

**Wildlife Restoration MULTI-YEAR GRANT  
INTERIM PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 115526  
Juneau, AK 99811-5526

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

**GRANT NUMBER:** AKW-23-R5-2020

**PROJECT NUMBER:** P4.0

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

**PERIOD OF PERFORMANCE:** July 1, 2019 - June 30, 2021

**PERFORMANCE YEAR:** July 1, 2019 - June 30, 2020; year 1 of a 2-year grant

**REPORT DUE DATE:** Submit to FAC August 28, 2020

**PRINCIPAL INVESTIGATOR:** Phillip Perry, Region V Management Coordinator

**COOPERATORS:**

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Authorities: 2 CFR 200.328  
2 CFR 200.301  
50 CFR 80.90

**II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.**

Prepare a regional biennial brown bear management report.

Brown bear management reports for Units 18, 22, 23, and 26A were 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, brown bears have been reported harvested in the general hunt in Unit 18 all in the fall of RY 2019, 21 and 3 for the spring of 2020. Of these bears, 19 were male bears and 5 were female. Fourteen bears were harvested by nonresidents and 10 were taken by residents.

Unit 22: Reported harvest during the RY2019 reporting period was 95 brown bears. Sex composition of the total reported harvest was 59 males and 35 females. The fall and spring season reported a harvest of 44 bears and 47 bears, respectively. The average annual reported harvest for the last 10 years (RY10 through RY18) is 106 bears per year (range 95-130 bears per year). Non-residents harvested 32% (30 of 95 bears) of the reported bear harvest in RY19 through drawing permits or general season harvest. Nonresident harvest was hampered by a closure of the spring nonresident brown bear harvest through May 31 due to COVID-19 travel restrictions. Some harvest occurred in 22A by nonresidents during June 1 – 15.

Unit 23: Reported harvest during RY2019 was 23 bears through the general hunt for residents, 0 in the registration hunt for residents, and 12 were harvested in the drawing hunt for non-residents. Therefore, 35 bears were harvested. The average annual harvest for the last 10-years is 50 bears per year (range 33-71 bears per year).

Unit 26A: We recorded brown bear harvest through field observations and analyzed brown bear sealing data and subsistence harvest data. Sixteen brown bears (9 males, 7 females) were reported taken in Unit 26A during the reporting period. Six were taken by nonresidents, ten were taken by Alaskan residents. Five bears were taken in August, two in September, three in June, three in May and one in April and two were harvested on an unknown date. The average annual harvest for the last 10 years is 19 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 23 sealed bears (16 males and 7 females). Teeth were extracted for aging when these bears were presented for sealing.

*Unit 22:* Data were collected from 95 sealed bears. Premolar teeth were extracted for aging when these bears were presented for sealing.

*Unit 23:* Data were collected from 39 sealed bears (25 male and 14 females). Teeth were extracted for aging when these bears were presented for sealing.

*Unit 26A:* Data were collected from sixteen sealed bears (ten males and six 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 RY18 is 5.4

for females and 8.5 for males. This sample is very small N= 13 so averages are heavily influenced by single bears.

*Unit 22:* Premolars were extracted and sent to Matson's Lab for sectioning and aging; results for the RY19 reporting period are not yet available. Ages returned for the RY18 reporting period show the average age for males was 7.4 years old (n=54, range= 1–23 yrs), and sows was 7.5 years old (n=31, range=2–20 yrs). The average age of males and females harvested in Unit 22 the last 10 years (RY09–RY18) was 6.6 years old and 6.8 years old, respectively.

*Unit 23:* Premolars were extracted and sent to Matson's Lab for sectioning and aging. Ages returned for the RY18 reporting period show the average age for males was 8.6 years old (n=13, range= 2 yrs-17 yrs), and sows was 4.9 years old (n=11, range=2 yr-9 yrs).

*Unit 26A:* Of the 15 bears that were sampled in RY18 data are incomplete. For the females that were sampled for teeth, the average was 9.7 years old (n=3), for the males the average age was 12.25 years old (n=4). There were 16 total bears taken so nine of them were not aged.

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.

*Unit 22:* The department issued 0 subsistence brown bear registration permits (RB699) in Unit 22 during the reporting period.

*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 RY18 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 harvested or taken in a Defense of Life & Property situation, and

methods to minimize human-bear conflicts during Advisory Committee meetings, Regional Advisory Council meetings, local news reporters, 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. One person was mauled by bear on the Yukon River in the spring. An increase in bear problems around villages and fish camps were reported.

*Unit 22:* Unit 22 promotes the use of electric fences around camps and stresses the importance of keeping remote camps free of attractants. Bear Aware posters were provided 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. Staff visited villages and fish camps in subunit 22B to provide advice on bear safety and electric bear fence demonstrations or installation assistance.

*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. Efforts have been made to do bear safety programs at schools and in public meetings to increase bear awareness particularly in Utqiagvik and Anaktuvuk Pass.

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. Two nuisance bears were taken under DLP regulations.

*Unit 22:* One bear was killed in defense of life and property in Unit 22 during the reporting period. Staff members work with Norton Sound villages and village public safety officers to have nuisance bears reported to the Department and, when taken, salvaged properly. When the department received reports of bears within the vicinity of local communities efforts to educate the public were made in instances where bears posed a potential threat to public safety.

*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 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 and camping areas.

## **Activities by Unit:**

### **Unit 22**

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

In accordance with local management objectives, annual reported harvest of boars between RY90 and RY19 has consistently exceeded the sow harvest (the average harvest composition is 63% boars). Harvest data suggests a slight deviation in the age of female bears harvested from Unit 22; sow age increased slightly from an average age at harvest of 5.8 years old RY90-RY97 to 6.6 years of age at harvest from RY98-RY18. The average skull size of harvested females was stable between RY18 and RY19 with average skull size of 20.4 inches and 20.5 inches, respectively. The average skull size for males decreased from 21.0 inches in RY18 to 18.3 inches in RY19. Anecdotal evidence from the public indicates the population is highly productive; reports of sows with 2-3 cubs are common.

Analyze drawing permit harvest data collected for nonresident drawing hunts.

The department administers two nonresident drawing permit hunts (DB685 in GMU 22B and 22C and DB690 in GMU 22D and 22E) annually with 27 and 21 permits available annually, respectively. During the reporting period 15% of DB685 and 24% of DB690 permits were awarded to hunters. The spring COVID-19 travel restrictions for nonresidents prevented some nonresident hunters from harvesting a bear during spring RY19. The RY19 success rates for nonresident hunters in permit hunt DB685 and DB690 was 75% (3 of 4) and 40% (2 of 5), respectively. The average skull size of harvested sows was 19.2 inches and average skull size for boars was 23.2 inches in the DB685 hunt. For the DB690 hunt, the average skull size for sows was 20.1 inches and average skull size for boars was 20.4 inches.

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. A brown bear survey planned for the spring of 2020 was canceled. A survey is currently scheduled for the spring of 2021. The 2015 survey estimated bear density within the survey area at 36.5 bears/1000 km<sup>2</sup>, which is similar to the density estimate from a survey completed in 1991 (Miller 1993). However, the two survey methods are not directly comparable due to differences in study area size and methodology. 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.

### **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 subsistence users indicate the current population level of brown bears is higher than they would like to see. There were seven brown bears reported harvested in 26A during this reporting period. This level of harvest is considered sustainable.

Actions were taken at the Board of Game to increase brown bear bag limits from one bear a year to two brown bears per year.

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

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.

There were no community household surveys conducted in 26A during this reporting period that included information regarding brown bears.

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 work was completed for this activity during this reporting period. Previously in Unit 23 staff assisted in completing a brown bear survey in the lower Noatak drainage with the National Park Service in May 2016 and 2017 in the upper Noatak drainage. The 2016 survey results estimated the bear density at 106.4 bears/1000 km<sup>2</sup> and the 2017 survey results estimated the bear density at 41.8 bears/1000 km<sup>2</sup>.

### **III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.**

For FY2020 this project was underspent by about \$5,000 or about by 6%. Staff time was slightly lower than budgeted and expenses for supplies and contractual were slightly lower.

#### **IV. PUBLICATIONS**

None.

#### **V. RECOMMENDATIONS FOR THIS PROJECT**

Many expenditures varied from the original grant submission and there are several reasons for this:

1. As a result of the Covid-19 pandemic in the spring and subsequent fallout to projects, the ADFG Commissioner mandated a 50% cut in travel.
2. The bulk of the region's travel budget was in the Coordination project.
3. The total operating budget available to Region 5 each year is determined by HQ. Region 5 has traditionally taken the approach of depositing these funds into projects based upon a very broad estimate, and then moving funds across grant projects throughout the year as project needs arise. This very generalized approach, while allowing needed spending flexibility, has resulted in large discrepancies between costs indicated in the grant request and the final expenditures of each project within the grant. This approach has also made it difficult for USFWS to determine if projects are cost-effective as the project budget estimates are not specific to the work described.
4. Staff in Region 5 are also being reminded to code time to individual projects as they conduct work by species.

To rectify these discrepancies amongst individual species' survey & inventory projects between budget requests vs. expenditures, the Region 5 grant will be restructured to create an operating grant that encompasses all survey, inventory, and coordination activities for all species into one project (the new TRACS reporting platform allows for this type of restructure). This should alleviate the budget/expenditures discrepancies problem while still maintaining maximum flexibility.

**Submitted by:** Phillip Perry, Region V Management Coordinator