

Western Arctic Caribou Herd Working Group DRAFT – 2018 Meeting Summary

December 12-13, 2018
 Anchorage, AK

DRAFT for review & approval by WAH Working Group at December 2019 meeting

The Western Arctic Caribou Herd (WACH) Working Group (WG) met in Anchorage on December 12-13, 2018 (Agenda in Attachment 1). The WG’s Technical Committee (TC) met in Anchorage on December 11, 2018 (TC report in Attachment 2). The following is a summary of meeting presentations and WG members’ discussion. Motions passed at the meeting are shaded in gray and listed in Attachment 3. Assignments are highlighted in yellow and listed in Attachment 4. The WG Binder for the meeting is posted at www.westernarcticcaribou.net

Day 1 – Wednesday, December 12, 2018

- I. Call to Order** – WG Chair Vern Cleveland called the meeting to order at 8:30 a.m.
- A. Invocation:** Mr. Bob Sampson offered the opening invocation, at the request of Chair Cleveland.
- B. WACH WG Roll Call / Establish Quorum** – Quorum was met. The following table lists WG membership attendance and the status of members as of the end of the 2018 meeting.*

Working Group Seat	Voting Chair	Alternate
1. Anchorage Advisory Committee	Neil DeWitt	<i>Matt Moore</i>
2. Buckland, Deering, Selawik	Ron Moto Sr	<i>Perey Ballott</i>
3. Anaktuvuk Pass, Nuiqsut.....	<i>Eli Nukapigak</i>	vacant
4. Elim, Golovin, White Mountain	Charles Saccheus.....	<i>Morris Nakaruk</i>
5. Fairbanks Hunters.....	Allen Barrette.....	<i>Rod Arno</i>
6. Hunting Guides.....	Jake Jacobson.....	<i>John (Thor) Stacey</i>
7. Kivalina, Noatak.....	Enoch Mitchell	Daniel Foster, Sr.
8. Kotzebue.....	Cyrus Harris (Vice Chair)	Willie Goodwin
9. Koyukuk River	Pollock Simon, Sr.	Jack Reakoff
(Huslia, Hughes, Allakaket, Bettles, Wiseman)		
10. Lower Kobuk River	Vern Cleveland, Sr (Chair)	Kirk Sampson
(Noorvik, Kiana)		
11. Middle Yukon River	Benedict Jones (now vacant)*	Micky Stickman
(Galena, Koyukuk, Nulato, Kaltag)		
12. Point Hope and Point Lay.....	vacant	<i>Caroline Cannon</i>
13. Nome	Charlie Lean.....	Jacob Martin
14. Conservationists.....	Tim Fullman.....	David Krause
15. Northern Seward Peninsula	Elmer Seetot, Jr.	Christine Komanaseak
(Teller, Brevig Mission, Wales, Shishmaref)		
16. Reindeer Herders Association	Tom Gray	Harry Karmun
17. Southern Seward Peninsula	Morris Nassuk	Leo Charles, Sr.
(Koyuk, Shaktoolik, Unalakleet, Stebbins, St. Michael, Kotlik)		
18. Transporters.....	Julie Owen.....	<i>Sheila Spisak</i>
19. Upper Kobuk River	William Bernhardt.....	Oscar Griest, Sr.
(Ambler, Shungnak, Kobuk)		
20. Atqasuk, Barrow, Wainwright.....	<i>Wanda Kippi</i>	vacant

Italic print indicates members voted in at the 2018 meeting (see Motions, Attachment 3)

Blue text = vacancies Strike-out text = not present as a WG member

*NOTE – Benedict Jones attended the 2018 WG meeting, but resigned his seat at the end of the meeting, after many years of service on the group. Seat 11 is now vacant.

Gray shading = motions; **Yellow** highlight = assignments

- C. **Audience Attendance**: Audience attendance is listed in Attachment 5.
- D. **Approve Agenda**: Facilitator Jan Caulfield reviewed the agenda (Attachment 1). Assistant Secretary of the US Department of the Interior Joseph Balash will not be able to attend on December 13. MOTION by Bill Bernhardt, second by Al Barrette, to approve the meeting agenda. Motion carried unanimously. Jan asked WG members to fill out the Caribou Roundtable questionnaire. Responses are included in Attachment 6 and will be entered into the database maintained by the National Park Service (NPS) and posted at www.westernarcticcaribou.net
- E. **Member Appointment**: MOTION by Al Barrette, second by Cyrus Harris, to accept nomination of Working Group alternate members: Seat 1 Alternate Matt Moore; Seat 12 Alternate Caroline Cannon. Motion carried unanimously.

II. Guest Elder – Mr. Ben Sampson, Noorvik

Mr. Ben Sampson from Noorvik opened the meeting, sharing information about his family's and community's subsistence use of caribou from the Western Arctic Caribou Herd. (Note, the following remarks are not verbatim.)

The Working Group is very valuable for the care of the Western Arctic Caribou Herd. In the 1950s and 1960s, Mr. Sampson lived with his family in the Selawik area. "It was a hard living," Mr. Sampson said. "I remember we don't have much caribou in those days. I was born way up Selawik River, near Purcell." He recalls his family traveling to Shungnak in winter, staying in a tent and using a cook stove, without much food. It was hard to feed the dog team; if they didn't go out and catch food at that time, they would run out of food for dogs and people. The biggest caribou group they would ever see would be around 50. They would go without food some nights. Mr. Sampson remembers being at a camp (around March) and hearing his father shoot something. They watched him walk back to camp carrying something under each arm – they didn't know what it could be, then saw he was carrying caribou. Everyone was happy! His father got about 15 caribou, and the family and dogs wouldn't have to worry about starving anymore. In the 1960s in Selawik, people had just started to harvest caribou. From this time, they started to increase in numbers and were hunted more.

In the 1960s-1970s, Mr. Sampson's family moved to Noorvik and the caribou had started coming to that area. People started hunting for them. He would go with his uncles by dog team over to the Noatak area and would go hunting for a couple weeks up there. It would take two days to get there. There were lots of good caribou. There were wolves and wolverine there too. Where caribou are there are wolves. He remembers that they would work so hard to hunt them, but they didn't think of it as hard work! In the 1980s, Mr. Sampson married a woman from Kiana and moved there. There were more caribou arriving in Kiana at that time.

People live on caribou. People in the region don't have many stores or much money. They live on caribou and moose. Mr. Sampson remembers that when he was very young and lived near Selawik, there were no moose. The first time he saw a moose he was surprised that there was so much meat!

More recently, there have been many caribou through Kobuk River and Noatak River areas, crossing through Kiana and Noorvik, and up river to Ambler and Shungnak. There have been a lot of caribou.

However, this fall (2018) it was rougher than ever near Noorvik. Everyone got less and less caribou. The caribou used to migrate right through Noorvik, but now they've changed their route and migrate closer to Kotzebue. This fall none of them (in the Noorvik area) got caribou. People went out in boats to where the caribou used to cross the Kobuk River, but came back empty. It's worrisome. People need to eat. There are also fewer fish than ever before, and people are worried. "Everything getting less," Mr. Sampson said.

Growing up, it was a hard life. Mr. Sampson noted that they had no phones, no CB, no radio, ... but they were happy. They were out all day looking for food and that was a happy life.

Now, Mr. Sampson is a parent and grandfather. He has twin great-granddaughters and is so happy to see them. What is coming, it's not easy. He is glad to have this Working Group and he knows that the group is doing its best for the caribou herd.

After Ms. Sampson spoke, WG member Charles Saccheus of Elim offered a recollection. There used to be a village at Cape Darby. When the caribou would come there, there would be a drive for them and men would catch caribou. There was also plenty of tomcod, crabs, and walrus. In the 1950s, people used to go to the head of Norton Bay, where there is a river that goes east, and get a lot of caribou. After that, the caribou declined, and then years later they returned and started coming in the fall time.

III. Western Arctic Caribou Herd Summary Information

2018 Western Arctic Herd Census Count and Population Trend – Alex Hansen, Alaska Department of Fish and Game (ADFG), Division of Wildlife Conservation (DWC) presented information about the WACH population status and trends (see p. 13 in WG Binder). The presentation laid the foundation for the WG's later discussion of their recommendations regarding future management of the caribou herd. Key points in the ADFG presentation included:

- ADFG conducts a calf yearling recruitment survey every year. Yearling recruitment has been good for the past three years: 2018 was 21:100 yearlings:adults; 2017 - 22:100; 2016 - 23:100.
- Summer calving surveys show that 86% of collared cows had calves in 2018 and 83% in 2017.
- Cow survival was down to 71% in 2017-2018 from 84% in 2016-2017.
- ADFG was unable to complete a photocensus of the herd in 2018, due to winds and weather. The 2017 herd census, using new digital photo technology, resulted in a minimum count of >239,055 caribou in the herd, raising the total estimate to 259,000 (+/- 29,000 caribou). The 2017 count was up from 201,000 in 2016 and reflects both an increase in the herd's size and improvements in census technology. ADFG is planning for a photocensus in 2019.
- ADFG and NPS were only able to collar three adult caribou at Onion Portage in fall 2018. They need to consider alternative methods for collaring caribou in the future. Collaring data is critical for inventory and management. There are currently only 70 caribou collared – and managers would like to have 100 collars deployed.
- At its December 11 meeting, the Technical Committee (TC) recommended to the WG that the herd be considered “Conservative, Stable” on Table 1 of the *2011 Western Arctic Caribou Herd Cooperative Management Plan* (see Attachment 2). (This is the same designation as in 2017. Note that in 2016 the herd was considered to be “Conservative, Declining”.) Although the cow survival was lower in 2017-2018, other biological indicators for the herd were good (e.g., high calf recruitment and calf production). (NOTE – Later in the meeting, the WG passed a motion designating the herd as “Conservative, Stable” in 2018. See page 12, below.)
- Neonate Study 2018 – ADFG continued its study of newborn calf survival for a second year, putting collars on 76 calves. To date in 2018, there have been 17 mortalities, due to predation, abandonment, and unknown causes. ADFG will continue this study in 2019.

Monitoring Caribou Movements and Distribution – Kyle Joly, NPS, presented information on the caribou the NPS has collared (see p. 27 in WG Binder). Information included: location of collared caribou in November 2018, their movements/range in Sept. 2017-Aug. 2018 and in the prior year, the distribution of caribou as they cross the Noatak River in the fall (2010-2018), the timing of the fall crossing of the Kobuk River (2010-2017), and the timing of the spring migration crossing of the Selawik (2011-2018). Points from the presentation:

- A late fall migration through the Kotzebue area is getting to be the norm. As of December 2018, there are no caribou yet in the Bering Land Bridge National Preserve (BELA), and fall use has been lower than in past years in BELA, and in the Noatak National Preserve and Kobuk Valley National Park. There are lots of caribou in Gates of the Arctic National Park & Preserve, similar to last winter.
- This winter (2018-2019), the caribou are moving eastward at an earlier point, instead of continuing southward toward Selawik. In fall 2017, about 50% of the herd never crossed the Kobuk River during the southward migration, while normally this would only be about 5% of the herd. Many of those that did cross the Kobuk River were about a month later than normal. In 2017, NPS observed the biggest time lag (since caribou collaring was initiated) between the first caribou to cross the Kobuk and the last caribou to cross in fall.
- The mean distance of travel by collared caribou from Sept. 2017-Aug. 2018 was 1,773 miles. This is the 5th year in a row in which the mean annual distance traveled has declined (it used to average 2,000 miles/year).
- Some collared caribou that intersect the Red Dog Road during their fall migration do not cross the road, and can be delayed in their southward migration by up to 30 days as they navigate around it. It is not known what, if any, effects this may have on the caribou – Is there sufficient forage for them if it slows their pace? Do they expend extra energy to “catch up” with the migration?

The following comments and questions were raised in WG discussion:

- It is critical to have satellite collar information; need to get the number of deployed collars back up.
- Change in winter range may be driven by changes in winter forage / lichen abundance.
- Question - Are there maps of the farthest south historic migration (e.g., used to hunt them in St. Michaels and Kotlik?) Answer – This may have been the case during their peak years (2003); would need to check ADFG reports from that time, as it pre-dates NPS collaring data.
- Concerns about effects of early-winter rains on forage and migration routes, and that it is increasing the distance that people need to travel to hunt. Concern that migration is changing due to climate change. Caribou are critical to communities, for nutrition, for elders’ health, and for the social structure and traditions (e.g., young people becoming caribou hunters).
- Caribou migrating south along the coastal route wait until the bay freezes at Kotzebue and it is safe to cross to the Baldwin Peninsula.

IV. Point Lay School Presentation – Onion Portage

Students from the Point Lay School participated in caribou collaring at Onion Portage on the Kobuk River in September 2018. Students Torrie Tracey, Teri Ferreira, Kenyan Tracey and Kobe Koonuk presented a slide show and video of their activities and thanked the WG and agencies for the opportunity. The students shared information about their community and culture in Point Lay, the importance of caribou to their families and community, and their experience camping and working with ADFG and NPS to collar caribou and take other data from the collared animals.

V. Working Group Discussion about Herd, Harvest and Collaring

WACH Management Level, 2011 Cooperative Management Plan – As a follow-up to the ADFG and NPS presentations about the herd status, the WG began to discuss what management designation should be given to the herd under Table 1 of the *2011 Western Arctic Caribou Herd Cooperative Management Plan*, but then tabled the topic. MOTION by Neil DeWitt to table this discussion and decision until later in the meeting, seconded by Morris Nassuk. Motion passed 17:1. (NOTE – See p. 12 below for later motions to un-table this topic and designate the WACH as “Conservative, Stable” under Table 1.)

Collaring Caribou – The WG discussed with ADFG and NPS potential alternatives to in-river collaring of caribou at Onion Portage. It is critical to increase the number of collared caribou to gather information about the herd, survival rates, migratory routes, and other parameters – and to be able to conduct the photocensus. ADFG recommends using net guns from helicopters to collar animals in the spring. The agencies would work closely with communities near where they would be collaring. This is preferred to tranquilizing animals, since drugs are expensive and stay in the system for up to 30 days (potentially affecting harvested meat). The mortality rate is the same for both netting and drugs (~2%). MOTION by Al Barrette, second by Neil DeWitt, to support the agencies in putting collars on in 2019 through means other than in-river capture (e.g., using net guns) to gather information about the herd and to support the 2019 photocensus. Motion carried unanimously.

VI. WACH Cooperative Management Plan Review & Revision

At its 2017 meeting, the WG decided to update the 2011 WACH Cooperative Management Plan and formed a subcommittee to work with agencies on this task. The subcommittee met via teleconference on July 26 and November 7, 2018. Subcommittee members included Vern Cleveland, Morris Nassuk, Al Barrette, Neil DeWitt, Charlie Lean, Jake Jacobson and Thor Stacey (alt.).

Susan Georgette (US Fish and Wildlife Service [USFWS]), Alex Hansen (ADFG) and Kyle Joly (NPS) listed five topics that the subcommittee wanted the full WG to discuss (see p. 37 in WG Binder).

1. Should the 40 Bull:100 Cow ratio be changed? The agencies recommend deleting the $\geq 40:100$ bull:cow ratio from the “Critical Management Level” in Table 1. ADFG noted that if herd levels are critically low, maintaining a high bull:cow ratio would favor hunting cows over bulls, which may slow herd growth. The agencies also recommend changing the bull:cow ratio to 30:100 in Table 2 for all management levels (it is 40:100 in the 2011 WACH management plan).

WG Discussion – There was not substantial discussion about this proposed change, but also no objection to deleting the $\geq 40:100$ bull:cow ratio from Table 1 and changing the bull:cow ratio to 30:100 in Table 2.

2. Should adult cow survival and calf recruitment guidelines be added to each of the population trend columns in Table 1?

WG Discussion – Cow survival and calf recruitment are the primary metrics that agencies consider when making judgments about the herd population trend. There was no WG objection to adding those metrics into Table 1 to give more information about what data is considered by the agencies when they evaluate population dynamics/trends.

3. What is the WG’s comment on the proposed changes to the harvest ranges in Table 1?

WG Discussion – WG members were not in complete agreement about whether the harvest ranges should be included in Table 1 and whether they should be lowered as proposed. Some WG members favored including harvest ranges for each Management Level in Table 1. They noted that the harvest ranges would be a guideline (not a regulation), and commented that including the harvest ranges better explains how future management decisions might be made for different herd population sizes and trends. However, other WG members were uncomfortable with including harvest levels that might impact availability of caribou to hunters. This point should be discussed further by the planning subcommittee and brought back to the full WG in December 2019.

4. What are the WG’s thoughts on allowing calf harvest, except at the Critical Management Level (see Table 2)? ADFG noted that when the population is declining, the main concern is to retain cows. Restricting calf harvest is not as important a tool for encouraging the herd’s growth.

WG Discussion – There was not substantial discussion about this proposed change to Table 2, but also no specific objection. (Note that the WG plans to submit state and federal regulatory proposals to remove the restriction on calf harvest in Game Management Unit 23. See p. 10, below.)

5. Should climate change, human impacts on the herd (e.g., development projects), or other topics be added into the plan as considerations that can affect the WACH and its management?

WG Discussion – WG members spoke in favor of addressing climate change and development / human impacts on the herd as “management considerations” in the plan. They commented that they are seeing evidence of climate change in northwest Alaska, that elders have told them it is happening, and that it may already be affecting caribou migration and hunter success. Resource development is increasing in the region and has the potential to impact the herd, its habitat and its movements.

MOTION by Cyrus Harris, second by Al Barrette, to include the topics of climate change and human impacts / resource development in the management plan. Motion carried unanimously.

ASSIGNMENTS

- Working Group members were asked to review the proposed edits in the plan (see p. 45 in WG meeting binder) and send any comments to Susan Georgette, susan_georgette@fws.gov by the end of January 2019.
- The plan subcommittee will prepare a final draft version of the plan and present it to the Executive Committee in mid-2019. Note the need to discuss further the harvest ranges in Table 1 (see p. 5, above). The draft revised plan will be brought to the full Working Group for final approval in December 2019.

VII. Traditional Stewardship of Caribou

WG Vice Chair Cyrus Harris and agency staff Hannah Atkinson (NPS), and Brittany Sweeney (USFWS) spoke about efforts to widely share elders’ knowledge and guidance about traditional stewardship of and respect for caribou with younger hunters (see p. 99 in WG Binder). These initiatives include the Caribou Hunter Success Working Group, the Native Village of Kotzebue’s and Kiana Elders Council’s *Inupiat Iitqusiak* Guidelines, and village meetings with elders, younger hunters and agency staff coordinated by Maniilaq. Through meetings and written guidance (e.g., flyers, discussion guides), elders are asking hunters to harvest in a way that respects the caribou, does not disrupt the migration or separate calves from their mothers, does not waste meat, and does not cause hunter conflict or safety issues.

WG members mentioned the following in their discussion:

- Meetings with elders are very important for younger hunters; some may not have been taught traditional hunting practices before.
- Meat must not be wasted.
- Concern about gun accidents when hunters are crowded and not being careful.
- Elders say: do not shoot the first caribou, as that will disrupt migration. Also, pick out the animal you are going to shoot. Do not shoot into the herd.

VIII. ADFG Community Harvest Surveys for 2016-2017 – Buckland, Koyuk, Noatak

Beth Mikow, ADFG Subsistence Division, presented 2016-2017 preliminary estimates of caribou harvest by Buckland, Koyuk and Noatak based on household surveys in those villages (see p. 105 in WG Binder). The presentation addressed the number and percent of households who harvested and used caribou during 2016-17, total harvest and pounds per capita, timing of harvest, geographic density of harvest, and comparison with prior year harvests (for which ADFG has survey data). In each village, ADFG coordinates with the Tribal Council, hosts a meeting to explain the survey and its purpose, and hires local research assistants to carry out surveys.

Gray shading = motions; Yellow highlight = assignments

IX. Prehistoric Caribou Movement & Hunting – Great Lakes Region

(Non-agenda topic - Chair Vern Cleveland asked that this additional topic be included in the meeting.) John O'Shea, archaeologist at University of Michigan, presented a virtual-world simulation of prehistoric caribou movement and herd size in the Great Lakes region (9,000 BP). The project team is planning to adapt the simulation to a portion of western Alaska, and came to the WACH WG meeting to make contacts with Alaska Native hunters, communities, and caribou researchers who may be interested in the project.

Day 2 – Thursday, December 13, 2018

I. Call to Order – The meeting was called to order at 8:30 a.m. Quorum confirmed.

II. Resource Development in the Herd's Range

Tim Fullman, Chair of the WG's Resource Development Committee, introduced resource development projects within the range of the WACH that need WG discussion or action at this meeting (see p. 113 in WG Binder). Agency presentations and WG discussions are summarized in this section.

A. Ambler Mining District Industrial Access Project

National Environmental Policy Act (NEPA) Process – Tina McMaster-Goering, BLM, gave a presentation about the NEPA process that will result in an Environmental Impact Statement (EIS) for the Ambler Road project (see p. 169 of WG Binder). The Alaska Industrial Export and Development Authority (AIDEA) is the project applicant and is funding the NEPA process. Tina described the proposed road project and reviewed comments received during the public scoping process. In early 2019, BLM plans to announce which alternatives it will analyze in the EIS. BLM plans to issue a Draft EIS for a 45-day (at minimum) public review period in late summer 2019. For more information, see www.blm.gov/AmblerRoadEIS

National Park Service Environmental and Economic Analysis (EEA) – Greg Dudgeon, Superintendent of Gates of the Arctic National Park & Preserve, presented information about the NPS analysis to determine the route of the 20 mile road right-of-way (ROW) through Gates of the Arctic (see p. 173 of WG Binder), as provided for in ANILCA Section 201(4)(b). The EEA will evaluate impacts and benefits, determine the best route, and stipulate conditions for the road. Regarding the WACH, NPS is evaluating potential impacts to migration, habitat and subsistence opportunity. NPS has reached out to 55 communities, Tribes, and organizations, and has offered government-to-government consultation with Tribes. NPS expects to issue a Draft EEA for public review in spring 2019. NPS can place conditions on how the road is developed in the ROW, but will not have control over who is allowed to drive the road. However, if the decision was made to open it for public access, NPS would consult again with communities. For more information see <https://parkplanning.nps.gov/Ambler>

State of Alaska – Don Perrin, Alaska Department of Natural Resources (DNR), explained that the State is a cooperating agency in the BLM NEPA process. The Ambler Road would require easements, contracts, and permits from the State of Alaska. Mr. Perrin commented that the State would only support restriction of general public use if it is deemed to be in the public interest through the approval processes.

WG Discussion – The WG submitted scoping comments to BLM and NPS in January 2018 (see p. 117 and p. 121 of WG Binder). At that time, the WG did not take a position in support of, nor opposing, the Ambler Road. The WG will review and comment on the Draft EIS and Draft EEA later in 2019.

The following comments and questions were made by WG members. (Comments are listed in the order in which they were made, not prioritized or categorized).

- Koyukuk villages close to the road are concerned that it will later be opened for public use (like the Haul Road, now Dalton Highway), which would increase hunting, trapping and fishing near communities, affect availability of subsistence resources, and possibly increase user conflicts.
- Meetings should be held in all villages that would be affected by the road. The Kobuk River communities of Ambler, Kiana, Noorvik, Shungnak should all be contacted by BLM. (In response, BLM noted that they are available to conduct government-to-government consultation with all affected Tribal Councils. They are talking with the Native Village of Noorvik about being a cooperating agency on the NEPA analysis. BLM did hold scoping meetings in Ambler and Shungnak.
- Noted that the cost of living and travel in the upper Kobuk region is very high. The road would address this. These potential benefits have caused one WG member to rethink his earlier opposition.
- Need to coordinate with all affected communities for due process.
- Concern that the Ambler Road itself, and in combination with other development(s), would be a barrier to caribou movement and impact the caribou migration.
- This road would open “Pandora’s box” and spur more mining projects. Concern it would negatively affect caribou. Do not favor the road at all.
- Question – How much data is there on subsistence use on the NPS-managed lands? Answer – NPS gathered community harvest data and shows that in the EEA. Also using ADFG community subsistence data.
- Our people and villages depend on caribou. We need those animals to move normally (not be deterred by a road).
- Question – Where do the two possible road routes in Gates of the Arctic cross the Kobuk River? Answer – Both crossings are upriver of the Lower Canyon of the Kobuk River.
- Caribou are migrating farther west than they used to. Also, they appear to be able to migrate around the Red Dog Road.
- Question – Would the NPS ROW be transferable? Answer – AIDEA would hold the NPS ROW for 50 years.
- Concern that the road would be built on public lands, but would not be open for public use.
- Strongly request longer than a 45-day comment period on the Draft EIS. Late summer / early fall is a very busy time of year and it takes time to coordinate a comprehensive response from the WG.
- Question – Will BLM evaluate cumulative effects caused by the mining activity and other potential future uses that would be facilitated by a road? Answer – Yes, impacts of mining will be considered in the EIS (but no specific mining proposals have been made yet).
- Thirty years ago, Point Hope elders shared traditional knowledge about the Red Dog mine and road. We are now living with what our elders told us. When you disturb the caribou migration there is a price to pay. Infrastructure’s benefits are not enough to counter its impacts. There are social impacts when we cannot have subsistence – drugs, alcohol, suicide, young men can’t take caribou and that affects self-esteem.
- Concern about impacts on a wide variety of fish and wildlife species used by subsistence communities. Concern about impacts on caribou migration.
- Northern route through NPS-managed lands makes more sense. The southern route is wetlands.
- Road would benefit the people in the upper Kobuk. Expect that the road will eventually happen and will change the lives of the communities nearby – both positively and negatively. It is hard to see that kind of change. It would likely be opened to public access eventually. Might cause damage. But, would also address need for jobs and the current high cost of living.
- Feeling both sides of this issue and appreciate all of the perspectives being shared by WG members. More than just caribou are being affected. Also concern about social impacts and loss of our culture.

- Main beneficiaries would be the mining companies. Do not favor this road.
- Projects like this bring change to the values of Alaska [he] values the most. Economic benefit would be primarily to the rest of Alaska, not to the Kobuk area communities.
- We are in a changing world. The road and associated mining would provide needed jobs to the upper Kobuk. Maps show there are no caribou migrating near the proposed road route. People need money to be able to hunt the caribou.

NOTE – See also the Business Meeting section, page 13 below, for additional WG comments and motion regarding the proposed Ambler Road.

B. National Petroleum Reserve - Alaska (NPR-A) Integrated Activity Plan

Stephanie Rice, BLM, gave a presentation about the NPR-A Integrated Activity Plan (IAP) revision and EIS process (see. p. 175 of WG Binder). In July 2017, the US Department of the Interior issued Secretarial Order 3352 requiring BLM to maximize areas for oil and gas leasing in the NPR-A, while also protecting significant surface values. BLM is now revisiting the 2013 NPR-A IAP. It is asking for public comments during a scoping period that ends January 22, 2019, and is holding public scoping meetings in a number of communities. The Draft EIS may be available for public review as early as May/June 2019. Stephanie suggested the WG look closely at and comment on the best management practices and stipulations in the DEIS Record of Decision.

Tim Fullman, WG Resource Development Committee Chair, noted that the WG submitted scoping comments and comments on the Draft EIS for the 2013 IAP. The WG strongly supported the version of the IAP that BLM adopted in 2013, which prohibited leasing in the core calving grounds and insect relief areas of the Western Arctic and Teshekpuk caribou herds. The WG will submit scoping comments for this IAP revision (see draft scoping comments on p. 143 of WG Binder).

WG members offered the following comments about the NPR-A IAP. (Comments are listed in the order in which they were made, not prioritized or categorized).

- Nuiqsut is a 100% subsistence community that is now surrounded by development in the NPR-A. Concerned that our subsistence lands will be overwhelmed by leasing and development. Subsistence use on federal lands must be protected.
- The caribou calving ground has been there for thousands of years and is essential to our people. This area needs to be left alone.
- This is the birthplace of the caribou (tuttu). Once it is destroyed, future generations will not have caribou. This would be genocide; heartbreaking. Concern that federal government promises things (like protecting the calving grounds), but then changes its mind and does not deliver on those protections.

NOTE – See also the Business Meeting section, page 12 below, for additional WG comments about the NPR-A IAP and motions regarding the WG's scoping comments to BLM.

C. Additional Resource Development Projects – WG Resource Development Committee Chair Tim Fullman provided general information about the following resource development projects within the range of the WACH.

- Alaska Strategic Transportation and Resources (ASTAR) project (see p. 151 in WG Binder)
- NPR-A oil and gas developments (see p. 153 in WG Binder) – Willow Master Development Plan Draft EIS expected to be released in March 2019 for public comment.

- Anarraaq-Aktigiruaq Mining Exploration (see p. 154 in WG Binder) – The WG submitted comments in October 2018 to Alaska DNR and the US Army Corps of Engineers about mineral exploration north of the Red Dog Mine. State and federal permits have not yet been issued.
- Noatak – Cape Krusenstern road (see p. 167 in WG Binder) – There is talk of a permanent (year-round) access road to Noatak that would connect to the Red Dog Road and pass through Cape Krusenstern National Monument (would require small land exchange with NANA Corporation). There is not much detailed information yet.

III. Wildlife Harvest Regulations

Alaska Board of Game – Phil Perry, ADFG, explained that the Board of Game will meet in January 2020 in Nome regarding wildlife regulations for the Interior & Arctic/Western Regions that would take effect July 1, 2020. The deadline for proposals is May 1, 2019.

WG Vice Chair Cyrus Harris presented a draft regulatory proposal that may be submitted to the Board of Game by the Kotzebue AC that would reopen the bull season in Unit 23 year-round and remove the calf harvest restriction.

MOTION by Al Barrette, second by Neil DeWitt, to support or cosponsor a proposal by the Kotzebue AC to remove the seasonal closure on bull harvest and restriction on calf harvest in Unit 23. Motion carried unanimously.

Federal Subsistence Board (FSB) – Chris McKee, USFWS Office of Subsistence Management (OSM) explained that the federal wildlife regulation process will begin with a public notice in the Code of Federal Regulations (expected in early 2019). Proposals would be due within approximately 45 days of this notice. The FSB will meet in April 2020 and new regulations take effect July 1, 2020. (NOTE – See p. 12 below for a motion regarding a WG proposal to the FSB.)

Registration Permits & Harvest Reporting – Alex Hansen, ADFG, presented information about implementation of registration permits RC800 and RC907 (see page 195 in WG Binder). Accurate harvest information is valuable to managers at all herd population levels. ADFG has been doing many different types of outreach to increase harvest reporting, including partnering with Tribal councils. In 2017-2018, the number of people getting the permits has increased (793 of the RC 900/907 permits were issued in Unit 23 & 26A, up from 457 in the prior year) and ADFG is working with people to increase harvest data reporting.

IV. Management of Red Dog Road during Caribou Migration

(Non-agenda topic - Chair Vern Cleveland asked that this additional topic be included in the meeting.) Fritz Westlake from Teck Alaska, and Damon Schaeffer from NANA Corporation, provided information about how the Red Dog Road is managed during the caribou migration. The Red Dog subsistence committee, made up of hunters from Kivalina and Noatak, meets quarterly and works hard to minimize the road's impact on migrating caribou. Traditional knowledge says that it is the activity on the road that could have impact (not the presence of the road itself). It is Red Dog policy that vehicle drivers must stop when caribou are within 300 feet of the road. Data for collared animals show that sometimes caribou do not cross the road, but “bounce off” to the north. However, thousands of caribou migrate across the road. It seems that individual caribou may be more likely to “bounce off”, while larger groups cross together. Trucks stop as long as is necessary for a group to cross.

WG members offered the following comments and responses are noted:

- Concern that 300-feet is too close of a distance before vehicles stop. Response – Any request to increase that distance should come to the Red Dog subsistence committee for consideration, from hunters with local knowledge in the area.

Gray shading = motions; Yellow highlight = assignments

- Concern about road dust. Response – The mined material is sealed in the truck, so there is no dust from that source. Red Dog does measure the spread of road dust along the corridor.
- Road products can have a petroleum smell that can deter crossing and noise is also a factor. Near Nome, rarely see caribou trails crossing the Kougarok Road system.
- This appears to be a good road management program that should be adapted for the proposed Ambler Road. That approach would minimize impacts to caribou, while allowing for public use of that road.
- Recommendation that the Red Dog subsistence committee also include hunters from other communities – as there are many more communities affected by changes in the migration. Specifically suggested: Point Hope, Noorvik, Ambler, Kiana, Kotzebue, and communities south of the road. Response – Damon Schaeffer will bring this request to the NANA Senior Management Team.
- NPS agency lead, Maija Lukin, Western Arctic Parklands Superintendent, said that the NPS has a subsistence program and would love the opportunity to meet with the Red Dog subsistence committee. She also invited Damon and Fritz to present this information to the Cape Krusenstern Subsistence Resource Commission (SRC).

V. Communications Committee Report

Heather Jameson, ADFG and Brittany Sweeney, USFWS are staff to the WG's Communications Committee. They highlighted current communication and outreach efforts related to the WACH (see Communications Committee Report (see p. 197 of WG Binder). Staff uses a wide variety of outreach tools to educate the public of all ages, especially those within the range of the WACH, on current issues regarding the caribou herd. In addition to the written report, staff emphasized:

- The USFWS Selawik National Wildlife Refuge posts outreach information on Facebook. WG members are encouraged to “Share” those posts on their own Facebook pages to increase circulation.
- Heather showcased a new “story map” about the WACH that will be posted on the WG's website (www.westernarcticcaribou.net)

WG members offered the following specific suggestions about outreach:

- Broadcast the annual WACH WG meeting on Facebook Live or another medium (Channel 9?)
- The Resource Development section on the website should include a map of the range of the herd, relevant to project reviews and other related issues.
- Add a “latest news” section on the website and update it frequently. (See ADFG's department website.)
- Use aerial photos and videos of the herd in outreach; post on website.
- Suggested topics for *Caribou Trails*:
 - What is happening with the migration in recent years – Why are caribou no longer coming in numbers to the Seward Peninsula?
 - Management of the Red Dog Road during caribou migration
 - Articles with a “longer shelf life”. Put more dynamic information on Facebook or as “latest news” content on the website.

VI. Business Meeting

Approval of 2017 WACH WG Meeting Summary (p. 225 in WG Binder) – MOTION by Morris Nassuk, second by Tim Fullman, to approve the 2017 WACH WG meeting summary. Motion carried unanimously.

Election of WACH WG Vice Chair for 2019-2021 – MOTION by Tom Gray, second by Neil DeWitt, to reelect Cyrus Harris as Vice Chair for the term 2019-2021. Motion carried unanimously.

Working Group Membership and Committee Appointments

MOTION by Neil DeWitt, second by Elmer Seetot, to appoint Eli Nukapigak as the primary member for Seat 3. Motion carried unanimously.

MOTION by Neil DeWitt, second by Cyrus Harris, to appoint Wanda Kippi as the primary member for Seat 20. Motion carried unanimously.

MOTION by Neil DeWitt, second by Elmer Seetot, to appoint Wanda Kippi to the Executive Committee. Motion carried unanimously.

MOTION by Neil DeWitt, second by Tim Fullman, to appoint Sheila Spisak as an alternate member for Seat 18. Motion carried unanimously.

Additional Working Group Discussion and Actions

During the Business Meeting, the WG revisited a number of substantial topics and adopted a number of motions. Their discussion and action on these topics is summarized below.

- WACH Management Level, 2011 WACH Cooperative Management Plan – MOTION by Neil DeWitt, second by Charlie Lean to un-table the consideration of what management level the WACH should be given in 2018, per Table 1 of the *2011 WACH Cooperative Management Plan*. Motion carried unanimously. In discussion, WG members noted that there are positive indicators for the herd's population trend, including the calf:cow ratio, calf recruitment, and bull:cow ratio. Although there is not a 2018 photocensus number, the agencies do not think the herd has declined in the past year. MOTION by Bill Bernhardt, second by Tom Gray, to assign the WACH to the "Conservative, Stable" category on Table 1 of the *2011 WACH Cooperative Management Plan*. Motion carried unanimously. This is the same management level assigned in 2017 and is what the TC recommended on December 11, 2018.
- Regulatory Proposal to Federal Subsistence Board – MOTION by Cyrus Harris, second by Charlie Lean, to submit a proposal to the Federal Subsistence Board to change the federal wildlife regulation for Unit 23 to match the Kotzebue AC's proposal to the Board of Game. Motion carried unanimously. (See also p. 10, above.)
- NPR-A Integrated Activity Plan, Public Scoping Process – MOTION by Cyrus Harris, second by Neil DeWitt, to approve the draft letter to BLM (p. 138 in WG Binder) requesting an extension to the NPR-A IAP scoping period and requesting that BLM consult with all of the villages listed in the WG's letter. Motion carried unanimously. WG members commented that actions that affect the herd have the potential to affect all of the communities that use the herd.
- NPR-A Integrated Activity Plan, Scoping Comments – MOTION by Al Barrette, second by Cyrus Harris, to approve the draft scoping comment letter to BLM regarding the NPR-A IAP (p. 141 in WG Binder), with the addition to point 15, "... Traditional Knowledge / Cultural Sensitivity" and update Figure 1 to show the overlay of NPR-A lease tracts on the herd range map. Motion carried unanimously.

ASSIGNMENT - WG Resource Development Committee Chair Tim Fullman will submit the WG's letter to BLM requesting changes in the NPR-A Integrated Activity Plan scoping process and timeline, and will also submit the WG's scoping comments to BLM.

- Ambler Mining District Industrial Access Project - MOTION by Cyrus Harris, second by Al Barrette, to oppose the proposed Ambler Mining District Industrial Access Road. Motion carried 17:1. WG

members offered the following comments and question before voting on this motion. See also pp. 8-9, above. (Comments are listed in the order in which they were made, not prioritized or categorized).

- Question for agencies – Do the WACH, Central Arctic herd, and/or Teshekpuk herd (TSH) come down to the area of the proposed Ambler road? Answer – It has been common for the TSH to use that area. Caribou from the WACH do cross the proposed road route, more to the west than the east.
- We do not know what the Upper Kobuk AC thinks about the Ambler Road. They are not represented at the WG meeting.
- Concern that the Ambler road would not be open for public use. Opposes the road based on that.
- It is not the road that scares the caribou, it is the noise. People in boats on the Kobuk River maybe even noisier. Doesn't seem right to oppose the road when activity on the river is creating the same type of disturbance, if not worse.
- Have supported the proposed road in the past. However, now do not support the road because AIDEA is applying for approval for an industrial road only. This is not a good use of state resources. We need to ensure the longevity of the WACH and increased access can facilitate herd management. (For example, can readily access the herd if need to increase harvest to stabilize the population. This should have been done for the CAH using the Dalton Highway.) Can't support the road unless it allows public access. If the road is built, favors using a model like the Red Dog road to manage its use to avoid disruption of caribou during migration.
- All of the villages on the Koyukuk River are opposed to the Ambler road, so that is where I stand.
- The Draft EIS is not yet out. We should wait to see the DEIS and make a decision from there.
- This is the last meeting of the full WG before we have to comment on the DEIS. If a decision isn't made on this motion today, the full WG wouldn't be deciding – just the Executive Committee.
- Road and associated development would provide employment for local people. We don't live in that upper Kobuk area, yet are making a decision that affects the people who live there.
- I'm worried about the social impact. While I don't live in that area, the WACH migration route does come to our area and we would be affected. Out of respect of my elders, I heard them 30 years ago, and today we're living it. Traditional knowledge is so critical. We hear what's happening in Nuiqsut (with NPR-A development), where it's already too late. There's no going back. With that said, I strongly oppose the road.

ASSIGNMENT – WG Resource Development Committee Chair Tim Fullman will work with that committee and the Executive Committee to develop and submit comments on the Draft EIS and Draft EEA for the Ambler Road project in 2019.

2019 WACH Working Group Meeting – MOTION by Tom Gray, seconded by Al Barrette, to schedule the next Working Group meeting for December 11-12, 2019 in Anchorage and the next Technical Committee meeting for December 10. Motion carried unanimously.

VII. Adjournment – MOTION by Morris Nassuk, second by Neil DeWitt, to adjourn the meeting at 5:10PM on December 13, 2018. Motion carried unanimously.

**Western Arctic Caribou Herd (WACH)
Working Group Meeting
December 12-13, 2018**

8:30 am – 5:00 pm each day

Anchorage Marriott Downtown Anchorage Room
820 West 7th Avenue, Anchorage, Alaska

Western Arctic Caribou Herd Working Group Mission:

“To work together to ensure the long term conservation of the Western Arctic caribou herd and the ecosystem on which it depends, and to maintain traditional and other uses for the benefit of all people now and in the future.”

DAY 1 – WACH Working Group, December 12

8:30 Call to Order (15 min)

Invocation

WACH Working Group Roll Call / Establish Quorum

Introduction of Working Group members and state and federal agency leads

Approval of Agenda – Preview meeting binder

New Working Group Member & Alternate appointments

8:45 Guest Elder – Mr. Ben Sampson, Noorvik (40 min)

9:25 BREAK (20 min)

9:45 Point Lay High School Presentation – Onion Portage (25 min)

10:10 Western Arctic Caribou Herd Summary Information (95 min)

10:10 Herd population, trend, calf survival, and other indicators of herd size and health – including Technical Committee recommendation on status of the herd – Alex Hansen, Alaska Department of Fish and Game (ADFG) (50 min)

11:00 Monitoring caribou movements and distribution – Kyle Joly, National Park Service (NPS) (15 min)

11:15 Caribou collaring – Will we need a new method in the future? (30 min)

11:45 LUNCH (90 min)

1:15 Working Group Members' Observations and Discussion about the Herd, Harvest, Collaring, etc. (45 min)

2:00 WACH Cooperative Management Plan Review & Revision (60 min)

- Report and recommendations from the Working Group subcommittee and agencies that have worked on proposed updates to the 2011 management plan.
- Working Group discussion of key issues / questions.
- Next steps – Process and schedule for completing the management plan revision.

3:00 BREAK (15 min)

3:15 US Department of the Interior Undersecretary Joe Balash (45 min) – Opportunity for Working Group discussion with Undersecretary Balash about proposed resource development projects on lands managed by the Department of the Interior within the range of the Western Arctic Caribou Herd. *(NOTE – Undersecretary Balash was unable to attend the meeting.)*

4:00 BREAK (15 min)

4:15 Traditional Stewardship of Caribou (30 min) – Presentation/discussion about local caribou hunter success groups working to promote traditional wildlife/hunting conservation approaches.

4:45 ADFG Community Harvest Surveys for 2016-2017 – Buckland, Koyuk, Noatak (15 min) – Beth Mikow, ADFG Division of Subsistence

5:00 Adjourn Day 1

Day 2 – WAH Working Group, December 13

8:30 Call to Order / Announcements / Review Day 2 Agenda

8:35 Resource Development in the Herd's Range

8:35 Resource Development Committee Report (25 min) – Tim Fullman, Committee Chair

9:00 Ambler Mining District Industrial Access Project – Update on state and federal review processes – with Working Group Q&A

1. National Environmental Policy Act (NEPA) Process – Tina McMaster-Goering, Bureau of Land Management (BLM) (15 min)
 - National Park Service Environmental and Economic Analysis – Greg Dudgeon, NPS (15 min)
 - State of Alaska – Don Perrin, Alaska Department of Natural Resources, Office of Project Management & Permitting (10 min)
 - Working Group questions and discussion regarding Ambler Road project (20 min)

10:00 BREAK (20 min)

10:20 Continue Resource Development Topics

10:20 National Petroleum Reserve in Alaska (NPR-A) – Information on BLM's revision of the NPR-A Integrated Activity Plan – Sarah LaMarr, BLM (20 min)

10:40 Working Group Discussion of resource development issues related to the Western Arctic herd – Next steps for participating in Ambler Road processes. Review draft scoping letter for NPRA Integrated Activity Plan revision. Other topics. (65 min)

11:45 LUNCH (90 min)

1:15 Wildlife Harvest Regulations (75 min)

- Upcoming Board of Game process for Interior & Arctic/Western Region – regulatory proposals due May 1, 2019 for Board meeting in January 2020 – Phillip Perry, ADFG (15 min)
- Federal Subsistence Board proposal process and timeline – Chris McKee, US Fish and Wildlife Service (USFWS), Office of Subsistence Management (15 min)

- Implementation of registration permit RC800 and RC907 – Alex Hansen, ADFG (15 min)
- Working Group discussion – Next steps for Working Group participation in state and federal wildlife harvest regulatory processes (30 min)

2:30 BREAK & WORKING GROUP PHOTO (30 min)

3:00 Communication Committee Report (20 min) – Heather Jameson, ADFG; Brittany Sweeney, USFWS

3:20 Business Meeting – Actions - Assignments (90 min)

- Approval of 2017 WACH Working Group Meeting Summary
- Election of Vice-Chair for term 2019-2021
- Committee Membership – Review & reconfirm
- Complete Action Items & Confirm Assignments
- Next Meeting – Date / Location

4:50 Closing Comments – Working Group members

5:00 ADJOURN

2018 WACH WG Technical Committee Report

The Technical Committee (TC) met on December 11, 2018 to discuss scientific and technical issues related to conservation and management of the Western Arctic Caribou Herd (WACH). The following are meeting highlights and TC recommendations for consideration by the WACH Working Group at its December 12-13 meeting. The 2018 TC agenda and presentations can be found on line at www.westernarcticcaribou.net

1. **Western Arctic Caribou Herd (WACH) Population Status and Recommended Management Status**

The 2011 WACH Cooperative Management Plan (p. 17) asks the TC to “*evaluate the status of the herd and develop recommendations on herd management level for the Working Group*”, based on *Table 1 in the plan*. On December 11, the TC discussed the following regarding herd status:

- The herd photo census in July 2017 tallied 239,055 caribou, raising the WACH population estimate up to 259,000. Alaska Department of Fish and Game (ADFG) was unable to photo census the herd in 2018 due to poor conditions. They are planning a census in 2019.
- Adult cow survival was lower (71%) in 2017-2018, down from 84% in 2016-2017.
- However, there are other good demographic indicators for the herd: high calf recruitment (21:100 adults) for the third year in a row and high calf production (86%). ADFG also observed good calf weights.
- Herd composition in fall 2017 also very good, with a 54 bull:100 cows (high) and 57 calves:100 cows (high). (Composition survey was not done in fall 2018.)

The TC recommends that the WACH be considered to be within the “Conservative” and “Stable” management category, with regard to Table 1 of the WACH Cooperative Management Plan (p. 17 of the plan). The TC discussed whether the herd should be considered to be in the “*Conservative, Declining*” category, due to concern about the higher cow mortality in 2017-18 and uncertainty about potential effects of changing winter conditions in the range. However, the TC ultimately agreed that the Conservative, Stable designation was more appropriate at this time. There are many positive indicators for the herd (e.g., high calf recruitment, high calf production, high bull:cow ratio). The TC noted it is possible that the higher cow mortality data may be due to a bias caused because few cows were collared in the 2017-18, so collared cows are now older on average (and more subject to mortality) than is typical. As there is no 2018 herd census number to compare to 2017, the TC agreed it would be best to have another census (2019) and another year of other data (calf production and recruitment, cow mortality) before making a change in the management designation. The TC felt that the word “Stable” would more accurately convey the current status of the herd to the public, than would the word “Declining”. There is no difference in the harvest or management recommendations between the Conservative, Stable and Conservative, Declining categories (see Appendix 2 in the plan).

2. **Registration Permit**

ADFG discussed the harvest registration permit (RC907), emphasizing the importance of obtaining more accurate harvest data on a yearly basis to inform herd management. ADFG, with the help of other management agencies, has used a wide variety of outreach approaches (including many public meetings in communities, PSAs, Caribou Trails) to explain the reason for the permit and how obtain it and report harvest. The number of hunters getting the registration permit and returning harvest data is increasing. There are vendors in all communities – making it possible for people to get permits. The ADFG Wildlife Conservation Division is coordinating with the Subsistence Division

to be able to (in the future) compare the reported harvest numbers with the results of community harvest surveys. This will help determine how accurate the registration permit harvest reporting is and its utility for management.

Suggestions to increase the number of hunters that get a registration permit and report their harvest included:

- Make the permit a one-piece card with the return mailing address on the back. It is hard to keep track of the 2nd piece of the permit that must be returned.
- To encourage more participation in the permit / reporting process, it is important that local hunters understand how the harvest data will benefit them as a subsistence user (e.g., it is used to help determine the Amount Necessary for Subsistence).

3. Research Needs related to WACH

The TC reaffirmed that the first five WACH research topics listed below are a high priority (these topics are unchanged from 2014-2018) and added two additional research topics (*italics below*):

- Continue to use satellite collars (or other improved technology) to collect data about the herd's movements
- Subsistence harvest information
- Snow/weather/icing/climate data (including periodic extreme weather events) and the effect of these factors on the herd
- Effect of predation on the herd
- Cumulative effects of roads and other infrastructure development on the herd and its habitat
- *Access to caribou by subsistence users*
- *Indigenous and traditional knowledge*

4. Additional Presentations

The TC also heard presentations about the following research studies (see the TC meeting packet at www.westernarcticcaribou.net for copies of the presentations):

- WACH Calf Survival Study 2017-2018
- Trends in and motivation for the use of calving grounds by caribou of the WACH
- Analysis of interchange of caribou between the four Arctic caribou herds
- Monitoring caribou foraging availability using satellite imagery, Central Arctic Herd
- Exploring potential effects of proposed roads on WACH migratory connectivity

5. Communication and Outreach about the WACH

The TC discussed key messages important to communicate to the public, including: herd status, why it is important to report harvest and how that information is used, safe/ethical hunting practices, harvest regulations, and how they can comment on proposed resource development projects in the range of the herd.

6. WACH Research and Management Projects and Bibliography

At the request of the Working Group, the TC maintains a list of research and management projects related to the WACH and a bibliography of publications regarding the herd. These lists will be updated in January 2019 and posted to the WACH WG website.

In addition, the TC is planning to develop a communication/outreach document (or series of documents, by key topics) that summarize knowledge and data about the WACH, and presents it in a format (e.g., photos, graphics) and language that will be attractive to and readily understood by the public and students.

Motions Acted Upon at WAH Working Group Meeting
December 12-13, 2018

1. Agenda Approval: MOTION by Bill Bernhardt, second by Al Barrette to approve meeting agenda. Motion carried unanimously.
2. Alternate Member Appointment: MOTION by Al Barrette, second by Cyrus Harris, to accept nomination of the following Working Group alternate members: Seat 1 Matt Moore, Seat 12 Caroline Cannon. Motion carried unanimously.
3. WACH Management Level, 2011 Cooperative Management Plan: MOTION by Neil DeWitt to table the discussion and decision regarding what designation to give to the herd under Table 1 of the 2011 Western Arctic Caribou Herd Cooperative Management Plan until later in the meeting, seconded by Morris Nassuk. Motion passed 17:1. (See also motion 13 below.)
4. Caribou Collaring: MOTION by Al Barrette, second by Neil DeWitt, to support the agencies in putting collars on in 2019 through means other than in-river capture (e.g., using net guns) to gather information about the herd and support the 2019 photo census. Motion carried unanimously.
5. Proposed Revisions to 2011 Cooperative Management Plan: MOTION by Cyrus Harris, second by Al Barrette, to include the topics of climate change and human impacts / resource development in the management plan. Motion carried unanimously.
6. Proposal to Board of Game: MOTION by Al Barrette, second by Neil DeWitt, to support or cosponsor a proposal by the Kotzebue Advisory Committee to remove the seasonal closure on bull harvest and restriction on calf harvest in Unit 23. Motion carried unanimously.
7. Approval of 2017 WACH WG Meeting Summary: MOTION by Morris Nassuk, second by Tim Fullman, to approve the 2017 WACH WG meeting summary. Motion carried unanimously.
8. Election of WACH WG Vice Chair: MOTION by Tom Gray, second by Neil DeWitt, to reelect Cyrus Harris as Vice Chair for the term 2019-2021. Motion carried unanimously.
9. Member Appointment: MOTION by Neil DeWitt, second by Elmer Seetot, to appoint Eli Nukapigak as the primary member for Seat 3. Motion carried unanimously.
10. Member Appointment: MOTION by Neil DeWitt, second by Cyrus Harris, to appoint Wanda Kippi as the primary member for Seat 20. Motion carried unanimously.
11. Executive Committee Appointment: MOTION by Neil DeWitt, second by Elmer Seetot, to appoint Wanda Kippi to the Executive Committee. Motion carried unanimously.
12. Alternate Member Appointment: MOTION by Neil DeWitt, second by Tim Fullman, to appoint Sheila Spisak as an alternate member for Seat 18. Motion carried unanimously.
13. WACH Management Level, 2011 Cooperative Management Plan: MOTION by Neil DeWitt, second by Charlie Lean to un-table the consideration of what management level the WACH should be given in 2018, per Table 1 of the 2011 WACH Cooperative Management Plan. Motion carried unanimously.
14. WACH Management Level, 2011 Cooperative Management Plan: MOTION by Bill Bernhardt, second by Tom Gray, to assign the WACH to the “Conservative, Stable” category on Table 1 of the 2011 Western Arctic Caribou Herd Cooperative Management Plan. Motion carried unanimously.

15. Proposal to Federal Subsistence Board: MOTION by Cyrus Harris, second by Charlie Lean, to submit a proposal to the Federal Subsistence Board to change the federal wildlife regulation for Unit 23 to match the Kotzebue AC's proposal to the Board of Game. Motion carried unanimously.
16. NPR-A Integrated Activity Plan Scoping Extension and Village Consultation Request: MOTION by Cyrus Harris, second by Neil DeWitt, to approve the draft letter to BLM (p. 138 in WG Binder) requesting an extension to the NPR-A IAP scoping period and requesting that BLM consult with all of the villages listed in the WG's letter. Motion carried unanimously.
17. NPR-A Integrated Activity Plan Scoping Comments: MOTION by Al Barrette, second by Cyrus Harris, to approve the draft scoping comments letter to BLM regarding the NPR-A IAP (p. 143 in WG Binder), with the addition to point 15, "... Traditional Knowledge / Cultural Sensitivity" and update Figure 1 to show the overlay of NPR-A lease tracts on the herd range map. Motion carried unanimously.
18. Ambler Mining District Industrial Access Project: MOTION by Cyrus Harris, seconded by Al Barrette, to oppose the proposed Ambler Mining District Industrial Access Road. Motion carried 17:1.
19. 2019 WACH Working Group Meeting: MOTION by Tom Gray, seconded by Al Barrette, to schedule the next Working Group meeting for December 11-12, 2019 in Anchorage and the next Technical Committee meeting for December 10. Motion carried unanimously.
20. Adjournment: MOTION by Morris Nassuk, second by Neil DeWitt, to adjourn the meeting at 5:10PM on December 13, 2018. Motion carried unanimously.

Assignments Made at WAH Working Group Meeting
December 12-13, 2018

Assignments

- Working Group members were asked to review the proposed edits to the 2011 WACH Cooperative Management Plan (see p. 45 in WG meeting binder) and send any comments to Susan Georgette, susan_georgette@fws.gov by the end of January 2019.
- The WG subcommittee working on updates to the 2011 WACH Cooperative Management Plan will prepare a final draft version and present it to the Executive Committee in mid-2019. Note the need to discuss further the harvest ranges in Table 1 (see p. 5, above). The draft revised plan will be brought to the full Working Group for final approval in December 2019.
- WG Resource Development Committee Chair Tim Fullman will submit the WG's letter to BLM requesting changes in the NPR-A Integrated Activity Plan scoping process and timeline, and will also submit the WG's scoping comments to BLM.
- WG Resource Development Committee Chair Tim Fullman will work with that committee and the Executive Committee to develop and submit comments on the Draft EIS and Draft EEA for the Ambler road project in 2019.

WACH Working Group Meeting Public & Agency Attendance – 2018

First Name	Last Name	Agency/Organization
Mark	Burch	Alaska Department of Fish & Game (ADFG), Wildlife Division
Carmen	Daggett	ADFG Wildlife Division
Maria	Gladziszewski	ADFG Wildlife Division
Tony	Gorn	ADFG Wildlife Division
Alex	Hansen	ADFG Wildlife Division
Heather	Jameson	ADFG Wildlife Division
Lincoln	Parrett	ADFG Wildlife Division
Phillip	Perry	ADFG Wildlife Division
Amy	Russell-Jamgochian	ADFG Wildlife Division
Beth	Mikow	ADFG Division of Subsistence
Don	Perrin	Alaska Department of Natural Resources
Jeff	San Juan	Alaska Industrial Development & Export Authority
Bruce	Davis	Alaska Reindeer Council
Yereth	Rosen	Arctic Today (media)
Ben	Sullender	Audubon Society
Patricia	Petrivelli	Bureau of Indian Affairs
Casey	Burns	Bureau of Land Management (BLM)
Tina	McMaster-Goering	BLM
Bonnie	Million	BLM
Stephanie	Rice	BLM
Bruce	Seppi	BLM
Laurie	Thorpe	BLM
Brian	Ubelaker	BLM
Timothy	Vosburgh	BLM
Ron	Yarnell	Brooks Range Council
Nathan	Jones	HDR, Inc.
Roy	Ashenfelter	Kawerak, Inc.
Leslie	Sampson	Maniilaq Association
John	Lincoln	NANA Corporation
Damon	Schaeffer	NANA Corporation
Alex	Johnson	National Parks Conservation Association
Brian	Person	North Slope Borough
Hannah	Atkinson	National Park Service (NPS)
Nicole	Braem	NPS
Matt	Cameron	NPS
Jobe	Chakuchin	NPS
Greg	Dudgeon	NPS
Raime	Fronstin	NPS
Kyle	Joly	NPS
Jeanette	Koelsch	NPS

First Name	Last Name	Agency/Organization
Maija	Lukin	NPS, Western Arctic Parklands
Jim	Lawler	NPS
Ben	Sampson	Native Village of Noorvik
Sophie	Tracey	Native Village of Point Lay
Suzanne	Little	Pew Trusts
Laura	Orenga de Gaffory	Teck, Inc.
Samantha	Schaeffer	Teck, Inc.
Fritz	Westlake	Teck, Inc.
Lois	Epstein	The Wilderness Society
David	Krause	The Wilderness Society
Nicole	Whittington-Evans	The Wilderness Society
Cal	Craig	Trilogy Metals Inc
Bridget	Psarianos	Trustees for Alaska
Susan	Georgette	US Fish and Wildlife Service (USFWS)
Brittany	Sweeney	USFWS
Tom	Evans	USFWS Office of Subsistence Management (OSM)
Lisa	Maas	USFWS OSM
Chris	McKee	USFWS OSM
Eva	Patton	USFWS OSM
Zach	Stevenson	USFWS OSM
Ashley	Lemke	University of Texas at Arlington
John	O'Shea	University of Michigan

Western Arctic Caribou Herd Working Group Caribou Roundtable Questionnaire Responses – 2018

At the December 2018 Western Arctic Caribou Herd Working Group meeting, members were invited to complete the Caribou Roundtable questionnaires with observations for calendar year 2018. Their responses are provided below. This information will also be entered into the database of responses from 2011-2018 that is posted on the group's website, <https://westernarcticcaribou.net/>

Kotzebue Sound / Game Management Unit 23

Working Group members: Vern Cleveland Sr. (Noorvik), Cyrus Harris (Kotzebue), James Jacobson (Unit 23 guide)

Weather/Physical Environment

- 1. When did freeze-up occur? How does this compare with past years? How about the first snowfall? How about break-up?**
 - Freeze in early November
 - Very late freeze-up—December
 - Later freeze-up than before
 - Earlier break-up than before
 - In general, snow and freeze-up were delayed by 2-3 weeks. (Comment from James Jacobson, Unit 23 guide)

- 2. What did you notice about snow depth and icing?**
 - No snow (as of December 2018)
 - Ice very thin in some areas
 - Normal

- 3. What were winds like in winter? In summer?**
 - Not much winds in the winter
 - Summer 2018 was windy as usual
 - Prevailing ESE winds

- 4. Has there been any unusual weather this year (2018)? If so, what kind? (For example, strong winds, storms, much/little rain or snow, etc.)**
 - Not much snow
 - Raining in August 2018
 - Not as much fall storms as last year (2017)

- 5. Has there been anything else noteworthy this year regarding the air, rivers and lakes, or land? (For example, occurrences of fire that may have impacted caribou range, good/poor vegetation growth, late/early freeze, erosion, etc.)**
 - Lots of algae in the rivers
 - Late freeze up
 - Early break up
 - Lots of erosion on riverbanks

Caribou

- 6. When were caribou present in your area? When did they first arrive? When were they last seen? How does this compare with past years?**
 - Seen a few in September near Kiana

- October can cross
- Were very late
- Along the coast - northwest of Kotzebue, one lone caribou harvested in mid-September, another lone caribou harvested in mid-October.
- Mid-November caribou movement occurred after the bay in front of Kotzebue froze—good harvest in Sisaulik.

7. How many caribou were in your area? What was the composition of the herd like (calves, males/females)? How does this compare with past years?

- Very few in Noorvik area
- Seeing males, females, calves
- Migrating later and later
- The late fall, early winter, saw equal number of bulls, cows, and calves
- Harvested only cows, good body fat

8. If you harvested caribou, how did the meat and skins compare with past years? What did you notice about fat? Parasites?

- Good health
- Fat
- Harvested only cows, good body fat
- In 2018, saw the least amount of rump and gut fat on caribou bulls that he recalls seeing in the past 52 years. (Comment from James Jacobson, Unit 23 guide)

9. Were there any other notable changes regarding caribou compared with past years?

- Different migration routes
- Second year in a row caribou have traveled later than before due to climate change

Other Animals

10. What did you notice about bears and wolves in your area?

- Lots of bears and wolves
- In 2018, saw heavy lice infestation on grizzly bears, but the hides looked normal. (Comment from James Jacobson, Unit 23 guide)

10-A. How did these predators affect caribou in your area?

- Bears and wolves keep pushing them from river crossing

11. Have there been any notable changes regarding other animals in your area, compared with past years? (For example, new animals arriving in your area, or animals that you do not see much of any more, or changes in behavior or body condition).

- No

Other Comments

12. How do people in the communities use caribou, other than for meat (e.g. clothing)?

- Mukluks, mitten, boot socks
- Thermos bottle bags

13. What types of recent exploration and development or other activity have you noticed in the region that may be impacting caribou?

- Red Dog road

- Climate change

14. What have you noticed regarding any conflicts between local and non-local hunting in the area of your community? Do you have suggestions for how to reduce conflicts?

- No conflict but lots of outside hunters in our area (Unit we)
- Closure of some federally-managed areas to non-federally qualified hunters is working to reduce conflicts

15. Is there anything else that you have seen this year that you would like to mention?

- Climate change issues

Koyukuk & Middle Yukon Region

Working Group member: Pollock Simon, Sr. (Allakaket), Benedict Jones (Koyukuk)

Weather/Physical Environment

1. When did freeze-up occur? How does this compare with past years? How about the first snowfall? How about break-up?

- The weather has changed; we see later freeze-up and early break-up.
- Freeze late, snowfall late.

2. What did you notice about snow depth and icing?

- There is more snow falling. It's warm, which causes icing.

3. What were winds like in winter? In summer?

- Not much wind around Allakaket

4. Has there been any unusual weather this year? If so, what kind? (For example, strong winds, storms, much/little rain or snow, etc.)

- It's warm and more snow
- Lot of rain this summer

5. Has there been anything else noteworthy this year regarding the air, rivers and lakes, or land? (For example, occurrences of fire that may have impacted caribou range, good/poor vegetation growth, late/early freeze, erosion, etc.)

- Fire burns up caribou range, leaves poor vegetation growth
- It's warm so it's late freeze-up

Caribou

6. When were caribou present in your area? When did they first arrive? When were they last seen? How does this compare with past years?

- Last year, 2017 we got caribou in Allakaket that travel west from Kobuk River—no caribou yet this year.
- No caribou present in Koyukuk area in 2018.

7. How many caribou were in your area? What was the composition of the herd like (calves, males/females)? How does this compare with past years?

- Not too many caribou

8. If you harvested caribou, how did the meat and skins compare with past years? What did you notice about fat? Parasites?

- The caribou were in good shape.

9. Were there any other notable changes regarding caribou compared with past years?

- The caribou were a little lean, not as fat as the past.

Other Animals

10. What did you notice about bears and wolves in your area?

- There are more grizzly bears in Koyukuk River. They kill moose and caribou.
- The bears, there are more of them, because we don't kill them. We don't eat them.
- No black bears near Koyukuk.
- Lots of wolves

10-A How did these predators affect caribou in your area?

- The wolves chase and kill caribou.

11. Have there been any notable changes regarding other animals in your area, compared with past years? (For example, new animals arriving in your area, or animals that you do not see much of any more, or changes in behavior or body condition).

- Moose are leaving the interior and going to the west and coast.

Other Comments

12. How do people in the communities use caribou, other than for meat (e.g. clothing)?

- The caribou skins make good mattress when camping in winter.
- Make dry meat.

13. What types of recent exploration and development or other activity have you noticed in the region that may be impacting caribou?

- In 1974 the oil pipeline started going up north to the oil fields. The haul road put in place and later was opened to the public [as the Dalton Highway]. Lots of people went up the road to hunt caribou. This greatly impacted the caribou movement and now there is no caribou in the interior.

14. What have you noticed regarding any conflicts between local and non-local hunting in the area of your community? Do you have suggestions for how to reduce conflicts?

- People come up the haul road, not only to look at the mountains, but they hunt, trap, and fish in the areas we use for subsistence lifestyle.
- The fish and game is limited in most areas. We can't compete with outside hunters.

15. Is there anything else that you have seen this year that you would like to mention?

- There are more bears around, lots of grizzly bears in the interior. They kill moose calves, caribou calves. We need to kill more bears. People don't eat bear today, so there are more bears.
- We need sport hunters to kill more grizzly bear in villages.
- There is no super meat stores so we need to hunt moose and caribou.

North Slope Region

Working Group member: Wanda Kippi (Atqasuk)

Weather/Physical Environment

- 1. When did freeze-up occur? How does this compare with past years? How about the first snowfall? How about break-up?**
 - Freeze-up occurred very late mid- to late-October and slowly froze. Did not even freeze enough to ice fish.
 - It has been about the same for about 3-5 years, with slow freeze-up.
 - In September and first part of October it snowed, but did not stick.
 - Break-up in 2018 was about the same as the year before.

- 2. What did you notice about snow depth and icing?**
 - Snow depth was too deep to go to camp by mid October, with an ATV with a depth about 12”-18”.
 - Icing was on ground and ditches, and small ponds were frozen in the mornings and by late afternoon melted and re-froze at night.

- 3. What were winds like in winter? In summer?**
 - Winds in the winter were about 3 miles per hour (mph) to an average of about 35 mph during a storm. During a storm would be about 20-50 mph, maybe to 60 mph.
 - Summer – ranged from 2 mph to 30 mph. Just a few times maybe 35+ mph.

- 4. Has there been any unusual weather this year? If so, what kind? (For example, strong winds, storms, much/little rain or snow, etc.)**
 - Snowing in July.
 - Mix of little rain and snow in September and part of October.
 - High winds in late July, about 35-45 mph winds.

- 5. Has there been anything else noteworthy this year regarding the air, rivers and lakes, or land? (For example, occurrences of fire that may have impacted caribou range, good/poor vegetation growth, late/early freeze, erosion, etc.)**
 - River stayed raised [high water] during July and August could not cross.
 - We had a poor vegetation growth. No blueberries, cranberries, salmon berries and black berries, and other vegetation.
 - Freeze-up way too late.
 - I have noticed erosion – Have been seeing this as long as I can remember; as far back as 2007?

Caribou

- 6. When were caribou present in your area? When did they first arrive? When were they last seen? How does this compare with past years?**
 - [Caribou have been present near Atqasuk] as long as I can remember
 - In 2018, caribou near Atqasuk in August-December, May-July.
 - April arrived? Last seen December?
 - None to compare, been same for a few years.

- 7. How many caribou were in your area? What was the composition of the herd like (calves, males/females)? How does this compare with past years?**

- April-July about 3-27 in a group. August hundreds, September 3-25+ caribou in wide area. October there were 1- 23 in groups. In November-December, 1-9 in a group. Depends on migration changes, bears, wolves, wolverines in the area changing the direction of the caribou/reindeer.

8. If you harvested caribou, how did the meat and skins compare with past years? What did you notice about fat? Parasites?

- I have seen less fat this year, but enough fat in between the meat. Bones less fat.
- No parasites known for me that I have experienced.
- Meat and skin are fine no changes that I have noticed.

9. Were there any other notable changes regarding caribou compared with past years?

- Yes! Changes of migration direction of the herds, as per being farther to hunt.

Other Animals

10. What did you notice about bears and wolves in your area?

- Bears are seen in the area from April-October and have scared just about everything around the area they are at.
- The same with the wolves and wolverines. Scared caribou away from the area they are at.

10-A. How did these predators affect caribou in your area?

- They kept caribou away from area they were at, which made it hard to harvest caribou when they are in the area of hunting usually takes place.

11. Have there been any notable changes regarding other animals in your area, compared with past years? (For example, new animals arriving in your area, or animals that you do not see much of any more, or changes in behavior or body condition).

- I have seen different types of birds in our area and seeing different insects.
- We are seeing more salmon and pike in our river and another fish I cannot recall what type it was.
- One grayling had a lump on the lower belly near the lower section of the fish.

Other Comments

12. How do people in the communities use caribou, other than for meat (e.g. clothing)?

- Antlers for knife handles and ulu handles.
- Caribou skin for layering in tents on the floor, on sleds when tying down for cushion or warmth, and use when fishing on the ice to keep warm.

13. What types of recent exploration and development or other activity have you noticed in the region that may be impacting caribou?

- When organization like the ones that do surveys on birds [are in the area], ... I have watched with my own eyes [and] see [caribou] run, which impacts the caribou from using excess energy that should be reserved to keep them stress free from running for a long distance.

14. What have you noticed regarding any conflicts between local and non-local hunting in the area of your community? Do you have suggestions for how to reduce conflicts?

- No comment at this time.

15. Is there anything else that you have seen this year that you would like to mention?

- Not at this time.

Seward Peninsula Region

Working Group members: Charlie Lean (Nome), Tom Gray (Nome), Morris Nassuk (Koyuk), Charles Saccheus (Elim), Elmer Seetot, Jr. (Brevig Mission)

Weather/Physical Environment

1. When did freeze-up occur? How does this compare with past years? How about the first snowfall? How about break-up?

- Deep snow early this year may keep caribou away. Maybe wind will create some clear zones.
- Break up - lots of water and snow. On schedule.
- Freeze up - month late—late October; in December 2018, the ocean is still water.
- The freeze up has not been as fast as it used to be; it is still progressing in my area (Koyuk).
- First snowfall was normal as last year (Elim)
- Port Clarence Bay frozen January 5th and went out May 24th, first time [freeze-up and break-up on the bay was] in the same calendar year (2018). Prevailing winds from the Northeast or East have kept Pt. Clarence Bay open up to December in the past.

2. What did you notice about snow depth and icing?

- Lots of snow in 2017; more than past 20+ years
- Low ice and slow snow.
- Our bay is ice free [in December 2018] (Elim)
- Snowfall happens when they temps get colder, but with lots of low pressure from west to east snow will melt when temps go up. January or February are when we get the most snowfall in the winter (Brevig Mission)

3. What were winds like in winter? In summer?

- Lots of wind in winter
- Wind stayed longer and blew longer period in the mid-summer to early fall
- Mild winter; warm & mild
- Most of the extreme wind conditions have occurred on the southern portion of the Bering Sea; high winds were mostly from the east or northeast.

4. Has there been any unusual weather this year? If so, what kind? (For example, strong winds, storms, much/little rain or snow, etc.)

- Fall to freeze-up, too much east wind. Warm and windy.
- Yes, warmer
- No unusual weather this year
- Rain occurred during late July to early September; cooler summer days.

5. Has there been anything else noteworthy this year regarding the air, rivers and lakes, or land? (For example, occurrences of fire that may have impacted caribou range, good/poor vegetation growth, late/early freeze, erosion, etc.)

- Permafrost is melting very fast, will change vegetation.
- Have had hillsides move, road was pushed and had to be rebuilt, permafrost thawing all over.
- Really not sure. Climate change seems to be noteworthy.
- Our lakes and rivers were late in freeze-up
- Frost did not show up until the middle of October 2018. There was a mid-May spring thaw, with little or no snow within our area (Brevig Mission).

Caribou

6. When were caribou present in your area? When did they first arrive? When were they last seen? How does this compare with past years?

- They have not arrived [near Nome] this year [as of December 2018]. Just feral reindeer in small numbers.
- We were able to hunt into April [2018].
- High snow year and it was good traveling. We have a lot of snow early this year, so caribou may go south from Granite Mountain.
- Have yet to arrive in 2018. In the past they have gotten to us [in Nome by] mid October.
- Yes, November-April last seen [in Koyuk area]. Think it was consistent in comparing earlier times.
- [First arrived near Elim] 12-10-18
- Caribou have been present throughout the year (north of Brevig Mission) as they have access from Serpentine River area through the mountain ridges to the west.

7. How many caribou were in your area? What was the composition of the herd like (calves, males/females)? How does this compare with past years?

- Late winter 2018 and spring was good hunting [near Nome]. Strong [caribou] numbers then. But not this fall [2018].
- Have hunters getting caribou year around. These [include] animals through main migration and others that spent the summers on the Seward Peninsula.
- +500 estimate [Koyuk area]. And that's below half way decent estimate. The area that the caribou migrated through it was difficult to give a clear answer. The caribou basically went through the same area used before.
- Normal as last year (Elim area)
- Caribou bull concentration was in the northern portion of the Seward Peninsula moving from east to west in and around Ear Mountain.
- Female concentration was in the eastern part of Seward Peninsula, in and around Serpentine River.

8. If you harvested caribou, how did the meat and skins compare with past years? What did you notice about fat? Parasites?

- [Caribou were] OK
- Had an animal with nasal bot larva [parasite] in the neck
- The skin seems to be about the same. The fat content seems to be the same, along with few that said they got fat ones with at least an inch of fat. Nothing that I heard about parasites.
- Normal
- Meat was lean but had fat between the muscle meat. Hides were not suitable for sleeping or sled mats as hair was falling out due to harvest in April.

9. Were there any other notable changes regarding caribou compared with past years?

- The caribou seem to graze in areas that hunters had difficulty in accessing.
- No notable changes
- Caribou have been present the last couple years in the northern portion of Seward Peninsula and mingled with the reindeer herds on the western portion of Seward Peninsula.

Other Animals

10. What did you notice about bears and wolves in your area?

- Bear population younger and down in numbers
- Wolves—too many in our region
- They are still being seen in our areas with bear numbers increasing.
- We have plenty of bears & wolves
- Wolves have replaced other wolf territories that have been harvested around the Kuzitrin River area (lava beds and Bendeleben Mountains) to access the local reindeer herd in the Southern part of Seward Peninsula.

10-A. How did these predators affect caribou in your area?

- Bears didn't [affect caribou]
- Wolves harassing caribou making them skinny and jumpy
- It is really difficult to say for the area that caribou migrate through [near Koyuk]
- Not too much effect
- Eastern shoreline of the Imuruk Basin was used by four different wolf packs in the past years. Wolves killed within the Kuzitrin River area are replaced by wolves from the lava beds area or the northern portion of Seward Peninsula.

11. Have there been any notable changes regarding other animals in your area, compared with past years? (For example, new animals arriving in your area, or animals that you do not see much of any more, or changes in behavior or body condition).

- Wolves were the “new animal” [to arrive] as the caribou expanded its range into the Seward Peninsula years ago. Too many resident wolves now killing all other resources (moose, muskox, reindeer, etc.)
- Not too much changes regarding other animals
- Bear population might be on the increase in and around the communities of Teller and Brevig Mission as they are not actually hunted.

Other Comments

12. How do people in the communities use caribou, other than for meat (e.g. clothing)?

- Predominantly used for food, all users that I'm aware of.
- Early winter harvest for good bed mats

13. What types of recent exploration and development or other activity have you noticed in the region that may be impacting caribou?

- None at this time.
- None
- Small or no caribou impact on northern portion of the Sawtooth Mountains.
- Graphite One [Resources, Inc.] is assessing graphite quantity and quality.

14. What have you noticed regarding any conflicts between local and non-local hunting in the area of your community? Do you have suggestions for how to reduce conflicts?

- N/A
- No conflicts
- Adjusting to weather changes for potential wildlife harvest

15. Is there anything else that you have seen this year that you would like to mention?

- Freeze-up is coming later.

- “Where’s the caribou?” seems to be the users’ questions.
- Our bay [at Elim] never freeze up as of today 12-13-18
- Cooler summer days with little or no rainfall for the first months of summer.