

**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

GRANT AND SEGMENT NO. AKW-20 Wildlife Restoration FY2017

PROJECT NO. 4.0 Brown/Grizzly Bear

PERIOD: July 1, 2016 – June 30, 2017

PROJECT LOCATION: Statewide

PROJECT TITLE:

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

REGION 1

The Status of Alaska Brown Bears and Factors Influencing Their Populations

Region-wide Activities:

Activity 1: Prepare a biennial brown bear management report.

Accomplishments: No biennial brown bear management report was published this year. DWC is changing to a five-year reporting schedule with brief annual reports.

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

Accomplishments: Information on brown bear harvest and management was provided to state and federal regulatory bodies as requested.

Activity 3: Monitor the harvest by using and analyzing data from sealing reports, registration and drawing permits, and interviews with hunters.

Accomplishments: All brown bear hunts in Region I require hunters to obtain a registration permit, and beginning in regulatory year 2015 a small number of drawing permits were offered to nonresident hunters guided by resident relatives within the second degree of kindred. We monitored hunter interest through issuing permits and documented hunter effort and harvest through the required sealing process. Often conversations with hunters and guides during sealing provide additional insight for managers.

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

Accomplishments: Alaska regulations require all harvested brown bears to be sealed and for evidence of sex to remain attached to the hide until hides have been sealed. DWC staff throughout Region I and designated sealers provided sealing services to hunters. Among other information collected during the sealing process, we recorded sex and extracted a tooth from each skull.

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

Accomplishments: DWC contracts with a private lab to section and age teeth extracted from all harvested bears. Teeth were sent to the lab following the spring and fall seasons and the lab provided bear ages to DWC.

Activity 6: Collect data on bears killed in defense of life or property.

Accomplishments: Region I staff ensured that anyone taking a bear in defense of life and property completed and submitted a Defense of Life and Property Kill Report Form. Data from those forms are archived in a state-wide database.

Activity 7: Coordinate with community decision makers to reduce bear/garbage problems that may be detrimental to bears.

Accomplishments: Area management biologists continued to work with municipalities, agencies, businesses, and individuals throughout the region to educate them on ways to avoid attracting bears by properly storing and disposing of garbage and other attractants. With the recent increase in homeowner's interest in keeping chickens, these activities now include advising people on how to keep chickens safe from bears, primarily through safe storage of feed and surrounding runs with electric fencing.

Activity 8: Coordinate with land managers and guides regarding guided hunter effort.

Accomplishments: Region I managers attended meetings, participated in regulatory processes, and corresponded with brown bear guides and the primary land managers (US Forest Service and Alaska Native Corporations) to provide guided hunting opportunity, high quality hunting experiences, and sustainable harvest.

Activity 9: Participate in planning efforts related to brown bear monitoring in mainland and other areas of the region.

Accomplishments: During this report period Region I managers collaborated with DWC bear researchers to monitor the population in the Yakutat area.

Activities by Unit:

Unit 1C

Activity 1: Assess the use of the Sweetheart Creek area by brown bears, by affixing 3-5 bears with radio collars as part of a study related to a proposed hydroelectric project.

Accomplishments: No activity during this report period. However, we have plans to capture brown bears at Sweetheart Creek during FY2018.

Activity 2: Collect brown bear hair for DNA analysis to determine minimum number of bears and distribution of brown bears in the Sweetheart Creek drainage of Gilbert Bay.

Accomplishments: Lab results returned during the report period indicated that a minimum of eight individual brown bears used the Sweetheart Creek area during the sampling period.

Unit 1D

Activity 1: Monitor brown bears with GPS radiocollars to assess habitat use and movements in the Chilkoot River corridor in Haines.

Accomplishments: We downloaded data from recovered collars and gave public presentations on the findings.

Unit 4

Activity 1: Radiocollar and aerial track a subpopulation of bears. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation "Wildlife Capture and Chemical Restraint Manual.")

Accomplishments: No activity during this report period.

Activity 2: Capture one or two urban brown bears opportunistically in Sitka/Angoon/Hoonah and monitor their movements using GPS radio collars to identify problem areas and to assist educational efforts towards better refuse management.

Accomplishments: No activity during this report period.

Activity 3: Monitor public use of the Pack Creek viewing area in the Stan Price State Wildlife Sanctuary.

Accomplishments: In cooperation with the US Forest Service DWC staffed and operated the Pack Creek-Stan Price bear viewing area. Visitor numbers were monitored by staff at the viewing area and through a visitor permitting program during the peak viewing period.

Activity 4: Deploy two GPS radio collars on brown bears within the Blue Lake Dam project area as part of the FERC wildlife monitoring plan.

Accomplishments: No activity during this report period.

Activity 5: Deploy 1-2 GPS radio collars on brown bears at Port Armstrong in conjunction with the taser/brown bear monitoring project.

Accomplishments: We downloaded data from recovered collars and gave public presentations on the findings.

Unit 5:

Activity 1: Assist in the collection of bear collars from field settings and in data analysis.

Accomplishments: The field portion of the bear research project in the Yakutat area ended in June 2016. No activity during this report period.

Activity 2: Coordinate with community groups, Alaska Wildlife Troopers, and City of Yakutat to provide bear safety education, and to reduce human caused bear attractants in and near Yakutat.

Accomplishments: Area management biologists continued working with the City of Yakutat and Alaska Wildlife Troopers to educate the public about bears and to evaluate and implement appropriate ways of minimizing bear attractants in the community with the goal of improving public safety.

Submitted by: Tom Schumacher, Management Coordinator

Date: September 2017

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PO Box 115526
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**Alaska Department of Fish and Game
Wildlife Restoration Grant**

GRANT NUMBER: AKW-20 Wildlife Restoration FY2017

PROJECT NUMBER: 4.0

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

REPORT PERIOD: July 1, 2016 – June 30, 2017

PROJECT LOCATION: Region 2

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

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

Regionwide: Units 6, 7, 8, 14C, and 15

ACTIVITY 1: Prepare information for 5-year brown bear management operational plans.

Staff collected information, prepared report, and submitted for publication in 2015. The department is transitioning to a 5-year report and plan. The next report will be published in 2020.

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

Staff routinely interact with federal staff and discuss management of brown bear relative to the respective regulatory systems.

ACTIVITY 3: 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 4: 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 II were presented to staff or appointed sealers for specimen collection and sealing. See area specific activities for additional information.

ACTIVITY 5: Obtain estimates of ages of all 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 bear harvest database.

Activities by Unit:

Unit 6

ACTIVITY 1: Sealed 14 female and 32 male bears for a total harvest of 46 bears.

ACTIVITY 2: Collected teeth from at least 46 bears for aging.

ACTIVITY 3: Track and den surveys in Unit 6D were conducted in May 2017.

Units 7 & 15

ACTIVITY 1: The Kenai brown bear management strategy was revised in 2013. Additional harvest opportunity was provided due to a documented increase in bear numbers and a population that has reached social carrying capacity.

We will continue to monitor the bear population through population demographic data from captured animals and harvest through sealing requirements. Harvest strategies will be adjusted to maintain sustainable harvest within population levels that meet an acceptable social carrying capacity for brown bears. Continued public education and enforcement of bear conservation strategies to minimize negative human bear interactions will be increased.

ACTIVITY 2: Forty-nine bears have been taken during the reporting period including 28 males and 21 females. This mortality includes 35 bears taken by legal hunting. Causes of non-hunting mortality include defense-of-life-or-property kills and illegal take.

ACTIVITY 3: Management staff assisted in brown bear captures for the Region II Kenai Peninsula brown bear demographic research project. As of late August 2016, there are 40 collared adult female brown bears on the Kenai. Bears were captured as part of a research project reported under a different job.

Unit 8

ACTIVITY 1: Implementation of the Kodiak Bear Conservation Management Plan continued in 2016–17 with support from the Kodiak Unified Bear Subcommittee (KUBS) and other local supporters. We continued to make progress with the Kodiak Island Borough Assembly and area villages to reduce the availability of human food and garbage to bears. Working closely with Alaska Waste Management, the Alaska Wildlife Troopers and other local law enforcement agencies (Coast Guard Military Police, Kodiak Island Borough, Kodiak Police Department) we have encouraged responsible waste management within the villages and the city of Kodiak. We have developed public service announcements and handouts providing guidelines for living responsibly in bear country and presented numerous bear safety presentations to groups and organizations throughout the island.

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ACTIVITY 2: We issued 470 hunting permits during this reporting period. The annual sport harvest was 189 bears, 137 males and 52 females (22%). Three bears were harvested during the federal subsistence hunt (2 males and 1 female) and

There were 28 non-sport hunting bear mortalities documented as follows: defense of life or property – 18 (6 male, 11 female, 1 unknown); agency kill – 1 (1 male); vehicle kill – 1 (1 female); illegal take – 1 (1 female); and natural/unknown – 7 (1 male and 6 unknown sex).

The 2016–17 sport harvest of 189 bears was well above the minimum annual harvest objective of 150 bears. An intensive aerial survey was conducted during this report period. Harvest data suggests that the unit-wide bear population continues to be stable.

ACTIVITY 3: We have continued to assess survival and productivity of female brown bears and cubs on Sitkalidak Island, Alaska. Continuing a project initially implemented in 2008 to monitor survival and productivity of female brown bears on Sitkalidak we conducted aerial surveys this reporting period to assess survival and productivity of bears radio-collared between 2008 and 2015. Three collars have either malfunctioned or stopped working and have been unable to be located.

ACTIVITY 4: Genetic samples are collected from all hunter harvested and agency killed brown bears. Other samples are collected opportunistically when possible. The feasibility of using genetic analysis for a population estimate is being assessed.

Unit 14C

ACTIVITY 1: Two brown bear were reported harvested in Unit 14C (1 male and 1 female). Three male brown bears and one female brown bear were killed in defense of life and property. One male and 1 female brown bear were killed by ADF&G. Two male brown bears were killed by vehicles.

Submitted by: Cynthia M. Wardlow, Management Coordinator

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**Alaska Department of Fish and Game
Wildlife Restoration Grant**

GRANT NUMBER: AKW-20 Wildlife Restoration FY2017

PROJECT NUMBER: 4.0

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

REPORT PERIOD: July 1, 2016 – June 30, 2017

PROJECT LOCATION: Region 3

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

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

Region wide Activities:

1. Prepare 5-year brown/grizzly bear management reports and operational plans.

Compiled information and data from harvest and sealing records for 7 five-year Brown Bear Management Reports and Operational Plans for Units 12, 19, 20, 21, 24, 25, 26B, and 26C.

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

Monitored the harvest of 230 grizzly bears in Units 12, 19, 20, 21, 24, 25, 26B and 26C during FY17 through sealing reports, permit reports, field observations, interviews with successful hunters and analyses of harvest data.

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

Harvest information was collected and a tooth extracted from approximately 230 grizzly bears harvested in Units 12, 19, 20, 21, 24, 25, 26B and 26C.

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

Regionwide: Premolars from approximately 230 grizzly bears harvested in FY17 were submitted

to laboratory for age analysis. Age was quantified for 213 bears harvested in FY16.

5. Monitor and analyze brown bear bait station permit distribution.

Monitored harvest of brown bears taken over bait in Units 12, 20A, 20B, 20C, 20E, 21D, 24C, 24D, and 25D, where 829 bear bait stations were registered.

6. Provide brown bear management information to State and Federal regulatory processes.

Communicated and coordinated with and attended meetings of 15 local Fish and Game Advisory Committee, the Alaska Board of Game, 2 Federal Regional Advisory Councils, the Federal Subsistence Board, numerous local village councils, Native corporations, and the Wrangell-St. Elias Subsistence Resource Commission about brown bear management and to review and analyze regulation proposals for the Alaska Board of Game and the Federal Subsistence Board.

7. Conduct a bear density assessment.

Unit 20A: Attempted to estimate brown bear abundance in early May (line-transect technique) and late June (capture-mark-recapture pilot study) to determine sustainable harvest rates of brown bears in Interior Alaska.

8. Monitor blueberry abundance on permanent study plots to evaluate relationships between berry abundance and grizzly bear harvest.

Monitored blueberry abundance on 8 sites along on the Taylor, Alaska, and Tok Cutoff Highways in Units 12 and 20E.

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. Educate the public on bear awareness and safety. 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.

Delta Area: Responded to 7 instances of human-grizzly bear interactions and made recommendations.

Fairbanks: Responded to 1 instance of human- grizzly bear interactions and made recommendations.

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ANNUAL SURVEY AND INVENTORY

GRANT AND SEGMENT NO. AKW-20 Wildlife Restoration FY2017

PROJECT NO. 4.0 Brown/Grizzly Bear

PERIOD: July 1, 2016 – June 30, 2017

PROJECT LOCATION: Region IV (Units 9, 10, 11, 13, 14A, 14B, 16, and 17)

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 Alaska Brown Bears and Factors Influencing Their Populations in
Region IV**

Regionwide Activities:

ACTIVITY 1: Prepare biennial brown bear management reports.

The biennial brown bear management reports were not due during this reporting period and we are in the process of transitioning to a five-year Species Operational Plans.

ACTIVITY 2: 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 3: Collect harvest data, determine the sex, and extract a tooth for aging¹ from brown bears presented for sealing by hunters.

	Males	Females	Unknown	Total
<i>Unit 9:</i>	7	4	0	11
<i>Unit 10:</i>	12	2	0	14
<i>Unit 11:</i>	5	2	0	7

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<i>Unit 13:</i>	77	64	1	142
<i>Unit 14A:</i>	2	1	0	3
<i>Unit 14B:</i>	11	8	0	18
<i>Unit 16:</i>	96	41	0	137
<i>Unit 17:</i>	28	23	0	51

Unit 9: Preliminary fall average age = 6 years.

Unit 10: Preliminary fall average age = 10 years.

Unit 11: Preliminary fall average age = 12 years

Unit 13: Preliminary fall average age = 5.5 years.

Unit 14A: Preliminary fall average age = 6 years.

Unit 14B: Preliminary fall average age = 3 years

Unit 16: Preliminary fall average age = 7 years.

Unit 17: Preliminary fall average age = 8 years.

¹ Determination of age through the cementum layer aging technique is dependent on outside contractors and not always available at the time of these reports.

ACTIVITY 4: Educate the public on bear awareness and safety, and provide demonstrations of how to use electric bear fences to reduce bear/human problems as requested.

Educational outreach takes place in the field, office, and classroom. When requested staff demonstrates how to reduce or eliminate attractants in the camp, home, and business as well the proper use of electric fences to reduce bear/human conflicts.

ACTIVITY 5: Provide information to state and federal regulatory processes on brown bear management.

Information is provided to the Advisory Committees, Rural Advisory Committees, Board of Game, and Federal Subsistence Board in addition to our state and federal partners.

Activities by Unit:

Unit 9:

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

Residents reporting bear issues were advised on the importance of proper stowage of attractants and on the use of electric fences.

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

Funding and time was not adequate to complete this survey this reporting period.

Unit 16

ACTIVITY 1: Conduct line-transect survey of the brown bear population and refine technique.

No brown bear census data was collected during this reporting period. Data previously collected is currently being analyzed.

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. DFG staff worked with the Dillingham animal control officer in addressing calls associated with bears that were considered public safety concerns. Several site visits were conducted and advice was given to homeowners about alleviating bear concerns.

ACTIVITY 2: Work with landfill to decrease attractants to bears.

We worked with the landfill manager to minimize bear attractants through the upkeep of electric fences and timely cleaning of a fish waste disposal tank.

Submitted by: Todd A. Rinaldi

Date: 1 September 2017

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**Alaska Department of Fish and Game
Wildlife Restoration Grant**

GRANT NUMBER: AKW-20 Wildlife Restoration FY2017

PROJECT NUMBER: 4.0

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

REPORT PERIOD: July 1, 2016 – June 30, 2017

PROJECT LOCATION: Region 5

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



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

Region wide Activities:

Prepare a regional biennial brown bear management report.

A brown bear management report was not due to be prepared during this reporting period.

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.

Review and revise population objectives.

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

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, 20 brown bears have been reported harvested in the general hunt in Unit 18 all in the fall of RY2016 and 23 for the spring of 2017. Of these bears, 8 were male bears and 12 were female. sixteen bears were harvested by nonresidents and 6 were taken by residents.

Unit 22: Reported harvest during the RY16-17 reporting period was 110 brown bears. Sex composition of the total reported harvest was 71 males, 38 females, and 1 unknown. The fall and spring season reported a harvest of 59 bears 51 bears, respectively. The average annual reported harvest for the last 10 years (RY07 through RY16) is 99 bears per year (range 86-116 bears per year). Non-residents harvested 43% (47 of 110 bears) of the reported bears in RY16 on drawing permits or general season harvest.

Unit 23: Reported harvest during RY15-16 was 47 bears through the general hunt for residents, 0 in the registration hunt for residents, and 14 were harvested in the drawing hunt for non-residents. Therefore, 61 bears were harvested. The average annual harvest for the last 10-years is 56 bears per year (range 33-71 bears per year).

Unit 26A: We recorded brown bear harvest through field observations, interviewed hunters, and analyzed brown bear sealing data and subsistence harvest. Thirty-two brown bears (25 males, 7 females) were reported taken in Unit 26A during the reporting period. Twenty-one were taken by nonresidents, 7 by nonlocal Alaskan residents, 3 by residents of Unit 26A, and 1 unknown. Sixteen bears were taken during August, 6 in September, 2 in May, 3 in June, and 5 in July. The average annual harvest for the last 10 years is 18 bears per year.

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

Unit 18: Data were collected from 20 sealed bears (10 males and 10 females). Teeth were extracted for aging when these bears were presented for sealing.

Unit 22: Data were collected from 109 sealed bears. Premolar teeth were extracted for aging when these bears were presented for sealing.

Unit 23: Data were collected from 61 sealed bears. Teeth were extracted for aging when these bears were presented for sealing.

Unit 26A: Data were collected from 32 sealed bears (25 males and 7 females). Teeth were extracted for aging when these bears were presented for sealing.

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 RY14 is 9.1 for females and 8.4 for males.

Unit 22: Premolars were extracted and sent to Matson's Lab for sectioning and aging; results for the RY16 period are not available. Ages returned for

the RY15 reporting period show the average age for males was 7 years old (n=63, range= 2 yrs-32 yrs.), and sows was 6 years old (n=31, range=1 yr-20 yrs.). The average age of males and females harvested in Unit 22 the last 10 years (from RY06 to RY15) was 6.5 years old and 7 years old, respectively.

Unit 23: Premolars were extracted and sent to Matson's Lab for sectioning and aging; results for the RY14 period are not available. The average age of all bears taken in Unit 23 from RY02 through RY11 was 8 yrs. for males and females combined, as well as considered for each sex separately.

Unit 26A: Of the 32 bears that were sampled in RY16 data are incomplete to compute an annual average age. The average age from RY00 through RY10 was 11 years for males and 8 years for females.

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. One hunter obtained a registration permit and reported that they did not hunt.

Unit 22: The department administered 2 subsistence brown bear registration permits (RB699) during the reporting period. Success of these permits is unknown.

Unit 23: No brown bears were reported taken under the subsistence brown bear registration hunt (RB700) in Unit 23 during this period. Since general season bear regulations have been liberalized and no tag is required, most subsistence hunters are using general season requirements.

Unit 26A: No brown bears were reported taken in RY16 under the subsistence brown bear registration hunt (RB697) in Unit 26A. Since general season bear regulations have been liberalized and no tag is required, most subsistence hunters are using general season requirements.

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 reporting a bear taken during harvest or in a Defense of Life & Property situation, and methods to minimize human-bear conflicts during Advisory Committee meetings, Regional Advisory Council meetings, and with local residents.

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.

Educate the public on bear awareness and safety, and provide demonstrations of how to use electric bear fences to reduce bear/human problems.

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.

Unit 22: Unit 22 promotes the use of electric fences around camps and clean camps. Bear Aware posters were given out to local organizations and the public on how to keep bears away from camp or homes. Staff participated in brown bear safety and bear education programs with local youth and private organizations.

Unit 23: We spoke to numerous hunters, especially hunters who reside outside of Unit 23 who call for information, about bear safety.

Unit 26A: We continued to promote the use of electric fences around cabins as a way to reduce human/bear conflicts

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: Each year we work with residents and provide educational information to reduce bear/human conflicts at camps and residences. Few bear problems were reported.

Unit 22: Reports of problem bears and DLPs continue throughout the unit. Staff worked with Norton Sound villages and village public safety officers to have nuisance bears reported to the Department and, if taken, salvaged properly.

Unit 23: We also spoke with local residents about preventing DLP situations and the need to report bears taken under such circumstances.

Unit 26A: Each year there are reports of brown bears breaking into cabins and entering villages. Efforts are being made to improve knowledge of DLP regulations and expand the use of registration permits for subsistence hunting of bears. Tag fees were eliminated for the general season hunt, which will make it easier for residents to protect their property. Electric fences are an alternative to protect remote cabins.

Activities by Unit:

Unit 22

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

Annual reported harvest of boars between RY90 and RY16 has consistently exceeded the sow harvest. Historical reported harvest of Unit

22 data suggests no deviation in sex or age structure of the Unit 22 bear population. Anecdotal evidence from the public indicates the population is highly productive. Reports of sows with twin & triplet cubs are common.

Analyze drawing permit harvest data collected for nonresident drawing hunts.

The department administers two nonresident drawing permit hunts (DB685 in Units 22B/22C and DB690 in Units 22D/22E) each year. Twenty-seven (27) and 21 permits, respectively, are awarded to nonresident hunters. This reporting period resulted in 63% of DB685 and 100% DB690 permits being awarded to hunters. The RY16 success rates for nonresident hunters in the field for permit hunt DB685 and DB690 was 82% (9 of 11) and 55% (11 of 20), respectively.

Complete surveys and data analysis on a brown bear census project with National Park Service in Unit 22.

Unit 22 completed a brown bear survey with the National Park Service in May 2015. The 2015 survey results estimated the bear density at 36.5 bears/1000 km², which is similar to the density found in the 1991 survey by Miller and Nelson (1993). However, the two survey methods are not directly comparable. The 1991 area was 1/10 of the 2015 survey and represented densities in a relatively small area. The 2015 survey covered 20,000 km² and is more representative of the center portion of GMU 22. It is difficult to understand population change over the last 25 years, although reported harvest has approximately doubled. Based on the 2015 survey, current harvest levels (~100 bears/year) represent approximately 4-5% harvest rate for total bears (all ages) and approximately 6.5-8% of independent bears (non-cubs). Additional surveys are planned in the future with the goal of providing information on population trends.

Complete surveys and data analysis on a brown bear census project with National Park Service in Unit 22.

No brown bear surveys have been completed on Unit 22 since 2015.

Units 23 and 26A:

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

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.

In 2015 a non-invasive mark-resight (with a sightability correction factor) brown bear survey was completed in the Noatak Drainage, results pending.

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. Analysis of sealing data indicates 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.

Analyze harvest data collected from selected communities in Unit 23 through household subsistence surveys.

Community-based Harvest Assessments were completed by Division of Subsistence in Kotzebue in Unit 23, and in Point Hope in nearby neighboring Unit 26A. Data analysis is currently ongoing and results are not available. Previous Community-based Harvest Assessments suggest the harvest of brown bears by residents of Unit 23 is low but accounts for more than sealing records indicate.

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.

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.

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

Community-based Harvest Survey were completed by Division of Subsistence in Barrow, Nuiqsut, and Point Hope in Unit 26A; also completed in Anaktuvuk Pass in close neighboring Unit 24. Data analysis is currently ongoing and results are not available.

Previously, we estimated local harvest by using data from ADF&G Subsistence Division, 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.

Submitted by: Phillip Perry, Region V Management Coordinator