# Kotzebue Sound \& Lower Kobuk Advisory Committee Minutes 2.19.13 7 pm <br> Roll Call/Quorum 

## Lower Kobuk

Raymond Stoney
Wilbur Howarth
Glenn Miller
Lonnie Tebbits
Leonard Brown
Not present: William Zibell \& Larry Westlake Sr.
Kotzebue Sound
Karmen Monigold
Victor Karmun
Michael Kraemer
Cyrus will be joining
Pete Schaeffer will be joining
Eugene Smith
Enoch Schiedt
Not present: Pierre Lonewolf, Alex Whiting.

## Introductions:

Clyde Ramoth-non-voting member John Ray
Susan Georgette
Brittany Sweeney
Brandon Saito
Charlotte Westing
Ray Hander
Mary Norton
Ernie Norton
Jori Norton
Jim Menard
Marci Johnson
John Erlich
Brenda Erlich

## Approval of Agenda

Moved: Eugene Smith
Seconded:
Motion to approve
Agenda Approved

## Elections

Table Elections till the next meeting

## Up for elections

Michael Kramer
Victor Karmun
Eugene Smith
Discussion of timing elections.
Eugene Smith: I believe the elections should take place during a Kotzebue Sound only meeting. Motions to table the elections to the next meeting time.
Seconded
Call for question
Motion carries to have elections at a separate meeting.

## Approval of Minutes

## Kotzebue Sound

Eugene Smith: motion to approve meeting minutes
Seconded:
Question:
Kotzebue Sound Minutes Approved

## Lower Kobuk

Lonnie Motion to approve meeting minutes

## Seconded

Question
Lower Kobuk AC meeting minutes Approved

## Reports

## Brendan Scanlon: Dolly Varden Project

The first of the fish projects is about dolly varden and it is funded by the Bureau of Ocean energy and the Red Dog mine.
Dolly Varden are second to bearded seal and caribou for subsistence species.
They come to fresh water to over winter, they are not sexually mature until they are seven years old. The tagging study suggests that the fish move quite a distance. Three fish went to Russia to spawn, a few fish went to Unalakleet. Dolly varden were found all around the Bering Sea, but we don't have any information about Dolly Varden in the Chukchi sea.
We count dolly varden just before freeze up where dolly varden come in to the Wullik to overwinter. The spawning fish are only 3-5,000 fish.
Enoch Schiedt: There are a lot of fish up other rivers are these fish included?
Brendan Scanlon: Do the fish go to where the oil and gas leases are sold? We used pop up statellite archival transmitting tags, measure temp, depth and light intensity and pop up off the fish to the surface for up to two weeks. These tags are fishery independent and you don't have to fly telemetry. You can schedule pop up dates. We had a variety of pop up dates to allow for variability in possible migrations of fish because the tags won't pop up in freshwater.

Explains methodology of tagging fish with satellite tags.
Raymond Stoney: Inquires about the monitoring process.
Brendan Scanlon: Explains how the tags work. We wanted to find the largest fish that we could because we wanted the tag to stay off of the tail

Clyde Ramoth: Ask how the tags are attached to the fish.
Enoch Scheidt: Wondering about recapture of fish to get an idea of return.
Brendan Scanlon: When the fish swimming really fast the tag lays down a bit. We looked at temperature, depth and pop up locations.

Of the 20 tags released we got information for 15 fish.
Public: inquires about the release and behavior of fish
Two fish were caught in the gill nets in Kivalina
One was caught in Buckland
One was caught off of the airport in Kotzebue
There were several fish swam up
One of the fish was close enough to the surface of the water and the tag released the information.
One of the fish died and floated North
Explains three different kinds of fish movement
River residence
Ocean Entry: characterized by abrupt drop in temperature
Marine Transit: no depth availability.
Marine Feeding: This fish was at the site for 40 days and dove continuously, they are diving about 50 feet.

Currents in the Chukchi sea shows a spot of upwelling that occurs over in the currents coming off of Russia.
Proxy of ocean entry see water temp drop to zero degrees
350 KM moved for five days
They spent most of the time in the upper 15 meters down to 50 meters.
Explains movements of fish in Kotzebue Sound and near Buckland.
Shows pictures of the Russian River that the dolly varden went to.
Dolly Varden spawn ever other year
We have missed some information because of the variability of pop up dates.
The water by the Russian Chukchi Sea are an important area for dolly varden.
Ray Stoney: The fish are mostly headed west
Brendan Scanlon: This study showed that the dolly varden did not move through the Bering Strait. Cyrus Harris and Pete Schaeffer joined the meeting.

Dolly Varden can move large distances in short period of times. When they look for oil they use seismic testing while drilling oil.

Eugene Smith: Question about continuation of the project
Clyde Ramoth: Inquires about other studies like this one.
Brendan Scanlon: Gives an outline of fish and tagged
Enoch Scheidt: I have seen a lot of dolly varden up the Noatak. The people in the North Slope talk about getting large trout in the big lakes.
Brendan Scanlon: We are talking about getting more tags to be released out by Kaktovik.
Enoch Scheidt: It is really important to get an idea about resources.

Michael Kramer: Wonders about Wrench Creek, Krugoruk, and the Kelly, have you seen any problems with beavers creating problems with migrations.
Brendan Scanlon: I have heard about that possibly happening with more adult fish than juveniles.
We are going to wait to a little bit later to tag the fish. We are going to tag fish in Kivalina in the lagoon. We are going to eliminate the July $1^{\text {st }}$ pop up date.

Glenn Miller: We had a lot of ice this summer, the ice didn't got out until July. Did that have any effect on the dolly varden and did the high water have an effect on the dolly varden and whether they are successful or not successful. The first boat was July $1^{\text {st }}$. We had a 100 year high event. The weather has effects on fish I am curious of the effects of the convergence of those two weather event.

Brendan Scanlon: Dolly don't like saline water and it allows the water to get colder. Dolly varden don't like to be under the ice pans, they like to move as quickly as they can out of that. As far as the high water goes I know it can impact salmon. We won't know for a couple of years. The nice thing about the Wulluk River is that it is a true metapopulation.

Glenn Miller: I know that flying can be affected by high water. These two events are likely to have high consequences.

Pete Schaeffer: Is there any correlation between the information you are getting and climate change.
Brendan Scanlon: Explains that that would take a longer correlation set to understand.
Public: Inquiry to determine if the fish had spawned or not.
Brendan Scanlon: it is amazing how good the fish look after sitting in freshwater all winter. It is really hard to tell if the females have spawned. You can still see the kipe on the males, but it is harder than you think to be able to tell.

Public: in the fall time they are really easy to identify, suggests having the fish being tagged in the fall
Brendan Scanlon: We thought that the condition of the fish after spawning might cause higher mortality which would reduce the amount of data we would have gotten, we try to get healthy fish.

Wilbur Howarth: You said that the harvest was about 30,000 fish between Kivalina and Noatak? What is the population about 200,000.

Brendan Scanlon: We think about 80,000 trout between Kivalina and Noatak It is hard to determine the number of fish in the Noatak because of the size and depth of the river. We radio tagged a bunch of fish in the fall to find their over winter range is, and we wanted to use a sonar counter, but the river needs to be about 230 feet across up river and the Noatak isn't like that until way up river. I would say between the two rivers maybe 500,000 fish but that is a guess.

Mike Kramer: It looks like this tag is large, is it possible that this limits your data collection.
Brendan Scanlon: We knew that we were cutting on the edge for the size of the tag for the size of the fish according to the manufacturer.

Mike Kramer: Wonders about duration of the study of the fish

Brendan Scanlon: We are tagging of the biggest fish and likely the oldest fish. That made us think about the length of time we are leaving the tags on the fish.

## Sheefish Report:

Presentation for Saveride looking at spawning frequency and timing of migration. We used smaller internal radio tags they last longer they turn on and off.
Maps of the Sheefish in Alaska they are mainly in the Kobuk, Selawik, Yukon, Kuskokwim.
In the 1990s we estimated $\sim 30000$. The Kobuk and the Selawik populations mix during the winter, but are distinct spawners.
In this project we are trying to be a better idea of spawning frequency to get an estimation of abundance of fish. We want to see the proportion of fish spawning frequency. In 2008 and 2009 we tagged 150 fish and we used two tracking stations to track abundance of fish as well as timing. Sheefish are really good at holding radio tags. We knock the fish out with clove oil. We have really good survival of fish that were radio tag. One of the classes in Kobuk has been tracking the movement of sheefish. The strong concentrations were between the Paw and the Selby rivers. The basically stay in the main stem of the Kobuk river and they down really migrate up the tributaries. They migrate at the beginning of August and they are all spawning by the end of September. The downward stream migration happens pretty quickly they are moving out at the end of October where ice begins to form. The females tend to be larger.
We took samples from people in the winter harvest people catch a smaller range of fish. Sheefish don't spawn till they are eight or nine years old. Only about $1 / 3$ of the females spawn every year mostly males spawn every year.

Raymond Stoney: How many eggs are successful from a sheefish
Ray Hander: the big females have like 400,000 eggs
Cyrus Harris: Inquires about the use of traditional knowledge.
Brendan Scanlon: We tried to get the public involved in this project between the youth project as well as local hire.

In the Kobuk it looks like things are good. The winter harvest there are lots of smaller fish that are being harvested as well. There are a whole lot more fish than we can count.
These big fish that are spawning I throw them back they can live to be up to 43 years old. I know that Selawik and Kobuk stocks exists. Is there a Noatak stock?

Brendan Scanlon: We have never flown and tagged sheefish, the ones that they do catch are small, but to my knowledge there isn't a spawning stock.

Clyde Ramoth: I am wondering about sheefish combining Kobuk and Selawik sheefish. Have they done any salinity tests on sheefish. There has been a question about how far these sheefish migrate.

Brendan Scanlon: It is curious that the Kobuk and Selawik River sheefish don't mix. I know there have been fish caught up in Barrow and I don't know where they are coming from.

Enoch Schiedt: Half way up the Noatak we get big sheefish coming up in the summer time. They come up in swarms.

Brenden Scanlon: I am guessing they are just feeding fish, not spawners, but there might be a spawning stock.

Brittney Sweeny: I wonder if you can characterize the use of sheefish habitat over time.
Brendan Scanlon: I think we are going to continue to use the tags they have a year and a half of data off of them. We would love to get more tags up here. It is hard to do research money on anything, but salmon.

Brittney: I guess I was thinking about doing it over a long period of time.
Clyde Ramoth: Depending on funding? Do you have further studies up the Upper Kobuk?
Brendan Scanlon: The radio tagging data came from the subsistence funding. As far as the traditional knowledge we have a resource specialist that goes to the village and listen to the people about harvest patterns and we cannot discount that information.

## Sheefish Report

## Ray Hander Fish and Wildlife Service

Talk outline: Distribution, permafrost thaw slump an influence of the thaw slump on the distribution of sheefish.
These whitefish they have limited spawning spots, they represent a pretty specific portion of the river. In the Selawik, in the Yukon and in the Kuskoskwim.
Sheefish are repeat spawners they go to their own river where they were born and spawn and there are no records of them changing rivers. Females broadcast spawn, with the male and the female drift down the water column. The eggs sift down in the gravel. There is probably pretty high mortality rate. In 2000 there were estimates put out to be about 20,000 fish harvested on an annual basis. Sport fishing takes about 1000. The study that ADF\&G is pretty cool it allows us to hone in on the spawning area. The FWS service is doing a telemetry study to identify spawning areas. In 2005 we had another radio telemetry project the fish keep going to the same 22 mile section of the river they spawn in. Why do they go back to that part of the river to spawn?

Brendan Scanlon: Sport fishing has special regulations of 2 to 6 fish depending on where you are in each of the rivers.
Clyde Ramoth: very small portion of the locals go up there except to get special oil.
Cyrus: Inquires about asking traditional knowledge about that area is so special.
Eugene Smith: there is a certain area where your father showed me there is rock in that area.
Ray Hander: They need gravel for the eggs to sift down into the substrate.
Selawik permafrost thaw slump, explains image of older more stable permafrost and the discontinuous permafrost. The discontinuous permafrost encompasses in the Selawik and Kobuk rivers. The NPS documented more frequent permafrost slumps. In June 2004 there was a large thaw slump. We couldn't rod and reel fish to do the sampling. We ended up having to saine the fish. The slump melts and flows out. The slump is on the south facing slope and when the sun hits it melts.
Shows pictures of the thaw slump. In 2006 there was a high water event and there was lots of silt from the slump. In 2008 in the fall, water does get clear as things start to freeze. In 2012 you can see lots of material that has come out of the slump. The slump is slowing down due to vegetation, it is still getting bigger. We are trying to figure out what proportion makes up the sheefish population in the early and late winter. Is the Selawik run or Kobuk run getting weaker? We are using subsistence harvests to compare population proportions from the winter harvests of fin clips. We are up in the spawning area and we collected 200 males we take their otoliths and fillet out the fish, then we count the lines or the rings to age the sheefish. The scales are not a good age indicator because the fish are so long lived.

Clyde Ramoth: Inquires about variability in the lines on the otolith.

Ray Hander: it may be stress related. In 2011 and 2012 we have gotten Kobuk sheefish they are incidental catch from the Kiana fishery. This is the only study that I am aware of that we have comparable age information. The fish come into being a spawner at age 9 and live to 17-18 years old, they quite growing to a point after they get to a certain age. I worked with the native village of Selawik and asked them if we could do the research. I recognize a few faces from the research projects that I have been working on. The federal subsistence management program was set in play for 10 or so years before fish was taken on a subsistence resource. OSM make regulations about subsistence species. I worked with the village of Selawik one of the deals was that we save the meat, we hung it and dried and we got folks to come up river to meet us. The Selawik IRA took over from there. Our otolith collection we moved down river and set up our sonar collection. We needed a section of stream that was $60-70$ feet wide. It is a nice sloping bottom and other side is a cut bank. The sonar unit was developed by the military and converts sound ways to images. All of these things moving are humpback whitefish. The humpback whitefish and waiting there to spawn, this is what we are seeing. If we had other fish as big as sheefish we might have a problem, but there aren't other fish as big as the sheefish. The largest humpback fish do not get to be as large as the smallest sheefish. The largest humpback whitefish are waiting to spawn. If we had other fish as large as the sheefish it would prohibit us from doing this method, but it is not the case in the Selawik River. In 1995 year the amount of knowledge the numbers of sheefish that have spawned. We had a mark recapture procedure done we tagged their dorsal fin. Now that we have the sonar we can more easily count the fish as a census and we are confident in the numbers.

Clyde Ramoth: Inquires about state and federal data collection.
Ray Hander: We try to get the highest standard of data collection between Brandon and myself. Sonar is a lot wiser use of money and time.

Clyde Ramoth: Inquires about federal and state agencies have different ways to count fish.
Brendan Scanlon: We work for agencies, but we use a lot of the same tools.
Eugene Smith: How many years of data do you have?
Ray Hander: We have two years of data, but the ice chases us out not the fish.
Raymond Stoney: Inquires about being able to use the sonar under the ice.
Ray Hander: Explains ice formation on the sonar and on the bottom of the river.
Raymond Stoney: Inquires about the health of the fish.
Ray Hander: We don't have to handle the fish with the sonar which is nice.
Eugene Smith: Inquires about estimation and variance from the fish.
Ray Hander: As you are tracking the fish run you can tell the movement of the fish.
Brendan Scanlon: From the Kobuk the tracking stations will pick up the radio tags no matter what the weather conditions. This is a way to detect and estimate how many fish.

Eugene Smith: The reason why I am asking is because of the heavy use of sheefish for subsistence.

Ray Hander: The sonar decreases the cost and the effort required for counting fish. Asks the question if there has been enough silt to affect the efficiency of spawning.

Ray Hander: The fish that are coming in from 2011 and 2012 we haven't really seen the fish coming back into the spawning population yet. The Selawik is having a problem with thaw slumps and the Kobuk does not.

Clyde Ramoth: Reminds the AC that I don't have any voting powers. I know that the climate change issues, we need the funding to continue the studies because of the concerns of the populations and the level of change and we need to get the money flowing for more research on sheefish.

Eugene Smith: is there any more commercial fishing for sheefish.
Jim Menard: There hasn't been any legal commercial fishing for sheefish.
Carmen Daggett: Inquires about the total number of sheefish
Brendan Scanlon: maybe 500,000 fish.
Eugene Smith: I know it is premature, but I think we should talk about commercial of sheefish. We should start the discussion about what might happen when we have a decline in sheefish.

Wilbur Howarth: Is curious about the whitefish up the Kobuk that we hadn't seen them before. I took it to an elder and she said they come from the lake. Every year we get more and more of the whitefish. Studies like this need to be funded.

Ray Hander: Take a picture of the fish and send it to us, we are always curious about those fish.

## Proposals

Proposal 215
Kotzebue Sound
Discussion: They left out subsistence use in this proposal and seeing that I don't like this proposal at all. Michael Kramer: I would like to amend this to make this proposal management unit specific.
Seconded
Question
Motion carries as amended
Proposal 215

## Lower Kobuk

I would like to motion to support proposal 215
Seconded
Motion carries
Proposal 217

## Kotzebue Sound

Eugene Smith: I would like to make it management unit specific.
Eugene Smith: I don't know why they are trying to go statewide with this proposal.
I think we can agree with it.
Michael Kramer: I would like to make a motion to make it management unit specific. The theory the fish where the fish thrive and caught.
Pete Schaeffer: I would like to remind everyone that the state water is unit 26.
Comment: The areas that are getting really intensely management.

## Motion fails

## Eugene Smith: Make a motion to support the proposal

Seconded:
All Support
Motion carries
Proposal 217
Lower Kobuk
Lonnie Tebbits Motion to support 217 as is.
Seconded:
All support motion carries

## Proposal 218

Kotzebue Sound
Discussion:
Pete Schaeffer: I think this is more problems down in the Nome and Unalakleet proposals
Eugene Smith: I hate this kind of proposals and subsistence wasn't mentioned again. It is not specific enough. I hate to see the Kuskokwim not being able to subsistence fish.
We need to protect subsistence
Pete Scheaffer: I am not sure this proposal says anything about that.
Eugene Smith: Motion to take no action on this time
Seconded:
Abstained from voting

## Proposal 218

Lower Kobuk
Lonnie Tebbits: I motion to take no action on proposal 218.
I get proposals like this because I am on the federal fish and game, we get more proposals like this. The more support they get the better support from the board.
Discussion: we are supporting those individuals who are in different regions
Jim Menard: Explains the SET (sustainable escapement total) and the management concerns.
Motion fails
Wilbur Westlake: I would like to make a motion to support this proposal. My understanding was that the person who was doing this proposal.
Motion to no to take action..
Eugene Smith: Explains the subsistence fisherman representation not present.
Carmen Daggett: Explains the possibility of re-writing the proposal.
Eugene Smith: This is going to affect the people on the tributary not the people on the ocean.
Karmen Monigold: Explains the compounding effects of different groups.
Jim Menard: This is somewhat about making these decisions on the data.
Eugene Smith: This proposal only affects the fisherman on the river.
Clyde Ramoth: I don't have any voting power, but I would either support it or take no action.
Seconded:
Question:
Abstain from taking action

