FEDERAL AID
ANNUAL PERFORMANCE REPORT

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

STATE: Alaska   **GRANT AND SEGMENT NR.:** W-33-12

PROJECT NR.: 4.0

PERIOD: 1 July 2013 – 30 June 2014

PROJECT LOCATION: Statewide

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

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

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

Regionwide Activities

ACTIVITY 1: Prepare a biennial brown bear management report.

> Reports were completed in 2013 during their regular 2-year cycle.

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

> Data from brown bear harvest will be provided to the Alaska Board of Game and Regional Advisory Council during their next regularly scheduled meetings (winter 2014).

ACTIVITY 3: 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. Region-wide, 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 150 bears were harvested in the region by hunters during the report period.

ACTIVITY 4: 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 and biological information on each bear was collected. A tooth was extracted from each bear for aging. As part of ongoing mainland brown bear research efforts, staff collected tissue and hair samples from brown bears harvested in mainland areas of Southeast, Alaska...

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

> This was accomplished.

ACTIVITY 6: 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 1D:* 1 DLP killed brown bears
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> *Unit 4:* 7 DLP killed brown bears
>
> *Unit 5:* 2 DLP killed brown bears.

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

> *Unit 1C and 1D:* Biologists continue to work with local governments in Juneau, 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. Biologists participated in Juneau Bear Committee meetings to provide information concerning department management strategies, and to assist in focusing the committees' efforts. An electric fence was constructed around infrastructure used to compost waste in Haines. Since the fence construction was completed and the fence was energized, bears have largely been excluded from accessing human produced garbage. Concerns about increased bear activity in neighborhoods adjacent to the Haines landfill to a large extent did not materialize. 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 and other communities to provide educational material and regular public service reminders via various media formats to supplement the efforts of Sitka's Bear Task Force work group of federal, state and community organizations.
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> *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. Landfill staff has reduced the size of the working face of the landfill, and has begun to burn trash daily. While bear activity in and near the landfill has been reduced, bears are

still present. Department staff also helped organize a local bear committee to assist with community brown bear education efforts.

ACTIVITY 8: 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.

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

This was accomplished for Unit 4 in concert with the 2013 Board of Game meeting. The Unit 4 Brown Bear Management Strategy was discussed at length and many of the original stakeholders participated in this effort. Recommendations for action items from that meeting continue to be worked on.

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 one brown bear along the Chilkoot River every few months.

Unit 4

ACTIVITY 1: Radiocollar and aerial track a subpopulation of bears.

This was not accomplished during the FY.

ACTIVITY 2: 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.

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

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

This was accomplished during the report period. Pack Creek was again a successful bear viewing area, and department staff along with USFS staff monitored the viewers throughout the summer season. There were no injuries or problems associated with bears during this FY.

ACTIVITY 4: Capture one or two brown bears at Pack Creek and monitor their movements using GPS radio collars.

One bear was captured and radio-collared this year.

Unit 5:

Activity 1: Affix 2-3 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.

> No brown bears were captured at the Yakutat landfill in 2013. Additional captures are planned for 2014.

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

Regionwide:

ACTIVITY : Draft a biennial brown bear management report.

> Brown Bear management report was not due during this period. Staff continued to collect information in preparation for drafting next report.

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 II were presented to staff or appointed sealers 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 bear harvest database.

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

> Staff routinely interact with federal staff and discuss management of brown bear relative to the respective regulatory systems. Staff collected and prepared information for the upcoming state Board of Game meeting this reporting period.

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

> Surveys were completed in GMU 8 during this reporting period and reported below. Staff worked on refining the line census technique and reanalyzed previous collected information.

Activities by Unit:

Unit 6

ACTIVITY: Sealed 15 female and 32 male bears for a total harvest of 47 bears.

ACTIVITY: Collected and submitted teeth from 47 bears for aging.

ACTIVITY: Track and den surveys in Unit 6D on Hinchinbrook Island were conducted this year but a very early spring and minimal winter snowpack resulted in poor survey quality.

Units 7 & 15

ACTIVITY: We continue to implement the conservation strategy with sustainable hunting opportunities and continued public education on bear conservation measures. 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. Increased public outreach efforts were made to educate the public on bear attractant issues in order to limit defense of life and property kills.

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 : Sixteen bears were captured and collared during the performance period. We currently have 33 collared bears active on the Kenai Peninsula. Bears were captured as part of a research project reported under a different job.

ACTIVITY. One hundred and twelve bears have been taken during the reporting period including 41 adult males, 23 subadult males, 26 adult females, 17 subadult females, 3 yearling 1 cub of the year, and 1 unknown. This mortality includes 95 bears taken by legal hunting. Causes of non-hunting mortality include defense-of-life-or-property kills, road kills, and illegal take.

Unit 8

ACTIVITY : Implementation of the Kodiak Bear Conservation Management Plan continued in 2013–14 with support from the Kodiak Unified Bear Subcommittee (KUBS) and other local supporters. We continued to make progress with local residents 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.

ACTIVITY: We issued 572 hunting permits during this reporting period, 295 for the fall season and 277 in the spring. During the fall season, 218 hunters went afield and killed 57 bears (39 male, 18 female). During the spring season 237 hunters went afield and killed 107 bears (88 male, 19 female). The annual harvest was 164 bears of which 127 were males (77%) and 37 were females (23%). Male skull measurements averaged 25.7 inches, the highest average in 12 years and the second highest on record. Similar to historical means, female skull measurements

averaged 22 inches. The spring 2014 bear season resulted in the highest number of 'trophy class' (skulls exceeding 28 inches) bears harvested on record. Of the 107 bears harvested in spring, 19 bear skulls exceeded 28 inches of which 5 exceeded 29 inches. The 2013–14 sport harvest of 180 bears was well above the minimum annual harvest objective of 150 bears. Males comprised 77% of the harvest, well above the minimum management objective of a 60% male harvest.

There were 16 non-sport mortalities documented this reporting period. Six bears (1 male, 5 females) were killed in defense of life or property and 10 bears (1 male, 1 female and 8 unknown genders) died of natural or unknown causes. No bears were reported taken during the federal subsistence hunt.

ACTIVITY: Due to weather constraints and pilot availability no intensive aerial surveys were conducted this reporting period by either agency.

ACTIVITY: Assessing survival and productivity of female brown bears on Sitkalidak Island, Alaska. Continuing a project implemented in 2012 to monitor survival and productivity of female brown bears on Sitkalidak Island we conducted 3 aerial surveys this reporting period to assess survival and productivity of 10 bears radio-collared in May 2012. Three collars malfunctioned and were unable to be located. Two bears had a 100% cub survival rate from capture (May 2012) to June 2014 with each bear producing 2 cubs. Three bears had a 66% cub survival rate from capture to June 2014 with each bear producing 3 cubs of which 2 survived. One bear had 3 cubs but could not be located following the initial visual identification. No cubs were identified for 1 female despite being visually located 3 times post capture. The 6 bears continually monitored had an average 2.7 cubs/female with an overall survival rate of 83%.

Assessing movements, distribution, and resource use of brown bears on Afognak Island, Alaska. Seven female brown bears collared in 2012 and 2013 on Afognak Island continue to be monitored. One female brown bear slipped its collar in 2013 and did not provide any reliable data. A total of 6,799 GPS locations were collected on bears this reporting period resulting in 222-1,490 locations per individual (mean = 971, SD 406). No collared bears were harvested or died during this reporting period. We calculated 95% and 50% fixed kernel home range and core area sizes for radio-collared female bears during this reporting period. Home ranges ranged from 10.16-86.17 km^2 with a mean home range size of 28.14 km^2 (SD=26.58). Fifty percent fixed kernel core areas ranged from 2.38-12.06 km^2 with a mean core area size of 5.18 km^2 (SD=3.68). Movement and distribution data continue to be collected.

Unit 14C

ACTIVITY : Three brown bear were reported taken in Unit 14C (3 males). Three additional brown bears (all males) were killed in defense of life or property. One male cub bear was killed by a vehicle.

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

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Regionwide Activities

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

Monitored preliminary harvest of 258 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.

Collected data, determined sex, and extracted a tooth for aging from 258 brown bears presented for sealing.

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

Submitted teeth collected from 258 bears during the sealing process to a laboratory for aging.

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

Monitored and analyzed bear bait station permit distribution. More than 500 bait sites were registered. Preliminary data indicate that fewer than 20 brown bears were taken over bait.

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 5: Prepare brown bear management reports.

Prepared preliminary data for triennial 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

Did not monitor blueberry abundance because of insufficient personnel to complete the task.

Unit 20E

ACTIVITY 1: Monitor blueberry abundance on permanent study plots to evaluate relationships between berry abundance and brown bear harvest

Did not monitor blueberry abundance because of insufficient personnel to complete the task.

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

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

Regionwide:

ACTIVITY 1: Prepare biennial brown bear management reports.

The biennial brown bear management reports were not due during this reporting period.

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 aging from brown bears presented for sealing by hunters.

	Males	Females	Unknown	Total
Unit 9:	355	130	0	485
Unit 10:	4	2	0	6
Unit 11:	8	6	1	19
Unit 13:	99	59	0	158
Unit 14A:	4	6	0	10
Unit 14B:	7	7	0	14
Unit 16:	71	51	0	122
Unit 17:	63	50	4	117

> *Unit 9:* Preliminary fall average age = 7.5.
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> *Unit 10:* Preliminary fall average age = 10.
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> *Unit 11:* Preliminary fall average age = 6.8.
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> *Unit 13:* Preliminary fall average age = 5.9.
>
> *Unit 14A:* Preliminary fall average age = 6.2.
>
> *Unit 14B:* Preliminary fall average age = 3.2.
>
> *Unit 16:* Preliminary fall average age = 6.8.
>
> *Unit 17:* Preliminary fall average age = 7.9.

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

> No brown bear census data was collected in FY13. 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 were advised on the importance of proper stowage of attractants and on the use of electric fences.

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.

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

Regionwide:

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, 16 brown bears have been reported harvested in the general hunt in Unit 18 for the fall of 2013 and 6 for the spring of 2014. Of these bears, 19 were male bears and 3 were female. Eighteen bears were harvested by nonresidents and 4 were by residents.

Unit 22: Reported bear harvest during the reporting period was 101 brown bears. Non-residents harvested 40% (n=40) of the bears during RY13 in the following areas: 30 bears in 22A, 7 bears in 22B, 2 bears in 22D, and 1 bear in 22E. Sex composition of the total reported harvest was 60 boars, 34 sows, and 7 unknown. The fall season reported a harvest of 52 bears; and the spring season reported a harvest of 49 bears. The reported annual harvest of 101 bears is stable with the RY12 period when 100 bears were sealed. The average annual reported harvest for the last 10 years (RY04 to RY13) is 95 bears per year (range 89-100 bears per year).

Unit 23: This year, 35 bears were harvested through the general hunt for residents, 0 in the registration hunt for residents, and 7 were harvested in the drawing hunt for non-

residents. Therefore, 42 bears were harvested. The average annual harvest for the last 10-years is 53 bears per year (range 33-76 bears per year).

Unit 26A: We recorded brown bear harvest through field observations, interviewed hunters, and analyzed brown bear sealing data and subsistence harvest. Twenty two brown bears (15 males, 7 females) were reported taken in Unit 26A during the reporting period. Sixteen were reported taken by nonresidents, 5 by nonlocal Alaskan residents, and 1 by a resident of Unit 26A. Seventeen bears were taken during August and 5 were taken in September. The average annual harvest for the last 10 years is 16 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 22 sealed bears (19 males and 3females). Teeth were extracted for aging when these bears were presented for sealing.

Unit 22: Data were collected from 83 sealed bears (50 males, 32 females, and 1 unknown). Premolar teeth were extracted for aging when these bears were presented for sealing.

Unit 23: Data were collected from 42 sealed bears. Teeth were extracted for aging when these bears were presented for sealing.

Unit 26A: Data were collected from 22 sealed bears (15 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 RY12 is 9.8 for females and 10.5 for males.

Unit 22: Premolars were extracted and sent to Matson's Lab for sectioning and aging; results for the RY13 period are not available. The average age of bears harvested in Unit 22 from RY02 and RY11 for males and females was 6.4 years and 6.5, respectively. Ages returned for RY2012-2013 resulted in average age for males was 5.8 years and 5.7 years for females.

Unit 23: Premolars were extracted and sent to Matson's Lab for sectioning and aging; results for the RY13 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 15 bears that were aged in RY13 the average age was 5.8 years. The average age from RY00 through RY10 was 11 yrs for males and 8 yrs 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. Three hunters obtained registration permits and reported their hunts.

Unit 22: The department administered 3 reported subsistence brown bear registration permits (RB699) during the reporting period. No brown bears were reported taken in RY13.

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 RY13 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 individual local residents. Staff participated in brown bear safety and bear education programs with local youth and private organizations.

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.

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.

Regionwide: A *Bear Aware* poster with tips on keeping bears away from camp was created for distribution throughout the region.

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 three DLP bears were reported taken in RY13.

Unit 22: Reports of problem bears and DLPs continue throughout the unit. Staff work 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 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 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. Tag fees were eliminated for the general season hunt, which will make it easier for

residents to protect their property. We are promoting the use of electric fences for people with remote cabins and bought and installed a fence to use as a demonstration.

Activities by Unit:

Unit 22

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

> Annual reported harvest of boars between RY90 and RY12 has consistently exceeded the sow harvest. Historical reported harvest of Unit 22 data suggest 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 harvest data collected from selected communities in Unit 22 through household subsistence surveys.

> No community-based harvest surveys were conducted during this reporting period.

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 12 permits, respectively, are awarded to nonresident hunters. This reporting period resulted in 100% of DB690 permits being awarded and 56% DB685 permits awarded to hunters. The RY12 success rates for hunters in the field for permit hunt DB685 and DB690 was 50%; and 25%, respectively.

Educate the public on bear behavior and safety to minimize conflicts between bears and the public, and the use of electric fences.

> Unit 22 promotes the use of electric fences around camps and clean camps. Staff worked with rural communities to have nuisance bears reported to the Department. Bear safety is given to local youth and private organizations, and discussed with residents and visitors who will be in bear country.

Units 18, 23 and 26A:

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 km^2 area in Unit 26B and eastern Unit 26A resulted in a density estimate of 18.3 bears/1000 km^2. We saw 6 bears during 25.4 hours in our moose trend count census in April 2014. 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.

Analyze harvest data collected from selected communities in Unit 23.

Community harvest assessments were conducted in the communities of Deering and Kotzebue 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.

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

In Unit 26A we set up an electric bear fence around the cabin of a local hunter to use as a demonstration. It was quite successful. The cabin had been broken into for 3 consecutive years, but has not been for the last 2 years since we put up the bear fence. A few other hunters have purchased bear fences.

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.

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.