summarized in the biennial management reports.

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

Unit 6

Track and den surveys during May 2006 resulted in 38 and 44 observations per hour on Montague and Hinchinbrook, respectively.

Unit 8

We attempted to conduct an intensive aerial survey of the brown bear populations in the Terror Bay area in May 2006. Weather and vegetation development prevented the completion of that survey.

Activities by Unit

Units 7 and 15

Activity: Continue implementation of the Kenai brown bear conservation strategy.

Staff met with the Interagency Brown Bear Study Team, Kenai Brown Bear Committee, and Kenai Brown Bear policy and management group several times to continue implementation

of the strategy. In addition, staff established and coordinated the wildlife conservation community program throughout communities on the Kenai Peninsula.

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

Staff captured 13 brown bear and placed new collars or replaced existing collars. No capture-related mortalities were experienced.

Unit 8

Activity 3: Continue implementation of the Unit 8 brown bear management plan.

Implementation of plan recommendations continued in 2005–06 by the Kodiak Unified Bear Subcommittee with 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 continued to make progress in our work with area villages to reduce the availability of human food and garbage to bears, including a cooperative project with the Kodiak Island Borough, the Village 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 and energized, 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 continued 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.

Units 9 and 10

Activity: Encourage unit residents to reduce attractive nuisances that lead to DLP kills.

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

Weather and plane availability prevented surveys from being conducted.

Unit 17

Activity: Work with local home and recreational cabin owners to try and reduce bear damage and defense of life and property kills.

Provided information to install electric fences at fish drying racks, animal pens, and food storage areas to deter damage by bears. Reported DLP kill in GMU 17 was 2 bears.

Total Regional Segment Period Project Costs (in thousands): \$224,864.26

Submitted by: Gino Del Frate, Regional Management Coordinator

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

Regionwide Activities

Activity: Write survey and inventory performance reports.

Wrote survey and inventory performance reports for all units.

Activity: Provide brown bear management information to state and federal regulatory processes.

Provided information to the Board of Game and to Fish and Game Advisory Committees throughout the region.

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

Monitored harvest of 211 brown bears through field observations, sealing reports and interviews with successful hunters; analyzed harvest data.

Activity: 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 211 brown bears presented for sealing.

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

Teeth collected from 211 bears during the sealing process were submitted to a laboratory for aging.

Activities by Unit

Unit 12

Activity: 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 (five 1-m² plots/transect).

Unit 20E

Activity: 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 (five 1-m² plots/transect).

Total Regional Segment Period Project Costs (in thousands): \$122.8

Submitted by: Roy A. Nowlin, Management Coordinator

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

Regionwide Activities

Activity: 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 Alaska Board of Game, state Fish and Game advisory committees, Federal Subsistence Board, and federal regional advisory councils.

During the November 2005 Board of Game meeting, the department provided information regarding population status of brown bears in Units 18, 23, 22, and 26A. Staff commented on and provided additional information at the board's request on proposals affecting Region V.

Activity: Review and revise population objectives.

Unit 18: We reviewed brown bear population objectives for Unit 18 but made no revisions.

Unit 22: We reviewed brown bear population objectives for Unit 22 but made no revisions.

Unit 23: We did not revise the population objective to maintain a minimum density of one adult bear per 25.7 mi² in the Noatak drainage.

Unit 26A: We reviewed brown bear population objectives for Unit 18 but made no revisions.

Activity: 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, 27 brown bears have been reported harvested in the general hunt in Unit 18.

Unit 22: We reviewed harvest data and found a total reported harvest of 83 bears including 2 DLP bears. Sex composition of the harvest was 58 males, 24 females, and 1 bear of unknown sex. During the fall portion of the season, 42 bears were taken; 39 bears were harvested during the spring portion; and the 2 DLP bears were taken in July and August. The reported annual harvest of 83 bears was the same as the average annual harvest during the previous 10 years.

Unit 23: Opportunistic observations of brown bears within Unit 23 were recorded during wildlife surveys and other activities. Forty-eight brown bears (34 males, 14 females) were reported taken in Unit 23 during the reporting period. Fifteen bears were taken by residents of Unit 23; 18 by nonlocal Alaskan residents; and 15 by nonresidents. Twenty-eight bears were taken during fall (Aug–Dec) and 20 during spring (Jan–May).

Unit 26A: Harvest data for Unit 26A during 2005–2006 is not currently available. The average annual harvest for the last 10 years is 21 bears per year.

Activity: Analyze registration permit harvest data collected for subsistence hunts.

Unit 18: To date, no subsistence brown bear hunters have reported harvesting a bear.

Unit 22: Data from subsistence registration permit hunt (RB699) showed 5 Unit 22 residents participated in the hunt, but no harvest was reported.

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

Unit 26A: Harvest data for 2005–2006 is not currently available. The annual subsistence harvest for the last 10 years is not more than 2 bears per year.

Activity: 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 newspaper articles and through opportunistic interviews with hunters, berry pickers, and other interested members of the public.

Unit 22: At advisory council 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: Collect data, determine sex, and extract a tooth for aging from brown bears presented for sealing.

Unit 18: Thirteen females and 15 male bears were reported harvested in Unit 18. Teeth were extracted for aging as these bears were presented for sealing.

Unit 22: Data were collected from 83 brown bears (58 males, 24 females and 1 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: Data were collected from 48 brown bears taken in Unit 23 during the reporting period. Teeth were extracted for aging as these bears were presented for sealing.

Unit 26A: All bears were presented for sealing outside the unit, where other staff collected data and teeth.

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

Unit 18: The age of bears taken in Unit 18 is not available for the reporting period.

Unit 22: Premolars were extracted from 83 bears harvested in 2005–06 and sent to Matson’s lab for sectioning and aging, but results from these samples are not yet available. Results

from 85 teeth from bears harvested in 2004–05 showed an average age of 6.9 years old; ages ranged from 2 to 26 years.

Unit 23: 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 23 was 7 yrs for each of the last 3 regulatory years.

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

Activity: Communicate and coordinate with local residents to reduce bear/human problems, improve understanding of 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 2005–06.

Unit 22: 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 proven 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 and Game office. In the last 3 years reports of bear problems and DLP takes have been reduced.

Unit 23: We spoke to numerous hunters, especially hunters who reside outside of Unit 23 and 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 using registration permits for subsistence hunting of bears in the Northwest Alaska Brown Bear Management Area has reduced the wasteful taking of bears and has improved attitudes about dealing with problematic bears.

Activities by Unit

Unit 22

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

Neither the number of bears harvested (83), the sex composition (70% male) of the 2005 harvest nor the age structure of the 2004 harvest (average age 6.9 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 3 cubs are common, and sows with 4 cubs are occasionally reported.

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

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

Activity: Investigate techniques (census or survey program) to assess population status in Unit 22 and, if appropriate, complete a census/survey in a selected portion of the unit in late May/early June.

This work was originally planned as a federal aid project, but the work was completed using state funds.

Units 18, 23 and 26A

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

Unit 18: Brown bear populations in Unit 18 are healthy and stable. The results of the census conducted with the Togiak National Wildlife Refuge in the southern portion of Unit 18 and adjacent Unit 17 during 2003 and 2004 are still preliminary but estimate the density at 33 bears per 1000 km².

Unit 23: Harvest data indicate 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. Modeling exercises indicate harvest data is insensitive to biological changes in bear populations, however, so these results should be viewed with caution. Reports from the public suggest bear numbers in the lower Noatak drainage and throughout the Kobuk drainage are higher than in past years and may still be slowly increasing. Our opportunistic observations do not indicate bears have been chronically overharvested.

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

No community harvest assessments were conducted in Unit 23 during the reporting period. Previous assessments suggest the harvest of brown bears by residents of Unit 23 is low.

Activity: 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 to 12 bears.

Activity: 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.

Unit 23: The National Park Service has conducted 2 brown bear censuses within Unit 23 during this and the previous reporting period while attempting to develop a new technique. No department staff were involved in the 2005 census, and only the Unit 22 area biologist

was involved with the 2006 census (which also included a portion of Unit 22). Results of these censuses are not available.

Total Regional Segment Period Project Costs (in thousands): 23.2

Submitted by: Peter Bente, Management Coordinator