GATES OF THE ARCTIC NATIONAL PARK
SUBSISTENCE RESOURCE COMMISSION MEETING
November 13-14, 2024
Sophie Station Hotel Zach's Boardroom and via teleconference

These meeting minutes are final and were approved by the Chair of the GAAR SRC on March 10, 2025

Present:

SRC Members
Taqulik Hepa (Utqiagvik)
Jack Reakoff (Wiseman)
Pollock Simon Sr. (Allakaket)
Gary Hanchett (Fairbanks)
Tristen Pattee (Ambler)

North Slope Borough Dept. of Wildlife Mgmt
Brian Person – Senior Wildlife Biologist (phone)

Alaska Dept. of Fish and Game
Brad Wendling
Lindsey Dreese

Office of Subsistence Management
Gisela Chapa – North Slope RAC Coordinator
Wildlife Conservation Society
Taylor Stinchcomb
Thijs Montalvo
Kevin Fraley

University of Alaska Fairbanks
Caitlin Luby – graduate students
Zahara Iverson – graduate students

NPS
Mark Dowdle - Superintendent
Ellen Lyons – Resources Program Manager
Marcy Okada – Subsistence Coordinator
Kyle Joly – Wildlife Biologist by phone
Scott Sample – Chief Ranger
Mat Sorum – Wildlife Biologist
Matt Cameron – Wildlife Biologist
Zack Delisle – Sheep Ecologist
Jon O'Donnell – CAKN Stream Ecologist
Kim Jochum – Region Subsistence Analyst
Bureau of Land Management
Erin Julianus – Wildlife Biologist
Geoff Beyersdorf – Fairbanks District Manager
U.S. Geological Survey
Michael Carey

Naqsragmiut Tribal Council (Anaktuvuk Pass)
Peter Earl Williams
Dorcas Hugo

1. Call to Order – Chair Taqulik Hepa
2. Moment of Silence
3. Quorum was established for the entirety of the meeting with 5 members in attendance.

Chair, Peter Earl Williams Anaktuvuk Pass Naqsragmiut Tribal Council member representative. I'd like to address something today. Anaktuvuk is in the middle of NPS National Park three unit statute. I know that somebody ignore me but that's okay. I'll let that ride. Anyway, I just want to address that I want to table this meeting because Anaktuvuk needs to be here at the meeting. And I want to address this perfectly clearly.

We're under a federal statute. We're both under federal, under a federal tribal sovereignty government. We need to be affiliated, we need to be here in person. And none of Anaktuvuk people are here in-person. I came in person from Anaktuvuk. I paid my own way, round trip. I did my own thing to stand up for our people. I'm tired of people just writing a letter to us and telling us this and that. It don't make no sense having letters coming to us. You guys could speak all you want at this meeting but still yet, we need somebody representing from Anaktuvuk Tribal. So, I just wanted to say I want to table this. Thank you.

Taqulik Hepa: Thank you Earl and I'm very glad that you're here to express your concern. We had our last meeting in Anaktuvuk Pass this last spring and met with the community, listened to the concerns. One of the main things and outcomes that happened at that meeting was representation from Anaktuvuk Pass. And we had a good long discussion on how can we get good representation. We have two members from Anaktuvuk Pass that have been appointed to sit on this Gates of the Arctic. One is Esther Hugo and I believe an update she'll give in just a bit is Susan Morry.

To help make sure that there is representation from Anaktuvuk Pass, we also talked about having alternates just in case they don't come. And I hear it's very important to have representation and Anaktuvuk Pass is within the Park of the Gates of the Arctic and their voice is very important. And we as a Commission, Subsistence Resource Commission understand that. And I know that Marcy has worked and she'll give an update, just here a little bit, on the membership, how we can continue to try to make improvements to make sure that there are people here from our representative communities for the Gates of the Arctic.

Peter Earl Williams: The reason why I said this is I got a notice about an Anchorage conference meeting subsistence. It brought up the tension Park Service wanted to shut down the ATVs because they're eroding and all of it, blah, blah, blah. [inaudible 00:06:20] The machinery in 1968 when they came through Anaktuvuk Pass was not noticed in the tribal or anybody. They went through with a CAT and stuff through federal proceeds. Okay? That's inexcusable. You need to bring this kind of tension up. And Jack Reakoff, doesn't matter what you say to me, I'm still going to stand up to you. And I don't appreciate your attitude toward me, thank you very much. I want to table this. I want to stop this meeting and I don't want to hear nothing on this meeting until this next meeting. Thank you.

Taqulik Hepa: Thank you, Earl. And I appreciate for you coming to express your concerns.

Peter Earl Williams: Yeah, I think we better close this meeting. I mean, I'm going to shut it down until the first meeting, until we have our next meeting, because we need to get Anaktuvuk back here. I mean it. You guys talk it over, you can table this meeting until we get our meeting back and talk together. Until I come here for. So I want you to table this meeting now.

This is an inexcusable meeting. You guys need to have people up here at the meeting Anaktuvuk, because we're right in middle of NPS. Okay? I don't know how many you guys ever been up there but you guys wasn't raised around there, you guys don't know what's going on there, and you guys don't know our livelihood.

And I just want you guys to heads up. We're Alaskan tribe. We're here for our land, sat down on that statute. We need to speak up for our tribe on behalf. Nobody speak up on people like this. I'm a new tribe member. I know the statute, Alaska constitute, and ANCSA has nothing to do with this. You know why? The village council, this is not tribal. So ANCSA will stay out of this because they don't want nothing to do with this kind of stuff. So let's get this attention. I want you to table this. Thank you. Now, table. Thank you. Chair.

Taqulik Hepa: Thank you, Earl.

Peter Earl Williams: When I come back here to this meeting, I'm going to put a petition. I'm going to write this stuff. Because you know what? This is Robert rules of order.

Taqulik Hepa: Maybe just one comment. We do have a quorum. And your concerns are very valid. And like I said, we talked about this in Anaktuvuk Pass. You have two representatives that should be here and unfortunately, they're not here. I would express those concerns. And I'll call them to talk with Esther and to Susan, the other representative, to make sure that when the meeting is noticed that they come. Because when you accept an appointment then that's your responsibility to come.

Peter Earl Williams: No, responsibility is the tribal come here, involved in these kind of matters that's had at the meetings. AFN brought that statute up that we should be attending these kinds of meetings. Not just sitting back there, listening, doing paperwork and listening. That don't make sense.

Taqulik Hepa: Maybe I'll just give you one other idea to help address it locally is I know that you guys have your trilateral, which is the Tribe, the Village Corp and the City. When you guys have your trilateral, you should also bring this up that you need to have appointments and recommendations on who would best represent your community.

Peter Earl Williams: I've told you that I want to table this meeting, okay? Thank you. That's all there is to it. Give me a heads-up.

Taqulik Hepa: Okay, thank you.

Peter Earl Williams: We're in a RAC meeting too so I don't want hear nothing in here. I want you guys to close this meeting.

Taqulik Hepa: So I appreciate Earl for coming and expressing, and this is going back to the heart of the discussions that we had in Anaktuvuk Pass. And I'll communicate as a Chair, just to encourage the two representatives we have for that very important community that having a presence and to express their concerns. I don't know, if we could reach out to Susan or to Esther to call, that would be very good.

But because we do have a quorum, we are going to move forward. I know he'll probably come back and I'll let him know that we have a quorum. So we're going to continue the meeting and we'll continue with our agenda. So I'm going to turn the floor over to our Park Service Superintendent.

Mark Dowdle: Thank you Madam chair. Very much appreciate it. And also I want to-

Peter Earl Williams: Chair, is my voice not powerful enough to the table this meeting?

Taqulik Hepa: Maybe before, Mark if you don't mind, so under Robert's rules of orders, we do have a quorum.

Peter Earl Williams: Yeah, I know, but when a tribal player come in, they could hold this meeting until a further notice, so we could have our meeting in Anaktuvuk so we could discuss this NPS, because we're right under NPS meeting. We're right under that land. That's how come, I want to table this so we could go to the meeting in the village and we can discuss more matters.

No, no, no. I know you disagree with me all the time. You're not cops. I don't appreciate your manners. You always disagree with us from Anaktuvuks.

Taqulik Hepa: So Earl, because we have a quorum, we're going to... If we didn't have a quorum, and I do hear your concerns, so we're going to continue because we do have a quorum.

Peter Earl Williams: You're overriding me. It's just overruled. When we say we table this meeting, we mean we hold everything down, we sit down until further, until we have another meeting in Anaktuvuk. That's what I want to have.

Taqulik Hepa: I don't know. Mark, I don't know if that's something that falls within how the meeting procedures are supposed to be. If a tribal member... And do you have paperwork from the tribe?

Peter Earl Williams: Huh?

Taqulik Hepa: Do you have a letter from the tribe?

Peter Earl Williams: No. They're going to call you up and tell you the same thing.

Taqulik Hepa: Okay.

Peter Earl Williams: We want to be table to come out in person. We're going to come in person. We're going to table because we want our tribal members... We've got new members that don't know what's going on. We just had our tribal meeting, member meeting, and we got a new representative in here. That's how I want to have a new meeting. I want to hold this meeting until we get everything together so we can discuss this, the erosion and stuff about the ATV roads. We want to discuss these matters. I want to table your guys' meeting. Doesn't matter if it's federal or not, but we're under federal statute too, tribal government.

Taqulik Hepa: When you guys have your tribal meeting, I'd be willing to come maybe along with-

Peter Earl Williams: No. That's what we hear all the time. You'd be willing to come. Nobody comes for the meeting. Nobody don't say nothing about this. At the meeting, they said that the Alaska Native should be involved in the subsistence resources meeting. We went to Arizona's Subsistence meeting, we went down to Florida's Subsistence meeting, we went to Anchorage Subsistence meeting. We brought the same issue up. And this matter is on the table. I don't see Jack Reakoff on there. I don't see Reakoff on there. I don't know what's going on but we need someone like that guy that talk [inaudible 00:13:57]. We need a person like that up there, not write a letter to try to make us talk with him. But I don't appreciate this. I like to have this meeting [inaudible 00:14:11]. I mean, we're going have meetings like this, we need to speak up all together, just not...

Taqulik Hepa: Your participation as a resident of Anaktuvuk Pass-

Peter Earl Williams: I'm a tribal council member. I'm here as a tribal council member.

Taqulik Hepa: Yes. And you're welcome to attend and participate in our meeting.

Peter Earl Williams: No, no. No, I want to close the meeting. That's what I was telling you. If you don't, I'll go get a letter from us. We're going raise it. We're going to put it right in the front page.

Taqulik Hepa: Okay.

Peter Earl Williams: I'll put Jack Reakoff right in front page with him too.

Taqulik Hepa: Okay.

Peter Earl Williams: I don't mean to point him out, but he's been against our words all the time.

Taqulik Hepa: Okay.

Peter Earl Williams: And I don't appreciate that. And I want to close this meeting.

Jack Reakoff: I've never spoken against Anaktuvuk Pass.

Taqulik Hepa: Okay. We're going to continue on because we do have a quorum. And again, I appreciate him coming to express his concerns. I'll turn it over to you, Mr. Superintendent.

4. Introductory welcome by Chair Taqulik Hepa and Superintendent Mark Dowdle

Mark Dowdle: Thank you, Madam chair. I'm Mark Dowdle, Superintendent of Gates of the Arctic National Park and Preserve. And also want to say that I very much appreciate Earl and his expressions and viewpoints this morning. I very much heard that and also very much appreciate that we were able to hold this meeting in Anaktuvuk Pass last April, and was very, very impressed with the tribal community, everyone that came to the meeting. And it was very beneficial to me as the superintendent to be able to hear from folks. And I was going back and reading through the notes from the last meeting as well, and it helped me also to bring that appreciation back up to the surface.

I want to express my appreciation to all the Commission members for being here and understand that several were not able to be here today or hopefully we'll be able to join us later, either in person or by calling in. And also just in tab two, we did get a new charter from the Secretary. She signed it in July of last year. And this is a very short section, but number three in the charter are the objectives and scope of activities as mandated in Title 8 of ANILCA. The Commission will, on the annual basis, make recommendations to the Secretary of the Interior and the Governor of Alaska on any changes in the subsistence hunting program or its implementation that the Commission deems necessary after a consultation with appropriate local committees and Regional Advisory Councils. And after considering all relevant data and holding one or more additional hearings in the vicinity of the park. Thank you again for being here, and turn it back over to you Madam chair.

Taqulik Hepa: Thank you. Any questions for our superintendent before I give a quick welcome? Yes, Gary.

Gary Hanchett: I just wanted to make a statement. Oh. There we go. At the meeting in Anaktuvuk Pass, and I wanted to remind everybody here, particularly those who weren't able to attend, that both Jack and I were very forceful in reminding people in

Anaktuvuk Pass that we needed to have someone there. At least one person. And it wasn't a whimsical a fly-by-night silent thing. We went after it. So I'm afraid to say that the responsibility for getting somebody here rests with Anaktuvuk Pass and we'll give them all the help they could get. But we can't kidnap somebody, that is illegal. So beyond that though, I had a good time there. And although that wasn't the purpose, I think everybody did. So I'm done.

Taqulik Hepa: Thank you, Gary. If there are no more questions for our superintendent and his welcoming remarks, I just want to welcome everyone to our meeting. We'll be meeting here today and tomorrow from 9:00 AM to 5:00 PM. I woke up this morning thinking about our spring meeting. The last meeting that we had in Anaktuvuk Pass, it was a great setting, an opportunity to hear from many community members and we focused our agenda to give the opportunity to hear the people, whether it's Allakaket, Anaktuvuk Pass, Ambler, Wiseman. We serve the communities that are within and adjacent to the park. And the role that we have, direct line of communication with the Department of Interior's Secretary is such an important one.

And I've been on this Commission for a long time now, but to me this is a very special Commission. The community of Anaktuvuk Pass in particular, and Nuiqsut which is another adjacent community from the North Slope Borough villages, is very dear to my heart. I did my early years of work right there as a young woman growing up. And the people there, being able to have a voice for them or to support them from the community concerns that we hear or what's working, what's not is very important. And I know each of us as a commissioner play a role to carry that voice and I just want to continue to encourage us to come.

I'm very glad that Earl did come. I hear his passion and his concern. So, taking it back to the community and to the leadership is going to be very important so that they do have a presence. And I'll work with Marcy and the two commissioners. Unfortunately, they're not here today. I know that they're both very well-spoken, outspoken people from that community and I look forward to them participating in our future meetings.

But we do have a full agenda, lots of good updates and good discussions that we will be having over the next two days. So I just want to welcome everyone. Look forward to hearing from our representatives, our commissioners and staff. I know a few folks in Anaktuvuk Pass that live here in Fairbanks, and I'll message if they want to come attend some of our meeting.

But with that, I just want to continue on with the agenda. We're going to do a quick introduction of our commissioners, staff, and public. I think what we'll do first is we'll start with those online and then we'll go around the room to do an introduction, just to let us know who's present and participating in this meeting. Marcy, do you know if we have anybody online.

5. Brief Introduction of Commission members, staff, and guests

Marcy Okada:Yeah. So we have at least Kyle Joly and maybe two other people.

Taqulik Hepa: Okay. I think we'll start with Kyle and then I'll open it up to others that might be online.

Kyle Joly: Hello, Madam chair. This is Kyle Joly. I'm a wildlife biologist for Gates of the Arctic. Nice to be here. Thanks.

Taqulik Hepa: Thank you. Welcome, Kyle. Anyone else online?

Brian Person:Yeah. Good morning, this is Brian Person.

Taqulik Hepa: Go ahead Brian.

Brian Person: Yeah, good morning. This is Brian Person and I'm a senior wildlife biologist with the North Slope Borough Department of Wildlife Management. Good morning everybody.

Taqulik Hepa: Good morning, Brian. Thank you for calling in. I heard someone else on.

Gisela Chapa: Yeah, good morning. This is Gisela Chapa, I am the council coordinator for the North Slope RAC. And I'll be jumping in and out of the meeting because I have other meetings, but good morning everyone.

Dorcas Hugo: Dorcas Hugo with Naqsragmiut Tribe as a member. Good morning everyone.

Taqulik Hepa: Good morning Dorcas. So glad you're able to call in. Good morning. Anybody else online?

Okay. If not, we're going to go ahead and start with maybe Tristen and then we'll work with our commissioners that are here present, and then we'll have staff in this room give introductions. And please come to the mic for the introductions.

Tristen Pattee: Morning. Thank you, Madam chair. My name is Tristen Pattee here representing Ambler. I'm just happy to be here.

Gary Hanchett: Gary Hanchett representing Bettles.

Jack Reakoff: Jack Reakoff for Wiseman and I've been on the Commission since 1991.

Pollock Simon Sr.: Pollock Simon Sr. for Allakaket. I've been on this Board from the beginning. I'm glad I'm here this year. I had a run in with the doctor the last few years and I'm feeling better now. I can travel now, so I'm here. I'm really glad. I've been sitting at this table in the beginning with the other old members like Levi and some good members from, my friends from Barrow, Charlie Brower, Delbert Rexford, Ben Nageak, all been sitting here before you... I'm glad I'm here. Thank you.

Taqulik Hepa: Welcome, Pollock. Again, Taqulik Hepa. I'm from Utqiagvik and I sit on the Gates of the Arctic Resource Commission appointed by the governor. Glad to be here for our Region. Mr. Superintendent?

Mark Dowdle: Good morning. I'm Mark Dowdle, Superintendent of Gates of the Arctic National Park and Preserve, National Park Service. Thank you.

Marcy Okada: Good morning. I'm Marcy Okada, Subsistence Coordinator for Gates of the Arctic National Park and Preserve. Welcome everybody.

Kim Jochum: Good morning. I'm Kim Jochum. I work at the Regional Office Subsistence Program. I'm also the Interagency Staff Committee Member to the Federal Subsistence Board. Thanks for having me.

Matt Cameron: Good morning, Madam Chair, commission members. My name's Matt Cameron, wildlife biologist with Gates of the Arctic. It's great to see you all.

Taqulik Hepa: Thank you Kim and Matt, welcome.

Kevin Fraley: And I'm Kevin Fraley, just a guest here. I'm a fish ecologist for the Wildlife Conservation Society based in Fairbanks.

Taylor Stinchcomb: Good morning Madam chair, members of the council. My name is Taylor Stinchcomb. I am a social scientist with the Wildlife Conservation Society based here in Fairbanks. Yeah, thanks for having me.

Thijs Montalvo: Good morning everyone. I'm Thijs Montalvo. I just arrived in Fairbanks, but I'll be helping Taylor with the social science research. Very glad to be here.

Taqulik Hepa: Good. So that's everyone we have in line. And again, I'm glad that everyone's here to participate. Just for the people that are new that haven't attended our meeting, we meet twice a year. Usually, our fall meeting is here in Fairbanks, about this time of the year in November. And then we have a spring meeting where we try to have the meeting in one of our outlining communities that is within or adjacent to the Gates of the Arctic. And last spring we had a meeting in Anaktuvuk Pass.

At the end of the meeting, we'll pick the next date and time and location for where the next meeting is. And I just want to reiterate, it's so important to get out to the communities and to hear from the people and to share information that we have from the Park Service and from the commissioners. Been real fortunate to travel to some of these villages and I look forward to continuing to do that.

6. **Review and Adopt the Agenda** (Chair)

Taqulik Hepa: So agenda item six, we have review and adoption of the agenda that is presented before you. Do we have a motion to approve it and then open it up for discussion?

Jack Reakoff: I make a motion to adopt the agenda from April 24 and 25, 2024 in Anaktuvuk Pass.

Tristen Pattee: I'll second it.

Taqulik Hepa: No. I said agenda. We're approving an agenda.

Jack Reakoff: Oh, the agenda. Excuse me. I retract that motion. I make a motion to adopt the agenda as presented in our packet book here.

Pollock Simon Sr.: Second.

Taqulik Hepa: Okay. We got a motion by Jack and a second by Pollock to adopt the agenda as presented in our packet. Any discussion? Marcy?

Marcy Okada: Madam Chair. I'd like to go through the agenda to share some time-certain agenda items.

Taqulik Hepa: Okay. That was a lot of reorganizing of the agenda so I am going to need your help to remember all those in order, but I don't think that we have anything new. I see the Central-Yukon Management Plan. I don't see it listed, but we could include that with the Ambler Road update in a presentation.

Jack Reakoff: Madam Chair, there's a new occurrence. As of yesterday, they signed the record of decision for the Central-Yukon Plan. So, it's appropriate for Jeff Beyersdorf to give us the update. I just got that email.

Taqulik Hepa: Okay. So noted. Again, that will be under old business, Ambler Access Road update, and then he can provide an update on that plan, and where we are with the current signing of the record of decision and what does that mean. Any other discussion? Hearing none. All those in favor of approving the agenda with the notations from Marcy, please say "Aye."

Group: Aye.

7. **Review and Approve Meeting Minutes from April 24-25, 2024 Meeting** (Chair)

Taqulik Hepa: Agenda item number seven is approving of the minutes, and we have them in our packet for your consideration. Oh, it's in the front packet. So, we have the minutes.

That's a lot of minutes. I don't recall our minutes being this detailed. That's pretty good. But I know in just reading and scanning through them, I think it captures a lot of the discussions and the discussions that we had with the community in Anaktuvuk Pass. And we are so blessed again, but I'll leave it up, give an opportunity for the Commission to review them, and at some point we can make a motion to approve, make any edits as needed.

Jack Reakoff: I would make a motion to adopt these minutes from the Anaktuvuk Pass meeting of April 24, 25, 2024. The detailed quotations are excellent for people who weren't able to attend to scan through and see the kind of, it was a very long and detailed

meeting with the community. And so, I felt that was extremely beneficial, and we had people coming in and going out and participating in the meeting. And I thought that these minutes capture that. Thank you, Madam Chairman.

Pollock Simon Sr.: I second.

Taqulik Hepa: There was a motion by Jack and seconded by Pollock to adopt the April 24, 25 meeting minutes that was held in Anaktuvuk Pass. All those in favor say aye.

Group: Aye.

Taqulik Hepa: Discussion? Okay. All those opposed? So, we do have minutes that have been adopted by this Commission. And if anyone wants a copy of these very detailed minutes, please let myself or Marcy know. Do we also post them anywhere for people to be able to see them?

Marcy Okada: So, what we're working on is having from all seven SRCs, their meeting minutes posted on the Regional Office website for subsistence, and then with a link to each of the park units. And that's a work in progress.

Kim Jochum: Yeah, and if it's okay to add. We also do report it annually to the FACA database. So, as we are a FACA Advisory body, so that is available also online through the FACA database, but I will make sure it's available also easily and easily found on the Park Service website.

Taqulik Hepa: Okay. And I'm sure Marcy knows for our member communities to make sure that they're informed when things will be posted and where they can find them. A flyer would be good. Jack?

Jack Reakoff: I also failed on email from our coordinator with the links to those where those minutes are found, because trying to navigate the government system for me is tough. And so, if the community's got an email with those links in there, then you can access them instantly and they pop up on your browser. So, I think that would be the best way to disseminate these meetings to the general public. Thank you, Madam Chair.

8. **Status of SRC Membership** – Marcy Okada

Taqulik Hepa: Very good, thank you. Okay, with the approval of our adoption of the minutes, we are going to move to membership status. And I'm going to turn the floor over to Marcy.

Marcy Okada: Okay. Thank you, Madam Chair. So, if you go behind the agenda, there's a list of all of our SRC members and their term dates. So, we'll just go through this real quick. Western Interior RAC – Pollock Simon Sr. – term expires on January 3rd, 2025. Again, it's a RAC appointment, so you would still have to be serving on the RAC to be appointed to this SRC. Northwest Arctic RAC - Tristen Pattee – until October, 2026. North Slope RAC - Esther Hugo – until April 2027. Both Esther and Earl Williams have seats on the North Slope RAC. So, maybe that's something we could consider, whether the RAC can appoint alternates to this Commission if Earl would like to join this Commission.

Okay, moving to the Secretary of Interior appointments, Jack Reakoff, your term is good until June 2025. Same with Raymond Woods from Shungnak, same term date. And so, what we're being advised to do is to, in order to renew your appointment, we're advised to submit your applications right now because the Secretarial appointments take a year and a half, and we kind of want to get in the queue and have a seamless process. So, I'll be submitting that. The third Secretarial appointment is Gary Hanchett. Gary, you're good until 2026. But again, I'll remind you at the next meeting to get your application in as well.

Moving to the governor of Alaska appointments, Tim Fickus and his term expires next month (December), 2024. Same with Taqulik Hepa, same term limit. And so, I sent both of you an email saying to please go ahead and go to the state website and reapply if there's interest to do so.

And then lastly, at our last SRC meeting in Anaktuvuk Pass, Susan Mekiana-Morry showed interest in being on this Commission. And so, we went ahead and submitted her application on the state website, and we did the same with Gladys Mekiana and Mary Hugo. And if you flip to the next page, Riley Sikvayugak Jr. was appointed for the same seat, and he received a governor of Alaska letter appreciating his service on this Commission but was essentially discontinued. And then if you flip to the next page, Susan Morry after the SRC meeting in Anaktuvuk Pass was appointed by the governor. And I spoke to Gladys Mekiana and Mary Hugo, and they have not received any response letters. So, I spoke to a staff member at the Juneau office, and it turns out the state does not do alternate seats. So, essentially Susan fills the seat for the governor appointed seat. And I followed up with her, and her understanding was she would be an alternate to Esther.

So, we need to figure out how to shuffle the appointment seats so that maybe Susan could be a Secretary appointment. And then the Secretary seats do alternates. So, I've got to do some sort of outline and figure out how to move the pieces and make it work. But that's the update on everybody's term limits and your appointment seats. If there’s any questions?

Taqulik Hepa: Even though the governor doesn't do alternates, can this Commission accept somebody from Anaktuvuk Pass or an appointed position by the governor to come and have a seat but not be a voting member so that their community is represented?

Marcy Okada: I think, Madam Chair, that's a very good question. And I think I need to follow up on this with some discussion with the state staff. They made it clear they don't do alternates, but to what limit? What would that look like?

Taqulik Hepa: So, if for some reason Susan is not able to attend, then I think this Commission, you could ask the solicitor, but I think this Commission can say we would like to have a representative, not appointed by the governor, but because we're missing this person, whoever it may be appointed by the governor, that somebody from the respective community come and we have alternates that show an interest. We could have them, because I think you're budgeted for it. We could just have them come and have a seat and express and hear and absorb to share information back. It's not going to be an official where they're a part of the roll call, but at least they have a presence, and to be able to share information and take home information from the discussions. I think that would be very good for us to consider and to look to see if that's a possibility. Okay. Pollock?

Pollock Simon Sr.: Thank you. Madam Chair. In the beginning, I've been on this Board since the beginning, and we didn't have any problem with making a quorum. All the members on the Board at that time, came every time. So, there was no shortage of Board members to make quorum. But these last few years I see that, compared to the meetings today. Other times like last year, we had to get on the phone to make a quorum. So, it seems I don't know compared to right now if travel is difficult or not, but I would think an alternate would be good. Sometimes last two years I was not well, so I couldn't come to the meeting. But if I had an alternate, that would have been good. Thank you, Madam Chair.

Taqulik Hepa: Thank you for sharing that, Pollock. I think that that's a good plan, and if the RACs are not able to appoint an alternate, it would be good to also consider that. So, if the appointment is Tristen, and he's not able to be here, maybe having a representative that the community wants to send from Ambler would be good to just have presence. And it goes back to the concern that we heard earlier from our Tribal member, Earl Williams from Anaktuvuk Pass.

Thank you, Marcy, for taking notes and we look forward to seeing what is the outcome, and maybe we could take some action at our April meeting. Alright, any other questions for Marcy on our membership updates? Okay, thank you for that. I think we're getting better. We have a quorum today, so that's good.

9. Set time and location for next SRC meeting

Taqulik Hepa: So, we usually do it at the end of the agenda. I noticed we're doing it earlier on the agenda now is we're going to set the time and location for the next meeting. And there should be a calendar under one of the tabs for springtime. Last page after tab one. So we're not burnt out and forget to set the dates for our next meeting. I think that's smart. So we have calendars of April and May, 2025. Again, just note that if it's possible, we try to do a meeting in one of the outlying villages, member villages. Any recommendation right now? My calendar is pretty much open for April and May.

Tristen Pattee: I would like to make a recommendation to hold the meeting in my home town in Ambler for consideration.

Taqulik Hepa: I like that. Thank you for making that recommendation. Any particular week in April and May? Or any other suggestions? Jack?

Jack Reakoff: Madam Chair, I prefer the third week in April, let's say the week of the 22nd through the 24th or so. I'm not sure whether it overlaps with spring carnivals, stuff like that. Is that a good week for you, Pollock?

Pollock Simon Sr.: Thank you, Madam Chair. Later part of April sounds good to me, like the first week, there's the Koyukuk River championship dog races and there's the [inaudible 00:47:48]. So, later part, from the middle of April on to the third week is good. And I don't want to go into May because the rivers start swelling up and break up is soon. Thank you, Madam Chair.

Taqulik Hepa: Thank you for your input. So, right now the recommendation we've heard is to have it in Ambler the week of the 21st, maybe the 22nd. Around that timeframe? That's actually a good time for me. What are you thinking?

Okay, if there's no objections, I think that we could work on the week of April 22nd through the 24th to have our next spring meeting in Ambler.

Marcy Okada: Madam Chair, if that's your first choice, and then if we could select an alternate date, a backup date.

Jack Reakoff: Maybe the week before? Like the 15, 16th, 17th?

Tristen Pattee: Yeah, I'm just looking at my schedule. So, the week before would be good. And then also the time that the first choices, they're both going to work for me.

Taqulik Hepa: Perfect. I like it. Okay. Any objections for the second choice to be week, the 15th, 16th, 17th, around that timeframe? No objections, so I think that looks like a good way to move forward. I look forward to it.

10. SRC Member Community Reports

SRC Member Reports

Jack Reakoff: I'm on the Western Interior Regional Advisory Council. We had a meeting in Galena. We talked extensively about fish issues, and those fisheries meeting the decline on the salmon runs on the Yukon River, effects on people's ability to meet their subsistence needs. Gear restrictions also restricts the amount of freshwater stocks, like sheefish and stuff. That actually has an impact on people's abilities.

As far as this year, there was tons of hunters that went up the road (Haul Road). And as I discussed in Anaktuvuk, there was going to be a lot of pressure against the caribou when they migrated, because they opened the season for cow caribou during migration. The caribou came twice, Central Herd trying to cross the road two times. Around the 8th or the 10th of August, and then again later in August. Those lead cows were driven back, and the herds displaced away from the road. And it got to where there was hardly any caribou near the road at all. There was a lot of hunters, the Porcupine herd traveled right up to within about 10 to 15 miles to the west of Coldfoot and Wiseman. And they wanted to go across into the park, but again, there was a lot more air taxis.

And I listened to the Eastern Interior Regional Council meeting, and there was a lot of discussion from people in Arctic Village and Venetie about the number of air taxis dropping off hunters there. Well, they have a 10-caribou bag limit. The problem is the air taxis dump the hunters in front of the caribou, and while they're waiting for bulls to show up, they'll shoot lead cows because they want to get something laying on the pole to eat.

So, they drove, the Porcupine caribou herd got so fed up with having that much force against it, they turned around and went all the way back into Canada. It's over there in the Old Crow Flats. They were pushing, hard, pushing, trying to come to the west, and they basically drove them completely back to the east. And they got most of the herds out of Alaska right now. They haven't been over there for seven years going that far east. They went back where they had been going. So, we discussed this with the State Board of Game. In reality, there should be no cow caribou harvests before October 1. A. They're still in lactation all the way through that time and B. Hunters will kill the biggest cows, and they kill those lead cows.

There's discussion. A lot of scientists and a lot of the park people don't think there are lead cows, but they've never collared one before. Everybody knows. Customary traditional knowledge knows there are lead cow caribou that lead migrations, and if you drive them back, and that's a complete anathema in our community. This year the Central Arctic herd went way out, traveled way west, and traveled west of the Dalton highway late in October and ended up joining with a lot of Teshekpuk caribou. And they ended up going through Anaktuvuk Pass. A lot of caribou went through there, and I was real happy that they got caribou. But there were virtually no caribou. There's a few ended up spurring off and they're in the upper Atigun River Valley, but there were virtually no caribou until about 10 days ago near that Road. They basically, those hunters will drive them away. So, it was better for the caribou, but it was harder to... I haven't seen the caribou we have to harvest.

We had virtually a little bit of snow in early October. Then we had kind of a lot of snow. We had about 15 inches of snow falling with a standing snowpack at 20 inches. And we got a little bit of rain on that. The wind during that entire snowstorm blew hard across the mountains, and it blew the snow off the mountains for the sheep. And so, the hills were bare, and it was drier up above. So, they didn't get rain on snow events up there.So, the sheep population is, I saw there's very few sheep. But I saw lambs born on time in late May. And also, the size of the lambs that I saw, they looked large and healthy. We had, again, a real rainy summer, predominantly rainy summer.

Kanuti Wildlife Refuge did a bumblebee inventory. There was only 10% of the bumblebees. It was my impression that there are only 10% of insects in general. Bumblebees and all pollinating insects were way less. So, the flowers, sheep eat flowers for the majority of the summer, as long as they can for that protein source. Without pollinating insects, there was a longer exposure to pollen, pollen's protein. The lambs that I saw in the fall, the few that I can find, are really, they're large. They were born on time, and they're larger because we've had this closure now since 2022. So, we're starting to see a response in the population. The other thing that the sheep are doing, Brad Wendling's probably going to show us that, but the sheep are starting to spread out and use areas that they had not used for probably five years. They're starting to seek out other portions of their little home ranges and stuff. And they're going into places that I've seen them before, but I haven't seen them there for five years.

So, our snowshoe hare population is starting to climb up a little bit. I'm seeing lynx tracks. I'm seeing way more marten tracks than I've ever seen that far into the Brooks Range. Martens don't normally go inside the mountains. Customary, traditionally the old-timers told me they'd never seen a marten north of Coldfoot. In the '80s they started coming, and now there's more and more marten coming into the mountains.

There was tons of ptarmigan, and there were tons of grouse in the spring. But with no insects, baby birds have to have insects for protein sources. And the recruitments weren't as big as I thought they would be. I thought there would be a lot of, a zillion ptarmigans, but they're there. And lots of grouse, but they're not as many as I anticipated.

But I think that's, and I saw that with sparrows and stuff. There wasn't very many. I used to hate sparrows. The number of immature, light brown sparrows was way lower than I expect would normally see. Normally it's like 10 to one adult. This year it was almost a one-to-one ratio.

So, currently the snow is back. It's settled down at 13 inches of snow inside the mountains. The moose are strolling around in that. It's relatively, it's firm. It's a firmer snow. So, it's good traveling right now for hauling wood and whatnot. But there are very, very few caribou in unit 24A, even 25A, most of the 25A, there's hardly any caribou in it. There's a few caribou up in the Atigun River. Most of the caribou are way west and way east of the road. So, that would be my report, Madam Chair.

Taqulik Hepa: Thank you, Jack, for your report. Any questions or comments for Jack? Gary?

Gary Hanchett: How much emphasis is put into not taking the first round of caribou?

Jack Reakoff: None.

Gary Hanchett: That's a major problem right there. Because if you start shooting them on that first group, that's going to change their pattern, right there.

Jack Reakoff: The caribou, for unit 24B, south of 169-5 (latitude), the season was closed to the harvest of cow caribou from 2016 through last July 1 of 2024. No hunters could kill cow caribou. So, they did not disturb the lead migrations. And the caribou were starting to get more accustomed to the Road again.

This year on July 1, they allowed cow caribou harvest, five cows per hunter for the Central Arctic caribou herd. Cows lead migration. The bulls are way in the back of those strings. So, of course they're going to kill the biggest cows that are there, because they're going to bleach that skull, and they're going to put it on their wall. And they drove those lead cows back multiple times where they just didn't want to get near that Road.

And the air taxis, and there's water taxis. There's water taxis that were going up the South Fork, up way east of Coldfoot on the South Fork drainage. There's water taxis going up the Ivishak, plus air taxis. There's a lot more air taxis that arrived this year. Kavik Air, which is a company out of Wasilla. There's a whole bunch of air taxis that have showed up for caribou harvest because Nelchina's done, the Fortymile herd got real big restrictions on it. So, there's a lot of harvest back there. The harvest capacity or the harvest by the general public, especially from a road like that, it's a significant impact on where the caribou are going to go. There's virtually no... The Department just didn't get it. The Board doesn't understand, you can't kill cow caribou where they're still in lactation. When they killed those cows, the Department told Western Interior Council, they killed like 189 cow caribou. But for every cow that they killed, basically there's a calf starving on the tundra, because they're killing those in August. Most of those caribou were killed in August. So, that's a huge impact to where the caribou are going to feel comfortable going. Porcupine Herd, even with the air taxes. The air taxis drove the caribou back this year. Eastern Interior RAC minutes, you should actually look at the Eastern Interior minutes. There was a lot of complaints about the number of airplanes flying around there, buzzing, Arctic Village during a cemetery event. It was a significant number of increase in air taxis. So, there's virtually no restriction against taking cow caribou during migration. It's not a little problem. It's a big deal.

Gary Hanchett: My thought is that they should have a closure on that, the first part of the migrations, if it's at all possible. And I don't see any reason why not. To allow those first groups of caribou to get through. And of course that includes those cows. And most people are after the bulls. They're antler hunters and so on. So, there'd be better off anyway. The only trouble with that is that caribou bulls aren't all that tasty the later it gets, so that's it for me.

Pollock Simon Sr.: I want to count what Jack said is, in 1974 was the last time caribou came through Allakaket. And I've been going to a lot of meetings and caribou walking through the forest over them and they cut back on [inaudible 01:02:31]. Caribou take for the peoples. One time I said, it take four caribou instead of five, no calf. I've been telling them that the wolves and grizzlies eat a lot of caribou. Like we had a meeting in Anchorage and there was some people from Kotzebue area that said there was a big pack of wolves eating caribou. One lady said there was 17 wolves in one pack. And some of us that still like to camp out, there's still wolves roaming around and…So, I know that any road development of any kind would impact the caribou migration route because I've been going to the meeting and captured one time, some members from that agency, Red Dog Road where they haul the ore, it's right across a caribou route. A caribou come to the road and turned around and make a big circle and that's [inaudible 01:04:24]. Any kind of road development would impact the caribou migration route. I hear that at all the meetings I go to. They don't listen.

Taqulik Hepa: Thank you, Pollock, for sharing that. Any other questions or comments for Jack? Tristen?

Tristen Pattee: Yes, Madam Chair. Tristen Pattee, here. I just wanted to go back to the emphasis on the leader importance, I'm just wondering if there's, in your region, if there's any kind of way that you could convey the message of the importance of not killing the leader of the pack, so you don't disturb the migration.

In our region, there's a lot of education that's done. There's a lot of outreach with our Native corporation, our Tribes, our schools. There's flyers posted, just kind of emphasizing how important that leader is because of what impact that you do if you are to take that leader and disturb the rest of the migration for the rest of the region. Our caribou comes from the Noatak area, Kivalina area, all the way down, so everybody just knows to respect that. That leader needs to keep going in order to not disturb the migration for the rest of us [inaudible 01:05:45] as well.

Jack Reakoff: Madam Chair, I'm the chair of the Koyukuk River Advisory. I had Michelle Quillin attend the Board of Game meeting. She made a PowerPoint presentation for the Board. And, we described how we didn't want to see any cow harvest before October 1 because they're in lactation and the cows lead migrations.

Ten minutes after her presentation, the Board was deliberating the proposal, they forgot everything she said and they forgot when caribou stop lactating. And the Board passed the proposal to allow cow caribou harvest on July 1. It's really depressing to spend a lot of time trying to convey to the Board, to the Board of Game, that's the decision makers and the Department, the importance of trying to conserve cow caribou because they only have one calf. They never have a twin. They're in lactation earlier. We don't need to be killing cow caribou during migration, so deflecting caribou migrations because what that did for Anaktuvuk is that it made the caribou divert away, and they went way to the coast and went way west. The caribou are starting to learn how to get around that Haul Road. But, they showed up late and they're showing up really late. They don't have access to caribou when they're in better condition. You didn't have bull access is what the problem was.

So, we have tried to convey this to the Department of Fish and Game and to the Board of Game. They just don't listen. That's what's frustrating to no end. Everybody ... You know it. People in Anaktuvuk. The customary traditional users know you do not ever disturb the lead caribou. But, they don't understand that and they cannot understand it until they get telemetry on those caribou and actually understand it.

I talked to a reindeer herder in Scandinavia who has reindeer. And so, they have certain cows that they'll put telemetry on those cows. Those are their lead cows. Those are their dominant cows. I asked him what's the age class of those because they basically raise them. Basically it's five years old. Just like bull caribou are the primary breeders when they're five and older. The lead cows are five years old. That was a pretty interesting thing to understand.

So, we've tried to deflect this away from the current management. We're having really poor success so far because the Board membership is not made up of people who understand caribou. That's the problem. You should be on the Board of Game.

Taqulik Hepa: I was just going to say this is really good discussion. Even though, Jack, you think they don't hear you. I think it's important to encourage people to continue to say what you have to say about what happens when, either transporters or activity that is disrupting the cows to make that migration ...We have to keep saying it. We can't give up. I hear you. There's like these things or themes that come and go that are the hot topic of the time. Maybe someday in the near future, it's going to become that theme of the majority of the comments or testimony that's going to be given to the Board of Game or to the Federal Subsistence Board. So, I just want to encourage everyone to continue to share your observations and what you know from living and spending time up there and what happens when those cow caribou are disturbed. It causes a late migration. They come ... But, don't give up. So, I thought that was really good and thank you for sharing that. Any other questions for Jack? If not, we are going to move on to Gary.

Gary Hanchett: Nothing to report from Bettles. Maybe some time. Nothing to report from Bettles, other than they didn't have the weather event that was here in Fairbanks, which is good. Had they had that, Jack would be jumping up and down and screaming about what happens to the caribou when such an event occurs. So, that's it for me.

Tristen Pattee: Thank you, Madam Chair. What I have to report, in August, as I was in Kotzebue, I witnessed a whole bunch of airplanes just in and out, nonstop in Kotzebue. And they were having these transporters drop off hunters, basically, right in between the breeding ground of the Western Arctic Caribou Herd. They were even actual social media posts of them actually in there, being surrounded by caribou as they're going through, right in between the caribou herd so you can definitely notice that they were shifting their direction as they were taking this video and all for people getting paid to do this stuff.

And so, that was one of the very big concerns that we had. Especially with our caribou herd declining. It's being put in a microscope, that whole entire area. It's changing the attitude of the whole region because, basically, they're disturbing their food that is on their way to them. That's why I was mentioning how important it is to emphasize the lead caribou and to not disturb that migration.

So, the caribou did show up near Red Dog, but late September. And, usually in the past, it's usually a lot earlier. They did cross the road. Of course, it does take some time, it just kind of depends on the section. It depends on if there's traffic on that road, but it did delay it, but they did make it across, eventually.

But, a lot of times, they do hang along the side of the road, even if it's on the southern end. And so then, we get subsistence hunters out of Kivalina to be able to go and use that road in order to reach the actual herd, so there is some help for Kivalina residents to be able to harvest their caribou.

I got reports from friends in Noatak. They're up and down the river. they're having to go a lot further because there's just a decrease in the caribou showing up during certain times. They did mention that there were lots of bears. One of my friends said that he saw 17 grizzly bears, just on his way home. His camp would be broken into and torn apart.

One friend got a moose and then, they actually went into Kivalina and the bear made it inside there and took one of the moose legs. So, the grizzly bears are very, very making a large presence in that area. And my friend even mentioned they're actually encouraging grizzly guides, just because they want them to be controlled.

In Kivalina, there was a couple of taking of polar bears. They got really close to town. One was trying to get into someone's food storage area. And so, they had to put it down. They were just getting closer and closer, it seemed. And so, they had to put a couple of polar bears down, unfortunately. But, they were able to share the meat. They sent some to Point Hope and some stayed in Kivalina.

Let's see. Culture camps. I've been noticing a lot of culture camps happening in the region. Ilisagvik was one of them, near my hometown, which I was really happy to see that. Let's see. Lots of people are harvesting moose. So, that was good to see.

In Ambler, the caribou arrived late October. I was able to collect four caribou for people in town and my aana. They were bulls that I got, so they didn't stink, they call it. So, that was really good to see. But, there were still a lot of taking of cows, even though we had this whole law change to only one cow per year. But, people knew historically, the bulls are already in rut and you can't really eat them, so people were focusing more on the cows, which is concerning because everybody in the region knows that our herd is declining. For them to continue to take cows is just something that is very concerning to me, and hoping that we could continue pushing that education to say we're trying to help this herd and make our best effort to help it.

On the caribou that I got, they were not stink, but I did just witness some stuff on the stomach and the liver was very discolored. So, I'm not sure. I took some photos. I'm just not sure what it could be. Jack mentioned a little about it earlier.

We have lots and lots of wolves in Ambler during when the caribou's migrating. And so, that's another concern. I almost thought one was a caribou when I was hunting. It's crazy how big they are, they're getting.

The troopers did make a presence, you know this new 15 per year, one could be a cow. So they are in town, are enforcing that law. But, some of the posts I saw there, they're very negative toward the troopers, even though they're just doing their jobs and we're trying to do our best effort to conserve this declining caribou migration. And so, it was good to actually see the troopers show up, even though it did make some people mad. It was good to see that they made a presence to do their best to enforce this law.

Lots of seining. And so, the whole good part of the summer, the water was very, very high. And so, a lot of people weren't able to catch a whole bunch of fish, but as soon as the water dropped, we saw some groups go out to seine for fish. I saw a post with their boats full of fish, so it was really good to see that, that the water dropped in order for them to collect their fish for the winter time.

Right now, they're making a fish trap through the ice, which I thought was pretty great. So, they have the whole community cutting through the ice and making this fish trap out of cottonwood and all for burbot.

The summertime, we had a very large abundance of berries, which was very good to see. My aana, she's not very mobile. Her knees give out, so it was good to see her be able to sit in one spot and collect gallons of berries. That made her very happy. All of us were happy. Yeah, that's my report.

Taqulik Hepa: Thank you, Tristen. Very good report. Any questions or comments for Tristen? Jack?

Jack Reakoff: Do you think all those bears are troublesome because the salmon run is so bad? The bears aren't getting the fish?

Tristen Pattee: Yes, that's also what I thought as well because Noatak, they didn't get as much fish as they usually do as well. And so, that's what we thought is, "Now, they're going after ..." They're breaking into people's cabins quite often now.

Pollock Simon Sr.: Thank you, Madam Chair. I already mentioned that we had a lot of wolves around Allakaket a few years ago. The Koyukuk River Advisory Committee approached the State for predator control. Took a long time, took 12 years before they come around and start shooting some wolves. They did the last few years. And the moose is coming back slowly, but there's no clear rule. Around the Kotzebue area, there's lots of wolves. The thing is that you approach the Fish and Game of the state of Alaska, there's pressure from other groups from Anchorage or some place. Just don't want to go shoot the wolves or bears because there's too many of them. We need to keep the balance between caribou, moose and predators, so that we don't have too many wolves. Right now, there's not that many wolves around Allakaket.

Jack Reakoff: Taqulik had to step out for a second. Any more questions for Tristen's report? You had a ton of caribou that showed up? Or was it just a few strings or ... They were at Onion Portage or were they coming through Ambler itself?

Tristen Pattee: Yeah, they came, a lot, through Onion Portage. Kind of on the west side of the Jade Mountains there. They're still coming on their regular migration route. There were quite a bit, but it didn't last long, probably, maybe a week. They were getting chased quite a bit, and the river was freezing over. And so, they were able to cross the river because usually when the river is open, they're either ... I mean, we're in boats gathering while they're swimming. This time, they were going to cross a creek on the river and we were not able to because we're on snow machines and on thin ice and all that. And so, we just were lucky enough to collect the ones that were followed more toward Ambler. But, there were quite a bit. But they just didn't last very long, so there were quite a bit of people that were not able to harvest caribou this year.

Jack Reakoff: One more question. Did you see a lot of calves? Did the calves look pretty good shape? Good size?

Tristen Pattee: I definitely saw calves, but not a whole lot. The ones that I did see, I thought they looked healthy, but I didn't see a whole bunch of them. Yeah, I was only able to hunt for two, three days when I was there and the day I left, the migration was gone.

Pollock Simon Sr.: Thank you, Jack. My name's Pollock Simon Sr. I've been sitting on this Board from the beginning, it was back in 1984. We went to Wiseman and had a meeting, my second meeting. Jack was living there at that time and maybe a teenager at that time. That's been a long time ago.

But, had former Board members in this building. We had many good meetings here. Some good Board members. We've had Levi Cleveland, Anaktuvuk Pass had James Nageak. Some of my friends from Barrow, Charlie Brower, Delbert Rexford, Ben Nageak. Tim Fickus' dad, Bill Fickus. We were the first Board members there. The first Superintendent was Dick Ring and every Superintendent after that. And, glad to work with Mark. Yeah. But, I think I'll be staying home pretty soon. I had a run in with the dogs the last few years and I'm feeling better now, so I could travel. But, I'm glad that we have our quorum. Yeah.

I don't know where, but some members don't come to these meetings every time. Sometimes, there's four and I have to get on the phone for quorum. It's neglected. Used to be all the Board members used to come in the beginning. I live in Allakaket in the Upper Koyukuk River. Life is kind of tough there, the lifestyle is changing. Going to the store to buy your food. Sometimes stuff costs high at the store. The last few years, first the state cut us down from taking chum salmon and the next couple of years, it got worse, they not letting us taking king salmon, which was the main fish that ... main dish for peoples up and down the river. Whitefish come pretty close but between the king salmon and whitefish, eat the king salmon every time. But the last few years, there's nothing now.

And another thing is that 1974 was the last time the caribou came through and with the Haul road pushing north, the pipeline Haul Road, the caribou are traveling along the Road and the headlights scare them off, divert off more to the west and they not coming to the Koyukuk River anymore.

And, the moose population is down, but they had predator control, they took some wolves out and started to increase a little bit, but not as much as it used to be. We used to have a cow season for moose in the wintertime, which was good. But now, the state only have a winter season for bull moose. In the wintertime, not much fat on a bull moose and tough meat. So, people don't. I think there was only one moose taken a couple years ago.

Allakaket is off the road. There's no road. You only fly in and no Park Service, so we're kind of in a rural area. I live in Allakaket, it's not because I have no place else to live, but because Allakaket is my home. My father and my grandfather lived there before me. And good life, you hunt, trap and fish. Live off the land. And that way of life is being threatened by road development. The last few years now, so things have started to change.

In other Koyukuk communities where there's non-natives, half natives. They're not understanding that it's change that are hurting. They don't give you something to eat like we went to meeting down in the lower Yukon one time and the meeting was in the Hall. The local Tribe came in and asked if we wanted to eat. We said "yeah" and they put lunch in paper bags. They brought it in and gave us lunch. That's the way it is now. But, they're still on the Koyukuk River, we still feed each other.

I think there's like we fight fire too, with the state and the feds change regulations, so we don't have our village crews when we used to have two village crews. The young peoples go out. I myself fought fires for many years, off and on. It's a good way for young peoples to make a little money, just go firefighting. But, the state and the feds changed the regulations, you see more of the hotshot crews going to fires and the village crews stay home. But, our representative Mike Cronk proposed to the state senators and they said that we should start working with village crews again and get the village crews to fight fires, so that sounds good. BLM start coming around to our village to fight fires.

I think I'm making my last few rounds here. But I'd like to see all of you, but I remember a lot of friends gone that sat at the table here that you're sitting on. This room has a lot of good memories. Thank you, Madam Chair.

Taqulik Hepa: Thank you, Pollock, for sharing your thoughts and observations and just going back to the history of this room with previous members such as Benny and Raymond and other...We truly appreciate your dedication. The decades of service you've done, representing your community with this SRC. It's been so much appreciated and I always enjoy you reminiscing or going back and talking about the things that you guys dealt with or just sharing of the food. I brought muktuk this time because you always mention, "We sure miss those muktuks from Delbert and Charlie." So, I brought you some muktuk this time. But, again, thank you for sharing that. And I'm going to give the floor to others. And you did pop one thing in my head, just about observations over time, and I'll end with that one after... Anyone have questions or comments for Pollock? Gary?

Gary Hanchett: I remembered. Just a little bit of humor. Bill and Lil Fickus, they used to have people... They took people out for moose and so on. And there was an evening around the fire where these hunters were bragging about their knives, their custom-made knives, and how much they cost. And this one was better than that one. And Bill got tired of that, and he said, "You know, you guys got those fancy knives, but you can't do what I can do with mine." And he threw it in the river. That's that.

Jack Reakoff: One question, Pollock, and I'm really glad to see you here after all these... I'm glad they tuned you up a little bit. You look really good. My question is with the high water that we had this year, could people fish very much for whitefish and go up seining the Alatna at all or is it pretty hard to fish?

Pollock Simon Sr.: There's not much fishing up Alatna. You know, we used to take the seining net and get two or three boatloads from up the Alatna River. Nobody has dogs anymore. It's just me and Steve Bergman got dogs. So, not much fishing. And maybe you might blame climate change, but the weather has changed. In July, it's really hot. Then, all of a sudden, it starts raining in August and just when the whitefish and sheefish coming upriver. The River comes up with all that rain and all the debris floating down it. We can't put our net out until September, let it go down a bit and then set our net. Me and my wife had fishnet across the River from Alatna - we caught sheefish and whitefish in the net. Our son, PJ, tried seining the last few years. This year he didn't. Of course nobody's interested in going seining. They could seine around town, but it would take two days to go up the Alatna and find a good fishing spot like we used to. No interest in that. Everybody say, "Oh, I don't have dogs, I don't need to fish." Thank you.

Taqulik Hepa: One question I had was you were talking about the last time the caribou migrated through Allakaket was in '84. But prior to that, the years before, was there a historical big migration through Allakaket or has it always been a hit-and-miss depending on... Could it be the outer range or is it because the migration pattern changed? You know what I mean? Yeah. So before 1984, did they used to come all the time?

Pollock Simon Sr.: Up to 1974. There was caribou 50 miles across the road all through the winter and in October they'd come, it's still freezing and they'd cross the Koyukuk River south, down to Ray Mountains where there's a lot of timber and good feeding for the caribou and they'd stay in the trees, out of the wind. And in January, February, March they'd come out to the lakes and we'd get them, the bulls are fat by then. But in the falltime we used to usually try to get cows. There were some years where peoples would shoot the fancy horn ones, but most of the cows are rough during that time and not too good eating. But since the Haul Road for the oil pipeline started in 1974, pushing north and the State said it was going to be private road only, commercial road only. That's what they said, but after the Road was done, not too long after that the road management was turned over to the State, and of course, the state opened to the public. And lots of people drive up the Road, not only to look at the mountains, but they want to hunt, trap and fish. In the same areas that we trap to already limited number of wildlife resources. Kind of difficult. Still have but there's not enough moose to go around. No more caribou. So, that's kind of tough for getting meat right now. Thank you, Madame Chair.

Taqulik Hepa: Thank you. I have lots more questions, but we'll save that for break. Any other questions or comments for Pollock on his report? My last comment is going back to in today's world, management agencies or land use agencies have an obligation to collect scientific data to help give management advice to the governments and to the users. And what I've observed over the years is when a group of people express a concern, it could be decades of them saying the same thing over and over but what I've learned is after a certain point in time, that sometimes science projects are prioritized to address the concerns that have been expressed over the years. And, at the end of the day, through good science, working with local knowledge people of what they're saying and what they're seeing, it's oftentimes proven that the people were right.

And I am starting to see a shift in how do you use local knowledge because western science is based on the academics and what they learned in school. And a big part of the picture that they're missing that our people have to share is local observations. What are you seeing? And one of the questions I wanted to ask him in just a bit is when the caribou came before 1974, where were they coming from? Were they coming from the east, the northeast? Northwest or the west or south? That would help us understand what herd maybe that they used to hunt from during those different times of the years. But my point is that I'm starting to see different scientists, especially modelers and the work that we do up on the North Slope is incorporating local observations or local knowledge into the models, working with the anthropologists and the modeler to figure out what questions or what information can we use from local knowledge.

And, at the end of the day, at least in the two projects that I've been involved with, the knowledge that was applied to these models to help understand harvest risk or population estimates and stuff actually influenced the model, which is really good. So, I just wanted to share that with the Park Service staff and others that are listening that do hard science is to realize that local knowledge is a very important part of the component, especially when you're doing research or developing models that could help inform. And I was just thinking, talking about cow caribou during migration, there's this constant message that we hear from different regions and different user groups that if you interfere with the cow caribou while they're migrating, then you're going to disrupt the hunt. And a good management system, whether it's a Board of Game, Federal Subsistence Board it's going to go and look... Or hope... They're supposed to go and look for the best available information.

So, I just want to challenge the researchers that are listening, especially the caribou biologists... We have a couple of them online... To think about how can we incorporate that to provide the answer to what people are saying. Or we don't know what the outcome is going to be, but what happens when cow caribou are disrupted. So, that was my thought. Thank you.

Pollock Simon Sr.: I have additional comments. I sit on a caribou working group – meeting in Nome, Kotzebue. These peoples are concerned about the decline in caribou and there's [inaudible 01:44:25] from Nome to 100 miles road north and south across the peninsula. And before that road, the caribou come to the end of the peninsula. But now the road was there and like you see some of this caribou have collars on that map, we see these red dots to the east of the road all bunched up. That tells me the caribou is afraid to cross the road. So, you know that the road development would impact the caribou migration route. And the Ambler Road is struggling, trying to put it through now. Now with the new president, new administration, I think the Ambler Road is going to go through no matter what we say. But it would impact the caribou migration route. I read the paper, last winter there was an article that said not only Alaska has a caribou decline, across Canada and northern areas. All over there's caribou decline. It's because of these developments. They're being pushed to the corner and not enough feed. But new administration, they'll be pushing, the president will be pushing roads north and they'll be more oil drilling. The former president Biden, he closed all drilling in the area. But now the new president will open it for the drilling, so there will be more roads and more drilling for oil as I see it. Thank you, Madame Chair.

SRC Chair's Report

Taqulik Hepa: Thank you, Pollock. Okay, I guess I'm the last one. I'll be quick. So, we all probably heard that the tuttu migration, the caribou migration, at least from the Teshekpuk Lake herd, was very late this year. And we were watching the herd hang up close to the coast. And I think kind of what triggered might've been a change in temperature, snowfall, but eventually they started to move. They were, what do you call it? Just south of Teshekpuk Lake for a long time. I just heard too from Wainwright and Atqasuk hunters that the caribou that were hanging out there this winter, probably the Teshekpuk too, another group, is they're starting to move to the east. So, caribou are moving around and people have been harvesting from our communities. And at this time, caribou are looking very healthy, especially the cows. And I just had some fresh catch the other day. It was lots of fat and very good marrow. So, that's a good sign.

But Anaktuvuk Pass in talking with Esther and others that the migration did come. It did come late. And prior to the migration come that a group of hunters from Anaktuvuk Pass did travel to Nuiqsut and took the opportunity to harvest bulls before the rut. And they were successful in that and were able to share that with the elders and with the community to make their paniktaq and other things. So, they were successful with that. And I just really think that the spirit of collaboration between the two communities is very important because the people from Anaktuvuk Pass are caribou people - Nunamiut. They followed the caribou, they went with the caribou. And the challenges they've had over the years for various reasons could be the transporter's activity north, the disruption of the cow caribou, the changing of climate that it's been a hardship for this community. And we do hear them and I am very glad to hear, and Esther was letting us know last week that their Caribou Association - UCAN is reestablished and they're hoping to come up with strategy to minimize the potential for the caribou to be diverted from their community. So, I just wanted to congratulate them on that.

The other part was fall fishing just started for Nuiqsut. I was traveling with a lady from Nuiqsut yesterday who just pulled her net. She said that the amount of fish for Arctic cisco or kaqtaq fishing is very abundant, very large fish. They go in six to seven year cycles. So, right now they're at their peak, so probably next year it's not going to be as productive as it is this year. Those fish, they spawn in the MacKenzie and they catch the current from the MacKenzie to the Colville and then they grow up and then they go back. So, the northeast winds from in the summertime are very key to get the... I'm not a fish person, but the little fish to catch the currents to grow up into the Colville. So, it was very good.

The reason I say this is because our communities and our leadership is going to be having a Messenger Feast come February and every couple of years at the call of our leaders and our whaling captains and others that they want to host a community to bring people together so we could share, barter, build relationships like we used to. It's a very, very old celebration that we have. It's called Kivgiq. So, people have been gathering and are going to come together and share those foods from all our communities and a lot of dancing and gift-giving. It's a very important one. We have a special dance that will be performed from the different communities. Kalutaq, they use a headdress with a yellow-billed loon headdress. And it's such a beautiful event.

I want to say that I think it was about the third week of October, we had a rain, snow, rain event, something that we're concerned about. Brian mentioned that at our last meeting last week, our Fish and Game Management Committee. It did happen in other villages. Atqasuk didn't get so bad if I remember correctly.

Talking about berries, what we heard from our community members is it was not a very good berry year in most of our communities. I didn't hear all the communities speak up, but where there would be berries everywhere, like in Point Hope that there was just very little. So, I know berries and caribou are very connected. There was an elderly lady from Anaktuvuk Pass that was telling me why their caribou always tastes so good and different. It's because they stopped to eat salmon berries at this one place north of the village before they come. True. True story.

Furbearers are very abundant across the North Slope. People are starting to actively harvest wolves. I haven't heard of any wolverines, but very fat. Abundant. I just encourage our younger generation of hunters and providers to go out and that we need to be in balance. Our people are the original stewards of our land and resources. And when you say the abundance of a certain resource that could affect another one such as caribou and furbearers, that we need to do our part to make sure that we keep things in balance. So, to encourage people to get out and harvest some, make some nice rugs and isagviks. Gift-giving at Kivgiq is going to be big. I'm sure that people will be giving a lot of furs away to their friends from across the North Slope.

We also have a big spike in most of our communities with Arctic fox. So, Arctic fox is very abundant this year. We're again encouraging people to go out and set traps to do their part to minimize any potential effects that could have on their populations of migratory birds and other things. But that's all I have for now. Thank you. All my notes I took anyway. Any questions? Pollock?

Pollock Simon Sr.: Thank you. I want to comment on what you said about traditional knowledge. I think if we go to the villages and talk with people about how to preserve the fish and game, that would be good. There's no salmon and before the State enacted regulation, there was a lot of fish, lot of salmon, and which we take as needed that were good for us. The salmon come over every spring. So, it will be the same with the moose and the caribou. I've been sitting on the caribou working group and they talk about the caribou entrance through Anaktuvuk Pass to the north is preserve. State preserve and sports hunting is allowed in the preserve. So, hunters go up there and shoot caribou and they don't know... Or maybe they don't, but the ancestors told us to let the first ones come through so that the ones that are coming behind will come through. And the elders were telling us to just take what you need. As far as the caribou are ever since the famine, if they drop out in the ?? because we didn't take it then they wouldn't come back in the same year. That's what our elders told us. And right now that preserve to the north of Anaktuvuk Pass is closed, but we talk about it at every meeting, the caribou's not coming through anymore. Thank you, Madame Chair.

Taqulik Hepa: Very good. You make me think again-... of two other things I wanted to mention. One of them was going back to the transporters and an increase. Working for the Department of Wildlife Management. We often get calls or they call the Planning Department of the Borough to express their concerns. So, there has been instances where there is increased plane traffic and I've seen a couple of videos and clips of planes disrupting hunters that spent a lot of money to get to where they were and caribou from a plane just turned the other direction and it was not a good thing. But I did want to mention that. And so, going back to Tristen's point about just education and outreach, and we had this discussion last week too, is to get to the right people and, again, just pounding it. If they're continually hearing that what you're doing is affecting our ability to feed our communities. And some people that have bought a trip to come hunt caribou in our region... A lot of them have no idea.

So education and outreach to the right groups of people so that they know that their activity is causing a hardship for our people. So, I wanted to express that and we're trying to think outside the box, working together with our Regional Tribe and other local leadership to figure out how can we see what's in our toolbox to let people know what's going on. It's going to be very difficult to stop a transporter or the guide hunts that do happen, but letting them understand what is actually happening is a different approach that we want to take to address that. The other part was across the North Slope too, what we heard from our hunters and fishermen is the rivers are very high and have recently dropped, but about maybe three or four weeks ago, it was like we had high water for a long time and then all of a sudden the tide just dropped. There was areas of our Elson Lagoon... that's our gateway to our rivers where we do our hunting... it was so low. There was areas of gravel under the water that people haven't seen at all before. So, it was a pretty major drop in the tide. Very interesting. One of the representatives from Atqasuk was talking about she could hear and feel the water too and as it was freezing up the high tide and then the low tide happening pretty dramatically. So, for people to note that, I think it was a dramatic

change in something that's different from historically. That was it. Any other questions? If not... Oh, anyone online have any questions for our SRC members about our reports? Okay. If not, we are going to take a 15-minute…

Dorcas Hugo: Madam Chair?

Taqulik Hepa: Yes. Yes. Hi, Dorcas. Go ahead.

Dorcas Hugo: I don't have any concerns, but I'm letting you know that I've got to check into my airlines.

Taqulik Hepa: Okay. Again, I appreciate you calling in and if you have any questions about the outcomes of the meetings, please reach out to me. Susan Morry knows how to get a hold of me or you could call Marcy.

Dorca Hugo: Okay. I probably can call back in this afternoon when I reach my hometown.

Taqulik Hepa: All right. Thank you so much for calling in. Have a good, safe flight. Okay. Okay, we're going to break until 11:20, then we'll try to get a few more presentations in before lunch. Thank you. Okay. That was pretty good, guys. I just love this part of the meetings.

11. December 2024 SRC Chairs Workshop – Marcy Okada

The Workshop encompasses all 7 SRCs around the State of Alaska. It's an opportunity for the Chairs to talk about statewide issues that have overlap eg. Caribou herds declining. To talk about the resources that their SRC are most concerned about and the management that the Park Service takes within our Parklands and to have that conversation with our Directorate. So our Regional Director Sarah Creachbaum attends the Workshop as well as Associate Directors in Natural Resources. In the agenda, we're going to try something different this year and have the Chairs have a breakout session to talk amongst themselves without Park Service staff there and then offer the opportunity to report back. The thought there was it was requested at the last SRC Chairs Workshop. Taqulik will be attending on behalf of this Commission and Jack will be calling in.

We have subsistence funding from our Regional office to do subsistence projects and we're going to have 4 project presentations at this Workshop.

12. Gates of the Arctic SRC Charter Update – Kim Jochum

Kim Jochum: The new charter was changed back to the language in the old charter as was requested by this SRC.
Taqulik Hepa: I think it would be good if there are not any comments at this time, but if you could take a look at it tonight to see if there's any further discussion. We don't need action on this. I think this is for our information. I also think it would be good if we get new members to review what the charter is and just to give a brief orientation on what our responsibility is as an SRC would be a good refresher for everybody, but especially for our new members. So it's clear to them why they're at the table, and what powers we have, and what our responsibilities are as an SRC. Okay.

13. Agency and Public Comments

Taqulik Hepa: At this time on our agenda, we have an opportunity for agency and public comments. If there is anybody in this room that would like an opportunity to address the SRC, now's the time. If not, do we have anyone online that would like to provide an opportunity to give public comments? Good morning, we just had somebody call in. Can you just introduce yourself and I'll let you know where we are on the agenda?

Brian Person: Good morning, Taqulik. It's Brian. I got disconnected so I called back in. Good morning.

Taqulik Hepa: Okay, good morning. So right now we're on agency and public comments. So again, if there's anyone online or in the room that would like an opportunity to have public comments, let us know. I think as people come to attend the meeting, if the SRC is good, that we'll give them an opportunity if they would like to share any public comments. So we'll just leave this agenda item open as people come to attend.

14. Old Business

Local Knowledge of Carnivore Populations in Northern Alaska – Taylor Stinchcomb/Wildlife Conservation Society
Taylor Stinchcomb: Yeah, thank you Madam Chair, members of the council, for having me back to this SRC. I always enjoy listening and hearing the concerns of the Commission and presenting many updates about this project. So it is a slow burn working with some of these communities, but that's okay. That's just the process that we need to take. So yeah, if you've heard these updates before, just bear with me because I have presented to multiple SRCs this year.

But yeah, so this project titled Local and Indigenous Knowledge of Carnivores in Northern Alaska is currently working with Kobuk, Kotzebue, Shungnak, Wiseman and working to engage Anaktuvuk Pass and Ambler. And so last winter I called into many Tribal councils just to present an overview of the project. And then in April, early April of last year, I was able to visit Shungnak and Kobuk with another social scientist on our team.

We met again with Tribal councils in person just to confirm their approval for their community to participate and partner in this research, also went over the questions that we ask people in the interviews. So we have kind of a draft list and then we allow the Tribe to remove questions if they want or to add topics and questions to the list. And one thing that came up in Shungnak and Kobuk was beavers, which we will talk about in a little bit. So we added questions about beavers and kind of the community's feelings about beaver control and wolf control was related to that as well.

So I am currently analyzing those interviews. It takes quite a bit of time to go through qualitative interviews in a good way. So that process is a little slow, but I do have some preliminary analysis that I am presenting to an update to Kobuk and Shungnak Tribes to see if they want to interview more people, continue with the project, and then determine how they want this information shared back with their communities. And then we create a larger more in-depth summary report that they see and approve and then we can share with our funders and wider communities. And then the ultimate goal is to, once these summary reports are approved, to create kind of a comparative assessment of what all the different communities are saying, what's the same, what's different, what are the major concerns and points of knowledge and changes in cultural practices as well.

So we've gone through that process with Kotzebue and Wiseman and so if you're interested in seeing those reports, either reach out to me or reach out to Alex Whiting in Kotzebue or reach out to Jack Reakoff on this council who can share the summary of our interview with him. So as I said, I've been presenting, I will be presenting preliminary updates to Shungnak and Kobuk in there. Kobuk received their update yesterday, so I need to follow up with them on any questions there. Shungnak is on November 26th and we'll be discussing additional community visits. And then I am in touch with the Tribes in Ambler and Anaktuvuk Pass to get on their council meetings and likely in December now and discuss community visits, initial community visits. And then Kotzebue is interested in doing some additional outreach related to this work, which might involve a radio broadcast in the community. So we might work with Alex and the Native Village of Kotzebue and the Park Service to figure out what that would look like.

On the back of your handout, I just have some of the community knowledge and perspectives that we have collected and documented so far that can be shared at this point in time. And you'll see we cover quite a few animals in these interviews. And I'm just going to go from top to bottom and share some of the observations and stories. So wolves, as we've heard in this meeting already, are increasing and coming closer to communities, but there's also fewer people engaging in active harvest and trapping of wolves across the communities than there were in the past. Wolves are known to be smart and not super trusting of humans. There's also a connection between ravens and wolves, where ravens will sometimes circle overhead telling the harvester where a wolf is moving. And when a harvester sees this, it can be a very spiritual occurrence. And this has been documented in both Kotzebue and Shungnak, which is interesting.

The active harvesters that are still trapping for wolves, do continue to pass down cultural practices like respect for the animal and ways to release the wolf's spirit to the next generation. Wolves have been observed killing grizzly bears, wolverines, and other solitary wolves. So there's some interesting interaction between these carnivore species. Also, as Tristen mentioned in his community report, grizzly bears are known to be all over the place, entering towns and eating or pushing out black bears. Fewer local people are harvesting bears and outside hunters are mostly going for caribou. So yeah, as I think Tristen mentioned, there's a desire for more guiding or other incentives to harvest brown bear. We did get several stories from Kotzebue of bears pulling fishnets out of lagoons, eating the fish and not putting a single tear in the fishnet, very dexterous animals. And they also break into camps and might lick an entire container of Crisco clean. So they're a little picky when they go into a cabin sometimes. Some bears are entering hibernation late or coming out early. And when they do, they are observed scavenging on anything they can find and also taking advantage of wolf kills.

Moving on to fox, both red, sometimes cross fox, and arctic fox. In the upper Kobuk, some people notice red and cross foxes all around the village, but mostly at night while others have hardly seen them in recent years. So maybe this observation depends on when people are looking and when they see the animals. Some people do have game cameras, so they're allowed to maybe observe the animals in that way and notice strange behaviors or changes in the populations. Villages do differ in their levels of concern about rabies being passed from foxes to dogs and then to people as well as the local ability to control or manage rabies transmission also differs. Trappers are not working as much on arctic fox, mostly in Kotzebue due to these rabies concerns as well as the arctic fox preying on the marine mammals, which causes their furs to be smelly and oily. So the furs aren't as usable from the foxes that are eating mostly marine animals. And then vegetation growth on the tundra has also impacted people's ability to find and trap the fox.

Wolverines might be the most elusive of the animals. They're not really seen too often in these areas. One Kobuk trapper was very surprised to get five wolverines over just under two months in their trap. They weren't even going for the wolverine, but the wolverine liked the bait that they had out for I believe marten and some of the smaller carnivores. A lot of wolverine life is pretty secretive, but they are known to eat anything they can find, including other wolverines that might be caught in traps. And we do have a few really interesting stories of some of the sociality that wolverines, it's not really well known how wolverines behave socially from a scientific perspective. So this is an interesting area for maybe the more western science methods to explore is wolverines traveling as small family groups or sibling pairs that like to hunt where they grew up originally.

Thanks to Jack, we have quite a bit of information about lynx populations. Lynx are known to follow the hare cycles and travel hundreds of miles in one direction, not straying far from their path unless they run into a hard barrier like the coastline. A male lynx will come back around to visit the females that he's bred with and will come right up to the kittens sniffing each other to say hello. That's a fun story of the social behavior of lynx. And one hunter in Kotzebue did catch rabies while processing a lynx. They were able to receive treatment, but it was the first time they had heard of a cat getting rabies up here, which raised some concerns.

And now down to the non-carnivores that do come up in these conversations, the first that I'll talk about is beaver, because beaver are a big concern in the upper Kobuk region because their populations are expanding, their dams are changing the environment and the waterways and impacting traditional fishing practices as well as access to cultural sites like the hot springs in Kobuk and Shungnak. They're also displacing fish from the rivers and streams, which then displace fish eaters like belugas, bears, and people. This was also of concern in Kotzebue as Kotzebue is also seeing a lot more beavers. People are not harvesting beaver as much as they have in past generations. And a few have seen some signs of predation or dam disturbance by wolves, bears, or river otters. But this is not a very frequent observance. So not too much solid information about the predation of beavers by other carnivores.

And finally, as we all know, caribou are the life force of the tundra. Most life revolves around their migrations. We can't really talk about carnivores without talking about caribou. Wolves do follow the caribou up and down the low mountains. Bears used to follow the caribou similarly, but maybe now more switching to moose and muskox in addition to caribou. Caribou heads that left behind by harvesters along a river bank are like a wolverine's one bank account, one after another, especially in the winter time digging those up. And so changes to caribou are not only affecting carnivores and animal relationships, but also the food sovereignty culture and the spirit of these communities. Caribou are and will continue to be a very important part of these conversations, and we're trying to look at the relationships among all of these animals and the relationships that the communities have with these animals. Thank you so much for listening.

Taqulik Hepa: Okay, thank you. Just curious, so when you're done doing the interviews in all the villages, you'll compile all of this into a report?

Taylor Stinchcomb: Yes, that is the goal. So it's kind of a piecewise report. So I think the first is going to be these community-based reports, but then the community can approve for sharing more widely. And then the goal would be to examine the similarities and differences in knowledge across the communities. And because we have from Anaktuvuk Pass to Kotzebue, we have this really nice distribution of communities along the Brooks Range. So that'll be kind of an interesting comparison to make. And then there's also, there could be future opportunities with some of the predator bear and wolf surveys that are going on at the Park Service to potentially look at the scientific data compared to the community observations and the indigenous science about these animals.

Jack Reakoff: Since I did the interview with you, the caribou were close to our valley. Now they've moved away. We weren't seeing wolves in the early part of the winter at all where they would come back. They would go to the caribou, then they would come back to our valley for breeding. I saw fresh wolf tracks right before I came down here. For the wolves, now that we're going east, they're now coming back. They're going to have to hunt moose. That's what they're going to have to do. And they're already starting to do it.

So these things are, over time there's these nuances of change with hares and where the caribou were at and populations. Because this is protracting out, it's actually getting a better data set for because of all the various nuances that are occurring and these salmon, the people in our western interior region are talking about brown bears hunting more moose because they don't have salmon. The bears don't have salmon, they're gone. They're used to going to these certain drainages for fish in the fall. They don't have it. So they're starting to move out. They're killing black bears. Most guys that hunt black bears are saying they hardly can find a live den anymore. They find one or very few. So Pollock knows a lot about those kind of issues, also. Thank you.

Taylor Stinchcomb: Yeah, thank you, Jack, for those observations. And I think there's a beaver project going on at UAF and there's a lot of people working on that. But something interesting that I think they're looking at is how these changes in the waterways attract different animals to the beaver ponds. So there might be in the upper Kobuk anyway, if the beaver ponds are trapping fish and then the bears come to the beaver ponds, then maybe they have a little more of those fish populations. But then you have this trade-off of, well that's affecting the people's fishing and they weren't able to seine in the river the past year. And so it's a complicated picture of interrelationships, but I think this is going to be a good data set of that local knowledge that Taqulik, you were telling us is so important to collect and bring to this table.

Jack Reakoff: Just supplementary, we don't have, I didn't get the beaver questions, but we don't have that many beaver in the Brooks Range. And the beavers that we do have are bank dens. So most of the beavers that would be inside the park itself are bank-oriented. They live in bank dens. The high waters that we've had the last few years have eroded those bank dens out because some of those happened in August, basically took their whole feed bed out and the dens up. So we've had beavers displacing out of the river into basically spring-fed ponds is the only refugia that the beavers actually have right now. The high water events that we've had in the last few years have been highly detrimental to the mountain beavers. Just supplementary.

Pollock Simon Sr.: Yeah. Back in Allakaket, we have great numbers of beavers. Only when the moose population declined, no caribou. Also, the black bears, which we eat, there's not that much black bears due to cause it's a cold spring. There's no blueberry crop that black bears need. It's cold spring in last few years was hard on the black bears. And they eat a lot of fish and there's not much fish coming up the river now. So they have a hard time. Old timers tell us that when bears go to den in the fall time, they have to have enough fat on them to survive to winter. If it's 50 below in the Interior, the black bears can have a hard time. They get cold and sometimes they don't survive. That's what the old timers say.

But the one thing we have a lot of is beaver. I trap beavers sometimes and my son cause, not because of the skin or fur, but the meat is good for us. We catch beavers in February/March when it gets warmer. But right now, there's two wolves in the village trying to eat dogs. One year, some years back, wolves killed about half dozen dogs. There was five wolves around the village that time and soon after that, people shoot them or trap them. But since the predator control on wolves, they haven't. come around, which are kind of smart to shy away from village since. So thank you, Madam Chair.

NPS Wildlife Rule Update – Kim Jochum

Kim Jochum**:** Thank you, Madam Chair, Council. The Wildlife Rule was approved. It became effective August 2nd of this year. So National Park Service amended the regulations for sport-hunting and trapping in National Preserves in Alaska. The harvest practices at issue in the final rule are very specific to harvest on National Preserve land only, as well as to harvest under the authorization for sport hunting and trapping. So none of these rules address subsistence harvests by rural residents under title VIII of ANILCA. So, I want to make that very clear, it's just for the sport hunting portion in Preserves only. So the public was invited to comment on draft environmental assessments or the draft environmental assessment on the proposed rule over the past two years. National Park Service staff presented on the draft rule to all Park Service Subsistence Resource Commissions as well as federal subsistence Regional Advisory Councils during that time, and we solicited your feedback. Our comments were reviewed and informed this final decision.

The final 2024 Wildlife Rule explicitly addresses two topics on National Preserve lands across Alaska. It prohibits bear-baiting for sport hunters on National Preserve lands in Alaska. And the second part, it clarifies how a firearm can be used in conjunction with trapping. I'm providing a little bit more information and then obviously there's time for questions if you have any. So the first part for bear-baiting, it is prohibited for public safety reasons. So the concerns are both immediate, relative to bears defending a bait station as well as more long-term relative to food conditioning, these concerns were identified. So the second portion, the trapping portion of the rule applies both to those trapping under state regulations and National Preserves and to federally qualified subsistence users trapping in National Preserves as well as in National Parks and Monuments open to subsistence. So this part clarifies existing regulations. So it was already in place, it just clarifies the language. The individuals that may harvest a furbearer with a firearm under a trapping license only if the furbearer is either ensnared in an intact trap, it is ensnared in a trap that is no longer anchored. So for example, the animal is dragging the trap that became unanchored. Or third, it is mortally wounded by a trap, but the animal has broken free from the trap. So therefore free-ranging furbearers may not be harvested with a firearm under state trapping license on Park Service managed lands, rather an open hunting season and hunting license would be required. Those are the two key points that this final rule does address. Please let me know if you have questions that I can help... With anything else if you have questions. Thank you.

Taqulik Hepa: I don't see how you described the trapping one. The clarification, I don't see that in this news release.

Kim Jochum: It's not, I guess, in the release, but it's in the final rule. Those are the two key points that the rule addresses out of a long list of other recommendations previously in the draft. The rule doesn't explicitly address like harvest seasons of wolves for example, and coyotes or the use of artificial light at den sites. So those things were not really addressed because the comments we received from a lot of community members were that they do like community members that live in urban areas, when they come back to engage in those activities. And there wasn't really a large concern that, that would happen often or on a high basis that would impact, would cause conservation concern. So therefore that wasn't addressed. So the two key points were the bear-baiting as well as clarifying the language around hunting or under a trapping license. I hope that helps a little bit.

Jack Reakoff: So these regulatory changes, are they going to be incorporated into the Federal Subsistence Board regulations and clarified that these are the facts on the ground for the subsistence users and the handy-dandy refer to as the handy-dandy?

Kim Jochum: Yes, there should be.

Jack Reakoff: I think that this is a regulatory change. The public has to be aware of what the rules are. If you're in the Park units and Preserve units, an animal may be taken under the trapping license, which has specific seasons compared to the hunting seasons. So I feel that these need to be published.

Kim Jochum: Yeah, I mean we do publish them. I believe that it's probably the intent to include that in the handy-dandy, but I will make sure I clarify that.

Jack Reakoaff: Not just the CFR regulation.

Kim Jochum: Correct. And the handy-dandy is additional up to CFR. Yeah, I'll make a comment and make sure that gets communicated. I believe that's the intent. I wouldn't see why not. Normally that is included in the handy-dandy, but I'll make sure. Thank you.

Ambler Access Road Update – Geoff Beyersdorf (BLM)

Geoff Beyersdorf: Good morning, Chair, and through the Chair, to the rest of the Commission. Geoff Beyersdorf, I'm with the Bureau of Land Management here in Fairbanks, and I understand that you wanted an update on Ambler Road as well as essentially Arctic office, so I'll move forward with that. I wasn't sure what everybody's level of knowledge was on the Ambler Road, so I'll give a bit of history of that, if I can. So back in June of 2016, the Alaska Industrial Development Export Authority gave us an application for a right-of-way to go across 211 miles on the south end of the Brooks Range. We processed that as an environmental impact statement, the highest level of need that's allowed, and we issued a decision for that in July of 2020. And with that, we went with Alternative A, which was to approve AIDEA's proposed action to develop the road across the south end. Subsequent to that, in August and October 2020, the BLM was litigated by several different entities. And then with that litigation, in February of 2022, our Department Secretary ended up asking if we could do what's called a volunteer remand, which is, can we take it back? We think there's some things that we could improve upon. Specifically what we took a look at, what we could improve upon was in the area of the cultural resources and in the subsistence resources.

The courts took a look at that, and in May of 2022 they granted that remand to the BLM, and then that's what began the process for what's called a supplemental environmental impact statement. A supplemental environmental impact statement is taking a look at is there new information or something that you can supplement what had already been done in the environmental impact statement. And again, for us, that was taking a look at the cultural resources as well as taking a look at the subsistence resources, in particular salmon and caribou. So with that, we then started going out and doing consultation with Tribes and with different Alaska Native corporations. We did 21 consultations with different Tribal entities, and 16 consultations with different Alaska Native corporations. And I apologize, I have a cold and so I'm on some medication, and so if I'm a little fuzzy-headed, that's why today.

We then ended up publishing what's called a draft supplemental environmental impact statement in October of 2023, and with that, we kicked off a series of public meetings in many of the villages. We did 12 public meetings, and with those public meetings, because we wanted additional information in regards to subsistence, we did what we've termed talking circles. So we would do the public meeting in each of the villages, and then the next day, we did an announcement trying to focus on elders to get their knowledge in regards to subsistence resources. We took all of that and we compiled that into the final environmental impact statement, which we then published in April of 2024 of this year. And with that was a recommendation that we do the no action alternative, and that was based upon the fact that the road would've required almost 3,000 different stream crossings and that would impact sheefish populations, potentially salmon populations, as well as because of the route of the road, it could potentially have an impact in regards to the Western Arctic caribou herd and we recognized that the caribou herd was declining at that time.

We also did what's called a Section 810 analysis, and we found that it would reduce the abundance and availability of different subsistence resources and also restrict access to different subsistence resources. We found that to be true for 60 of the communities that were associated with the road. Within those 60 communities, we found that there would be a significant restriction to 30 of those communities in regards to the subsistence resources and access to those resources. We also looked at what the impacts would be to permafrost, if the road were put in place and for the road to be able to be repaired. And the other big issue that was pointed out within that final EIS was looking at reasonable foreseeable action in regards to if the road would become a public road at some point.

So with that, I think the key consideration in there is ANILCA Section 810-83, I believe it is, in which you have to make a determination on whether it's going to significantly restrict or not. And the BLM found that the significant restrictions to the subsistence communities was you have to make a determination if it's necessary, consistent with sound management of public lands. We found that it was not, and so through a record of decision, which we then issued in June of 2024, we denied the right of way application. So that's the status of the Ambler Road project at this point.

Jack Reakoff: Madam Chair. I have this map here, it doesn't show the Doyon lands and basically the routing of the road. It's my understanding that Doyon has now denied access also, not just the BLM, but the Doyon Corporation has also. Is that still in place also?

Geoff Beyersdorf: I don't recall that Doyon was denying.

Jack Reakoff: They retracted their approval to cross their properties

Geoff Beyersdorf: Yeah, I think probably how I would characterize it, through the Chair to Member Reakoff, is that they're neutral.

Jack Reakoff: Sort of. What they did last year was actually, they had given a three-year lease and then they denied continuing the leasing, so they're maybe neutral at this point. Okay. Do you discuss this stuff with Doyon? Do you meet with them?

Geoff Beyersdorf: Yeah, I probably had monthly consultations with Doyon.

Taqulik Hepa: In the beginning when you were giving the background, the company, AIDEA, is that how you say it, requested it. I always want to make sure that the companies that are at Red Dog mine, that they wanted this to happen. This was the opportunity for them to have better extraction of what they're mining. Okay, just wanted to make sure.

Geoff Beyersdorf: I think NANA was initially supportive. NANA did do a survey of their shareholders, and there were concerns that were brought forward within that survey. And NANA did issue a statement shortly after we issued the final EIS retracting their support for the road.

Tristen Pattee: Thank you, Madam Chair. Are you able to explain the difference between how the Dalton Highway was permitted and also how the Ambler Road is permitted? What are the differences, and based off the two ways that they were permitted, how would

each one get public access? Which we already know one of them did, the Dalton Highway. In order for the public access to be granted for the Ambler Road, what would it take?

Geoff Beyersdorf: Through the Chair to Member Pattee, I wasn't around when the Dalton Highway corridor was permitted and made public. I'm sure Member Reakoff can actually speak a lot more to that than I can. As far as on our end, when a right-of-way application comes in, we have to process that right-of-way application. In this case, the application that we received was for a private industrial road, that's what we were looking at. However, we saw that it was reasonably foreseeable that it could become a public road, much like the Dalton Highway corridor. If that were to happen, we'd have to go through another NEPA process in order to do that and be able to permit it as a public road.

Tristen Pattee: And do you know if... Well, Jack, do you know, did the Dalton Highway go through another NEPA process or did the Dalton Highway go through the NEPA process?

Jack Reakoff: Madam Chair, the Dalton Highway and the pipeline were approved under the Alaska Pipeline Act. It was actually an act of Congress, they analyzed the whole thing. It was actually a congressional act, so the act itself allowed the construction of the road that was necessary to build the pipeline. So that was all part of that one act. So as far as the NEPA process, there was a whole bunch of fishery work. I lived in Wiseman since long before the pipeline, and there was a whole bunch of fisheries biologists netting fish and doing all this. Sheep surveys, there was a bunch of sheep surveys that occurred for the Department of Fish and Game for that area. There's a whole bunch of preliminary EIS kind of stuff that happened before the pipeline bill was actually passed. Thank you, Madam Chair.

Taqulik Hepa: Again, thank you, Geoff, for the update on the Ambler Road. Very good information to keep us up to speed of what the current status is.

Geoff Beyersdorf: Okay. And to the Chair, I also understand you may want an update on the Central Yukon Resource Management Plan. So I can be pretty quick on that. As Co-Chair Reakoff is aware because he's the chair of the Western Interior Resource Advisory Council, I gave him a call the other day to give him a heads-up. But on Tuesday, we issued a record of decision for the Central Yukon Resource Management Plan (RMP). That plan we've been working on that for the last almost 13 years. It's a management plan for the Bureau of Land Management for the 13 million acres that we have within that plan, most of which is in the Dalton Highway corridor. In that plan, a couple of things that I just want to take note. We ended up making available almost 11 million acres of the 13 million acres under the Dingell Act, the Veteran Native Allotment, for them to be able to select lands within there.

A couple of the other key things, we did set aside a couple of areas of critical environmental concern. One of them was for caribou habitat, the other one is for Dall sheep habitat. In addition to that, we've designated two areas for backcountry, so a backcountry designation, as well as three areas for recreational use. So that record of decision, the RMP, the final EIS, was this summer and then the record of decision, which finalizes everything, was just on Tuesday.

Jack Reakoff: That covers that whole long process that this Commission and the Western Interior Regional Advisory Council is very involved in, that whole Central Yukon Management Plan. And so thank you very much. Appreciate that update on that record of decision. Thank you, Madam Chair.

One additional question. I was having a hard time finding the mapping for some of those sheep conservation and caribou conservation areas. I would like to get into the mapping of the record of decision regarding the sheep and caribou areas. Can I get a hold of somebody at your staff to work me through that?

Geoff Beyersdorf: Yes, certainly. Through the Chair to Co-Chair Reakoff, there should be an email that went out and I think you're probably on that list, and it'll have links to all the supporting documents within it. If it's not there and you don't have it, just reach out to me and I can put you in touch with somebody to take you to the maps that you need.

Jack Reakoff: I'm working off of my phone and when I click the links, it just shows me the text. It doesn't show me actually the mapping part.

Geoff Beyersdforf: Do you want some hard copy maps? I can get them mailed up to you.

Jack Reakoff: Sure, I'd appreciate that. I think our community would be very interested in seeing them.

Ambler Access Road Subsistence Advisory Committee Meeting Report
~ Dec. 6-7, 2023 meeting in Fairbanks, ~ Feb. 21-22, 2024 meeting in Anchorage,
~ June 4, 2024 meeting in Shungnak, ~ October 2024 meeting in Fairbanks

Marcy Okada: So as this Commission knows, we have a representative from the Gates of the Arctic Subsistence Resource Commission that was appointed to the Ambler Access Road Subsistence Advisory Committee, and that was Raymond Woods from Shungnak. And there's a listing of meetings that occurred for this Advisory Committee, and the only meeting Raymond was able to make it to was the December 6th to 7th, 2023 meeting here in Fairbanks. This Committee continues to meet, but we're no longer kept advised as to when they're meeting, so hoping to resume the connection. But yeah, I just wanted to give a quick update.

Taqulik Hepa: So considering the current update that we just heard, is there going to be a continued role with this Advisory Committee?

Marcy Okada: I think that that's what we're trying to figure out. I think to some capacity they might still be meeting, but maybe not in the full way that they used to.

Taqulik Hepa: Okay. So at our next meeting, hopefully things have developed. Okay.

Geoff Beyersdorf: Thank you, Chair. To the members, Senator Sullivan did introduce legislation under the National Defense Authorization Act to have the Ambler Road approved, and I think that you should be aware of that as a Commission. So that's still open. I don't think that the Senate has voted on it yet.

Taqulik Hepa: Okay. Thanks. Very important piece of the puzzle, so it's good to have that. I think for the Subsistence Advisory Committee, I think it's very important that somebody from this SRC participates, so Marcy, if you could keep us abreast of what the plans are. And if for some reason Raymond could not attend, it would be good to reach out to other members that would be most affected, such as Tristen or others. That would be very good. Thank you.

Dall's Sheep Ecology and Health Assessment Project Update – Brad Wendling

Brad Wendling: Good morning, everyone. I believe this is the third time I've spoken in front of this group, maybe the fourth. I'm getting to know folks' names, but I'm a slow learner so it'll take me multiple times. But I've seen familiar faces, but I think there's a couple new ones in here as well. So with that, we'll just get started, an update on the project that we've got going. Some of this is going to be redundant for folks that have been here multiple years. Jack's seen a lot of the intro, but for maybe some people that haven't, I'm going to give a little bit of background on the project. So my name's Brad Wendling, I've been with the Alaska Department of Fish and Game since 2003. In 2015, I took the position of Dall sheep researcher.

There was an idea I pitched around. We interviewed a bunch of our management biologists and stakeholders in the public about a large scale research project. In my heart of hearts, I've always wanted to go up and work in the Brooks Range, it's very dear to me. Stakeholders such as Jack. I pitched it, it took a long time to finally get the money, but we've got a substantial chunk of money to begin some research. So with that, I know I'm speaking a lot of people that this is your home, but I give this talk to the other stakeholders as well. But so the blue polygon is the Alaska Range, and we go out west with the hash marks, that's out in Game Management Unit 23, like the De Long and Baird Mountains. That has been closed to sheep hunting for well over a decade now. As we move east into the green polygon, we have Gates of the Arctic National Park, which is closed to hunting except for those that are federally subsistence qualified. And I'm not going to go into the special closures right now. As we keep moving to the east, the black polygon, the Dalton Highway cuts through there. And then within that, there's a five-mile corridor that restricts weaponry during hunting to bow and arrow only, and there's motorized restrictions as well. Now, the first polygon to the east of the road is what we refer to as 1A and 1B, but they are areas that were established to do minimum count surveys for sheep that we started in the year 2002. And that's a mosaic of federal and state lands. And lastly in that far polygon to the east is the Arctic Village Sheep Management Area, which is again another area that's set aside for only those that are federally qualified subsistence users.

So the purpose of this research was twofold. As a Department, we've been under a full-curl harvest strategy since the early 1990s. Sheep hunting, the regulations have evolved over time. Pre-statehood, the first regulations with the bag limits, then we went to males only, evolved into a three-quarter-curl harvest strategy to seven-eighths. And for, like I said, over 30 years, we've been relying on a full-curl harvest strategy. So the Department, we want to examine what are the potential impacts of full-curl harvest? One, what's that mean for the energetics and the overwinter survival of those animals? And then what are the long-term genetic ramifications? If you're selectively harvesting one group component of the population, is that going to have long-term genetic effects? And lastly, we wanted to look at what these effects were overall on the population dynamics and fitness.

So the experimental design of the study, we set it up as a four-year study. And what we wanted was two study areas with varying harvest intensity. And the idea was GPS and DNA mark both sub-full-curl rams and ewes within the population, and then follow those sheep through the life of the GPS collars. Then we also... I need to take that bullet out. We wanted to get a genetic mark of the entire population. We've tossed around different ideas, but the sheep that we handle, we can get their DNA, we've settled on trying to go and collect as many fecal pellets from the population as we can and try to slough off the DNA from that as a least intensive way of... It's not as intensive as going to biopsy darted yearlings and stuff. So with animal welfare in mind, we've settled on that.

So zoom back out. So the folks in the Park have broken up the units for the Dall sheep surveys into different areas. So it seemed logical to the east road, where we have our state surveys of 1A and 1B, to designate that as a study area. But then across the road in the southeast, what they termed as a southeast GAAR, we would use that as the control. So that's our control population. On the state side of the land, that's the treatment, with the treatment being hunting. That's just zoomed in a little bit more. So the salmon polygon to the east is our hunted area, and to the west is lightly hunted. I don't want to say no hunting, because there is traditionally federally qualified subsistence hunting.

So the research questions that we had is, under a full-curl harvest strategy, are we seeing differences in the health of the sheep between the two study areas? Secondly, is the survival, the recruitment, and population growth lower in an area where we have intensive harvest? Do the sheep move more, have more energetic costs in areas of heavy hunting pressure? So that could be a twofold. If folks are in there and flying with Super Cubs or groups of hunters are bumping sheep around, is there more energetic costs moving then? But then the second time is during the period of the rut, if we're removing a significant proportion of these full-curl rams out there, are we forcing that rut onto more immature rams? So are they participating in a rut and moving more? So there's two time periods we're

really interested looking at those movement rates, during the rut and during the hunting season. And then lastly, we wanted to look at what the reproductive contribution of these immature males are in a heavy and a lightly harvested system.

So I'll be completely honest, this is one of the biggest sheep projects that's probably been undertaken in North America. The investment from the state and my federal counterparts is very, very substantial, and there's a lot of players and a lot of stakeholders are interested in this. So we have a unique opportunity to get a better understanding of survivorship curves of both rams and ewes under two different harvest regimes. Get a better understanding of the reproductive contribution of the different classes of rams within both populations, get some really baseline information that we don't have for some other species of sheep, compared to caribou and moose are way understudied. So we'll get some things just as basic as home range size, movement rates, dispersal patterns, and measures of habitat use and habitat selection. It gives us an opportunity to examine the overall herd health, understanding group size dynamics, and improve our population survey techniques and getting some sightability estimates out there, sightability correction factors.

So we launched this project in 2023, so between June 7th and June 11th, we began captures on the state side of the land. Initially we had 25 GPS collars. Capturing sheep in June, traditionally, the little bit of captures that have happened in the state, have taken place in snow, but we had a capture pilot, a very seasoned one came up, thought we could do this when they were... Coming out of the winter, we were hoping that they'd be a little bit better condition handling. So we caught 25 rams, no capture mortalities. Things were good, but you can see it was still a little bit early, a lot of mottled snow out there.

So we got the collars deployed on the state land. There's a little bit of delay in getting our permit to go with the Park, so we weren't able to just follow up immediately. But three weeks later we went up. So between July 1and July 3rd of 2023, we went on the Park side and captured 25 additional rams. And I love this picture compared to the previous slide because what a difference three weeks can make up in the mountains. It is green and lush. Those sheep had shed out. The difference in body condition, they were already plumping out in a short three-week period of time. But again, another 25 sheep collars were deployed, no capture mortalities.

So this past March, so between March 30th and April 7th, we went out to begin deploying the ewe collars. We started on the state side. Anytime we've done any new field work up there, we start on the state side just in case anything, things aren't working right, we can put the brakes on before we move into the Park. So we deployed 30 ewe collars and we did have a first capture mortality in this event on the state side, we broke a leg of one of the ewes, but up to that point in time, one out of a nearly a hundred sheep, we're pretty happy with that. And I just want to step back for a second though.

So I didn't get to spend as much time in the helicopter this time. So my helicopter pilot kicked me out and I was like, "What? Am I not being safe around the helicopter?" He's like, "No, you're too fat." And so it hurt my feelings, but I got to spend a lot more time in the air that year and it was amazing up there this spring, there were tens of thousands of caribou around and the ptarmigan and without even looking, packs of wolves and wolverines and gyrfalcons and golden eagles. And it was absolutely spectacular and a pleasure to be up there.

But that bottom left picture, it's not very good, but that's probably 500 caribou in that picture. And I was actually in the helicopter this time, I just wanted the altimeter there, we were about 4,500 feet. And we were capturing a lot of sheep below where these groups of caribou were. So there's some biologists, this isn't part of my project, that are curious about potential competition, especially this time of year with forage competition. So I did land in three different places at high elevations where caribou were and I picked up 30 fecal pellets from the caribou and we have the 30 sheep that we have fecal collections, and we're playing with the idea of maybe trying to do some dietary comparisons to see if there's overlap.

And just to back up, then we moved over into the Park side and caught 30 additional ewes, and again, we didn't have any issues. So we followed that back up in June of 2016, 2017. The idea was that maintain 30 sheep in both study areas. Initially we only put out 25 and 25. So we went up there and supplemented our harvest in both the park and the state side and again, no capture mortalities.

So then, this was the big field work, between July 16th and July 22nd, 2024, we had three Super Cubs and an R44 helicopter up there. So the two Super Cubs, we were doing minimum count surveys on our traditional count area, the one A and one B, but we also established a new minimum count area part of southeast Gates. So it's going to be our first data point that we can compare with the Park's distance sampling surveys. The third fixed-wing aircraft was up there. So now that we have nearly 60 sheep marked in both study areas, he was flying the sightability corrections. He was counting how many of the marked sheep that we were missing as we were flying our survey. So we get some correction factor in what overall abundance is.

I had three groups of two people that they had a cool job this summer, so our marked ewes while we were flying them out and dropping them on the ground to observe the marked ewes with spotting scopes. And so the point of that was two-fold. One, we wanted to get some more detailed composition data. So when they had a ewe, lamb group, they were able to really focus in and parse out the number of ewes from the number of yearlings, from the number of, did I say ewes, lambs, yearlings. And any immature rams that we maybe miscounted as a ram. Then once they were done counting or classifying those sheep, they walked down where they were observing them and then picked up all the fresh fecal pellets that they could, where we're going to try to pull the DNA from.

So we are at the very beginning stages of this project. The data is starting to pour in, but we're at a point of giving some very, very preliminary results, but we're not at the point that we've put all the pieces together and have robust conclusions or anything. But I'm going to show you the results of our minimum count surveys, talk about decidability correction factors, the results of the pregnancy rates for the ewes, our survival rates to this point in time. Again, we haven't had a sheep on air for very long. Show you some

movement slides and then I'm going to turn the talk over to Lindsey and she's going to talk about the health metrics and the overall health of the samples, of the blood we've sent out. Well, she'll get into everything.

All right, so again, to go back, our traditional one A, one B survey area, I actually added a little bit of chalk there at Table Mountain. I did this because looking at our movement data, some of our marked rams have moved up there, but we've never counted Table Mountain. However, that summer we counted zero sheep in the time of year we were there. Okay. I got to find my pointer. So like I said, we began this survey. Is that showing up? In 2002, and it didn't-

Okay, so these are stacked bar graphs. And so the blue, we have the ewe-like categories. The orange is the lambs, the gray bars, sub-legal rams, and then legal rams at the top. We had a couple of years, because of turbulence and stuff, we couldn't get down. So some of these will have unknown rams in there. So again, we started in 2002, we're roughly 1500 sheep including the lambs in the population, and we're seeing this oscillation and up and down 500 sheep from one year to the next. And that started Steve Arthur's work up there where he was like, "What's going on here? Are we missing these sheep or are they moving in and out of the study area?" So he had deployed about 40 or so ewe collars and all those ewes seemed to stay put. So I think we were probably just missing those sheep as our pilots are learning the new area and stuff.

We peaked in about 2012 and then we had a steep decline, started to grow back out. As you can see now since 2018 we've been relatively low, but we did see a slight uptick from our... Our lowest survey was in 2023, our lowest overall account. We did see a slight uptick in overall sheep this year, and I will say our lamb numbers were outstanding for our ewe, lamb ratio, it was 41 lambs per a hundred ewes and that's the second best since we've been doing this survey. So that's the positive. So very slight uptick in overall numbers and outstanding lamb production.

So you can see figure, courtesy of Erin Julianus. So what this figure is, and one A and one B, and Zack's probably going to get in and talk about the distance sampling results in a bit. So they use a different technique and he can get in the guts of it, where they fly transects and then they extrapolate out with some statistical methodology to come up with an overall abundance estimate. So that's what the gray bars represent. And then the yellow or the red dot is the year where that distance sampling and a minimum count survey happened at the same time.

So you see in the early years, 2014, 2015, 2016, our minimum count estimates which aren't corrected for within the sightability correction factor, the distance sampling overshot it a little bit, but came in very, very close in a couple of years. But now that we're in a population low, our minimum count survey data seems to be, well, it's overshooting what the distance sampling estimate is. And again, like I said, that minimum count is not corrected for, so it's an absolute bare minimum. We know we were missing some sheep.

So like I said, since we have this comparative study and one of the things that Zack, my counterpart, is going to do is call the integrated population models. So we're going to look at population performance in a hunted and unhunted area. And so we are going to replicate our surveys on both sides. We're going to do the distance sampling and we're going with minimum count survey. And that coupled with the survival data and our on the ground composition counts, develop a model of population performance in the two areas.

So southeast Gates, the polygons I showed before were much larger but all our sheep fall within this area right here. The secondary polygon is actually not in what they consider southeast Gates, but I concluded that because some of our marked rams had moved over to Two Prong Mountain. Is that right?

Jack Reakoff: The northern portion of the addition is the North Fork Koyukuk coming across? And that curve across is north of the North Fork?

Brad Wendling: Correct.

Yeah, because we didn't capture any sheep over there but sheep, after we captured them, moved over there. So we wanted to include that in there. I didn't say this before. So the sheep are going to tell us what our overall study area size is. That one A and one B area is about 800 square miles and I just calculated this yesterday. If I include this chunk here, it's roughly 1,100 square miles, so a little bit bigger study area.

So I just put this thing together yesterday. This is the first time we've done this survey and so the first bar on the graph is our results from this survey and that's to compare the results of the one A and one B. So again, blue represents that ewe-like, orange is the rams, gray is sub-legal rams, and yellow, legal rams. And you can see the abundance, the results down here at the bottom. So the total sheep on the Gates side was 324 sheep, 153 ewe-like, 66 lambs, 85 sub-legal rams, and 20 legal rams. And we're calling full-curl, dipping out the side of the airplane. There's likely more than that if we sat on the ground with a spotting scope.

But again, outstanding ewe, lamb ratios, 43 lambs per hundred ewes. So that's a very good... Which we've needed for a long time in the sheep world, it is a good bright spot. But you can see the densities over there is a little bit less than what we see on the state side. We counted total 530 sheep on the state side, 268 ewe-likes, 111 lambs, 138 sub-legal rams, 13 legal rams, and a 41 per hundred lamb, ewe ratio.

So you don't need to get bogged down on this table, but I just pulled it out of a... I don't even know how to say the guy's name, Jack, you may have met him before, but Udevitz. They evaluated aerial survey techniques on Dall sheep out in the Western Brooks Range and I just want to highlight the red box there. So there's been attempts to do some sightability correction factors on these surveys and so on the Alaska surveys, it ranges from 68 to 88% detection rates. I didn't want to put a number on here, because we just did a real

crude analysis yesterday. We're going to make it a little bit more sophisticated, try and account for group size in our detections with the radio collars. But a quick and dirty analysis yesterday, we detected about 82% of the radio collars, GPS collars.

So I'm going to get into our capture and survival data and we'll just focus on everything I highlight in red. So like I said, our initial capture, we started with 25 rams in both study areas. They had an average age of five years old and each. Now the age distribution on the Park side was from two to 11 rams, and it's a little bit... We intentionally within our study design, since we don't have any hunt or there's not any compulsory sealing from the hunt, so one way we can get genetics from the harvested rams on the state side is that people are required to bring them in for us to seal. At the time of sealing, if I know where they're harvested, if they're from our study area, I can take a little piece of muscle tissue so we'll get a genetic mark from those full-curl rams. On the Park side, we didn't have that so we wanted to put... Initially we did try to get five full-curl rams out there.

So base distribution in Gates from two to 11, and then on the state side, three to eight. To date, we've had two mortalities on the Park side and we've had a total of five on the treatment side. But if I just look for when we caught those sheep in March of 2023 and I calculate survival out to June of 2024, roughly a one-year survival rate, we had about 92% survival rate for that first year and now that overall survival to date, we're at 92% on the Park side and 88% on the state side, which falls within the literature on a stable population, you're losing about 85. You have about an 85% survival from one year to the next.

So now I'm going to jump in at 2024 with the ewe data. So 30 ewes in both study areas. We had an average age of six years old and like I said, I wasn't on the ground. We had a professional net gunner that came up from the lower 48. They do a lot of bighorn captures, lots and lots of bighorn captures in the lower 48. So he was seasoned at handling animals and counting annuli, but ewes are much harder to count than... Especially when you're trying to handle in 15 minutes to get everything else and cut them loose because we try to keep..

Jack Reakoff: Did you photograph the horned annuli for each animal captured?

Brad Wendling: I have for all the rams. I have a photograph for every horn, probably not the ewes.

Jack Reakoff: I would suggest peel that hair back on the back and take a back picture of that ewe horn, they're really easy to count off the back.

Brad Wendling: I like having the video evidence to go back because I've questioned a couple of the ram annuli. A couple of the ram ages, I've questioned them. Having those photos on hand, I could go back and correct for that. So age distribution on the ewes, three to nine on the Park side, very similar two to 10 on the state side. Now as to date, we have lost four of those ewes in the Park and one on the state side. So overall survival, they haven't even been out for a year, is 87% on the Park and 97% on the state side.

Jack Reakoff: Why are the mortalities, the four mortalities, those are predation or have we determined what the mortalities are?

Brad Wendling: I got a slide, I'll jump into that. So we will get there, I promise you. But at this point I wanted to go, since we did those ewe captures, I probably did this backward, we looked at pregnancy rates on both sides. So 29 out of the 30 in the Park, 29 out of 30 ewes were pregnant. So a pregnancy rate at 97% and on the treatment side it was 26 out of 30, so 87% pregnancy rate.

Now, our sample sizes are a little bit low and I'm sorry I put this together yesterday, but I don't even know if you can see those. I wanted to look at what the pregnancy rate was by age class. So we only had a single two-year-old, but she came back pregnant. So a hundred percent pregnancy rate. And so then looking at three-year-olds, again, small sample size but a hundred percent pregnancy rate. So you see these very, very high pregnancy rates, then I clumped everything that was nine plus together. I only have N of seven and so that was a 53% pregnancy rate. So it looks like, again, small sample sizes but there's probably some reproductive senescence that goes on with the ewes.

And then lastly, our supplemental captures in the Park, we put eight more ram collars out in Gates, six on the state side. You see that age distribution, we got a couple more big ones in the Park, so it was three to 10 and three to six on the state side and all of those sheep are still alive and moving around. So Jack, I apologize, I'm sorry, trying to get into the mortality stuff. This will get better, first crack at it. I know it's terrible but I think I can talk, walk everybody through it.

So the first mortality we have was on August 30th, 2023. So this is just the timeline to present day and anything below the line are mortalities that happened in the Park and everything above the line are the mortalities that happened on the one A, one B side. The first mortality in August, you'd think things are prime alive. New project, I was anxious to get up there, but I was not able to fly up there for over a month and by the time I got there, there was absolutely no evidence and what I've learned very quickly, if you do not get on these things quick, it's very tough to determine what happened.

So that was an older ram. He had been in the same ridge complex and then his collar was down in the bottom of a creek. And then on the state side, again this was in Snowden Creek, Jack, he had been up on the ridge above the road and then ended up in the bottom of Snowden Creek. We weren't able to go up on that one. Now, this clump of mortalities right here happened, actually happened when we were up capturing the ewes. So we had a ram mortality in the Park and we had a ram mortality on the state side. Because we were up there and had a helicopter on hand. We got that first mort signal on the Park, and Lindsey will get into cause of death with this, but it was a seven-year-old ram. We got permission to fly out to go get it. We flew out and we went there and we're like, "This thing is still breathing." Came back, we knew it was dying, then we went and checked it the next day and it expired. So we were able to collect the whole carcass and bring him back. She'll get into the necropsy of what we found on that. Then while we were up there on

Matthews Creek, we got a signal from one of our rams that had been consumed, but we were able to bring a partial carcass back. Looking at bite marks, we suspect that it was a wolverine mortality there.

The two ewes, actually happened right after we had left, but we had a caribou crew that was going up there and so they were able to go. So two things, those happened within 30 days of our capturing sheep. Now, a lot of survival papers, anything happens within a three-day window, they attribute to the capture. Some of our IACUC, they want to know within 30 days. We did handle sheep, but they're red lined, right? It's the toughest time of year for them. But that being said, it happened about 10 days post capture, one on the Park side, one on the state side.

On the state side, those guys hated me. I wish I could put that picture in. They had to dig down about 12 feet of snow and then there's wolverine tunnels everywhere and that's... So it's been cached by a wolverine, that was the ultimate cause of death. I don't know. And then their best guess, again, there was a little bit of a lag getting up there. They thought that it was potentially wolves on the Park side. As I keep going, this ram on the state side, there's actually a landing strip that we were able to get up there about three days post mortality signal. Again, down a creek, some bones have been scattered about. Best guess is a predation event, whether it's wolves or wolverine, don't know. Let's see, where are we?

This cluster of ewes that you're asking about, Jack, I don't know. We went back and looked at the health metrics, why that time of year? In August and September. Yeah, August and September while we had that, the guys at the Park were like, "What's going on?" But when we went back and looked at overall health, nothing jumps out like that. It may be just a run of bad luck of running into the wrong predators. But again, it's so difficult and expensive when we get those to get up there. When I was gung-ho on this one, where we got no information, it was a $6,000 trip and I'll just be out of money real fast if I run up there.

Let's see. Which other ones? You'll find this one interesting. That ram was a sub-legal ram that was shot by a guided hunter. The story from the guide is he told him shoot the second from the front, two other sheep came in before the guided hunter shot, shot the wrong one. But anyway, so we did have one illegal harvest and then last, I got another one on the state side that I have no idea what happened. So that's the best information I can give you at that point.

Jack Reakoff: When was that last sheep? I can't see…

Brad Wendling: I'm sorry, that date. This slide will get better. But it was early October. Again, not when you'd think things were happening, but we lost one over here on the state side early October as well.

Jack Reakoff: Was that early October? They move around a lot. Did the telemetry show that he'd been moving through a lot of different country?

Brad Wendling: I'll have to go and look at that. I think you're [inaudible 01:01:14] because I was showing you those slides that are sedentary but that pre-rut is the biggest movement time. But we will get into, excuse me, a little spatial analysis. I have to grab water.

So I segue, so into the movement data. So currently on air, we have 31 rams on the Gates side. The reason it's above 30, I think we told you last time, that in our initial captures, we had a very young ram we caught, and we must have irked him off or something because he left the Park and he spent the last year outside up by Wild Lake. So 31 rams, 26 ewes currently on air. And then we have 26 rams. Thank you very much. Twenty-six ewes on the state side and 29 ewes on the Park side. And as of yesterday, when I pulled this up, that means we have 466,816 ewes locations and that is moving frequently.

The sampling design on these collars is during the hunting season, during the lambing season, and during the rut - we're getting a location every hour and all other times of the year that we're getting a location every six hours. We had a graduate student that we had recruited that was going to tackle these analyses. These analyses are going to take some horsepower and some supervision from a movement specialist at the university, he unfortunately quit. So we're in the process of recruiting either another student or we're in talks with a guy from Michigan State University and then thinking about getting a postdoc that really handles this incredible robust spatial data set. Again, this is where we're going to get those movement rates and for energetic costs during the rut, during the hunting season, the home range size and so forth.

Where I'm going from here, so our collars are deployed, and we need to have some more conversations with the Park moving forward. If we want to try to secure more funds and maintain these sample sizes. Do we want to re-collar the sheep that we already have, follow them through life or just keep a sample size of 30 or are we going to have enough here and we try to go with it? My vote is we keep going. So 2024, 2025 we'll be out, continue to do our surveys and establishing the sightability correction factors. I'm going to take another crew up there this year to get more composition data and fecal collection.

We're limited on the number of helicopter landings that we can have in the Park. So for those IPMs that we're building, the integrated population models, we focus on just the ewe, lamb groups. I would like to land and do composition on the rams, but we got to balance what's going to be the most bang we get for our buck. And then we will collect all the DNA from any harvested rams on the state side that comes through our office.

Lastly, I want to point out, this says proposed study area, we actually, as much as it went on up there, we launched this identical project in the Alaska Range, so this past June. And so Fairbanks, Alaska, right here, this is Game Management Unit 20A. So in the central Alaska Range where we have an established long-term minimum count area. We deployed 30 ram collars in there and we followed that up in Denali National Park and deployed another 30 collars. We're going to be going out in March and replicating the ewe collars. So not only do we have a treatment control going on in the Brooks Range so that we can make comparisons to, now we

have a treatment control in the Alaska Range that we can make those comparisons to as well. The only thing this study lags by one year.

And I have a whole ton of collaborators, but Dr. Josh Schmidt, Mat Sorum from the Park, Lindsey will be speaking. She has been invaluable to the success of this project. Eric Wald, Zack, who you just met are going to be helping as well. Bridget Borg from Denali is on the Alaska side of things. Greg Breed from the university, he's a movement ecology specialist. He is involved in it and like I said, we're looking at it, developing collaborations with a professor from Michigan State who is a pretty solid guy. And then our veterinary staff, doctors Kimberlee Beckmen and then Annette Rowe will be doing the full health analyses, with help of Lindsey.

So we can do this one of two ways. I can take questions or Lindsey can jump into the health assessment and then we can field all the questions after, whatever the group would like.

Jack Reakoff: Let's just cover Brad's. So my one question was the one two-year-old ram that moved over to the Wild River. It's my opinion that that's the age class where they disperse from the ewe group and that would be possibly a normal dispersal tendency for genetic mixing. Once they settle down with another ram group, then they stay with that ram group the rest, they become a dominant ram there eventually. How many two-year-old rams did you have collared?

Brad Wendling: Not very many. I'll have to go back and look. That two, three class, probably eight around there between the two study areas. I will say, we did fly over and look at that sheep, just out of curiosity like, "Who is he with?" And we were placing bets like, "Is he going to be with rams? Is he going to be with ewes? Is he going to be by himself?" And I said, "mixed group," and I was right. So, he was with the ewes, lambs, and a couple other small rams. So, it was like a group of eight over there.

Jack Reakoff: Yeah. There aren't very many of those age class, of those two-year-olds. And I watched even half-curls pushing them around. They basically were driven back to ewe groups, because there's not very many of those.

I think it's kind of a unique opportunity to capture one of those, that's actually going to do that. I don't think all the sheep do that. They do it, but I was always of the impression that those kind of sheep, they satellite around ram groups. They got accepted, until they get to at least three or four years of age. It depends on the age demographics of the other ram groups.

So, I am glad to see that a minimum count for the Park. And so, I was getting concerned about the distance sampling technique not actually working with the low populations that we have right now. So, I'm really happy to see that you have a minimum count area. That addition, of sheep going north of the North Fork, and the Koyukuk. That's one of the major, that north of the North Fork of the Koyukuk, is a major sheep wintering area, the big mountains and the head of the Clear River where the sheep are in the summertime, a lot of them will go up to the north end of that. There used to be hundreds of sheep across the river from Doonerak Mountain in the winter.

And so, I am happy to see the minimum count. I think you're expanding this work that you're doing, and I am glad to see that you're getting some age demographics within the ewe groups. And so, one of my questions was, how many yearlings per hundred ewes were you getting, when you did comp work?

Brad Wendling: Okay. So, when we collected that composition data, we have a new research biologist that he has a genetics background, so it was very critical to get those things frozen and cold immediately. So, all of that comp data, we're out there, we had our comp data and collected our fecal. We put it in the Ziploc bag, froze it. I haven't entered that, because it's all frozen in my freezer right now. Because once we pull those samples out, they become compromised. And over the next two months, we're going to swab all those pellets. I'll get that pulled out. In hindsight, I should have taken a photograph of that, so I had it. But that's my excuse. They're in the freezer. I haven't entered that yet. I can get that to you within a couple months.

Jack Reakoff: I mean, how many composition groups did you do? And could you parse out what your yearling survival was, per adult ewe?

Brad Wendling: I see, that's kind of where Zack may have to jump in with this IPM is that data is, after we had a couple of years with this kind of data? We're going right for the question that you're asking.

Jack Reakoff: Okay. All right. Those are my questions. Thank you, Madame Chair.

Gary Hanchett: It's a bit late in your age group analysis, you mentioned in the two study areas. Do you mean 1A, 1B? Or the Alaska Range and the Brooks Range?

Brad Wendling: So, the initial project was just the Brooks Range. Yeah. So, 1A, 1B was one study area and then the Park was the second. So, the treatment would be 1A, 1B, where we have hunting. And then the park.

Then we got another chunk of money to replicate the study. So, game management Unit 20A in the Alaska Range is the hunted area. And then Denali National Park is another un-hunted area. So, we have two Parks, relatively un-hunted. And two areas that operate under state harvest regulations, under full-curl management.

Gary Hanchett: This is bigger than I thought. What I'm looking at is, the mortality factor of the age class. Where is your basis? In other words, was it 1A and 1B in the Brooks Range? Or was the other area that you spoke of, the two areas, the Brooks Range, and the Alaska Range study, are they mixed in that analysis?

Brad Wendling: No. Nothing from the Alaska Range. No.

Gary Hanchett: That's what I really wanted to know.

Brad Wendling: And I can just tell you, out of the 60 ram collars that we put out in the Alaska Range, we've had one mortality. And it was in game management unit 20A in the Wood River. That was one. Since we're close, I was able to jump in and go out. And we have a tracking specialist that, honest to God, a tracking specialist. I flew him out with me, just to look at signs and stuff. It was pretty clear a grizzly bear got that one. That sheep had been up on a mountain. He came down low. There's a little bluff with berry scabs, with a grizzly bear all over the place, and that sheep you could just, he just walked right down, wrong place, wrong time, and just got nailed.

Erin Julianus: How old was he, Brad?

Brad Wendling: He was like a four or five, I think he was. Most of those sheep were like four or five years old out there.

Pollock Simon Sr.: I just have some comments, there's a slow trend in the decline of the sheep. Also in our game management unit, caribou, moose, and black bears. I'm glad there's a study on sheep while there is a decline. Maybe if we know why there's a decline, we could reverse the decline. Cause since I remember, early 1900s, my father and my grandfather would go up the Alatna River, into the Brooks Range, and up the John River. They had no power boat, just poling boats, or used a canoe, or something. So, people has been going to the mountains to look for sheep for many years.

Today there's some of the young boys go up in the mountains sometimes. I know my son has been up there a few times. It's good to go to the mountains to look for sheep cause our ancestors used to do that. I'm glad there's a study, maybe we could find out why there's a decline. I'm excited about hearing about this study. Thank you.

Jack Reakoff: I'm going to ask one more question. In early to mid-October, I seen an R44 and an airplane flying up the valley going northeast, for a two-day period. Was that part of your project?

Brad Wendling: This year, earlier? No. Any of the caribou guys up there?

Jack Reakoff: There was a light blue R44 helicopter flying.

Lindsey Dreese: They don't have a light blue one that we contract, that I know of.

Jack Reakoff: Don't know who that was. Could have been Arctic Refuge, or I don't know who. But they kept going to the northeast. The same pattern that you would fly when you go to 1A and 1B. I was going to ask you if that was part of this project. So, thank you. Can I get you to go back to that one slide? All right. The one slide with the minimum count in the Park. I want to get a picture of that one. I missed that one.

Brad Wendling: That place is awesome.

Jack Reakoff: Grotto. Been there lots of times. I trap up there.

Lindsey Dreese: Good morning, everybody. My name's Lindsey Dreese. I work for the Alaska Department of Fish and Game as a wildlife biologist. And I'm here to give you guys kind of an overview/review of the disease surveillance work we've been doing, as a larger part of this Brooks Range Dall's Sheep project.

I was fortunate to be in the right place at the right time as this project got off the ground. Brad needed a little help, I was there. And now I'd like to think I'm a very integral part of the project. And it's a really cool project to get to be a part of.

So, I'll caveat this talk by saying, I am not a veterinarian. I did work for the Wildlife Health and Veterinary Services group for almost five years. So, I'm familiar with our disease testing protocols, sample handling, and the diseases that we're looking for. But I'm not necessarily the one that will do all the interpretation and stuff. I leave that to the veterinarians.

So, with that being said, when it comes time for questions, if we have a question that I can't answer, I'm happy to get your name, information, the question, and I will pass it along to Dr. Kimberlee Beckmen, our Wildlife Veterinarian, here in Fairbanks.

All right. So, I'll just jump in with a brief rundown of what I'm going to talk about. First thing we do is our health assessment. Then we'll talk about the samples collected and our testing protocol for those. I'll go over what Dr. Beckmen presented last year at this council meeting. I'll go over what we collected for our ewes and additional rams. I'll talk about those two opportunistic necropsies we got to do in the Brooks Range, and we'll end with some thank you and questions.

All right. I'll start with our health assessment here. So, when handling each sheep, we work through a protocol to make sure we're getting all of our samples and data that we need. We start by taking a body temperature, which you can see I'm doing a thermometer back there. While that's happening, I'm also palpating ribs, rump, and withers, to assess the body condition of each sheep.

Once we've done that, we move on to our blood samples. We collect a suite of blood tubes, that are later tested, that are later handled. We then get an ear punch for genetics. We get a fecal sample. And we also get our nasal and tonsil swabs.

Our blood samples, you can see here, Dr. Roug is down there collecting her blood sample. Those are transported back to our field lab setup. That's where I really step in. I get them all spun down, sub-sampled, and frozen or chilled, as appropriate. Once they're delivered all back to Fairbanks, then they go out to the different labs.

When we send them out to labs, we're testing for a bunch of different stuff. One of the things is trace minerals. And we're looking at that as a population level. We're just looking for marked or severe deficiencies in our populations.

Next, we do what we call sero-surveillance, or serology. And that's looking at exposure to diseases. Then we do acute phase proteins. This is a relatively new measure that we as a department are kind of working with. Acute phase proteins are non-specific biomarkers of inflammation. So specifically, we look at serum amyloid A, and haptoglobins. They can be used individually to assess if there's some underlying disease. We won't necessarily know what that disease is, but inflammation will tell us something is going on and warrants further investigation. We can also use it on a population level. We create what we call a reference interval. And with that, we look at the proportion of animals that fall outside of that reference interval. Some proportion will always fall outside. That's just kind of normal, so to speak. But if a higher percentage, hypothetically we'll say 20, 30, whatever percentage fall outside, that warrants further investigation as to what's going on in that population that's causing some inflammation.

Next, we go into, for the ewes we did pregnancy, and then finally we did genetics. We sub-sampled some whole blood, and we archived that for backup to our ear punch that we got for genetics.

And next. Here's a list of the diseases that we screen each sheep for. So, it's important to note that with serology, we're not actually testing for active disease. We're testing for exposure to the disease. So, it doesn't mean that an animal was ever sick or exhibited symptoms. That certainly can happen, but it doesn't necessarily mean that.

It just means that they were exposed to it, and their body and their immune system mounted a response, by creating antibodies. And our serology tests test for those antibodies, the presence of those. These are standard tests for adult sheep disease surveillance protocol, and also other sheep, because sheep are known to be susceptible to these, and these diseases can also have adverse health impacts.

So, all of these are serology tests, Mycoplasma ovipneumoniae, parainfluenza 3, respiratory syncytial virus, toxoplasma, lentiviruses, leptospirosis. We tested for five biovars, or five biovariants of leptospirosis. Brucella, contagious eczema, chlamydophila species, and Coxiella bernetii, also known as Q fever.

In addition to our blood samples, we did some swabbing to screen for additional diseases. We took a multi-pronged approach in looking for the respiratory pathogens that are known to cause pneumonia in sheep. So, we've got nasal swabs and tonsil swabs. Here you can see me getting some tonsil swabs on this sheep.

Our nasal swabs were tested for universal Mycoplasmas. So, that PCR is intended to catch any Mycoplasma. And then they were also tested specifically for Mycoplasma ovipneumoniae, which is the one most of us are familiar with, from its effects on big horn sheep in the lower 48.

In addition, the tonsil swabs, they were cultured for Mycoplasma. It's just another way to look for that same organism. We also did an aerobic culture, and then a Pasteurella PCR.

Finally, we got feces for parasites. Those ewes that we captured in March, we sub-sampled those for a diet analysis, as well. And finally, we got our ear punch for genetics.

So, here's a quick overview of the ram stuff.

Jack Reakoff: Madame Chair, did you do a diet analysis? You're palpating these sheep, and when you were observing, doing your comp work and stuff, did you do a diet analysis of summer?

Lindsey Dreese: We have not, that I know of, done a diet analysis for the summer yet.

Jack Reakoff: They eat a lot of flowers, because of the pollen and protein and all that. So, the amount of flowers and the duration of the flower exposure, with the rainy summers that we've had the last two years, during our studies, actually, they're getting a big push off of that. Because the extent of the number of insects is way lower than I've ever seen it. And the number of pollinating insects are not there. So, those sheep are exposed to a longer period of protein intake. So, it's something that if you're doing your comp work, you should be watching what they're actually eating. I've sat and watched sheep eat more than 50% flowers. Whenever you've got blossom, they're eating predominantly flowers. That's a huge part of their protein intake. So, I was just wondering when you do these fecal samples, if you're analyzing for what the dietary intake is during the summertime, not just winter.

Lindsey Dreese: We haven't as of yet. But something to consider, for sure.

Brad Wendling: We have the samples to... They used to do micro, what do they call it? Microhistological analyses, where they grind those things up, and labs could look at the fecal pellets, and break down what genus of plants. I don't think there's a lab in the United States that do that. But people have moved towards the genetic markers of the plant fragments that went through.

But there's still a problem. If something's highly digestible and goes in as highly digestible, it's not going to come out. But that goes into looking at comparison, the caribou to the sheep diets. There was a talk at the Wildlife Society this past year, the woman from USGS, like those techniques, that genetic techniques, it's still evolving. And if you don't have the right library, if those plants aren't in that genetic library, it won't pick it up. We might be able to get there, but it's not a primary path.

Jack Reakoff: That's the problem with flower comb, or flower. They caught caribou eating cottongrass combs. It has huge digestibility. In fact, I let the rumen of a caribou that I killed on the 8th of May go through, dissolved the comb. You can hardly find the comb, if you let it sit. And I should have poured the fluid off. I'll do it again.

The digestibility of those flowers is phenomenal. And it won't be showing up, but the plant stems and things would be there. So, something to think about.

Lindsey Dreese: Yeah, for sure. So, in June of 2023, we started our collaring operations. Some of this is review from what Brad had just talked about. But we ended up handling 26 sheep in the treatment area, and 25 in the Gates of the Arctic. Those samples were sent out to the different labs. And here is a review of what Dr. Beckmen presented last year. So, this is basically her table.

Two things of note were the toxoplasma exposures, and the leptospirosis, that's something that they're interested in. We're still looking at and kind of figuring out how that fits into the larger puzzle.

And then we also have the nasal swab results. Good to see our nasal swabs were negative for Mycoplasmas, including M.ovi. That aerobic culture that you see? There is a detect on, those are from the tonsil swabs. And that trueperella pyogenes is considered a normal flora for sheep. It can cause issues if there's other things going on, it can bloom. But generally, it's very normal for them to have that. And these were cultured at low, low amounts. Final results and interpretation are pending, like I said, we need to see all the puzzle pieces come together.

Quick view/overview, in April, March-April of 2024, we picked up our ewe collaring operations, and we got 30 in each area, with all the same sampling protocol. We just added the pregnancy to these guys, obviously. So we got 30 in each area. We still have some samples that need to go out to the labs, so, they're in freezers. And again, final results and interpretation are pending veterinary review. I'm sorry we don't have it. I'm hoping all the pieces will come together, so that next year we can give you guys the lowdown on everything. I will say, what we do have from those ewe collar, or those ewe samples, nothing additional has come up from what we saw from the rams. So, it's more of the same, based on what we have right now, but it's not the full picture.

Jack Reakoff: Last year, Kimberlee showed us that they had sheep keds. Were those detected, or was that part of what you found this year?

Lindsey Dreese: Did we have? I don't remember seeing any on the ewes that I handled. But I was not on all the ewe captures. Brad, do you remember seeing any?

Brad Wendling: I was kicked out of the helicopter.

Jack Reakoff: It's an insect that lives on the sheep.

Lindsey Dreese: Yeah. I know what you're talking about.

Jack Reakoff: I'm working with some spruce grouse, a vector for these spurious nematodes. They're vectored through insects. So, the sheep ked incident, some of those diseases may actually be hemaboric. So, they actually could be a vector for some of those diseases.

So that's why I'm asking about the sheep ked. Because I had never seen a sheep ked, ever. When I saw a picture on a sheep, I was over there in the North Fork country, or somewhere, I was like, "I've never seen one of those before.

Lindsey Dreese: Yeah, we did collect a couple in the first round. And incidentally, that sheep that had the high amount of keds on it, also came back with some different markers that showed things were not all well. So, have to over those serum amyloid A, those inflammation biomarkers. Those were super high. And it was off in a couple areas of the health measures as well.

So certainly, they can have impacts that one could also have had other things going on that were subclinical that we didn't see, but could have some other stuff happening.

So, the additional ram collars. In June of this year, we supplemented, so that we had 30 collars in each area. We handled seven in the treatment area, and eight in Gates, or at least we have samples from all those, from that number of animals.

These are still some samples to send. So, what we have back, again, is a very similar picture to the ewes and the original rams we collared. No additional red flags have come up. But we still need all the pieces. So, like I said, hopefully next year, we'll actually have more of this for you.

But now the fun stuff. What I think is fun, because I was in the vet world for a while. These opportunistic necropsies we got to do. So, during our ewe collaring operations in April, it was one of those very rare circumstances where a sheep died. We actually had a helicopter in the vicinity to go visit that mortality site almost immediately, which is basically unheard of.

So, the first one was a ram in the treatment area. We found it partially consumed. It was missing one, basically one full hind leg. Part of the gut cavity had been eaten into.

Jack Reakoff: This is the sheep that was in progress of dying the day before?

Lindsey Dreese: No, this is a different one.

Jack Reakoff: Oh, a different one.

Lindsey Dreese: Yeah, different one. I think I numbered him opposite of Brad.

But this one was the one that was partially consumed. And we came to the conclusion it was wolverine predation. You could clearly see, when we skinned it back, that it had teeth and claw marks up its dorsal spine, and then ultimately the wolverine ended up underneath it on its throat, and clamped down. You could see a huge ball of hemorrhage under here. And then it had gone to town on that lower leg, that hind leg.

So, we felt pretty comfortable calling it a wolverine predation. And if I remember correctly, the crew that picked it up also said you could see where they had come down the mountain together, the sheep. They ended up kind of in the bottom of a draw.

The second one we found intact. And this is the one that blinked out on the day before. And then we went out the next day, it had ultimately expired. This one was carcass intact, which is even more of a rare gem that we never get to find.

So, this one, because it was intact, we opted to pick it up with the helicopter, and then have it driven back to Fairbanks, so that Dr. Beckmen, our wildlife veterinarian, could actually do the necropsy. As a board-certified pathologist and all that good stuff, she's the one that should do that necropsy.

And on that necropsy, they found severe pneumonia. Pneumonia is not a new thing in sheep. It definitely happens. But the etiology or what causes it, is always in question. So, we took tons of samples, and we ordered a ton of tests, to look for the different bacteria and viruses that can cause pneumonia in these sheep, including Mycoplasma ovipneumoniae. That's the one we're all concerned about here.

And the good news is, that it was negative for M.ovi, and other Mycoplasmas that can cause disease. I think if memory serves, that one ended up being, it had an abcess that had drained into its lungs, and it had died that way. But nothing out of the ordinary that we were like, "Uh oh. We've got to be worried about this." It was a routine death, if you will. So, that was good news. Yeah, Jack?

Jack Reakoff: I killed a sheep one time, and it had a severe lung adhesion. And the diaphragm was adhesed forward about two inches. Was there lung adhesion in this sheep at all? Or just the lung were free?

Lindsey Dreese: I was not there for the necropsy. I don't remember them mentioning lung adhesions. But I would have to look back at the necropsy report to be sure on that.

Gary Hanchett: Several years ago I read where sheep would have these breakouts. I'm not sure if it was hoof and mouth, or hoof. The hooves would atrophy. And then they also had it in the jaw. So, is any of that still going on?

Lindsey Dreese: It could be contagious eczema is what you're thinking of. We call it Orf, in people. And it causes sores on their feet, on their coronary bands between their toes, and then also on their lips.

Adult sheep can get it, but it usually doesn't affect them as much as it does for lambs. So, lambs can get it, and they'll get so crusty with sores that they can't suckle properly. So, it can actually cause some issues with the lambs.

In our disease results, we see exposure to contagious eczema. But in all of our handling and looking at sheep through spotting scopes and everything we've done, we haven't observed any with an active infection at this point.

Gary Hanchett: Is it possible that's because the numbers of sheep are down? If you had a greater population, would that incidence increase extemporaneously more than...

Lindsey Dreese: I don't know. That would be a question Dr. Beckmen would be able to answer. I'm not sure how that disease would fluctuate, and the prevalence of it would fluctuate with a larger or smaller population. But I can certainly get you the answer.

Gary Hanchett: That was a real big concern. This is back in the nineties. Which was yesterday, to me.

Lindsey Dreese: There was foot and mouth, which is also, that's a foreign disease that we've not seen in sheep here. We thought we had it at one point. We tested a moose for it several years ago. It was not. It was just sores. But that one is foot and mouth. We have, that I know of, have not had a case of that in Alaska. Because it was a big deal when we thought we might've had it.

Gary Hanchett: Did they have that problem in the lower 48?

Lindsey Dreese: Potentially. I don't know. Yeah. But yes, foot and mouth is a different, another piece that we don't have in our sheep up here.

So, in review and next steps, the rams from 2023 raised a few things that we want to keep an eye on. And we also want to understand how they fit in the larger picture. So, we're sort of awaiting those ewe and additional ram results. Once we have everything, we can put the puzzle together, all the pieces of data and the health info, and the serology results, those all come together to create the puzzle. And we put it all together and see the bigger picture.

So, until we have that, we're kind of in a holding pattern right now. And then moving forward, we'll be comparing the Brooks Range results to the Alaska Range results, once we have all of those, to see if there's any differences between the populations. And see if there's like, "Oh, interesting. These guys have exposure to this, where these ones don't." And just looking population level for differences.

Taqulik Hepa: Genetics. I said even looking at the genetics between the two ranges. Are they different?

Lindsey Dreese: Yeah, we will do that relatedness work, in both ranges as well. Looking at number of sires, and all that. The study has been copy/pasted into the Alaska Range. So, we're collecting all the same samples, testing them the same. The protocols are the same for both areas. So, we will have two identical, in theory, studies, and two different areas to compare to.

And then, just some quick thank-yous. Thank you to you guys for your time today. Thanks to Brad for bringing me onto the project. It's an honor to work with you on this one. Dr. Kimberlee Beckmen and Dr. Annette Roug. Dr. Beckmen was my boss for a long time, and I learned a lot under her. And she also reviewed my slides today.

Dr. Annette Roug is our capture vet. She helps with all of our sheep captures and is a whiz in the field. The National Park Service for letting us be out on your lands. We appreciate it. Our capture crew, who is world-class, and just a pleasure to work with. And of course, our stakeholders. And then I will leave you with a video of a collared ewe from our April captures.

Jack Reakoff: Isn't that a beautiful country?

Lindsey Dreese: Sure is. And then questions? I will try and field them. And if not, I know who to talk to.

Gary Hanchett: Well, I just wanted to make a statement. It's great to see yourself and Brad enthusiastic. But in your case, I particularly like the, "Ooh, a necropsy." Thank you, again.

Jack Reakoff: I really appreciate you coming down, Brad, and giving us the update on this project. I'm really excited about the data that we're going to get from this. I do think that getting pictures of the back of those ewe horns, you can parse those out. You could do it with my phone. And they got all that hair at the base of their horn. But you can peel that down and get a picture of those.

You can also look at those ewe horns and you can see where they begin to have lambs. Whether they start, whether they have their first parturition at three or four years old. They will actually put on more horn if they don't have their first lamb. That's something that would be instrumental in part of this project.

So, thank you very much. Appreciate all that. I do feel that you have to understand the trophic intakes of these animals and the duration that they have, this trophic intake. Hot summers do exactly the opposite. It really is just like caribou. It's a highly restrictive event. Basically, they don't have the same kind of trophic intake. The pollination rate is higher. The number exposure to flowers is much lower. A lot of that work you're doing in early, typically in June, the dryas flowers are in full blossom and they just basically sit there and eat that stuff like popcorn. It starts when they first emerge as the bud and they continue to eat it until it's pollinated. They don't eat it once they're pollinated. They don't eat the seed head off of that. Never seen them eat that stuff. So, thank you very much. Appreciate that.

Brad Wendling: And I want to say I appreciate everybody's support for this project, the collaborative effort that we have. And we're talking with BLM, trying to see how we can get other aspects and the other studies lost at the same time. Yeah, thank you very much.

Taqulik Hepa: I think my last comment is for Anaktuvuk Pass. I don't know if you guys have talked to the community just to let them know what you're doing because they have a potential to harvest some of the sheep and they come across one with a collar. I don't know if they have the background information that this project is going and the duration. That would be good. And they do meet monthly, both the City and the Tribe.

Dall's Sheep Survey Update – Zack Delisle, Arctic Inventory and Monitoring Network

Zack Delisle: So I'm going to give an update on the sheep monitoring up in Gates and we also did monitor the BLM-1A/IB that Brad mentioned earlier. So overall I'll give abundance estimates in the Itkillik, the Anaktuvuk Pass, Southeast Gates and then the BLM-1A/1B. So this was a collaborative effort between us at NPS and Alaska Department of Fish and Game, and we did an aerial survey using distance sampling techniques from June 29th to July 14th in 2024 with three total aircraft.

And I guess before I get into it as well, Brad wanted me to talk a little bit about distance sampling. So we're surveying random transects on the study areas and we're using the counts that we collect on these transects to essentially extrapolate abundance to the entire survey area. Some of the results you saw from Brad's slides aren't too surprising. When we have really low abundance, we might get an undercount with distance sampling, but me and Brad are talking about doing a collaboration where we can share data and integrate distance sampling with minimum count work, which I think would be really advantageous because there are some really good assets that distance sampling gives you and minimum counts as well. So okay, I'll get into it.

Jack Reakoff: One question there--while it's fresh in my mind. Your sightability correction factor that you're getting with the collars, can you apply that correction factor to distance sampling? Are you thinking about it?

Zack Delisle: No, it wouldn't really be applicable because distance sampling in and of itself estimates detectability, which is why it's called distance sampling. It estimates detectability as a function of distance away from the plane under the presumption that you're less likely to see sheep if it's further away from the plane. But if we did an integrated method, they wouldn't need to use any sightability estimates because sightability would be estimated in distance sampling.

So it would remove the need to have collars on the ground for sightability. Other reasons you would want collars but...

Okay, so here are abundance estimates in Anaktuvuk Pass. We were able to actually get estimates there this year, the first time since 2021. And you can see there has been a slight dip but pretty consistent from 2016. And this is all sheep. So on the y-axis you have abundance with 95% error bars and on the x-axis you have the year that we sampled. Here is the same thing for adult sheep. And this is pretty similar to the pattern you saw on the previous slide. Here are lambs. So these are for the years in which we were able to estimate abundance and actually have statistical confidence in the estimate. Here are ewe-like.

Jack Reakoff: You don't have this year's ewe-like?

Zack Delisle: No, we weren't able to estimate abundance with good confidence unfortunately.

And then here are rams. And you'll notice here as you break down sheep into these smaller sub-categories, we have less and less confidence in the data oftentimes. And so you'll see these bars start to disperse a little bit. And then here is the lamb-to-ewe-like ratio.

Jack Reakoff: You didn't get enough. You had weather events, you couldn't fly on the transects. What was the percentage of the transects that you couldn't fly?

Zack Delisle: Yep. So there's bad weather, like you said, money, and timing. We have a lot of parks that we sampled but we were able to fly roughly 70% of the transects.

Jack Reakoff: And that's inadequate to get the composition? This lamb-to-ewe-like and the overall ewe-like population is it, basically that's so important to know the trajectory, where this population's going.

Zack Delisle: Yep, I agree and unfortunately, yeah, we weren't able to estimate a good ewe-like abundance and then because of that we're not able to estimate a very good lamb-ewe-like ratio but...

This is just Anaktuvuk Pass. In the Itkillik, it might change and some other areas we might have enough information to present estimates.

Gary Hanchett: I've noticed 2016 is low in almost every comparison you're making and if I remember right, that was a year that I was almost flooded out of moose camp. There was a lot of rain and it came late and a lot of that was snow up high. So I'm pretty sure that may have influenced this. Did you find that the case too that year? Do you recall or...?

Zack Delisle: I've only been here since this February.

I understand there was a couple of bad winters. I'm not sure if 2016 was one of them, but I know 2013 there was a pretty big crash as well, so...

Okay. And then this is for BLM-1A/1B and this is all sheep. So a little bit of an uptick from 2023 to 2024, but generally fairly stable since 2021.

This is the same BLM-1A/1B that Brad was talking about earlier. This is adult sheep which reflects the past line for the next week. Here are lambs and ewe-like, which, compared to 2022, the last two years have been stable but down quite a bit from 2022.

Jack Reakoff: I don't understand why you're not showing the lambs for 2023 since you got all the other data.

Zack Delisle: So, in that year, whether it was the sampling variability of lambs on the landscape or how many transects we detected lambs on, we just weren't able to estimate lamb abundance with any confidence that we feel comfortable presenting. In other words, you can think of it as, for that year, the error bar around the lamb estimate would be massive.

Here are all rams, which seems to be pretty stable since 2018, but of course down substantially from pre-2017. And the lamb-to-ewe-like ratio. And this was one of the highest we've ever had on record in BLM-1A/1B, which I think reflects that of what Brad also documented.

Okay, this is the Itkillik, all sheep which appears pretty stable since 2021 at least. Adult sheep. Lambs, which here pretty stable since 2021.

Taqulik Hepa: The missing years again, is that because the confidence interval is too high? Okay, thank you.

Zack Delisle: Yes.

Jack Reakoff: What is the lambs? I mean it's hard to tell against the... Is that like 50 lambs in the survey or...?

Zack Delisle: Probably around 80 or so.

Mark Dowdle: I don't know if this is pointed out but there is some information in the binder. It's toward the back of tab five.

Zack Delisle: Here are ewe-like. Which seems to be slightly declining ever since 2018. Here are all rams, which compared to pre-2023 have gone up a little bit and lamb-to-ewe-like ratio, which again is just about as high as we've ever documented.

And then unfortunately in Southeast Gates, we weren't able to estimate any of these groups with a degree of confidence. And because of that I only have data from previous years, but if you want to see that data from 2023 and prior, I have it here.

Jack Reakoff: Again, the percentage of Southeast Gates virtually, no, you couldn't get a survey? So you flew a survey but...

Zack Delisle: Yep, we flew a survey. We have to sample other Parks and we only have so much time and money, and unfortunately we just weren't able to get a good estimate there. Partially due to weather too. We got blown in for about a week and a half when we were up in Coldfoot and Galbraith, so.

Jack Reakoff: How many sheep did you get in the survey? The work that you did?

Zack Delisle: How many groups did we count?

Jack Reakoff: Yeah, how many groups? How many sheep? Overall sheep?

Zack Delisle: Yeah. In Southeast Gates, counted about 20 groups.

Jack Reakoff: And did you try to get comp work off of those lamb-ewe ratios, etcetera?

Zack Delisle: Yep. That would be up here. If we were able to estimate it with any certainty it would be up on these slides.

Jack Reakoff: [inaudible 02:00:42] You saw lambs with ewes?

Zack Delisle: Yes. Okay. And that's all I have for you.

But I would echo what Brad said. I mean, the lamb-ewe ratio was pretty good across most of the parks that we sampled.

Jack Reakoff: So let me understand: you flew survey at a completely different time than the state flew survey on the minimum count inside the Park?

Brad Wendling: Yep. We were... I don't know, you guys went first, right?

Zack Delisle: Yeah, we were. I got the...

Lindsey Dreese: They were close if I remember.

Zack Delisle: At the beginning. Did Jordan fly the minimum counts?

Lindsey Dreese: She did.

Zack Delisle: She was flying some of the distance stuff for us as well. So I imagine they were really close.

Lindsey Dreese: They were close. Because she was in Coldfoot already when we showed up to do our minimum count and they had just wrapped on their distance sampling.

Jack Reakoff: And you didn't have weather problems?

Lindsey Dreese: We did the first day we got. And we had wind... one other day they couldn't fly. One or two other days they couldn't fly.

Jack Reakoff: And how many days did you survey?

Lindsey Dreese: How many did you guys do? Five or six? I was on the ground for this, so...

Brad Wendling: There was like 20 hours total flight time in 1A/1B. Maybe 22. It was about 23 or 24 hours total flight time in that new area that we established. All those days blended together. There was so much going on, so...

Lindsey Dreese: I'd say it was four or five days of probably. Then that's based on listening to radio traffic, so everybody talking.

Brad Wendling: Trying to do that with having a helicopter. I would probably break that up. There was a lot. We had a crew of 12, 13 people up there. It was chaotic.

Lindsey Dreese: We also had two planes serving at the same time.

Brad Wendling: With the sightability plane. One of the things that the Park with the distance sampling, a struggle that Zack has, we can use pilots that they can't use because of OAS and I don't -- what, is there like seven pilots statewide that you can pull from?

Zack Delisle: Yeah, it's a really small list and it gets even smaller when it comes to pilots that will do distance sampling because we're flying pretty close to the ground and a lot of pilots just aren't qualified to do that.

Jack Reakoff: Okay. But the numbers you got for Itkillik, I am not real super happy to see the ewe-likes declining, continuing to decline there. So that's not, that's a bad sign.

The productivity, this high lamb ratio, that has to do with that really rainy summer, 2023 I documented 13.2 inches of rain in Wiseman. We had rain all the time and the pollination was reduced and then we had very low lamb production years also. So then these fecundic ewes, they just pumped out coming off of that high protein year and we had a decent -- I mean, look at your ewe, you let go there on top of there. We didn't have that much snow. So this year again is another rainy year, so we should see highly fecundic sheep coming up. When you got all that weather down here, you got rain all over the place. We had some rain, we had high winds and the mountains are scoured down right now. So I'm expecting to see better, another decent reproduction year.

When you're doing those compositions, the lamb sizes were much larger this year than I saw the previous year. The size of the lambs that were actually being produced. So I think we're possibly starting to turn the corner. I'm hoping for the best.

Zack Delisle: You think I brought good luck by coming to Alaska?

Jack Reakoff: And you also have to remember though that in 2013, the sheep population took a huge nosedive. So the previous numbers to 2014, those are vastly reduced numbers from previous populations. So I'm really excited of all this work. I'm hoping we get a better distance sampling. You don't want to hope for -- I told caribou biologists, you get a year where you can get aggregate for caribou, that's actually means the caribou under high stress. So you get a caribou population, that tells you your population is under high stress since Jim Dau showed us slides from 1994 and 1998 where the caribou were really super skinny coming off of really hot summers coming across the Kobuk River. That's what hot summers do to sheep, that's what hot summers do to caribou also.

So thank you very much. I appreciate that. I'm glad that you're here, Zack. I hope you're going to stay. Your predecessors have not stayed around long enough, just kind of get their feet on the ground and they're gone. They're itching to go back to Colorado or somewhere. Illinois is where you came from, right?

Zack Delisle: Indiana. I've worked all over the lower 48 with wildlife. Northeast, Texas, out west. Just happened to come here from Indiana, so.

Brad Wendling: Okay. I just want to say with this collaborative project, which is probably unprecedented, on Zack's hiring committee, the Park let me come and sit in on it. He was in a very, very deep applicant pool and to be honest, what we saw on paper, there was probably somebody else there looking at me, and he blew everybody away. We were very, very excited to work with him going forward. He's a super bright guy. His dissertation from Purdue University was estimating deer abundance in different ways and he's really changed how they manage deer in Indiana. So yeah, he's brand new and we'll make him Alaskan real soon.

Gary Hanchett: I remember that. You mentioned that you were limited as to your pilots or flights due to OAS. What's OAS?

Zack Delisle: That's the Office of Aviation Services. I believe that's the right acronym.

Gary Hanchett: Why would that be different? Is it more restrictive to fly for the federal government? Why is there a difference there?

Mark Dowdle: I don't know if I know all of the differences, but it's a Department of the Interior organization that oversees all of the aircraft management within the Department. So there are a lot of requirements, a lot of them are centered around safety and really wanting to have the most safe operation as possible. So sometimes it seems like a very high bar to achieve. Am I capturing that?

Zack Delisle: I believe so. That's how I understand it.

Gary Hanchett: Does that diminish your enthusiasm knowing that your... The reason I ask is because in my view there could be a greater collusion between the two and you get therefore more information, spend less money, and like that. Anyway, that was my question. Thank you.

Zack Delisle: Yeah, I totally agree. And that's why we collaborated with the state for BLM-1A/1B. And we got very good estimates there because they were able to collaborate with us and helped fly some of that distance sampling transects. So I'm looking to continue to do that in the future and me and Brad talk pretty consistently about that and that'll be a way where we can start filling in the blanks on these slides and not having years where we just have no confidence in our estimates.

Jack Reakoff: Madam Chair. I'm almost ready to make a motion to eliminate distance sampling from the survey methodology inside of the Gates of the Arctic Park and go to the minimum count since the minimum count is established because we're not getting data and we're not going to get pilots. We're going to have fewer and fewer pilots that are going to want to fly for OAS. Can we move away from, I mean we don't have that long a data set? We can meld that old data set from distance sampling, but go to minimum count. You can fly higher, you actually get better results because actually, you're looking for the sheep is what you're actually doing. What would you think about eliminating the distance sampling in the Park, Brad?

Brad Wendling: Well, right now, like I said, and this is what an analysis that Zack is going to be working on is, and it's unfortunate we didn't get to Southeast Gates this year, but having those two surveys going on over the course of the study to compare them and incorporating that into the integrated population model, I would ask that we hold off on that decision.

Jack Reakoff: Okay. Yeah, that's what I want to talk about. I'm not real happy with distance sampling for various reasons. The OAS problems. I know an OAS pilot that would fly survey, they weren't getting paid. The federal government wouldn't pay them, had all this expense out there and it took them months to get their pay. So there's a whole bunch of problems with this OAS program, not just that, and it's just pathetic what it does to managing wildlife in Alaska on federal lands. So I'll get off my high horse about that one.

I would like to visit this after the study again to see using minimum count comparing with distance sampling and whether it's actually a viable methodology for the land masses that we have in the park, these large units. So thank you Madam Chair.

Taqulik Hepa: Thank you. I think that was noted from the research team for sheep for expressing that. Just my closing comments, again, just making sure that the community of Anaktuvuk Pass and any other communities that are near where these flights are going to be taking place. I just recommend having a local contact so that they know what type of aircraft, the dates, and the general area where you're going to be flying. When people see unidentified aircraft, especially in Anaktuvuk Pass, we usually get a call and then we spend time trying to investigate who they are, where they're going. A lot of it is related to research and then others just unknown, but I just want to encourage that.

Another success we've had with USGS and polar bear surveys with the marked recapture work is that we built a partnership to get a local hunter on the plane. And what that has done with polar bears is it really has increased just the knowledge on where to go to look for polar bears and the number of bears before they were on the plane versus not. It has been pretty interesting and a really good outcomes and it's a great partnership.

Anyways, when I was first starting my work with the department, I did fly surveys with the Park Service on counting sheep in the mountains in the early nineties, and that was a lot of fun. But I just want to encourage; reach out to the communities, build a partnership. It's good to see the partnership between the state, ADF&G and the Park Service to gather this information. And it's a very good comprehensive sheep project and I look forward to hearing the results and where do we want to go from there.

And then one question that always came to my mind is just the general historical abundance and research that has been done over time, like caribou. I don't know sheep, I don't come from the mountains, but I know that there's been major crashes over the decades from the early 1900s that have been documented. But having a little bit of that information on, is this expected? What is happening in the broader sense of what's happening across the Brooks Range, looking at it from a historical perspective would be very interesting to me and I'm sure to the people from the Gates of the Arctic communities that we represent. So thank you. I really enjoyed your guys' comprehensive report.

I think it would be a good time for us to take maybe a 15, 20 minute break and we'll come back and continue on with the agenda. Does that sound fine with everyone? Okay, great. Yes, we'll take a break.

WIRAC Draft Sheep Management Strategy – Jack Reakoff

Jack Reakoff: So yes, thank you Madam Chair. This sheep management strategy, referred to as a strategy because it's actually in Title VIII of ANILCA, and this is developed by the Western Interior Regional Advisory Council. It's right at that last part of our tab here.

It basically is six pages long. This has been in a draft form for many since April of 2023. And we have this, we've discussed this at the Regional Council levels. We've discussed this at the Western Interior Council. We've had it out as a draft basically to get as much input from the state, give an opportunity to the state or other agencies including, I've had this before the National Park Service. I've had this before as the Western Interior Regional Council Chair. I've sent it to other refuges, Arctic Refuge, I've sent it to Koyukuk-Nowitna. There's people that work at Koyukuk-Nowitna including Brad Scott who's worked with sheep, worked with the Department of Fish and Game, trying to get as much input.

Got as much input as I possibly can, yet nobody makes comments. So there's no corrections or any additions that I have found. So I would like to make a motion to adopt this Sheep Hunting management plan from the Gates of the Arctic Subsistence Resource Commission as a hunting plan management strategy for Dall sheep. We'll go through our hunting plan recommendations for the Secretary of Interior's office. So we get a second, I will continue discussion if you would like.

Taqulik Hepa: There's a motion on the floor for the Gates of the Arctic SRC to adopt this management plan as a hunting management plan to be considered for…

Jack Reakoff: This is the old version. It's not a plan, it's a management strategy. That's the correction.

Taqulik Hepa: Management strategy. So there is a motion for our Commission to adopt this as a management strategy for Dall Sheep for both the Alaska and the Brooks Range.

Gary Hanchett: I'll second.

Taqulik Hepa: There is a second by Gary. Any discussion?

Jack Reakoff: Any questions or discussion from Commission members? Supplementary, I spent a heck of a lot of time after going through several meetings and seeing many biologists like Zack here, he knows about white-tailed deer, he doesn't know about Dall sheep and what we need for management for Dall sheep. So I thought let's just get this on paper. Title VIII of ANILCA is not just a directive for subsistence priority, that's only a portion. The directive of Title VIII is for maintaining healthy populations of fish and wildlife using recognized scientific principles and there's a lot of principles and management incorporated into this. And so it goes through the ecology of the sheep, what this animal is, what it kind of does. We're getting more data around here all the time, and it also is what the kind of data that we need for management.

So this talks about what you need, composition as anybody, Zach right there, he knows all about composition data for white-tailed deer. You have to know what your population composition is, age classes to know. As Brad is presenting nine-year-old ewes are starting to decline and that's my perception also. I've seen that. That's my customary and traditional knowledge that I've seen. That's my concern right now is that a lot of the ewes that we have in the Itkillik are timing out. That's what's actually going on?

Ellen Lyons: Thank you Madam Chairwoman. I would just like to ask a question or make a statement. So I have only been in this position, excuse me, since April as well. So I'm also learning these processes and gaining understanding of how this impacts Parks. And so what I want to make sure I understand before we take a vote on this is what are the implications? What does this commit the Park to? Just to make sure that should we agree to something we can actually fulfill.

Jack Reakoff: Madam Chair, the way these hunting plan recommendations work is like our antlers and horns back in 1999. We submitted the hunting plan recommendation, and at that point the Park Service analyzes the hunting plan recommendation. And so there's a process that we submit the hunting plan, and now it's your job now to analyze and so we're making you look at this plan. They might've just skimmed over it. Oh, I saw that thing. It's not written in the normal format of abstract, et cetera, et cetera. I'm not a real scientist but I know a heck of a lot about animals and so it's going to be your job to analyze this management strategy, and basically it's saying there are flaws in the current management system. There is no composition. There's composition - we got rams and legal rams. Well that doesn't work. That doesn't tell us anything at all. That's like worthless. And the ram composition tells you what your ewes are, and it also tells you when you're going to anticipate when cohorts are going to fade out.

So this plan is to adjust how management is going to be done in the Gates of the Arctic National Park. We're not going to make everybody do it, but it's going to be your job to actually analyze this with your staff, and you've got some very capable staff here. Where's the other Matt? You got these Mat(t)s. These guys are cutting edge too. I'm super happy to see Zack here. I just met him this morning, but so far I've decided I really like this one. So that's what's going to happen with this hunting with this motion. The ball's going to be in your court, you're going to analyze it and you're going to... At that point, if you got any problems, you're going to come up with reasons why it's going to be implemented.

Taqulik Hepa: In other words that if we adopt this as a management strategy for sheep, then like you said, you guys will get an opportunity to review it, make some recommendations, and I think that we could build upon it to become a solid strategy is kind of the goal here. At least there'll be something continuing to move forward while the other groups weren't quite successful. Okay.

So there is a motion on the floor to adopt this management strategy from the Gates of the Arctic SRC, with the understanding that this Park Service staff will take a look at this, provide some feedback and recommendations, and then we can build upon it as we continue to meet. And hopefully have a solid management strategy plan in place for us to give guidelines to both the researchers and to the people who harvest these sheep. Thank you. Any other discussion? Yes.

Tristen Pattee: Yeah. Obviously, I wasn't there for the full meeting last April, so I just don't know a whole bunch about this. And once they do analyze this draft, then they make their recommendations. What happens after that? Do we come back and make another decision? Because I don't know much about this. I'd like to look more into this before we actually vote. Is it possible that I abstain from this vote just because I want to learn more about it. I don't want to go forward against it. I just want to learn more about it before I go forward into voting for this.

Jack Reakoff: You could abstain if you would like, but this, you can go that way. You should really look at it closely. We can hold the vote until after lunch. It's only six pages. You can read it through, but we can take a vote on it. We need to move it forward at this meeting so that we can get this thing moving forward, and we will have another period of discussion after the National Park Service analyzes it.

Tristen Pattee: Okay. Yeah, through the Chair. Okay, so if there's going to be more discussion, more votes on this. This is just a stepping stone that'll give me time to actually learn more about it until our next... With any changes, amendments that they would like to make going forward. So okay, I'll definitely vote on this.

Taqulik Hepa: But I also anticipate if we take action on this and staff and ourselves get to absorb and to come up with questions that it's kind of like a living document that we'll move towards something that we could all agree upon that's a solid strategy, and it will be probably an ongoing conversation as we build this strategy.

Jack Reakoff: Madam Chair that's exactly... It was all of our hunting plan recommendations of the Gates of the Arctic Subsistence Resource Commission as are open to further the living document as new information would come forward. That's always been an understanding since Steve Ulvi was our subsistence coordinator here a long time ago. So that's the way we've worked with these hunting plan recommendations. So what I'm trying to make the motion to move forward with is to get the Park Service to really analyze this. You've got Denali staff, you got Park Service staff, analyze this thing and then when we come back together in April and down there in Ambler, we can talk about it again and then finalize it to submit to the Secretary of the Interior's Office.

Tristen Pattee: Okay.

Mark Dowdle: Madam Chair just had a question. Is this the most recent draft?

Jack Reakoff: It's not exactly the most recent draft. We have a more recent draft that was in our Western Interior Council packet. This was a preliminary draft and then it's had some tweekings. I would have to find that. It would be the Western Interior's most recent draft is what we're going use.

Mark Dowdle: My request would be convey that most recent draft so that when we begin to look at it we're looking at the right document.

Jack Reakoff: Yeah, this is really close. The title's not correct and there's a couple other just basically typo kind of stuff, but it would be to have the clean draft and I could come up with that one.

Gary Hanchett: Correct me if I'm wrong. If it was totally wrong, doesn't make any difference because it then goes to the Park Service and you actually initiated something. I think that's what we're trying to do. So no matter what's in here, whether we know anything about it or not, we shove it off onto them and get something going I think. Is that an accurate...

Jack Reakoff: So I appreciate your correction there because I'm scribbling in here the strategy part of it. That was an agreement that I had to go through Office of Subsistence Management (OSM) about back in February of last year. Anyways, this has had some little bit of tweaking since then. I don't even know that they actually had it at the All-RAC meeting. That was actually the correct version iteration. We'll get the right iteration to the Park Service.

Tristen Pattee: So are we voting on this draft or are we voting on a draft that we did not see that you're going to submit to the…

Jack Reakoff: It's a draft that changes the title and it has a few typo-type things in the latter portion of it. It doesn't change the document hardly at all.

Tristen Pattee: Okay. I just want to make sure we're not voting on something that we haven't fully reviewed, but at least maybe you could verbally say the changes as you put the motion in. And we're not voting on this particular one.

Jack Reakoff: I don't have that. I just got here seeing this is not the right title, and I would have to find the other version, which is not significantly different. We just need to get this moving forward, I will submit that in the next day or so to Marcy and then she could disseminate it back up to the Commission members, and we're going to be looking at that version and the Park Service can look at that version at our April meeting of 2025.

Taqulik Hepa: I think for a good way forward since we haven't seen the latest draft is in this motion we are adopting the Dall's sheep management strategy guidelines that we have before us. Understanding that Jack will provide the change in title with the minor edits to the staff while they analyze this document in the document that he has updated with the typos and the editorials and the title change.

Mark Dowdle: Madam Chair, if I could just, it may be summarized, it may help because I think Gary actually said it really well and to build on Ellen's question as well that the SRC would be making a recommendation to the Secretary. And how you word that is up to you. But really if I understand it is for the Park Service Gates of the Arctic to take a serious deep dive in consideration into the draft plan, and to respond back with our input on that. And again, like you said, a living document to continue to work towards something that could be a success.

Taqulik Hepa: I think that's good. And I just want my thoughts before we vote 'cause I think it pushes us in a position to develop a good strategy and that is what is missing. So I am comfortable with adopting this or taking action today that we're working toward building a management strategy that will give guidelines for sheep in both the Brooks Range and the Alaska Range if I understand?

Jack Reakoff: Was strictly for Gates of the Arctic management strategy. If other subsistence, it could be discussed at the all SRC Chairs meeting. If other parks feel that they would like to join or utilize this as a template of how to manage for Denali or some other Park unit, that would be fine. We have authority on this particular Park under 808 of ANILCA and so this is totally within our purview to develop a management hunting. It's going to be a management strategy, guidelines, hunting plan recommend. It would be a hunting plan. That's the progression. And we went back and forth with the Park Service on the horn and antler thing way too long. It took like 20 something years or something. So thank you Madam Chair.

Taqulik Hepa: Good. And I look forward to the discussions on where this goes after the staff has had an opportunity to review it and to help build a solid strategy on a harvest plan for sheep. So I am in support of voting in favor of this action or this motion. Any other discussion? Hearing none I'd like to take a vote on approving the Dall sheep management plan guidelines that is presented before us with the understanding that Jack will provide an updated most recent draft to the Park Service for them to look at and to analyze and to review and provide recommendations to this Commission at our April meeting.

All those in favor of approving this motion say aye.

All: Aye.

Taqulik Hepa: All those opposed. So the motion's been passed. Thank you. Thank you Jack.

Jack Reakoff: Thank you.

Taqulik Hepa: Thank you Park Service staff who are willing to take a look at this, and I think at the end of the day when we come to consensus and have something solid, it will be a good strategy guidelines for us to use. Thank you. And then we're going to move on to the next agenda item.

15. New Business

Rusting Rivers Presentation – Jon O'Donnell (NPS) and Michael Carey (USGS)

Jon O'Donnell: Thank you so much for having me, and thank you for the invitation to speak about this topic. So this picture on this slide here, it was taken by Ken Hill at the Fairbanks office for Park Service. And this is the Kutuk River draining into the Alatna. And what you're seeing there is orange particulates. Those are iron oxides coming out of the landscape and entering the river.

We initially made some observations of the rusting rivers back in 2018. But in 2017, we were working on this small creek in Kobuk Valley National Park on the Akillik River. We went back in 2018 and that river, we had been monitoring chemistry and temperature and fish in the river. And we went back in 2018, the stream had changed color. And I'll get into some of the data in a second about what we observed through this change.

In 2019, we were flying over the Agashashok River (Aggie) in the lower Noatak, and this is a place where we had been working for about five years. And when we flew over, this is the North Fork of the Aggie, and it had this big iron seep emerging out of the hillsides and it changed the whole color of the river for several miles downstream. We went back later that fall and landed up on that hillside above where that seep has formed, and it looked like we were flying over a fire, like a burn scar. But when we got down on the ground, it wasn't a fire at all. It was actually this very acidic seep that had emerged out of the ground and had killed all the vegetation. Really high, a really low pH, like a pH of two. So that's very acidic and very high trace metal concentrations like copper and zinc and things like that.

So after we started compiling these initial observations we went on... You can click through the next three little points there. We ended up compiling over 75 streams across the Brooks Range that had changed color. So the spatial extent is over a thousand kilometers, so lower Noatak in the west, all the way up to North Slope and Arctic Refuge in the east. And then we reviewed the satellite imagery, and it showed that most of these changes have happened in the last 25 and 15 years, but relatively recent changes. There are some places that have changed earlier, but overall this is a recent phenomenon.

So to sort of back up that statement we used remote sensing or satellite imagery, and I mainly want you... There's some pictures of some orange rivers here on the left, the Agashashak, the Kugururok, and the Anaktok Creek and the Salmon River and the Kobuk. The figures on the right, basically we use the satellite imagery to try to determine when they switched from clear to orange. And the redness index basically shows that if that value is below 1.5, the river is clear. And then once it goes above 1.5, the river has changed to an orange color. And so you can see, for all three of those rivers, they've mostly changed within the last five to 10 years.

And the Anaktok Creek and the Salmon did have a couple periods of time in the early two thousands where it turned orange, but then it switched back off and went clear again. And so here's some of the chemistry of comparing clear and orange streams. You can see

that pH, it's generally more acidic. The seeps are down below the pH of three, but the streams themselves aren't. There's wide variability. So some streams are really acidic, some are more neutral, but generally pH is lower in orange streams. Sulfate is higher and metals. Generally there's just a lot of trace metals in the stream. So aluminum, manganese, iron, cobalt, nickel, copper, zinc, these are all higher in the orange streams. And some of these are at concentrations that can be toxic to aquatic life like fish and vertebrates.

So back to that stream in Kobuk Valley on the Akillik, initially there was a really healthy fish population in this stream. So there was lots of juvenile dolly varden, there was slimy sculpin, lots of macro invertebrates. But when the stream changed from clear to orange, all the fish left. The macro invertebrate density dropped dramatically, and then the algae that was growing on the bed of the stream basically got blanketed with these iron particulates. So the base of the food web kind of disappeared too.

So, I guess you can click through so you can see us doing all this sampling. Next page. So, why is this happening and why is it happening now? We think that... Well, this is a hill slope draining into a stream and this is without any disturbances, without any permafrost thaw. And so groundwater sort of flows above the permafrost into the stream, and that's when things are normal and the water is clear. And if you click through... When permafrost starts to thaw, it can expose these mineral deposits like pyrite, which are the source of the orange and the acid in the streams. So permafrost, the climate's warming, the permafrost is thawing, and then groundwater can interact with these mineral deposits and then release acid and release trace metals and iron and things into the stream.

So there's a lot of implications of these findings for life in the water. So, some of these metals can be taken up directly by the fish, it can glom onto their gills. There can also be bioaccumulation of metals from the base of the food web, from the algae into the bugs, into the fish that are eating the bugs. And then also what we're calling ecosystem contraction but it's basically loss of habitat. So when a stream turns orange, the fish don't like it there, so they have to go seek out other places to rear or forage or migrate.

So there's other concerns for humans in terms of drinking water for villages that rely on river water streams for their drinking water supply. We know at the very least that these metals will have an effect on the taste of the water. But in some cases where there's lots of particulates, you're going to have to have much beefed up filtration for municipal water. We're also concerned about subsistence fishing. If we go to the next slide, this here is a map of anadromous waters in the Noatak and where there are spawning areas. And so the picture in the upper right is on the Kugururok. That is a really dramatic rusting river, the pH of that water is like four, so very acidic. And this watershed is turning orange in a couple spots and it overlaps with known chum spawning grounds. And so there's concern about how they immediately, how the spawning grounds are being affected, but also the capacity of fish to swim through rusting water in parts of lower 48 where there's been acid mine drainage, which is essentially the same thing as this. Migratory fish will not swim through these plumes to get to where they need to go. It's very hard to see or catch fish if they even were there in these rusting rivers. And so we are using free-floating environmental DNA to see what organisms are present in these rusting rivers. And that's something we're starting next year.

And, yeah, I guess I'll just give some time for any questions. I wanted to acknowledge this is a very collaborative effort, so I want to acknowledge Park Service, USGS. We have colleagues at UC Davis in California and if you're out and about and you see rusting rivers, we've been compiling observations from pilots, from people who live in villages or people who are recreating in the Brooks Range. If you send us a picture or coordinate of where you see this, we'll add it to the database and that kind of helps us understand why this is happening, but also, yeah, how to respond in terms of management. So, yeah, I guess I'll leave it right there and if anybody has any questions or comments?

Pollock Simon Sr.: Thank you, Madam Chair. We noticed there's something about the Alatna River. It used to be crystal clear and cold in summertime, springtime before. The village had these... The people used to go and get the water for drinking and stuff. The last few years we've seen the river change, not exactly orange but dirty, muddy water, the whole... So now before the river was clear and it cleared up in July and stay clear. We notice there’s a lot of change in the river.

Jon O' Donnell: Yeah, I think that, that first slide where you saw the Kutuk come into the Alatna, if you go upstream of that, the Alatna still looks pretty good, I think. But everywhere for miles, 20, 30 miles downstream of that, yeah, it looks dirty. I think that's a good way of describing it.

Jack Reakoff: I live in the Dietrich, Middle Fork Valley as you know. It's not just the rust. The rust was... The releases are exacerbated by hot weather. That's when Wiseman Creek released in the hot summer of 2017. We got a rain event and then Wiseman Creek looked exactly the same color as that of the picture there on the wall. And we've run rusty water ever since. There's a lot of rain these last few years. It's diluted that, but that's still present. What Pollock's talking about is just like I'm talking about, there's also this turbidity problem. It's not just rust that comes out. There's also drainages that have highly eroded, mass wasted lime stones that there's ice masses slide down, they continue and the high turbidities are coming down. And the Middle Fork of the Koyukuk, it's just like the Alatna, it always used to be gin clear. You could see the bottom easy. Now it's mud all summer long. It doesn't clear up just like Pollock's saying, exactly the same problem. There's turbidity problem and that would be alkaline. And then you get into this rust that's acidic. And so I'm trying to get the Western Interior Council -we keep talking about we need to have midstream, what the mixed results are. Is the alkaline neutralizing the acidities and what is the overall effect? I was talking about this rusty water thing back in 2017. That's when I started talking about it. The hot summers seems to augment them. That's why you see that spike when it was really hot in the early two thousands. 2004, 2005, some of the biggest fire years in Alaska's, the interior of Alaska facing part of 11 and a half million acres. Real hot summers was one of those augmentations. So I think it's a huge impact of fisheries overall.

There have been naturally inside the Gates of the Arctic Park, there's Red Star Mountain, which is right below the gates of the arctic and right above Red Star Mountain, Bob Marshall names a drainage Fishless Creek. And Fishless Creek runs higher iron oxide

because it's associated to the iron glow that makes Red Star Mountain. And there's always been lots of iron in the upper Clear River drainage. You've always seen the bottoms are really orange all the time, but there's other areas that are now contributing to this whole iron oxide problem.

So, I think it's a giant problem for fisheries overall. But they have to understand that above the Kugururok there, you can see there's limestone mountains. Are those releasing alkalines into the system? And we have Marion Creek, which Erin here knows that Marion Creek runs blue water all the time. I was talking to Erin at the break on that one. It could be aluminum or some other mineral. It makes white granulates on the bottom. It's a really weird thing. And what is that doing to the water? Marion Creek didn't used to do that before 10 years ago. I started seeing that in the last 10 years. So this is a giant problem. It's actually really complex. Thank you.

Jon O' Donnell: Yeah, thanks for all that insight. So I would say that the carbonate rock has the capacity to mitigate some of the acidic issues because it is generating a lot of alkalinity. And so a lot of these rivers in Gates of the Arctic Park are alkaline. They're a pH of eight. And so instead, if one of those turns into a rusting river, it goes from pH of eight to pH of seven and it's not that big of a deal, you're still in neutral.

In other places where there isn't carbonate, that's when you see it drop down to like a four because there's no neutralizing capacity. I would say that the muddy issue might be even bigger and more widespread. You may be familiar with the big thaw slump on the Selawik from...that happened a decade or so ago, but it was a mega slump that was just dumping silt into the Selawik River and the village of Selawik, which relies on that river water for drinking, I think they were traditionally before that slump were changing their filters not very often. But then the slump started happening and had to change it every couple of weeks because there was just so much material being transported in the river. So yeah, it's a big issue and I think there's lots of different things going on. Like that tundra seep is different. Somehow the hydrology changed and water came to the surface. And then there's places up in the mountains more where you have rockslides or rock glaciers that are like you talked about, that are causing the source of these metals. So yeah, it's complex and we're kind of just scratching the surface of understanding it.

Tristen Pattee: Okay, thank you, madam Chair. Yeah, just a comment. I work for Red Dog Mine, environmental department. And so our first notice... We first noticed in 2018 as well, actually 2019 because that was the year that we actually had to stop discharge because of the naturally high TDS levels that were happening around there. Yeah just flying around that whole area as it first started. You could just start seeing all these spots, burn marking spots everywhere. They're sinking the ground, and we saw it coming out of the mountains and the whole river just turned orange.

And yeah, it was sad to see even the little tiny fish just trying to make it. And you could see they weren't going to make it, just caked with all this very thick rust, that stuff on them. And it got really cakey and it looked thick because we walked to... We take water samples all the time and we had to walk to certain areas and we definitely noticed that. And now we're doing a whole bunch of studies at Red Dog. We installed thermosters and we have all these water sampling programs, much more now than what they were. So it's a lot of stuff happening.

Jon O'Donnell: And the region around Red Dog is obviously like a hotspot. Yeah, the region around Red Dog, it's going to be a hotspot too because of the zinc sulfides. And so that's going to be a source. So I guess the larger point I would like to make is that permafrost is probably going to thaw everywhere in the Brooks Range in the next 100 years, but not all streams are going to turn this color because you need to have a specific type of geology in the setting where the permafrost is thawing. And there are obviously spots across the Brooks Range that have that type of geology, the Red Dog being one of them. But yeah, I think we have a lot of work to do to try to figure out when and where this could happen elsewhere. So thank you.

Tristen Pattee: There was one more thing. Have you guys had any data with the creeks turning white, like aluminum oxide? Is that a thing? Because I thought there was something that turned white at some point.

Jon O'Donnell: Jack had mentioned that at Marion Creek, that there's this white particulates. We've seen streams that kind of look like milky blue. And my understanding is that it's obviously not iron causing that, but it's aluminum oxides and so it's going to be specific to that geology in that setting. So when the permafrost thaws and those minerals get exposed to groundwater, what's the chemical composition of that mineral? Is it zinc? Is it aluminum? Is it iron? And how mobile is it? Yeah, so I think that blue-white is aluminum.

Pollock Simon Sr.: Thank you, Madam Chair. We noticed there's something fierce? where water is higher and the banks are washing away and there's more rain, more warm weather. We're seeing rocks laid on the hills here and there that we never seen before. Thank you Madam Chair.

Jon O'Donnell: I think one of the common observations about climate change is that you get more extreme events, especially with the hydrology. So big rain events, big snow melt, big river break-up type things. And when you have something that forceful happening, you can get all kinds of these disturbances that aren't necessarily hard to predict when and where they're going to happen. But yeah, I think that's a good observation.

Taqulik Hepa: Very interesting. I look forward to hearing more as you learn more. A couple of things that come to mind is, at least on the North Slope, I'm not sure about how far into the Brooks Range, but there was a lot of exploration that happened even before I was born and the government came up here and then a lot of the things that they couldn't bring back, they buried in barrels and we're seeing that across the North Slope of exposure due to erosion, some of these old sites that were just buried and we have no idea what's in these things.

But I don't know if that's an issue within the Park. But from the community perspective, I think it's important that, to be proactive on providing information to the residents or to the state like, "What is this? Is this something we're going to see?" Because obviously our earth is going to change. It always has changed. It seems to be changing a lot faster than probably what it should be because of the rapidly changing environment. But I think from a management perspective of the Park Service, that we should think about those potential burial sites of things that were buried and left and then just giving information to our communities on what is this, what does this mean.

Because I have a feeling they're going to look for responsibility, but I would just encourage you all to be proactive, to get information out there to ease the minds of people that live in these regions. And just going back, that we shouldn't be... We are where we are today because of people and being settled into communities and not being ready to move when we have to move. That's how we used to be a long time ago, right? So, just that we have to think outside the box because things like this are going to happen. There's going to be melting permafrost. We're seeing it along our coastline, lots of cliffs falling in and properties going into the ocean, that type of thing. But anyways, just my food for thought and I look forward to you... Hopefully we can invite you back as you learn more. And the other thing to my last point was, historically, Gary and Pollock, is this something that we saw in the past but not as frequent? What are their thoughts? What are the elders thoughts that are aware of these types of things? Thank you.

Gary Hanchett: As this occurs, the eutrophication factor raises and you have greater turbidity, less oxygen, and you have a disaster in play because that's going to influence everything around it, including all the plants and trees that actually hold. Eventually you are talking about a dead river or maybe not a river anymore, but this is pretty bad. And I'm not sure that... I think who's to blame for this is all of us. I mean, we are people, and we consume, take place and mess up things. So we're going to have to look to obviating this so that we have drinking water. This is not safe water to drink. And as far as the white particles go, just maybe a little humor.

I had a charter boat business and it was for lake trout and salmon, and I was always very interested in the reflection colors of metal lures. Well, silver and aluminum reflected white light. Stainless steel would be black and sometimes blue. Of course, you get copper and so on. So it's a possibility there you could have some silver nitrate even in there and things aren't looking too good. So how is it possible to negate this? Wow, you're really onto something here, I think. Really critically important.

Taqulik Hepa: Before you answer just a little bit of humor too, it just took me back to high school sitting in the lab. But this would be real fascinating to show that to the students, whether it's college age or high school. Okay, never mind. And it makes more sense to see things visual.

Jon O'Donnell: Yeah, I think this topic has gotten a lot of attention because it's so visually compelling. Yeah, so a couple of things in terms of cause and you had mentioned there's buried barrels and I am not aware of any of that near where we're seeing things, but it's certainly possible that that's an issue in some places in the Brooks Range, maybe not in the parks, but this issue transcends boundaries. The other issue is that we know the Arctic is warming four times faster than the earth as a whole, and that is not anyone locally's fault. It's a global issue. And that has to do with greenhouse gases in the atmosphere. This is just an unforeseen consequence of a global phenomenon and it can affect people at the local scale. I guess the other thing I wanted to mention about outreach to the communities, I don't know if... Mike, are you on the phone? Yeah, maybe you could just mention real quick the pamphlet that's been developed with Fish and Wildlife Service?

Michael Carey: Sure. Yeah. We're currently trying to produce a pamphlet with Fish and Wildlife Service that kind of summarizes a lot of what John has presented here, particularly the conceptual model of what we think is happening to engage with people and hope that we can interact and get some other locations identified. There's going to be an email address and other ways to contact us and engage with us moving forward as we learn new locations and hopefully learn more and more about what's happening in terms of the process.

Jon O'Donnell: Yeah, so I think those are going to be distributed when they're finished. The graphic artists who you saw some of the images, we worked with her to make this pamphlet, and so it's going to go out to the different villages and just provide some really basic information, condensed version of this. And then, yeah, ways to contact us or make new observations. But I think the one point you made about looking to elders to sort of understand what's happened in the past, the satellite record only goes back 20 years, so we're trying to reconstruct things, but we weren't there. And so we don't know about the long history of some of these watersheds and there definitely could have been periods in the past where they've changed and knowing that information is really useful.

Taqulik Hepa: Thank you for that very interesting information. But on a brighter note, the next generation of scientists and local people, our future is bright. I think they can really tackle this, look at it and then figure something out for us elders. That's what I think. Kids nowadays are so... They think very differently like how we were raised. This'll be a challenge, but I think that they can certainly just figure it out. I know they can. Our kids are smart.

Fish Research Projects – Kevin Fraley/Wildlife Conservation Society

Kevin Fraley: I'm a fish ecologist here in Fairbanks. And I'm just going to go over, introduce a of couple projects that I think the commission might be interested in, sort of at the preliminary results stage. I think maybe at your next meeting, I can give some more detailed information about it. But most of it is looking at contaminants in fish, ecological and subsistence importance, kind of around the periphery of Gates of the Arctic National Park. So didn't do any sampling within the Park or Preserve, but obviously all the rivers and water bodies are connected there and anything that's happening upstream gets showing up downstream when it comes to contaminants and that sort of thing.

Taqulik Hepa: Kevin, before you start, for others that may not be as familiar, I'm not that familiar, but can you just give us a little bit of background on your organization very briefly?

Kevin Fraley: Yeah, absolutely. So earlier this morning my coworkers, Taylor and Thys, talked about their carnivore project. They're also WCS, Wildlife Conservation Society employees. And so it's a non-profit research organization based in New York, but with offices around the world. Started out in 1895 as the New York Zoological Society. Started with the Bronx Zoo, New York Aquarium, and now it's branched out to this global conservation non-profit. The goals are to protect wildlife and wild places. And so in Alaska here we have the Arctic Beringia program, which is a pretty small office with... We've got four social scientists, a fish person, which is me, mammals and wildlife person, and then some admin staff. So that's sort of our story, I guess, here in Alaska.

I'm going to skip through some of the background stuff. So one of the contaminants that we're looking at, we're looking at the metals like Jon introduced, a lot of the heavy metals, but we're also looking at PFAS. It's a chemical, it's human-made so it's only found in firefighting foams and Teflon and that sort of thing, but it's been basically distributed around the world and now we get even in really remote areas out in the Arctic, levels of these contaminants which are potentially harmful to biota and to fish and wildlife and to humans too.

So for this project I'm going to be talking about... we're looking at heavy metals, so arsenic, mercury, lead, zinc, cadmium in fish tissue, as well as these PFAS chemicals. We don't expect a lot of them to show up in the fish, but the idea behind the study was to look at baseline levels before something like Ambler Road went in or we talked a little bit this morning about the central Yukon EIS where maybe there was going to be some opening up of lands along the Dalton Highway where industrial development might cause in the future increases in contaminant loads. Also, Jon talked about with permafrost thawing and that sort of thing, there may be more mercury and metals that are getting into river systems in the future.

You guys are all familiar with the Ambler Road corridor there. Those green sections of the rivers are the wild and scenic sections. And so as part of this project over the last two years, myself and colleagues have flown out to these rivers, floated them and then collected sediment, aquatic vegetation, aquatic invertebrates, and several different fish species sort of downstream of where the Ambler Road would potentially cross on the river. And the idea was to get baseline levels in case there was ever any industrial development, which there may or may not be, right? And then also if there's just changes due to climate change and that sort of thing.

And so a lot of what we look at for the Ambler Road situation is the Red Dog Mine road, which is sort of a similar scheme where ore is being trucked along a haul route and the Park Service and other folks have found that there are elevated levels of metals as you go out into the tundra from that road from ore that gets fugitive dust from the trucks basically. So if we think about Ambler Road where there's potentially going to be 168 ore truck trips per day, you might see something similar with that and these contaminants potentially getting into water bodies as well and going downstream. And so it's important to kind of look at the baseline levels of contaminants in the fish and the sediments and all that right now in case something changes in the future. We always want to know what's there before things change.

Also, if the Ambler Road went in, there'd be potentially some mines put in which historically have caused some problems with contaminants in aquatic ecosystems. I won't go into that too much. So our project objectives were to look at the John River, the Koyukuk, the Alatna and the Upper Kobuk, as well as a bunch of water bodies along the Dalton highway that were associated or nearby Bureau of Land Management, areas of critical environmental concern that may have changed or they may change in sort of management status in development in the future. And we wanted to focus on the sediments, the mud of these rivers to see what sort of mercury, zinc, cadmium is getting into that. And then through the food chain as well for aquatic invertebrates, which are fish food, you know, bugs, the vegetation, and then especially looking at the resident or freshwater fish like slimy sculpin and long-nosed sucker. Those fish are, especially the slimy sculpin, they don't move very far during their life. So they're a very good local indicator of what contaminants might be in the area. And of course everybody cares about the fish of subsistence importance, the big anadromous and migratory fish like sheefish, humpback whitefish, Arctic grayling. So we also wanted to do sort of a baseline survey of those fish too. The idea of the project was not to give any human health advice on fish consumption or anything like that, more to look at the metals as bio-indicators and the PFAS as well. And we didn't expect to find very high levels of anything at this point because most of these areas are fairly undegraded except for along the Dalton Highway there may be some elevated levels.

So last summer, 2023, and then this recent summer we went out to these sections of rivers in green. We sampled outside of the Park and Preserve boundaries. In 2023 we hit all these green dots, the sites along the Dalton Highway, so those are sort of different ponds, rivers like the Jim River. You guys might be familiar with Mount Sukakpak, which hangs over the road there. There's several ponds that hold a lot of Arctic grayling and burbot in the streams there. So sampled a variety of streams that were sort of near those pink areas, which are BLM areas of critical environmental concern that were sort of slated for Central Yukon EIS to change in management potentially. I haven't seen what the record of decision (ROD) was, so I don't know what the future of that might be, but initially there was going to be some opening of those lands for mineral exploration maybe.

So I think that may have changed now. And then, so last summer we floated the upper Kobuk River. We were going to do the Alatna, but during that September time period, the rivers were just way too high. We weren't going to be able to get our fish species, our fish samples that we wanted. We were able to do okay for Arctic grayling and sheefish and sculpin on the Kobuk because it's more of a clear water river with a lot of small tributaries and I was really familiar with it from floating it before on my personal float trips and stuff. So we were able to get good samples there.

But when we flew over to the Alatna, we were going to land by Help Me Jack Lake. It was just like complete mud, no gravel bars, no areas for camping. So we skipped that last year and then we returned this year to do the Alatna. We actually got Steven Bergman from the village of Allakaket to boat us up to Siruk? Creek on the Alatna and then we floated back down to the village and did some sampling there. So most of those float trips, we were catching a lot of grayling, pike, sculpins and then opportunistically other fish like long-nosed sucker, whitefish. We actually caught a hybrid sheefish/humpback whitefish. We're pretty sure, going to need some genetic work on it, but some interesting and cool fish for sure. And right now, all the samples are at an analytical laboratory, so we'll get those samples back this winter and then sort of go through what we're seeing. But I do have a few notes about some of the preliminary results from the Dalton Highway and the Kobuk River samples.

Some scenes from some of our sampling. The bottom left there is Lake Minakokosa when we landed there last September and you can see the water was up into the trees, so it was a pretty challenging scenario, but we floated down and got our samples down near the Pah River area and do a bunch of sloughs where the sheefish and the grayling were hanging out.

So yeah, that's the Jim River, top middle there, but some of the various sampling locations and we've got a lot of different fish. So like the center right there is a pike from the Alatna River, we've got lots of the slimy sculpins, which are these little guys on the bottom here, they're very good local indicators of contaminants. We did have a few sites on the North Slope on the north side, and so there's some lake trout, that top fish in the center, there is a little least cisco. It's a species of whitefish that we found in one of the Dalton Highway ponds. So kind of a smattering of different fish, but really focusing on grayling, suckers, sculpins and pike. And so that was good. We didn't want to kill too many fish at any one location. So for our permits from Fish And Game, we were allowed to keep 10 grayling, 10 pike per site and then five of each other species that we might find opportunistically.

So for the metal sampling, we were looking at muscle tissue and usually you have to lethally sample the fish. You can do a muscle punch, it's called, but that's fairly painful for the fish and sometimes that's harder to get authorization for because of that rather than just euthanizing the fish. So of course we didn't want to deplete any of the fish populations we were sampling. So we tried to keep our sample sizes fairly low, but enough that we can say something about what's going on in these places. Along with all the fish, of course we collected a bunch of sediment, aquatic vegetation and invertebrates from most of our sites.

So lab work is going on now and then planning to do lots of outreach to different local groups around Fairbanks and Northern and Northwest Alaska. And what we're seeing, kind of what we expected is that the metals in the Dalton Highway and Kobuk sites and the fish there were all really low. There was one site on the Kanuti River where some of the pike were a little bit elevated with mercury right along the road. Pike oftentimes have higher concentrations of contaminants because they bio-magnify them. So basically, they're predators and all the other fish that they eat, they sort of take on those contaminant loads and they can live for quite a while so they can kind of accumulate more than some of the other species. Yeah, that's about it for that one and I'll kind of leave it there since folks are running off to the other meeting.

But if you want more info, look up our website and I plan on asking Marcy if I can present again at your next meeting and hopefully give you some more high-quality data rather than just sort of some qualitative stuff like today. But I just wanted to run the project by you so you're aware of it, what we're doing, and then hopefully can have some good discussion next time if I'm invited back. In your packet as well, I put a whole bunch of information about our Kobuk River, Kotzebue Sound sheefish movement study, so it's more related to the western side of the Park and I won't go into that now, but if you want to check that out, there's some info in there and hit me up if you have any questions about that or want to talk more about it. That study, we're also in the preliminary results stage. It'll get wrapped up before the next SRC meeting probably, so I can present more on that then. But I'll leave it at that and if there's any questions, happy to answer. Thanks for listening, guys.

Gary Hanchett: Just out of curiosity, did you have an opportunity to handle the ciscos yourself?

Kevin Fraley: Yeah, so I pretty much myself and a technician were doing all the sampling, so.

Gary Hanchett: Do you remember what they smelled like?

Kevin Fraley: Well, no. I mean, they didn't smell kind of weird. I know grayling smell strange, but I didn't notice a particular smell from the ciscos

Gary Hanchett: Ciscos are cucumbers. The reason for that, that was the forage fish for the lake trout and we tried to mimic that. But anyway, I digress.

Kevin Fraley: And we found a lot of cool species we weren't expecting like those least cisco. We caught them in a pond along the Dietrich River I think it was. And we just expected there would be grayling in there and we ended up catching all these little kind of dwarf, long-nosed suckers and least ciscos. So it was really cool, the different fish we found in some of these places that we weren't expecting.

Taqulik Hepa: We get least cisco on the North Slope on the south. We used to catch them for our dog food a long time ago.

Jack Reakoff: One question on those least cisco, those are immature least cisco or they're this size?

Kevin Fraley: Those should be probably adult fish. They're just sort of a dwarf, kind of stunted version. It's about as big as they get in that lake it seems.

Jack Reakoff: I catch them incidentally with a small mesh net, a fyke net in the river when they're ascending the drainage, but the numbers of those have been continuously going down over time. I get chub also. The fyke net I'm using has got a quarter inch mesh, so I get chubs. But the fish that actually can tolerate iron most, I've seen them in Wiseman Creek, is these long-nosed suckers. They actually will go in there and they're eating off of the bottom. I've seen them in really iron oxide, heavy iron oxide and the long-nosed suckers seem to be able to tolerate some of these things that other fishes will not. You didn't encounter any Chinook smolt in any of your travels on the Koyukuk drainages?

Kevin Fraley: No, we weren't doing any electrofishing. We were doing a little bit of minnow trapping where we might've possibly caught some juvenile salmon, but we didn't end up getting any of the waters that are known to have salmon. We chose not to do some of the more harmful methods like electrofishing. So mostly we were using gill nets, minnow traps and angling to catch our samples

Tristen Pattee: I heard you mention the hybrid, the sheefish. What was the other? Humpback?

Kevin Fraley: Yeah, I believe... So, we're getting some genetics work done on it, but it appeared to be a sheefish humpback whitefish or maybe a humpback least cisco hybrid. And so we're actually... I have another project where we're compiling observations of hybrid whitefish and there's actually quite a few of those out in the Kotzebue Sound area and then near Fairbanks in the Yukon, the Chatanika River. So we have a project about that which is also, there's information on the website that I shared. I can go back to the QR code if anybody wants to shoot that. But yeah, it's really interesting seeing those hybrids and people notice them. There's like an Inupiaq word for the hybrid. I forget what it is, but it pops up enough that people have noticed these hybrids over the years, so.

Taqulik Hepa: Is it different from... Because we get the broad whitefish, the humpback, and then the round. I wonder if it's... A round is a combination of both.

Kevin Fraley: Yeah, the different species can do different combinations. Mostly we see the humpback whitefish and sheefish or the least cisco and humpback whitefish. But there's documentation of a lot of the different whitefish species interbreeding, so.

Pollock Simon Sr.: Thank you, Madam Chair. The peoples of Allakaket are concerned about the Haul Road, the Ambler Road. I live in the Upper Koyukuk River – no more chum salmon. The salmon was first restricted to... for subsistence, it's completely closed for us the next year. Then we thought we had chum salmon, but that population also crashed. We're not allowed to fish for chum salmon and I'm glad there's some study being done on sheefish because that's all we have is sheefish and whitefish and need the whitefish to harvest.

And peoples are concerned about this because in the Upper Koyukuk River, the caribou doesn't return anymore and there's low number of moose and no more black bears. So people are concerned about what could happen with this development of the Ambler Road. A few years ago when they started talking about the Ambler Road, the Tribal Council got together and drafted a letter opposing the Ambler Road. I can say I oppose the Ambler Road, but they'll still go ahead and push it through. So I just wanted to mention the concerns of the people that living up here. With the new president, new administration, they have no trouble pushing the Ambler Road through and more drilling for oil would open up and impact our way of life.

I live in Allakaket, not because I don't have no place to go, but a way of life. There's a way of life for me in Allakaket, where my father and my grandfather lived before me and today I still subsist, fish, hunt, and trap. But what about the future of our children and their children? We want to preserve something for them. I guess that's a concern of peoples all over. We cannot stop progress, but we can say that we had... There was an oil pipeline that went through years ago. We had known the impact of it now. We didn't know what will happen before, but today we're a little bit smarter with what can happen with road development. So I just want to mention this. Thank you, Madam Chair.

RAC Meeting Updates – North Slope, Western Interior, Northwest Arctic – Marcy Okada

Marcy Okada: And then we also have Gisela Chapa online. She's the coordinator for the North Slope Regional Advisory Council as well. So the North Slope RAC met on August 19th of 2024 in Utqiagvik. Main topics of discussion were fisheries cross-over proposals and the Western Arctic caribou herd. The RAC was glad that their input was taken into consideration, and the current regulation for the Western Arctic herd is now 15 caribou per year, only one of which can be a cow. There still are concerns about sport hunters who get to the caribou before local people can harvest them, so that's ongoing discussion. But that's just a quick summary of that meeting.

Taqulik Hepa: And then, Marcy, we heard discussions yesterday that I guess the concerns that we hear far and abroad about the sport hunters or the transporters and interference with the migration of the Western Arctic and other herds in Alaska about the disruption when the cow caribou are disrupted. And I just want to encourage both you and Gisela to pass our message on that education and outreach to those that are actually doing the hunts and those that are providing access to our lands and how those types of activities could have the potential to provide interference with providing food to our communities. Because the caribou are probably the single most important land resource that all of our communities depend on to make sure that we're meeting our nutritional needs. And just spreading the word to those groups on what happens, I think we need to encourage others to do that in the forum that we participate in when we talk about caribou. Thank you, Marcy, for that update.

Marcy Okada: For the Western Interior Regional Advisory Council, of which Jack shared a bit of information about that meeting during his council member report, council met on October 2nd and 3rd in Galena. The RAC took action on fisheries proposals and discussed fisheries resource monitoring program priority information needs, which included both the Kuskokwim and Yukon Rivers.

And then lastly, the Northwest Arctic Regional Advisory Council just met last Friday, November 8th for a teleconference meeting. Due to storm impacts in Kotzebue in late October, the meeting was rescheduled to be a one-day meeting via teleconference. Topic specific agenda items like fisheries resource monitoring program project updates were deferred to their February 2025 meeting. The RAC discussed the Western Arctic caribou herd and shared concerns that a census survey wasn't completed this past summer due to inclement weather. There were no comments on the National Park Service final rule on sport hunting and trapping in Alaska National Preserves. For the statewide sheep discussion, the Council is interested in hearing information on the follow-up sheep survey data in Gates of the Arctic. So that's it.

Taqulik Hepa: And then just one comment I wanted to make too, in regards to the census work. I know that we did hear from some of our community members on the North Slope about not knowing that the survey was going on, and when people were out hunting, there was a lot of concern about the disruption. But I just want to encourage those that are doing the survey to reach out to the communities well before, let them know what plane. It would be good to establish communication of when they are going to head north to do the photo census so that people are aware in what areas they're going to be so that they can plan accordingly, both for the hunters and the people doing the flights. Thank you. Thank you, Marcy.

Great. Thank you for sharing that very good report. It's always good to know what the RACs are up to, and I thank them for their time to address the concerns and proposals that come to them. So with that, we're going to move on to the sheep ecology report. Brad.

Federal Subsistence Board Update – Kim Jochum

Kim Jochum: Thank you, Madam Chair and Council. So I just have a few updates for you regarding the Federal Subsistence Board and the Office of Subsistence Management. Just wanted to mention that the fishery regulatory cycle for the federal cycle and the Federal Subsistence Board will be February 4th to 7th, 2025 in Anchorage. For the Office of Subsistence Management (OSM), there were quite some changes. They got moved. The Office of Subsistence Management transitioned over to the Office of the Secretary's Assistant Secretary for Policy Management and Budget. So they're straight under the Secretary's office within PMB in short.

OSM is now organizationally and then right situated within the Office of Policy and Environmental Management. So you have PMB and then Office of Policy and Environmental Management. One of the divisions within PMB was OSM staff and organizational chart remaine exactly the same though. The physical location also will be in Alaska. So they're looking for office space right now. It's still within the Fish and Wildlife Service building on a short term basis, but they're also looking for a more permanent location in midtown it looks like. So the Federal Subsistence Wildlife regulatory cycle operating procedures and meeting schedules remain all unchanged as well.

New Public Members Final Rule

Then specific to the public member final rule that was published, so there's some information on that. In mid-October, the Department of Interior and Agriculture both announced the final rule to strengthen the Alaska Tribal representation on the Federal Subsistence Board. The final rule adds three new public members to the Federal Subsistence Board and they're all nominated by federally recognized Tribal governments in Alaska. So that's the requirement under that rule. It can be their rural members that are appointed, but nominated by the Tribal governments. So these members will have personal knowledge of and direct experience with subsistence practices in rural Alaska, including Alaska Native subsistence users and they will be appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture. All Tribes are welcome to nominate and recommend public board members for these three new seats. And the communication application should be directly sent to Raina Thiele as well as Sarah Taylor. And I do have email addresses if anybody's interested.

Taqulik Hepa: Is there a deadline for submissions and when the appointment will be?

Kim Jochum: There's no deadline, but I do know they're trying to act really fast, specifically under incoming changes in the federal government. I believe they will try to appoint these seats within this annual year.

Taqulik Hepa: I think that's great, but... I think it is great, but other appointments have taken years, so it just doesn't look good for the fact, this current administration.

Kim Jochum: I do know we had meetings with Raina Thiele and Sarah Taylor with the Federal Subsistence Board, and there was one recently and they're definitely pushing this right now to get it into place. And those members too, actually those members also be on the Board for the Federal Subsistence Board meeting in February. That's all I'm aware of, that they're definitely committed to this and trying to make this happen.

Jack Reakoff: So, when was this? This was the final adoption was when and did they publish this to the Native organizations and then they already made nominations?

Kim Jochum: I know some nominations were received by Tribal organizations already. I believe three that were submitted over the last few weeks. The final rule was published early October this year in the federal register as a federal register notice.

Jack Reakoff: So, I am happy that they're aspiring to get those positions on the Federal Subsistence Board for the fisheries meeting in February. But I don't know that it's been widely enough published to get enough nominations from all of the Native organizations. Maybe some have. When we had the All-RAC meeting in March of this last year, I spoke before the All-RAC - I felt that there needed to be a regional representation of the new membership so that's not all from the same region. So I would like to know if the three

nominees that actually come from throughout the entire state of Alaska, not just one region. That's what my concern as a Regional Council Member would be. So that's what I want to say.

Taqulik Hepa: Because these three new seats are so important, I think that the due diligence on making the selection should not be rushed. If you have any way to communicate that with…we do huh? I just want them to make the best... Because they are going to be very important seats. Give the time for the Tribes to make their right recommendations and pull the information together to justify who will serve the best.

Jack Reakoff: One more comment. I just feel that there should be a news release published tomorrow or sometime soon and give an opportunity for making up nominations. And I'm sure that there will be a lot of nominations and therefore then it could move forward expeditiously. But it needs to be more public outreach about what is actually going to happen. Either talk to a news reporter or something to that effect because I read the news quite a bit. I have not heard that this was actually finally adopted in early October. I didn't hear that. So I think it needs to be elevated a little bit more in a public perception. So thank you, Madam chair.

Gary Hanchett: This was actually a recommendation that we arrived at, I think at the very last meeting at the latest. We've done that before. And I agree with Jack in the term expeditious because I think we do need to act fast on this in spite of the greater possibility of maybe making a mistake. But I think we're going to be better off if this is moved forward as soon as possible. I'm done.

Taqulik Hepa: Yeah, it is going to move forward, but I think the Tribes need to organize and come up with the best possible names and good solid recommendations or selections should be made, not rushed. But either way, it's a very important move and I'm glad that those three positions have opened up and just want to make sure that the right people are there.

Kim Jochum: I really appreciate all your comments. Very valid, important to hear. I will communicate back to OSM on what I've heard for sure here. And I just also wanted to share with Jack that the regional representation is definitely, they're very aware of that and they want to also definitely choose those three additional public members from regions that are not already represented.

SRC Member Compensation Letter – Kim Jochum

Kim Jochum: Thank you Madam Chair, Council members. We want to draw your attention to a letter that our Regional Director, Sarah Creachbaum, submitted on September 13th this year. This letter was written in conjunction with the Office of Subsistence Management submitting a similar letter to the Secretaries asking for compensation for Regional Advisory Council members as well. So the timing was intentional, that they both were submitted at the same time. Although our process about asking for compensation is very different than for the RACs, as for our processes to ask our National Park Service National Director for compensation. So he has authority to do that and would sign off on that.

Also, our request is not attached to the request for an additional added budget. As we said, we were able to allocate funds to reimburse SRC members through our current allocated budget already. That's different for the Regional Advisory Councils. They wouldn't be able to draw on their current budget to do that reimbursement. So they asked for additional funds. We're definitely happy this was submitted. Very excited about that step. It will be a longer process, however is what our Regional Director Sarah Creachbaum was saying, is probably will take some time. But yeah, that's where we're at. So that's my information and happy to answer questions.

Jack Reakoff: I'm glad to see that Sarah Creachbaum actually submitted this. Excuse me, the question to your Council. We said that we sent an additional letter there was kind of an All-RAC letter then we sent an additional letter. And our letter pointed out that we're not just, and this under ANILCA 805 Councils and 808 Subsistence Resource Commissions. We're not exactly just advisory. We're actually making decisions, especially Regional Councils they have deference from the Federal Subsistence Board. So we're actually not only advisory, we don't actually fully fall under FACA the Federal Advisory Committee Act.

So this Commission is making recommendations and hunting plans and so forth. Unless they violate subsistence or violate some management principles, they also are not really advisory. So I'm happy to see that Sarah spent two days with us in Anaktuvuk Pass. And she thoroughly understands a lot of these aspects and being a Federal Board member. So I'm really happy to see that this is moving forward through the Park Service realm for the Subsistence Resource Commissions and I really appreciate it to the Regional Director to submit this letter forward for the Subsistence Resource Commissions. Thank you.

Taqulik Hepa: Thank you. And I'm very glad for the communications and where it's headed because I know with my employment that I am not going to need this, so there needs to be an option. But I know people that serve on this Commission that take time away from their jobs to come and attend and that's time away, that's income away from their family. So being able to be compensated to take the time to come here I think is very appropriate and I appreciate that. Any other questions or comments to Kim regarding the letter?

Kim Jochum: Thank you very much and yeah, I'm definitely happy to talk to Sarah about it as well as other questions or thoughts that come up in December. During the SRC Chairs Workshop she'll be there. Yeah. Thank you.

16. NPS Staff Reports

NPS Regional Office Subsistence Program Update – Kim Jochum

Kim Jochum: Thank you so much, Madam Chair, Council. So I have a few updates from our Regional Office program for you. Regarding staffing, we're excited that we have Lydia Agnes added to the Alaska Native and Tribal Affairs program. She's the third full position for that program across the Regional level. She serves as the Tribal liaison for the region supporting Tribes, corporations, and Tribal entities including providing technical assistance and increasing a Tribal capacity to our whole region. She will also work with

Parks, prioritize projects that have a potential to have an impact on indigenous homelands. Lydia is Yup'ik and from Nightmute in Alaska. Her first language is Yup'ik and she was raised to live a traditional Yup'ik way of life with her mother and grandparents. Lydia has a bachelor's degree from the Northwest Indian College in Native Studies Leadership and she's currently attending graduate school at the University of Alaska Fairbanks College of Indigenous Studies. And she most recently lived in Kotzebue for seven years before she moved to Anchorage for this position. So she joined us a few months ago and we're very excited to have her added to our team at the Regional level.

We further hosted quite a few ANSEP students this year, so Alaska Native Science and Engineering Program. There were five university level ANSEP students this year with us this summer. A couple of them are even staying on to work with us part-time during their academic year. We had interns working in Park units throughout the state including Yukon-Charley, Denali, and Wrangell-St. Elias. These interns worked on a variety of projects from collecting rabbit pellets for biological surveys, analyzing wolf camera and collar footage, working with Tribes on co-management agreements, creating public outreach materials and transcribing oral history interviews.

We are very grateful for having such an enthusiastic and motivated group of interns as well as Park Service staff who hosted them. It's a lot of work to also host these interns, which we're so grateful. Like definitely Gates of the Arctic has been very active with hosting interns as well and Yukon-Charley staff. So thank you. Our Regional office contact for anything ANSEP is Victoria Flory. She works with me at the Regional Subsistence program team. So if there's any questions or you want information, she's the contact, let us know.

Additionally, I wanted to point out we have, that you probably are aware of, we have the Subsistence Advisory Council across the Region and we have annual research funding where we decided to fund certain projects that are a priority such as anything subsistence across the Region. So often projects develop out of what Subsistence Resource Commission members also identify as priority needs. So we did fund this year projects including the Upper Kobuk River comprehensive community harvest surveys and associated travel, local indigenous knowledge of carnivores in Northern Alaska, focusing on Anaktuvuk Pass. So that's the study Taylor was talking about from the Wildlife Conservation Society yesterday. One piece of the puzzle, we funded that portion for Anaktuvuk Pass that's going to happen here. Excited for that.

We funded oral history interviews with elders from Nenana and Tanana about traditional sheep and bear hunting prior to establishment of the Denali National Park in 1917. So they'll be spearheaded by Denali staff and Tribal members. And then a study also focusing on caribou movement in Bering Land Bridge National Preserve. So that'll be Bering Land Bridge staff and communities. Oh yeah, there's one other study that I want to share that's from the Katmai. It'll focus on subsistence access and off-road vehicles to the Katmai Preserve documenting traditional community trail routes to inform traditional use determination requests. So they're also in the process of working with the Tribes from Kokhanok and Igiugig to go back and map those routes that are traditional to allow for access. We're also further going to continue funding projects that were already funded and are currently being conducted prior. So assessing Dall sheep populations in Wrangell-St Elias in response to SRC and RAC concerns. And the Chignik community household surveys are also being conducted and funded through the Park Service through the fund source. Okay. I have a couple more updates. Let me see. You have any questions yet? Please go ahead.

Jack Reakoff: Going back to that caribou movement Seward Peninsula study that was funded. That's going to be TEK or trail systems? I've tried to get the Park Service…

Kim Jochum: You're talking about the Bering Land Bridge project. So Kyle Joly and Letty Hughes, she's a biologist out of the Nome office working at Bering Land Bridge National Preserve. They will work with Nikki Braem. She's a cultural anthropologist in that office and Tribal members. Yes, that's going to be a really great combination of traditional knowledge interviews as well as starting to put collars out and track some of the caribou. Because they really don't know anything about these lower local populations that have been sticking around, and that request to understand which relation those caribou belong to and if they're really their own little separate group. Yeah, that has been coming up at RAC meetings consistently in the Seward Peninsula. So they're trying to be responsive to that.

Jack Reakoff: So those are what I call residual populations. Those are populations of when there are large caribou migrations, there's caribou that stayed behind. So where you see that Ray Mountain herd, Hodzana caribou herd - those are residual populations from a….FortyMile caribou used to go across the Yukon River into the Ray Mountains. The trails are still there. I've been trying to get Department of Fish and Game and the Park Service to look at satellite imagery right after we get fresh snow in October, all the leaves are off the trees. You can see the trail systems etched into the ground. Those are still there from hundreds and hundreds of years of movement. There are east-west movements, north-south movements and different configurations of movements.

Caribou was a major part of the food source of indigenous people, before. Caribou didn't arbitrarily crash. We had the gold rush happened in Alaska and they sold caribou meat for 33 cents a pound and those gold rushes had a major impact. The whaling industry also had a major impact on the caribou on the Arctic Slope and the Gold Rush had a major impact on the caribou populations in the interior of Alaska. So looking at the land configuration of those - Mulchatna caribou used to go north-south across, right across the Yukon River at Ruby. There's some documentation, oral documentation of that. They crossed it in the Ramparts. Major caribou herds used to cross the Yukon River in several different spots from Interior populations. They made Denali National Park because they were wiping out the Dall sheep during construction of the railroad. That's why Denali Park's even here, but they missed the part where they wiped out the Mulchatna caribou at the same time. They switched it at Ophir, Iditarod - all those big gold rush communities decimated the Mulchatna Herd, which used to go from the Mulchatna River all the way to the north across the Yukon River.

We're over there in Anaktuvuk Pass and you can see, Sollie Hugo's got great big huge maps all over the place with caribou migrations going in different directions. There's your TEK right there. Just go to the Nunamiut museum and have Sollie go over that with you. He's got beautiful information about Raymond Paneak. A few months before he died, he was calling me up, "Where's the Porcupine caribou? They knew they were coming." I says "The road they're stopping at the road Raymond." Sollie's got vectors. He's got arrows of caribou crossing through right above Wiseman there. It's also documented in 1923 when Olaus Murie and Marty show up in Wiseman. They're like, "You're lucky. We just got there to study caribou," and there's caribou had just arrived north of Wiseman. That's the Porcupine herd coming in 1923. So there's a lot of other movements.

Residual populations are part of that, but there's also major migration routes that caribou will traditionally use if they're allowed to get to the population status where they will migrate. The FortyMile caribou herd was starting to migrate. They got to 80 to 90,000 and they were going to go across the Yukon River. They're crossing the Dalton Highway mile 10 Dalton highway, but oh no, we just got to wake them back up cause our model says that they're eating themselves out of house and home. The model's wrong. The analysis of the model's incorrect. Three-year-old cows that are reducing on having calves is showing that they had bad winters, deep snow, late springs and rain on snow events and hot summers. That's what that shows. It's a useful model, but they're incorrectly…

The Department of Fish and Game at the Ungulate meeting, you guys sent me down there, the Ungulate meeting, the Department of Fish and Game says...I says, "How did you quantify the model, the range depletion model? How did you quantify that?" The response was "We didn't quantify the model. The model is unquantified, it's actually not a valid model." It says the model's showing that the productivity's falling because of weak cohorts that are moving into the population. That's why I was telling Brad, weak cohorts won't produce lambs until they're four. And so there's a whole bunch of stuff. I would still like to go back and we talked about it. You may have been long enough here, Mark, where I've been talking about this. Getting this trail inventory analysis and overlying that with customary and traditional knowledge to document what the expanse of the caribou's habitat is. There is massive amounts of country that's completely unused by where there used to be thousands and thousands of caribou, hundreds of thousands of caribou.

FortyMile was thought to be 500,000. The Gold Rush brought it to 250,000. Road access, Steese and Taylor Highway brought it down to 6,000 animals in 1971. I'm old, I'm 67 years old. I remember listening to the radio, Department of Fish and Game was telling people to go get them on the Taylor Highway. And they wiped them out.

I know lots of Alaskan Natives that took a knife to the Taylor Highway. They didn't take a rifle. They took a knife because there were so many dead caribou laying all over the place. They could just dress hot caribou and haul it away. They wiped that herd out. I don't care what the stories they'll tell you. I am old enough to know exactly what they did to the FortyMile caribou herd. The FortyMile caribou herd wanted to expand. Its plan was to allow it to move into its historical range. Well they stopped that. They cut it back down to 28,000. What is it 28,000 now? FortyMile?

Mat Sorum: I think 32,000.

Jack Reakoff: The presentation I heard to the Eastern Interior RAC was 28 to 32,000.

Why is that? Because they shot all the adult cows out of the population. They shot most of the adult bulls. Ask any ranger they need to get into a Scandinavian management, have 3000 years of managing reindeer, what it takes to keep caribou populations healthy with the breeding structure. Don't reinvent the wheel. Go to the Scandinavians. They know how to manage caribou. So I love your residual population study from the Bering Land Bridge, but I think that there's other populations that are associated to our Parks here. These trail systems, this utilization of the expanse of the range.

Porcupine caribou wanted to cross to the west. They wanted to go back into the Park and some of them got in there. But what happened this year? They lined their air taxis and water taxis, they lined up and as they came closer to the Dalton Highway corridor, the air taxis and the boat taxis and the hunters just kept being dropped right in front of those migrating cows, drove them back. And they're back in Canada now. They wanted to come back. Raymond was right. Raymond knew. He intuitively knew the customary and traditional knowledge that the Porcupine caribou herd was going to come from the east. They're not going to make it. They're afraid to go to that road now. So there's a bunch of things.

You were giving this presentation and what did you call the Subsistence Council? Your priority council. You had a meeting of and you prioritize these needs, is that what you're saying?

Kim Jochum: Okay. Subsistence Advisory Council is made up out of this Park Service specific advisory council body on anything subsistence. So the subsistence coordinators for all the SRCs are part of the Council. And so our staff that are involved in subsistence management.

For example, the cultural anthropologist, Nikki Braem, Bering Land Bridge National Preserve. They don't have an SRC because it's a preserve. However, they have nexus to subsistence. So they're also engaged with the RAC. There's about 15, 20 staff from all Parks across the region and we meet monthly as an advisory body and we have that $400,000 of fund source that we have annually to respond to subsistence needs.

Jack Reakoff: Madam chair, I understand now. We've spoken to staff here about doing this land step. All you got to do is have high security clearance where you can look at the trail systems with satellite imagery. You don't have to fly anywhere. You just get high definition image, you get a clearance. Patty Rost, your Resource person you used to have here at Park Service, she had a clearance to where she could look at basically CIA images. You get the right timeframe when the snow is freshly on the ground and those trail

systems will stand out. So we need to make a motion for your Council, your Subsistence Advisory Council for the staff to actually do what I'm saying because apparently it didn't get through because it's not happened. And we had Kyle Joly. When was that? That was like three or four years ago. We had Kyle Joly all fired up about this thing. All of a sudden this goes flat, this goes away. Well apparently, it's not getting to the right staff or the right meeting.

Kim Jochum: So we do set out a call for proposals in August and it's open through October. So there's an annual fund so that we have, it is fairly responsive because it's annual money. Normally for a research project, it's three years out until, so that's really helpful. So to be responsive, it is annual funding that we get and there's definitely multiple projects. Also, Kyle and both Mat(t)s are involved that we do fund. So yeah, it's, we put out a call for proposals and then Marcy is liaison for Gates.

Jack Reakoff: This SRC has never received the call. I think your Council needs to talk to the SRCs.

What we do at WIRAC at the Regional Council level is they have a priority needs and we review those priority needs and we prioritize them. We shift them around. This is more important on this fishery issue, this is regards to fishery and I'm trying to get wildlife priority needs also because there's lots of wildlife priority needs. So I make a motion to submit a proposal to the Park Service Subsistence Advisory Council for their call of proposal in August of 2025 that they do a land stat inventory, which could easily be done for the entire State of Alaska where caribou were known to have lived and develop the trail systems in conjunction with customary and traditional use knowledge, just like they're doing at Bering Lands. They can go to Anaktuvuk Pass, go to the museum, talk to Sollie, fill you in exactly where these caribou cross the river and it'll show that they go, the trail systems inter matched with the TEK is what it's going to show.

Then we get away from the idea that the caribou have run out of food. That's the upshot of this story is the perception is that caribou have eaten the range up and we need to kill them is absolutely erroneous. It's backwards. What we need to know is what is the extent of these caribou populations? What's the range availability and how do we manage them to fill their range? Because the bigger the herds, the more distance they go. As we see with Western Arctic, they contract, they don't want to go anywhere if they don't have to go anywhere. So they have less need to migrate across the Kobuk River. They may or may not do it.

The larger population, the population objectives for most of these herds are way under what the carrying capacity is. Because if you look at the trail systems, the carrying capacity is showing you where the trails were and the capacity of those herds. Those herds they have made giant trenches in the Kuskokwim Mountains that are that deep on the tops of the ridges in the Kuskokwim Mountains that come right to Ruby. I used to fish in Bristol Bay. I flew across those trails all the time. They're still there. They're like 25 years ago. They're still there. You can see those lands with land stat. We need to know where the caribou used to go and what is their capacity and what populations they're associated to our Park units and so forth.

I make that motion. Do I have to have a second to submit that proposal?

Pollock Simon Sr.: Second.

Taqulik Hepa: So there's a motion and a second to submit a proposal at the August 2025 opportunity when they call for proposals submitted to the Council. And it's specific to utilizing satellite imagery to look at during a certain time of the year when the snow just falls to look at caribou migration routes across a certain area.

Jack Reakoff: Oh, the entire State of Alaska specific to the Brooks Range for us. But this can be applied for Nelchina. There are a bunch of herds that used to be huge. Those trails go across the border. There's trail systems all over Alaska. You have to parse out which herds were going. I am of the opinion of not every herd is a defined herd. They will utilize the same trail systems, but they have primary movements. So that's the motion. So I just didn't know that. I could miss this part that you had this Council. I had never heard of this before until your presentation.

Kim Jochum: Well I apologize for that. I'm happy I did speak up at least about, let you know what we're looking to fund this year, what we're up to. That same Council also does organize the SRC Chair's workshop every year and so the staff that attend the SRC Chair's workshop are the core members, all the Subsistence Advisory Council members across the region. So you definitely met some of them. The last few years you didn't go in person, you called in.

Taqulik Hepa: Okay, I'm just going to reiterate what the motion was. So to submit a proposal, a call for proposals for next August to the Council so they can consider a project for funds to look at satellite imagery to look at historical caribou migration routes. Any further discussion? And there's a lot of discussion that is noted to give guidance in building the proposal. Okay. All those in favor say aye.

All: Aye.

Taqulik Hepa: All those opposed. Motion's passed.

Jack Reakoff: One final statement, I was looking at a landslide in the Gates of the Arctic National Park. I was showing Mark that. I've got that off of Google Earth on my phone. That's in my mapping program. I'm talking about high definition where you can actually see clearly where these trails are. With that kind of imagery, you will also see ATV damage. It's another way to look at ATV damage is look at that satellite imagery in like down there in the Nelchina and stuff. So that was great, thanks for that update. I picked something up there. Thanks.

Gary Hanchett: [inaudible 00:51:34] mapping has it too. It's pretty detailed.

Ellen Lyons: I just want to add that I think the Park can do a better process of making sure you guys understand what is going on in the SAC (Subsistence Advisory Council) and the opportunities that exist there. However, I do just want to clarify that there is a process and there is submitting a proposal definitely does not guarantee that it would be funded. I don't know what the percent of projects submitted to the SAC actually receive funding? I don't know if you have those numbers off the top of your head?

Kim Jochum: I don't think so. Yeah, it is fairly high because we have $400,000 available currently, annually. For that at least a quarter or a little bit more, we do allocate towards comprehensive community harvest surveys. It's something we do continuously. We have a spreadsheet, how we prioritize which communities we will fund and it's also spread out across the region. We have the last ones funded were Gates of the Arctic Upper Kobuk communities, that they'll be doing and conducting community harvest surveys the next few years.

And then this next one, following that is the Chigniks. So that's the other Region then we will be serving next. So there's always a chunk that goes directly towards community harvest surveys. There's about up to 300,000 available still in funding for other projects to be funded. I would say there'd be just an estimate, probably 80% of the projects that are submitted are being funded right now. And the process, we can also give you information about what the process is, what the exact funding criteria are. We can give you that information if you're looking for that. And the criteria for ranking, prioritizing that all members or core members of the SAC do get to rank and decide then as a Council.

Jack Reakoff: That's the same way with the Regional Council. We make recommendations where they can get up a collaborator to do the investigation, whether the money is there. But this particular project that I'm talking about is cheap. It's not expensive. Gathering the TEK, you have access to several key people, partners. You could go to the Kobuk River. You'll get probably plenty of elders to tell you local knowledge. I mean Tristen here knows exactly where those caribou cross the Kobuk River. Everybody knows where that happens. But then you can start looking at all the vectors of where these populations, what they do. That's an easy one over there. But there's these historical vectors that...

I was going to put one point about this residual populations, Hodzana caribou, which are east of the road. And so that's the Hodzana Mountains and I called that the Hodzana Mountain herd a long time ago because the Ray Mountain and Hodzana caribou don't actually intermingle. But they were like, "There's caribou that live to the east. We don't know." I said, "I call those the Hodzana caribou. They're a residual population." When they had 50,000 Porcupine caribou there in 2019, two or three of those Hodzana caribou cows left with the Porcupine herd, went all the way up to the Arctic coast and were up there on the Arctic Coast calving grounds in the 1002 and then they came back. Then they stayed. So it is something to look at how residual populations can actually… If Western Arctic was to move into Bering Land Bridge, they might actually pick up some of your residual population, and they might actually come back again. So that's an interesting aspect of that. To look at how that happened with Hodzana caribou. That also can be happening with Ray Mountain herds when the Western Arctic herd would come down, down there by Hughes and get in and mix with the Ray Mountain caribou. They actually would pull some away, which they're distinctive in morphology.

The Ray Mountain and Hodzana caribou are way bigger than the Arctic caribou. They're a lot bigger. They got gray necks and light necked bulls whereas Arctic caribou, I've rarely seen a gray necked bull. How many gray necked caribou have you ever seen? You hardly ever see a gray necked bull caribou in the Arctic. But you see that in the FortyMile caribou herd. You'll see that in Hodzana/Ray Mountain herds. The genetics are related to those caribou down here. So it's an aspect of small herds, residual herds being pulled out by large migrations. Just supplementary to your discussion about that one. Thank you, Madam Chair.

Kim Jochum: Those were the main points I had as updates. If there's any other questions though, let me know. Thank you for your time.

Ranger Division Update – Scott Sample -Recording 241114_003
Scott Sample: It's good to see familiar faces and many people I've been talking to for a while. Scott Sample, Senior Law Enforcement Ranger for Gates of the Arctic National Park and Preserve. Also, the Senior Law Enforcement Ranger for the other Northern Alaska Parklands, Yukon-Charley Rivers, Western Arctic and the Bering Land Bridge.

Specifically speaking for this SRC, Gates of the Arctic, this year we had a decent year considering we lost Eric Tidwell to the Forest Service. If you recall, Eric was our field ranger, law enforcement, and he took a new position in New Hampshire closer to home. That was at the end of July, right before hunting season. In the spring, we had good coverage up and down the Haul Road, did snow machine patrols - common areas are Galbraith Lake, the Nolan Mine access route. And then we had overflights for looking up visitor use in the wintertime. There was a lot of use up in the Alatna and along the Hammond, the common areas where people access the park pretty easily. And then with the Gaedeke family at Iniakuk - there's a lot of activity up the Alatna and in Coldfoot - Dirk and Danielle were pretty active in the parks there. It was good to see where use is going in the wintertime. There's never been adventure-seeking, high-marking type activity in the Park. It's all trails going to something, like a hot springs or a cabin. It's traditional use, from what we can see at least, talking to folks, and then from the air.

In the summertime, we did have Al Smith, who is the Anaktuvuk Pass Ranger and another Bettles General Ranger. We're pretty active in the Park, just monitoring resources, particularly looking at high-use areas, like the North Fork and the Alatna. I had a patrol into the Arrigetch Peaks. That got canceled due to the really high water at the end of July because we have limited floatplane access right now with vendors. The group I had out of Kotzebue couldn't get in on wheels.

Then once hunting season came, I started working with Fish and Wildlife Service. Cody Smith was up there quite a bit, flying, so I asked him to monitor mostly the eastern side of the park, kind of the Hammond, Glacier, North Fork area. And then Steve Moser was up there, worked with him, and of course Brian LeMay, the State trooper. It wasn't the coverage that we normally have, especially along the Haul Road, but there were three different agencies basically working that eastern side of the park, just helping us out. And we did the same for them when we were flying. We also had Nick Thompson, who's a ranger pilot out of Eagle, that conducted flights during the summertime during the hunting season. And for me, I'm at Gates, I'm at Yukon-Charley, Kotzebue. I don't usually go to Bering Land Bridge in the hunting season, but I was in Kotzebue and the eastern parks for the hunting season.

Most of our cases, as you know, come as reports from other people. It's not unusual, but it's difficult to observe a violation. So a lot of our cases take time. We've gotten great reports from people who live in the area that can help us start investigations. We work with the troopers. We gather a lot of knowledge where people are going. If you suspect something and report it, we do follow through, and if we come to some conclusion, we'll at least let you know what that conclusion is if it's a report. If it's a case, then we can't usually discuss it until that's fully adjudicated. But so far this year, and now at this time of year, what we do is we research the online stuff, because people post stuff after the season, and we get a lot of information…I've seen a lot of posts on collections of, we don't know where they are, but they're showing collections of fossils. There's fossil hunters up there. They're very careful of where they say they are and they're usually working out of some of these camps which are adjacent to Gates, so you're not quite sure if they're in the Park when they get them or they're just in there on the state land that's surrounding that. So, again, sometimes these cases if we do get tips can take a while. But so far, to my knowledge, we've gotten a good tip from a trusted source this year. We followed through with that. We had help with our own Resource staff to look into that one too. Nothing yet came out of that as far as any of a criminal nature.

And then there was another report of some use that I followed up with the troopers and that was identified as legal use where it was reported where it was thought to be not legal. So nothing that has been reported has been found to be of unlawful activity yet. There's always people that people suspect and that's great because that tells us that people are thinking, they're looking, they're documenting, and all that helps build a pattern. And once that pattern's established, usually we can pick something up.

So right now, working with Mark, we are going to look at the Program, look at our budget. I think Mark's probably talked about that. We're on a continuing resolution, but we are going to be ramping up our back country non-LE program to get more people in the Park doing what we used to do 10, 12 years ago. And so we've been cleared to kind of fill positions that help get people out in the Parks, particularly during the busy summer season. And then for the law enforcement position, Mark and I are working on a solution for that. For an example, Alaska's law enforcement programs at the grade that Eric Tidwell was Alaska is only allowed three new ranger positions a year region-wide and we have to compete with every Park in the state. All the Senior law enforcement officers get together and discuss which Parks need the position the most and then that is delegated.

It's no longer I can just announce a position. There's a national announcement three times a year. They're taking all the candidates nationally, bringing it down to 24 for each hiring phase. And then if those people are selected and you put your name in, then they kind of sell the, who wants to go here? And we do have the option of doing laterals, which means somebody's already in the National Park Service Law Enforcement Program and bringing them in. That's always preferred because they have experience. And I can do that, so that's likely the option we're going to probably attempt here at Gates. But if we do get somebody new, you never know what you're going to get.

One Park in Alaska got somebody at a very high boating Park that doesn't like operating boats or being on water. But they have a two-year commitment once they're hired, so that's unfortunate. But we try to recruit locally if we can, people who are in Alaska, love Alaska, are in the back country. That's been successful in some occasions. Eric was a good example but it's not always the case.

But I do appreciate those who have called us and had concerns, because a lot of ways with our small staff, that's how we start investigating, and we can't do it without those reports.

Jack Reakoff: Alright, so you work with the US Fish and Wildlife and I've met Cody before. He seems like a pretty energetic person. And so if you're working out of Galbraith, you'll look at the Arctic Refuge lands portion if you happen to be in that area also?

Scott Sample: Yeah. It's a benefit for all of us. One, the aviation assets are the best assets we have. I mean, a ground ranger is great, like going up and down the Haul Road, but the pilot has been the most effective because you can cover so much ground in such a short amount of time. So with Cody in particular, he doesn't like flying the road corridor because of inter air traffic. He actually avoids it by flying down the Hammond, down the Glacier, going down the North Fork. And while he's doing that, he's helping me out in the Park Service. And then when we're out there flying, sure, Galbraith is nothing for us to go over up to the Sag River or across over to ANWR and just do at least the western side. We don't have a pay status. It's not like we charge them, they charge us. It's just we share airplanes, we share pilots, we share resources. And honestly, that's likely the future.

And so BLM has a pilot. We have three. We have a 2181, we've got two law enforcement pilots, Nick Thompson and myself, and then we have a biologist pilot as Amy Larson. And then Fish and Wildlife Service has quite a few normal pilots. And then Cody has a dual function. And then Steve Moser for BLM. So we're in the air more than we're on the ground, probably.

Jack Reakoff: One more question there. Did you go into the Itkillik River and see camps for caribou hunters and stuff in the fall?

Scott Sample: We had overflights to check camps in the fall. There wasn't a lot of activity, like Rich Guthrie, who's been a long time guide up there. He didn't go in again. He went in himself, but he didn't take clients in. But when I talked to him, he said the activity was pretty low. There was a lot of high water. During that time, we had at least two SARs (search and rescues) that I'm aware of, one

on the very upper North Fork near Summit Lake. So on the starting of the North Fork before you got to the headwaters of the Itkillik and the person had started off that day and got injured and got flown out. And then I avoided a SAR - somebody landed at Oolah or was it Summit, but they couldn't cross to go down Kayuktovuk. They were wanting to be rescued and I said, "No. Just wait for the water to go down." I think two days later they walked out.

Jack Reakoff: Reading the enabling legislation for self-reliance and stuff.

Scott Sample: Yeah. But it's a concern. So being a SAR coordinator, I have to take every request for SAR seriously. It's putting the liability on the Park Service here. If somebody requests assistance, I have to look at all the facts and I have to look at what's their capability. Is there a potential illness? What's their food source? How long they have food. We've waited 10 days for somebody to just wait out their food, just to see if they would decide to self-rescue. And when they choose not to, then normally we have to go in.

This year, luckily, we had a helicopter in Coldfoot for the one on the North Fork. We talked that one group out of that one out of the Itkillik. We had one up on east of Gaedeke Lake on the Alatna. That was the Alatna Fire Service helicopter in Bettles that helped us out on that one. And I know there was one more. I can't recall off top of my head. It seems like three's on average these days. Two of them were injuries, for sure, and the other one, I think, was the one we waited. We just tried to wait them out and just see if they... I think they landed at the North Fork during the high water time and they immediately said, "No, I'm not going down the river," and I just waited for 10 days, see if the water would come down and they'd go, and they just chose never to go. And so it's a short hop, but it is risky. So I always fly them to the closest airport and they can get a seat fare out if they're not injured.

In the case of the upper one up at Gaedeke Lake on the Alatna, that was an injury that was amazing. I think we got the call at 9:30, had a helicopter off the ground at 10:30. They had her back in Bettles and Wrights waited for her, the caravan waited, the morning one, by noon, and then she was in Fairbanks at 1:00 and I took her to the hospital by 1:30.

Right place, right time for assets. But, anyway, and then we did have one where I was looking at the North Slope Borough. Their area of operation goes into Gates, but it just touches it. And so they have quite a few assets, but they're like two and a half hours just to the Park with their large helicopter, and so a lot of times they just won't take it. But they do have a King Air that they can fly. But it's usually what I find is those planes are too fast to see people on the ground, especially unless people are building fires and trying to be visible with orange or yellow or some bright color. But what we found is visitors in the Park underestimate the Park. They hike on trails in the lower 48 and they can do 18 miles in a day and then they come to the Park and they do six miles and they're just not prepared.

Usually, by this meeting we hoped to have the annual data, but that's required to be reported by November 15th for commercial use folks. So I oversee the commercial use and the concession use in the Park. By the next SRC meeting, I'll have the data compiled for everybody to see where visitor use was, reported visitor use in 2024.

Taqulik Hepa: I was going to say, just I'm glad you were in communication with North Slope Borough Search and Rescue. So that's good. Because we had a couple of calls this season, I'm not exactly sure, but were either a transporter or somebody didn't come back and pick them up. There was no real emergency and I think they let them wait it out too. There was a couple of calls like that. Because what it does is it takes away the assets if it's a true emergency in one of our other villages. So she started to see a pattern and called me and said, "What's going on?" But I think her approach is similar to yours, to make sure if it's a true emergency. But please coordinate with them if you ever have to. I encourage that. And also along the Dalton Highway, we do have public safety officers based out of Deadhorse and there's a lot of activity. There's activity. I won't say a lot, because I'm not that familiar based out of Deadhorse with activities that go south.

And so I just kind of bring them in the loop and coach them on what to look for, who to report, having contact information from you if they see anything that could be illegal or worth investigating. So I would reach out to our chief, Chief Brown with our Police Department. Thank you. And I look forward to hearing your follow-up this spring of what those numbers are.

Scott Sample: Yeah, sounds good. And then, also, the Pump stations have been an asset. We had a SAR couple years ago. Somebody took a wrong turn and went up the North Fork instead of the Middle Fork and got high centered and they were able to pick them off from their boat while they were in the middle of the river. This time around, I think that the North Slope Borough call, it was an extremity injury but with a potential loss of limb was the initial call. Once that was established as they had feeling sensation and movement, that was when it was like, "Okay, it's not a life threat anymore or a life or limb threat." And then the Pump station 4 declined as well, because they are contracted to patrol all that and pulling them off to a couple hundred miles west of their areas only on a life and death. I think they do it, but on this one they canceled. So we have used Pump station 5 and Pump station 4 aircraft helicopters, but it's usually the last resort.

Taqulik Hepa: If I remember correctly, they picked up a group, because somebody didn't come and pick them up. But they just took them to Barrow and these people wandered around Barrow thinking, what are we going to do? Because they were stuck in Barrow. And it’s expensive. Logistically, I don't think that's what their plan was. Because I remember seeing them kind wondering, what are we going to do here?

Scott Sample: The good news, the good and bad, the two-way communication devices now are great. Bad because they're very easy to hit an SOS, but they're great because you usually can establish that two-way communication. And so, normally, we find out what the injury or what the complaint is, and if it's not a life threat, we always try to encourage them like that. The closest asset we can get is

out of the North Slope Borough. You're going to be flown to Barrow and then you're on your own to get back to wherever. And they're like, "Oh, we might figure a way out of this." Because they understand there's a cost.

And then this year with the floatplane, the group that was wanting not to, they couldn't cross the water somewhere in the upper Itkillik River. I called Danielle at Coyote Air and I just explained to her, "They're going to be charged, so charge them for the pickup, not the National Park Service." When I relayed that, they were like, "Oh, we'll just wait a couple days." And so I think it comes down to, "Is it free or do I have to pay for it?" What we find is once people have to pay for it, or if it's not a true emergency and we find an air taxi to come get them, they usually self-rescue. The helicopters that we use are paid for by a national SAR account. They aren't charged for that. And again, like you said, it's pulling an asset off a potential life threat. But in this case, this year something's going on in Coldfoot where there's an exclusive use helicopter for some project somewhere and we got permission from whoever had that contract to use it for that particular SAR. And then the other one, Alaska Fire Service, you had the fire right outside of Bettles this year and they just happened to fly in that day.

Jack Reakoff: One additional question. Can you give us a report on the transporters? I would like to know how many transporters are working out of Galbraith Lake and whether they're permitted to go into the Park for caribou hunting opportunities?

Scott Sample: The only person allowed to guide is Rich Guthrie. But the big game transporters, I have not known of anybody working out of Galbraith. We had some working out of Toolik and of course Bettles and then long ago, Grayling Lake. We'll find out. Because they have to provide coordinates of where they're dropping people off and for what species.

Yeah. So part of the Park Service requirement is if you have a commercial business, you have to provide us with the coordinates of where you're dropping everybody off and what activity are they doing.

Taqulik Hepa: I just want to add too, our North Slope Borough Planning Department is clarifying this language for transporters and others is if there's an exchange of commercial activity, whether it's being a transporter or whatever it may be, that they're required to get a permit from the North Slope Borough. They are. Because we have our Title 19 powers and it's related to commercial activities. So if there's an exchange for paying for fees and stuff like that, they are required. So that language should be coming out soon... that they will be sharing.

Scott Sample: So is that include the portion of Gates that's in the North Slope Borough? Or would that be excluded since the Park Service is managing those lands? Would that also include those CUAs who only go into Gates of the Arctic?

Taqulik Hepa: I'll ask the Planning Director.

Scott Sample: Because we do have some guided trips that fly commercially to Anaktuvuk Pass, which is private land, corporation land, and then they're allowed to walk through to the Park through an easement. Basically, they have to just keep going. They can't stop unless they need to camp. They can camp on corporation land, but they can't camp or stop on Native allotments. It usually depends on what time the plane lands, they might have one night, if at all. But I'd like to know about that too because we would have to inform them. Like, if you're within the boundary of Gates and you're okay with that, then they're already paying a fee. And they're insured because they have to have insurance. They have to have $1 million in liability insurance at minimum, and they have to be approved. Our rules are if they're engaged in congress in the park, so if they pay for renting a boat in Fairbanks and they take that boat into Gates, that's not a commercial operation. Or if somebody plans their trip and then they go and follow that trip without a person guiding them, that's not commercial. But if they're there and they're providing a service in the Park that certainly is.

Taqulik Hepa: But I will ask and reach out to the Director of the Planning Department to see how that works within the Gates of the Arctic. I'm sure it's Borough-wide.

Jack Reakoff: I just wanted to say, I appreciate stepping up your presence up there and looking out for the resources that we have, especially at this time when we have suppressed sheep populations and so forth. So appreciate the work and collaborating with the other agencies. I think you're working on a real good program up there. Thank you.

Taqulik Hepa: I agree. It's always good to have a presence, because if people don't see law enforcement, they know that they're not going to be there, then it's just open game.

Scott Sample: It's a great point, too. Even our cases, Gary and I were just talking about a moose case we had a couple of years ago. When those go into the news and people are like, "Oh." We just finished up a transporter violation in Western Arctic in the fall in December. The group pled guilty. That got in the news. And when it goes in the news, it shows the maximum everything that they could face, because that's the maximum charges and the maximum fines. It's rarely reported what they actually paid. And so it looks like it's an eye-opening amount. And so those are always good because, yeah, people go, "Oh, maybe we shouldn't go there. If we're going to do something nefarious, we'll go somewhere else." Or they just learn, like, "Maybe we just shouldn't do it at all." Hopefully, that's the case. Thanks.

Taqulik Hepa: Thank you. Any other questions? If not, we appreciate you being here.

Wildlife Update – Kyle Joly

Western Arctic Caribou Herd

Kyle Joly: First of all, just thanks for having me at the meeting. I really enjoy this meeting. I learn a lot every time. There was some nice caribou discussions earlier and I just want to touch on a few things before I get started on my presentation.

Commissioner Reakoff, mentioned that he didn't think food was a big issue over in the FortyMile. I just want to let him know that we are working on analysis over there and it's going to confirm his suspicions that food has not changed all that much during this recent population high. Another thing that Commissioner Reakoff touched upon was these remnant herds and interchange. And so we published a paper looking at interchange just a couple of years ago. And like Commissioner Reakoff said, there's a tendency to flow from the small herds to the big herds and that's probably just the social nature of caribou. They like joining the bigger groups. And then the last thing that was touched upon was the issue of mapping trails. Obviously, that's of interest and I'm glad the Commission is interested in that. Just we haven't been able to tackle that due to lack of funding. We have a very small budget. For caribou, we get about $55,000 a year. So we just haven't had the resources to tackle that project. So if there's not any questions, I'll begin my presentation.

So the picture there is obviously a neonate, a newborn calf getting some milk from its mom. It's from a camera collar. We have a camera collar project going on. I'll touch a little more upon that in the second half of the presentation. I just wanted to acknowledge Matt Cameron. He's been a huge help through the Caribou Program.

Next slide is slide two. I just want to say that this presentation as well I'll be giving to the Western Arctic Herd Working Group next month, so you guys are getting an early sneak peek about it. Pollock, I'm sorry, you'll have to suffer through this again in a couple of weeks. So the second slide is where the herd was in the fall. It was pretty interesting. They roughly divided in half with half lingering in the middle of the Noatak and the other half kind of drifting up in that area between Atqasuk, Wainwright and Point Lay. The animals really weren't moving much at all in the fall. They'd really petered out. And then there was that big storm that came through Kotzebue and flooded Kotzebue. Right after that storm, the animals really went on the move. And as Commissioner Pattee noted, the animals were coming through Onion Portage, kind of their usual routes. We had a big push of animals come through just east of Kiana on that ridge system to the east of the Omar. And so some really familiar migration routes, a fair number of caribou migrating. There are still a bunch up on the North Slope, but it was a very, very late migration this year. But that storm did seem to get them going.

Next slide, slide three. We were able, in conjunction with the Alaska Department Fish and Game to deploy 46 more GPS collars. We had to give up collaring at Onion Portage. So all of them were deployed in April via net gunning. In the fall, we had a record high percentage of collared caribou come through Kobuk Valley National Park. We had 72% of our collars come through. It's been super interesting to look at that because the previous year we had a record low percentage of animals come through Kobuk Valley, just 15%. The year prior to that low was a previous record high of 69%. So just a lot of extreme variability in fall migration patterns.

Similarly, zero, none of the collars made it out to Bering Land Bridge. This is the sixth year in a row that they haven't made it out there at all. Seven, eight years ago, we had 75% of the collars out there. So a really dramatic change in especially winter distribution timing of migration. We had 16% of the collars end up in Gates of the Arctic for the winter. That was the most out of any Park, but it was still below average. We track how far caribou move in total. If we straightened out all their movements, they would've gone about 2300 miles. A caribou can walk around the equator of the earth in 10 years that they move so much and they also have the longest terrestrial migrations on the planet.

The next slide, slide four. That shows the areas of concentrated use for the previous monitoring year, which is September 2023 to August 2024. You can see a high use in the Northern Nulato Hills. That's where a lot of the herd wintered. But all the way up through the upper Kobuk, a lot of use of Noatak and then the calving area up north of the Colville there.

Slide five is a depiction of where caribou crossed the Noatak River in the fall. So the fall of 2023. You can see from those bars, the colored bars in the top graph that the use was very heavily concentrated in that upper section of the Noatak where the Noatak crosses from the Noatak Preserve into the Gates of the Arctic National Park. That was the highest percentage of animals that have moved through a Noatak River segment in any year that we've been monitoring, which goes back to 2009. The graphic below shows the average from 2010 to 2016. And you can see it's more evenly distributed over time, and especially there's almost 20% of the migration is occurring to the west. In 2023, only about 1% of the migration was in those two western segments.

Next slide is slide six. This depicts what percentage of collars crossed the Kobuk River during fall migration. And so the yellow bars are kind of our early years of monitoring, 2010 to 2015. About 82% of the collars migrated south across the Kobuk, and this seems pretty normal to what we had been seeing previous to GPS collars being put out. There was always some collars that, some animals that stayed north for winter, but not that many. And then, starting in 2016, there was a pretty dramatic shift, only about 42% or half as many animals were migrating. It's been as little as 6% in 2020. It rebounded to a relatively solid number in 2023, 75% of the animals migrated south of the Kobuk River, and that was the highest it's been since 2015.

The next slide is looking at the timing of migration. This is slide seven. And so this is the average date that collared caribou crossed the Kobuk River. And so again, in those early years, 2010 through '16, the average date was October 6th. And in more recent years, it's almost 20 days later, October 26th. And then this year was the latest, the fall of 2023 was the latest year that we've ever reported. It was so late that I actually had to change my graphic to fit it in. So November 8th was the average date of crossing. And so while it was a fairly reasonable percentage of animals that crossed, they crossed extremely late, more than a month later than the previous average.

The next slide is that same graph, but I've added the red bars. The red bars are when the first animals crossed the Kobuk River, and so in the early years, 2010, 2011, we were having animals cross in August. If you look all the way out to 2020, we didn't have an animal cross until November, so a difference of two months in the extremes. Looking at the average from 2010 to 2017, the first caribou was crossing about September 8th. In more recent years, it's October 5th, so almost a month later for that first cow caribou to cross the Kobuk. And in 2023, the first one didn't cross until October 16th, which is the second latest that we've reported.

The next slide is slide nine. This is looking at spring migration and when they're crossing the Selawik. The animals that made it fairly far south, this is when they're starting their spring migration northward. For 2024, this spring, the average date that they crossed the Selawik was April 27, which is a little early than the average, but if you discount those two late years that we had very deep spring snow in 2012, 2013, it's about average, but there is a three-year trend in earlier migrations.

The next slide is slide 10, just reporting on a couple of papers here that were published during this year. So this one was called Behavioral Adaptation. It's a seasonal resource scarcity by caribou and its role in parts of migration. So basically what we did is we compared the movements of those animals that stayed north of the Brooks Range for winter versus the animals that migrated and made it south of the Kobuk River. And we're just looking at their movements during winter, and so not during migration. Obviously, the migrants are moving much more during migration, but we also found that they're moving twice as much during winter as the non-migratory caribou. The migratory caribou also found two and a half times more lichen than their non-migratory counterparts. So we think one of the reasons that caribou are migrating in the fall is to get to these more lichen-rich pastures. The non-migratory caribou by not moving as much were trying to save energy, and they saved about 10% of their energy daily by moving less. So that's a strategy to conserve energy. Whereas, the animals that move south, they're trying to maximize their lichen intake. For both animals that went north or south, they all slowed down when they encountered more lichens.

The next slide is also a review of another paper. This paper is not quite out yet, but it's been accepted. It's entitled, Evidence for an Adaptive Large-Scale Range Shift and a Long-Distance Terrestrial Migrant. So the takeaways here are we've seen a very big shift in winter ranges, as is documented in those previous slides. And so that shift happened around 2016. In the slide, you can see that in those dark purple areas, they used to be wintering out on the Seward Peninsula. Now, we've had a lot more animals wintering in the Brooks Range. Overall, survival has been lower in more recent years, and this is just for adult females. We determined that if they haven't shifted their winter ranges, survival would've been even lower. So those animals that still continued to migrate were actually having lower survival rates than the animals that chose this new route. And so that's the thought about it being adaptive. They made a decision and it helped them. It was still lower survival rates, but it wasn't as low as if they had gone to the winter ranges where they had been before. The other thing that was really interesting is that the percentage of animals migrating was linked to survival, and so when survival was high, they continued to migrate. When survival was low the following year, less animals would migrate to that region.

Next slide is slide 12, and this is just an article that was published in Alaska Park Science and it's a review of many species and how they're responding to a warming climate. We did specifically discuss caribou, wolves, and bears, but changing temperatures, precipitation, fire regimes, all can impact caribou, as well as icing events.

And so the last slide is just to see if anyone has any questions. Again, another image from our camera collars. You can see a couple of caribou in the Brooks Range on their way north from where they were captured, south of the Brooks Range up to their calving areas. We scored the first round of video collars that were put out and we just got the second round back to the office.

And so we're hoping to start scoring those, and we want to be able to look at caribou diets and more things with the camera collar data. So I'll stop and take questions before I launch into a quick talk about the topics that Commissioner Reakoff was interested in.

Jack Reakoff: Did the Department of Fish and Game get a count this fall? Did they this summer, did they get aggregation sufficient to get a count and a composition of the herd?

Kyle Joly: Yes, great question through the Chair. So Fish and Game attempted to do a photo census. It did not work out. So we do not have an updated estimate. We will not get an updated estimate this year. The last estimate was 152,000 caribou and that was from the 2023 summer census. It's always difficult to make guesses with caribou, but from what we were seeing with adult female survival, we don't think that the herd is rebounding at this time, it's likely still declining.

Jack Reakoff: Yeah, did they fly a fall survey? They normally will fly a fall survey for bull:cow ratio, like an October survey. Not really a photo census, but they do their composition work. Did they get that accomplished?

Kyle Joly: They do a spring composition count every year. Mostly they've been doing every other year for the bull ratios, the fall composition counts. I don't know for certain if they got that done or not, but I can find that out for you.

Jack Reakoff: They should have that at the Western Arctic Caribou Work Group as data presented most likely?

Kyle Joly: Yep. We'll know shortly, but I can just reach out to them and ask. I know the Western Arctic Working Group Executive Committee did ask for a discussion about bull cow ratios, so that is on the agenda for the Working Group. And that meeting is the 11th and 12th of December in Anchorage.

Pollock Simon Sr.: I have a question predators. In all areas where there's a lot of wolves, like in the Kotzebue area, I was sitting on the Western Arctic Caribou Herd Working Group. There's a lot of pack of wolves in that area chasing caribous and more grizzlies were seen here and there. So I want to know how many predators are in the area?

Kyle Joly: Yes, great question. So I don't know if Zack is still in the room, but the Park Service did try to attempt a bear survey out in the Noatak area. My understanding is that they were not able to get that done. Is Zack there?

Zack Delisle: Yep, I'm here. And that's exactly right.

Kyle Joly: On the wolf front, I know that Raime Fronstin, the biologist for Western Arctic Parklands, which is based in Kotzebue, he does have a camera trap study to try and determine abundance of wolves out in the Noatak. So far, that's been a small-scale pilot study. I know he's going to try and expand that, but there have not been very many wolf studies in the region. The last big one was done by Warren Ballard and I don't know if some of you remember Lee Ann Ayres who used to be the Refuge manager for Selawik, but that was about 40 years ago. So there is quite a lack of studies going on with predators in the region.

Taqulik Hepa: I just wanted to add, too. We just had our Fish and Game Management Committee meeting and that was also identified from our Committee, that data gap is on the knowledge of predators across the North Slope. From what hunters are saying that the predators are abundant, whether it's wolves, grizzly bears, wolverine. The directive or the information that we received from our Committee is to see if we could stir up enough interest from research groups to look at abundance of predators.

Jack Reakoff: My question is for you is, do your hunters look at the number of golden eagles that are present in the calving grounds? Golden eagles in the Arctic Refuge are the number one predator of caribou calves. They're in the top three, but mostly they're the number one predator, because they can kill caribou calves a lot longer than land-based predators, like wolverines and wolves. So Tristen, here, do you see a lot of wolf activity or a lot of wolf harvests? And your hunters in your area, you're basically got your finger on the pulse of the caribou on their wintering grounds. They're coming into your region the last couple of years, what do you see?

Tristen Pattee: Yeah, so every year we go hunting right behind the hunting grounds in Ambler, that's where the caribou go right through. And yes, this year we saw huge amounts of wolves. There were just so many that we even thought they were caribou as we're hunting. But I don't see a lot of harvesting of the wolves as much as it was when I was a kid. You would see a lot more of that happening. Nowadays, we don't. Everybody's more focused just on the caribou and it just seems like there's a lot of pressure on the caribou because you got all these different predators and humans going after the same thing.

Taqulik Hepa: The other interesting comment about predators, too, that was made at our meeting was because of the increased presence of predators in particular wolves, I think in the wintertime. That a lot of the groups of caribou that have wintered on the North Slope are hugging our communities. And pretty much all winter long, we've had caribou surrounding some of our communities across the North Slope.

Tristen Pattee: And just to add to that, to what you just said, along the Red Dog Road, we've noticed that a lot of the caribou, they would actually stay very close to the road because we think the predators are a little more scared than the actual caribou are, so we noticed them staying very close.

Taqulik Hepa: And then just my last comment, the description of the wolves that I did hear from people out in the field recently, at least the wolves that they saw, pretty big, very big, very fat and huge. Good to hear that from people who've spent time around them, and they're hearing them say that whatever type of wolf they came across recently was huge. In other words, that's a big statement to me.

Tristen Pattee: All right, on slide 11, I just had a quick question of, I see the difference between the 2016 and the 2021 data, how many of those collared caribou are shifting their migration pattern? Is there a certain percentage that you know off the top of your head or that you can get?

Kyle Joly: Yeah, if you look at slide six, so that shows the percentage of collared females that migrated across the Kobuk and that didn't. And so, prior to 2016, it's above 80%. So the vast majority of collared animals were migrating south of the Kobuk River. Since that time, it's only about 42%, so about half as many as we were previously seeing. And then some years, like 2020, which probably you remember, only 6% of the animals crossed and they didn't cross until November. It was a really dramatic change.

Last year was back up to 75%. This year, there's still animals on the move at this point. I'm guessing it's going to be less than 75%, but it's hard to say, as there are still animals on the move. Yeah, it's a fairly dramatic shift. About... percent less animals proportionally in the herd migrating south of the river and they're doing it much later.

Tristen Pattee: And yeah, I just wanted to comment that yeah, since 2016, I have noticed a big, big difference on the migration of the caribou. My family has private property at Onion Portage and that's usually where we go every single year growing up. And they used to jump through the property, just flowing like water around us. And so I definitely notice a big shift. And then, as we continue on, now they're coming later and later, we can't even make it to Onion Portage to harvest our caribou. It's all by ATV in the back area of Ambler now. So I definitely can see how this data makes sense to me.

Do you know if it would make sense, or would it be impossible for predator collars to actually happen to be able to track their activity?

Kyle Joly: Yeah, it’s definitely possible. The big hurdle, I think, in my mind is funding. We do have a wolf project over in Yukon-Charley, which is all the way on the east side of the state abutting Canada. That project's been going on for 30 years. And so we have the expertise, we know how to do it. We've been doing it for decades. It's really, really expensive to do. And Yukon-Charley's a fairly small park compared to Gates and Noatak and those places.

One is a funding issue. The other one is, I call it bandwidth. Do we have enough bodies, people, biologists, to go out and do the work? My staff is fairly limited. It's just me and two Mat(t)s for a fairly big area, and so taking on a project like that, we would have to have more staff and so that compounds the problem with funding.

But from a logistical side, they make wolf collars. We've been deploying them for decades. That's something that can be done. We did have a grizzly bear project that ran along the south slopes of the Brooks Range in Gates of the Arctic and south of it, from 2014 to 2017. And so we did get a lot of good information and publications out of that. So we've done quite a bit of bear work. We'd be happy to do more. Again, those projects are pretty expensive. That bear project from 2014 to 2017 was probably pushing a million dollars.

Taqulik Hepa: I just want to add, you just reminded me about...There was a discussion about a bounty. Some of the people on our Committee were knowledgeable of the last wolf bounty that was around the North Slope. So my uncle was reminding me, my grandpa used to go and collect the wolves and turn in the left paw, and they would give him cash at the game warden's office.

But it was $90 back then and that was a long time ago. Even if they took the pups and brought the paw. So my mom was a little girl and they got three pups and then she thought they were theirs to keep, but my grandpa killed them and took the paws and brought them to the game warden. My uncle was reminding me of that story. It was so funny. But anyways-

It's something that has worked in the past, and if there was plenty of wolves back then and there was a bounty, are we coming to a situation where we're in a position like that again? And I know there's a lot of pros and cons and a lot of emotion from different views on that. But I think from a user perspective and a manager perspective, we should really, predators play a huge role on the overall health of the population of caribou. So we need to think about that very seriously. Thank you.

Jack Reakoff: My question is for Tristen is, you see a lot more wolves when the caribou show up, and then you don't see so many when you're hunting moose?

Tristen Pattee: Yes, pretty much before the caribou show up, we will rarely or, if we even do see a wolf. But once the caribou do show up, there's a huge influx of bears and wolves that show up. I mean, it's neat after, when the sun is about to go down, when you're in those hunting grounds, you'll just hear them howling. So it's neat, but it really shows how many show up during the caribou migration.

Jack Reakoff: Madam Chair I ask. I'm of the opinion that there's nomadic wolves, nomadic packs of wolves and individual wolves that actually travel with caribou. They just follow them around. And then when caribou come through, there's resident packs, but they're like drawn with the caribou and they pull even over the borders of their territory. They get pulled with them. So when we had all those caribou, the Porcupine herd wouldn't cross the Haul Road. They were just staying to the east. All the caribou from our valley would go to those caribou. They'd be gone all winter. You hardly would find a track.

Then when the caribou took off, our resident packs would bounce right back and go back. A lot of them are denning inside the Park areas and stuff. They'd come right back and go back to their den sites. So there's different demographics of wolves. How you would determine who is a nomadic pack to put a collar on? That would be a completely like getting a lead cow caribou, would be a unique situation. The number of caribou is down, so their actual... If you looked at the number of wolves in comparison to the number of caribou, their incidence of mortality actually goes way up, because there's so fewer caribou, in general. And the wolf numbers are, the wolves are actually stressing.

The thing about wolves is that they will cannibalize each other. There's too much stressing going on. They're going to eat each other. Because that's a very common thing. I've seen that lots of times. I don't know that collaring the wolves would be a real viable thing. Gets a lot of cool information, but we've got lots of telemetry work on wolves all over the place. Not so much there with the migratory, the caribou that are going on these long migrations, the Porcupine and Western Arctic herds, those got really long... And Porcupine's actually gone much longer distances, 2,200 miles for the Western Arctic, 3500-3,600 miles on Porcupine Caribou.

I just looked at the Porcupine Caribou Management Board at the break, and I just found out that the Porcupine Caribou Herd, that I was testifying that'd gone into Canada, it's now coming back. And some of the lead cows are actually all the way back to Arctic Village. Those things are nuts. They go all over the place. So they went back to the east. But now, they're going hundreds of miles traveling around. You know that they're dragging around a bunch of wolves. They're following those things. The wolves got to burn a lot of energy doing that too. So this, supplementary to this predation thing, it's going to be interesting to see what the Western Arctic Caribou Work Group is actually going to start advocating for predator control. It's what I'm going to be interested to see what they're going to think about doing with this predator issue, the predator numbers for that herd. So thank you Madam Chair.

Tristen Pattee: I just had maybe just an observation, just looking at your 2021 migration shift, just getting, just through conversations with friends from Noatak that hunt quite a ways up the Noatak River, could it be possible... Well, I know there's a lot, a lot of bears. I'm just wondering, based off of the fish decline for that area in the recent years, I wonder if it could be possible that because there's such a large, large amount of bears in that area, could be shifting their pattern as well. Just this year, a friend saw just on his one trip home, he counted 17 bears. And I've been hearing different reports from friends the amount of bear activity that's in that area now, I'm wondering if that's a potential cause of the shift in these caribou migration patterns.

Taqulik Hepa: Even the guy from Point Lay, just south of Point Lay, is the calving grounds for the Western Arctic that he did report to quite a few bears just hanging around waiting. There's the haul out of the walrus there too and have been disrupting that herd that's resting on the beach, but moving back and forth between the land and the coast. Notable though.

Pollock Simon Sr.: Thank you Madam Chair. I just want to comment on the wolves, when the caribou start declining, they limit the take for the people to cut down. But the wolves and grizzlies keep eating the caribou. My idea is that to put down some wolves and grizzly bears, we will be saving caribou. Thank you Madam Chair.

Kyle Joly: I just wanted to say thanks to Commissioner Pattee. It is really gratifying to hear that what our western science is showing, it's matching up with local observations. And then a comment for Commissioner Reakoff, in that study that we have over in Yukon-Charley, we have two different types of wolves. We have wolves that are pretty residential and they primarily just feed upon moose that are in their home ranges. And then, we have wolves that come back to dens, but in the wintertime, they range all over the place looking for caribou. And they'll cross other wolf packs' territories a lot to go find those FortyMile caribou. And so yeah, they do drift and the caribou herd is a magnet for those wolves that go wandering about.

Next up, hopefully you have some more slides. It's called a cotton grass update. So Commissioner Reakoff asked for some information that we've been working on about cotton grass. And so the picture there is the combs, or the flowering heads of tussocks. And so the second slide is a picture a few years ago when we were doing field work out in the calving area of the Western Arctic herd. That's a picture of Keith Bosturn that I took, just off his right shoulder, so just to the left of him, you can see the combs and also just off the right of him, the tussock combs are out in June. And in fact, the combs are formed the previous year, and so they're available as soon as the snow melts off or if the caribou kick off the snow, they'll be lingering under there.

So the next slide is a picture of those combs looking down. And what makes them really unusual, most everything is brown, you can see that the inner tussock space, it's still frozen solid. The permafrost is just below the ground. Nothing's really greening up. Some, you can see a couple of shards of tussock grass becoming green here. That's a shot from June 8th. So everything's still pretty brown, but those tussock heads are out and available, and they're also quite nutritious. And so they are a target of caribou.

The next slide shows a picture of caribou from a camera collar, dated May 26th. The next slide has an orange oval, and you can see it's highlighting some of the combs. It went straight for these and ate them. What we don't really have information on is how nutritious these combs are when they're first exposed to, all the way through calving. And so that's something that I think would be interesting to look at. They do come out very early.

So the next slide is a picture from May 23rd. Again, another caribou just walked right over to them and started feeding on them. My next two slides are actually videos and I don't know if you're able to show them those? This is information we're getting off of the camera collars. They're nine second clips, video clips. The first one, you're seeing a lot of caribou chin hair, but at the end of the nine seconds you can see that the animal's going over and eating the tussock heads. And again, this is really early, this is May 20th.

Jack Reakoff: Kyle, while they're setting up here, all of these collar cam photos, these are on the calving ground, this is on the Utukok Highlands in May 2023?

Kyle Joly: So we haven't gotten that far yet. That's an excellent question. So we caught these animals south of the Brooks Range, and so I haven't linked up the GPS locations to the videos yet, so I can't say where... I know when they are, but I don't know where they are at this point, and that's something that we want to do is kind of map out where and when they're working on these grass heads. But just from the geography of it, we were in a fair amount of snow when they got caught in April, and then soon afterwards they were migrating north primarily over snow, and then they were in the Brooks Range where there isn't tussocks. And so they're coming off the Brooks Range and then intersecting with tussock habitat. And so I'm not sure if it's right in the calving ground, but if it is not in the calving ground, it's just south of the calving ground on their way to the summer calving ground.

Jack Reakoff: The first video, the sun is shining into the caribou's face. It's just gobbling up cotton grass combs.

Kyle Joly: Yeah, it's just going for it, going for it, and then right at the end, about second six through nine, you can actually see the combs that it's going to work on next. And then the second video is the same thing, again, very brown tundra. That first video was from May 20th, so they're working on those combs very early in the season as soon as they're becoming available, and they're basically available as soon as it's snow free for them because the heads are forming the previous year.

And then the second video I just wanted to show because this should be the calving grounds, it's June 5th, and so the animals should be in the calving grounds, and again, it's doing the same thing, it's pretty brown. You can see some tussocks and then it goes right over to the tussock heads of the combs and the video actually ends with the stem is sticking out of its mouth, there at the end, you can see a green stem sticking out of its mouth. Were you able to show the second one too.

Jack Reakoff: We're watching that one right now. And a lot of those, some of those combs are actually in the pollen phase, so you can see the pollen handle.

Kyle Joly: So the next slide, I got to thank Heather Johnson, so this is the ninth slide. So she's also doing a camera collar study. She's helping us with our camera collar study, but these data are from the Porcupine herd and they're a couple of years ahead of us in processing things, so they actually have some data, and I asked her to just give me some preliminary data on how much they're eating these flower heads, these combs, and just Eriophorum in general. That's the scientific name for the tussocks, it's Eriophorum vaginatum.

And you can see from this graph, if you're not familiar with reading these, just the flower heads themselves is almost about 20% of their diets during this time. And you can see that the camera collars started producing data for them on May 21st, and already by that time they're just really focusing in on eating those. And all bits of the eriophorum, 25% of your diet. And then it really tapers off very quickly, by June 18th, things are greening up and they're going to switch to other items that are more nutritious as these flowering heads get less nutritious. So they're starting to switch over to shrubs and things like that by June 18th, but I thought you'd appreciate just seeing some of this preliminary information, and hopefully we'll be getting the same type of data for the Western Arctic herd.

Then the last slide's, just another picture of those combs.

Jack Reakoff: So the starting dates are May 21 is that's when the analysis is. But this year, I'll just use this year as an example. Porcupine caribou were 20 miles north of Wiseman. They were basically stayed, they actually moved into the Park, not that many, but some, quite a few moved into the Park. Then when they moved back out where a large percentage had been just to the east of the Road. They opened the tundra up as they were pawing for lichen, but that also exposed the cotton grass to heat. And so on the 20th of April, the cotton grass, the combs started to emerge and they immediately switched to eating the combs. And so that's kind of the starting date, is they're moving with the comb emergence in the low part of the range, and as they're moving all the way to the north, the 21st, 23rd of May, they're pretty much out on the Arctic Slope. They're basically following the tundras melting out, and they're staying with the comb. As it gets too warm, the comb opens up, you see it in the last photo here. You see it in pollen. The wind's going to blow, it's going to pollinate, they don't want it anymore. They only want it until it pollinates. And I've killed caribou that were just yellow on the mouth like a honeybee, just covered in yellow pollen, just like you see in the image there.

So these starting dates are actually a little bit... That's why I feel that we need to have cameras actually pointed at the tundra to observe when the combs emerge at different points so that we know when they started onto the protein. In the graph here, this is a super interesting graph. The mean calving date is the 6th of June, but it's this final gestation, all of this huge protein. And I really encourage you to do the trophic analysis of the Eriophorum vaginatum because it's got so much pollen, so much protein, the volume is of 25%, but it's a phenomenal amount of nutrition for the caribou, and they're finishing their gestation.

So in reality, what is happening is the cow caribou is in gestation, eating lichen, which is sugar. It's drawing proteins out of her muscle structure until she gets to this, until this tundra opens up. She's got the comb emergence, then she starts banking protein, putting it into the gestation. She's also starting to re-bulk again, and she's going to prepare for this final gestation. They grow, you've killed them in April, they're really small, they hardly, they have no hair. But if you kill a cow caribou in late May, it's got all of its hair. The calf's got all of its hair. I used to kill caribou, and lots of caribou are killed. We had thousands of caribou around when I was a kid.

The fetus is phenomenally developed. It's tripled to quadrupled in size on this protein, and that's why you could get the late spring of 2013, they didn't have the protein. So basically they pull all of the energy out of the cow and then it kills them in the summer. They're under lactation demands.

So it's very important that we start to think about, like Galbraith Lake, they have cell service there. They can actually have, I was talking to Erin here about that, is having cameras pointing at the tundra, south facing slope, wind bearing tussock, and on the north side. And so you start observing the tundra, and when you start to see the combs, that's your starting date. That's when your caribou actually have protein. If they're present there, they're going to have protein. That's going to have a huge effect on the overall productivity of the herd. So this work is excellent. I just really think you're doing a great job here. And this Porcupine caribou work, are they triggering these collars on the 21st of May, Kyle?

Kyle Joly: Yeah, that's what they picked as the start date. And the camera collars are kind of tricky. They're bulky, they're heavy, and they're kind of data limited as well. And so you got to kind of pick your window. Based on some of our conversations, we went a little earlier, we went May 15th, thinking that that's probably when they'd be getting over the Brooks Range and into this tussock dominated habitat. So we'll be looking at that to see if we're catching them coming out of mountains into that good Eriophorum habitat. Hopefully we did catch it, but yeah, those combs are out earlier, so if they are in-

Jack Reakoff: It depends on where they're at. If they're wintering in an area and if you've got a comb emergence, they're going to stay with that comb. Look at Porcupine caribou, you can go on Porcupine Caribou Management Board and you can scroll to where those caribou are at and you'll see that they started, they stayed basically on the south side of the Brooks Range into the crest of the Brooks. They didn't actually, if you think about their calving day on the sixth, they calved in the mountains because the Arctic Slope had a later spring. It was colder over there. They're not going to go to the Arctic coastal plain just to eat snow and lichen, they're going to stay with the comb. They got it, they're going to stay with it. That's why they will calve in the mountains, is if they have a... they don't have the food to go with it. So I've talked too much about caribou.

Taqulik Hepa: I might contradict what you said, but anyways, like you, I grew up out in the country during this time of the year, and as a young teen and younger kid, we'd be at camp until the 1st of June because it was still very frozen. We'd be out there until that time, and there was a lot of snow. But nowadays, in recent years, it's like we're in a rush to come back, come the second week of May. And it's very interesting because, even in the fall time, to better understand when did the bulk of the caribou move, even in the fall time, these slides that Kyle showed about the fall migration and the timing, especially this year, that we saw a big bulk of the Teshekpuk Lake herd just up, way up north, until it snowed. Once it snowed then, and correct me if I'm wrong, Brian, I was looking at the information from the weekly maps, but once it started to snow and the temperature dropped, then things started to move around. But they were pretty much congregated south of Teshekpuk Lake and across the North Slope.

And so it's very important that we pool this information together again and to have an understanding if they're going to be spending more time on the coastal plain, or just across the North Slope, what does that do to the overall herd is something that I have to think about as a user and somebody that's very dependent, our communities, on caribou.

Just to think about that because I know people wait for the migration to come, both in your area and Anaktuvuk Pass. And we're always waiting and waiting and waiting when they begin to come, and then once it gets cold and they move, you really don't need the maps to figure that one out. But the caribou biologist might think something different. And then in the springtime again, it's like come

May 15, there's hardly anybody out there at their cabins because the rivers are starting to flow. Lots of exposure of land, so we can't get back, so we're in a rush to get home during that time. And where, growing up, it was like we'd stay until June. Very different. But anyways, my thoughts for us to think about as we continue to gain more information from the science community and then what our local hunters are saying.

Jack Reakoff: The North Slope is huge and it was quite a bit colder from the Haul Road. We go on that side in the spring and we went over there on May 17 and there was ice right against the side of the Road, it was all snow. Those nigliqs were just standing on the snow. It was quite a bit colder over there. And if you look at where the... I would like you to start looking at this-

Taqulik Hepa: Yeah. I was talking in general terms, not this specific year. I'm looking at the last few decades. Growing up from the seventies and eighties. Yeah, just in general. And I know specific years because we have to set a closure for egg picking, right? It all depends on the snow again. Is it going to be late? Is it going to be... And again, the last couple of years it was colder, which is good, but it varies. But in general, over time, over each decade, it's been pretty dramatic. Those memories of us staying till the end of May aren't there no more. So that was my point.

Kyle Joly: That's all I have, Madam Chair. Thank you very much for listening to my presentation. Definitely send me questions if you have any. And again, just really appreciate learning from all of you. It's really great meeting, and thanks.

Taqulik Hepa: Maybe I have a question for you and Brian, just thinking about it broadly, not any specific year, but are you guys noticing the dropping of calves away from the traditional week that they typically drop?

Kyle Joly: Thank you, Madam Chair. Yeah, so we've looked at that. We try and avoid the calving grounds as much as possible, but we do have new techniques to look at the GPS data to determine when the animals calve. And we haven't noticed much of a change thus far in calving dates. There is annual variation, but we're not seeing any noticeable big change in the dates. It's not trending earlier. It's not trending later at this point. But there is information out. There was a recent paper looking at the last wild reindeer herd in Scandinavia and they had to do a bunch of culling of animals cause they had chronic wasting disease. So they really skewed their bull-cow ratio, dropped to something like 15 bulls per hundred cows. When that happened, they did have later calving. The theory there was that all the big bulls had been killed off and the immature bulls were the ones fertilizing, and they just weren't quite as efficient as the big bulls, and that pushed calving back a bit. But so far in the North American herds, we haven't seen a big trend in earlier or later, but it's something that we're trying to keep tabs on.

Taqulik Hepa: Okay. And then I think my other point too, aside from that, which is good and I expected that, but would be, because of the melting over time, again, no specific year, is there no... Because I know, for example, we're quite a few ways from Teshekpuk Lake where our camp is, and at some point over time we'd notice a cow and a calf that's maybe enroute, but are they dropping before they get because of the change in the month? Something to think about as well, en route to their calving ground area. And I know when my mother was alive, she did ask Geoff Carroll when he was an area biologist, "Why are we seeing these cows with calves in our area when they're not quite..." You know what I mean? So just something to think about and is that a helpful thing to observe to help us understand what's happening? Thank you.

Kyle Joly: Thank you, Madam Chair. Yeah, I appreciate all these observations. They trigger thoughts and sometimes research projects. We did do a study looking at spring migration, and in those years where the caribou do encounter really deep, kind of mushy snow, they go slower, they have a harder time getting through that stuff. And we do see animals calving before their traditional calving grounds. We've had animals calve in the Noatak Preserve prior to getting to the North Slope. There's actually documentation of caribou calving in Gates of the Arctic occasionally when they get stuck by these deep snows. So that does happen. But yeah, please do share these observations. They're very helpful for any biologist willing to listen to them.

Resources Update – Ellen Lyons

Ellen Lyons: Thank you, Madam Chair, Commissioners. I am going to direct you to the last two pages of TAB-5. There is a list of projects that have been proposed or conducted within Gates to the Arctic this year. This is for 2024 field projects. You've heard some presentations about a lot of the projects on this list, specifically the sheep projects and the caribou projects. But some of the other things that have happened are, so these projects are either conducted by the National Park Service or by other entities and they receive authorization from the National Park Service to collect data. The University of Alaska Fairbanks has collected some tree growth data at the tree line. That was a one-year project. There was a one-year project that collected songbird data that was by Jeremy Mizel and that was near Anaktuvuk Pass and included some time on Nunamiut Corporation lands.

Stanford University conducted some geology data collection along the North Fork. They floated the North Fork of the Koyukuk, John, and Alatna Rivers. That was for PhD research, and that was the last year of that project. They flew out of Bettles to conduct that work.

We did do some native seed collection on Walker and Selby Lakes, and that was the second year of five years for that project. The cultural resource work at the same place didn't happen as expected due to some logistical difficulties, but they were able to get out and do some vegetation monitoring. And also the Upper Kobuk Moose Survey did not happen. It got weathered out and so they couldn't go in and collect that data.

We also collect annually snowshoe hare data that Donna DiFolco has been doing for the last 20 years. She has retired and so she has transferred that project over to the BLM, so it'll continue, but it'll be conducted by the BLM instead of the Park Service. And then of course we received the presentation on the rusting rivers.

You can also see we had a couple commercial use operations happening in Gates of the Arctic out of Anaktuvuk Pass. That was, there's some backpacking trips, the top of the second, the back of that page. And then we have large lakes and streams data collection every year. And that's fix-winged access from Bettles, and that's water quality data.

And that's really all I have to present, unless anyone has any questions.

Jack Reakoff: I see the one is the boundary survey with the BLM, and that's delineating the actual park boundary along the east side?

Ellen Lyons: I don't know. That's actually a good question. I'm sorry I don't have an answer. Maybe Mark does?

Mark Dowdle: I don't specifically know the specifics, but I think the BLM was just looking to clean up some things or improve upon the boundary survey. I don't know the exact locations either, but we can get that for you and follow up.

Jack Reakoff: The BLM land and the Park are right adjacent to each other. That's what it would seem to be. That's what I was asking. Thank you.

Ellen Lyons: And I forgot to mention, another weather and climate summary study that has been done. We have two climate and weather scientists in the Park, Pam Sousanes and Ken Hill, and they collect data, weather data, climate data and data on permafrost. And if you review, it's the last page under tab five, you can see that this was for the Bettles's area. And you can see that although we are getting increased temperatures some months, decreased temperatures in some months, overall we're seeing a gain of 0.9 degrees Fahrenheit for the average summer temperature. And we're seeing a gain in the average precipitation of 3.85 inches of the average in the summer as well. And so this just documents some of the trends that we have been observing over this one year.

Jack Reakoff: This data is pretty important because, and it's important to explain the snow depth because that has an impact on the moose and wildlife resources. Deep snow is beneficial to the wolf population and shallow snow is detrimental to the wolf population, and deep snow is detrimental to the ungulate populations. So I take weather for the National Weather Service, and this mapping here, it's sort of assuming that there's less precipitation north of the Bettles, but in reality, I had a 13.2 inches of precipitation in Wiseman, and again this, in 2023, and then I had 11.4 this summer. So which are way over what would be an average. So had some really high precipitation. Plus we've got lots of snow.

So this is part of this climate change thing is wetter conditions in general when it gets cold enough to make snow. And then these temperatures, like we were talking about, it actually the earlier the temperatures melt, the sooner the animals have exposure to high protein foods in the springtime. So it's a double-edged. So thank you, Madam Chair.

Taqulik Hepa: I was going to say this, and we all know this too, that animals respond to the conditions, whether it's the wind, the currents, the snow, the rain, the thaw. And to be observant, to be adaptable as, because access to the resources or the timing are going to change. I know, growing up on the river too, that water temperature, our fish were very sensitive to change in temperature, and we knew when it was time to pull the nets because of the way the fish were, they were acting real lethargic, it was time to pull nets. Or other fish would come in when our target fish would want to go hide in the deep lakes.

But yeah, we should always remember that, and a lot of changes have happened over the decades, and being observant and making sure that our hunters are going to be safe is so important. I know I had an uncle fall through a river when he shouldn't have because it was in the fall time and coming back from ice fishing and in an area where they typically routed to Barrow that they fell through the river and that's never happened before. And him not thinking about that kind of thing.

So we always have got to remind our hunters to be observant and to make sure that the conditions are good as things continue to change. And again, I think my other message was just animals respond to the conditions and we need to acknowledge that and to make sure that we're putting the two together to get a better picture. Thanks.

Ellen Lyons: Thanks, Madam Chair. I just want to point out that this handout only covers summer temperatures in Bettles, there is an internet address, website address at the back page at the bottom, and I am sure that there's additional information there. You can also reach out to either Pam or Ken with any questions. And you can also reach out to me and I'm happy to get whatever answers you need. Thank you.

Taqulik Hepa: They went back a week later and picked up his snow machine that was still in the river. It was okay.

Subsistence Update – Marcy Okada

Subsistence Management Plan

Marcy Okada: So this is our subsistence management plan. And it was largely created with help from this Commission, and it's very outdated. The Commission voted to pass the hunting plan recommendation, but that hasn't been common in the last decade or so, just because the Federal subsistence management program essentially took over for all federal lands in creating regulations. But I'm hoping to bring this management plan back up to current status and I'm going to need your help, especially for the folks that still have copies of their old one. And I think where the new people come in is, I've been always meaning to provide an orientation for folks. It's like what is the purpose of a Subsistence Resource Commission for a National Park or Monument? And why are you guys coming to these meetings? What kind of input can you provide? All these questions you might have, it's all in this management plan.

So I think at the suggestion of what Taqulik had brought up in the past, we're not going to overwhelm ourselves with doing the entire management plan all at once. I think you're suggesting Taqulik was just to do it chapter by chapter, and some of the chapters we can actually skip because they're introductory, nothing's changed, it's the baseline that stayed consistent. But what I will use these chapters for is to, as an orientation to our newer members. Taqulik, you had mentioned the charter that was recently signed by our current Secretary, and for some of our Commission members, they're not familiar with the charter. And so we have to explain things more because we don't want people to be confused. That's the last thing we want.

And so what I'm going to be doing is breaking it down chapter by chapter so that we can review it and make sure that everything is up-to-date and the way this Commission wants it. I think we had talked about doing a working group or a committee and I'm open to ideas. If we don't want to discuss it at a Commission meeting, maybe we can create a separate working group and then we can get through it a lot quicker, or I'm just open to suggestions.

Taqulik Hepa: If there's no timeline, I think taking it sections by sections, or topics, but not doing the whole thing, but a little bit on the agenda would be the way to go. Because I think everybody would benefit from the review of the document. And it's good you're looking it up there, but if we did it in our meetings, just having a hard copy for us to review or you could email it to us before, so we could look at those sections before we come. It's just easier for me to read something, even at night in the hotel room to get caught up. But those are my thoughts, but open to what direction this Commission would like to go for it. I know we did spend a lot of time on it, which was good. It was a great exercise, but kind of tedious, huh?

Jack Reakoff: Madam chair, this Steve Ulvi, we were working on this on our hunting plan. He developed this idea for this working, living document, hunting plan compilation. And to go back through it again, I agree with Taqulik, we should have a hard copy in front of us. It's hard to work off a screen. And so if we could receive those a month out or before our meeting in a printed form. So I work better off of printed. So I mark them up. I mean like my agenda here, this is all scratched up. I got all kinds of stuff. So I could go through it and I can make notations on the paper.

Then when we arrive at the meeting, then we could go down through that section by section. I think it'd be really good for the newer members to understand what different things we've done over time. It's 40 some years later, things have happened. So I do think that it's worthwhile. Part of this Commission's work is to go through the hunting plan section by section, but it should be a hard copy and it should be an allotted time to do that.

Taqulik Hepa: I don't see any opposition to that. Any other thoughts?

Tristen Pattee: I mean, I agree on the hard copy, but I do see double screens where I'm at all the time and so I'm really good at seeing everything on the digital. Yeah, if I can just get an email, it's a lot easier for me to take notes on actual screens because of software nowadays. And yeah, it's a little different for me. The hard copy will just sit for me, just sit there until the time of the meeting. And I'll have a computer in front of me usually.

Marcy Okada: I think I'll check in with people to see what version they want. I think we're starting to see the spectrum of the generations.

Taqulik Hepa: Some of us would say you could just mail it to us, but you know mail, now it takes a long time.

Jack Reakoff: I could probably print it if it's not too much. I don't want to crash my printer.

Marcy Okada: There are 13 chapters. Some of them will take, we'll just like this one is the intro. We'll fly right through it because nothing's changed. And the meat of it is just what hunting recommendation plans were submitted, so I need to add that. But it is a good review for the Commission to take a look at it. And it shows the history. It shows who were the Commission members back in the day. Folks can reminisce because I'm sure you all have stories.

Taqulik Hepa: I think when we're in Ambler, starting off at the beginning would be good because it will be a public meeting, and you never know. Maybe folks from your community will come or students to listen to that portion of it and they might learn something as well.

Marcy Okada: As a reminder, I mean, I don't know if folks know, but you guys have a direct link to the Secretary of Interior. So unlike the Regional Advisory Councils, the Subsistence Resource Commissions for the Parks and Monuments, can write letters to the Secretary of Interior. And we also share it with the Governor of Alaska because there's supposed to be some fold in from the state.

So these are all things that for one reason or another, I've always tried to have folks try to come in early, do an orientation, but then folks are limited. And out of respect for your schedules too. We get you in for the meeting and then we get you out. But like you said, we have more time when we're in a community so we can really sit down and take a look at things and discuss it.

Tristen Pattee: Maybe it would be, I mean nowadays you can Teams call, you can actually have a computer chat. You don't have to actually travel somewhere physically so that can be done just remotely as well.

Marcy Okada: Yeah, because I really highly recommend that we just keep chipping away at this and just bring this up to date. It's been long overdue.

Taqulik Hepa: Just curious with the other SRC's, how are they with their? In the same boat?

Marcy Okada: I think we do have a Subsistence Resource Commission for a Park/Preserve. They're very highly proactive and they're completely caught up. They have a working group or a subcommittee, I think they call it. Wrangell-St. Elias, they've been doing a

good job moving along and that Commission writes a lot of letters also. And then you have some units that due to turnover, staffing turnover, it's uncertain whether they have a Subsistence Management Plan. So I would say we're kind of in the middle. We got to get caught up, but at least we got a good thing going. We just got to really hash it out.

Taqulik Hepa: I think after we went through the process of bringing it to where it was, there was a lot of staff involvement and commissioner involvement, community involvement. That was a really great exercise, but we burnt out at the end. We were like, don't put it on the agenda for a while. But I think it's time again. It's good. Thank you.

Marcy Okada: So yeah, just wanted to bring this to your attention and hope for your cooperation and energy. I appreciate it. I mean this was the main update for me. I think Kim provided some background on some of what we have going on for different park units and with the SAC funding and all that. And I don't really have too much of a subsistence update.

We do have a couple projects in the queue for funding, Taylor's project. And then we have, Pollock made mention that sheep were an important resource for the residents of Allakaket and Alatna. So what we did was fund a Dall's sheep traditional cultural landscape study with Dr. Annette Watson. And she was able to go all the way up the Alatna River to Gates of the Arctic. Spend some quality time up there with an elder because the motor, the boat broke down. But we were able to send a new motor via helicopter and they came back down.

But that information is being documented for the Allakaket side and the Alatna side. And then I'm hoping to, once some story map is created, I'm hoping to get Dr. Annette Watson here at a meeting and she can present the project. One thing we always realized was the central Brooks Range where Gates of Arctic is, we're known for our sheep population. So hoping to better inform management so that we can protect sheep now and into the future. I think that's it for me.

Jack Reakoff: On the sheep issue, sheep were a large portion of the subsistence harvest for Wiseman community. The reporting system was flawed with the federal subsistence reporting system. I know we sent in a moose report from our village that didn't arrive. I mean when they present at the Federal Subsistence Board, there's one sheep taken by Wiseman. I know we killed three to six sheep per year. I mean I was sharing sheep meat at meetings and stuff. We're a small community. We're only like 12 people, so it was a large component.

We've gone on personal conservation before we got closure. We've not hunted sheep. No one has hunted sheep in Wiseman. There's no data of harvest inside the Park at the southeast Gates of the Arctic because nobody's hunted there. We're not hunting there. And we're not going to hunt there until the sheep population comes around. And that's going to be after 2026 at the earliest that we'll be able to hunt there.

So sheep has always been, you look at Arctic Village, you look at Anaktuvuk, you look at Wiseman and even I know people out of Bettles used to go up into the North Fork and hunt sheep up near Allakaket and Alatna. Even Hughes, people from Hughes would come up and go up into the Park. So sheep is a big deal. Over on the Kobuk side, there's lots of various people, Clarence Wood and all kinds of various people went up into the Noatak. If you're near the mountains, you hunt sheep. If you're in Nenana, you hunt sheep. If you're near Denali Park, you hunt sheep. That's what happened. That's what people have always done that. So sheep is an important animal.

The sporting community, it's not a subsistence animal. There's 110 pounds on a big ram. There's a lot of meat on a sheep. And sheep were hunted early in the fall before we could hunt. We would either not have caribou present or we would not be cold enough to keep moose. So we hunted sheep earlier in the year. And so it was always in late August and September before we even had caribou.

So when Anaktuvuk Pass this year, because they didn't have caribou again. They hunted sheep kind of a lot. I got lots of friends on Facebook and they hunted a lot of sheep. They were hungry for meat and they share extensively with elders. I mean, I know an elder he would've got way more than his fair share of sheep meat. So sheep has been a big deal for when these caribou migrations don't show up. And so the sporting community doesn't think that they're a subsistence animal, but they are a significant portion of the subsistence use for a lot of communities. Depends on how close. And when we had sheep, I could see them from my house. I could put my spotting scope on the floor of my cabin and look at sheep on the mountains. They're right there. We always hunted sheep there. People live in the mountains, sheep was a big deal.

We're trying to get this population back and everybody in our community would not hunt sheep. And so it's not just this village or that village, it's villages that have access to sheep or have a long-standing tie to hunting sheep.

You ever read Bob Marshall's book where they go to the head of the North Fork of the Dietrich River to go get sheep that were cached up there by the old timers. You can read that in Alaska Wilderness. You can read that in Arctic Village. So this is a long, long trip before the Park was there. So I had a supplementary to the discussion on the use of sheep. Sheep is a large component of mountains. And Gates of the Arctic is a mountain region, so that's why you would see them. Thank you, Madam Chair.

Taqulik Hepa: Don't forget Kaktovik. Their high school is the Kaktovik Rams. But yeah, typically during the holidays too that people from our communities will go to the mountains and harvest sheep as well. It is a very important delicacy.

It's kind of like polar bear because we don't get that many polar bears. But when we do, it doesn't get to too many houses so it's always a delicacy and shared with the elders first. And they're so lucky to get it because everyone wants it. But we just don't, that's not what we do. But it's such an important resource. Same thing. Thank you.

17. Closing Comments

Jack Reakoff: I started on the Commissioner report. I thought we had a really good meeting. I thought the State's presentation was excellent. And I'm really happy to see new staff, a very capable staff. I'm glad they hired Zach there. And so I will say it, and I've said it many times. We had contention with the National Park Service when the Park first started. And over time we have a very compatible and basically dual goals for the resources. So I think that we work really super well with the Gates of Arctic for many, many years now. I think it was in the late 90s when they all came around. The Regional office decided that subsistence wasn't that bad and let's work on the subsistence thing. So I'm really happy to see that there's enforcement presence there. And even just being in the area can have a big effect on what people are thinking.

So I'm happy that Erin's here. She's BLM's new biologist and she can spot sheep like you wouldn't believe in the snow. I was out with her. We were doing some lynx telemetry stuff with Knut Kielland. She's an excellent spotter. You need somebody to spot something, she's good at that.

Thank you very much for this meeting to our Commission members. I'm really happy to see Pollock here again. You're looking great, Pollock. Look forward to you coming back to Ambler. And Tristan's back for this meeting, so thank you very much.

Tristan Pattee: Yeah, every time I come to these meetings I seem to learn or I seem to find out how much I don't know about the whole area. On the last meeting in the Kobuk Valley, they did some sheep stuff, but here it was a lot more extensive because it's more important I guess. You're in the mountains, so there's a lot more of it in there so it's very interesting to listen about.

I just want to thank all the people that gave their presentations and take the time to be here. And of course, the Commissioners for having me. It's good to meet Pollock. And I hear you mention Levi Cleveland, which is my great grandma's brother. And so it's really cool that you worked with him at some point. And yeah, I'm really happy you guys chose to come to Ambler. I look forward to showing you my home and I'm excited for everyone to be there that can attend.

Pollock Simon: Thank you Madam Chair. I'm glad to be back here again. Many years ago when we were having meetings. We had meetings in different hotels. First we moved here and had the first meeting in this room here. There was the first members were Levi Cleveland and Ben Nageak, there was Charlie Brower too and Bill Fickus from Crevice Creek his home was. All of us old timers, they were pretty knowledgeable about the areas they represent. Like Bill Fickus, he lived in Crevice Creek before since he was young. He moved up there and he did some guiding business and he had a little mine there. So when the Christian came up and moved up that way, Bill Fickus knew everybody like representatives and old timers that lived around there.

Levi Cleveland was also knowledgeable about his areas and sat on some other different Boards. He knew a lot of people and he was in [inaudible 02:04:30] for many years. He always, when Board members got bogged down on some issues, he'd speak up and then they would realize that.

Levi and I would eat breakfast over here in the restaurant. In those days, the restaurant was open 6:00am for breakfast. And he told me when the meeting started in the morning, "Eat breakfast with me." I said, "What time?" "6:30am." Said, "Oh, that's an early hour." At that hour, 6:30am, you're sitting down. But he was a great guy. I learned a lot from him.

And the first meeting was in Wiseman where Jack Reakoff was living. He wasn't an adult at that time, but we had a good meeting there. I can't remember all those times. I had to go to different villages and everybody showed up for meetings. And we had a meeting there recently one time it was good up there too.

But now, Jack and Taqulik run a good meeting. It's good to be back with all of you. I don't know how long I'll be coming back again. I try to be here. I think I come back every year for a reason. When they first told me to be on the Board, I said, "Okay, what will we be doing?" And said, "You'll be on the Board for three years talking about the fish and game." I said, "Okay, I'll go three years." Turned out that time 50 years later I would still be sitting here talking about fish and game. But I return every year because to preserve the fish and wildlife and living areas for the next generations. What we learned from our father and our grandfathers who lived off the land. And there's a lot of changes coming now, development, progress kind of stuff that you can talk with them and tell them what we want. But the main thing is our next generation, our children, they should have freedom to fish and game in the future. That's why we are sitting here. Thank you very much.

Taqulik Hepa: Thank you Pollock for sharing that and bringing us back into the history and the decades that you've given your time to advise us on this Commission. That's been wonderful. Wonderful. Good to know you and listen to you every time you come to the meeting, so thank you. Mr. Superintendent, you want to say a few words before I wrap up?

Mark Dowdle: Thank you Madam Chair. Thank you all Commission members. I'll be brief. Tristan, I too am humbled at how much I don't know and how much I learn every single time. And I am also ever more appreciative of the representation from many different places around Gates of the Arctic that really, those viewpoints really make a huge impression on me and I think really make a difference too. And I'm glad that we're a partner in this. I really am. And I very much see it that way. And we rely on you and your wisdom and experience and that's very much appreciated too. And I want to thank our staff, particularly Marcy who works so hard to make this happen. The logistics is not an easy thing, and she pulls it off every single time and looking forward to coming to Ambler next spring. Thank you.

Taqulik Hepa: Thank you. And maybe just in closing, I just want to thank everyone for coming, our presenters, our staff. Thank you Mark for allowing us to have our meeting here and just with your staff. It's just been wonderful. Thank you Marcy.

But I want to wish everyone safe travels home. Before I say that, I thought too, it was a very good meeting. Lots of good information. I really appreciate the focus we're going to take onto the harvest management plan. I think that that's great. It is time to shake off the dust and re-familiarize ourselves on what our roles are, what that hunting plan does, and bring our new members up to speed. And Levi actually helped us with that. He was a great contributor. I really miss him. He was mentioning some of the older guys. Raymond Paneak was another one too that participated and others. But it's been such an honor to serve on this Commission. I look forward to and hopefully will get reappointed by the governor. That's why I'm trying to be so nice. Make it easier to listen to me. I'm just kidding.

But, no. Actually it is because we have two communities from the North Slope that are member communities of this Commission. And any way that I could help in my working capacity, I think it's important. It is really good to be Inupiaq and to have this bond of people that use the Park is so important. To get to know people like yourself and Levi and Gary from Bettles. There's so much history and knowledge in all the information you shared over the decades growing up on the North Slope and the history of the Dalton Highway and the hunting areas you have is so valuable.

I can say I've been to Allakaket and it was wonderful. I got to use their tribal snow machine. They just gave it to me like I was a tribal member. It was wonderful, just the hospitality. But my point is it's a great Commission. I feel like we're family. Partnerships is important and wish you all happy holidays. We're almost there. Thank you. Marcy?

Marcy Okada: Madam Chair on that note, you've served on this Commission for 25 years. I just want to say thank you. I met you before I even worked for the Park Service. I was a graduate student at UAF doing work on the North Slope. Remember the first day I walked into Taqulik. For those that don't know, she's the director of the North Slope Borough Department of Wildlife Management. And Brian Person is one of her staff members. He's on the call. And yeah, met you back then and then ended up working for Gates of the Arctic and have continued to work with you. So I do appreciate all your years of service. It doesn't go unnoticed. So yeah, if we could just also take a group photo.

Taqulik Hepa: Okay. No, I had no idea. But anyways, thank you. Like I said, this is one of my favorite Commissions because it's so dear to my heart. Sometimes I feel like I'm from Anaktuvuk Pass, just trying to be an advocate for them or from Nuiqsut. And it's been an honor. Thank you.

18. Adjourn

Tristen Pattee: I make a motion to adjourn the meeting.

Taqulik Hepa: Moved and seconded to adjourn the meeting. All those in favor say aye.

Everyone: Aye.