BROWN BEAR
ANNUAL SURVEY AND INVENTORY

STATE: Alaska

GRANT AND SEGMENT NUMBER: AKW-4 Wildlife Restoration FY2015

PROJECT NUMBER: 4.0

PERIOD: 1 July 2014 – 30 June 2015

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 Alaska Brown Bears and Factors Influencing Their Populations in Region I

Region wide Activities:

ACTIVITY 1: Prepare a biennial brown bear management report.

No report was written during 2014. A report will be written in 2015 during the regular 2-year reporting cycle.

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

Data from brown bear harvest were provided to the Alaska Board of Game and Regional Advisory Council during their regularly scheduled winter 2015 meeting.

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.

Unit 4 records indicate 122 bears were killed; 110 from hunter harvest, 4 from illegal hunting, 7 DLPs, and 1 public safety kill. Approximately 700 registration permits were issued for the 3 hunts.

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.

In addition to tooth collection from each bear, tissue samples were also collected from all bears killed on Barnaof Island to build this island's DNA database.

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 1A: 1 DLP killed brown bear
Unit 1D: 3 DLP killed brown bears
Unit 4:   7 DLP killed brown bears
Unit 5:   5 DLP killed brown bears

Unit 4: Seven bears were killed DLP, primarily due to poor garbage control in communities. One bear was killed under public safety parameters while trying to haze it from a campground.

We continued aversive conditioning work with brown bears at the Port Armstrong salmon hatchery using conducted electrical weapons (Tasers). The goal of this effort is to prevent/reduce DLP takes as bears congregate at the weir during salmon spawning and cross over into hatchery work and residential areas. Since 2011, we believe about 40 bears (primarily adult females and their cubs) that would have otherwise been killed have been successfully deterred from entering work and residential areas.

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. Directed community education efforts also took place in Hoonah and Tenakee Inlet this year.

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. Both the Department and the City of Yakutat have initiated an electric fence program, which has proven successful after demonstrating its use around a smoke house in town.

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.

Unit 4- New interest in guiding on native corporation lands emerged following passage of the Sealaska Lands bill. Discussions with guides and native corporation staff re-opened the spring.

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 consistent with Board of Game guidance. The Unit 4 Brown Bear Management Strategy was discussed at length, and many of the original stakeholders participated in this effort. We continue to work on recommended action items from that meeting.

Action items recommended by the 2015 Board of Game were adopted and will be implemented during the next regulatory year.

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.

We did not collar or track bears this year.

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.

We captured two bears and fitted them with GPS radiocollars 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 female 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.

Five brown bears were captured at the Yakutat landfill in 2014, and 4 were fitted with GPS radiocollars. In 2015 we plan to recapture and remove collars from all bears.

Submitted by: Tom Schumacher, Region I Management Coordinator

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

Region wide Activities:

ACTIVITY : Draft a biennial brown bear management report.

Brown Bear management report was due during this period. Staff collected information, prepared report, and submitted for publication. The department is transitioning to a 5-year report and plan. The next report will be published in 2020.

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 brown 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 March state Board of Game meeting.

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

No Surveys were completed during this reporting period due to early green-up. Staff worked on refining the line census technique and reanalyzed previous collected information.

Activities by Unit:

Unit 6

ACTIVITY: Sealed 12 female, 21 male and one of unknown sex bears for a total harvest of 34 bears.

ACTIVITY: Collected and submitted teeth from 34 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: 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 : Nine bears were captured and collared during the reporting period including 7adult females, one subadult male and one subadult female. Bears were captured as part of a research project reported under a different job.

ACTIVITY. Thirty-four bears have been taken during the reporting period including 13 adult males, 10 subadult males, 4 adult females, 6 subadult females, 1 cub of the year, and no yearlings. This mortality includes 30 bears taken by legal hunting. Causes of non-hunting mortality include defense-of-life-or-property kills and illegal take.

Unit 8

ACTIVITY : Implementation of the Kodiak Bear Conservation Management Plan continued in 2014–15 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 held multiple meetings and participated in a number of public presentations as well as developed public service announcements and handouts for Kodiak residents providing guidelines for living responsibly in bear country.

ACTIVITY: We issued 614 hunting permits during this reporting period, 306 (133 drawing, 173 registration) for the fall season and 308 (211 drawing, 97 registration) in the spring. During the fall season, 219 hunters went afield (drawing 133, registration 86) and killed 72 bears (drawing 62 [41 males, 21 females], registration 10 [9 males, 1 female]). In the spring season 275 hunters went afield (drawing 209, registration 66) and killed 112 bears (drawing 101 [84 males, 17 females], registration 11 [6 males, 5 females]). The annual sport harvest was 184 bears, 140 males (76%), 44 females (24%). No bears were harvested during the federal subsistence hunt.

There were 13 non-sport mortalities documented as follows: 5 (1 male, 2 females and 2 unknown) in defense of life or property, 1 (female) illegal sport kill, and 7 (unknown gender) died of unknown causes.

The 2014–15 sport harvest of 184 bears was above the minimum annual harvest objective of 150 bears. Males composed 76% of the harvest, above the minimum objective of 60% males. Harvest data suggests the unit wide bear population continues to be stable.

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

ACTIVITY: We have continued to assess survival and productivity of female brown bears on Sitkalidak Island, Alaska. Continuing a project initially implemented in 2008 to monitor survival and productivity of female brown bears on Sitkalidak we conducted 3 aerial surveys this reporting period to assess survival and productivity of 9 female bears radio-collared during the last capture event (May 2012). Two radio collars deployed in 2012 were no longer transmitting data and were unable to be located, resulting in the continuous monitoring of 7 females captured in 2012. In addition, one bear radio collared in 2008 continues to be monitored, resulting in 8 bears currently being assessed for survival and productivity. Of the 8 bears monitored this reporting period, Four bears had a 100% cub survival rate from capture (May 2012) to June 2015 with 1 bear producing 2 cubs, 1 bear producing 4 cubs (2 litters of 2 cubs), and 2 bears producing 5 cubs each (a litter of 2 and a litter of 3). Two bears had a 66% cub survival rate from capture to September 2014 with each bear producing 3 cubs of which 2 survived. Of these 2 bears, one had an additional litter of 3 cubs in the spring of 2015 and one was identified with no cubs. Both bears (and their young if applicable) continue to be monitored. One bear was unable to be located in 2014 but was accompanied by 3 yearlings when located in June 2015 and continues to be monitored. No cubs were identified for 1 female despite being visually located 6 times post capture. The 8 bears continually monitored had an average 2.2 cubs/female with an overall survival rate of 92.4%.

From 10–12 June 2015, we aerial darted 11 brown bears (11 females) and deployed 11 VHF radio-collars on Sitkalidak Island. Bears were in good physical condition with a mean body condition score of 3.4 (range = 2.0–4.0) and a mean estimated body weight of 415.6 lbs. (range = 375.0–500.0 lbs.). Estimated ages of captured bears ranged from 8–20 years, with a mean estimated age of 11.9 years. Total skull sizes (length + width/2) ranged from 22.0–25.0 inches with an average skull size of 23.5 inches.

Assessing movements, distribution, and resource use of brown bears on Afognak Island, Alaska. Four female brown bears collared in 2012 and 2013 on Afognak Island continue to be monitored. As programmed, 2 collars dropped off bears in 2014 and were recovered from the field and 1 collar malfunctioned and could no longer be detected. A total of 38,268 GPS locations have been collected on 8 bears through the end of this reporting period resulting in 2,214-7,967 locations per individual (mean = 4,783, SD 1,715). No collared bears were harvested or died during this reporting period. Resource use and movement analysis are currently underway.

Unit 14C

ACTIVITY : Two brown bear were reported harvested in Unit 14C (1 male and 1 female). Four additional brown bears were killed by non hunting sources (1 female in defense of life or property, 1 yearling female by agency-Anchorage Police Department, 1 male and one female by vehicle.

Submitted by: Gino Del Frate, Region II Management Coordinator

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

Region wide Activities:

1. Prepared biennial brown/grizzly bear management reports: collected preliminary data and wrote 14 draft biennial reports.

2. Monitored brown bear harvest through field observations, sealing reports of 280 brown bears, interviews with successful hunters and analyzed harvest data.

3. Collected harvest information and extract a tooth for aging from 280 brown bears presented for sealing by hunters.

4. Obtained estimates of ages of 202 harvested bears by tooth sectioning.

5. Monitored and analyzed brown bear bait station permit distribution. Bait stations were brown bear take was legal were distributed in 9 Game Management Units and a total of 41 brown bears were taken over bait.

6. Provide brown bear management information to State and Federal regulatory processes: 17 Fish and Game Advisory Committees, 1 Board of Game, 3 federal Regional Advisory Councils and 1 federal Subsistence Board.

Covers GMUs: 12, 19, 20, 21, 24, 25, 26B and 26C

Submitted by: Doreen Parker-McNeil, Region III Management Coordinator

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

Region wide Activities:

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:	6	4	0	10
Unit 10:	12	2	0	14
Unit 11:	3	4	0	7

Unit 13:	65	39	1	105
Unit 14A:	4	6	0	10
Unit 14B:	7	7	0	14
Unit 16:	71	51	0	122
Unit 17:	46	33	4	83

Unit 9: Preliminary fall average age = 10.

Unit 10: Preliminary fall average age = 11.

Unit 11: Preliminary fall average age = Not Available.

Unit 13: Preliminary fall average age = 5.4.

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 = Not Available.

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

No brown bear census data was collected in FY15. 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 the landfill by providing comments and guidance on the erection of an electric fence around the active landfill to deter bears from accessing household trash.

Covers GMUs: 9-11, 13, 14A, 14B, 16 and 17

Submitted by: Lem Butler, Region IV Regional Supervisor

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 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, 23 brown bears have been reported harvested in the general hunt in Unit 18 for the fall of 2014 and 3 for the spring of 2015. Of these bears, 13 were male bears and 13 were female. Seventeen bears were harvested by nonresidents and 9 were taken by residents.

Unit 22: Reported bear harvest during the reporting period was 90 brown bears. Non-residents harvested 44% (n=40) of the bears during RY14 in the following areas: 32 bears in 22A, 16 bears in 22B, 15 bears in 22D, and 10 bears in 22E. Sex composition of the total reported harvest was 47 boars, 39 sows, and 4 unknown. The fall season reported a harvest of 43 bears; and the spring season reported a harvest of 47 bears. The average annual reported harvest for the last 10 years (RY05 to RY14) is 96 bears per year (range 88-105 bears per year).

Unit 23: This year, 56 bears were harvested through the general hunt for residents, 0 in the registration hunt for residents, and 16 were harvested in the drawing hunt for non-residents. Therefore, 72 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. Thirty brown bears (20 males, 10 females) were reported taken in Unit 26A during the reporting period. One was reported taken by an alien, 17 by nonresidents, 11 by nonlocal Alaskan residents, and 1 by a resident of Unit 26A. Twenty-five 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 26 sealed bears (13 males and 13 females). Teeth were extracted for aging when these bears were presented for sealing.

> *Unit 22:* Data were collected from 72 sealed bears (38 males, 32 females, and 2 unknown). Premolar teeth were extracted for aging when these bears were presented for sealing.

> *Unit 23:* Data were collected from 72 sealed bears. Teeth were extracted for aging when these bears were presented for sealing.

> *Unit 26A:* Data were collected from 30 sealed bears (20 males and 10 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 RY13 is 13.6 for females and 12.3 for males.

> *Unit 22:* 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 bears harvested in Unit 22 the last 10 years (from RY04 to RY13) for both males and females was 6.5 years. Ages returned for RY13 resulted in average age for both males and females of 6.5 years.

> *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 30 bears that were sampled in RY14, only 4 reports have been received with ages ranging from 2 – 17 years. 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 an unsuccessful hunt.

> *Unit 22:* The department administered 4 subsistence brown bear registration permits (RB699) during the reporting period. One brown bear was reported taken in RY14.

> *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 RY14 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:* A demonstration project with an electric fence installed at a cabin with frequent bear/human problems has successfully stopped conflicts for several years. Additional use of electric fencing is anticipated in the future.

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 RY13 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.

> A Community-based Harvest Assessment was completed in Shishmaref by Division of Subsistence. Data analysis is currently ongoing and results are not available.

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 70% DB685 permits awarded to hunters. The RY14 success rates for hunters in the field for permit hunt DB685 and DB690 was 62%; and 67%, 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. Data analysis is currently ongoing and results will be summarized in the next years report.

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.

> *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: Peter Bente, Region V Management Coordinator