

YUKON RIVER DRAINAGE FISHERIES ASSOCIATION A United Voice for Yukon River Fishers



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Salmon Bycatch in the Bering Sea Pollock

Fishery: Focus on the Observer Program

— Part 1 of 2 —

By Becca Robbins Gisclair, Policy Director

In the past several months fishers have asked a number of questions about the observer program in the Bering Sea pollock fishery. The observer program is responsible for collecting data on catch and bycatch of the pollock fishery. Martin Loefflad, Director of the Observer Program for Alaska Fisheries Science Center of the National Marine Fisheries Service (NMFS) was kind enough to answer some of the questions we've heard most frequently.

YRDFA: How much of the pollock fleet is currently observed?

Martin: The Bering Sea pollock fishery is one of the most heavily observed fleets in the nation. Currently, catcher processors and motherships must have two observers at all times (equivalent to 200 percent coverage), and one of these observers must be a lead level 2 observer. A lead level 2 observer has proven his or her ability to collect quality data via previous experience on similar vessel types and/or fisheries. Catcher vessels longer than 125 feet in length must have one observer at all times. Catcher vessels between 60 and 125 feet in length must have an observer for 30 percent of their fishing days. I am not aware of any catcher vessels that are less than 60 feet.

YRDFA: What does 100 percent observer coverage mean for the various sectors of the pollock fishery? Is every haul monitored? What about 200% coverage?

Martin: The phrase 100 percent coverage in the NMFS Alaska regulations means that a vessel must carry an observer during 100 percent of

its fishing days. In turn, 200 percent coverage means that a vessel must have two observers during 100 percent of its fishing days. Two observers allow for round-the-clock monitoring.

YRDFA: What changes to the observer program will take place in response to Amendment 91—the recent action taken by the North Pacific Fishery Management Council regarding Chinook salmon bycatch?



An observer takes salmon scale samples.

Martin: The key change to the observer program will be that the observer will be required to accurately count Chinook salmon for Prohibited Species Catch allocations. To meet this objective, the following requirements will be implemented under this proposed rule: (1) there will be 100 percent observer coverage for all vessels and processing plants participating in the Bering Sea pollock fishery; (2) all salmon will be retained; and (3) there will be specific areas to store and count all salmon.

From a program standpoint, we are planning to have vessels retain all salmon, and every Chinook and chum salmon will be counted by the observer. Then, the observer will collect a

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EMPLOYEE DIRECTORY

- **JILL KLEIN**, Executive Director Phone: 907-272-3141, ext. 102 Email: jill@yukonsalmon.org
- **BECCA ROBBINS GISCLAIR**, Policy Director Phone: 907-272-3141 ext. 106 Email: becca@yukonsalmon.org

KEVIN WILEY, Finance Manager Phone: 907-272-3141 ext. 104 Email: kevin.wiley@yukonsalmon.org

KIM MEEDS, Office Manager Phone: 907-272-3141 ext. 103 Email: kim@yukonsalmon.org

- **CATHERINE MONCRIEFF**, Anthropologist Phone: 907-272-3141 ext. 107 Email: catherine@yukonsalmon.org
- LAUREN SILL, Program Coordinator Phone: 907-272-3141 ext. 101 Email: lauren@yukonsalmon.org

JASON HALE, Communications Director Phone: 907-272-3141 ext. 105 Email: jason@yukonsalmon.org

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YUKON FISHERIES NEWS is published by the Yukon River Drainage Fisheries Association 725 Christensen Drive, Suite 3-B, Anchorage, AK 99501 Phone: (907) 272-3141 / Fax: (907) 272-3142 • TOLL-FREE 1-877-99-YUKON (98566) www.yukonsalmon.org

> Funding is provided by the USFWS, pursuant to grant #701819G019, to support dissemination of information regarding the Yukon River Salmon Agreement and the management of Yukon River salmon.

A Message From the Director

By Jill Klein, Executive Director

Spring has sprung in Alaska and brings the arrival of many things, including the birds, whales, herring, and eventually the salmon. In the spring, it is also time for the Yukon River Drainage Fisheries Association to hold annual elections for its Board of Directors. Every year 14 alternate seats are open from all fishing districts. This year five board member seats are open from the fishing districts of Y-1, Y-2, Y-4, Y-5, and Y-6.

YRDFA sends out requests to all tribal and city councils along the Yukon River seeking nominations. YRDFA was created in 1991 by people along the Yukon River to create a group that works on bridging communications along the vast geographic region of the Yukon River, which encompasses different cultures, languages, topographies, and fishing districts. A system was created to enable equal representation among upriver and downriver and includes board members and alternates. This group of 30 delegates represents most villages along the Yukon River. To act as a representational body, YRDFA was created as a membership organization that would have board member candidates nominated by their peers in the fishing community to be the best fisheries decision-makers for their

> YRDFA is looking for ways to ensure inclusion of all the

Tribes and cities

along the Yukon River

region. Some villages do not end up with representation because there are 44 tribal councils along the Yukon River within Alaska and only 30 seats open on the YRDFA board.

YRDFA is looking for ways to ensure inclusion of all the Tribes and cities along the Yukon River, and although inclusion of all villages may not be possible through the board structure, we try to host events to which all are invited. An example is the April 8, 2010, meeting held by YRDFA in Anchorage to discuss the preseason management outlook for the summer salmon fishing season in 2010. YRDFA invited every Tribal Council to participate with funding from the Yukon River

Panel. Nearly 50 representatives from the river were present, and most people in attendance agreed that they wanted to continue an annual process to meet and discuss the preseason management outlook. We will use this feedback and other comments



Jill Klein guides educational exchange participants Esau Schafer (Old Crow) and Joe Jackson (Teslin) on a tour of the Yukon outside of Emmonak.

given to YRDFA on ways to continue to serve the fishing families along the Yukon River.

Also noteworthy is that YRDFA policy director Becca Robbins Gisclair recently traveled to Washington, D.C., to discuss Chinook salmon bycatch in the Bering Sea pollock fishery, disaster funds for Yukon River fishers, and YRDFA's work in general with agency and legislative representatives. She joined with other Western and Interior Alaska groups to ensure that the Western Alaska perspective is considered. It is through the hard work and dedication of these leaders that fishing families on the Yukon River will be a part of the decision-making process and have their voices heard at the table.

> of the Yukon River that many of us care about and work hard to sustain. In light of a slightly better run outlook than last year, we hope that the predictive models and environmental factors will align to return salmon eet the needs of

It is the

fishing families

in enough abundance to meet the needs of the people that rely on them for their food, income, and culture—these are the people that compose YRDFA and for whom YRDFA works on behalf of. With our board elections expected to be completed by June 30, stay tuned to learn about the new board members who will be working through YRDFA to sustain healthy wild salmon fisheries. S

Yukon River Fisheries Meetings Calendar

DATE	MEETING	LOCATION
May 21–24	River Rally	Snowbird, UT
June 1	YRDFA Inseason Teleconferences Begin	
June 7–15	North Pacific Fishery Management Council	Sitka
Sept. 4–8	American Fisheries Society (AFS) Annual Meeting	Anchorage
Oct. 4–12	North Pacific Fishery Management Council	Anchorage

SUCCESS STORY Preseason Plan Developed at Stakeholder Meeting

By Jason Hale, Communications Director

I was nervous, and I'm hardly ever nervous. Fishers and other stakeholders were coming to Anchorage from throughout the Alaskan portion of the Yukon River drainage to discuss management plans and other issues related to the 2010 salmon fisheries. After the tough fishing restrictions in 2009, people were bound to be upset. After the recent Board of Fisheries action to reduce mesh size starting next year, people would likely be on edge. Combine subsistence needs and regional differences in light of the recent weak runs, and it seemed like the meeting room could become a warzone.

At 8 a.m. people started filtering into the room. Representatives from 26 tribes, 30 communities, two Regional Advisory Councils, two CDQ groups, two processors, numerous agencies, and YRDFA topped off cups of coffee and chose their seats at a number of round tables scattered throughout the meeting space. There were warm greetings, smiles, and updates of families, snow conditions, and weather. There were no stern faces and no angry tones; there was no hostility. It looked like a room full of 70 old friends, which in many ways it was. People came to represent their tribes, communities, and regions, but they did their best to leave their differences at the door.

We jumped into the day's work, discussing run outlooks and possible management actions for the summer. Nearly everyone agreed that starting the fishing windows later than normal was a good idea, and



James Roberts of Tanana shares his views on fishing restrictions during break-out discussions.

there was the same level of support for entering the season with the normal fishing windows, as opposed to imposing more severe restrictions from the start.

Participants generally agreed that if the run looks to be worse than expected inseason, pulling a fishing period in the early or middle portion of the run would be the fairest and most reasonable action to take, but pulling more than one fishing period in a row would put undue hardship on fishers. Opinions were split on the idea

of cutting fishing time in half during each fishing period, and almost nobody supported gear restrictions. State and federal managers seemed to take this advice to heart and reported that although they will keep all of these management options in their toolboxes, they will use them only if needed and try to follow the wisdom shared during the meeting.

After lunch discussion focused on whether to continue holding meetings and teleconferences in future years to give users preseason input into the management of the salmon runs. Martin Moore, a respected elder from Emmonak and long-time advocate for the rights and needs of fishers, gave an impassioned speech about the importance of involvement by the people and building relationships with fisheries managers. Heads nodded in agreement around the room. In the end, everyone supported the continuation of this communication process in one form or another.



Fishers from across the drainage engage in in-depth discussions about management options for 2010.

The day ended with educational sessions on current topics of interest, including customary trade, sonar projects, and use of Traditional Ecological Knowledge in management. People shared their views and listened to others. As the meeting came to a close, people shook hands and shared fond farewells. As for me, I breathed a sigh of relief, waved goodbye to friends new and old, and began thinking about how to bring even more people to the table next year. ≤

This article was prepared by YRDFA under award number CC-03-10 from the Yukon River Panel. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the Yukon River Panel.

Fond Farewell to a Founding Father

Since YRDFA was formed 20 years ago, Henry Weihl of Rampart has poured his heart and wisdom into helping the organization and supporting both the fish and fishers across the mighty Yukon River. Through kindness, respect, and wisdom, he has worked to bridge regional gaps and has fostered riverwide

> march 1, 2010 Rampart, ak. 99767

Executive Director - Y.R.D.F.C. 715 Christensen Dø., Suite 3B Unchorage , Ak. 99501

Dear ms. Klein: Hi, Sill! I have enjoyed being a member of Y. R.D.7A. for 20 years, traveling to all various Nillages along the Newton River and most of all meeting all the profile who live and fish along the Newton. I would like to thank you, Bill alstrom, and Richard Burnham for residing over all our Since my first meeting in Renand, we all had Various conflicts (uprives No. , down-hiver) about fish gustas. U. R. J. J. a. has come along way in Alo-ing a lot of our problems by y. R. R. F. a. moeting a property Megal meetings every year. Keep up the good work and good dishing ! C, C, Richard Brunham Dincerely, Bull altonons Fester Wilde Rompart, ak. 99767 understanding of tough issues. At meetings, Henry could always be found swapping stories, shaking hands, and sharing viewpoints. In the evenings, he and his amiable wife, Betty, were first on the dance floor and last to step off. Henry's dedicated service as a board member has been invaluable, and as he moves on, we wish him the best of luck.

Henry, may your smokehouse and dance card always be full! 🥌

"Do you think Traditional Ecological Knowledge should play a role in fisheries management on the Yukon?"

In April 2010, YRDFA communications director Jason Hale asked this question of fishers from up and down the Yukon River. Here are their thoughts:

ALEXIE WALTERS, SR., MOUNTAIN VILLAGE Of course. When we get up in the morning, that's our life. We see changes in the river. We're active 365 days a year. That's our farm.

DISTRICT 4

Nenana DISTRICT 6

DISTRICT

BRANDON AGUCHAK, SCAMMON BAY It would be nice for management to ask local leaders about their knowledge that was passed down generation to generation.

DISTRICT 2

WILLIAM BEANS, MOUNTAIN VILLAGE Yes. Generation after generation prior to today, our way of life has been our means to survival. It's how we live, the way we do things, and a way of life. That is getting devastated yet we cut back. What we gather, catch, and how our ancestors did this, nothing was wasted. They took what was needed for their survival. HANNAH MAILLELLE, GRAYLING Yes. We live out there. We should have say so in what goes on out there.

MARGARET HENRY-JOHN, CIRCLE Yes. The local knowledge knows more than the people in the big offices who are never around the river. Local

people need to be involved.

"OBSERVER PROGRAM..." continued from front page

systematic random sample of these fish for genetic studies to assess, to the best of NMFS' abilities, where the fish came from.

Other measures are proposed in the rule that will help ensure that the fish are not discarded prior to an observer counting them.

YRDFA: What safeguards are in place to ensure that observers see and count all salmon that are caught as bycatch (that is, that they can't be dumped overboard)? What happens when the observer is sleeping, in the bathroom, etc.—are salmon caught at those times counted?

Martin: The regulations require that all prohibited species, including salmon, be retained until counted by an observer. Having two observers on a catcher processor or mothership helps ensure that this happens. One observer on a catcher vessel is sufficient to ensure fish do not disappear because the observer can see every haul and everything goes into large refrigerated seawater tanks. Also, the observer monitors the offload when it occurs at the dock to ensure every salmon is sorted from the catch. It is a lot of work, but we have dedicated people working hard to complete this task routinely. Safeguards include excellent support from our office of Law Enforcement that conducts investigations if there is a violation of the regulations. In addition, several other steps are proposed in the rule noted to help ensure fish cannot be hidden from the observer's view. We will not know the exact details until the public comments on the proposed rule and the NMFS publishes a final rule. However, a great deal of effort has gone into making a sound system to

account for salmon bycatch by using our extensive observer program to independently monitor and count salmon bycatch.

YRDFA: Is there potential for the pollock fishers to distract an observer and dump bycatch overboard before it is counted?

Martin: There is always the potential for this to happen, and NMFS has had experiences with personnel from other fisheries attempting this type of activity in the past on halibut bycatch issues. NMFS has prosecuted these cases. At this time, I am not aware of any overt attempts to bias observers' samples in the pollock fishery, and we will work diligently to ensure it does not happen in the future. Our interest, and our work, is all about ensuring we have good information to manage our fisheries resources.

YRDFA: If some hauls go unobserved, does NMFS have an estimate of what portion of those hauls are missed?

Martin: Because we have a very high level of coverage for the pollock fishery in the Bering Sea, it is expected that the observer samples every haul. If the observer cannot sample a haul due to illness or injury, it is clearly documented such that there is a record for every haul that occurs (sampled or not sampled) while the observer is on board the vessel.

A second part of this article with more details about the qualifications and process involved in becoming an observer will be provided in the next YRDFA newsletter.

Natural Indicators Applied in Management and the Classroom

By Catherine Moncrieff, Anthropologist

At the preseason fisheries planning meeting in April, the Yukon River managers reported that they are predicting the 2010 salmon run will be below average to average. At this same meeting, Fred Huntington of Galena expressed his concern that there will be few salmon this year because there is so little snow in the mountains. According to his elders, when there is little snow there will be few salmon.

YRDFA is moving into the next phase of the Natural Indicators of Salmon Run Timing and Abundance project. A multi-disciplinary team made up of knowledgeable elders and active fishers will join with scientists specializing in climate, weather, birds, and salmon to discuss the natural indicators reported from Hooper Bay, Emmonak, St. Mary's, Grayling, Kaltag, and other communities. This team will meet twice, in May and in the fall, to discuss natural indicators and try to understand how or why they work. They will identify measurable variables and available data related to each local observation.

The result of these meetings will be a study plan for analysis of the natural indicators. In addition, the team will discuss the use and design of a database to record local observations of natural indicators. The goal is to provide salmon managers

> According to his elders, when there is little snow there will be few salmon

with new tools to understand Yukon River salmon. YRDFA would like to thank the Alaska Sustainable Salmon Fund and Lannan Foundation for providing important funding for this project.

In addition, YRDFA has heard from elders that they want the natural indicator information to be shared more with the youth of their communities. In response to this request, YRDFA is going to produce an atlas of natural indicators and an accompanying teacher tool kit for use in schools, culture camps, and other settings. We are just beginning to develop a model for this atlas and are seeking input from elders, educators, and others. This atlas will be distributed among the Yukon River communities for use by schools, tribal offices and others upon request. YRDFA would like to thank the Rasmuson Foundation for supporting this project. ≤

This article was prepared by YRDFA under grants from the Rasmuson Foundation, Lannan Foundation, and Alaska Sustainable Salmon Fund. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the Rasmuson Foundation, Lannan Foundation, or Alaska Sustainable Salmon Fund

State of Alaska Finds Yukon Salmon Safe to Eat

By Howard Teas, Research Analyst, Department of Environmental Conservation

The Fish Monitoring Program of the Alaska Department of Environmental Conservation (ADEC) has been collecting information on contaminants in fish tissues since 2002. Our goals are to determine whether contaminants in fish are negatively affecting this valuable resource, to collect long-term monitoring data to look for changes in the concentrations of these compounds, and to share this data with the agencies and people that rely on this resource. Researchers analyze all the fish samples for mercury and five other trace metals. We also analyze a select number of the samples for organic contaminants, such as polychlorinated biphenyls (PCBs), flame retardants, dioxins, and pesticides. We have been collecting data for all five species of salmon, halibut, groundfish, rockfish, other marine species, and freshwater fish (burbot, sheefish, whitefish, trout, char, pike) from all over Alaska.

The results so far show very low concentrations of most contaminants in Alaska's fish. We are most concerned about the trace metal mercury because it is one of the most toxic. Although naturally found in the environment, mercury is also a by-product of industrial activities and can bioaccumulate in the food chain (concentrations increase in animals and fish at the top of the food chain, as shown in the figure). We have mercury results from almost 4,500 fish from around Alaska. That seems like a lot but there are many areas of the state and some species of fish that have not been collected. Our results from across the state show that 10 percent of the fish and 17 percent of the salmon sampled have mercury levels too low to measure (0.025 parts per million). The mercury levels of Chinook salmon from across the state averaged 0.063 parts per million and from the Yukon River averaged 0.078 parts per million, well within safe limits for consumption. All other salmon species had lower levels of mercury. The summary data and evaluation can be found on our web pages at http://dec.alaska. gov/eh/vet/fish.htm.

Health officials from the Alaska

Department of Health and Human Services have looked at the metals data, focusing on mercury, and have evaluated the risks and the health benefits of eating fish, especially salmon. They determined that it is safe for everyone, including women of child-bearing age and young children, to eat as much salmon as they want. More information on the public health aspects of mercury in fish is available at http://www.epi.hss.state.ak.us/eh/fish/default. htm#guidelines.

As part of the Fish Monitoring Program, ADEC has also posted the results for organic contaminants: pesticides, PCBs, flame retardants, and dioxins. These are man-made compounds that are harmful to human health at high levels. Levels in Yukon River fish were very low for most of these contaminants. A few elevated concentrations of total PCBs and certain pesticides in Yukon Chinook salmon were found. State Public Health officials don't feel these concentrations are high enough to require an advisory, but we will continue monitoring for them in salmon to make sure that levels of these or other compounds are not rising over time. More detailed results are available at http://dec.alaska.gov/eh/docs/vet/ FMP%20Organic%20data%206-08.pdf.

A focus for the Fish Monitoring Program this year will be the life cycle of Yukon River Chinook salmon. We plan to analyze samples of eggs, smolts, fish feeding in the ocean, and returning spawners from along the Yukon River for trace metals, pesticides, PCBs, flame retardants, and dioxins. We will also be looking at the amount of fish oils (omega-3 fatty acids) in these fish and analyzing them to determine where in the food web they are feeding. Our funding covers sampling supplies, shipping, processing, and chemical analysis of samples as well as data analysis, report preparation, and project management. ADEC researchers will collaborate with field biologists and recreational and subsistence fishers to collect samples, which allows us to direct most of our funding to the chemical analysis of the fish tissues (the most expensive part of the program). We will be collecting returning adult salmon during June near the mouth of the Yukon River. Smolts will be collected in late spring, if we can find them. The results

of the study are not likely to be available for at least a year because of the time required for processing and analyzing fish. \leq



Maureen Horne-Brine removing a fillet from a fish during processing.



Grinding up a fillet to homogenize the sample.



Annie Sawasaki weighing a sample before putting it in the mercury analyzer.



The illustration shows how contaminants in the environment can accumulate in the food chain.

Spawning 101

By Dr. Katie Howard, Yukon Area Research Biologist, Alaska Department of Fish & Game

How Many Kings Return for Each Spawner?

Detailed information on Chinook salmon returns from each spawner is currently only available for Canadian origin stocks. **Since 1982, on average 2.65 Canadian-origin Chinook salmon return to the river for every fish that makes it to the spawning grounds**. For any parent year, though, the number of offspring returning may range from more than 1 to more than 5 fish per parent. This is remarkable considering that each female can deposit between 5,000 and 10,000 eggs, and a maximum of two or three of those eggs will return as spawning adults approximately 4 to 7 years later.



Where Do Yukon Kings Spawn?

This map of the Yukon River shows general areas where Chinook salmon are known to spawn.



Fast Facts on Spawning

- The number of offspring returning per parent varies depending on:
 - o The parent—some parents are more successful than others.
 - Environmental factors—poor environmental conditions in some years may mean that fewer offspring survive, even for parents that would normally be very successful.
- Salmon return to the location where they were born using senses such as smell and internal navigation, which are far more sensitive than human senses.
- Bigger females can produce more eggs. For
 instance, a 25 inch Canadian-origin Chinook
 salmon can produce approximately 5,200 eggs,
 a 30-inch fish can produce approximately 6,600
 eggs, and a 40-inch fish can produce approximately
 9,500 eggs (Bromaghin, personal communication).
- Bigger fish can make deeper redds (nests), which help protect the eggs from freezing in the winter.
- Bigger females can have larger eggs that are packed with more nutrients, which may help them survive better (Healey 1986, Nicholas & Hankin 1988).

So Many Eggs, So Few Returning Fish: What's Up with That?

Few spawned eggs survive to hatching. If environmental conditions are poor, up to 95 percent of the eggs may die before hatching. Even after hatching, the survivorship of young salmon is low. Predators, food availability, and environmental conditions can be major challenges if one or more of these factors is not ideal for survival. Those challenges continue after salmon migrate to the marine environment. In the ocean, food available to Chinook salmon can be scarce and the availability and quantity of food can change with changing oceanic conditions. For instance, if there are changes in oceanic temperatures, the Chinook salmon's preferred food may reside in locations that may not be readily available to the Chinook to eat, and the fish may have to expend additional energy to access better forage areas. It's amazing that any salmon can survive all of these challenges. The variation seen in the adult returns per parent spawner probably reflects differences between groups of fish born under good conditions and groups of fish that matured to adulthood under poorer conditions.

Why Have Escapement Goals?

Escapement goals strive to maintain sustainable salmon stocks by ensuring that a certain number of fish spawn and contribute to the next generation. Sustainable means that annual spawning numbers are large enough that these fish can replenish themselves year after year, even with all of the

challenges that exist for salmon survival from egg to adult. If escapement falls below a goal too often, we risk seeing that stock crash. Stocks that crash can take years or decades to recover, and in the process of recovery, fishery harvests typically need to be reduced through regulatory actions. This helps to ensure that future generations of Yukon River fishers will have healthy salmon runs decades and centuries from now.

2010 Summer Project Guide: Tools in the Water

Throughout the salmon run, you'll hear fisheries managers refer to a bunch of projects that they look at to assess run strength, spawning escapement, and a ton of other factors. To be sure you're ready, here's a list of the main projects you might hear about that will be on the river this summer, along with the <u>Who, Where, When</u>, and <u>Why</u> for each.

CANADA

Big Salmon River Chinook Sonar Enumeration

<u>Who</u>: Jane Wilson & Assoc. (Consultant) <u>Where</u>: Big Salmon River <u>When</u>: sonar counting from July 14 to August 28 <u>Why</u>: estimate escapement of Chinook salmon to the Big Salmon River

Blind Creek Chinook Salmon Enumeration Weir

<u>Who</u>: Jane Wilson & Assoc. (Consultant) <u>Where</u>: Blind Creek, a tributary of the Pelly River <u>When</u>: mid-July to mid-August <u>Why</u>: enumerate Chinook salmon returns to Blind Creek

Escapement Index Surveys: Chinook Aerial Index Streams

<u>Who</u>: Department of Fisheries & Oceans Canada (DFO) <u>Where</u>: Big Salmon, Little Salmon, Wolf, and Nisutlin rivers <u>When</u>: mid-August <u>Why</u>: obtain counts in index areas

Fishing Branch Chum Salmon Weir

<u>Who</u>: DFO and Vuntut Gwitchin Government <u>Where</u>: Fishing Branch River <u>When</u>: late-August to mid-October <u>Why</u>: enumerate fall chum salmon returning to the Fishing Branch River

Klondike River Chinook Sonar

<u>Who</u>: B. Mercer (Consultant) <u>Where</u>: Klondike River <u>When</u>: sonar counting from July 3 to August 15 <u>Why</u>: estimate Chinook salmon escapement to the Klondike River

Little Salmon Chinook Spawning Grounds Survey

 Who: G. Sandone (Consultant)

 Where: Little Salmon River

 When: filed activities August 27 to 31

 Why: sample post-spawn Chinook salmon in the Little Salmon

 River for age, sex, and length data to assess escapement

Michie Creek Salmon & Habitat Monitoring Project

 Who:
 Kwanlin Dun First Nations

 Where:
 Michie Creek, upstream of Whitehorse Rapids dam

 When:
 May to October, with 6 anticipated field surveys

 Why:
 monitor adult Chinook escapement, sample juvenile

 Chinook salmon, and monitor environmental conditions in
 Michie Creek upstream of Whitehorse Rapids dam

Miner River Chinook Index

<u>Who</u>: Vuntut Gwitchin Government <u>Where</u>: Miner River, a tributary of the upper Porcupine River <u>When</u>: a single aerial survey in early August <u>Why</u>: aerial survey of Chinook spawning in the Miner River to assess escapement

Porcupine River Catch per Unit Effort

<u>Who</u>: Vuntut Gwitchin Government <u>Where</u>: Porcupine River outside of Old Crow <u>When</u>: field component from August 15 to September 30 <u>Why</u>: estimate chum salmon abundance in Porcupine River using catch per unit effort obtained from gillnetting

Tachun Creek to Minto Area Ground Surveys

<u>Who</u>: Selkirk Renewable Resource Council <u>Where</u>: from Tatchun Creek to Minto area <u>When</u>: two field components, one for Chinook salmon (late August to early September) and one for fall chum salmon (mid-October) <u>Why</u>: document Chinook and chum salmon spawning areas in the mainstem Yukon River from Tatchun Creek to Minto area

Whitehorse Rapids Fishway

<u>Who</u>: Fish & Game Association and Yukon Energy Corporation <u>Where</u>: Whitehorse <u>When</u>: July to early September <u>Why</u>: enumerate wild and hatchery-reared Chinook salmon returns to upper Yukon upstream of the Whitehorse fishway

UNITED STATES

Anvik River Sonar Project

Who: ADF&G Where: river mile 47, Anvik River When: June 16 to July 26* Why: estimate escapement of summer chum salmon to the Anvik River

Chandalar River Sonar and Carcass Survey

 Who: USFWS

 Where: 13 river miles upstream of the confluence with the

 Yukon River

 When: early August to mid/late October

 Why: monitor the escapement of fall chum salmon in the

 Chandalar River drainage

Chena Counting Tower

<u>Who</u>: ADF&G Sport Fish Division <u>Where</u>: Chena River at the Moose Creek Dam (approximately river mile 45)

When: late June through early August depending on Chinook salmon run timing

<u>Why</u>: estimate escapement of Chinook and chum salmon to the Chena River used to manage terminal harvest fisheries on the Tanana River

Eagle Sonar Project

 Who: ADF&G and DFO

 Where: mainstem Yukon River at approximately river mile 1,200

 and 6 miles downstream of the community of Eagle.

 When: July 1 to October 6*

 Why: estimate passage of Chinook and fall chum salmon near the US-Canada border

East Fork Andreafsky Weir and Carcass Survey Who: USEWS

<u>Where</u>: approximately 27 river miles upstream from the confluence of the Adreafsky and Yukon rivers, upstream of the village of St, Mary's <u>When</u>: mid-June to late July $\underline{Why}:$ continue the escapement monitoring for Chinook and chum salmon

Gisasa River Weir

 Who: USFWS

 Where: 2.5 river miles upstream of the mouth of the Gisasa

 River with the Koyukuk River, upstream of the village of Koyukuk

 When: mid-June to late July

 Why: monitor the escapement of Chinook and summer chum salmon

Goodpaster Counting Tower

 Who: Bering Sea Fisherman's Association (BSFA)

 Where: 48 miles above the Tanana River confluence

 When: July 1 to July 31

 Why: estimate escapement of Chinook salmon to the

 Goodpaster River, carcass sampling as requested/funded

Henshaw Creek Weir

 Who: Tanana Chiefs Conference (TCC)

 Where: 1 river mile upstream of the mouth of Henshaw Creek

 with the Koyukuk River, upstream of the villages of Alatna and

 Allakaket

 When: late June to early August

 Why: monitor the escapement of Chinook and summer chum

 salmon

Inseason Subsistence Harvest Monitoring

 Who: USFWS and YRDFA

 Where: villages across the Yukon Basin

 When: throughout the run

 Why: collect harvest information from subsistence users for

 managers to better understand run timing and fish harvest

 composition

Lower Yukon Test Fishery

 Who: ADF&G, YDFDA

 Where: south, middle, and north mouths of the Yukon

 When: summer, May 26 to July 15; fall, July 16 to August 28

 Why: provide run timing for Chinook, chum, and coho salmon.

 Age, sex, and length data is collected and used to determine the age classes in the run.

Mountain Village Test Fishery

<u>Who:</u> YDFDA, summer; BSFA through Asa'carsarmiut Traditional Council, fall <u>Where</u>: mainstem Yukon River at approximately river mile 87 near the community of Mountain Village

<u>When</u>: summer, June 1 to July 18; fall, July 17 to September 11 <u>Why</u>: provide run timing and relative abundance of Chinook, chum, and coho salmon

Nenana Test Fish Wheel

 Who: ADF&G

 Where: mainstem Tanana River at approximately river mile 842

 downstream of the community of Nenana

 When: summer, end of June to August 5; fall, August 16 to

 September 30*

 Why: provide run timing of Chinook, chum and coho salmon for

 use in fishery management of the terminal harvest area on the

 Tanana River

Offshore Test Fishery

 Who: ADF&G, YDFDA

 Where: Hooper Bay

 When: June 1 to July 15

 Why: conduct pilot study to attempt to detect Chinook salmon run timing before river entry

Pilot Station Sonar Project

 Who: ADF&G

 Where: river mile 123, Yukon River

 When: June 1 to September 7*

 Why: estimate passage of Chinook, summer chum, fall chum, and coho salmon in the lower Yukon River

Rampart Rapids Video Test Fish Wheel

Who: Stan Zuray/USFWS Where: Rampart Rapids, Yukon River, 40 miles upriver from village of Tanana on Yukon main stem When: June 1to September 26 Why: provide run timing and passage of Chinook and fall chum salmon at Rapids

Salcha Counting Tower and Carcass Survey Who: BSFA

<u>Where</u>: 2 miles above the Tanana River confluence <u>When</u>: July 1 to August 10 (carcass survey until September) <u>Why</u>: estimate escapement of Chinook and chum salmon to the Salcha River used to manage terminal harvest fisheries on the Tanana River.

Sheenjek River Sonar Project

Who: ADF&G Where: approximate river mile 5 on the Sheenjek River or mile 1,054 on the Yukon River When: August 9 to September 25* Why: estimate escapement of fall chum salmon to the Sheenjek River

Subdistrict 5-A Test Fish Wheel

 Who: contracted to Pat Moore

 Where: mainstem Yukon River at approximately River Mile 695

 downstream of community of Tanana on the left bank

 When: fall, August 13 to September 30*

 Why: provide run timing of fall chum and coho salmon for use in fishery management of the terminal harvest area on the Tanana River

Subsistence Catch Survey

 Who: TCC

 When: throughout the Chinook subsistence season

 Where: Holy Cross, Bishop Rock, Nulato, Ruby, Galena, Hess

 Creek area, Fort Yukon, Eagle, and communities on the Koyukuk

 River

 Why: collect data on subsistence salmon harvest

*Note: dates are approximate and may be altered slightly

2010 Yukon River Salmon Fisheries Outlook & Subsistence Fishing Schedule for the U.S.

This information sheet describes the anticipated management strategies for the 2010 season after discussing options with fishermen during several preseason meetings. State and Federal fishery managers will coordinate management of the Yukon River subsistence salmon fishery.

RUN AND HARVEST OUTLOOK

CHINOOK SALMON	CHUM SALMON	COHO SALMON
Below average to average run is projected.	Below average to average runs are projected to provide for escapement and subsistence uses.	Average run is projected to provide for escapement and subsistence uses.
Chinook run is projected to provide for escapement and subsistence uses.	Summer chum commercial surplus is anticipated to be 250,000 to 500,000 fish.	
Directed commercial fishery is unlikely.	Fall chum commercial harvest is anticipated to be 0 to 100,000 fish.	Commercial harvest is anticipated to be 30,000 to 70,000 fish.

MANAGEMENT STRATEGIES

- Initial management will be based on preseason projections and shift to inseason assessment information as runs develop.
- It is unlikely there will be any directed Chinook salmon commercial openings.
- A normal subsistence salmon fishing schedule will begin June 7 in Y-1 and will be implemented chronologically with the upriver migration.
- The Tanana River personal use and sport fisheries will be managed to meet escapement objectives for Chena and Salcha rivers.
- A surplus of summer chum salmon is anticipated above escapement and subsistence needs. However, the extent of a directed chum commercial fishery will be dependent upon the strength of the Chinook salmon run.
- If the Chinook salmon run develops below expectations, managers will consider implementing conservation measures, such as no fishing on a portion of the run or a reduction in fishing time, in an effort to meet escapement goals.

SUBSISTENCE FISHING SCHEDULE

A subsistence salmon fishing schedule will be in place early in the season until the salmon run size is projected to be of sufficient strength to warrant relaxing or additional conservation measures appear necessary. The schedule is intended to reduce harvest impacts during years of low salmon runs on any particular run component and to spread subsistence harvest opportunity among users. **Note: this schedule is subject to change depending on run strength.**

AREA	REDUCED REGULATORY SUBSISTENCE FISHING PERIODS	APPROXIMATE Schedule to Begin	DAYS OF THE WEEK
Coastal District	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
District Y-1	Two 36-hour periods/week	June 7	Mon. 8 pm to Wed. 8 am /Thu. 8 pm to Sat. 8 am
District Y-2	Two 36-hour periods/week	June 9	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
District Y-3	Two 36-hour periods/week	June 13	Wed. 8 pm to Fri. 8 am / Sun. 8 pm to Tue. 8 am
Subdistrict Y-4-A	Two 48-hour periods/week	June 16	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Subdistricts Y-4-B, C	Two 48-hour periods/week	June 23	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Koyukuk & Innoko Rivers	7 days/week	All Season	M/T/W/TH/F/SA/SU – 24 hours
Subdistricts Y-5-A, B, C	Two 48-hour periods/week	June 29	Tue. 6 pm to Thu. 6 pm /Fri. 6 pm to Sun. 6 pm
Subdistrict Y-5-D	7 days/week	All Season	M/T/W/TH/F/SA/SU — 24 hours
District Y-6	Two 42-hour periods/week	All Season	Mon. 6 pm to Wed. Noon /Fri. 6 pm to Sun. Noon
Old Minto Area	5 days/week	All Season	Friday 6 pm to Wednesday 6 pm

All subsistence salmon fishing with gillnets and fish wheels must be stopped during subsistence salmon fishing closures. In <u>Districts Y-1</u>, <u>2, and 3</u>, from <u>June 1 to July 15</u> a person may not possess Chinook salmon taken for subsistence uses unless <u>both tips (lobes) of the tail fin</u> have been removed.

For additional information:

ADF&G: Steve Hayes, Anchorage, 907-267-2383; Dayna Norris, Fairbanks 907-459-7240; or Emmonak 907-949-1320

- Subsistence fishing schedule: 866-479-7387 (toll free outside Fairbanks); in Fairbanks, 459-7387
- USFWS: Fred Bue, Fairbanks, 907-455-1849 or 800-267-3997; or Emmonak, 907-949-1798

Management Plan for Yukon Territory

This upcoming season the Department of Fisheries & Oceans Canada (DFO) will continue to base the execution of its fisheries on the estimates produced at the Eagle sonar site and the harvest shares outlined in the Yukon River Salmon Agreement. If a fishing opportunity exists after the conservation objective has been met, fisheries will be executed with First Nation harvests taking priority over Commercial, Recreational and Domestic Fisheries. After annual meetings are concluded with Yukon First Nations, the public, the Yukon Salmon Subcommittee, and other stakeholders, management actions will be detailed in the 2010 Yukon River Chinook and Fall Chum Salmon Integrated Fisheries Management Plan that will be available at http://www-ops2.pac.dfompo.gc.ca/xnet/content/MPLANS/ MPlans.htm.

For further information, contact Steve Smith, DFO, Whitehorse, YT, 867-393-6724. <

How Many Fish Does the U.S. Need to Get into Canada in 2010?

By Dr. Katie Howard, Yukon Area Research Biologist, Alaska Department of Fish & Game

This year the Interim Management Escapement Goal (IMEG) has been developed as a range of 42,500 to 55,000 Chinook salmon. This goal was adopted by the Yukon River Panel. The IMEG is the number of fish that need to reach Canadian spawning grounds to help keep these runs healthy and sustainable into the future.



Kusawa Lake in the Yukon Territory—a long-time spawning area for Chinook salmon.

This goal means that after a 1,200 mile long journey upriver, between 42,500 and 55,000 king salmon need to pass the Eagle sonar and travel even farther to reach the Canadian spawning grounds and contribute to the next generation of kings. It's a 1-year goal because the Panel recognized that new information may come up in the future and this goal should be revisited as new data arise.

The IMEG isn't the whole story though...

On the Alaskan side of the border, fishers rely on salmon to meet their needs. The same is true on the Canadian side of the border. To ensure that Canadian fishers get their fair share, the Yukon River Salmon Agreement mandates that in addition to the numbers of fish that need to make it to the spawning grounds, the U.S. has to provide additional fish passing the U.S.-Canada border for the agreed Canadian harvest share.

The Yukon River Salmon Agreement mandates that about 23 percent of the Total Allowable Catch (TAC) must enter Canada. The TAC is calculated as the total Canadian-origin run size minus the number needed for the spawning grounds. In other words, it's the total number of fish that can be caught by U.S. and Canadian fishers while delivering the required number of fish to the spawning areas. If the 2010 run is near the lower end of the projected run size (77,800 to 113,100 Canadian-origin Chinook salmon), approximately 6,700 fish would also need to cross the U.S.-Canada border as the Canadian harvesters' share. The U.S. share of Canadian-origin fish would be approximately 22,400.

... the target number of Chinook salmon that we need to get past the U.S.-Canada border is about 55,500.

When we add this all together...

The middle of the IMEG range (the number of king salmon that must reach the spawning grounds in Canada) is 48,750. It helps to shoot for the middle of the range because assessment projects are never perfect and this approach gives some room for error. Add the 6,700 king salmon for the Canadian fishers, and the target number of Chinook salmon that we need to get past the U.S.-Canada border is about 55,500.

For more details on the Yukon River Salmon Agreement, visit http:// yukonsalmon.org/whatwedo/YRSA.htm or contact YRDFA toll free at 877-999-8566, extension 105.

Bycatch Update

By Becca Robbins Gisclair, Policy Director

Chinook Salmon Bycatch Management

The decision by the Secretary of Commerce to approve or disapprove Amendment 91 regarding Chinook salmon bycatch in the Bering Sea pollock fishery is due out by May 19. Check the National Marine Fisheries Service website for the decision at http://www.fakr.noaa.gov/. You can find updates posted by YRDFA on our website at www. yukonsalmon.org or follow us on twitter at http:// twitter.com/yrdfa.

Chum Salmon Bycatch Management

The North Pacific Fishery Management Council (the Council) will be refining the options (called "alternatives") under consideration for chum salmon bycatch management in the Bering Sea pollock fishery during its June 2010 meeting in Sitka. This event is the Council's final opportunity to revise the alternatives before the full analysis of the various options begins. Revising the alternatives is important because the Council will only be able to choose from the alternatives that have been analyzed during final action.

The meeting will be held June 7 to 15, 2010, in Sitka. The agenda for the meeting, as well as a discussion paper on the current alternatives, will be posted on the Council's website at http://www.fakr. noaa.gov/npfmc/.

You can provide comments to the Council by providing testimony at the meeting or by sending a letter before the meeting. Letters must be received by May 31 to be included in the Council's materials. Letters should be sent to:

> North Pacific Fishery Management Council 605 W. 4th Ave., Suite 306 Anchorage, AK 99501 Fax: 907-271-2817

The tentative timeline for the Council's action on chum salmon bycatch is for selection of a preliminary preferred alternative at the June 2011 meeting in Nome and final action in October or December 2011 in Anchorage. Outreach to Western Alaska will be conducted as part of the process. So

This article was prepared by YRDFA under grants from the Oak Foundation, Patagonia, and the National Oceanic and Atmospheric Administration (NOAA). The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the Oak Foundation, Patagonia, or NOAA.

Sea Ice and Climate Change in the Bering Sea Ecosystem

By Lauren Sill, Program Coordinator

The Bering Sea is a rich and diverse marine ecosystem that has supported and sustained seabirds, marine mammals, fisheries, and communities for centuries. Covering more than 3 million square kilometers, this extension of the North Pacific Ocean has unusually wide continental shelves and shallow water. The area experiences dramatic seasonal variation, generally receives low levels of sunlight, and has extremely low water temperatures, yet it is still incredibly productive. As an Arctic ecosystem, the Bering Sea is highly sensitive to changes in climate.

A changing climate

Climate change can affect the marine environment by affecting ice conditions and coverage, ice extent, sea surface temperatures, wind, and cloudiness. In the late 1970s, the Bering Sea underwent a climatic shift, going from a primarily cold Arctic ecosystem, dominated by sea ice, to a subarctic one. This shift has caused a reorganization of the entire ecosystem. Despite recent cold years, this generally warmer regime appears likely to stay. Additionally, research from the Intergovernmental Panel on Climate Change (IPCC) predicts an average warming of 0.2°C per decade for the next two decades, with greater increases expected in the high latitudes.

Role of sea ice in Bering Sea ecosystem

Among the many factors influencing the Bering Sea ecosystem, sea ice is important and may be the most vulnerable to a changing climate. During the past two decades, sea ice coverage has reduced 15 percent. Sea ice, and the timing of its retreat, affects when and how plankton is produced in the springtime, and where it is available for consumption by animals.

At its foundation, the food web in the Bering Sea depends on sunlight, water temperatures, and the timing of the sea ice retreat. It is hypothesized that colder temperatures and more sea ice support benthic (bottom-dwelling) species like crustaceans and the marine mammals and diving ducks that eat them. In cold years, the ice pack breaks up later in the springtime when the days are longer



Illustration of the relationship between the timing of the retreat of sea ice in the spring and the timing of the spring bloom. Top: When the ice retreats in late winter, light is insufficient to support a bloom, and the bloom is delayed until late spring when solar heating has stratified the water column sufficiently to prevent algal cells from sinking. Bottom: When the ice retreat comes later in the spring, light is sufficient to support an ice-associated bloom. This bloom can start under the ice or at the ice edge in ice-melt-stabilized water.¹

and there is sufficient sunlight available for plankton growth, but the cold sea temperatures from the recent ice retreat discourage the growth of predatory zooplankton, which is the main grazer of phytoplankton. A lack of zooplankton means much of the phytoplankton goes ungrazed and falls to the bottom where it becomes available to benthic species.

Before the late 1970s, the Bering Sea was characterized as having temperatures colder than those in recent decades. In contrast, warmer temperatures, like those seen since the 1980s, lead to earlier sea ice breakup. During these short spring days, phytoplankton growth is restricted by the lack of daylight. The phytoplankton bloom won't happen until later in the season, at which time the sea ice has retreated and the water has warmed. These conditions are beneficial to zooplankton, which will thrive and consume much of the phytoplankton bloom. These zooplankton are then available to pelagic (within the water column) species, such as walleye pollock.

Since the regime shift in the 1970s to warmer temperatures, populations of bottomdwelling creatures, such as Greenland turbot and some crabs, have decreased, whereas pelagic species such as pollock have done remarkably well. The dominant species of clam in the northern Bering Sea has changed during the years, and species that have traditionally been found in the southern Bering Sea are being found farther north.

Effects on salmon

Little research has been conducted on Yukon River salmon in the marine environment related to climate change and sea ice retreat. What is known about the response of salmon stocks to climate change largely comes from studies of Bristol Bay sockeye. These stocks appeared to benefit overall from the regime change in the 1970s. It is expected that they will continue to do so. The loss of sea ice and other known impacts of climate change are only parts of the whole in terms of what drives the Bering Sea ecosystem. Predictions and climate models can only show so much about what the future will bring; surprises occur regularly in ecosystems that are in flux. There is concern that a loss of spring phytoplankton production may reduce the overall productivity of the Bering Sea, which may have a negative impact on salmon stocks. Large-scale research projects, such as the BEST-BSIERP Bering Sea Project Projects, which emphasize species important to subsistence and documentation of local knowledge, are important because they may provide the additional understanding and knowledge to allow us to better predict how a changing climate will continue to affect the Bering Sea and the many species that call the sea home. 🍝

¹Source: G.L. Hunt, P. Stabeno, G. Walters, E. Sinclair, R.D. Brodeur, J.M. Napp, N.A. Bond, 2002, "Climate Change and Control of the Southeast Bearing Sea Ecosystem," Deep-Sea Research II, Volume 49, pages 5821-5853.

WASSIP: Helping Unravel Effects of Fisheries on Western Alaska Salmon Stocks

By Jill Klein, Executive Director

WASSIP is the Western Alaska Salmon Stock Identification Program, which was established to develop baselines for identification of sockeye and chum salmon genetic stocks, sample salmon fisheries in Western Alaska, and analyze fishery samples against the baselines to determine stock of origin of sockeye and chum salmon harvests to the finest resolution possible.

The effects of fisheries on the various stocks of sockeye and chum salmon in Western Alaska have been of concern for several decades. Although there are differing views on policy questions pertaining to the conservation and harvest of Western Alaska salmon, interested parties share a strong commitment to obtain the data and scientific analyses necessary to inform the public policy debate. In turn, this will help Alaskans generate solutions to reduce conflict and ensure the sustainability of the stocks and the fisheries.

... this will help

Alaskans generate solutions to reduce conflict and ensure the sustainability of the stocks and the fisheries.

In lay terms, WASSIP is gathering information on salmon stocks to help in the management of fisheries that affect Western Alaska sockeye salmon returning to Bristol Bay and Western Alaska chum salmon returning to the Kuskokwim River, Yukon River, and Norton Sound. These fish travel through the Aleutian Chain, also known as Area M, and have been caught there, causing concern for Western Alaskans relying on these fish to return to their natal streams for harvest and reproduction.

YRDFA, other parties in Western Alaska and the Aleutians, and the Alaska Department of Fish and Game have been working together on this effort since 2006. An advisory panel meets two times a year and a technical committee works on issues related to the sampling, baseline development, and genetic stock identification. The advisory panel and a technical committee member met on April 23, 2010, in Anchorage and discussed the upcoming deadlines for completion of the sockeye baseline (June 2010) and the chum baseline (September 2010, with analysis beginning in October 2010).

A large sampling program has been in place for 4 years to develop the baselines. Once the baselines are finalized, the genetic analysis will begin. An effort is currently under way to determine the best course of analysis on the chum samples because chum salmon are less genetically differentiated from each other than sockeye salmon. Another key component is making sure the sampling process is adequate and enough samples are taken from all of the streams to ensure that the statistical analysis will be able to resolve which stream each salmon is from.

A series of technical papers is being developed to ensure formal documentation of this process. Additionally, a website will be created with educational topics on genetic stock identification of salmon and the WASSIP process. These should come out this summer or fall.

The WASSIP process should release final analysis and reports on the salmon stock identification program by the next round of Board of Fisheries meetings for the Arctic-Yukon-Kuskokwim and Area M regions in 2013. This scientific information is expected to be useful in management decision-making.

Federal Subsistence Board Votes to Reduce Mesh Size to 7.5-Inch Maximum

By Becca Robbins Gisclair, Policy Director

At its meeting in Anchorage on April 13, 2010, the Federal Subsistence Board unanimously adopted proposal FP09-12 to restrict the mesh size of gillnets used in subsistence salmon fisheries in federal public waters of the Yukon River drainage by federally qualified subsistence users to 7.5-inch maximum. The mesh-size restriction was approved to help increase the number of large, more-productive Chinook salmon females reaching the spawning grounds and to provide for the health of the salmon run. Effective in the 2011 fishing season, the new regulation parallels action taken earlier this year by

the Alaska Board of Fisheries. Together the two decisions apply to all commercial and subsistence fishing on the Yukon River in Alaska.

The Federal Subsistence Board did not approve FP09-13, which sought to restrict all gillnets of stretch mesh greater than 6 inches to not more than 35 meshes in depth. S



The Federal Subsistence Board deliberates on restricting mesh size on the Yukon.

SPOTLIGHT ON Emmonak







By Tracy Augustine, Emmonak AK

Emmonak, hub of the Lower Yukon, is approximately 10 air miles from the coast, where Alaska's richest salmon come into the river. *Imangaq* came from the Yup'ik word meaning blackfish. The village started as a fish cannery approximately 1.5 miles up the Kwiguk River; it was relocated when washed away by floods. The population is approximately 850 but grows every summer when our local fish cannery opens up and when construction is going on. Grant Aviation and Frontier Flying Services are the main airlines flying passengers in and out of town.

During the summer months, people come in from surrounding villages to find work with Kwikpak Fisheries and construction companies. The whole town gets excited when the first run of salmon comes in. No matter where you are, you'll hear about how many fish the first person caught. Another exciting event is when there are countless boats racing to catch a seal right in front of the village. The children playing and people walking through town stop and cheer the hunters on. Many people travel up and down the river, going out to the coast for subsistence needs such as geese, swans, cranes, ducks, whales, fish, and seals.

When the days get shorter and the salmon have passed, it's time for berry picking. We travel many miles to pick black, blue, and salmon berries for the winter. Things begin to slow down in town as Kwikpak closes and school opens for the year. That's until moose season opens and people get anxious again. During winter and spring months, the gym is open for the public. Another big thing in town is basketball. We hold three annual tournaments a year.

From fall into winter, we set rabbit snares, put out *taluyaks* (black fish traps), set ice nets for white fish, and hunt for ptarmigans. In December, elders get together with singers to decide what songs to sing for the upcoming potlatches held in February and late March/early April. People get ready for these big events all year. We are one of the few villages to host two potlatches a year.

When all the Eskimo dancing is over, we get excited for pike and go out *manaqing* (ice fishing) beginning in April. The days get longer and school kids are restless for summer break. The high school juniors and seniors get pumped up for prom and graduation. Spring excitement is when it floods. Boat owners watch over their boats along the bank to make sure the ice doesn't take them out. Sometimes the water gets so high you'll see boats going through town. Then summer begins again.

All this goes on every year here in Emmonak. ≤

YUKON RIVER WILD HOODIES FOR SALE

Show your Yukon River salmon pride in this comfy hooded sweatshirt!

Buy one now for only \$40 and receive a **free** one-year membership to YRDFA.



Yukon College Offers Fisheries Training with Online Component

Effective conservation of fish populations and fish habitat relies on well-trained and knowledgeable field assistants to participate in and manage field projects. The Yukon Fisheries Field Assistant Program (or Fish Tech program), offered by Yukon College in Whitehorse, is an intensive course that gives students the training necessary to find employment in fisheries-related field work.

Through this program, students will learn about basic fish biology, northern fish species identification, various capture techniques, and stock assessment, as well as restoration and mapping of fish habitats. The course will certify students in First Aid/CPR and electro-fishing. It will prepare them to work efficiently, effectively, and safely in fisheries restoration and enhancement projects under sub-arctic field conditions.

To make Fish Tech certification available to a wider group of students, the classroom-based portion is being changed to an online format. The "hands-on" portion of certification will be completed during a 3-week field camp.

This program receives funding from the Yukon River Panel's Restoration and Enhancement Fund. For more information on the Fish Tech program, visit http://www. yukoncollege.yk.ca/programs/info/ yffa. **S**



Yukon River Panel 2010 Restoration & Enhancement Projects

NUMBER	PROJECT TITLE	PROJECT PROPONENT	\$US	\$CDN
URE-04-10	Ruby Data Collection	Ruby Tribal Council	9,363	
URE-08-10	Tech Assist, Dev & Support – Fish Wheel Video	USFWS	5,500	
URE-09-10	Rampart-Rapids Full Season Video Monitoring	Stan Zuray	46,100	
URE-13-10	Ichthyophonus Sampling at Emmonak & Eagle	Larissa Dehn	50,395	
URE-16-10	Eagle Sonar Operations	ADF&G	135,757	
URE-19-10	In-season Chin Stock ID Pilot	ADF&G	35,000	
URE-22N-10	Mountain Village Coop Chinook Drift Test Fishery	YDFDA	20,100	
URE-23N-10	Stock Comp Age 0 Chinook Non-Natal Streams	USFWS	30,500	
URE-25N-10	Temperature Monitoring Select YT R Tributaries	ADF&G	5,000	
CRE-06-10	Yukon River North Mainstem Salmon Stewardship	Dawson District RRC		28,144
CRE-07-10	First Fish Youth Camp	Tr'ondek Hwech'in FN		10,000
CRE-09-10	Tr'ondek Hwech'in Student Steward	Tr'ondek Hwech'in FN		5,290
CRE-16-10	Klondike River Chinook Sonar	B. Mercer		78,251
CRE-27-10	Porcupine River CPUE	Vuntut Gwitchin Gov		41,210
CRE-29-10	Chinook and Chum Spawning Ground Surveys — Minto Area	Selkirk RRC		24,000
CRE-37-10	Blind Creek Chinook Salmon Enumeration Weir	Jane Wilson & Assoc.		48,008
CRE-41-10	Chinook Sonar Enumeration Big Salmon River	Jane Wilson & Assoc.		83,950
CRE-51-10	KDFN Michie Cr Salmon & Habitat Monitoring Project	Kwanlin Dun FN		39,630
CRE-54-10	Ta'an Kwach'an Council Community Steward	Ta'an Kwach'an Cncl		46,000
CRE-63-10	Whitehorse Rapids Hatchery Coded Wire Tagging	YF&G Association		42,042
CRE-65-10	McIntyre Creek Salmon Incubation Project	NRI Yukon College		49,738
CRE-67-10	Yukon Schools Fry Releases & Habitat studies	Streamkeepers Nor Soc		5,000
CRE-78-10	Collection of DNA Baseline Samples	DFO and ADF&G		60,000
CRE-79-10	Stock ID Microstellite Variation – Chin & Chum	DFO		22,000
CRE-112N-10	Selective Fisheries - Implementation	Jake Duncan		21,000
CRE-113-10	Miner River Chinook Index	Vuntut Gwitchin Gov		12,300
CRE-114-10	Porcupine River Sonar Feasibility Study	Vuntut Gwitchin Gov		33,869
CRE-119N-10	Fraser Falls Chinook Salmon Passage Investigations	Na Cho Nyak Dun FN		10,000
CRE-125N-10	Teslin Community Salmon Management Plan	Teslin Tlingit Council		9,008
CRE-127N-10	Trondek Hwechin & TKC Viable Fisheries	Trondek Hwech'in		20,000
CRE-128N-10	Ta'an Kwach'an Council Culture Camp	Ta'an Kwach'an Council		4,600
CRE-129N-10	Chinook Public Info Display	Teslin Tlingit Council		7,200
CRE-130N-10	NND Youth Steward	Na Cho Nyak Dun FN		5,290
CRE-132N-10	Yukon Fisheries Field Assistant Program (over 3 yrs)	Yukon College		77,860
CRE-133N-10	Fox Creek Chinook Incubation Survival Project	NRI Yukon College		2,890
CRE-134N-10	Chinook Monitoring upstream Whse Rapids Dam	NRI Yukon College		2,000
CRE-136N-10	Radio Tower Retrieval	DFO		38,885
CRE-137N-10	Chinook ASL Collection & Comparison	DFO		34,700
CRE-141N-10	LSCFN Trad'I Salmon Habitat Knowledge Study	Little Salmon Carmacks FN		53,000
CRE-142N-10	McQuesten River Sonar Pilot Program	Na Cho Nyak Dun FN		31,467
CRE-143N-10	Little Salmon Chinook Spawning Grounds Survey	G.Sandone		23,779
			337,715	971,111

TOTAL \$1,308,826



Yukon River Drainage Fisheries Association 725 Christensen Drive, Suite 3B Anchorage, AK 99501 PRSRT STD U.S. Postage **PAID** Anchorage, AK Permit #643

Yukon River Fisheries In-Season Management Teleconferences

1:00 pm Alaska Time | 2:00 pm Yukon Time each Tuesday Starting on June 1, 2010



Participant Code YUKON# (98566#)

Get involved!

Discuss fishing conditions & management strategies Learn from fishers, processors, & managers Make your voice heard!



Funded by the Office of Subsistence Management and the Yukon River Panel

¹⁶ YUKON FISHERIES NEWS

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