

**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-B-R5-2020

PROJECT NUMBER: P3.0

PROJECT TITLE: The Status Caribou 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:

Authorities: 2 CFR 200.328
2 CFR 200.301
50 CFR 80.90

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

**The Status of Alaska Furbearers and Factors Influencing Their Populations In
Region V**

Prepare regional biennial caribou management reports.

A caribou management report was prepared during this reporting period.

Provide information to state and federal regulatory processes on caribou management.

Area management staff reviewed State and Federal regulatory proposals, attended regulatory process meetings, and presented caribou information to the State Board of Game, State Fish and Game Advisory Committees, Federal Subsistence Board, and Federal Subsistence Regional Advisory Councils.

Activities by Herd or Unit:

Unit 18

Monitor herd dynamics using radio collars deployed on caribou in Unit 18 and other units as seasonal ranges of the Mulchatna and Western Arctic herds expand into Unit 18.

We conducted radio telemetry flights in June 2020.

Monitor caribou movements north of the Yukon River.

No flights were made to monitor caribou north of the Yukon during this reporting period.

Conduct fall aerial sex and age composition counts.

The results from the composition work will be reported in the Region 4 caribou grant.

Conduct spring aerial or ground based surveys of caribou in Unit 18 to assess recruitment and distribution.

No recruitment work was completed on this activity during this reporting period due to sparse distribution of caribou and difficult logistics.

Participate in photocensuses of caribou herds that use Unit 18.

Due to limited pilot availability no work was completed for this section during this reporting period.

Participate in radio collar deployments and sample collections from caribou from herds that use Unit 18. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation "Animal Welfare Policy" and its wildlife capture and restraint manual.)

Mulchatna caribou were collared in Unit 17 during this reporting period. The results from those deployments are listed in the MCH section.

Monitor hunting and other mortality factors through harvest reporting, public contacts, and field observations.

We supported the use of harvest reports/tickets through the license vendors and interviewed hunters when the opportunity presented itself. Hunting by registration permit RC503 was initiated in RY13 and reported harvest of the MCH (by permit) in RY 19 was 49 caribou in Unit 18.

Continue to improve communication with the public.

We discussed caribou issues with advisory committees, other agencies, and the public.

Develop updated population objectives in cooperation with the public and other agencies.

We discussed issues with other area and regional offices and agency biologists to address common needs related to the MCH, including population objectives.

Teshkepuk Herd (Unit 26A):

Conduct a photo census to estimate population size of the herd on a projected schedule: a minimum of 3 photo censuses every 5 years.

We conducted a photo census in July 2017. The minimum count was 56,255 caribou and the Rivest estimate was 55,614 with a standard error of 2909 caribou. Weather conditions were not favorable for conducting a photocensus in 2019 and 2020.

Monitor distribution, movements, and dispersal using satellite collar data, radiotelemetry data and aerial survey observations.

We prepared distribution maps throughout the year to monitor movements of satellite collared bulls and cows. Satellite collars and VHF radiotracking data revealed that a large proportion of the herd wintered in northeastern Unit 26A, with a smaller proportion wintering in the eastern Brooks Range. After 4 years of calving in new areas relative to the 1990-2009 period, calving was primarily concentrated in areas west of Teshekpuk Lake in the summer of 2020 with some animals calving on the south side of the lake.

Monitor mortality (causes and rates) through field observations of collared individuals and investigation of large-scale die-off events.

We are still in the process of estimating the mortality rates for adult females, but preliminary indications are that mortality in 2019-2020 was 12% slightly below the 15% historical average.

Develop updated population objectives and recommended regulations in cooperation with the public and other agencies.

We discussed population objectives in advisory committee meetings and regional advisory council meetings. A proposal was submitted to rescind the harvest reporting requirements for the communities of the North Slope, and the proposal was not adopted by the Board of Game. The Teshekpuk caribou herd operating plan was written and published in 2019.

Attend meetings with management agencies, oil companies, and caribou users with the intent of minimizing conflicts between the herd and major development projects.

We continue to work cooperatively with BLM, oil companies, and consultants to address management and mitigation concerns. We attended a government to government tribal consultation with the Native Village of Nuiqsut to discuss caribou related issues.

Capture bulls and cows to attach satellite, GPS, and conventional radio collars. Attempt to maintain a minimum sample of 70 known-aged females. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation "Animal Welfare Policy" and its wildlife capture and restraint manual).

Using an R-44 helicopter and hand-held net gun, we captured a total of 32 caribou 20 TCH female yearlings, 9 female recollared adults, and 3 recollared bulls. The collars that were used were PTT collars on bulls and GPS collars on cows. We used blindfolds and

hobbling equipment to restrain caribou. No drugs were used. There were no mortalities associated with this capture project this year. Female yearling calves were weighed and were on average 20 lbs. lighter than the long term average since 1996.

Weigh, measure and collect blood, fecal and hair samples from all captured caribou to gain information about the prevalence of diseases, parasites, contaminants, and condition of the animals.

We collected blood and nasal swabs to analyze for diseases. We did collect fecal and hair samples, morphometric measurements from the caribou that were captured, and weights from 20 captured yearlings.

Conduct sex and age composition surveys during mid-summer and/or October.

We were unable to conduct fall composition surveys due to poor weather. The new management protocols are to start collecting this data only during times of reduced abundance

Conduct aerial surveys during April and May to assess short yearling recruitment and range-wide distribution.

Short yearling surveys were flown on 29 April-May 1st 2020. There were 4,257 caribou surveyed in 2020 with 3,810 being adults and 447 being calves. The recruitment rate was 11.7%. There were four mortalities observed in collared caribou during this survey. Observations suggest that some of the caribou appeared to be skinny.

Conduct calving location and productivity aerial surveys in June.

Calving surveys were conducted on 6-8th June 2020. We located 85 adult cows. The parturition rate was 80%. The parturition rate of cows 3 years and older was higher than the long-term average of 67% (2001-2015).. Peak calving occurred on June 6th and calving distribution was centered around the western side of Teshekpuk Lake with several animals also calving south of Teshekpuk Lake and a few north of Teshekpuk Lake.

Use satellite collar information to assess relative abundance of caribou from differing herds in hunt areas in order to better estimate herd-specific harvest rates.

The lack of recent community harvest data from subsistence division limits our ability to evaluate overall harvest patterns, or spatial relationships that allow prediction of harvest by herd. . However, efforts to distribute RC907 and collect RC907 reports are underway for RY2019, so this information may be available in the future. The North Slope Borough collected caribou harvest information through their caribou subsistence household surveys and their report contains harvest information from 2014-2018 which may provide some insight into harvest patterns (Person et al. 2018).

Western Arctic Herd (Units 22, 23, 24, and 26A):

Conduct a photo census to estimate herd size on a projected schedule of once every two years (2015, 2017, etc.). Censuses may be conducted more frequently if necessary.

On the 28th of June 2019, Region 5 staff mobilized to Eagle Creek in preparation for the 2019 census, warm weather and insect development provided good aggregation conditions and the census was completed on July 7th. During the fall and early winter of 2019 ADF&G staff counted photographs enumerating 224,753 individual caribou. Using this minimum count, the Rivest results estimated the herd at 244,000 animals.

Monitor distribution and movements using radiotelemetry data and aerial survey observations.

The WAH was radiotracked throughout the reporting period by staff located in Barrow, Nome, Kotzebue, and Fairbanks.

Deploy a sufficient number of radio collars to maintain a year-end sample size of at least 100 operational radio collars on living caribou. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation “Animal Welfare Policy” and its wildlife capture and restraint manual.)

Following two years (2017-18) of late and or limited fall migrations through the Kobuk Valley, ADF&G biologists elected to monitor caribou movements prior to heading into the field on the project. Collar locations and reports from the field prompted staff to mobilize to Onion Portage on September 30th. Staff stayed on the project through October 7th and collared a total of 49 adult caribou (43 females and 6 males).

Conduct aerial surveys during April and May to assess short yearling recruitment.

We classified 7,872 caribou between April 29th and May 10th of 2020 and observed 17 short yearlings: 100 adults, this ratio was in-line with the average since 1998. Winter distribution of the WAH required extensive efforts to spatially allocate sampling. Given this challenge we opted to utilize 1-3 survey teams each day rather than operating a single crew as had been done in the past.

Conduct aerial surveys during June to monitor initial calf production and the distribution of calving areas.

We visually located 75 radio-collared female caribou during the calving period and observed a calving rate of 67% among those cows that were observed. The observed parturition rate was below what has been seen in recent years and close to the average of 70% since 1992. Recent efforts to account for udder distension as an indicator of parturition would indicate the calving rate was closer to 72%, based on observations of cows that likely gave birth then lost their calf prior to the time of observation.

Conduct helicopter surveys on a scheduled basis during October to assess fall composition and retrieve radio collars. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation “Animal Welfare Policy” and its wildlife capture and restraint manual.)

No fall composition surveys were conducted during 2019, we are planning to conduct a fall survey in 2020.

Collect blood samples from approximately 50–100 captured caribou (annually) to monitor the incidence of selected diseases and pathogens. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation “Animal Welfare Policy” and its wildlife capture and restraint manual.)

We did not collect blood samples in 2019. Previously, blood collections and serology have been analyzed to assess haptoglobin levels, which indicate inflammation, and to evaluate exposure to *Brucella suis* bacteria. We are currently planning on blood sample collections beginning again in 2020.

Monitor hunting and other mortality factors through harvest reporting, collection of biological specimens and public contacts.

Fall subsistence harvest in Unit 23 likely increased slightly as greater numbers of caribou crossed the Kobuk River in 2019 than in the two previous years. This increase may have been offset however by the decrease in availability to the community of Kotzebue during November and December. Caribou movements on the Seward Peninsula were limited and likely impacted the ability of Seward Peninsula communities to harvest winter and spring caribou.

ADF&G staff have made extensive efforts to inform Unit 22, 23 and 26A villages about the new registration caribou permits, RC 800 which went into effect in RY16, and RC 907 which went into effect in RY17. The new permits are designed to capture more accurate harvest information from resident hunters. A total of 1184 RC907 and 511 RC800 permits were issued in RY19, we are in the process of collecting harvest information at the present time.

Collect caribou jaws to monitor the age structure for the herd and assess herd health through morphometric indices of jaw growth. Jaw samples will be collected from harvested caribou as well as natural mortalities.

We collected fewer than 50 WAH mandibles during this reporting period. These jaws have not been processed to date.

Use public education programs and/or increased communication with the public to improve understanding of hunting regulations and the value of conserving caribou populations, and to obtain better harvest data through increased harvest reporting.

Department staff participated in the Board of Game and state and federal advisory committee meetings within Game Management Units 22, 23, 24 and 26A summarizing the population status of the WAH during this reporting period. Additionally, staff made multiple visits to communities throughout the range of the WAH, and produced

publications for consumption by the general public, including regulatory explanations, and “Caribou Trails”, the publication of the Western Arctic Herd Working Group. .

Make a presentation at the annual Reindeer Herders Association meeting and work with the reindeer herders to minimize caribou/reindeer conflicts that may be detrimental to caribou.

ADF&G staff provided a general update on the status of the WAH as well as providing information on the movements and distribution of caribou to the Reindeer Herders Association during their meeting in November 2019.

Involve students in the Onion Portage collaring project to improve public relations and support wildlife education. (All animal capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation “Animal Welfare Policy” and its wildlife capture and restraint manual.)

Due to uncertainties in caribou movements no schools were involved with the Onion Portage project in 2019.

Collect and analyze harvest data from selected communities within the range of the Western Arctic Caribou Herd through the Community-based Harvest Assessments program in cooperation with the ADF&G Division of Subsistence, Alaska Native organizations, and other resource agencies.

We updated the harvest model for estimating harvest levels by incorporating the latest information from household surveys from the following communities: Deering, Noorvik and Shishmaref. These models indicate that the harvest of WAH caribou by people residing within the range of the herd has been 9,000-15,000 caribou annually. It appears that harvest levels by people who live within the range of this herd have been relatively stable from the late 1990s through this reporting period, despite a more than 50% reduction in herd size and unpredictable fall movement patterns.

Attend meetings with resource management agencies, oil companies, and caribou users with the intent of minimizing conflicts between the herd and major development projects.

We presented overviews regarding the population status of this herd to the WACH Working Group, and several subsistence advisory panels associated with development (e.g. Red Dog Mine, and BLM’s NPR-A panels).

Participate with resource management agencies and the Western Arctic Caribou Herd Working Group to maintain a Cooperative Management Plan for the herd.

The 2019 Cooperative Management Plan was presented and accepted at the 2019 working group meeting.

Participate with State interests, resource management agencies, and the Western Arctic Caribou Herd Working Group to evaluate and recommend critical habitat designations for the herd.

Kernel analyses delineating seasonal ranges and dynamic Brownian Bridge Movement Models of WAH movement areas were updated.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

Many expenditures varied from the original project 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, and even though no funds were originally budgeted for travel in this project, Region 5 staff expended \$6.2K.
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.

IV. PUBLICATIONS

None.

V. RECOMMENDATIONS FOR THIS PROJECT

The Alaska Department of Wildlife Conservation recommends continuing this project.

Submitted by: Phillip Perry, Region V Management Coordinator