

**FEDERAL AID  
ANNUAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 25526  
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**CARIBOU  
ANNUAL SURVEY AND INVENTORY  
FEDERAL AID PERFORMANCE REPORT**

**STATE:** Alaska  
**GRANT AND SEGMENT NR:** W-33-2  
**PROJECT NR:** 3.0

**WORK LOCATION:** Statewide

**PROJECT LOCATIONS:** Game Management Regions 2, 3, and 5

**PERIOD:** 1 July 2003–30 June 2004

**PROJECT TITLE:** The Status of Alaska Caribou and Factors Influencing Their Populations

**REPORT DESCRIPTION:** This statewide performance report includes the three regions involved in caribou survey and inventory activities. Statewide and regional activities are listed before specific activities by herd and game management unit.

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

**Regionwide Activities**

Activity: Provide information to the Board of Game.

The Board of Game meets on a two year cycle for the SE Alaska region and did not meet during this reporting period. As a result, there were no formal proposals developed. However regional staffs have met and discussed ideas may need to be addressed at the next meeting.

Activity: Conduct fall sex and age population composition surveys to determine status, trend, productivity, and mortality of caribou.

Surveys were conducted on most of Region 2 herds during this reporting period.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters.

See below.

## Activities by Herd and Unit

### NAP Herd (Unit 9)

Activity: Conduct an aerial post-calving photo-census in cooperation with the FWS. Conduct periodic radio-tracking surveys to determine distribution, movement and areas of preferred use.

The final count of caribou seen on this cooperative survey totaled 3,445 caribou including calves.

In October 2003, 2,776 caribou were classified in Units 9C and 9E, with ratios of 36 bulls and 11 calves per 100 cows.

Deployed one satellite collar on an adult female and 13 radio collars on yearling females between the Naknek River and Meshik River April 4-6, 2004. One yearling female died within 24 hours of the capture event.

Radio tracking flights were conducted Oct. 23-4, 2003; Dec. 23, 2003; May 2-7, 31, 2004; and June 1, 21-27, 2004.

Activity: Collect a sample of up to 20 calves to monitor trends in body condition.

No work was accomplished on this activity.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters.

Preliminary results from Tier II subsistence hunt TC505 show a total of 97 caribou killed. Again, few NAP caribou crossed the Naknek River during the 2003-04 winter and few Mulchatna caribou were present between the Naknek and Alagnak rivers, as was the case last year.

### SAP Herd (Unit 9)

Activity: Conduct an aerial post-calving photo-census to estimate population size.

In October 2003, 1,257 caribou in Unit 9D were classified with ratios of 40 bulls and 8 calves per 100 cows. Radio-tracking flights were conducted 24 Oct. 24, 2003, and April 4, 2004.

Deployed five radio collars on yearling females near Black Hills and Trader Mountain on April 4, 2004.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters

Preliminary results from the 2003–04 general hunt were 33 males killed in Unit 9D and 22 males on Unimak Island.

#### **Kenai Lowland and Mountain Herds (Units 7 and 15A)**

Activity: Conduct a post-calving aerial sex and age composition survey.

On June 18, 2004, a survey was completed on the Kenai Lowland Caribou herd to determine the minimum herd size. A total of 88 caribou was found, 28 % were calves.

Activity: Monitor trends in calf weights to evaluate herd body condition.

No work was accomplished on this activity.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters.

Harvest reports for fall 2003: Out of 250 permits issued (each for 1 caribou of either gender), 22 caribou were harvested (14 males and 7 females and 1 of unknown sex).

#### **Killey River Herd (Unit 15B)**

Activity: In cooperation with the USFWS, conduct a post-calving aerial sex and age composition survey.

No work was accomplished on this activity.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters.

There was one drawing hunt and one registration hunt for Killey River/Twin Lakes Caribou during fall 2003.

Hunt DC608: Out of 76 permits issued (each for 1 bull and 2 cow caribou), 10 males and 6 females were harvested.

Hunt RC610: Out of 109 permits issued (each for 3 females), 14 females were harvested.

#### **Nelchina Herd (Unit 13)**

Activity : Conduct a post-calving photocensus and sex and age composition survey.

Estimated herd size June 26, 2004, was 38,700 caribou.

Herd composition on Oct. 7, 2003:  
31 bulls/100 cows (19%)

35 calves/100 cows (21%)

No herd composition flight was flown during the summer of 2004.

Activity: Replace expiring radio collars on caribou.

Twenty-seven old collars were replaced on adult caribou.

Twenty-five new collars were placed on 4-month old caribou, one mortality was recorded.

Productivity of radiocollared caribou in 2004 was:

86% for caribou  $\geq 5$  years of age

89% for caribou 4 years of age

55% for caribou 3 years of age

0% for caribou  $\leq 2$  years of age

Activity: Collect a sample of up to 20 calves to monitor trends in body condition.

No work was accomplished on this activity.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters.

Monitored a Tier II permit subsistence hunt with 2005 permits issued for bulls only.

Preliminary Harvest:

743 successful permittees (Additional 247 under Federal hunt)

743 bulls (99%), 3 cows, 3 unknown.

Preliminary Hunter Effort (State only):

69 did not report

460 did not hunt

727 hunted unsuccessfully

749 hunted successfully

Monitored a drawing permit hunt with 60 permits issued for the Western Talkeetna Mountains Unit 14B.

Preliminary Hunter Effort:

2 did not report

41 did not hunt

13 hunted unsuccessfully

4 hunted successfully (bulls)

0 hunted successfully (cows)

**Mulchatna Herd (Units 9A, 9B, 9C, 17 and 19B)**

Activity : Monitor caribou distribution through relocation of radiocollared caribou.

Radio-tracking flights conducted throughout the year. Seasonal distribution determined.

Results of fall 2003 composition counts:

Cows (%)	Calves (%)	Bulls (%)	Total Sample Size
5,468 (69.9%)	1,402 (17.9%)	951 (12.2%)	7,821
25.6 Calves/100 Cows		17.4 Bulls/100 cows	

Activity: Conduct an aerial post-calving photocensus to estimate population size.

No work was accomplished on this activity.

Activity: Collect a sample of up to 20 calves to monitor trends in body condition.

No work was accomplished on this activity.

Activity: Monitor the caribou harvest through field observations, hunter harvest reports, and contact with hunters.

Preliminary reported 2003–2004 harvest: 2,163 caribou

**Nushagak Peninsula Herd (Units 17A, 17C)**

Activity : In cooperation with USFWS, conduct a census and radio-tracking surveys to determine distribution, movements and areas of preferred use.

Assisted USFWS with strip-transect survey conducted March 11 (780 caribou counted) and monthly radio-tracking flights.

Results of fall 2003 composition counts:

Cows (%)	Calves (%)	Bulls (%)	Total
222 (52%)	98 (23%)	105 (24%)	425
44.1 Calves/100 Cows		47.3 Bulls/100 cows	

**Other activities funded by Federal Aid on this project:** None

**Stewardship Investment items purchased:** None

**Total Regional Segment Period Project Costs (in thousands):** \$243.4

**Submitted by:** Bruce Bartley, Acting Assistant Management Coordinator

## **The Status of Caribou and Factors Influencing Their Populations in Region III**

### **Regionwide Activities**

Activity: Provide information to the Board of Game and advisory committees during the regulatory process.

Provided information on caribou population status and management issues to the Board of Game and various advisory committees.

Activity: Monitor harvest and analyze harvest data.

Estimated harvest based on harvest ticket and registration hunt reports. Preliminary data indicate that:

Chisana Herd (Unit 12 and adjacent Yukon, Canada): no harvest.

Macomb Caribou Herd (Portions of Units 12 and 20D): 29 bulls harvested.

Beaver Mountains, Big River-Farewell, Rainy Pass, Sunshine Mountain and Tonzona Caribou Herds (Units 16B, 19, and 21A): 50 caribou.

Delta Herd (Unit 20A): 100 permits, harvest = 28 bulls.

Fortymile Caribou Herd (Units 20B, 20C, 20D, 20E, 25C and adjacent Yukon, Canada) hunt quota = 850 caribou, harvest = 794 caribou.

Galena Mountain, Ray mountains, and Wolf Mountain Caribou Herds (Units 20F, 21C, 21D and 24): 3 caribou harvested.

White Mountains Caribou Herd (Units 20B, 20F and 25C): general hunt reported harvest = 14 male, 1 female; registration permit hunt RC879 reported harvest=1 males, 0 female.

Porcupine Caribou Herd (Units 25A, 24B, 25D, and 26C): about 100 caribou harvested.

Central Arctic Caribou Herd (Unit 26B and 26C): 664 hunters harvested 306 caribou.

Activity: Deploy and maintain radio collars as needed on herds throughout the region to maintain an adequate sample size to conduct surveys.

As noted below, deployed 35 radio collars on cows in the Chisana Herd in cooperation with the Yukon Department of Renewable Resources and the U.S Geological Survey. Two mortalities. In the White Mountain Herd, radiocollared three 4-month old female caribou. No mortalities. Captured and deployed 10 VHF radio collars on female caribou during March 2004 in conjunction with research program which, at the same time was capturing and deploying GPS collars and weighing calf caribou. No mortalities.

### **Activities by Herd and Unit**

**Chisana Herd** (Unit 12 and adjacent Yukon, Canada)

Activity: Estimate status, trends, and recruitment through aerial surveys.

Conducted late-September composition count and utilized USGS census data to estimate the herd at 720 caribou.

Activity: Determine pregnancy and parturition rates, and calf survival.

Conducted a herd pregnancy and productivity survey during spring May 2004. Determined calf survival and found that 83% of the cows  $\geq 3$  years old (59/71) were pregnant.

Activity: Conduct a fall sex and age composition count.

Conducted composition counts during late-September 2003. 410 caribou observed with composition of 22 calves:100 cows and 34 bulls:100 cows.

Activity: Deploy 4–5 radio collars on adult cows to maintain an adequate sample size to conduct surveys.

Deployed 35 radio collars on cows in cooperation with the Yukon Department of Renewable Resources and the U.S Geological Survey. Two mortalities: 1 cow died during the initial capture from a broken neck and 1 cow died from capture myopathy approximately 1 hour after capture.

Activity: In cooperation with the Yukon Department of Renewable Resources and the National Park Service, continue developing a draft Chisana Caribou Management Plan.

Completed draft 5-year (2003-2008) Chisana Caribou Management Plan.

#### **Macomb Caribou Herd** (Portions of Units 12 and 20D)

Activity: Deploy 8 radio collars to maintain an adequate sample size to conduct surveys.

No radio collars were deployed as an adequate sample size of radiocollared caribou existed.

Activity: Estimate status, trends, and productivity from aerial surveys.

Conducted fall composition survey resulting in estimates of 46 bulls:100 cows and 19 calves:100 cows.

Activity: Conduct a photocensus of the herd to determine population size.

Conducted a photocensus that resulted in a population estimate of 550–575.

Activity: Conduct a prehunt aerial distribution survey to assist with managing the hunt by EO.

Conducted a prehunt distribution survey that determined the majority of the Macomb herd was in the vicinity of the Macomb Plateau.

#### **Beaver Mountains, Big River-Farewell, Rainy Pass, Sunshine Mountain and Tonzona Caribou Herds** (Units 16B, 19, and 21A)



Activity: Deploy 9 radio collars total distributed among various herds to maintain an adequate sample size to conduct surveys.

No radio collars were deployed because of unsuitable conditions and unavailability of helicopter support.

Activity: Estimate status, trends and distribution of the herds from aerial surveys.

Did not complete surveys because of unsuitable survey conditions and unavailability of helicopter support.

#### **Delta Herd (Unit 20A)**

Activity: Estimate productivity, status and trend from a summer photocensus, fall sex and age composition counts and annual mortality.

Conducted photocensus ( $n = 2168$ ) in June and fall composition surveys in October 2003 (37 bulls:100 cows, 10 large bulls:100 cows, 20 calves:100 cows,  $n = 1023$ )

#### **Fortymile Caribou Herd (Units 20B, 20C, 20D, 20E, 25C and adjacent Yukon, Canada)**

Activity: Estimate status, trends and recruitment from aerial surveys.

Conducted a fall sex and age composition survey and sampled 14.5% of the herd. Estimated calf and bull:100 cow ratios of 17 and 50:100.

Activity: Conduct a photocensus to determine herd size.

Conducted pre-census flights to monitor herd distribution in June; however, extreme smoke conditions prevented the completion of the census.

Activity: Write and distribute 1-2 issues of the *Comeback Trail*, a newsletter about the Fortymile Caribou Herd.

Due to time constraints and the moderate priority level of this task, we were unable to produce a 2004 issue of the *Comeback Trail* newsletter.

Activity: Develop roadside educational signs about Fortymile caribou to be placed on the Steese and Taylor Highways.

Developed and constructed road signs and placed them along the Taylor Highway.

#### **Galena Mountain, Ray mountains, and Wolf Mountain Caribou Herds (Units 20F, 21C, 21D and 24)**

Activity: Deploy 5–10 radio collars on caribou in the Ray Mountains to maintain an adequate sample size to conduct surveys.

No radio collars were deployed because of unsuitable conditions and unavailability of helicopter support.

Activity: Estimate status, trend and productivity of the herds from photocensus and aerial surveys.

Conducted aerial composition survey of Ray Mtn. Herd and counted 1,705 caribou on 06/22/04 in cooperation with BLM.

Counted ~ 146 caribou in the Wolf Mtn. Herd on 5/24/04

Counted 73 caribou in the Galena Mtn. Herd, on 10/07/03

#### **White Mountains Caribou Herd** (Units 20B, 20F and 25C)

Activity: Deploy 4–5 radiocollars on caribou to maintain an adequate sample size to conduct surveys.

Radiocollared three 4-month old female caribou. There were no capture-related mortalities.

Activity: Conduct radiotelemetry flights to monitor herd demographics.

Conducted radiotelemetry flights in October to monitor herd demographics

Activity: Conduct fall sex and age composition survey.

Conducted a sex and age composition survey in October: 17 calves:100 cows, 30 bulls:100 cows.

Activity: Replace radio collars as needed to maintain adequate sample size to monitor herd demographics.

Radiocollared three 4-month old female caribou.

#### **Porcupine Caribou Herd** (Units 25A, 24B, 25D, and 26C)

Activity: Estimate status, trend, and productivity from aerial surveys.

A photocensus was attempted in late June, but was cancelled due to smoke from wildfires and coastal fog.

Activity: Conduct calving ground surveys.

Calving surveys were conducted June 1–4 and 23. Forty-six radiocollared caribou cows were observed, of which 36 (78%) were parturient (observed with a calf or judged to be pregnant). The late-June calf:cow ratio could not be estimated because the herd formed large aggregations earlier than expected and identification of calf:cow relationships was not possible.

Activity: Replace radio collars as needed to maintain adequate sample size to monitor the herd.

Ten caribou cows and two bulls captured and radiocollared during March 2004. No mortalities occurred.

**Central Arctic Caribou Herd** (Unit 26B and 26C)

Activity: Conduct a photocensus to determine herd size.

Did not conduct a photocensus because of poor weather in July 03 and the CAH was mixed with the Teshekpuk caribou herd in June 04.

Activity: Conduct fall sex and age composition survey and determine distribution.

Re-allocated these monies to the CAH research program because we obtained distribution information from satellite radio collars and telemetry flights conducted by the research program.

Activity: Capture and radiocollar female caribou to maintain an adequate sample size for population monitoring.

Captured and deployed 10 VHF radio collars on female caribou during March 2004 in conjunction with research program which, at the same time was capturing and deploying GPS collars and weighing calf caribou. There were no capture-related mortalities.

Activity: Conduct radiotelemetry flights to determine winter herd distribution.

A winter radiotelemetry flight was conducted in conjunction with a capture operation in March 2004. Most of the CAH wintered on the south side of the Brooks Range east of the Dalton Highway.

Activity: Estimate parturition rates and calf:cow ratios in June by radio-tracking collared females.

Estimated parturition rates and calf:cow ratios. The parturition rate was 90% (n=77). The calf cow ratio was 82:100 (n=44).

**Other activities funded by Federal Aid on this project:**

Chisana Herd: Captured 30 pregnant cow caribou to be held in a pen from just prior to through 3-4 weeks following peak calving, in an experimental effort to increase overall calf survival within the herd. Cooperative project with the Yukon Department of Renewable Resources, U.S. Park Service and the U.S Geological Survey, April 2004.

Fortymile herd: Monitored herd movements once every 3-7 days during the hunting seasons to aid harvest management.

**Stewardship Investment items purchased:**

**Total Regional Segment Period Project Costs (in thousands):** \$195.6

**Submitted by:** Doreen Parker McNeill, Assistant Management Coordinator

## **The Status of Alaska Caribou and Factors Influencing Their Populations in Region V**

### **Regionwide Activities**

Activity 1: Provide information to the Board of Game during the regulatory process.

During the November 2003 Board of Game (BOG) meeting, the Department provided information regarding population status of caribou in Unit 18, Teshekpuk Lake herd, and Western Arctic herd. We commented on and provided additional information at the board's request on 2 proposals in Unit 18 and 1 proposal in Unit 23. There were no proposals for Units 22 and 26A.

### **Activities by Herd or Unit**

#### **Unit 18**

Activity 1: 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 participated in a Mulchatna caribou herd fall rangewide survey and found only 1 radio collar among a group of 200–300 caribou in Unit 18.

Activity 2: Monitor caribou movements north of the Yukon River.

We discussed the presence/absence of caribou north of the Yukon River with Yukon River residents and ascertained that caribou were few or absent from this area during this reporting period.

Activity 3: Conduct fall aerial sex and age composition counts.

We did not conduct a fall composition count during this reporting period due to the low number of caribou using Unit 18 during the proper time.

Activity 4: Conduct spring aerial or ground based surveys of caribou in Unit 18 to assess recruitment and distribution.

Weather and pilot unavailability prevented spring recruitment and distribution surveys during this reporting period.

Activity 5: Participate in radio collar deployments and sample collections from caribou from herds that use Unit 18.

We did not participate in any radiocollaring efforts in Unit 18 during this reporting period.

Activity 6: Monitor hunting and other mortality factors through harvest reporting, public contacts and field observations.

We monitored hunters and recorded 194 camps and boats during aerial searches and we interviewed hunters when the opportunity presented itself.

Activity 7: Continue to improve communication with the public.

We wrote articles for a local newspaper, discussed caribou issues with advisory committees, other agencies, and the public.

Activity 8: Develop updated population objectives in cooperation with the public and other agencies.

We participated in a technical meeting with other area and regional office and agency biologists to address common needs related to the Mulchatna caribou herd, including population objectives.

### **Teshkepuk Herd (Unit 26A)**

Activity 1: Monitor distribution and movements using satellite collar data, radiotelemetry data and aerial survey observations.

We looked at distribution maps generated by the Nome office throughout the year to monitor movements of satellite collared bulls and cows. Satellite collar data enabled us to keep up to date with an unexpected long distance fall migration when approximately 1/3 of the herd moved 250 miles east to the Arctic National Wildlife Refuge area. During this movement, we were able to monitor interactions with oil field infrastructure as the herd moved eastward through the Kuparuk and Prudhoe Bay development areas. We used bi-weekly radiotracking data throughout June, July and August to monitor summer movements and habitat use. Winter and spring radiotracking flights were conducted to determine wintering locations for most of the collared caribou. Satellite location data from the previous year was processed and summarized by a consulting firm through a cooperative project with the North Slope Borough (NSB) and the Bureau of Land Management (BLM).

Activity 2: Monitor hunting and other mortality factors through harvest reporting, public contacts and field observations.

Field observations and public reports indicated that there were several small scale die-off events this winter, likely related to icing conditions on the winter range.

Activity 3: Collect harvest information through the North Slope Borough and the ADF&G Subsistence Division.

A large project by the Subsistence Division continued to collect harvest data from Barrow, Atkasuk and Nuiqsut. Results of harvest estimates produced by the NSB and Subsistence

Division were reviewed. Data from these surveys are being analyzed, and results will be compared with historical satellite collar distribution to attempt to partition the harvest between herds occurring in hunting areas.

Activity 4: Develop updated population objectives in cooperation with the public and other agencies.

We discussed population objectives for the Teshekpuk caribou herd (TCH) with the NSB Fish and Game Management Committee, as well as at public meetings.

Activity 5: Attend meetings with management agencies, oil companies, and caribou users with the intent of minimizing conflicts between the herd and major development projects.

We attended at least 10 meetings related to the TCH and spent time on the Environmental Impact Statement (EIS) process related to oil development, including meetings with BLM to address the Northeast and the Northwest Planning Units of the NPR-A and the Alpine Satellite Development Project.

Activity 6: Capture a total of 20 bulls and cows to attach satellite, GPS, and conventional radio collars.

Using a R-44 helicopter and hand-held net gun, we captured 13 TCH cows. We attached 10 satellite-linked GPS collars and removed three satellite collars that were nearing the end of their battery life. The GPS collars are scheduled to transmit for one year, providing locations every three hours. We used blindfolds and hobbling equipment to restrain caribou. No drugs were used. There were no capture mortalities or injuries. The current number of radiocollared caribou is 50, including 4 males.

Activity 7: 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, fecal, hair, and morphometric samples from the 13 caribou that were captured. The average weight of adult cows was one of the lowest seen in the last 10 years. Analyses of blood, fecal and hair samples is part of a cooperative project with the NSB and results have not yet been reported.

Activity 8: Conduct sex and age composition surveys during mid-summer and/or October.

Fall composition surveys were attempted but had to be abandoned due to an aircraft mechanical malfunction.

Activity 9: Conduct aerial surveys during April and May to assess short yearling recruitment.

Short yearling surveys were flown on 6 and 10 April 2004. We located 24 radiocollared cows and 9 of them had short yearlings (38 surviving calves:100 cows).Of the collared caribou that

wintered in ANWR, we counted 39 short yearlings:100 cows and 36:100 cows were counted in the western segment of the herd near Atqasuk. An additional 2692 caribou were classified in the vicinity of radiocollared caribou and we found 475 short yearlings for a ratio of 21 short yearlings:100 adults. In ANWR, 251 of 1378 caribou were short yearlings (22 short yearlings:100 adults), while 224 of 1314 caribou in the Atqasuk area were short yearlings (21 short yearlings:100adults). This is slightly higher than the 10-year average of 17 short yearlings:100 adults.

Activity 10: Use telemetry and ground observations to carefully monitor summer movements of Teshekpuk Herd caribou in the insect relief area.

We monitored the distribution of TCH caribou on and near their insect relief areas using a combination of satellite telemetry and bi-weekly radio tracking flights. Areas north of Teshekpuk Lake received consistent use from mid-June through mid-July by the majority of the herd.

Activity 11: Conduct calving location and productivity aerial surveys in June.

Calving surveys were conducted on 3, 5, 6, 7, 8, 11 and 12 June 2004. We located 33 adult cows, and observed 16 cows at heel (48 calves:100 adult cows). This calf:cow ratio was the second lowest recorded in the last 10 years. Of the caribou that had wintered in ANWR, at least 8 radiocollared cows remained east of the Colville during the calving period, and there were five calving locations recorded east of the Colville. Due to distance and bad weather, some of the cows that wintered in ANWR were not visually observed during the calving period. Although cows were widely distributed during calving this spring, a concentration was detected northeast and southeast of Teshekpuk Lake.

Activity 12: Use satellite collar information and conduct VHF radio collar telemetry surveys to determine the relative abundance of North Slope caribou herds in hunting areas during the time of the year when people do most of their hunting.

VHF radiotracking surveys were flown every 2 weeks during the summer and fall to determine the locations of TCH and satellite collar information will be examined to determine the relative numbers of caribou from the TCH, Central Arctic herd (CAH) and the Western Arctic herd (WAH) in hunting areas when people are hunting.

Activity 13: Involve students in the capture operations, work with students to track satellite collared caribou movements and lecture to school classes about caribou biology.

Students from Anaktuvuk Pass tracked caribou movements during the school year. Several lectures were delivered to students from North Slope schools on population dynamics, genetics, and general information on the TCH.

### **Western Arctic Herd (Unit 22, 23, and 26A)**

Activity 1: Conduct a photocensus to estimate herd size.



Aerial photography for a photocensus was completed in July 2003 and caribou counts from the photographs were completed by March 2004. The minimum population estimate was 490,000 caribou.

Activity 2: Conduct periodic radiotracking flights to monitor herd distribution.

The WAH was radiotracked throughout the reporting period by staff located in Barrow, Nome, Kotzebue and Fairbanks. Some caribou from this herd spent the winter of 2003-2004 roughly 20-40 mi east of Chandalar Lake, the farthest east ever recorded.

Activity 3: Deploy approximately 35 radio collars to maintain a year-end sample size of at least 100 operational radio collars on living caribou.

Thirty three radio collars (22 conventional and 11 satellite) were deployed in the WAH during September 2003. A total of 114 caribou were captured during the collaring effort and there were no capture mortalities. See Activity 7.

Activity 4: Conduct aerial surveys during April and May to assess short yearling recruitment.

We classified 8889 caribou (7262 adults and 1627 calves) during spring 2004 and observed 22 calves:100 adults.

Activity 5: Conduct aerial surveys during June to monitor initial calf production and the distribution of calving areas.

We visually located 86 radiocollared female caribou and observed a ratio of 59 neonates:100 cows in June 2004.

Activity 6: Conduct aerial surveys during October to assess herd composition and retrieve radio collars.

Weather precluded fall composition surveys during October 2003. In 3 days of survey we retrieved 22 radio collars from the Seward Peninsula, Nulato Hills and Kobuk River drainage.

Activity 7: Collect blood samples from approximately 75 captured caribou to monitor the incidence of selected diseases and pathogens.

We collected a blood sample from 114 caribou during September 2003. Results from disease analyses are still pending.

Activity 8: Monitor hunting and other mortality factors through harvest reporting, collection of biological specimens and public contacts.

No biological specimens were collected from hunters during the reporting period. Harvest levels based on community-based harvest assessments and harvest reports were comparable to previous years.

Activity 9: 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.

We spoke to hunters about hunting regulations and harvest reporting requirements.

Activity 10: Make a presentation at the annual Reindeer Herders Association meeting and work with the reindeer herders to minimize caribou/reindeer conflicts.

We presented maps showing movements and distribution of caribou to the Reindeer Herders Association during their annual meeting in March 2004.

Activity 11: Involve students in the Onion Portage collaring project to improve public relations and support wildlife education.

Students from White Mountain and Noatak participated in the collaring project. White Mountain students made a joint presentation with ADF&G staff at the 10<sup>th</sup> North American Caribou Workshop in May 2004. Noatak students used blood collected during the collaring project as the basis for science fair projects that analyzed DNA in cooperation with the University of Alaska.

Activity 12: Update population objectives by participating in a cooperative management planning process with the Western Arctic Herd Working Group. (Note: WAH Working Group meetings and process are not funded by Federal Aid. Public review and analysis of the management plan are funded by Federal Aid).

We participated in 2 Working Group and a Technical Group meeting during the reporting period.

Activity 13: Analyze harvest data collected from selected communities within the range of the Western Arctic Caribou Herd. (Note: Data collection using Community-based Harvest Assessments is a cooperative effort with the ADF&G Division of Subsistence, Alaska Native organizations and other resource agencies and is not funded by Federal Aid. Analysis of harvest data is funded by Federal Aid).

Community harvest data for 2002–2003 was analyzed using 2 approaches: a per capita harvest approach and a modeling approach. Both techniques estimated the harvest of WAH caribou by people residing within the range of this herd as ~14,500 caribou. Community harvest data for 2003–2004 was not available at the time this report was prepared. However, it appears that overall 'local' harvest levels have been relatively stable at 14,000–15,000 caribou annually since the late 1990s and we do not think this substantially changed during the 2003–2004 regulatory year.

**Other activities funded by Federal Aid on this project:**

**Stewardship Investment items purchased:** None.

**Total Regional Segment Period Project Costs (in thousands):** \$351.2

**Submitted by:** Peter Bente, Management Coordinator

**Statewide Project Costs (in thousands):**

**State Share = \$197.55      Federal Share = \$592.65      Total Costs = \$790.2**