

Yukon River Drainage Fisheries Association

A United Voice for Yukon River Fishers

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SUCCESS STORY Yukon River Elders Council Discusses Salmon Issues, Shares Knowledge

by Catherine Moncrieff, Anthropologist



"We need to work together to understand the point of view of people from different parts of the river." —William Derendoff, Elder from Huslia

I frantically took notes as the Elders spoke, facing each other, in a small circle in the middle of the Larsen Charlie Community Hall in Galena. They had come together for a first ever meeting of the Yukon River Elders Council. Surrounding the inner circle were the board members of the Yukon River Drainage Fisheries Association as well as other attendees from Galena and the rest of the drainage.

We set up chairs in this way so the Elders could discuss issues, listen, and talk to each other face to face, rather than broadcast to a large group or full meeting. This fishbowl setup worked well, as I could see the Elders looking at each other and speaking openly about their experiences in different parts of the river.

YRDFA Board member and Huslia Elder William Derendoff had approached me a year ago and described his desire to play a strong role in the newly forming Yukon River Elders Council. He had a vision and understood the importance of uniting the river through the Elders. Bill knew that the time had come for our Elders to share their knowledge and guide us through the difficult times that come with low salmon numbers. He offered to help in any way he could, and he served the group as moderator and liaison with the YRDFA board. He expertly led them through the questions posed to them prior to and during the meetings. He shared his knowledge and wisdom behind the vision of a Yukon River Elders Council.

The Yukon River Elders Council met in Galena during the YRDFA Annual Meeting from February 13-16, 2012. Alaskan Elders, knowledgeable about fishing, were nominated by their Tribal Councils, YRDFA board members, and fishers at large to represent their part of the river at this historic meeting. The Elders met four times during their stay in Galena. During these meetings, the Elders discussed the King Salmon Management Plan proposed revisions, the importance of chum salmon, and the functions and purposes of the newly formed Elders Council. In addition, the members of the Yukon River Elders Council had important things to say about working together

associate members

Interior Alaska Fish Processors Inc. Boreal Fisheries Holy Cross Traditional Council Koyukuk Tribal Council Ruby Marine

City of Nulato Pitka's Point Tribal Council Yupiit of Andreafski Ohogamiut Traditional

Council

Asa'carsarmiut Tribal Council Allakaket Traditional Council Beaver Village Council Birch Creek Tribal Council (Dendu Gwich'in) Nulato Tribal Council Ruby Tribal Council Evansville Tribal Council City of Hooper Bay

Kotlik Traditional Council

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Y-1, Seat 1	Frank Alstrom	
Y-1, Seat 2	Michael Jimmy	
Y-1, Seat 3	Ephrim Thompson	
Y-2, Seat 1	Alexie Walters, Sr.	
Y-2, Seat 2	Mike Peters	
Y-2, Seat 3	William Alstrom	
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Y-6, Seat 1	Philip 'Jeep' Titus	
Y-6, Seat 2	Victor Lord	
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Yukon Flats, Seat 1	Jan Woodruff	
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Bethel Timothy C. Andrew Terence Reeve Aloysius Wasuli**

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Eagle Andrew Bassich Ian Woodruff

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Susan Robinson Brian Rogers Darlene Sweat Doug Sweat Eric Umphenour

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Fortuna Ledge Vassily Sergie

Galena Gilbert Huntington Sidney Huntington

Grayling Shirley Clark Harry Maillelle

Holy Cross Jeffrey Demientieff, Sr. William Newman

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Kotlik Peter Elachik** Rudolph Hootch** Clement Matthias** Joseph P. Mike** Martin P. Okitkun, Sr.** Robert Okitkun** Michael Prince** Billy Teeluk** Victor Tonuchuk** Aloysius Unok** George Williams**

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Tanana Lester Erhart Gerald Nicholia Stan Zuray

Tok Bronk Jorgensen Thor Jorgensen

Wasilla Axel Alstrom* Ernie Chase Ernest Demoski

Outside Alaska Bill Fliris Richard Kocan Donald Kramer

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A Message From the Director

by Jill Klein, Executive Director



I recently attended training on cross-cultural communication and interpersonal negotiation skills and processes. One would think after 12 years

with YRDFA that I would not need to attend this training, but there are is always more to learn when trying to prevent, management, and resolve conflict.

I want to start with the "Golden Rule"—do unto others as you would have them do unto you. This is a core value at YRDFA and what I learned is that this rule embodies sameness and suggests that we are all the same because it assumes that what we want done for ourselves is what someone else wants too. But we learned that this is often not the case and instead of a rule of similarities we should have a rule of differences. When people assume that they are all the same, they may not take into account significant differences that do exist and when they are under stress, or in conflict situations, this principle breaks down and people default to their positions.

Instead, we should embrace the "platinum rule"—do unto others as they have done unto themselves. Applying this rule enables differences to be accounted for and allows others to define themselves, their values, their preferences, priorities, and interests. Most powerful of all, it shows respect. Instead of trying to change or reject others ways, we listen and accept at face value and try to work with them.

These "heavy metal rules" come into play along the Yukon River when we enter the regulatory proposal arena. With Board of Fisheries (BOF) proposals due April 10, many people are preparing their proposals to submit. Once these proposals get submitted and sent out to the public, it often creates an adversarial process where people are trying "win" their position.

Low salmon returns to the Yukon River have led to an increase in divergent views on why the populations are low, what caused it, and what the solutions are, which is what the BOF asks for in its proposal form. While YRDFA has done an excellent job of bringing fishers' voices to the table, there are many divergent views on how best to manage the fishery in times of low abundance. One concept we have made progress on is the pulse protection measures, which essentially don't allow fishing on a segment of the run to ensure it makes its way to the spawning grounds. While we seem to see some riverwide support for this concept, we know that the details of

how and when these pulse closures take place, in concert with other conservation and management tools, is what ultimately makes the difference both on harvests for people and conservation for the future.

YRDFA was created with a win-win concept in mind, in that no one wins at the expense of another and that the interests

and expectations of the different user groups and fisheries regions involved would be met to an acceptable degree. In contrast to this, the BOF process has felt like a zero sum gain, where someone wins and someone loses. The public comes in with their positions already stated, and not their interests expressed, which is really where their underlying concern is. We know a lot of people are concerned about the state of the salmon runs on the Yukon River. Their interests are similar—to sustain the salmon and the people that rely on the salmon. However, when we come into the BOF arena with our positions already stated, it is hard to move to a

We don't want to risk fighting over the wrong things or trying to win something that really will not serve everyone's best interest, which is to sustain the salmon. win-win situation. If we identify the issues that everyone has, such as securing food to eat and getting enough fishing time to harvest this salmon to eat, we could be starting at a better place.

It is looking like there may be a bumpy road ahead for people on the Yukon River with respect to the king salmon runs. Let's think about how this

impacts everyone and remember to think about other people and learn about their ways before submitting and responding to BOF proposals that are trying to address the problem of low salmon returns. We don't want to risk fighting over the wrong things or trying to win something that really will not serve everyone's best interest, which is to sustain the salmon.

Yukon River Fisheries Meetings Calendar

DATE	MEETING	LOCATION
March 26-April 3	North Pacific Fishery Management Council	Anchorage
April 4	Pre-Season Planning Meeting	Anchorage
April 17-18	Yukon River Inter-Agency Meeting	Fairbanks
June 4-12	North Pacific Fishery Management Council	Kodiak
June 5	In-Season Management Teleconferences begin	
October 1-9	North Pacific Fishery Management Council	Anchorage
October 10-11	YK Delta RAC	Quinhagak
October 10-11	Western Interior RAC	Aniak
October 16-17	Eastern Interior RAC	Central
December 3-11	North Pacific Fishery Management Council	Anchorage
January 15-20, 2013	Alaska Board of Fisheries - AYK	Anchorage

It's Board of Fish Time Again! Proposals Due April 10, 2012

by Becca Robbins Gisclair, Policy Director

It's hard to believe it has already been three years, but indeed it has, and it is time for the Arctic-Yukon-Kuskokwim (AYK) Board of Fish cycle again. Proposals for the Board of Fisheries to consider are due April 10, 2012 at 5pm. You can submit a proposal online at http://www.adfg.alaska.gov/ index.cfm?adfg=fisheriesboard. proposal. You can also download the proposal form by visiting the Board of Fish's website: http:// www.adfg.alaska.gov/index. cfm?adfg=fisheriesboard.main and clicking on Board of Fisheries Call for Proposals 2012-2013.

YRDFA is currently facilitating a riverwide process to develop proposed changes to the King Salmon Management Plan (see

are not working as

intended

article in this edition of Yukon Fisheries News). These proposed changes will be submitted to the Board of Fisheries for consideration at the upcoming AYK Board of Fisheries meeting.

After proposals are received by the Board of Fisheries they will be distributed for public comment. The Board of Fish meets January 15-20, 2013 to consider AYK proposals.

We'll distribute more information about how to participate in this process later on, but submitting a proposal is the first step. If you have ideas for changes which should be made to the current state regulations, now is the time to meet with other concerned fishers and develop a proposal.

Salmon Bycatch Update

by Becca Robbins Gisclair, Policy Director

Chum Salmon Bycatch

The North Pacific Fishery Management Council (the Council) is still in the process of addressing chum salmon bycatch. They are scheduled to review potential actions to reduce chum salmon bycatch management at their next meeting, March 26-April 3, 2012 in Anchorage. Final action is tentatively scheduled for October 2012 in Anchorage.

The alternatives, or options, under consideration include a range of hard caps that would close the fishery when reached, and hard caps applied to June and July only when Western Alaska salmon are caught in higher ...the fact that the proportions in the bycatch. The alternatives also include fleet did not avoid an option for the fleet to participate in a rolling hot spot bycatch at that time system as they currently do, with the additional option of seems to indicate that a backstop large closure area in addition to the hot spot their incentive plans system.

The range of hard caps being considered is 50,000 to 353,000 chum salmon. The alternatives include options

for allocating these caps amongst the different sectors of the fleet. The option for a rolling hot spot system also includes the ability for the Council to revise the current system. At this point YRDFA and our Western Alaska partners have not identified our preferred option, but we will be doing so as we receive more information.

The revised Environmental Assessment was recently released and is available on-line at: http://www.fakr.noaa.gov/npfmc/.

Chinook Salmon Bycatch

This past year, 2011, was the first full year in which the new Chinook salmon bycatch limits (Amendment 91) were in effect (See Yukon Fisheries News, Fall 2011, *Salmon Bycatch in the Pollock Fishery: 2011—A Year in Review* for a

full review of these actions).

At final count, 25,500 Chinook salmon were taken as bycatch in the pollock fishery in 2011. While below the 10-year average bycatch, this is much higher than the 2010 bycatch of 9,694 Chinook salmon. Particularly worrisome is the

fact that a large portion of the bycatch took place in the month of October. October is a notoriously bad time for Chinook salmon bycatch, and the fact that the fleet did not avoid bycatch at that time seems to indicate that their incentive plans are not working as intended.

In other interesting news, genetic stock identification work from the 2010 fishery was recently released. The results showed a substantially higher portion of middle and upper Yukon Chinook salmon taken as bycatch. The stock proportions from the 2010 bycatch samples were:

- Coastal Western Alaska: 42%
- Upper Yukon River: 20%
- North Alaska Peninsula: 14%
- Middle Yukon River: 11%

While these proportions are based on the samples taken from the bycatch and could be biased due to sampling, these results are much different than previous years which formed the basis for the analysis and decision under Amendment 91. To see the full report visit: http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-232.pdf.

The Council will also receive a report from the pollock fleet on the 2011 incentive plans and a report on the 2010 Chinook and chum salmon genetic stock identification work.

This article was prepared by YRDFA under a grant from the Oak Foundation. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the Oak Foundation.



"In recent years, what steps have you seen fishers in your area take to cut back on their king salmon harvests in light of the low returns?"

> This winter, YRDFA program assistant Marilynn Woods asked this question of fishers from up and down the Yukon River. Here are their thoughts:



ATTENTION ALASKAN FISHERS! Provide Input on King Plan Revision

by Jason Hale, Communications Director

There are so many things we have virtually no control over, like the price of gas, the weather, and NBC's fall lineup. However, here's an opportunity to affect something critically important to your life: how your king salmon are managed for years to come.

YRDFA is working in partnership with intertribal groups (AVCP, TCC, and CATG), Regional Advisory Councils to the Federal Subsistence Board (Yukon-Kuskokwim, Western, and Eastern), the U.S. Section of the Yukon River Panel, CDQ, processors, USFWS, and ADF&G to review and revise the current king salmon management plan for the Alaskan portion of the Yukon River, and we need your feedback. At an initial stakeholder meeting in January, stakeholders from the river agreed that the management action of choice for equitably restricting harvest is pulse closures, similar to those that were used in 2009 and 2011. However, there was not consensus on how or when those closures should be instituted. A host of other topics were discussed passionately, but did not gain universal support.

To help us move forward, we've been surveying user groups on the river to find out their preferences. We've mailed a survey to every Tribal Council in the Alaskan portion of the drainage, and we've requested feedback at a number of recent fisheries-related meetings.

We would also like to hear from individual fishers. (Yup, that's you)

Please take a few minutes to complete the survey on the facing page. We will factor in your input as we determine which ideas to move forward, which to modify, and which to drop off the list.

For background and details related to each of these options, turn to the end of this newsletter for The Fine Print. You will find a boatload of insightful information there!

What's Next?

In the spring YRDFA will submit a placeholder proposal to the Alaska Board of Fisheries (BOF) for the revised king salmon management plan.

Then, throughout the summer, our contract scientist will work with a steering committee to incorporate public comments, narrow the revised plan to the most workable components, and send it to other experts for review.

In the fall the final draft plan will again make the rounds for public input, with the hopes of completing the revision by mid-November and submitting it to the BOF for consideration at its January 2013 meeting.

For more information, contact Jason Hale at 907-746-7355 or jason@yukonsalmon.org.

YRDFA's work on this project is funded through the State of Alaska Department of Commerce, Community and Economic Development (DCCED). The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of DCCED.

> Please take a few minutes to complete the survey on the facing page!

Piecing Together Salmon's Genetic Puzzle

by By Dr. Stephanie N. Schmidt, Ph.D., Yukon River Summer Fishery Research Biologist, ADF&G

On long road trips across the country, my nephew enjoys keeping a tally of all the different state license plates he sees. Driving around Alaska, chances are you really are only going to come across Alaska license plates most of the time. But the east coast of the lower 48 is a different situation, where states are geographically smaller and the population is higher. On my road trip from Wisconsin to Maine last August, I counted 32 license plates from different states. License plates are a marker of where a person is from, where they are eventually headed back to. And because every state has a unique license plate design from other states, they are an easy identification tool. Adult salmon return to spawn in the tributaries where they born. In the Yukon River drainage, spawning tributaries encompass both Alaska and Canada. Identifying where each spawning salmon in the Yukon River is headed is an important aspect of management and understanding the salmon population over time.

For example, some spawning tributaries may contribute a large number of salmon to the overall population each year. Or other tributaries may produce fewer and fewer salmon each year, possibly indicating disturbances or threats within that particular watershed. In either of these cases, knowing where salmon are returning to is an important piece of information to help determine harvest and protection measures.

This task would be a piece of cake if salmon had license plates. A quick glance and we would know where that particular fish was headed. Luckily, there are other tools we can use to get the same information.

Genetic markers are a lot like license plates for salmon. Salmon from differing regions and spawning tributaries have different and unique combinations of genetic markers. The degree of uniqueness varies from tributary to tributary and we do not yet have the resolution to identify every spawning tributary. At a minimum, there is enough difference in these genetic markers to differentiate between Canadabound and Alaska-bound salmon in the Yukon River. Given the treaty agreement with Canada, knowing the number of salmon entering the river that are bound for Canada is an essential component of managing the fishery.

"Genetic Puzzle" continues on page 8

King Salmon Management Plan Revision Survey

Please indicate whether you support or oppose the following possible draft components for the Yukon River King Salmon Management Plan, developed by fisheries stakeholders from the Yukon River. For background information and rationale regarding each of these options, turn to *The Fine Print* at the end of this newsletter.

Send completed surveys to: YRDFA, 725 Christensen Drive #3B, Anchorage, AK 99501

Name:

Village:_

PULSE PROTECTION

First Pulse (please indicate your support for only one of the four options below)

- Not allow any harvest from the first pulse, regardless of the preseason run size projection.
 Support Oppose
- Allow a harvest not to exceed 50% of the passage of the first pulse, regardless of the preseason run size projection.

 Support
 Oppose
- 3. Not allow any harvest from the first pulse when the preseason projection of run size indicates that subsistence harvests will likely be restricted in one or more districts or sub-districts.

 □ Support
 □ Oppose
- 4. Do not formalize pulse protection.
 □ Support □ Oppose

Second & Third Pulses

Based on the inseason run assessment, the department will restrict harvest opportunities on the second and third pulses of Yukon River king salmon, as necessary, to provide for escapements and international treaty obligations.

□ Support □ Oppose

<u>Equity</u>

The department shall distribute reductions in subsistence harvest opportunities equitably among users.

ADDITIONAL ITEMS FOR CONSIDERATION

1. Protection for early fish

Establish greater protection for the earliest returning king salmon (prior to windows schedule or pulse protection).

2. Sale of incidentally caught kings by set date or percentage of king run has gone by

Allow the sale of incidentally caught king salmon after a set date or after a specified proportion of the king salmon run has passed Pilot Station Sonar.

□ Support □ Oppose

3. Subsistence and personal use harvest reporting

Require improved harvest reporting, perhaps through harvest report forms issued by the department.

4. Subsistence use permit

Households must obtain a subsistence permit to participate in subsistence fishing.

□ Support □ Oppose

5. Concurrent subsistence and commercial periods

Delete (5 AAC 01.210(e)(1)A) requiring a waiting period between subsistence and commercial periods in Districts 1, 2, and 3.

□ Support □ Oppose

6. Prohibition on selling king salmon roe in Sub-district 4-A

Expand the prohibition on selling king salmon roe in Subdistrict 4-A to the entire drainage. Change the regulation (5 AAC 05.360(c)) to read: A harvester may not sell king salmon roe; only whole king salmon may be sold.

□ Support □ Oppose

7. Mesh depth of net

Reduce the allowable mesh depth. □ Support □ Oppose

<u>8. Windows</u> (please indicate your support for only one of the three options below)

If pulse protection is adopted for management of king salmon in the Yukon River, consider how the subsistence fishing periods ("windows") should be applied during times of conservation

- 1. Keep windows
 - □ Support □ Oppose
- If pulse protection is adopted, eliminate windows
 □ Support
 □ Oppose
- 3. If the first pulse is protected, eliminate windows after the first pulse

□ Support □ Oppose

"Genetic Puzzle" continued from page 6

This is especially important with regards to king salmon, where the first two pulses typically have a high proportion of Canada-bound fish in them (Figure 1). Management can consider more strict protection of those pulses containing Canada-bound fish to ensure escapement goals are met. Besides in-season management decisions, this information is also used to help with post-season run reconstructions and pre-season outlooks.

Based on the proportion of Canada-bound fish in the samples, the strength of the run, and the harvest data, managers may decide to alter management to balance the needs for escapement and needs for fishing. Scientists are working on refining the technology and baseline monitoring to help differentiate spawning salmon within the run on a more regional and local scale. Currently, Yukon River scientists are generally able to identify salmon at a national scale (US, Canada), broad scale (Lower Yukon, Middle Yukon, Canada), and fine scale (Lower Yukon, Tanana, Koyukuk, Upper U.S., Border, Pelly, Carmacks, Takhini, and Teslin).

Scientists collect and analyze tissue samples, typically adipose fin clips, for these unique genetic markers. Samples are collected from a variety of projects in-season. Samples from the Lower Yukon

Test Fishery (LYTF) located at the mouth of the Yukon River and Pilot Station gillnets are primarily used to help estimate the proportion of Canada-bound fish in each pulse.

Once collected, the samples are flown back to Anchorage where scientists are able to analyze a subsample within a 36 hour time frame, getting the information back to research scientists and fisheries managers to help assess the stock composition of the run. Based on the proportion of Canada-bound fish in the samples, the strength of the run, and the harvest data, managers may decide to alter management to balance the needs for escapement and needs for fishing.

Tissue samples are also analyzed postseason from subsistence-harvested fish (thanks to sample collection projects spearheaded by TCC and AVCP), the LYTF, and Pilot Station to help with post-season run reconstructions and pre-season forecasts.

Baseline monitoring projects also occur throughout the drainage each summer to essentially help build a "database" of genetic information for various spawning tributaries. This "database" of genetic information is then used to compare with future samples. Imagine that each "database" is like a picture puzzle where you are trying to fill in



Figure 1. Based on genetic analyses, proportion of Chinook salmon bound for Lower Yukon, Middle Yukon, and Canada at Pilot Station for three time periods in the summer 2011 season. Error bars represent 90% confidence intervals.

the missing pieces. The more pieces you have, the more complete the puzzle and the better idea you have of the picture. That way, you can compare your most recently "caught" picture (aka your salmon) to the respective puzzles from spawning tributaries to determine which one it most looks like.

Genetic sampling requires considerable collaboration with local fishers, tribal organizations, and state and federal management agencies. Working together, we can help piece together the numerous puzzles for the Yukon River drainage that will ultimately help us better understand and protect Yukon salmon.

YSSC Basics

The Yukon Salmon Sub-Committee (YSSC) is a non-government, public advisory body established under the Umbrella Final Agreement (UFA) that provides formal recommendations directly to the Minister of Fisheries and Oceans and to Yukon First Nations on all matters related to salmon and their habitat.

The UFA is an agreement between the Government of Canada, Government of Yukon and Yukon First Nations as represented by the Council of Yukon First Nations (CYFN). There are 11 Yukon First Nations that have Final and Self-Government Agreements in effect.

Under Chapter 16 of the UFA, the YSSC is recognized as the main instrument of salmon management in Yukon. For more information on the YSSC visit: www.yssc.ca.



WWW.YUKONSALMON.ORG

News from the Yukon Territory

by Dennis Zimmermann, Executive Director, Yukon Salmon Sub-Committee

Talking Turkey in Old Crow

Despite the -45 degree weather, this January, the Yukon Salmon Sub-Committee (YSSC) travelled to the two northern Yukon communities of Old Crow and Dawson City to discuss Yukon River and Porcupine River salmon management.

The first public meeting took place in the community of Old Crow, Yukon in partnership with the Vuntut Gwitchin First Nation (VGFN). The Vice-Chair of the YSSC and Porcupine Drainage member Pauline Frost, YSSC Executive Director, Dennis Zimmermann and the VGFN Fish and Wildlife Coordinator, William Josie made up a panel and presented to approximately 30 community members.

Proving that you don't just save turkey for Christmas, first order of business was to share a great turkey dinner with all the fixing's. Thanks to Renee Charlie of Old Crow for the great cooking and getting people out despite the cold weather.

The panel made presentations on the Chinook and chum season in review, discussions around the Salmon Summit, an overview of the Porcupine River Salmon projects and research, and a review of the December Yukon River Panel meeting in Whitehorse.

With the formal presentations out of the way, this very engaged community asked numerous questions and made great suggestions to the panel. Most comments revolved around the chum salmon and the fact that while the chum run in the main stem Yukon River was good, the Porcupine did not see those same returns. In 2011, the Fishing Branch weir estimated 13,085 chum, while the spawning escapement goal was between 22,000 and 49,000 fish. This escapement goal has not been reached since 2006. There were concerns with climate change, discussion around the projects and technology used to count salmon, and specific thoughts around spawning areas in Fishing Branch and the Crow River.

Another highlight of the visit for the YSSC was to be able to visit the school and witness Stan Njootli Sr. teaching ten school kids how to butcher a caribou hind quarter and handle a mature Chinook salmon. Seeing the smiley, wideeyes kids holding the big frozen salmon made us realize how important it is to keep these kids fishing and harvesting these beautiful fish.

The Boom and Beyond of Dawson City

The second visit for the YSSC was to Dawson City to participate in the conference "The Boom and Beyond: Balancing Growth with a Sustainable Future". The conference was part of the Dawson Regional Land Use Planning process. With the signing of the Umbrella Final Agreement, and the subsequent land-claim settlements, the Dawson Regional Planning Commission was established and carries out the formal land use planning process for this region.

Naturally, Yukon River salmon are an important resource for the Tr'ondek Hwech'in First Nation, commercial fishers, domestic fishers, and the general public within this planning region. Earlier in the process, the YSSC submitted a document that highlighted the significance of Yukon River Chinook and chum salmon and identified a series of issues related to salmon in the planning region. Issues included: the declining number of salmon, the inability to meet agreed upon escapement and harvest goals, lack of spawning habitat, and the Yukon Queen II. For more information on the planning process and a copy of the submission visit: www.dawson.planyukon.ca. The feature on day two of the conference was the panel session on "A River Runs Through it" with presenters Gerry Couture and Peggy Kormendy. These two wise "river people" presented on the environmental, cultural, and economic importance of the Yukon River. They spoke about the changes over the years in salmon, the river, the uses, and habitat in general. It was a great session balancing the science of the past day with the wisdom of these individuals.

It is important for the YSSC to stay involved in this planning process to ensure that Yukon River salmon, their habitat and their uses are incorporated into the plan.











YRDFA's 22nd Annual Meeting: Elders, Legislators, Business, and Merriment







10 YUKON FISHERIES NEWS

by Jill Klein, Executive Director

YRDFA held its 22nd Annual Meeting in Galena. This was the same location that the first meeting of Yukon River fishers met to determine that they needed to work together to speak with one voice to sustain the salmon fisheries that they all depend on. With an almost full delegation of riverwide representatives at the table, and representation from most villages along the Yukon River in attendance, YRDFA was able to conduct a successful meeting.

Hosted by the community of Galena, the YRDFA meeting took place at the Larson Charlie Community Hall from February 13-16, 2012. We had our meals at the hall and lodged with the many B&B and home stays in Galena. Events ran smoothly due to the assistance of many gracious helpers from the community, including numerous local people, the schools, the Tribal Council, and the refuge. These folks pitched in on lodging, meals, snacks, and driving us around town.

YRDFA discussed the king salmon management plan revision process, made possible by a grant from the Alaska State Legislature through the Department of Commerce, Community and Economic Development. The YRDFA delegation passed a motion and also a resolution to support pulse closures as a concept that can work to help rebuild the king salmon stocks.

Throughout the meeting, YRDFA had an Elders Council participate. Elders were nominated from across the drainage and then selected by the YRDFA board to attend the meeting in Galena. They discussed the same fisheries issues as the board members and lent guidance to other discussions, especially around the areas of low king salmon returns to the Yukon River. The Elders spoke numerous times during the meeting and our Elder members of our YRDFA board joined in at times.

The second day of the meeting was framed by the attendance of our Alaska State legislative guests, who included the Lieutenant Governor Mead Treadwell, Senator Albert Kookesh and his staff, Senator Donald Olson, Representative Neal Foster, Representative Alan Dick, and also staff from U.S. Senator Mark Begich's office who helped us teleconference with Senator Begich during the meeting. The legislators in attended updated us on issues impacting rural Alaska and took questions and comments from the delegation. They were able to meet with meeting attendees one-on-one during breaks, making themselves available for quite some time, to the appreciation of all.

The YRDFA board and others in attendance worked to pass resolutions that cover a broad spectrum of interesting, timely, and relevant topics (see related sidebar). The community hosted a covered dish dinner where many delicious foods such as moose and halibut were served. In addition to these Alaska delicacies, the meeting attendees were treated to freshly baked pizza and doughnuts from the Galena Interior Learning Academy.

YRDFA hosted a raffle with awesome prizes that drew in the community members, and in YRDFA fashion we had our own musicians including Lester Erhart and Bill Derendoff who played with the best of the local talent, also from the Galena Interior Learning Academy. We watched traditional Athabascan songs and dance, and Ron Chambers from Haines Junction, Cananda presented his traditional dance, song, and regalia to the school kids in their classrooms.

YRDFA feels it is important to give back to the communities where we meet, and we do this by working with the school to develop activities that we can present in local classrooms. This year we had a full schedule of events where YRDFA brought Elders and other educators into many of the Galena classrooms. We also visited the students during their living wax museum—a fun activity to do as a break from the meeting.

Overall the YRDFA meeting was a success and we all enjoyed our time in Galena. We look forward to next year in Saint Mary's, which was selected as a primary choice for the 2013 annual meeting.

YRDFA's work on this project was funded through U.S. Fish & Wildlife Service (USFWS), the Lannan Foundation, and the Administration for Native Americans (ANA). The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of USFWS, the Lannan Foundation, or ANA.

YRDFA 2012 Resolutions

01 – Thanking the Community of Galena

Be it resolved that the YRDFA Board Members, delegates and staff of YRDFA gratefully thank the various organizations and the people of Galena, including the Louden Tribal Council, City of Galena, James Honea (driver), Archie Wholecheese (driver), Bobby Frankson (driver), Shirley Cleaver (cook), Sandy Scotton (community liaison), Fred Huntington (board member), bed and breakfasts, businesses, fishers, and families for their generosity and hospitality.

02 – Salmon Bycatch

Be it resolved that YRDFA requests that the North Pacific Fishery Management Council adopt management measures which will adequately protect Yukon River chum salmon runs at a biologically acceptable level.

03 - Unified Yukon River Conservation Plan

Be it resolved that all people on the Yukon River continue to work together to develop a conservation plan for Yukon River Chinook salmon to allow the stock to recover and rebuild.

04 – Hatcheries

Be it resolved that YRDFA supports setting specific limits on hatchery production within Alaska and internationally.

05 – Pulse Protection

Be it resolved that the YRDFA Board supports putting pulse closures in regulation to help rebuild the Yukon River Chinook salmon stock.

06 – Concern with Donlin Creek Mine

Be it resolved that YRDFA expresses its concern that the mine, if permitted, operates with no impacts to the environment and, particularly, no impacts to aquatic life and habitat productivity.

07 – International Cooperation

Be it resolved that YRDFA will continue its efforts to work for international cooperation and understanding between the United States and Canada for the good of the Chinook salmon and fishers of the Yukon River and its tributaries.

08 – Value of Traditional Knowledge in Management

Be it resolved that YRDFA recommends the Federal Subsistence Board, the Alaska Board of Fisheries, the US Fish and Wildlife Service, the Alaska Department of Fish and Game, the National Marine Fisheries Service and the North Pacific Fishery Management Council include Alaska Native traditional and historical knowledge of the salmon and rivers in the planning, response and management of the Yukon River resources.

09 – Thanking the school and youth of Galena

Be it resolved that the YRDFA delegation and staff gratefully thank the youth and Galena schools for their hard work, creativity and artistic expression.

10 – Thanking the Elders for their participation

Be it resolved that the YRDFA delegation and staff gratefully thank the Elders for attending and participating in the YRDFA annual meeting.

11– Thanking Harry Wilde and Sidney Huntington for their leadership role along the Yukon River

Be it resolved that the YRDFA delegation and staff gratefully thank Harry and Sidney for attending and participating in the twenty-second YRDFA annual meeting.

12 – Tracking and monitoring of fires, floods and other natural disasters potentially impacting salmon and their rearing and spawning habitat

Be it resolved that the YRDFA delegation and staff recommend that agencies review historical information and document occurrences and work together with local people in the region to monitor forest fires, floods and other natural disasters that likely impact salmon rearing and spawning habitat in the future.

13 - Mining in the Yukon River Drainage

Be it resolved that YRDFA expresses its concern that these mines operate with no impacts to the environment and, particularly, no impacts to aquatic life and habitat productivity.

14 - Trans-Alaska Pipeline Citizen Oversight

Be it resolved that YRDFA supports developing citizen oversight capacity of the Trans-Alaska Pipeline System to provide for pipeline operations oversight and monitoring.

15 - Marine Research and Cooperation

Be it resolved that YRDFA requests that State and Federal agencies such as the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service allocate and apply for funding for continued joint efforts to do research on what is happening to Yukon River wild salmon in the marine environment.

16 – Primary Subsistence Use of King Salmon Be it resolved that YRDFA defines that the primary use of the Yukon King salmon is to provide food for personal and family human consumption.

YRDFA sincerely thanks businesses who donated to our raffle this year:



AYK Escapement Goal Review Underway

by Jan Conitz, Arctic-Yukon-Kuskokwim Regional Research Coordinator, ADF&G

Every three years, ADF&G reviews its salmon escapement goals and makes recommendations to the Alaska Board of Fisheries. The process also includes review by stakeholders. Those interested in this review should have an understanding of escapement goal basics—what they are, how they are set, how they are used, and what they can and cannot do.

effect on escapement than natural fluctuations in salmon populations and the status of the environment.

To set an escapement goal, we need escapement data over a period of time, usually a couple of full generations of returns (e.g. 12-14 years for Chinook salmon). Data collection in a huge



Many people understand escapement goals in terms of conservation, but an escapement goal is actually a tool or guideline with which to manage salmon fisheries so they are sustainable and remain productive. Alaska's Sustainable Salmon Fisheries Policy, passed by the Board of Fisheries in 2000, specifies that ADF&G will set and use salmon escapement goals and "manage Alaska's salmon fisheries, to the extent possible, for maximum sustained yield."

Escapement goals are used by fisheries managers to help determine when to open or close fishing, so they only work to promote conservation when a salmon run is fished. If there is very little fishing on a salmon run, or if the stock is only a tiny proportion in a mixed run, an escapement goal will likely not be effective. In these cases, fishing, if any, has much less

Escapement goals, in principle, mark the point at which spawning needs have been met, a surplus is available, and fishing can

begin.

watershed with many remote tributaries, such as the Yukon River, is difficult and expensive. Counts from weirs, towers, or sonar are the best escapement data, but sometimes all we have are one-time visual estimates from aerial surveys of the spawning grounds. Some salmon runs have no escapement goal simply because we don't have enough data.

For the simplest escapement goals, we assume that over a couple of salmon generations, the escapements we observe are sustainable if the runs are fished and remain fairly stable in size. Typically, an escapement goal range is set that covers the middle 50-70% of all observed escapements, which allows for natural fluctuation in the salmon run and uncertainties in our estimates.

With some additional data, including harvest estimates and fish ages, we can develop goals based on salmon

productivity—how many salmon will potentially return from the offspring of a given spawning population. Up to a certain point, more spawners will produce more offspring, but at higher numbers, the average number of surviving offspring per pair of spawners begins to decrease. Salmon, like many animals, are capable of producing many more offspring than they need to replace themselves, which buffers their population against inevitable losses from predation, injury, and disease. On the other hand, populations cannot increase indefinitely but are limited by the amount of habitat available to them.

Habitat for salmon comes in several forms, depending on their life stage. Spawners need enough suitable gravel or other substrate to deposit their eggs, and developing embryos need sufficient flowing water and oxygen. Salmon fry which remain in streams and lakes need specific kinds of prey, and juvenile salmon in the ocean need large amounts of other types of prey to support their growth and maturation. At all these stages, salmon compete with each other as well as other species for available resources.

These habitat requirements and constraints together create a limit, or carrying capacity, on the number of salmon the environment can support. Even so, many more salmon frequently return to the spawning grounds than are needed to sustain the population. If not fished, this natural surplus can result in a boom and bust cycle between generations, but, as fishers on the Yukon have known since time immemorial, the surplus fish can be harvested for food year after year without depleting the run.

In the present day, increasing fishing pressure on many runs requires precautions to avoid exceeding the surplus and harvesting those fish needed to produce the next generation. Escapement goals, in principle, mark the point at which spawning needs have been met, a surplus is available, and fishing can begin.

The fisheries manager uses escapement goals to help decide when to open or close the fishery, but in a large river system such as the Yukon, these decisions often have to be made before the escapement can be counted. Migrating salmon pass through the fishing area over an extended period, but may not reach their spawning grounds until long after most of the run has passed through the fishing grounds. In many fishing areas, the run is also composed of a mix of different stocks which

will disperse upriver into widely separated spawning populations, some with and some without monitoring or escapement goals. Managers have to rely on imperfect forecasts and a steady stream of bits of data collected during the season to make their best guess as to how much fishing the run can support and still meet escapement goals.

In reviewing escapement goals, we look at both fishing and escapement data to see if goals are working as intended and consider changing or eliminating those that are not. In recent years, we are facing an apparent loss of productivity, particularly in our Chinook salmon populations. Even when escapement goals were met, it was often at the expense of important subsistence and commercial harvests.

The loss of productivity could be due to problems with health and fitness of spawners, especially females, or to reduced carrying capacity of the environment. Salmon habitat can be lost or impaired by human activities in the watershed or events related to climate change such as large floods and fires. Pollution in freshwater can reduce the quality and quantity of food for juvenile salmon, and widespread changes in ocean chemistry and ecology can change and reduce food that salmon need in the ocean.

Escapement goals may alert salmon biologists and managers to signs of declining salmon production due to factors other than fishing, but most of these factors cannot be managed through escapement goals alone.

Stay tuned for information about Yukon River escapement goals through Board of Fisheries announcements and meetings. Get involved in data collection and monitoring projects in your local area.

These are challenging times for Yukon salmon, but by working together and using the best available science, we can still provide for sustainable fisheries and escapement up and down the river.

YRDFA Helps Shape Youth Fish Camps in Communities

by Teddy Willoya, Program Coordinator & Christian Osentoski, Program Assistant

To kick off the New Year, Christian Osentoski and Teddy Willoya had the opportunity to travel to Nulato, Pilot Station, and Tanana to collaborate with the communities about the upcoming youth fish camps. We received a grant from the Administration for Native Americans (ANA) to work with five Yukon River communities to implement fish camps for the youth over the next two summers (2012 and 2013).

The five participating communities are Pilot Station, Nulato, Galena, Tanana, and Nenana. This project involves working with members of the Tribe, city, school, Elders, youth, fishers, and other active community members. The goal is to improve the well-being of youth by preserving the cultures and subsistence way

of life in Alaska Native communities on the Yukon River. We aim to achieve this by creating and implementing a youth-focused fish camp program that incorporates three activity modules on:

- Fishing practices, processing and storing techniques,
- Traditional ecological knowledge (TEK) educational activities, and
- Education, employment and training on fisheries opportunities through mentoring.

The meetings in each of the communities we visited went exceptionally well, and we were able to decide on key details pertinent to their upcoming fish camps.

In the first week of January we traveled to Nulato and it was a surprising 65 degrees below zero. We have learned that it helps to fly with your snow gear on as opposed to having it your checked luggage. Our community meeting was originally scheduled to be downtown but due to the very cold weather we changed the location to uptown. Despite the cold weather, we had a successful turnout of active community members that voiced their concerns and opinions.

The following week we traveled to Pilot Station and it was a welcoming 35 degrees below zero. Regardless of the cold weather, we had a wonderful turnout of the community.

In the beginning of the third week of January, we traveled to Tanana and we were greeted with yet again a bitter 50 degrees below zero. Although

Locations, dates, boat drivers, cooks, fishers, Elders, youth, educators, chaperones, mentors, and other details were decided the weather was very cold, we were fortunate enough to have another good turnout at our meeting. In each of the community meetings, we discussed various details of their individual needs for each

camp. Locations, dates, boat drivers, cooks, fishers, Elders, youth, educators, chaperones, mentors, and other details were decided during the meetings by members of each of the communities.

During our visits, we had the opportunity to speak with the students at each of the local schools. We informed the students of the upcoming fish camps, and they expressed a great deal of interest in attending this summer.

We also had the opportunity to talk to the students about the importance of focusing on their education. We informed them about the many scholarship opportunities that they have available to them. We stressed the importance of getting good grades now, so that they can obtain the financial aid necessary for their higher educational needs.

Although we were able to work out quite a few of the details for each camp, there are still much coordination and many details to be ironed out. We are thankful for each of the communities' hospitality and efforts in making these youth fish camps a success.

YRDFA's work on this project is funded through ANA. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of ANA.

Know Your Fishery Assessment Tools: Mountain Village Cooperative King Salmon Test Fishery

by Gene Sandone, Consultant for YDFDA

Yukon Delta Fisheries Development Association (YDFDA), in conjunction with the Asa'carsarmiut Tribal Council (ATC) and ADF&G, successfully conducted a king salmon test fishery during the 2010 and 2011 summer seasons near the community of Mountain Village (River Mile (RM) 87) in the Lower Yukon Area.



The Mountain Village Test Fishery (MVTF) project is strategically located between the Lower Yukon Test Fishery (LYTF; RM 24 and 26) and Pilot Station sonar (RM 122) assessment projects. The MVTF project was initiated in 2010 to provide additional information regarding the timing and the relative magnitude of the Yukon River king salmon run as it passed through the Lower Yukon Area.

Additionally, because of problems
associated with the assessmentdesigned
associated with the assessmentof the 2009 Yukon River king
salmon run in the lower Yukon, this
project was designed to provide
verification, or a check, on the LYTFverification
the
and Pilot Station sonar assessments
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three Lower Yukon projects, in
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projects, provides
managers and research biologists
with a better understanding of the entire Yukon

River king salmon run. In the future, information from the MVTF project will be more useful as the database grows and the utility of the data is more fully understood.

During the 2011 summer season, 74 test fishing drifts were conducted by local expert fishers from June 7 to July 17, using 50 fathom, 7.5-inch stretch mesh gillnets. Only 7 scheduled drifts were cancelled because of very rough water. During these test drifts, 493 Chinook salmon were captured and retained. A total of 429 Chinook salmon were sampled for age, sex, size and genetic stock identification. Additionally, 18 Chinook salmon were observed to have

> dropped out of the net when the net was being pulled into the boat. Two Chinook salmon were captured and retained that did not have an adipose fin and were thought to have originated from hatchery releases in Canada. All retained salmon were distributed to community residents for subsistence purposes.

Unlike the 2010 Chinook salmon run, which was late, the 2011 Yukon king salmon run was close to normal run

timing. The first king salmon was caught at the MVTF project on the first day of operations, June 7. The mid-50% passage of the run, or the middle of the run, occurred between June 16 and June 26, inclusive. The median date of passage, or midpoint of the run, occurred on June 22. Run

...this project was designed to provide verification, or a check, on the LYTF and Pilot Station sonar assessments projects 2011 Yukon River king salmon run was similarly observed at all three Lower Yukon assessment projects. Of the total

timing of the

number of Chinook salmon retained and sampled, 85%,

or 370 salmon, had ageable scales. Age 5-king salmon dominated the sample, accounting for 59% of the sample. Age-6 king salmon, which usually dominates the Yukon River king salmon run, accounted for 39% of the MVTF sample. Age-4 king salmon accounted for 1%, while age 7 accounted for less than 1% of the sampled salmon. Female salmon comprised 32% of the total sample. Similar to 2010, the female component was greatest in the last, or fourth, quartile of the run. Female composition by quartile ranged from 24% to 51% in 2011 and similarly from 29% to 52% in 2010.

The majority of the sampled king salmon, 69%, were between 27.6 inches (700mm) and 33.5 inches (850mm), inclusive. Nearly three-quarters of the female salmon, 74% were equal to or greater than 33.5 inches (850mm), while the vast majority of the male salmon, 83% were less than 33.5 inches (850mm). King salmon equal to or greater than 35.4 inches (900mm) comprised 8% of the sampled fish. However, the vast majority, 82%, of these largest kings were female.

Note, however, the 7.5 inch stretch mesh gillnets used at the MVTF project targets the male dominated, age-5 component of the run. Therefore, the age and sex information collected from this project, like all test fish projects, probably does not accurately represent the true sex and age composition of the run because of the selectivity of the gear employed.

The genetic samples have not yet been analyzed. ${\displaystyle \leqslant}$

This project was primarily funded by the US/Canada Restoration and Enhancement Fund with additional funding for oversight, supervision, and report writing from YDFDA. Local hiring of expert fishers and fish distribution was accomplished through ACT. ADF&G provided technical support, aged the scale samples and is responsible for analyzing the genetic samples.



Keeping the Oil in the Pipe: YRDFA Supports Citizen Oversight of the Trans-Alaska Pipeline System

by Kristen Pope, Campaign Coordinator, Citizen Oversight of the Trans-Alaska Pipeline System

At its 22nd Annual Meeting in Galena, the YRDFA board passed a resolution of support for Citizen Oversight of the Trans-Alaska Pipeline System (COTAPS).

COTAPS is a coalition of citizens and organizations promoting the safe transportation of oil and gas from the North Slope to Valdez and working to keep the oil in the pipe.

TAPS crosses 34 major rivers and nearly 800 other rivers and streams over the 800 miles from Prudhoe Bay to Valdez. The pipeline was completed in 1977 and built to last only 30 years, but the lease and right of way have now been renewed through 2034. A breach in the line at or near a river crossing could result in oil reaching fish streams or rivers, and clean up in remote areas would be an enormous challenge.

Over the 35 years of TAPS' operation, there have been a number of serious incidents along the pipeline and the pipeline owners have been fined millions of dollars for numerous violations. Our most pressing concerns with the pipeline include: corrosion problems, wax and ice buildup in the pipe, deferred maintenance, inadequate leak detection systems, inadequate spill response planning, and seismic and geologic hazards.

To address these concerns, we are working to increase citizen oversight capacity. After the Exxon Valdez disaster, the Prince William Sound Regional Citizens Advisory Council was formed to provide citizen oversight for the Sound and resulted in significant improvements in safety and operations.

Our coalition of partners that want to "Keep the oil in the pipe" include: Cascadia Wild, Copper Country Alliance, Copper River Watershed Project, Cordova District Fishermen United, Ecotrust, Yukon River Drainage Fisheries Association, Gulkana Village Council, and Tazlina Village Council.

Some Frequently Asked Questions About Citizen Oversight:

What is citizen oversight?

Citizen oversight is a proven legal framework within which recognized citizen groups can act



as independent observers of government agencies and private corporations for greater transparency,

accountability, and receptiveness to public priorities. Examples of effective oil and gas citizen oversight organizations include: Prince William Sound Regional Citizens Advisory Council, Pipeline Safety Trust, Cook Inlet Regional Citizens Advisory Council, and the Washington Oil Spill Advisory Council.

How is this different from government regulation and current oversight?

The oil and gas industry is essentially selfregulating at this point. Citizen oversight would add an independent layer of monitoring. We're not trying to add more bureaucracy, but we do want to raise public awareness about the need for state and federal agencies to use the discretion allowed them by current law to protect public waters and lands adequately.

Why isn't the existing oversight good enough?

Citizens don't have enough information available to them to know whether the TAPS is being maintained adequately. The Joint Pipeline Office is supposed to assemble Comprehensive Monitoring Reports, but the most recently posted CMR on-line is dated 2007. And the State's annual report on TAPS is based largely on selfreported data from the Alyeska Pipeline Service Company with minimal verification by the State.

Why is this becoming an issue now? It's been fine for over 30 years.

The pipeline was completed in 1977 and built to last 30 years. The pipeline is now 35 years old and its lease and right of way have been renewed through 2034. Under Alyeska's Strategic Reconfiguration, several pump stations have



been automated, meaning there are fewer crew members in the field. That could lead to longer response times to mechanical problems. The pipeline's age is catching up to it and current problems include corrosion problems, wax and ice buildup in the pipe and deferred maintenance in addition to seismic and geologic hazards, inadequate leak detection systems and inadequate spill response planning.

Where can I get more information?

For more information, please go to www.akpipelinesafety.org.

Who can I contact if I have questions?

Please contact CO TAPS Campaign Coordinator Kristen Pope at kristen@akpipelinesafety.org or (307) 203-8146.

What can I do to help?

- Learn More & Spread the Word:

Talk to your friends and neighbors and tell them why you are concerned about the current oversight of the Trans-Alaska Pipeline System.

- Join our email list for updates:
 - To join our email list, go to http://akpipelinesafety.org/home and enter your email address in the field on the right side of the page and click "Add". You will receive an email to verify and then after verification, you will receive CO TAPS updates. You can unsubscribe at any time.
- For more things you can do to help:
 - Visit our webpage at:
 - http://akpipelinesafety.org/whatcanyoudo.

Listen to Your Elders: Sidney Huntington Addresses YRDFA Board



Sidney Huntington—Elder, fisher, leader, legend delivered the following speech at the 22nd YRDFA Annual Meeting in Galena this past February.

What's happening to the salmon runs along the Yukon River and its tributaries?

In looking back to 1920, my first year at Anvik, I recall a lot of history. The method used to harvest chum salmon was a floating fish trap. Then, the native people were fully prepared to harvest with one trap; some years two traps were used. A 20

or 24 foot birth bark canoe was used to haul the fish from the trap to the women, who were all ready to cut. They harvested a few thousand salmon to last the Tribe a year. There were no moose and very few black bears those days. There were some rabbits and very few beaver. Mink was often eaten. There were no restrictions on when they could be harvested—if they were seen, they were harvested.

Skins of large male chum and king salmon were used for water boots and rain parkas. Dried chum was traded for seal oil to the people over the hill to people from the coast. On the Koyukuk River, we used bear grease.

King salmon was not a concern because very few were harvested before the fish wheel was brought into the picture. The same for the late fall chum—they were called silvers. Salmon along the Koyukuk River in the early days were harvested by fish traps, also. As were chums, few kings and late fall chums.

In Anvik, some kings were probably dried, but I never saw that. I do know that they used to wrap salmon in birch bark, same with moose, and bury them in the permafrost for preserving.

I built one of those fish traps in Hog River on the Koyukuk. I caught my winter supply of eating fish and enough to feed 10 dogs for a year.

Predicting the salmon runs in those days was a lot different. The extreme cold weather, sometimes minus 60 to 80 degrees, had a great effect on

Your federal government didn't do the management any good when they made it legal to sell a subsistence bycatch such as king salmon. Some people say king salmon is a good part of our subsistence resource. In 1935 my wife's mother with her husband fished the eddy across from Koyukuk. They harvested one 100 pound gunny sack of king salmon, and that included the backbone—you don't subsist very long on that much.

It is probably going to take a massive study to see how to hopefully preserve the king salmon run. You all know that some massive salmon runs have all but been eliminated in the USA.

People in the USA today consume 60 more fish than the records show 15 years ago. 55 percent of what is eaten in the USA comes from overseas.

For money from foreign countries, for greed, the Bristol Bay red salmon will eventually be wiped out if the mine opens.

All species of fish from the oceans are in danger of being eliminated due to greed—tuna, shark for fin soup, cod, halibut, and pollock. So not only the salmon are in trouble; other species are in the same boat.

I am sorry to have given you all such a dim picture of your future—of the future of our historic subsistence food, the salmon. We do have to do what we can if the goal is to preserve our salmon. Some people are going to get hurt; that's the price we have to pay. There are other species we may have to go back and consider: pike, burbot, whitefish, and other small fish.

Our best chance to preserve any salmon on the Yukon is the late fall chum. Remember False Pass—they had in the past had a great effect on the fall chum, their bycatch running to over 200,000 at times.

Note from Fred Huntington, who served as "translator" for Sidney Huntington at the meeting:

He also suggested that in addition to any cut back on the take of the salmon on the Yukon River, there are measures to cut back on the Bering Sea fisheries, too. Otherwise it would be useless for Yukon River fishers to cut their harvest of salmon on the Yukon River.

salmon runs. 1928 and 29 were extremely cold, and in 1932 and 33 there were very few chum harvested. We fished in Nulato and caught less than 2,000 chum before the 4th of July. There was no more fish even in the Nulato River. There was 2 winters when the spawning grounds on the small rivers froze to the bottoms.

Today people don't even consider the summer chum. Everyone is after the king. The first king salmon that I saw were caught by Jack Patsy in Pasty Slough above Nulato. He caught them by fish wheel. Five kings then was considered a large catch. The modern method and means to harvest king today will in due time eliminate the king salmon.



WWW.YUKONSALMON.ORG

The Fine Print

The following information serves as background and rationale related to the King Salmon Management Plan Revision Survey on

page 7 of this newsletter.

Potential Changes to the Yukon River King Salmon Management Plan

Proposed by Yukon River Stakeholder Group February 22, 2012

Overview

The Yukon River king salmon stock historically provided for adequate escapement and subsistence, commercial, personal use, and recreational harvests. However, in recent years the number of king salmon returning to the Yukon River has declined, such that even subsistence harvests have been restricted to provide for basic escapement needs. In response to stakeholder concerns, and in preparation for the 2012-2013 Alaska Board of Fisheries (BOF) proposal cycle which will include Yukon River salmon proposals, the Yukon River Drainage Fisheries Association (YRDFA) initiated a process to review existing management strategies and achieve consensus among stakeholders on potential measures to improve king salmon management in the Yukon River. Funding for these efforts was provided by the State of Alaska. The overall goal of this process is to use stakeholder input to identify measures to facilitate rebuilding of the Yukon River king salmon stock.

To develop proposals with riverwide consensus, YRDFA convened stakeholder representatives from the lower, middle, and upper Yukon and including three Federal Subsistence Regional Advisory Councils, the Yukon River Panel, the Association of Village Council Presidents, the Tanana Chiefs Conference, the Council of Athabascan Tribal Governments, YRDFA, the Yukon Delta Fisheries Development Association (CDQ group), an upper river processor, and management and research staff from the Alaska Department of Fish & Game and U.S. Fish and Wildlife Service. The stakeholder group met in Anchorage January 11-12, 2012 to discuss potential approaches; pulse protection of Yukon River king salmon was identified as a primary focus. The following text outlines the proposal with options identified where the group did not have consensus. After receiving comments from the broader Yukon River community, the stakeholder group will revise this proposal for submission to the BOF for the 2012/13 proposal cycle; BOF proposals must be submitted by April 10, 2012. The BOF meets in Anchorage January 15-20, 2013 to consider Yukon (as well as Arctic and Kuskowkim) proposals. The stakeholder group is currently requesting your comments on this draft proposal. The final proposal will be circulated prior to the Board of Fisheries meeting and there will also be an opportunity to comment directly to the Board of Fisheries.

Background and Context for the Proposal

Yukon River king salmon have experienced extreme fluctuations in run size, including very low run sizes during 1998–2002. From 2003 to 2006, runs improved and escapement goals and subsistence needs were generally met. Runs again declined after 2006, with escapement goals to Canada not met in 2007, 2008, or 2010, and subsistence harvests restricted. Overall, "mean run of Canadian-origin Chinook for the period 1998–2010 declined 45% compared to the period 1982–1997."¹ In response to this decline, during their last four Arctic-Yukon-Kuskokwim (AYK) meetings the Alaska Board of Fisheries (BOF) adopted regulations intended to improve quantity and quality of king salmon escapements. Two key regulations are the "windows" fishing schedule, used for greater conservation, and restriction of gillnet mesh size to a maximum of 7.5 inches. Windows limit subsistence to specific fishing periods, spreading the harvest across the salmon run, while the mesh size restriction is designed to increase spawning escapement of larger king salmon.

While king salmon escapement goals have been met in most years since 1998, fishing opportunities were often restricted to help meet these goals. Subsistence harvest opportunities were reduced in recent years, and in 2008, 2009, and 2010 (2011 data not yet available) harvests were below the BOE-determined Amounts Reasonably Necessary for Subsistence (ANS). To protect king salmon, directed commercial fishing for king salmon was eliminated, commercial chum salmon fishing was restricted, and sale of king salmon caught in the chum salmon fishery was at times prohibited. Even when escapement goals have been met, subsequent returns from these escapements have been poor. While the direct cause is unknown, poor runs have low recruits-per-spawner (the ratio of number of fish returning to the river compared to their parental spawners). It is important to maintain the quantity and quality of escapements to aid in returning the stock to historical levels.

King Salmon Pulse Protection Proposal

(<u>underlined</u> text represents additions to the current language)

5 AAC 05.360 (a) The objective of this plan is to provide the department with guidelines to manage for the sustained yield of Yukon River king salmon. The goal of this plan is to ensure that adequate escapements, both in numbers and quality, are maintained on the spawning grounds. to facilitate rebuilding of the run to historical levels. The department will manage for quality of escapement that provides for full representation of the genetic and phenotypic characteristics of the stock and shall use the best available data, including preseason run projections, test fishing indices, age and sex composition, subsistence and commercial harvest reports, and passage estimates from escapement monitoring projects to assess the run size for the purpose of implementing this plan.

5 AAC 05.360 (XX). Pulse protection.

(1) The Yukon River king salmon run usually enters the river in three distinctive pulses of fish. Management of the first pulse of the king salmon run will be based on preseason projections. Management of the second and third pulses will be based on in-season run assessment data. (2) The department will manage the first pulse of the king salmon run based on preseason run projections to:

Options:

- (a) Not allow any harvest from the first pulse, regardless of the preseason run size projection;
- (b) Allow a harvest not to exceed 50% of the passage of the first pulse, regardless of the preseason run size projection;
- (c) Not allow any harvest from the first pulse when the preseason projection of run size indicates that subsistence harvests will likely be restricted in one or more districts or sub-districts.
- (3) Based on the inseason run assessment, the department will restrict harvest opportunities on the second and third pulses of Yukon River king salmon, as necessary, to provide for escapements and international treaty obligations;
- (4) The department shall distribute reductions in subsistence harvest opportunities equitably among users.

Rationale

The intent of the proposed changes is to rebuild the Yukon River king stock to historical levels. This stock remains depressed well below historic levels, and older salmon are lacking from recent returns. Although the sustainable salmon policy addresses stock diversity and quality of escapement, much of the Yukon management emphasis has been on spawner abundance. The cause of low returns-per-spawner is unknown. It is prudent to ensure that adequate numbers of male, female, and large fish reach the spawning grounds to contribute to stock rebuilding.

The first pulse of king salmon entering the Yukon River usually contains the largest number of fish and the most Canadian-origin fish. First pulse fish also tend to be larger fish. Under a treaty between the U.S. and Canada, the U.S. must allow passage of enough Canadian-origin king salmon to meet an agreed-upon escapement goal plus additional Canadian-origin fish for harvest sharing. The treaty obligation is a primary factor for Alaskan management. Because Canadian-origin fish usually comprise about half of total king salmon returns to the Yukon River, ensuring the health of this stock is important not only for treaty terms, but to ensure continued returns of Canadian-origin fish for Alaskan harvest. Thus, in low return years, the department must restrict all Alaskan fisheries in the Yukon River to achieve border passage of Canadian fish.

Pulse protection has been used successfully for king salmon management. For example, after Canadian escapement goals were not met in 2007, 2008, and 2010, and given a 2011 return of Canadian-origin fish projected

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to be insufficient to support full subsistence harvests in Alaska, managers protected the first pulse of king salmon by reducing or eliminating subsistence fishing opportunity as this pulse moved through Alaska; border passage obligations were met. Further restrictions on subsequent pulses, which contained a majority of Alaskan-origin fish, resulted in Alaskan escapement generally being met. Thus, pulse protection allowed king salmon escapements goals to be met in most Yukon River tributaries and treaty obligations to be fulfilled. A secondary result was that escapement quality, measured as percent large fish and percent female, was enhanced throughout the drainage, although 2011 was the first year of the 7.5 inch maximum mesh size restriction, so improved escapement quality could be due to the mesh size change, pulse protection, or both.

In past years, conservation measures were often implemented more aggressively later in the run when return strength was better estimated. Establishing formal language that provides management advice to specifically protect the early portion of the king salmon run will: (1) improve border passage of Canadian-origin fish; (2) allow better assessment of run strength prior to harvesting; (3) enhance escapement of larger, older fish present early in the run;² and 4) reduce uncertainty regarding potential early-season fishery openings.

Additional Items for Consideration

These items were identified as those which at least some of the stakeholder group had interest in, but did not have time to develop further The stakeholder group did NOT have consensus on these items. Please provide your comments on these items as well.

1. Protection for early fish Proposal

Establish greater protection for the earliest returning king salmon (prior to windows schedule or pulse protection).

Rationale

Subsistence fishing is open 7 days per week from breakup until the schedule of subsistence fishing periods is implemented. The start of subsistence fishing periods is established by department emergency order and typically begins in late May or early June in District 1 (initiated June 6 in 2011). The schedule is then implemented chronologically upriver, although the established schedule does not result in early season fishing closures in all sub-districts/rivers. An early group of king salmon typically enters the river in early June with the first pulse entering the river around June 15. In 2011, lower river breakup occurred on May 22, an average date, and the first lower river catch of king salmon was reported on June 3 in both the lower river test fishery and in the subsistence catch. However, the time between breakup and the implementation of subsistence fishing periods is popular for the subsistence harvest of sheefish, as well as these early king salmon. It is possible that the implementation of pulse protection, particularly for the first pulse of king salmon returning to the Yukon, will result in intensified efforts to harvest the early king salmon present prior to the date that the pulse protection is implemented. Although

the early group includes a relatively small number of king salmon, the importance of these fish to the overall genetic diversity in the population is unknown. Establishing an early season closure prior to the start of the subsistence fishing schedule, or starting the subsistence fishing schedule slightly earlier, may protect this genetic diversity. However, the department currently has authority to adjust the subsistence schedule start date contingent on factors such as projected return abundance and any corresponding stock concerns, or changes in fishing patterns.

2. Sale of incidentally caught kings by set date or percentage of king run has gone by Proposal

Allow the sale of incidentally caught king salmon after a set date or after a specified proportion of the king salmon run has passed Pilot Station Sonar.

Rationale

Some kings are incidentally caught in the commercial summer chum fishery. This fishery is restricted to a maximum mesh size of 6 inches. Approximately 70-80% of the king salmon caught in the summer chum fishery are small males. Removal of these fish from the run has an unknown impact on the reproductive potential of the stocks. During times of conservation, management actions may allow these king salmon to be retained for subsistence, but not sold. Based on a predetermined date or index of run progress or after a pulse protection measure has occurred, allowing the sale of incidentally caught fish may provide a limited commercial sale of salmon and may reduce waste of king salmon caught incidentally if subsistence needs have been met. On the other hand, allowing the sale of incidentally caught kings may provide harvesters with an incentive to catch kings at a time when conservation is needed. Some harvesters also support removal of these small males from the genetic population in an effort to increase mean size of Yukon River king salmon.

3. Subsistence and personal use harvest reporting Proposal

Require improved harvest reporting, perhaps through harvest report forms issued by the department.

Rationale

Data for subsistence and personal use harvests are currently based on a combination of annual or seasonal permits and household interviews. Much of the data collection involves post-season sampling. Requiring all subsistence and personal use harvesters to maintain updated harvest reports will facilitate improved in-season monitoring and accuracy of post-season harvest summaries. Development of this proposal will require further consideration of costs of harvest reporting and enforcement for noncompliance

4. Subsistence use permit Proposal

Households must obtain a subsistence permit to participate in subsistence fishing.

Rationale

Data for subsistence harvests are currently based on a combination of annual or seasonal permits and household interviews. Although a subsistence permit is required for some harvest areas (e.g., road accessible sections and the Tanana River), other areas, are outside of the subsistence permit requirement area. Expanding this permit requirement to other selected areas of the Yukon would potentially improve: management's anticipation of potential effort; understanding of subsistence user demographics (through information requested when issuing the permit); and harvest reporting (through reporting requirements as a condition of the permit being issued). However, it is also recognized that requiring subsistence permits increases the obligations of harvesters and the expense to the department for permit implementation; some stakeholders are also concerned about how the permit information would be used.

5. Concurrent subsistence and commercial periods

Proposal

Delete (5 AAC 01.210(e)(1)A) requiring a waiting period between subsistence and commercial periods in Districts 1, 2, and 3.

Rationale

Harvest periods ("windows") are intended to distribute harvests across the run, and regulation 05 AAC 01.210(e)(1)A affects the early summer when Yukon king salmon return. Commercial and subsistence fishing may open concurrently in the upper Yukon, but lower Yukon regulations require a "waiting period" between commercial and subsistence openings to facilitate enforcement and allow assessment of run strength. However, waiting period regulations were adopted prior to the establishment of harvest windows. Given the in-season management option to close specific windows of time to protect run components, waiting periods between fishery openings are unnecessary and may constrain fishing opportunity given the limited amount of time available between op periods in some areas. It is noted that allowing concurrent fishing by commercial and subsistence harvesters may increase competition between these users. In addition, because commercial and subsistence harvesters are often the same individuals using the same gear. allowing concurrent openings forces some individuals to select either commercial or subsistence fishing while foregoing the alternative fishing opportunity. Allowing only sequential openings without a waiting period allows an individual to participate in both harvest opportunities.

Prohibition on selling king salmon roe in Subdistrict 4-A Proposal

Expand the prohibition on selling king salmon roe in Sub-district 4-A to the entire drainage. Change the regulation (5 AAC 05.360(c)) to read: A harvester may not sell king salmon roe; only whole king salmon may be sold.

Rationale

The existing regulation was adopted in 1998 to address roe stripping from king salmon in Yukon River Sub-district 4-A, but the regulation generates confusion relative to what is allowed in other subdistricts and why Sub-district 4-A is singled out. By specifically addressing Sub-district 4-A, the regulatory language of the Yukon Chinook Management Plan implies that roe stripping from king salmon may be allowed in other sub-districts. The regulation could be expanded to provide consistency among Yukon subdistricts. There is no directed commercial harvest of Yukon River king salmon in Alaska under present stock conditions. However, when the stock rebuilds to a level providing for commercial harvest, the whole king salmon should be utilized for human consumption.

7. Mesh depth of net

Proposal Reduce the allowable mesh depth.

Rationale

The current maximum mesh depth for commercial fishing with gillnets on the Yukon River varies by district and gillnet mesh size. For Districts 1-3, nets may be up to 45 meshes deep for larger than 6-inch mesh and up to 50 meshes deep for a mesh size of 6 inches or smaller. For Districts 4-6, nets may be up to 60 meshes deep for larger than 6-inch mesh and up to 70 meshes deep for a mesh size of 6 inches or smaller. Some stakeholders report that king salmon migrating upstream occur deeper in the water column than chum salmon, and some people report the largest king salmon occur deepest. Reducing the allowable mesh depth could reduce the efficiency of catching for king salmon, and potentially of large king salmon, thereby increasing escapement of those fish or sizes.

Some stakeholders have suggested establishing a consistent 45-mesh depth with the 7.5 inch mesh for all Yukon River districts. However, it is noted under equal aspects of escapement goals and passage rates, a reduction in efficiency implies that more fishing time will be needed in order to achieve the same ANS. This reduced efficiency would be most pronounced upriver where a greater mesh depth is currently allowed.

8. Windows Proposal

If pulse protection is adopted for management of king salmon in the Yukon River, consider how the subsistence fishing periods ("windows") should be applied during times of conservation.

Options

1. Keep windows

 If pulse protection is adopted, eliminate windows
 If the first pulse is protected, eliminate windows after the first pulse

Rationale

During times of conservation, subsistence fishing is only allowed during district or subdistrict specific periods, commonly known as subsistence fishing "windows." Windows are designed to spread the subsistence harvest over the king salmon run. Distributing fishery catch across the run during years of poor returns facilitates more precise in-season management through more timely assessment of run strength and passage. The use of windows improves the likelihood of achieving escapement goals, and also distributes escapement from a poor return across the duration of the run, thereby assuring representation of the genetic diversity inherent across the run.

The Yukon River king salmon run usually enters the river in three distinctive pulses of fish. The first pulse of king salmon returning to the Yukon River usually contains the largest number of fish, as well as the most Canadianorigin fish. An international treaty stipulates that the U.S. will endeavor to provide to Canada an agreed-upon escapement goal, in number of king salmon, plus a prespecified harvest share of the surplus Canadian-origin fish above the escapement goal. The use of pulse protection, if adopted, improves the likelihood of achieving escapement goals and international treaty. Because protection of a pulse of fish precludes harvest opportunity from that pulse, reasonable subsistence harvest opportunity must be provided from subsequent pulses. Meeting ANS following a pulse closure would be easier in the absence of windows. However, if there is still jeopardy of not achieving escapement goals (i.e., a conservation concern) after a pulse closure, then windows provide an effective management tool to distribute the harvest across the available fish surplus to escapement needs. ≤

¹ Spaeder, J. and M. Catalano, Compilation of Evidence for Long-term Decline and Periodic Low Returns of AYK Region Chinook Populations, Report to Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative Chinook Expert Panel, Oct. 15, 2011.

² Note that the reduction in mesh size is also intended to improve escapement quality.

YRDFA's work on this project is funded through the State of Alaska Department of Commerce, Community and Economic Development (DCCED). The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of DCCED.

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as one river, the decline in the number of fish camps along the river, and shared notes about the effects of new net size regulations.

Benedict Jones of Koyukuk responded to the King Salmon Management Plan discussion by stating that "a closure on the first pulse has made a positive impact on the salmon arrival in the Koyukuk River."

Nick Andrew, Sr. of Marshall described the traditional value of sharing: "The first salmon caught is always cut up and shared with all the Elders of the village and then everybody else in the village. Everybody waits for that first fish. Having a taste of this first salmon is very important to us."

During the chum salmon discussion held on Wednesday morning in the beautiful Yukon-Koyukuk Assisted Living Facility, the Elders spoke about the great abundance of chum salmon in the past. "There used to be so many chum salmon in the creeks near Marshall. There were so many chum salmon that they overlapped in the river," reflected Nick Andrew, Sr.

In addition to participating in Elders Council meetings, the Elders also attended the YRDFA Annual meeting and visited students at the local schools. During the school visits, the Elders split into groups of two or three and shared stories or experiences they have had over their lifetimes. The Elders were well received by the students and it seemed that the Elders also enjoyed their time with the students.

The YRDFA board passed a resolution thanking the Elders for their participation:

We gratefully thank all the Elders who traveled to and participated in this event; Harry O. Wilde,

Sr., Andy Simon, Moses Paul, John Huntington, Benedict Jones, Nick Andrew, Sr., Joseph Bell, William Derendoff. We also thank the YRDFA Board Members, who are also Elders, that participated, sharing their knowledge and wisdom; Lester Erhart, Felix Walker, Sr., Pollock Simon, Ephrim Thompson, and Lester Wilde. We give tremendous thanks the community of Galena, the Louden Tribal Council, and Sandy Scotton for graciously hosting us and making our event a success. Finally, we could not have held this important gathering without the generous support of Lannan Foundation and the State of Alaska.

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Meet YRDFA's New Program Assistant

The newest addition to the YRDFA staff, Marilynn Woods is originally from Manley Hot Springs, AK. Her mother is Elizabeth Woods from Manley, Tanana, and Rampart, and her stepfather is Lawrence Bredeman



originally from Kansas City, MO. Her grandmother is Judy Woods from Tanana and her grandfather is the late Walter Woods of Rampart.

Marilynn has a B.S. in Elementary Education and a minor in Special Education from Lewis-Clark State College in Lewiston, Idaho. She taught for 7 years throughout rural Alaska in Noorvik, Kiana, Anderson, and Kotzebue. She has spent the last three years teaching special education in Anchorage. She is currently working towards a Master's degree in Rural Development from UAF.

Marilynn began working for YRDFA in January of 2012 and is very excited about joining such a great organization. She is thrilled to be working with people on the upper and lower Yukon River. Marilynn is interested in learning about issues that face rural Alaska, specifically Interior Alaska where she is from. She enjoys traveling, spending time with her family, cooking, hiking, and various other outdoor activities. Her experience, dedication, strong ties to the river, and ever-present smile have quickly made her an indispensable member of the team. Look for her at upcoming fisheries meetings, or on the phone from the YRDFA office.

