

**FEDERAL AID  
ANNUAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
Juneau, AK 99802-5526

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

**STATE:** Alaska

**GRANT AND SEGMENT NR.:** W-27-5

**PROJECT NR.:** 4.0

**WORK LOCATION:** Statewide

**PERIOD:** 1 July 2001–30 June 2002

**PROJECT LOCATION:** Game Management Regions 1, 2, 3, and 5

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

**REPORT DESCRIPTION:** This statewide performance report includes the four regions involved in brown bear survey and inventory activities. Regional activities are listed before specific activities by game management unit.

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

**Regionwide Activities**

Activity 1: Draft a brown bear management report.

Area biologists collected data to be used in the final report, due to headquarters in May 2003.

Activity 2: Write a survey and inventory annual performance report.

This draft satisfies the activity described.

Activity 3: Provide information to the Board of Game on brown bear management.

During the report period the Board of Game did not consider Region I brown bear issues.

Activity 4: Collect hunter and harvest information from all bears harvested and presented for sealing.

Brown bear skulls were measured and the sex determined as bears were sealed, and except in cases where the hunter damaged the skull or external sex identifiers were removed, this data was

collected on every bear presented for sealing. All hunters regionwide were 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 190 bears were killed during the report period.

Activity 5: Collect data on bears killed in defense of life or property.

Area biologists worked with FWP troopers, municipal police officers, and private citizens to collect information on DLP kills. In Unit 4, 2 bears were killed DLP, 2 were found dead, and 2 were killed illegally.

Activity 6: Monitor the harvest, seal harvested bears and analyze data.

ADF&G Wildlife Conservation staff as well as FWP Troopers and designated sealing agents sealed brown bears harvested in the region.

Activity 7: Coordinate with community decision makers on local bear issues.

Area biologists worked with a community committee in Sitka to address the garbage issue. At the end of the regulatory year, the committee was moving toward making recommendations to the borough assembly.

Activity 8: Coordinate with land managers regarding guided hunting effort.

The Department of Natural Resources finalized its Unit 1D management plan, including suggestions from DWC. Discussions about permitting commercial guiding on state land continue due to increasing use of the brown bear resource.

## **Unit 1**

Activity 1: Participate in planning to help resolve the Chilkoot River bear/human conflict.

The Unit 1D Assistant Area Biologist continued work with the Chilkoot River Corridor group in Haines. Several of last year's recommendations were adopted, including enhanced regulatory authority for the road to the campground, and the installation of "no camping" signs in the area. We financially supported monitoring bear/human actions in the area.

## **Unit 4**

Activity 1: Radio tag and aeriially track a subpopulation of bears.

Because of mortality, shed transmitters, and emigration of previously marked bears, during the report period a total of 44 marked bears were available for the population estimate. We began resight flights in late June 2002.

Activity 2: Monitor public use of Pack Creek viewing area at Stan Price State Wildlife Sanctuary.

This activity was successfully carried out July–September 2001 and has begun for the 2002 field season in June. A total of 1,366 people visited Pack Creek.

**Total Regional Segment Period Project Costs (in thousands) = \$145.0**

**Submitted by: Bruce Dinneford, Wildlife Biologist IV**

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

### **Regionwide Activities**

Activity 1: Prepare a brown bear management report.

Draft brown bear management reports were prepared during spring 2001

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

Preliminary harvest information was available from sealing reports.

Activity 3: Seal bear skins and skulls, determine the sex, and extract a tooth for aging from brown bears presented for sealing by hunters.

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

Teeth are sent in on a biannual basis for sectioning and aging. Spring 2002 results will not be available until fall 2002.

Activity 5: Write an annual survey and inventory performance report.

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### **Activities by Unit**

#### **Unit 6**

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

The preliminary 2001–02 harvest was:

Males 33	Females 11	Total 44
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Activity 2: Monitor the brown bear population on Montague Island.

A survey in spring resulted in 83 observations of bear tracks and dens.

#### **Units 7 and 15**

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

The preliminary 2001–02 mortality was:

Males 9	Females 8	Total 17
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Harvest includes 15 bears taken by nonsport methods (e.g. DLP, roadkill, illegal, etc.).

## Unit 08

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

Hunting permit report results indicate that 566 people obtained permits, 239 fall permits and 327 spring permits. During the fall season, 202 hunters went afield and killed 60 bears. In the spring season 287 hunters went afield and killed 124 bears. The annual sport harvest was 184 bears, 146 males (79%) and 38 females (21%). Two bears (1 male and 1 female) were killed in the federal brown bear subsistence hunt. An additional 15 non-sport mortalities were documented as follows: defense of life or property (DLP) - 5 (1 males, 3 females, and 1 unknown sex); natural/unknown - 8 (1 male, 7 unknown sex); illegal - 2 (2 females).

The 2001–02 sport harvest of 184 bears exceeded the annual harvest objective of 150 bears. Males composed 79% 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.

Activity 2: In cooperation with Kodiak National Wildlife Refuge, annually survey a portion of the island to establish baseline bear density estimates and to detect changes in the population.

In late May, we joined Kodiak NWR staff in conducting an intensive aerial survey of brown bears on the Aliulik Peninsula on southwestern Kodiak Island. This survey was a replicate of one conducted in the same area in 2001, due to concerns about the accuracy of that effort. Although the data reflected a decrease from 209 independent bears/1000 km<sup>2</sup> in 1993 to 173 bears/1000 km<sup>2</sup> in 2001, differences were not statistically significant. This information suggests we should continue to monitor the situation and consider including the Aliulik hunt areas in the sex/skull minimum restrictions which apply to other areas on south and west Kodiak Island.

In June 2002, we deployed 4 radio collars on bears on Afognak Island in a joint effort funded by Afognak Native Corporation, Rocky Mountain Elk Foundation, Kodiak Brown Bear Trust, Kodiak National Wildlife Refuge, and the department. Conventional VHF transmitters were put on to an adult male and a young adult female. Collars with both VHF and GPS transmitters were put on 2 adult females that were accompanied by cubs. These animals will be monitored throughout the year to get a better understanding of bear movements and to evaluate the feasibility of deploying additional collars on Afognak bears with the ultimate goal of investigating the life histories, movements and density of bears on that island.

Activity 3: Develop a draft Unit 8 brown bear management plan.

We completed a comprehensive bear conservation and management plan for the Kodiak archipelago in February 2002. The plan was developed by a Citizen's Advisory Committee with

representatives from 12 diverse user groups, with technical support by the department and staff from the US Fish and Wildlife Service. It included over 270 recommendations and all were developed with consensus of the participants. Implementation of the recommendations by government and corporate entities has commenced.

### **Units 9 and 10**

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

The preliminary 2001–02 harvest was:

Unit 9	Males 463	Females 203	Total 667
Unit 10	Males 7	Females 1	Total 8

Activity 2: 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. The availability of a new bear safety video may improve educational efforts with local residents and recreational visitors.

Activity 3: Conduct population trend counts adjacent to heavily used salmon streams.

Four repetitive surveys were completed near Black Lake in Unit 9E during 5–6 August, 2002. We classified a total of 1101 bears.

### **Units 11 and 13**

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

The preliminary 2001–02 harvest was:

GMU 13	Males 71 (58%)	Females 51 (42%)	Total 122
GMU 11	Males 6 (60%)	Females 4 (40%)	Total 10

### **Unit 14**

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

The preliminary 2001–02 harvest was:

Males 11	Females 9	Total 20
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### **Unit 16**

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

The preliminary 2001–02 harvest was:

Males 60      Females 28      Total 88

**Unit 17**

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

The preliminary 2001–02 reported harvest was:

Males 62      Females 28      Unknown 2      Total 92

Activity 2: Work with local home and recreational cabin owners to work on reducing bear damage and defense of life and property kills.

Gave talks at the schools and other public forums to work on reducing defense of life and property kills. Reported DLP kill in GMU 17 was 2 brown bears, compared to 10 reported DLP kills reported the previous year. The number of known illegal kills in GMU 17 was 4 brown bears.

**Other activities funded by federal aid on this project:** None.

**Total Regional Segment Period Project Costs (in thousands) = \$158.5**

**Submitted by: Michael G. McDonald, Assistant Management Coordinator**

## **The Status of Alaska Brown Bears and Factors Influencing Their Populations in Region III**

### **Regionwide Activities**

Activity 1: Write an annual survey and inventory performance report.

Wrote an annual survey and inventory report for all units.

Activity 2: Provide information to the Board of Game and advisory committees.

Made presentations to the Board of Game and advisory committees as needed.

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

Obtained ages of harvested bears by tooth sectioning.

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### **Activities by Unit**

#### **Units 12**

Activity 1: Seal harvested bears, monitor harvests, and analyze harvest data in relation to population objective and moose calf survival.

Sealed 18 brown bears (67% male), of which 3 were DLP bears. A tooth was collected from each of these bears and sent in for aging.

Analyzed harvest and age data trends to determine any effects on the bear population. Compared moose calf survival rates between areas of different bear harvest rates.

Activity 2: Monitor berry abundance along 3-5 transects in different bear habitats.

Monitored blueberry abundance within the Tanana River valley using 4 permanent transects (5 1-meter<sup>2</sup> plots/transect). This was the second year of monitoring. The intent is to monitor these plots annually and develop a blueberry abundance index to compare between years and between habitat types. These data will be used to determine if there is a relationship between berry abundance and quality and grizzly bear harvest and DLP kills. Beginning in FY03, berry quality will be assessed by comparing sugar content between study areas and years.

#### **Units 19, 21A and 21E**

Activity 1: Seal harvested bears, monitor harvests and analyze harvest data.

Sealed harvested bears, monitored harvests and analyzed harvest data. Bear harvests have increased slightly with liberalizations in season length and tag fee exemptions. Three year average harvest has been 85 bears. Harvests have exceeded the objective of 70, however percent females in the take is still below 50%.



Bear age data based on harvest appears to indicate a diverse age structure, indicating low exploitation rates.

### **Units 20A, 20B, 20C, 20F and 25C**

Activity 1: Seal harvested bears, monitor harvests and analyze harvest data.

Monitored harvests through sealing of harvested bears (Preliminary 2001 harvest = 26 bears) and analysis of harvest data.

### **Unit 20D**

Activity 1: Seal harvested bears, monitor harvests and analyze harvest data.

Sealed 11 bears to monitor harvest, and analyzed harvest data.

### **Unit 20E**

Activity 1: Seal harvested bears, monitor harvests, and analyze harvest data in relation to objectives and moose calf survival.

Sealed 11 brown bears (73% male). A tooth was collected from each of these bears.

Analyzed harvest and age data trends to determine any effects on the bear population, and compared moose calf survival rates between areas of different bear harvest rates.

Activity 2: Monitor berry abundance along 3-5 transects in different bear habitats.

Monitored blueberry abundance within southcentral Unit 20E along the Taylor Highway using 4 permanent transects (5 1-meter<sup>2</sup> plots/transect). This was the second year of monitoring. The intent is to monitor these plots annually and develop a blueberry abundance index to compare between years and between habitat types. These data will be used to determine if there is a relationship between berry abundance and quality and black bear harvest and DLP kills. Beginning in FY03, berry quality will be assessed by comparing sugar content between study areas and years.

### **Units 21B, 21C, and 21D**

Activity 1: Seal harvested bears, monitor harvests and analyze harvest data.

Sealed harvested bears, monitored harvest, and analyzed harvest data

### **Unit 24**

Activity 1: Seal harvested bears, monitor harvests and analyze harvest data.

Sealed harvested bears, monitored harvest, and analyzed harvest data

**Units 25A, 25B, 25D, 26B and 26C**

Activity 1: Seal harvested bears, monitor harvests and analyze harvest data.

Sealed harvested bears, monitored harvests, and analyzed harvest data. Preliminary data show that 34 brown bears were sealed in Units 25A, 25B, 25D, 26B and 26C (all objectives).

**Other activities funded by Federal Aid on this project:** None.

**Total Regional Segment Period Project Costs (in thousands) = \$72.9**

**Submitted by: Roy A. Nowlin Management Coordinator**

## **The Status of Alaska Brown Bears and Factors Influencing Their Populations in Region V**

### **Regionwide Activities**

Activity 1: Write a survey and inventory annual performance report.

Performance report for Units 18, 22, 23, and 26A were prepared August 2002 and submitted to HQ early September 2002

Activity 2: Provide information to the Board of Game on brown bear management.

Unit 18: Information regarding brown bears was presented to the Board of Game to assist in their deliberation of a proposal to increase the brown bear season north of the south bank of the Yukon River including its sloughs and distributaries southward as far as the Kashunuk River. Information was also provided to the Board of Game as they deliberated on renewing the brown bear tag fee exemption as a component of the Western Alaska Brown Bear Management Area registration permit hunt.

Unit 22: In preparation for the Board of Game meeting in November 2001, the department analyzed data and presented information on the population status of brown bear and conservation issues pertaining to proposals from the Northern Norton Sound Advisory Committee and members of the public. Proposals were for 1) a 1 bear per regulatory year resident and nonresident bag limit in Unit 22, except Unit 22C; 2) opening the bear season one month earlier on August 1 throughout Unit 22; 3) increasing the number of nonresident brown bear drawing permits for Units 22D and 22E from 8 to 12; and 4) including Unit 22C in the Northwest Alaska Brown Bear Management Area.

Unit 23: During November 2001 the department provided background information to the BOG regarding the population status of brown bears in Unit 23. The department also provided the BOG with information on participation and harvest levels for the northwest Alaska subsistence brown bear hunt (RB700).

Unit 26A: During November 2001 the department provided background information to the BOG regarding the population status of brown bears in Unit 26A.

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

Unit 18: Harvest information for the 2000–2001 subsistence hunting season was finalized and 1 of 25 hunters who obtained the WABBMA registration permit was successful. Five hunters utilizing the general hunting regulations reported harvesting bears during 2000–2001. Harvest data for the 2001–2002 subsistence and general hunting seasons is not finalized.

Unit 22: The reported harvest was 80 brown bears, including 1 DLP. In Unit 22A, 15 bears were harvested, 29 bears in Unit 22B, 17 bears in Unit 22C, 12 bears in Unit 22D and 7 bears were harvested in Unit 22E. After 4 years of increasingly high harvests, the percent of male bears in the annual harvest declined significantly. During this reporting period 43 (54%) male bears and 37 (46%) females were harvested. Prior to this regulatory year males averaged approximately 65% of the total harvest since the mid 1980s.

Unit 23: Harvest information was collected in Unit 23 through the statewide brown bear sealing program and through the Northwest Brown Bear Management Area subsistence registration permit hunt. Brown bears were observed opportunistically while conducting surveys for other wildlife species.

Unit 26A: We examined sealing data. Thirteen bears were harvested in Unit 26A, of which 10 were males and 3 were females. Seven were harvested in August, and 6 in September. All 13 were harvested with the use of aircraft. Nonresidents harvested 9 bears and nonlocal state residents harvested 4 bears. Nine hunters used a registered guide, 3 used commercial transportation, and 1 used no commercial services. All 13 bears were harvested in the eastern portion of Unit 26A.

Activity 4: Improve communication with the public to reduce the magnitude of illegal and unreported harvest and to improve understanding of defense of life or property situations to remove nuisance bears.

Unit 18: Modest improvements have been made toward public use and understanding of the defense of life and property (DLP) regulations and their importance to conservation. Four bears were killed and reported by residents under DLP provisions.

Unit 22: Increased communication with the village public safety officers (VPSOs) and tribal councils seems to have resulted in better reporting of bears taken in DLP near villages. When requested, we supplied VPSOs with rubber bullets. We distributed a poster explaining the general season and subsistence hunts and DLP regulations to improve reporting and raise awareness of conservation issues.

Unit 23: ADF&G provided individuals and local advisory committees with population and harvest information, particularly as the committees prepared to address the BOG in November, 2001 about ways to minimize the number of bears harvested in defense of life and property.

Unit 26A: We discussed bear regulations and the defense of life or property provision and their pertinence to conservation at public meetings and on radio programs, and ran articles in the newspaper.

Activity 5: Seal bear skins and skulls, determine sex and extract a tooth for aging from brown bears presented for sealing.

Unit 18: We sealed bear skins and skulls, determined the sex and extracted a tooth for aging brown bears presented for sealing.

Unit 22: Brown bears were sealed at the Fish and Game office in Nome and by authorized sealing agents in White Mountain, Shishmaref, and Unalakleet.

Unit 23: Brown bear skulls and skins taken under the Unit 23 general hunt were sealed and premolars were collected to determine age. The sex of each bear was confirmed from the skin of external organs. No bears taken under RB700 were sealed because no hides were removed from the hunt area.

Unit 26A: All of the bears harvested in this unit were sealed outside of the unit.

Activity 6: Obtain estimates of ages of sealed bears by tooth sectioning.

Unit 18: Teeth were not sent in for age analysis since the small number of bears taken would not provide a meaningful data set.

Unit 22: Premolars were extracted from sealed bears and sent to Matsons Lab for sectioning and aging. The results from the 2001–2002 harvest are not yet available. However, the results from the 2000–2001 regulatory year were returned and show no change in the age structure of the harvest. Age reports were sent to hunters who harvested bears during the 2000–2001 regulatory year.

Unit 23: Premolars extracted from bears taken in Unit 23 were sent to the Alaska Department of Fish and Game office in Anchorage to be sectioned, stained and aged.

Unit 26A: Extracted teeth were sent to Matson’s Lab to be sectioned and aged. We have not received the ages for bears harvested in 2001-2002.



## **Activities by Unit**

### **Unit 22**

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

Observations by staff, reports from the public and analysis of sealing data indicate the Unit 22 brown bear population has increased over the last decade and probably exceeds our management goal of maintaining the population at levels estimated during the bear census and research study conducted in the early 1990s.

Activity 2: Collect harvest data through community-based harvest assessments in selected villages in Unit 22

No federally-aided work was performed under this activity in this segment.

Activity 3: Educate the public about bear behavior and safety to minimize conflicts between bears and the public.

An electric fence bear enclosure was set up and used as a demonstration to alleviate bear problems at a camp in the vicinity of Nome. Another fence is available for loan to the public. Public service announcements were aired on the radio, scanner and published in newspapers emphasizing awareness of bears in the area, the importance of clean camps and not leaving food, dog food, garbage or other attractants unattended or accessible to bears. Copies of the bear safety video, “Staying Safe in Bear Country,” are available on loan from the Nome Fish and Game office to interested groups or individuals.

### **Units 18, 23 and 26A**

Activity 1: Monitor population trends through field observations, census results of various research projects, analysis of reports from registration permit holders, and analyses of sealing data.

Unit 18. The department, FWS, and BLM continued the cooperative brown bear radiocollaring project. Animals have been tracked since 1993 to determine seasonal movements and estimate productivity.

Unit 23. Brown bear abundance was monitored through opportunistic observations while surveying and radio tracking other wildlife species. Brown bear abundance was also discussed with advisory committee members, many local residents and some long-term guides and transporters. Brown bears currently appear to be abundant throughout Unit 23.

Unit 26A. From sightings of bears during surveys for other species, and reports from hunters and pilots, it appears that brown bears are relatively plentiful in Unit 26A.

Activity 2: Collect harvest data through community-based harvest assessments in selected villages in Units 23 and 26A. In Unit 26A harvest data is collected through cooperative efforts with ADF&G Subsistence Division and the North Slope Borough.

Unit 23. Scheduling difficulties prevented any community-based harvest assessments from being conducted in Unit 23 during this reporting period.

Unit 26A. The department received information from the North Slope Borough Harvest Documentation Project and the Subsistence Division on the harvest of bears in some North Slope villages.

Activity 3: Improve communication with the public regarding the take of radiocollared bears so that ADF&G can conduct a population census in Unit 18.

Unit 18. We met with representatives of the Association of Village Council Presidents (AVCP), FWS, Subsistence Division, local Advisory Committees, and local IRA councils. We discussed the WABBMA subsistence brown bear registration permit system, improving our harvest information, liberalization of seasons and bag limits, and the continuation of the cooperative brown bear research project.

Activity 4: Develop updated population objectives in cooperation with the public and the USFWS in Unit 18.

No work was completed toward this objective.

**Other activities funded by federal aid on this project:** None.

**Total Regional Segment Period Project Costs (in thousands) = \$29.9**

**Submitted by: Peter Bente, Wildlife Biologist III**

**Statewide Project Costs (in thousands):**

**State Share = \$101.6 Federal Share = \$304.7 Total Costs = \$406.3**