Alaska Department of Fish and Game (ADF&G) biologists are optimistic about the overall health of the Western Arctic caribou herd (WAH). After a sharp decline from almost 500,000 caribou in the early 2000's to just over 200,000 in 2016, data from aerial surveys suggest that more young caribou are surviving to enter the population and fewer adults are dying. It is too early to say how these changes will influence the population overall, but these indicators do provide some evidence that a positive change may occur. An additional photocensus took place in July 2017. The results of this survey will be available later this year.

New Registration Hunt Permit

Last December, the WAH Working Group and multiple advisory committees recommended the Alaska Board of Game adopt a new registration hunt permit in Units 23 and 26A. Over the course of the last six months, staff from the agencies have been visiting communities across the range of the herd to provide information about these new permits, and to distribute them to hunters. Biologists look forward to evaluating the data as it comes in.

Upgraded camera equipment provides more precise counts

Along with the hunter information from the new registration permits, biologists also gather biological data. ADF&G regularly conducts a photocensus where biologists take pictures of the herd from an airplane. ADF&G upgraded its camera equipment prior to the 2017 photocensus, switching from film to digital format. The digital format gives biologists better resolution photos and should provide more accurate information on the herd. Photographs can also be taken under a wider range of light conditions.

Biologists plan on compiling the results of the 2017 photocensus prior to the Western Arctic Caribou Herd Working Group meeting in December 2017. Once they have a new population count they will have a better understanding of whether the population decline has slowed, stabilized or even reversed.
Educating Hunters with Inupiat Ilitqsiaq

After members of the Kobuk Valley and Cape Krusenstern Subsistence Resource Commissions expressed concern that some hunting practices on the Kobuk River were a danger to local hunters, students, scientists, and the health of the herd, it was decided that safety education was a top priority. This prompted the formation of the Caribou Hunter Education Working Group. The group consists of tribes, Maniilaq, NANA, NPS, FWS, and ADF&G representatives, all working together to use existing avenues of communication to spread information on how best to hunt safely and in-line with traditional values. The group will also coordinate with regional Elder councils and other local authorities to understand location-based traditional hunting values and share that information.

One participating council, the Kiana Elders Council, hopes to address the unsafe hunting practices on the Kobuk River by sharing the hunting values that are specific to their traditional lands.

Taikku to the Kiana Elders Council for leading the way!

What are the traditional hunting practices in your range of the herd?

---

How can you make your elders happy?

"The fat around the stomach, like lace, is good food. The heart, liver, kidney, and [omasum]...these are the best foods other than meat. Elders always ask for it."

"The stomach that is mostly green will cook the tendons and the liver. Put the tendons and the liver inside the stomach and bring it home and keep it in a cool place. Let it get sour."

—Hannah Loon Kotzebue

"When I was growing up I remember eating it [caribou] sour by not cutting it right away. Uncooked, frozen meat has vitamin C in it."

—Cyrus Harris Kotzebue

"In old times this food protected people from scurvy."

—Hannah Loon Kotzebue

Approach caribou from the north to keep the migration moving south.

Use smaller caliber rifles, for the safety of others.

When caribou start crossing the river, wait until they are half way across before approaching.
Protecting the Migration through Safe Hunting

Fall caribou hunting traditions differ between communities, but people who rely on caribou often have similar customs. One common traditional practice is to ensure that migratory paths are well established each year before hunting begins.

Larry Westlake tells of old times in Kiana, when the fall caribou migration came through the Narrows. Hunters in Kiana were instructed to wait two days after the first caribou passed through for the migration to be established. By waiting to harvest caribou, the community protected the migration for years to come.

On the coast at Sisualik, there were different fall caribou hunting traditions. Cyrus Harris remembers that before hunting started, elders would gather to talk about the movement of the caribou, getting information from travelers and reading the weather to know when they would come through Sisualik. When the first bands of caribou were spotted in the flats, hunters had to let the first group of 100 caribou pass so that the migration would be established.

Alaska has seen great change and the harvest of caribou from the Western Arctic caribou herd has changed too. Many hunters have jobs and are limited to a short time-period to harvest caribou. Boats and high-powered rifles are often used to harvest caribou during the fall migration.

Today on the Kobuk River, there are more hunters concentrated in a small area, all looking for a successful hunt. Following traditional knowledge will protect the fall caribou migration that people have depended on for centuries.

Firearm safety is good for everyone!

Always control the muzzle of your firearm. Keep the muzzle pointed in a safe direction. NEVER point the muzzle at anything you are not willing to kill or destroy.

Keep your finger off the trigger until ready to fire. Keep your finger outside of the trigger guard until you are ready to shoot.

Treat every firearm as if it were loaded. Immediately check every firearm you hold. Check the firearm even if another person tells you it is unloaded.

Be sure of your target and what is beyond. This is the most common cause of fatal hunting accidents - another hunter shot because they were mistaken for game or were beyond the target and not seen by the shooter. Learn to look well past your target before you shoot.
Calf mortality study begins on the North Slope
A topic discussed by the Working Group and biologists was the need to do a calf mortality study to learn how successfully calves are surviving. And, if they are not surviving, what is causing their deaths?

With the support of the Working Group biologists contacted villages near calving grounds this spring, such as Point Hope and Point Lay, to discuss their plan and ensure there were no objections to the study.

ADF&G biologists deployed 78 collars on calves in early June. As of the most recent survey in mid-August 2017, 70% of collared calves have survived.

Predation has been the leading cause of mortality; evidence at the kill sites indicate that brown bears have killed the most calves, followed by birds of prey, likely golden eagles.

Working Group holds annual meeting

The Western Arctic caribou herd (WAH) Working Group (WG) met in Anchorage on December 14-15, 2016, discussing the best strategies to collect more data on the herd.

WG members heard information on the slower, but continued decline of the WAH population, noting the possibility of harvest reduction in the coming years. The WG agreed that gathering hunter harvest data would allow for more informed decisions to be made, along with completing regular photocensuses with upgraded equipment and undertaking a calf mortality study.

Working Group supports registration hunt

WG members recalled last year’s first WAH registration hunt permit, RC800 (Registration Caribou), in Unit 22 as an example of generating more harvest data. This prompted a motion in support of Proposal 2, requiring a registration hunt permit (RC907) in Units 23 and 26A.

The WG motion carried by a vote of 11:2.

Local Advisory Committee actions

<table>
<thead>
<tr>
<th>No Action Proposal 2</th>
<th>Opposed Proposal 2</th>
<th>Supported Proposal 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kotzebue Sound AC</td>
<td>North Slope AC</td>
<td>Lower Kobuk AC</td>
</tr>
<tr>
<td></td>
<td>Noatak-Kivalina AC</td>
<td>Upper Kobuk AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. Norton Sound AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. Norton Sound AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WAH Working Group</td>
</tr>
</tbody>
</table>


Remember! If you are hunting in Units 22, 23 and 26A, you must have the appropriate registration permit. You may pick up a free permit online at www.hunt.alaska.gov, at your local ADF&G or vendor office before your next caribou hunt.

Caribou in your region

Observations from Working Group members

**NANA Region**

Freeze up occurred late, with no snow as of December 14, 2016. Last winter, the ice was thicker due to lack of snow. The caribou first arrived in late September and October looking very healthy. Larger males were observed and the Kiana area saw a lot of cows with calves.

**Seward Peninsula**

Freeze up occurred in late November of 2015, there was plenty of ice, but not as thick as normal. Caribou were seen on the Seward Peninsula starting in October. They were good, healthy animals with lots of warble fly larvae. Residents are seeing lots of wolves on the Peninsula.

**North Slope Region**

Late freeze up in 2015, with little snow all year, making for a mild winter. The caribou did not come as close to Wainwright as they have in the past. But, the caribou seen on the North Slope included bulls and cows and healthy looking calves. Residents also noticed an increase in bears, both brown and polar.

**Koyukuk & Middle Yukon Region**

This past year saw a warmer climate with a late freeze up and earlier than normal break up, which makes for tough sno-go hunting trips. No caribou were seen in the area of Allakaket, as they have been seen in the past, before the pipeline.
Caribou Hunt Regulations Change

Hunter harvest data helps biologists

One of the biggest challenges biologists face while managing the Western Arctic caribou herd (WAH) is the ability to accurately measure harvest. The agencies that work with the WAH collect a great deal of biological data, but during times of low herd numbers, some of the most important pieces of data are total harvest and the number of cows harvested.

With this in mind, the Western Arctic Caribou Herd Working Group and more than half of Northwest Alaska’s Advisory Committees supported a proposal last December for the Board of Game to consider new harvest reporting regulations for WAH hunters. With this support, the board implemented a new registration permit and mandatory reporting requirement for caribou harvest in Game Management Units 23 and 26A. The new permit, effective July 1, 2017, is known as RC907 and includes a section for hunters to report their harvest.

Harvest data matters even more today

In the late 1990s and early 2000s when WAH numbers were at an all-time high, overharvest was of little concern. With the population now just above a number that can support historic harvest levels, there is a need to be careful. Overharvest when the population level is too low can lengthen the time needed for the herd to recover and begin to grow again.

The current harvest is estimated at around 12,000 animals annually. This number falls within the acceptable limits of the herd’s current size. The problem with our current method for calculating annual harvest is that the estimate is based on long-term trend data and does not account for short-term changes in harvest. For example, using current methods, a harvest decrease of more than 5,000 animals would not be obvious because only a few communities are visited each year to collect door-to-door household harvest data. If WAH caribou hunters were interested in seeing the effect of various regulatory changes, we would first need a major increase in the amount of harvest data collected.

How can you help?

You can help by picking up the new RC907 permit for Units 23 and 26A as well as, RC800 for Unit 22. Reporting your hunt helps ensure a sustainable future for the Western Arctic caribou herd!

Federal Subsistence Board news

This year, July 2017 - June 2018 there will again be a one-year closure of caribou hunting on some federal lands in GMU 23. This closure is similar to the one which was in effect from 2016-17 in that it only applies to caribou hunting by non-federally qualified users (or, generally speaking, people who do not live in or close by GMU 23) and only on federal lands. However, the closure is different from last year in that only some federal lands in the region are closed.

What is closed in 2017: The following federal public lands are closed to caribou hunting by “non-federally qualified users” from July 1, 2017 - June 30, 2018 (closure indicated within black cross-hatched area on map).

- 10- mile wide strip along the Noatak River corridor, spanning 5 miles on either side of the river from the western boundary of the Noatak National Preserve upstream to the confluence with the Cutler River.
- Eli River drainage
- Agashashok (Aggie) River drainage
- Squirrel River drainage

Other federal public lands in Northwest Alaska (such as along the Kobuk and Selawik rivers) are open to caribou hunting following the state seasons, bag limits and regulations.
Students Collar Caribou at Onion Portage

Star of the North Magnet School - Kotzebue

Donovan James (left), Trae Adsuna (middle)

Donovan James (middle)

Trae Adsuna (left), Donovan James (right)

Trae Adsuna (left), Donovan James (middle)

Davis-Ramoth School - Selawik

Brad Johnson, Frank Greist, Kali Howarth, Charlie Riley, Myia Henry, Aqpiq Howarth, Kevin Ballot
Selawik Students Listen to Community Members

Collaring caribou at Onion Portage was a great treat for students from Selawik. They learned that science is more than math and counting caribou. Science is about observing the world around you and asking questions about that world, much the same as traditional ecological knowledge passed on in families from generation to generation. It was no surprise that when Selawik students returned home, they had more questions to answer. How could they find out more about caribou from their friends, family members, and surrounding village community members? They created their own survey and passed it out at the Selawik Annual Thanksgiving Basketball Tournament, which draws from the entire Northwest Arctic Borough. The surveys were given to 70 adults. Thank you for participating!

After compiling all the data from the surveys, four students were invited to Anchorage to present their findings to the Western Arctic Caribou Herd Working Group. Representatives from all over western Alaska, as well as state and federal agency biologists listened and learned from the students.

"According to our survey, most people were sure about the hunting regulations and always followed those regulations."

- Helena Johnson
Selawik student

![Survey Results Graphs](image)

Students Frank Greist, Helena Johnson, Cheyenne Davis, Charlie Riley III presented their findings at the Working Group meeting. Pictured with Emma Ramoth.
Listening to our Elders - Emma Ramoth

Mamaaq Emma Ramoth grew up in Selawik, living a subsistence lifestyle and caring for her community as a health aide for over 40 years. In 2016 she served as the guest Elder of Honor at the Western Arctic Caribou Herd Working Group meeting and shared her knowledge and love of caribou through stories of her life.

Early life hunting caribou

"I remember my parents...go past Ambler, past those mountains and they take us, maybe [in] 1946, almost reached the flat country that way. And, there's a lot of caribou. And they hunt and they camp there for a while. And, they got a lot of caribou and saved a lot of bone marrow and take care of the caribou and skin the leggings. My mom can sew a lot and save a lot, and they don't waste. Later on my parents start hunting between Shungnak and our area [Selawik]. There's lots of caribou, so we camp there."

"I got married 1955. I have seven kids, so my husband always hunt with dog team and between Shungnak and Selawik and he has to get caribou and takes care of them out there and take them home, and there's no caribou, no moose, no beaver in our area in those days, the 50's & 60's. We live off rabbits, fish, and prarmigans, muskrat, you name it, whatever you could get. And it's hard work but your mind is in peace. You're not worried. You take care of whatever you have to do in the day time and then you go to bed in peace. And then wake up, no worry, just worry what you have to do that day."

Observations through the years

"Caribou started passing by through Selawik, lots and lots and lots and then [again during] springtime coming back. So when they're coming back, there always be caribou around Selawik area. They always, some of them always sit there. People always hunt whatever they need. They don't waste."

"So many times I eat wrong food, but if you eat right food, I see my dad's parents, they live 100 years old because they mostly eat fish. Gather greens, berries, whatever they have to gather whole summer long. Long time ago everybody go camp and gather whatever they have to gather whole summer long and they go back to the village in fall time because their kids have to go to school. There's no lunch in school. There's no electricity in school in those days. My husband always tell me he had to run home at lunch time and eat frozen food. Frozen fish and biscuit and tea. That's it. Long time ago if you have tea, coffee, sugar, and flour, you are rich. Because out there you put away barrels and barrels of salmon berries and sourdock, blue berries, cranberries. And whenever you need to have sweet you'll get them. And after you eat … Eskimo food—you want something sweet that's what you have. I knew those people eat nothing but Eskimo food. I see them no medicine until they 90 years old, like my grandma. And they don't have aches and pain. They're healthy. They are breathing good, no short of breath. No heart pain. I see that. If you, if you are willing to help and take care of somebody, even though things are hard, endure and don't get mad. Your life will go on."
Population Recovery and Project Updates

When is cow harvest appropriate?

Cow harvest increases hunt opportunity and is allowed in several situations. Examples include:

- If a herd is healthy, stable, or growing it can accommodate a small portion of cow harvest without affecting the population.
- If a herd is reaching an unsustainably high population, managers may increase cow harvest in an attempt to stop herd growth.
- In some declining herds, managers may allow limited cow harvest if there will be minimal impact to the herd. This may be particularly true in areas with reduced access, or where seasonal opportunity to harvest a small number of cows is worth more to hunters than having a potentially larger bull harvest.

Why restrict harvest to bulls?

When a herd is unstable or in decline, restricting harvest to bulls, or mostly bulls, allows more cows to live and produce calves. Over time, this may allow the population to recover.

Development in the range of the herd

As the State of Alaska and oil and mining companies explore ways to develop remote resources, there is concern among many Working Group members about how development within caribou habitat and migration corridors could affect the health and abundance of caribou. There is also interest in knowing the benefits and costs of development on subsistence economies. In the Cooperative Management Plan, the Working Group has recommended that cumulative impact analysis be done on all new development actions to ensure that enough habitat is protected for the sustainability of the herd.

Public participation is an important part of development decisions. Comments from a variety of stakeholders are combined with information from scientific studies to provide guidance on which of Alaska’s resources can be developed with minimal harm to caribou and other wildlife.

Make your voice heard!

Opportunities to provide comments are ongoing or expected for the following projects. You can send comments by mail, email, or fax as indicated below.

Ambler Road Project

Public scoping is currently ongoing for the Ambler Mining District Industrial Access Road Project and will continue through January 31, 2018. Comments can be emailed to blm_ak_also_amblerroad_comments@blm.gov, faxed to (907) 271-5479, or mailed to: Attn: Ambler Road Comments 222 West 7th Avenue, Stop #13 Anchorage, Alaska 99513.

Greater Mooses Tooth 2 (GMT-2)

A draft Supplemental Environmental Impact Statement is being developed for the GMT-2 development in the northeastern National Petroleum Reserve – Alaska (NPR-A). It is expected to be completed this fall and will be followed by a 60-day comment period. Please contact Stephanie Rice, GMT-2 Project Manager, via phone at (907) 271-3202 or via email at srice@blm.gov for further information.

National Petroleum Reserve - Alaska Integrated Activity Plan Revision

A Secretarial Order, issued in May from the U.S. Department of the Interior, has called for a revision of the Integrated Activity Plan (IAP) that governs land use in the National Petroleum Reserve- Alaska. The current plan prohibits development in the calving grounds of both the Western Arctic caribou herd and the Teshekpuk caribou herd, in part in response to comments submitted by the Working Group. This could change under a revised plan. The timeline and plan for IAP revision has not been announced as of the time of printing, but a public comment period is expected. Contact the Bureau of Land Management at (907)478-1263 for more information.

There was an elder in Koyukuk, he worked on a steamboat in 1918, and he said he had to stop 12 miles above Galena. The caribou herd was crossing from the south Koyukuk River area and they tied up for one week. Day and night, he estimated about one million caribou crossed the Yukon at that time. They ran out of wood for the steamboat so they had to go back down to Galena to pick up more wood. When they came back 10 days later, the caribou had finally crossed the river.”

—Benedict Jones

Working Group Representative for Middle Yukon River

Population Recovery and Project Updates

Let cows live.

Cows produce calves. Their calves grow into adults and produce more calves.
Traditional Uses of Tuttu- Activity for Kids

Tuttu tastes from the North Slope!

**ALUUTTAĞAAQ**
2 pounds fresh caribou
½ onion, chopped
¾ cup flour (divided)
1 cup cold water
Salt and pepper to taste
Cooking oil

Cut caribou into bite-size pieces. Season meat with salt and pepper. Coat with ¼ cup flour. Fry in hot Crisco oil until browned. Add onion, continue cooking till onion is soft. Cover with water or broth, simmer at least 30 minutes. Mix remaining flour with cold water to make a heavy cream and stir into meat mixture to make gravy. Serve over potatoes or rice.

- Molly Spicer
Utqiagvik

**FERMENTED TUTTU LIVER**
1 - freshly caught summer tuttu (caribou) liver, from freshly opened carcass.

Cut open the stomach, clean out liver of debris from stomach area. Pull out stomach sack from inside of tuttu. Cut about 5” incision into the stomach (the largest chamber, also called the rumen). Slice up liver into serving size pieces and/or cut several incisions onto liver. Insert liver into stomach. Store stomach in gunny sack and box, in a dark shaded area, away from direct sunlight. Let sit for 3 – 5 days. Pull out liver from stomach and put liver into serving canister or pan, clean out thoroughly. Serve sliced up liver with boiled hot tuttu meat (spine, ribs portion). Delicious meal (has a very tangy sweet flavor), very nutritious and full of nutrients your body needs. I make this once a year, annual serving with summer season tuttu.

- Sarah Skin
Utqiagvik

**Part 1: Directions:** No part of the (caribou) was wasted after a hunt. Unscramble the letters below to find out how each part of the caribou was used.

1) The BINAR was eaten.
   _ R _ _

2) WRADIEH is used to make drums.
   R A _ _ _ _

3) RETLNA is carved into spear arrows.
   _ _ _ _ _

4) The MTCASOH was used as a water jug.
   _ T _ _ _ _

5) OSEVOH were made into rattles.
   _ _ _ _

6) EDHI is sewn into mukluks.
   H _ _

7) EBNO was used as a scraper.
   _ _ _

8) The VRILE was roasted and eaten.
   _ _ V _

**Part 2:** Color the caribou.
In the old days, when tuttu were scarce, people utilized every part of the animal for food, clothing, tools, and shelter.

- John & Pearl Goodwin
  Kotzebue

Part 3: Ask an Elder in your community to share a tuttu memory with you. Write or draw the story below.

Part 4: Label each body part of the caribou.

John and Pearl Goodwin of Kotzebue recently shared stories on some of their traditional uses of caribou, or tuttu.

“The quannaq, or tuttu fat, was shredded, cooked and mixed with white fish and berries. The quannaq was fried and made crunchy like potato chips. People also diced the quannaq, added a flour and water mixture to make soup. When you cooked the diced quannaq and flour mixture, it was easy to make a large quantity.”

“The stomach fat was hung to dry, it was eaten as a snack with tea. It was also used to make a variety of akutuq, or eskimo ice cream.”

“The fibrous sinew on the back strap was long and thin. It was dried, twisted and made into thread for sewing makkals, garments, parkies, etc. The leg sinew was twisted, woven, or braided, to sew umiaqs (skin boats), qayaqs and water proof clothing. It was very important to skin the legs down to the hoofs so the fur could be made into makkals. People on the North Slope still take their sinew seriously, because it is used to sew their umiaqs, which must be durable to keep hunters safe while whaling. The leg sinew was also braided and used for fish line. People also used tuttu antlers for kivviguns, or sinkers, for their fishing nets.”

—John & Pearl Goodman
  Kotzebue
Western Arctic Caribou Herd Working Group

Working for you and Caribou!

Contact your local Working Group representative or one of the agencies to share comments, concerns or to get involved.

Voting Chairs
Anchorage Fish & Game Advisory Committee
Buckland, Deering, Selawik
Anaktuvuk Pass & Nuiqsut
Elm, Golovin, White Mountain
Fairbanks Hunters
Hunting Guides
Kivalina & Noatak
Kotzebue
Koyukuk River (Huslia, Hughes, Alaskaket, Bettles, Wiseman)
Lower Kobuk River (Noorvik & Kiana)
Middle Yukon River (Galena, Koyukuk, Nulato, Kaltag)
Point Hope & Point Lay
Nome
Conservationists
N. Seward Peninsula (Teller, Brevig, Wales, Shishmaref)
Reindeer Herders Association
S. Seward Peninsula (Koyuk, Shaktoolik, Unalakleet, Stedbank, St. Michael, Kudlik)
Transporters
Upper Kobuk River (Ambler, Shungnak, Kobuk)
Atqasuk, Utiqaqvik & Wainwright

The following agencies support the Working Group, but are not voting members:
Alaska Dept. of Fish & Game, Kotzebue, Alex Hansen, 907-442-1711, alex.hansen@alaska.gov
US Bureau of Land Management, Anchorage, Bonnie Million, 1-800-478-1263 or 907-267-1246, bmillion@blm.gov
US National Park Service, Kotzebue, Maija Lukin, 1-800-478-7252 or 907-442-8301, maija_lukin@nps.gov
US Fish & Wildlife, Kotzebue, Susan Georgette 1-800-492-8848 or 907-442-3799, susan_georgette@fws.gov

Please bring questions regarding the Working Group to:
Vern Cleveland, Chair, 907-636-2261, vern_cleveland75@hotmail.com
Cyrus Harris, Vice-Chair, 907-442-7914, charris@maniilaq.org
Jan Caufield, Facilitator, 907-523-4610, janc@gci.net

Please send questions regarding Caribou Trails to:
Kari Rasmussen, ADF&G, 443-8196, kari.rasmussen@alaska.gov

This publication was released by the Alaska Department of Fish & Game to support the Western Arctic Caribou Herd Working Group and printed in Anchorage, Alaska.

Run on Down to the Next Caribou Meeting:
December 13 & 14, 2017
Anchorage, AK
Check the website soon for details!
www.westernarcticcaribou.net

To Report Violations call:
1-800-478-3377