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

# ANNUAL SURVEY AND INVENTORY

**STATE:** Alaska

**GRANT AND SEGMENT NO.** W-33-11 **PROJECT NO.:** 3.0 Caribou

**PERIOD:** 1 July 2012 – 30 June 2013

**PROJECT LOCATION:** Statewide: Activities in Regions II, II, IV, and V

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

**REPORT DESCRIPTION:** This performance report describes caribou survey and inventory activities. Activities are listed by region and herd or game management unit.

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**Region II—Southcentral Alaska**

**Regionwide:**

Activity 1: Prepare biennial caribou management reports.

Caribou management report was drafted during the summer 2013 and is currently in the review stage. Staff continue to work on data collection for future reports.

Activity 2: Provide information to state and federal regulatory processes on caribou management.

Staff routinely work with Federal biologists to coordinate information needs. In March the Board of Game considered proposals but did not make any changes affecting caribou in region II.

Activity 3: Conduct fall sex and age population composition surveys to determine status, trend, productivity and mortality of caribou.

Surveys were completed for all herds except the Kenai Mountain Herd. See individual unit activities below.

Activity 4: Monitor the caribou harvest through field observations, hunter harvest reports and contact with hunters.

These are standard activities accomplished in each office. See Area specific activities.

**Activities by Unit:**

**Unit 15 Kenai Lowland and Kenai Mountain Herds:**

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

A survey was conducted on 14 June 2012 for the Kenai Lowland population. A total of 123 animals were counted consisting of 2 bulls, 90 cows, and 31 calves. This is an increase of 23 animals from the last composition survey conducted in June 2010 and a slight increase in percent calves in the population (23% to 25%). No survey was conducted for the Kenai Mountain herd due to logistical constraints.

Activity : Capture up to 15 caribou and replace expiring radio collars.

No captures were conducted due to budget constraints and other existing priorities.

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

There was not an open hunting season for Kenai Lowlands caribou herd during the reporting period. Twenty-four caribou (12 male and 12 female) were taken in the Kenai Mountain Herd during the reporting period. Two-hundred fifty permits were issued for Kenai Mtn. caribou.

**Unit 15 Killey River and Fox River Herds:**

Activity 1. In cooperation with the USFWS, conduct a post-calving aerial sex and age composition survey.

A minimum count survey was conducted on 19 October 2012 for the Fox River Herd. A total of 105 caribou were counted, which is more than twice the minimum count obtained during the previous reporting period survey.

A minimum count survey was also conducted on 19 October 2012 for the Killey River Herd. A total of 340 caribou were counted which is an increase of 140 animals from the last survey conducted in 2008.

Activity 2. Monitor the caribou harvest through field observations, hunter harvest reports and contact with hunters.

Six bulls were taken in the Killey River Herd during the reporting period. Three caribou were taken in the Fox River Herd (2 male and 1 female) during the reporting period.

**Unit 8 Kodiak Herd:**

Activity 1. Conduct a post-calving aerial sex and age composition survey.

One winter (February) and one summer (July) survey were conducted in 2012. In both cases about 300 caribou were counted. We estimate that the population was stable.

Activity 2. Monitor the caribou harvest through field observations, hunter harvest reports and contact with hunters.

Hunters reported harvesting 21 caribou (12 males, 9 females) during this reporting period, an increase from the 2011/12 reported harvest of 15, and the 5-year average of 17.2 caribou.

**Submitted by: Gino Del Frate**
**Date: 6 September 2013**

## Region III—Interior Alaska

### Regionwide Activities

ACTIVITY 1: Monitor harvest and analyze harvest data.

Monitored preliminary harvest of 2,575 caribou and analyzed harvest data.

ACTIVITY 2: Capture approximately 50 caribou to deploy radiocollars and maintain an adequate sample size of collared animals for surveys.

Deployed 96 radio collars in various herds to maintain adequate sample of radioed animals to conduct surveys, with 4 mortalities due to collaring.

ACTIVITY 3: Provide caribou management information to State and Federal regulatory processes.

Provided information to 15 State fish and game advisory committees, State Board of Game, 3 Federal regional councils, and the Federal Subsistence Board.

ACTIVITY 4: Prepare biennial caribou management reports.

Prepared biennial caribou management reports.

### Activities by Unit [and/or herd]

### Units 12 and 20D (portions) Macomb Caribou Herd

ACTIVITY 1: Conduct a photocensus of the herd to determine population size.

Conducted a photo census to determine herd size of 1,173.

ACTIVITY 2: Conduct a prehunt aerial distribution survey to assist with managing the hunt.

Conducted a prehunt distribution survey to assess potential harvest during the motorized access portion of the hunt.

### Units 19A, 19B, 19C, 19D, 21A and 21E Beaver Mountains, Big River-Farewell, Rainy Pass, Sunshine Mountain and Tonzona Caribou Herds

ACTIVITY 1: Estimate status, trends and distribution of the herds from aerial surveys.

Conducted minimum population estimation survey in June 2013 within the range of the Beaver and Sunshine caribou herds and found 488 caribou, including 49 calves.

### Unit 20A Delta Herd

ACTIVITY 1: Estimate productivity and bull:cow ratios from fall sex and age composition counts.

Conducted fall composition survey (51 bulls and 15 calves per100 cows).

ACTIVITY 2: Conduct a photocensus of the herd to determine population size.

No photocensus conducted because the caribou did not aggregate.

ACTIVITY 3: Conduct radiotelemetry flights to monitor herd.

Flew distribution surveys in Aug, Nov, Feb, Mar, May, and June.

**Chisana Caribou Herd**

ACTIVITY 1: Implement the Chisana management plan.

Worked cooperatively with Yukon Department of Environment, Yukon First Nations, Tetlin Wildlife Refuge and US Park Service to implement the management plan, including cooperating with the Tetlin NWR and Park Service to implement the Federal Hunt in fall 2012.

ACTIVITY 2: Estimate productivity and bull:cow ratios from fall sex and age composition counts.

Did not complete a fall composition count due to poor weather.

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

ACTIVITY 1: Estimate status, trends and recruitment from aerial surveys.

Conducted a fall sex and age composition survey (calf and bull/100 cow ratios were 22 and 40/100; 42% of the herd sampled).

ACTIVITY 2: Conduct a photocensus to determine herd size.

Photocensus not completed because of poor census conditions.

ACTIVITY 3: Conduct aerial distribution surveys before and during the hunting seasons and conduct hunter check stations to assist with managing harvest.

Conducted aerial distribution surveys before and during the fall and winter hunts; and no hunter checkstations conducted.

**Units 20F, 21C, 21D, 24, and 25A Galena Mountain, Ray Mountains, and Wolf Mountain Caribou Herds**

ACTIVITY 1: Estimate status, trend and productivity of the herds from photocensus and aerial surveys.

In cooperation with BLM, conducted aerial surveys of Hodzana Hills Herd and counted 508 on 06/17/13

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

Activity 1: Conduct fall sex and age composition survey.

Conducted a sex and age composition survey in October (15 calves:100 cows, 31 bulls:100 cows).

ACTIVITY 2: Conduct radiotelemetry flights to monitor herd demographics.

Conducted radiotelemetry flights in Sep, Nov, Mar, May and Jun to monitor herd demographics.

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

ACTIVITY 1: Estimate parturition rates and calf:cow ratios in June by radio-tracking collared females.

Conducted radiotracking flights to estimate parturition rate and calf:cow ratio in June 2013, however, estimates not obtained due poor weather prohibiting aerial observations.

ACTIVITY 2: Conduct a photocensus to determine herd size.

No photocensus conducted due to poor weather conditions and herd aggregation.

ACTIVITY 3: Conduct household harvest surveys.

Household surveys not conducted because funding reallocated to photocensus and captures.

**Units 26B and 26C Central Arctic Caribou Herd**

ACTIVITY 1: Conduct fall sex and age composition surveys.

Conducted a fall se sex and age composition survey on 13 October 2012; Classified 4,016 caribou, resulting in a bull:cow ratio of 56 bulls per 100 cows and a calf:cow ratio of 61 calves per 100 cows.

ACTIVITY 2: Estimate parturition rates and calf:cow ratios in June by radio-tracking collared females.

Radio-tracked females and obtained a preliminary parturition rate of 80% for females >= 3year olds (*n*=30) and preliminary late June calf:cow ratio of 55% for females >= 3 years old (*n*=29).

**Submitted by:** Roy A. Nowlin, Management Coordinator

## The Status of Caribou and Factors Influencing Their Populations

## Region IV—Southcentral Alaska and Southwest Alaska

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

**Regionwide**

ACTIVITY 1: Prepare biennial caribou management reports.

The biennial caribou management reports were prepared and submitted to the region for editing.

ACTIVITY 2: Conduct fall sex and age population composition surveys to determine status, trend, productivity and mortality of caribou.

| | **Bulls (%)** | **Cows (%)** | **Calves** (%) | **Calves/ 100 Cows** | **Bulls/ 100 Cows** |
|---|---|---|---|---|---|
| *Mulchatna* | 15 | 65 | 20 | 30 | 23 |

| | | | | | |
|---|---|---|---|---|---|
| *Nelchina* | 30 | 53 | 16 | 31 | 57 |
| *Northern Alaska Peninsula* | 19 | 66 | 15 | 22 | 28 |
| *Nushagak Peninsula* | 26 | 50 | 25 | 50 | 52 |
| *Southern AK Peninsula* | 27 | 60 | 12 | 20 | 45 |
| *Unimak* | 8 | 89 | 2 | 3 | 10 |

ACTIVITY 3: Monitor the caribou harvest through field observations, hunter harvest reports and contact with hunters.

| | Hunters | Bulls | Cows | Unknown | Total Harvest |
|---|---|---|---|---|---|
| *Mulchatna* | 550 | 161 | 170 | 4 | 335 |
| *Nelchina* | 10145 | 3137 | 1268 | 25 | 4430 |
| *Northern Alaska Peninsula* | 0 | 0 | 0 | 0 | 0 |
| *Nushagak Peninsula* | 0 | 0 | 0 | 0 | 0 |
| *Southern Alaska Peninsula* | 0 | 0 | 0 | 0 | 0 |
| *Unimak* | 0 | 0 | 0 | 0 | 0 |

The state hunting seasons for the Northern Alaska Peninsula caribou herd, Nushigak Peninsula caribou herd, the Southern Alaska Peninsula caribou herd, and the Unimak caribou herd were not open during this reporting period.

**Project Activities by Herd**

**Mentasta Herd:**

ACTIVITY 1: Monitor caribou seasonal distribution through relocation of radio-collared caribou.

No monitoring of the Mentasta Herd occurred. The National Park Service monitors the distribution of this herd.

ACTIVITY 2: Capture up to 15 caribou and replace expiring radio collars.

No captures were conducted on the Mentasta Caribou Herd. The National Park Service captures and replaces radio collars on this herd.

**Mulchatna Herd:**

ACTIVITY 1: Monitor caribou distribution through relocation of radio-collared caribou.

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

ACTIVITY 2: Conduct an aerial post-calving photo-census to estimate population size.

Photo-census counts have been unsuccessful since 2008 due to a combination of poor weather conditions and lack of post calving aggregations. A modified photo survey was conducted on July 6-7, 2012 to provide a minimum count of caribou as well as to evaluate the survey method, however the data is still being analyzed.

ACTIVITY 3: Capture up to 20 caribou and replace expiring radio collars.

A total of 18 radio-collars were deployed on Mulchatna caribou.

**Nelchina Herd:**

ACTIVITY 1: Conduct a post-calving census and sex and age composition survey.

On 26 June 2013, a post-calving census, and a sex and age composition survey were flown. A total of 35,464 caribou were observed during a conventional census. A total of

4,581 caribou were observed during the composition survey: 941 (21%) bulls, 2,896 (62%) cows, and 771 calves (17%).

ACTIVITY 2: Monitor caribou seasonal distribution through relocation of radio-collared caribou.
Caribou locations were monitored via fixed-wing flights conducted throughout the year and using satellite collars.

ACTIVITY 3: Capture up to 15 caribou and replace expiring radio collars.
In October 2012, 15 caribou calves (4-month old) were captured, weighed and measured, and fitted with radio collars. An additional 5 calves were captured, weighed and measured, though were not fitted with radio collars.

Northern Alaska Peninsula Herd:
ACTIVITY 1: Conduct parturition survey to estimate pregnancy rates.
A parturition survey conducted in May estimated an 81% pregnancy rate for cows that were 2 years of age or older (n = 193).

ACTIVITY 2: Conduct an aerial post-calving photocensus to estimate population size in cooperation with the USFWS.
No photocensus was conducted in 2012-13, due to a lack of post-calving aggregations.

**Nushagak Peninsula Herd:**
ACTIVITY 1: In cooperation with the USFWS, conduct a census and radio-tracking surveys to determine distribution, movements, and areas of preferred use.
Radio-tracking flights conducted by state and federal staff throughout this fiscal year to note distribution and movements.

Southern Alaska Peninsula Herd:
ACTIVITY 1: Conduct parturition survey to estimate pregnancy rates.
A parturition survey conducted in June estimated a 93% pregnancy rate for cows that were 2 years of age or older (n = 192).

ACTIVITY 2: Conduct an aerial post-calving photocensus of the herd to estimate population size and a sex and age composition survey.
No photocensus was conducted in 2012-13 due to poor weather conditions.

Unimak Herd:
ACTIVITY 1: Conduct parturition survey to estimate pregnancy rates.
A parturition survey conducted in June estimated a 65% pregnancy rate for cows that were 2 years of age or older (n = 71).

ACTIVITY 2: Conduct an aerial post-calving photocensus of the herd to estimate population size and a sex and age composition survey.
No photocensus was conducted in 2012-13 due to poor weather conditions.

**Submitted by:** Lem Butler, Region IV Management Coordinator
**Date:** 15 August, 2013

## Region V—Western and Northwestern Alaska

### Regionwide:

ACIVITIY 1: Prepare regional biennial caribou management reports.

A caribou management report was prepared during this reporting period.

ACTIVITY 2: 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

ACTIVITY 1: Monitor herd dynamics using radiocollars 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 October and December 2012 as well as in March and June 2013.

ACTIVITY2: 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.

ACTIVITY 3: Participate in photocensuses of caribou herds that use Unit 18.

We flew two days during July 2013 to assist with the Photocensus. The results from the photcensus will be reported in the Unit 17 report.

ACTIVITY 4: Participate in radiocollar 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 Unit 17 section.

ACTIVITY 5: 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. Reported harvest from the Mulchatna caribou herd (MCH) in Unit 18 is 215 caribou for RY12.

ACTIVITY 6: Continue to improve communication with the public.

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

ACTIVITY 7: 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.

**Teshekpuk Herd** (Unit 26A):

ACTIVITY 1: Conduct a photocensus to estimate population size of the herd on a projected schedule: a minimum of 3 photocensuses every 5 years.

We did not conduct a photocensus in this year. Aggregation conditions were poor for most of the post-calving period, and we were unable to capitalize on the one-day window that did occur late in the summer.

ACTIVITY 2: 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 northwestern Unit 26A with a smaller proportion wintering with the WAH in the Noatak, Kobuk, and Selawik drainages. Calving was distinctly different than 1990-2009, with a large number of caribou calving well outside historical calving areas, similar to 2010 - 2012.

ACTIVITY 3: Collect harvest information through the North Slope Borough and the Subsistence Division. Also, monitor mortality (causes and rates) through field observations of collared individuals and investigation of large-scale die-off events.

Field observations and public reports indicated that the mortality rate in the herd during the past year was generally high with no significant local die-offs reported. The preliminary mortality rate of collared females was 27% (n=67), much higher than the long-term average of 14%.

No harvest data were collected through cooperative programs during the reporting period.

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

We discussed population objectives in advisory committee meetings, but did not develop alternative objectives.

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 two meetings related to the TCH and development concerns. We continue to work cooperatively with BLM, oil companies, and consultants to address management and mitigation concerns.

ACTIVITY 6: Capture bulls and cows to attach satellite, GPS, and conventional radiocollars. 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 32 TCH cows and 8 bulls. We attached 18 VHF collars, 6 PTT collars and 13 GPS collars. We replaced 11 collars (VHF and GPS) that were nearing their end of their battery life. We used blindfolds and hobbling equipment to restrain caribou. No drugs were used. There was 1 capture mortality. The current number of radiocollared caribou is 78, including 41 PTT and GPS collars, and 37VHF transmitters.

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 40caribou that were captured (Activity 6). The blood, fecal and hair samples are being analyzed as part of cooperative projects with the North Slope Borough.

ACTIVITY 8: Collect jaws of hunted caribou to develop age structure models for the herd, and assess herd health through morphometric indices of jaw growth.

We made no significant progress toward beginning a jaw collection program, although the idea continues to be discussed in public forums.

ACTIVITY 9: Conduct sex and age composition surveys during mid-summer and/or October.

Fall composition surveys were flown on 20-21 October 2012 with a helicopter. A total of 5010 caribou were classified in the vicinity of radiocollared caribou, and we found 35 calves:100 cows and 39 bulls:100cows.

ACTIVITY 10: Conduct aerial surveys during April and May to assess short yearling recruitment and range-wide distribution.

Short yearling surveys were flown on 13-14 April 2013. We located 25 radiocollared caribou. Using a fixed-wing aircraft, a total of 3153 caribou were classified in the vicinity of radiocollared caribou and we found 13 short yearlings:100 adults. This is lower than the 10-year average of 17 short yearlings:100 adults.

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

Calving surveys were conducted on 6-12 June 2013. We located 36 adult cows. The parturition rate was 61%, 16 cows were seen with calves (44 %). Two of the 36 adult cows had visible soft antlers at the time of the survey. Calving was concentrated in a latitudinal band stretching from just south of Teshekpuk Lake to an area between Wainwright and Atqasuk.

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

ACTIVITY 1: Conduct a photocensus to estimate herd size on a projected schedule of once every two years.

During the reporting period, the WAH was not photographed to estimate population size. One week after the end of the period on 7 July, and again on 8 July, 2013, photography of the herd was completed. Both sets of photographs will be used to assess the precision of minimum count and Rivest estimates of population size. An updated population estimate should be available by May 2014.

ACTIVITY 2: Monitor distribution, movements, and dispersal using satellite collar data, radiotelemetry data, and aerial survey observations.

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

ACTIVITY 3: Deploy a sufficient number of radiocollars to maintain a year-end sample size of at least 100 operational radiocollars on living caribou. Capture activities will follow protocols in the division's Wildlife Capture and Chemical Restraint Manual.

32 radio collars (13 GPS and 19 satellite) were deployed in the WAH during September 2012; 10 collars were deployed on bulls and 22 on cows. There were no capture mortalities during this activity.

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

We classified 11,185 caribou (9,584 adults and 1,601 calves) during spring 2013 and observed 17 short yearlings:100 adults.

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

We visually located 71 radiocollared female caribou and observed a ratio of 63 neonates:100 cows in June 2013.

ACTIVITY 6: Conduct helicopter surveys on a scheduled basis (once every 2 years) during October to assess fall composition and retrieve radiocollars.

We classified 9,120 caribou (2,119 bulls, 5,082 cows and 1,919 calves) based on 44 collared caribou in 23 groups. We observed 44 bulls:100 cows and 38 calves:100 cows.

ACTIVITY 7: Collect up to 20 caribou for necropsies and health assessments to determine overall health and condition of the herd. This collection will have a negligible impact on the herd as it will be much less than 1 % of the calves produced that year and it has been documented in our research that predators take 50 % or more of the potential annual increment in the herd. (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.)

A health assessment was not conducted during this reporting period.

ACTIVITY 8: Collect blood samples from approximately 50 - 100 captured caribou 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 collected a blood samples from 46 caribou during September 2012. 17% of these individuals exhibited an elevated haptoglobin level, and 2% were positive for exposure to *Brucella suis*.

ACTIVITY 9: Monitor hunting and other mortality factors through harvest reporting, collection of biological specimens and public contacts.

Some mandibles were collected from hunters during the reporting period (see Activity 10 below). Caribou were generally available to most communities in Units 22, 23 and 26A during this reporting period, and subsistence and recreational harvest levels were within the range reported for previous years. As in the past, most visiting WAH hunters hunted in Unit 23 during RY12.

ACTIVITY 10: 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 180 mandibles during this reporting period. Jaws were measured using CARMA protocol to monitor size and a tooth was extracted to determine age. Analyses are not yet complete.

ACTIVITY 11: 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 12: 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.

We presented maps showing movements and distribution of caribou to the Reindeer Herders Association during their meeting in November 2012.

ACTIVITY 13: 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.)

Students from Kobuk and Kivalina High Schools participated in the Onion Portage collaring project during September 2012.

ACTIVITY 14: 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.

Community harvest data indicates the harvest of WAH caribou by people residing within the range of this herd has been ~14,000-15,000 caribou annually. It appears that overall 'local' harvest levels have been relatively stable from the late 1990s through this reporting period.

ACTIVITY 15: 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 maps showing movements of WAH caribou near and far from the Red Dog mine and road to environmental staff at Red Dog during October 2012. This information was also presented to: 1) the WACH Working Group and all attendees during December 2012 meeting, and 2) the Unit 23 User Conflict Working Group during May 2013.

ACTIVITY 16: Participate with resource management agencies and the Western Arctic Caribou Herd Working Group to maintain a Cooperative Management Plan for the herd.

The second revision of this plan was finalized at the 2011 WAH Working Group meeting. Copies were printed and distributed at the WACH Working Group meeting in December 2012.

ACTIVITY 17: 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 line density depictions of WAH movement areas were updated to include data collected during this reporting period.

**Submitted by:** Peter Bente, Survey and Inventory Coordinator, Region V

**Date:** 1 September 2013