

YUKON RIVER DRAINAGE FISHERIES ASSOCIATION
A Riverwide Meeting on the size of Yukon River Chinook Salmon
Anchorage Hilton Hotel
Anchorage, Alaska
October 30, 2006
8:30 a.m.

INTRODUCTIONS AND WELCOME

Ms. Jill Klein, YRDFFA Executive Director YRDFFA Executive Director, welcomed everyone to the meeting. The purpose of the meeting is to share information, to listen to each other and learn from each other, the local people who are on the river as well as the scientists and the fisheries managers. She outlined the meeting objectives:

1. Share local and scientific knowledge
2. Identify if there is agreement on aspects of the issue
3. Develop next steps for the riverwide work on the issue

INTRODUCTION TO PROCESS

Ms. Jan Caulfield, facilitator, went over come of the guidelines for the meeting. She went through the agenda and then had everyone present introduce themselves.

LOCAL OBSERVATIONS

Mr. Brian Carlson, Y-1 District, stated that 60-70 years ago there was bigger fish. He felt part of the problem is the gear that is being used today compared to then (nylon compared to cotton).

Mr. Virgil Umphenour stated he was concerned about the genetic integrity of the king salmon on the Yukon River. He fishes with a fish wheel himself, as well as buys fish from different areas of the Yukon River as well as the Tanana River. He has observed that the king salmon are getting smaller and smaller. He was also concerned that there were few five-year old females. The fish that are getting caught and not making it to the spawning grounds are not only the large fish, but also the female fish. He stated that 80 percent of king salmon getting on the spawning grounds are five years old and younger. He stated that Larry Ingall did a study on how long it takes fish to get tough once they go from salt water to fresh water. He found that the catch and release survival rate of cohos caught within the intertidal area have an 80 to 90 percent mortality rate. Ten miles up the river it drops to less than five percent. In response to a question Mr. Umphenour stated that in their fish wheel on the Tanana River this year out of 80 kings they caught, 7 or eight were less than a pound.

Mr. Paul Williams, Beaver, stated that many of the fish he caught this summer were small males. He was concerned about how the river will survive. He was also concerned with keeping the river clean which could possibly help the fish.

Mr. Roger Alfred, Yukon Territory, stated that back in the 60s and 70s the Chinook salmon was in good shape and larger. Between 1978 and 1984 the size of fish changed and the run also changed. Between 1986 and 1991 the quality of the salmon changed. The fish was soft. The size got smaller. They were also skinnier. The number of fish decreased. Between 1993 and 2006 the quality changed. The flesh is very soft. They have also observed the traditional drying process takes longer. He felt some of the problems they are seeing with regards to storage are due to climate changes.

Mr. Bill Alstrom, St. Marys, stated he has been involved in the fisheries since the mid 1950s. In the last few years the average king weighs between 25 to 30 pounds. In the early years most of the fishing was done with set nets. Now most use drift gear. He felt that the problems cannot be all blamed on the mesh size and type of gear used in the lower Yukon River. He felt the changes in climate are also a factor. He stated that they need to look at what is going on out in the ocean and what the fish feed on there. There are many factors that are affecting the fish, not just one. He felt was important not to blame each other, but to look at all the factors and issues.

Mr. Mike Smith stated while there are many factors that can affect the fish, they as fishermen can only affect their catch rates and harvest strategies, their ways and means. He agreed that there are fewer fish in the river as well as smaller in length and weight.

Mr. Tim Andrew, Director of Wildlife Resources, AVCP, stated he has seen variations in the fish over the years he has been fishing and there have been good years and bad years. He added that the Yukon River Chinook salmon live in an extremely harsh environment. He discussed the possible effects of the cold winter temperatures and ice thickness. It is hard to come to a conclusion with all the factors that could affect them.

Mr. Carl Sydney, Yukon Salmon Committee, agreed that fish are smaller and the runs are smaller. He felt that while they could not have any control over the environment or what happens in the ocean except through the international fisheries associations that deal with the high seas fisheries, they can control how they fish. He felt that one of the tasks they should take out of the meeting is to come up with a way to address what happens on the high seas.

Mr. Barry Westphal, Eagle Advisory Committee, stated that in Eagle they are seeing smaller fish and smaller runs. Although this changes from year to year, he has noticed that their runs are affected by commercial fishing on the lower end of the Yukon. He stressed that they respect the right of others to commercial fish. Their concerns are that the size of fish, the quality of meat, and the extent of the runs affects them and their lifestyles the same whether it is commercial fishing or subsistence fishing. He stated that when you have to fish twice as long to catch half as many fish, it makes it harder to continue. They are concerned about going to gear reductions, i.e. the size of the net. They are concerned about the future of subsistence fishing. They want to help work on solutions so that future generations can continue to fish.

Mr. Bobby Woods, Yukon Territory, stated they have also noticed the change in the fish. He was concerned about what is happening in the environment, such as acid rain that falls on the mountains and runs unto the rivers, the beavers that build dams and also put germs into the water. He was also concerned about the big commercial fishermen with their three or four-mile long nets that go two miles deep. This year in his area they noticed there were hardly any female fish. Wild fish is important to his diet. With respect to farmed fish, he was concerned about the different chemicals that were going into the ocean and then get into the cages. He stated that by the time the fish reach his area, the fish is very soft and battered and starting to have spots on it. There are many factors contributing to the problem, but he felt they are human problems, that we are the ones who have caused it. He was worried about the future of the fish.

Mr. Charlie Campbell, Tanana, stated that 16 years ago when the Yukon Panel was convening for the treaty negotiations he saw the beginnings of YR DFA. He felt this is something they were all in together. There is a tendency particularly among fishermen to look on the bright side. It is important to look for answers now. He stressed that whatever affects the lower river also affects the upper river. He is seeing smaller fish. They did a study of the size (weight, length, girth), and they are getting smaller. In response to a question from Mr. Art Heckman, Pilot Station, regarding the depth they needed to set their three fish wheels, Mr. Campbell showed a profile of the bottom and the water level. They set them so the baskets are within a certain distance of the bottom.

Mr. Heckman stated that where he fishes, the water is really deep. In response to another question from the audience, Mr. Campbell stated they only caught a handful of the less than a pound fish. He did not know if they were headed out toward the ocean or coming back from the ocean. In response to another question, he explained how their fish wheel worked. In response to a question, Mr. Campbell stated that for a subsistence period, the fish wheel would run eight hours if it is a good run, and longer if it is not. He estimated they harvested 400 kings this year. Older people in the village depend on them to supply them with fish. With respect to subsistence windows, Mr. Greg Olson stated on the lower river, they are closed over half the time. Mr. Campbell stated they have discussed this. At Rapids, they are 725 or 750 miles upriver. The gentleman who runs the test project has tracked fish pulses as they come up the river and how they are being fished on the on the lower river. This year they had a period of a few days when there were big fish. It was the first run that was not fished on in the lower river. Their concern was that the windows maybe were not true windows due to the mobility of the fishermen on the lower river. They thought they should be taking a look at just how the windows are being implemented riverwide, including for them.

Jack Whitecheese, Huslia, stated that in the 40s and 50s the people from Huslia went to the Yukon River in the summer to fish for kings, silvers and dog salmon. He has also noticed that the fish are getting smaller. This year he caught two kings all summer. Another person caught 20, which they thought was good. It makes him sad to hear of other people catching 400. He thought that on the Koyukuk River one year they have caught some farmed salmon, because there was a difference between them and the wild fish. He stated that this year the biggest king he caught was in August. He thought it was

about 40 pounds. He wanted to know why the biologists stop their testing so early. He thought that due to climate change, the big kings are going upriver on the tributaries later in the fall. He stated that if the locals and the Fish and Game and Federal managers and biologists work together they might come up with a solution. He reported that on the Koyukuk they were not that successful this summer due to climate change. When they put up their fish, it would rain, and when the good runs came in, the water rose. In response to Mr. Art Heckman and how much fish he needed to feed his dogs through the year, Mr. Whitecheese stated that they have 14 dogs and 10 puppies. He is already running out of fish that he caught this summer. He figured they needed 3,000 to get through the winter. He also thought that with the price of gas, more people will want to get dogs.

Ben Stevens, Stevens Village, stated his impression is that the fish are getting smaller. The fish used to be bigger than the fish container in their boat. Now they are not. He has also observed that when they break fish camp and take all the fish out of the smokehouse, it use to take two bags to transport it back to the village. These days they only need one bag.

Ms. Emmie Fairclough, Tong (ph) Gwich'en Council, Lands and Resources Department, Yukon Territory, stated that the Tong Gwich'en are located at the headwaters to the Yukon River drainage. They also are not seeing the big fish in the Yukon. They do not fish to feed dogs, but fish to feed themselves and their families. She read a letter from Richard Mahoney, fish and wildlife manager, Lands and Resources Department of Nacho-nyak-dun (ph). He requested assistance in designing an R&E funded research project to ascertain what impact if any on the upper Stewart Basin the Frazier Falls portion of the river has. The stocks that reach there may have been affected by net size, selectivity and commercial fishery on the lower Yukon. Brian Carlson was concerned that they were trying to put District I in smaller gear.

Stanley Ned, Allakaket, stated that fishermen in his area are also talking about kings that are smaller now than they used to be. They tell him everything is getting smaller, including the whitefish, sheefish, and pikes. They also have noticed that some of the salmon are beginning to change spawning grounds. The water is getting lower than before.

Ms. Jody _____ stated that the salmon are getting smaller. She asked the biologists how much salmon do salmon sharks eat. Chris Stark stated that they do not study sharks in the Bering Sea. However, there has been an increase in salmon sharks in Prince William Sound in recent years. Currently they do not think they are a factor, but they really do not know.

Mr. Ron Chambers stated he has been on the Yukon River Salmon Committee in the past. He felt it is good to focus on what the problems are. The numbers, and who catches what when is something they have been debating for 10, 15 years. He felt the big thing now is for them to come together so they can focus on what can be done to keep the fish coming, and keep coming with some health. He observed that sometimes beaver dams are good

for salmon fry and in other places they can block them from getting where they want to go, or even change a stream system. He stated that there are more beavers now than there has ever been.

Mr. Jack Whitecheese clarified that they do not feed king salmon or silvers to dogs. They feed them dog salmon. Mr. Charlie Campbell agreed with Mr. Whitecheese and pointed out there is a regulation stating you are not supposed to feed king salmon to dogs. (He had other comments at well, but they were hard to hear as he was not near a microphone.)

Mr. _____ stated that thousands and millions of years ago the creatures on the planet were large. Around the time of the ice age, the animals started getting smaller. He opined that they could be going through some kind of natural cycle. He stated that this summer the coho salmon were noticeably smaller.

Ms. Emmie Fairclough stated that the Yukon First Nations subsistence harvest is less than 10,000 Yukon River Chinook salmon. Mr. Whitecheese clarified that all he harvested was 300, not 3,000. The 3,000 was what he believed his dogs would need to survive the winter.

Mr. Andrew stated that not only are the Chinook smaller, but also the coho are smaller this year. In the last several years they have seen an increase in size in the summer chum.

Mr. Francis Thompson, St. Marys, stated he started fishing in 1968 with his father. In those early years there was a lot of fish and nobody thought about fighting one another. Over the years the commercial fishery grew. He felt that along with this came abuse, such as subsistence fishermen selling subsistence salmon, as well as the roe fishery. He stated that when the roe fishery started, the talk on the lower river was sad. Once you start targeting females, there are fewer left to spawn. The decline in fish has made the people from the Yukon Territory to the mouth of the Yukon River work together to improve the returns. In the last five years he felt they have seen improved numbers of fish coming back to the river. He stated that those on the lower river have been battling for their commercial and subsistence fisheries. Commercial fishery hours have been reduced in Y-2. However, they have not put in proposals targeting upriver fishermen. He stated that everyone needs to work together. There are too many variables, such as high seas fisheries, ichthyophonous, chloralithic bloom, hatchery fisheries, people abusing the subsistence priority, et cetera. Attention should be focused on the illegal things that are going on. There is too much at stake for everyone on the river. They all need to work together. He also pointed out that although most of the population on the Yukon is on the lower river, the amount needed for subsistence is much lower than that found in the Interior. He would like to know how people use the resources throughout the drainage.

Mr. Gilbert Huntington, subsistence fisherman, middle Yukon, Y-4A, stated that he has observed over the past several seasons that he has seen fewer fish. He is against drift gillnetting which he felt was affecting the number of fish they see. He felt the number 1 goal of any kind of study should be to find out what they can catch, i.e. size, age, et cetera.

PRESENTATION 1: WHAT DO WE KNOW ABOUT THE CHANGING SIZE OF YUKON RIVER CHINOOK? Yukon River Panel Joint Technical Committee (JTC) Whitepaper

Ms. Dani Evenson, Alaska Department of Fish & Game, JTC ASI Subcommittee Co-Chair, presented the whitepaper for the committee. Copies of the presentation were available. Possible reasons for the change in size and age of maturity include size-selective fishing, genetics, and/or environmental changes in ocean habitats. Many studies have shown a decrease in size and also a decrease in the proportion of female Chinook. In response to a question, Ms. Evenson stated that the time period studied depended on the study. Dr. Cliff Schleusner discussed the time period the study he was involved in covered. There was a difference in the number of years of data available for the different rivers. In response to a comment by Mr. Charlie Campbell, Dr. Schleusner stated they did assume there was a difference between weir data and carcass data (where there was a bias towards larger fish), which is why they treated them separately. In response to Mr. Doug Maldow (ph) regarding how many fish generations they were taking about, Dr. Schleusner stated that research shows that to see some sort of change you would need a 25-year period of time to see enough generations to see a genetic change in a population. In response to Mr. Tim Andrew, Ms. Evenson, Dr. Schleusner and Mr. Dean _____ discussed the sampling protocol on various projects. It varies by project. In response to another question, Ms. Evanson stated that the Bigler (ph) et al. study was on Yukon River Chinook. In response to a question, Ms. Evanson stated the Bigler, et al. looked at all commercial harvest from the lower river and was derived from the fish ticket data base, so it would include restricted and unrestricted openings. Mr. Francis Thompson pointed out that what is caught in a net depends on how you hang the net. There was some discussion regarding the different sizes of mesh and whether the relative difference between the 6.5 and the 8.5 was significant. The bigger mesh does tend to catch the larger fish. The point is the size range that the nets target. In response to a question, Ms. Evanson stated the exploitation rate was 50 percent. Others agreed. Ms. Evanson also stated that possible causes of traits of salmon populations changing through time include environmental, fishing, hatchery competition and others. The concern that population genetics may be changing is increasing worldwide. Potential oceanic influences on salmon include nutrient mixing by storms, timing of ice breakup, water temperature, availability of food, et cetera. She stated that the cause of change is difficult to prove. With respect to next steps, she stated number 1 is to finish the white paper and get it out. After that they will develop a set of testable hypothesis. A member of the audience stated that an elder mentioned to him ghost nets. He did not know how many nets are lost in the river that are catching fish.

PRESENTATION 2: SIZE-SELECTIVE FISHING AND ITS IMPLICATIONS FOR SALMON

Mr. Jeff Hard, Conservation Biology Division, Northwest Fisheries Science Center, gave this presentation. He stated that the size of large marine predatory fish in both the Atlantic and Pacific Oceans has declined to a fraction of their former levels in the last 30

years. There have been whole scale changes in fishery assemblages in the marine environment. Whether these changes are attributable to fishing or climate is an open question. The problem is very complicated and identifying solutions will probably be very difficult and case specific. He stated that fishing often takes the largest and most fecund fish which can have attendant consequences for viability and productivity if those changes are heritable in the population. In addition there have been pronounced climate changes over the last century. Another possible variable is the effect of hatchery production. He felt it will be very difficult to identify the causes of declines. Harvest selection can induce short-term responses in life history. Whether it actually does depends on a lot of factors. The critical factors are the rate of harvest, the size thresholds at which harvestable fish are allowed to be retained or not killed, the mean and variance of size, the strength of the natural selection on size, and the correlation of size with growth, age and the population's productivity. A constant harvest rate above a minimum size reduces the abundance below levels you would predict by a model that does not consider genetic diversity. Genetic diversity is critical for the population's ability to cope with constant elevated harvest rates. Productivity of the population is also critical.

PRESENTATION 3: MARINE CONDITIONS AND OCEAN-WIDE EFFECTS ON THE SIZE OF SALMON

Dr. Jack Helle, Auke Bay Lab, Alaska Fisheries Science Center, gave this presentation. He stated that things like El Nino can change drastically the size and age of salmon. The progeny of the fish in years when they are large survive much better than the progeny of the fish that spawned when they are small. Studies have shown a commonality to what is going on with respect to the size changes. The different salmon species show a similar change in size up and down the coast. This points to something in the ocean that is common to all the fish. In 1995 something happened and the fish started to come back up and down the coast except for the AYK. In response to a question, Dr. Helle stated that the only thing he can find that changed in 1995 is the wind speed and the wind direction. The Bering Sea has changed enormously. It has gotten much warmer after 1976. The U.S., Japan and Russia are conducting studies in the Bering Sea. They have found that a lot of things are moving north. One of the things that has had an effect in the Bering Sea is the cocylithoform bloom. The sea ice has also changed. The base studies are continuing. They would like to expand into the Chukchi Sea. In response to a question, Dr. Helle stated that 2006 was a strange year. Skena (?) sockeye were late coming in and were very small at first, but then they got bigger. Chum returns in the Gulf and Southeast were late coming in, but were large. Pink salmon were a disaster in Southeast and weak in Prince William Sound. The pinks that did come back were large. In response to Mr. Tim Andrew, Dr. Helle opined that the size and age changes they are seeing happen up and down the coast, so there is a major environmental component that has affected stocks from the Bering Sea to California. The Yukon River is very complicated because there are so many different races or stocks. In response to a question on by-catch, Dr. Helle stated they are looking at the stock and age composition of the chum and Chinook by-catch. They are not sure if they are selecting older fish or younger, smaller fish. He also stated that Asian fish also go into the Bering Sea and North Pacific as do the Russian stocks. He added that while conducting their studies, 18 percent of the chum they caught in August were from southern British Columbia and Washington. It is not known how much of this is due to the climate regime shift in 1976 and the enormous amount of feed in the Bering Sea. He did not know if it has always been that way or if it is something new.

NEXT STEPS

Ms. Jan Caulfield summarized what was brought up under the concerns section as well as what was stated under the three presentations.

Mr. Richard Burton stated he felt they need to monitor and follow up on the leads they have heard. They have heard the changes are affecting all salmon. The problem is complicated. We need to pursue the changes in the ocean. He was less convinced that the cause of the problem is just one factor.

Mr. _____ stated he did not feel they are any further ahead in understanding than when they started. There are many factors. His elders have said that there are cycles with both

the fish and the animals. He felt the one thing they can address is the size of the runs by managing the catches.

Mr. Virgil Umphenour stated from the presentations there is uncertainty in the marine environment. There are also a lot of hatchery fish that are not there naturally. He stated that we cannot do anything about the weather. We might potentially be able to do something about the overproduction by hatcheries and the competition in the marine environment, but that is a big international political thing. He felt the only thing we can control is the harvest. He stated we need to take a look at how we can put unmolested king salmon onto the spawning grounds we lose all the large fish.

Mr. Jack Whitecheese stated he had not heard anything about the pollutants in the water. He felt this was a very big concern and we do not know how they are affecting the fish.

Dr. Helle stated they have argued for years that they need funding for such studies and have not been successful. Mr. Whitecheese was concerned about pollution both in the ocean and in the Yukon River. Ms. Patty Nelson, ADF&G, stated the Department has been collecting samples from commercial catches throughout the state to help DEC with studies they are doing on PCB levels.

Mr. Pat Milligan stated that the water is clear above the White River system, which is a glacial system which puts a lot of silt in the water. Canadian commercial fishermen have noticed a decline in the size of fish. They have embarked on a program funded through the R&E program to use fish wheels to see if they can catch enough fish to make it viable as well as to release the females and larger fish. They will analyze the results. It is a selective fishing technique that shows promise.

Mr. Chris _____ stated the U.S. FWS has been doing testing of fish contamination. Mr. Jeff Adams, U.S. FWS, stated there were studies done on Chinook and chum salmon in the Kuskokwim and Yukon on pollutants, pesticides, heavy metals, et cetera. The results showed they were low enough that it was better to continue to eat the salmon resources. There is an ongoing study looking at mercury in pike in the Yukon Drainage, but those results have not been published yet.

Mr. Robert Walker stated in the middle Yukon the flesh color of the Chinook is changing from red to a lighter red over the last 20 years. He wanted to know why. However, the fish are still fat.

Mr. Jeff Hard stated that there is some heritable component to flesh coloration. White fleshed Chinook are most common in British Columbia and Southeast Alaska and quite rare north of northern Southeast Alaska and south of Frasier River. Experiments have shown that there is also a dietary component to the color.

Dr. Jack Helle added that the white-fleshed kings in Southeast Alaska are the oiliest. Russian studies have shown it is at least partly due to diet. He felt it would be interesting to follow up on whether it is due to diet in the ocean.

Barry Westphal suggested that there be a newsletter for the Yukon River to talk about these issues. Another suggestion was a web site.

Mr. Charlie Campbell stated that after listening to the presentations, there is more to it than meets the eye and it is a very complicated system. He recommended the YRDFA board put pressure on the agencies to try to determine now what is going on and not wait. We only need to look at what has happened to the Columbia River. We need to act now.

Mr. Carl Sydney stated that it would be naïve to think that pollution is not having an affect on fisheries. He stated that everyone needs to think of what they can do in their practices to help the situation when they are out on the River. What can they do to reduce the waste, to let the large females get up the river to spawn? He liked what was going on in Canada with the fish wheels. He was also concerned about the waste in the by-catch products on the high seas. We need to look at what technology can do to help reduce the waste.

Ron Chambers stated that something people can do is putting together what they have observed and determine where we need to go from here. He felt this conference has shown how big and widespread the problems are. The next step would be to find the people to start working on the problems.

Ms. Jan Caulfield asked if there was a way or role for some subset of fishermen, whether the YRDFA board or another group, to work together on some of these issues.

Mr. Carl Sydney, Yukon Salmon Committee, stated that in addition to getting the big female salmon to the spawning grounds, we need the big males to get there also. He agreed that they should look at putting an international working group together to go forward. The problem is there, now what do we do.

Mr. Mike Smith stated one of the reasons for this conference was the upcoming Board of Fish meeting in February. He wanted a system-wide approach. He did not want to see the different groups fighting among themselves. He was in favor of a working group.

Mr. Tim Andrew, AVCP, agreed they needed to work together on the issues and finding solutions. The presentations have pointed out that there are many factors, not just one.

Ms. Jan Caulfield stated that in the future there may still be an opportunity to come together and say while we know there is a lot of uncertainty, what do we know is going on in the system and what are some appropriate responses we can talk about.

Ms. Jill Klein stated YRDFA was thinking of a second meeting with a smaller group in December to come up with an organized way to go into the Board of Fish meeting.

Mr. Stanley Ned stated there could be a meeting with representatives of the different regions, such as TCC, AVCP and YRDFA.

Mr. Barry Westphal stated the Yukon River Intertribal Watershed Council is doing a lot of work in Canada and the United States. He suggested YRDFA connect with them and possibly partner with them. Ms. Jill Klein stated that YRDFA does work with the Council.

Ms. Nancy Swanton, NPS, stated that the Federal Subsistence Board has expressed interest in consensus building and cooperative planning efforts. The Board had four proposals in the last cycle directed towards the declining size of Yukon River Chinook salmon addressing fishing schedules, gill net mesh size and gill net depth. The Board deferred action to provide opportunity for the working group to address the issues. In response to Ms. Jan Caulfield, Ms. Swanton stated she was not in a position to say whether the Board could help support future meetings financially.

Ms. Emmie Fairclough stated that the meeting has raised a lot more questions on where to go from here. She felt there was a need for a larger information session on where to go. There are many groups working towards managing the salmon for sustainable use. She felt that there may be some duplication of effort. She felt they need to know what each group is doing.

In response to Mr. Jack Whitecheese, Ms. Caulfield stated they were not talking about forming a group to make proposals to the Board of Fish. Mr. Whitecheese felt the only way they will get anything done is to submit proposals. Mr. Mike Smith stated that the meeting in December would be to look at the proposals that will come before the Board of Fish in February. Those proposals have the potential of being very divisive.

Mr. Robert Walker stated they do not want to change the windows for subsistence fishing in their area.

Mr. Smith stated that is one of the proposals he was talking about.

Dr. Jack Helle suggested that the problem is not as complicated as it seems, because to his knowledge there had never been a coded wire tagged Chinook salmon from the Yukon River caught outside of the Bering Sea.

Mr. Pat _____ stated that two were caught in the south, but they are going to look at them again because they think it may be a reading error. Dr. Helle stated that if this is correct, then basically we are looking at the Bering Sea and do not have to worry about what they are doing in the Gulf of Alaska or other places. He also stated that Chinook salmon and chums come into the river in late June/early July so they are missing a great amount of feeding time in the Bering Sea that summer. Therefore their size is probably related to the year before. Since coho and pink salmon are only out one year, you might be able to get a clue to what is going on by looking at their size and see if that correlates with the Chinook and chum the following year.

CLOSING

Ms. Jan Caulfield felt the meeting had raised everyone's understanding of some things as well as introduced more questions about what is going on. She felt there was great benefit for the people who are affected by what is going on in sitting down together and hearing the same things and talking about it together. She thought a newsletter or web site would be helpful and give people a chance to share what they are seeing on the river. Ms. Jill Klein stated that people have brought out that there are changes happening to the salmon. There are many things happening that affect the salmon life cycle. She stressed that they need to find a way to go into the Board of Fishery's meeting with an organized voice. Today's meeting was a first step. They would like to have another meeting in December. She thanked everyone for attending and participating.