

YUKON FISHERIES NEWS

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SPRING 2004



**YUKON RIVER
DRAINAGE
FISHERIES ASSOCIATION**

*A United Voice for
Downriver and Upriver
Fishermen.*



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AREA M BRIEFING

PREPARED BY THE YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

In February 2004, the Board of Fisheries (BOF) made significant changes liberalizing the Area M June commercial salmon fishery. This has caused concern as AYK summer chum and smaller amounts of fall chum pass through the South Unimak and Shumagin Islands on their way up to Western Alaska. Salmon stocks in the AYK region have been depressed since 1998, which has led to decreased subsistence and commercial fisheries harvests by local residents of these areas. At the AYK BOF meeting held in Fairbanks during January 2004, the BOF recognized that Yukon River summer chum stocks are a management concern.

Since that time, the Federal Subsistence Board has received a number of requests to intervene in the Area M June fishery to protect subsistence salmon stocks in Western Alaska. The Board does not have the authority to regulate the harvest of fish and wildlife outside Federal jurisdiction. The Secretaries of the Interior and Agriculture can extend Federal jurisdiction in order to protect a Federal interest, however such intervention is rare. The Board will make a recommendation to the Secretaries on a response to these requests for intervention.

A Federal subsistence Board staff report, addressing issues raised by requests that the Federal government intervene in the management of the Alaska Peninsula/Aleutian Islands (Area M) commercial salmon fishery was prepared for the Board to examine this issue. This report states that subsistence

needs will not be jeopardized by the increase in fishing time in Area M.

In addition to the staff report, the Board considered written comments and testimony in order to develop its recommendation. The Board held a public meeting to take testimony on this issue on Tuesday, April 27th and 28th at the Egan Civic and Convention Center in Anchorage. Following this meeting the Federal Subsistence Board will meet in executive session at a later date to develop its recommendation to the Secretaries. A working group will be created to discuss a collaborative effort to begin research and monitoring of the stocks as they migrate through Area M. This meeting will also take place in the near future to work towards the beginning of research for this summer season.

YRDFA has testified to the Federal Subsistence Board and requested that the State of Alaska to monitor and track the fishery in Area M starting this season. Conservation measures should be put in place to protect the Yukon River salmon along their migratory path. Such measures would include test fisheries, in-season reporting, observers, enforcement and genetic sampling to gather stock identification information.

To receive a copy of the Federal report by mail, contact the Office of Subsistence Management at (907) 786-3888 or (800) 478-1456. To receive a copy of the YRDFA testimony, contact 1-877-999-8566. ☪

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A MESSAGE FROM THE DIRECTOR

BY JILL KLEIN,
EXECUTIVE DIRECTOR, YRDFA

The summer season is upon us. The ice is moving out and the salmon will soon be moving upriver. By the time this newsletter is out, many of you will already be fishing. It is the moment that many of you have



been waiting for; the ability to be out there on the water fishing to provide food for your family or to earn a respectful living. The rest of us are participating in research and

monitoring of the salmon runs and hope that enough fish come back to support the people that depend on them.

I was recently at the Fourth World Fisheries Congress in Vancouver with people from all over the world working on fisheries issues. This was a unique opportunity to learn about other fisheries and their experiences in other locations. The Yukon River salmon fishery is one of many fisheries experiencing challenges due to the multitude of reasons usually talked about at meetings. The issues of climate change, marine ecosystems, habitat destruction, over-fishing, hatchery production, by-catch, limited economic opportunities and poverty are all affecting the state of life on the Yukon River.

It is important to step outside of the issue one is working on to get a different perspective. Some questions to ask ourselves are: where do we want to make progress? Where do we want to go from here? What are our objectives? Once we have these answers, we can then measure success against the destination we are headed to. There have been many barriers to people working together on the Yukon River. Some of these include different cultures, different power structures, different goals and different beliefs among many different entities working on the same issue. While these barriers have existed, people have been able to get past some of them and have come together to make change. But, there are still parts of each of the above areas that need further attention.

Some of the ways to make progress will be found through capacity building, getting organized, co-management and research and monitoring with better tools. The salmon cycles fluctuate and we need to work together to figure out how to carry on during the times of low abundance. As we continue to make progress this summer, we will hope for better salmon runs that provide for the people of the Yukon River. ☺

“We cannot solve problems using the same thinking that created them.”

~ E I N S T E I N

Ever wonder what the Yukon River Panel does?

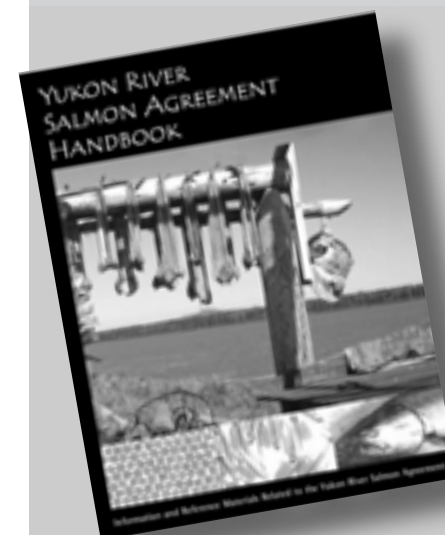
•
Do you know what Total Allowable Catch (T.A.C.) means?

•
How do escapement goals impact your life?

THE ANSWERS TO THESE QUESTIONS AND MANY MORE ARE FINALLY HERE!

This handbook, describing the Yukon River Salmon Agreement in layman's terms, shows how the Agreement impacts and affects the lives of salmon fishermen along the Yukon River. Produced by YRDFA and the Yukon River Panel, it is intended to be a reference for understanding the events leading up to the Yukon River Salmon Agreement, the Agreement itself and the provisions related to improving conservation & restoration of Canadian-origin, YR salmon as established under the Agreement.

A resource for Yukon River fishers, First Nations, Tribal Councils, fisheries managers and teachers!



Keep a copy as a reference tool in your school, tribal or city office.

ORDER YOUR COPY TODAY... IT'S FREE!

Contact Darcy King, YRDFA
1-877-999-8566

**YUKON RIVER DRAINAGE
FISHERIES ASSOCIATION,
SUMMER & FALL 2004**

Marine By-Catch Assessment - Yukon Salmon: University of Alaska, Fairbanks will compile and analyze by-catch data to determine how salmon by-catch is recorded, accessed, types of gear and locale limitations that might limit salmon by-catch, origins of by-catch. **Funding:** Provided by NOAA

Ocean Carrying Capacity (BASIS): YRDFA supplies a technician to assist with NOAA's Ocean Carrying Capacity cruise collecting salmon biological and oceanographic data. Results inform management by-catch decisions. **Funding:** Provided by NOAA

South Side Tanana River Fish Investigations: Continue survey for juvenile salmon and the habitat they occupy in areas in the Tanana drainage that may be subject to development. **Funding:** Provided by NOAA

40-mile & 70-Mile Fish Investigations: Document presence or absence of salmon in this drainage. **Funding:** Provided by NOAA

Chatanika Stock Monitoring: Document range extension of juvenile and adult salmon upstream of old FE damsite. **Funding:** Provided by NOAA

Andreafsky River Juvenile Salmon Study: Final year of juvenile collections, health, condition factor analysis, habitat/environmental data, food habits. **Funding:** Provided by NOAA

Clear Creek Chum Salmon Ecology: Field tech support to USGS to document chum salmon smolt emigration and adult escape-ment. **Funding:** Provided by NOAA

Anvik River Spawning Enumeration: Aerial survey of Anvik River and tribs for coho salmon. **Funding:** Provided by NOAA

Nenana River Spawning Survey: Ground and aerial surveys for coho and fall chum spawners. **Funding:** Provided by NOAA

St. Mary's Area Fisheries Biotechnician Training Camp: Remote biotechnician training camp in the St. Mary's area. Students will visit USFWS weir on the Andreafsky and ADFG sonar at Pilot Station among other training activities. **Funding:** Provided by NOAA

Andreafsky Science Camp: YRDFA Fish Biologist will assist USFWS science camp for middle school kids on the Andreafsky River. Presentations on fish biology, ecology, etc. **Funding:** Provided by NOAA

TEK Informed Run Projection: YRDFA will compile salmon run-related TEK information from teleconference participants. **Funding:** Provided by NOAA

Analysis of Phenotypic and Genotypic Characteristics of Chinook Salmon: TEK interviews about white nose and blueback chinook salmon. **Funding:** Provided by NOAA

Outreach and Information Gathering: Youth and elder interviews to gather TEK data. **Funding:** Provided by NOAA

In-Season Teleconferences: Weekly YRDFA teleconferences with state and federal managers, DFO, Canada, tribal and first nation representatives, subsistence and commercial fishers on-line to discuss progression of the salmon returns and fisheries and management option discussions. **Funding:** Provided by OSM, YDFDA & YR Panel

Chinook Salmon Run Timing & Genetic Sampling: YRDFA hire gathers chinook genetic samples for USFWS database. **Funding:** Provided by USFWS DFO Passthrough

Phenotypic Characterization of Chinook Salmon: Report writing after receipt of genetic analyses. **Funding:** Provided by YR Panel

Yukon River Salmon Agreement Handbook: Provides practical information for managers, researchers and stakeholders on the Yukon River Salmon Agreement. **Funding:** Provided by YR Panel, USFWS

Local Fisheries Technicians: Hires residents of areas near research sites to work as technicians for ADFG projects at Galena (age, sex, length), Sheejek (sonar), Anvik (sonar), Pilot Station (test-fishing/sonar), Eagle (sonar). This project will also hire a technician to support the Rapids fish wheel project. ADFG provides day to day supervision; YRDFA biologist does site visits to ensure technicians and department staff are working effectively together and to evaluate the capacity building goal of hiring local technicians who, by their jobs, become more knowledgeable in fisheries matters. **Funding:** Provided by Pacific Salmon Recovery

Local Support for Subsistence Surveys: Local hires handle local logistics, bridge linguistic gaps, conduct follow-up surveys and serve as a liaison to ADFG subsistence surveyors. **Funding:** Provided by Pacific Salmon Recovery

Gear Study: Identify gear types and sizes being used by YR fishers to inform the issue of size and sex selectivity of different gear. **Funding:** Provided by Pacific Salmon Recovery

Subsistence Catch Monitoring, Ft Yukon: In-season survey of subsistence fishing in the Porcupine River and in the Yukon nearby, above and below the confluence. Are chinook and fall chum salmon needs of Ft. Yukon area residents being met? Are the Porcupine fall chum stocks being significantly impacted? Local hires will be trained at USFWS RIT training to carry out similar surveys. Collect genetic samples. **Funding:** Provided by Pacific Salmon Recovery

In-Season Subsistence Monitoring, Grayling: YRDFA technicians gather real-time subsistence harvest information and report concerning it on the in-season teleconferences. **Funding:** Provided by Pacific Salmon Recovery

Radio Telemetry Tags: NOAA/ADFG is requesting \$20K to buy tags as YRDFA's involvement in the tracking project. **Funding:** Provided by Pacific Salmon Recovery

"PROJECTS LIST..." CONTINUED ON PAGE 10

TANANA TRIBAL COUNCIL
P.O. Box 130, Tanana, AK 99777
Phone: (907) 366-7170, Fax: (907) 366-7195
Email: gnicholia@yahoo.com

April 21, 2004

Federal Subsistence Board, OSM
Fax: (907) 786-3898

Re: Hearing on Area M

From looking at the staff report to the Federal Subsistence Board it looks as though the board would give in to the actions of the State Board of Fish concerning the area M June fishery. I am very concerned that you are going to make a decision that would adversely affect the people I represent. The staff has always and knowingly rejected that advice of regional councils and the subsistence people interests that OSM is obligated to protect. You all know that the Yukon River chum fishery is history, and this is your chance to protect the interest of the federally qualified users along the Yukon River. Far too long the Federal Board has been reactive, and that is no way to protect the interest of those that you are obligated to protect. To use the staff report as an excuse to not support the request from the Bristol Bay RAC and the Eastern Interior RAC shows that you as a board are not doing your job. To have staffers to lead you around is not what I call making decisions that would protect the interest of the people I represent along the Yukon River. Far too long you have ignored the subsistence needs of the People in the upper reaches of the Yukon, especially the Yukon Flats Wildlife Refuge. What and when are these people going to have adequate protection for their subsistence way of life when their wildlife and fish resources are dwindling in State management?

I encourage you to support the special action requests to the Secretary of Interior and the Secretary of Agriculture to put a stop to wasteful actions of resources people rely upon in the farthest reaches of the Yukon River. These people in the Yukon Flats rely heavily upon Chum Salmon to make it thru the year. Their moose populations are low to dwindling, the job market is low, and the prices for commodities are high, what are these people to do to sustain their traditional way of living? They rely upon you, the Federal Subsistence Board to protect their interest, even if it is in Area M. Why did Ed Dersham ignore the by-catch data from Area M, because it would show how Chum Salmon are being wasted as by-catch, this information came from a former Board of Fish Member who is now sitting on the EIRAC. You as a Federal Subsistence Board that is mandated to protect the interests of federally qualified subsistence users have to support the special actions request to halt the wasteful practices of Area M and to tell the Secretaries to implement the Extraterritorial Jurisdiction for the benefit of the of the Yukon Flats people.

Sincerely,
Gerald Nicholia
Realty/Subsistence Director
EIRAC Vice-chair

Cc: Bruce Thomas, CATG
Harold Brown, TCC
Craig Fleener, EIRAC Chair
The public of the Yukon Flats
The press

CONDITION FACTOR AND JUVENILE SALMON RESEARCH – A PERSPECTIVE

BY MIKE MCDUGALL, YRDFA FISHERIES BIOLOGIST



I was recently asked to write an article on the use of the condition factor method of determining relative health and condition of juvenile salmon. While informative, a few paragraphs outlining this tool are somewhat limited in scope. I therefore felt that a few words on the importance of juvenile research are more appropriate.

Condition factor, what is it? Simply put, it is a means of assigning a numeric value to the condition or “relative health” of a particular fish or group of fish. If we are interested in the health of a particular group of juvenile salmon, we cannot ask “How are you guys feeling this summer?” and expect a reply such as “Oh, the aquatic drift has been down since that clear cut took out the riparian zone a few weeks ago so there is not much to eat and water temp has been through the roof causing us to seek out less than ideal cover and forage sites.”

A bit of humor I know, but it helps in making the point that we must look in our fish science tool box for another way to determine fish health. In my research efforts, I use the Fulton method (Riker 1975) of condition factor, which determines the condition of fish using the following equation:

$$K = w/l^3$$

w = fish weight in grams

l = fish length in mm

3 = isometric constant (fish shape does not change with growth)

The number generated is usually multiplied again by a constant such as 100,000 to move the decimal point so that it is easier to read. So given this, let's take a juvenile chinook with a length of 54mm and a weight of 2.4g and run it through the math:

$$K = [2.4/(54^3)]100,000$$
$$K = 1.52$$

But what does this really mean? By itself, this number ($K=1.52$) does not tell us much. It represents a snapshot in time for an individual fish. However, when averaged over a group of chinook, for instance Andreafsky River juveniles, over a period of time (condition factors taken over periods of months or years); inferences can be drawn from the data. For example, if we have records of condition factors of Andreafsky River juvenile chinook for the month of August extending back for five years as follows:

2004 = 1.5	2001 = 0.7
2003 = 1.4	2000 = 1.6
2002 = 1.4	

The 2001 cohort shows a lower condition factor ($K=0.7$) and would be an indicator that something was different for these fish. We can then begin to ask questions as to why this is. If we have corresponding data on water quality parameters, such as water chemistry, climate, land use changes, and water temperature, we can then put all the pieces together and perhaps see why the 2001 cohort's condition factor is lower than that of other years.

Though a fish biologist cannot ask a fish how it feeling, he/she can weigh and measure it in order to determine condition factor. The advantage here is one can get this information without killing the fish, and it is relatively inexpensive compared to other methods. Some disadvantages to this method are that it depends on the accuracy and precision of scientific equipment used as well as how the equipment is used.

Moving on, I will mention a few words about the importance of juvenile salmon research.

In order for anadromous streams and riparian habitat to be protected under Alaska statute (AS 41.14.870), they must be documented as supporting anadromous species. At present, roughly 50 percent of

anadromous streams have been documented statewide, with even fewer documented as rearing or over-wintering sites (Stark 2004). Within the Tanana River drainage, streams larger than 3 feet wide can be afforded protection under AS 41.14.870. Those less than 3 feet wide cannot be protected. Threats to juvenile salmon include increased interest in mining, logging, and development of land for homes and other uses. These threats will continue to increase in the next several years.

Within Alaska, there is a lack of baseline data on juvenile salmon. This makes juvenile salmon investigations all the more difficult to conduct. So where do we begin? A stepwise approach would be to: (1) identify areas where potential land use is occurring or is about to occur, (2) locate streams of interest within these lands, (3) survey the streams for anadromous and high value resident species, (4) provide this information to ADF&G / DNR, and finally (5) conduct further research on surveyed streams as appropriate. This is precisely what YRDFA is doing with its projects on the South Side of the Tanana River near Fairbanks, The 70-mile River, and the Andreafsky River Drainages. We hope to continue to conduct further studies in the future.

I hope these words are informative and provide you with some insight. I welcome questions, concerns, and fishery project ideas.

Mike McDougall, Fisheries Biologist
Yukon River Drainage Fisheries Association
PO 423, Ester, AK 99725
(907) 378-3699

Literature Cited

Riker, W.E. 1975. Computation and Interpretation of Biological Statistics of Fish Populations. Bull. Fish. Res. Board. Can. 1991: 382. Chapter 9 page 209.

Stark, T. 2004. Personal Communication



YUKON RIVER CHINOOK SALMON RADIO TELEMETRY

BY JOHN EILER, NMFS AND TED SPENCER, ADFG

The radio telemetry study conducted this year will be its 5th year. The project was started in 2000 by biologists from the Alaska Department of Fish and Game and the National Marine Fisheries Service to learn about the movements, timing, spawning distribution, and abundance of chinook salmon stocks, and to help evaluate other run assessment programs in the basin. Work in 2000 and 2001 developed effective capture methods and equipment, and set up a system of tracking stations necessary for a study of this size and scope. The project was expanded to its full capacity in 2002, 2003, and will be again in 2004.

Adult chinook salmon were captured with drift gillnets in the lower river near the villages of Marshall (in 2000-2002) and Russian Mission (in 2000-2003). The fish were removed from the nets immediately after being caught, and tagged with radio tags gently inserted through the mouth and placed in the stomach. This tagging method was used because the salmon don't feed during their upriver migrations, and radio tags attached outside the body can affect the ability of the fish to swim long distances in swift water. A small number of salmon were tagged with radio-archival tags to record water depth and temperature. Radio-tagged salmon moving upriver were recorded by tracking stations located at 37 sites on important migration routes and spawning streams. Aerial surveys collected detailed information on where these fish had traveled and were spawning.

During the chinook salmon basinwide study, 768 fish in 2002 and 1,097 fish in 2003 were tagged. Although people were concerned the capture and tagging methods might hurt the fish, all precautions were taken to minimize this risk and less than 2% of the fish captured were fatally injured. The salmon responded well after tagging with 98% moving upriver soon after release. Movement rates for the salmon after they passed the first stations averaged 33 miles per day, although differences were observed. Some salmon, particularly those traveling far upriver into Canada, averaged over 45 miles per day. Fish spawning in streams in the lower and middle basin tended to move at slower rates.

Radio-tagged salmon were tracked to spawning areas throughout the basin. Upper Yukon River salmon were a major component of the return. Most of these fish traveled into Canada, although salmon were also tracked to U.S. tributaries; a surprising number of fish returned to the Chandalar and Sheenjek Rivers. Canadian salmon were tracked as far away as the upper Teslin River and to streams near Whitehorse. Tanana River salmon were a major component of the run with most fish traveling to spawning areas in the Chena, Salcha and Goodpaster Rivers. About 10% of the radio-tagged fish were tracked to tributary streams in the lower and middle basin: the Bonasila, Anvik, Innoko, Nulato, Koyukuk, Melozitna,

Nowitna, and Tozitna Rivers. These fish were most abundant later in the run. Radio-archival tags returned by fishermen or recovered in spawning areas provided new insights on chinook salmon movements. Swimming depth varied continually as the salmon moved upriver, fish periodically swimming at depths of more than 70 feet. Archival tag information will also be used to address concerns related to changes in water temperatures within the basin.

We are excited to continue this study for another year. This study has provided new information and insights into the abundance, composition, timing and movements of chinook salmon stocks in the Yukon River basin. The return of tags from local fishers is critical to the success of the study. We have enjoyed great support from fishers in past years of this study and anticipate great support again this year.

For additional information about this study, contact John Eiler, National Marine Fisheries Service (789-6033) or Ted Spencer, Alaska Department of Fish and Game (267-2804). 🐟

CHINOOK SALMON TAG LOTTERY

Win one of five **\$200** prizes or a **\$500** grand prize.

- To enter, return radio tag with spaghetti tag.
- Receive **\$20** for each archival tag with pink tag returned.

A tagging study is being conducted on Yukon River chinook salmon to better understand returns in the drainage. We need your help.

Tag number, Toll-Free Phone Number (1-866-851-2104)
Return Mailing Address, Information Needed

50 fish with pink spaghetti tags and internal archival tags

Archival tag in stomach, PLEASE RETURN IMMEDIATELY

1000 fish with yellow spaghetti tags and internal radio tags

Radio tag in stomach, please return

Illustration by Cedar Eubank

Please return tags with the following information:

- Your name, address, phone #
- Date and time caught
- Gear used
- Location caught

For more information contact:

Ted Spencer ADFG / Commercial Fish 333 Raspberry Road Anchorage, AK 99518 Phone: 1-(866) 951-2104	John Eiler National Marine Fisheries Service 11305 Glacier Highway Juneau, AK 99801 Phone: (907) 799-6033	Russ Hilder USFWS, Fishery Resource Office 101 12th Avenue, Box 20 Fairbanks, AK 99701 Phone: (907) 455-1949	Pat Milligan Dept. of Fisheries and Oceans 419 Range Road Ste. 100 Whitehorse, YT Y1A 3V1, Canada Phone: (867) 393-6720
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HARRY WILDE SR. *Yukon-Kuskokwim Delta Council Chair learned the importance of subsistence early in life*

BY MAUREEN CLARK, USFWS

It was the end of a long day of meetings and Harry Wilde, chair of the Yukon-Kuskokwim Delta Regional Advisory Council, was tired. But his face brightened when asked about his family's Yukon River fish camp. It was clear the place stirs strong feelings.

"It smells good out there," Harry said with a smile. As meeting participants cleared out of the hotel meeting room in Wasilla, Harry, took a few minutes to talk about his camp downriver Mountain Village; about his grandson who helps him catch, cut and smoke salmon there; and about the importance of passing on this way of life, its skills and its values.



Hardships made Harry realize at an early age the importance of subsistence. When he was about 14, his parents became ill. There were no doctors in Hooper Bay in 1940 and, within a year, both his mother and father died. Though he was just a boy, his two little sisters and brother looked to him to provide food.

"I was too young. I had nothing to hunt with. We were very poor," he said. One particular incident during this time is still sharp in his memory. Harry had arrived late to school, after trying to catch a few tomcod.

"The teacher spanked me with a ruler. He said I was too lazy to go to school," Harry recalled. The incident only served to strengthen Harry's resolve to make sure others didn't go hungry.

"I said to myself 'When I grow up I'm going to do my best to take care of the people who need food, especially children.'"

Harry, his brother and sisters went to live with their grandmother in St. Michael's, where Harry learned to hunt and fish. When their grandmother died, they were sent to the Covenant Church orphanage in Unalakleet. Eventually, Harry grew up, got married and moved to Mountain Village. When his brother, Lester, graduated from Mount Edgecumbe High School he moved to Mountain Village to live with Harry.

"He brought me up and he taught me my subsistence way of life," said Lester, who lives in Hooper Bay and also serves on the Yukon-Kuskokwim Delta Regional Advisory Council. "Everything I've learned about hunting and fishing I've learned from Harry and from my grandfather."

In addition to fishing for subsistence, Harry has worked as a commercial fisherman. He is one of the founding members of the Yukon River Drainage Fisheries Association, served as an advisor to the U.S. delegation negotiating the Yukon River salmon treaty with Canada, and has been on the Yukon-Kuskokwim Delta Regional Advisory Council since 1993. He also served as mayor of Mountain Village. All of those efforts have meant time away from home



and countless hours of work.

"My wife, Patricia, understands," Harry said. The two celebrated their 50th wedding anniversary last year. Wilde says the time spent working through difficult issues is worth it in the long run.

"Our elders taught us not to fight over food," he said. "If we fight over food—fish or or animals—they will disappear." ☞



YUKON RIVER SUBDISTRICT 5-C NEW SUBSISTENCE FISHING PERMIT REQUIRED FOR THE RAMPART VILLAGE AREA

BY THE ALASKA DEPARTMENT OF FISH AND GAME

In January 2004 the Board of Fisheries (BOF) made a change to the subsistence fishing regulations on the Yukon River that extends the permit requirement area to include all of Subdistrict 5-C. Subsistence fishing permits are now required on the Yukon River from the western tip of Garnet Island to the Dall River. The area includes the village of Rampart and the Haul Road bridge area.

The BOF decision to extend the Subdistrict 5-C permit area to include Rampart was based on the observed change in use. The number of year-round residents

at Rampart has decreased and the number of fishermen traveling to the area has increased. Furthermore, construction of a road connecting Rampart with the Alaska Highway system will begin this summer. The current harvest assessment method is no longer adequate to assess the salmon harvest because it is becoming increasingly more difficult to contact fishermen post-season during the household subsistence survey. This is a high use area and accurate harvest assessment is important.

If you intend to subsistence fish in Subdistrict 5-C, you need to obtain a permit.

Permits can be obtained, at no cost, from the Alaska Department of Fish and Game in Fairbanks. Permits can be requested and processed by mail and fax. The department will make every effort to streamline the permitting process.

Fishermen should consult State of Alaska fishing regulations before fishing in the Yukon Area. For further information or questions regarding this report, please call the Fairbanks office of the Alaska Department of Fish and Game at (907) 459-7274. ☘

FISHING SCHEDULE 2004

PROVIDED BY ALASKA DEPARTMENT OF FISH & GAME

AREA	REGULATORY SUBSISTENCE FISHING PERIODS	SCHEDULE TO BEGIN	DAYS OF THE WEEK
District 1	Two 36-hour periods/week	May 31, 2004	Mon. 8 pm to Wed. 8 am /Thu. 8 pm to Sat. 8 am
District 2	Two 36-hour periods/week	June 2, 2004	Sun. 8 pm to Tue. 8 am /Wed. 8 pm to Fri. 8 am
District 3	Two 36-hour periods/week	June 8, 2004	NEW ★ Tue. 8 am to Wed. 8 pm /Fri. 8 am to Sat. 8 pm
District 4-A	Two 48-hour periods/week	June 14, 2004	NEW ★ Mon. 6 pm to Wed. 6 pm /Thu. 6 pm to Sat. 6 pm
District 4-B, C	Two 48-hour periods/week	June 13, 2004	Sun. 6 pm to Tue. 6 pm / Wed. 6 pm to Fri. 6 pm
Subdistricts 5-B, C	Two 48-hour periods/week	June 22, 2004	Tue. 6 pm to Thu. 6 pm /Fri. 6 pm to Sun. 6 pm
Subdistrict 5-A	Two 48-hour periods/week	June 22, 2004	NEW ★ Tue. 6 pm to Thu. 6 p.m. /Fri. 6 pm to Sun. 6 pm
Subdistrict 5-D	7 days/week	By Regulation	M/T/W/TH/F/SA/SU – 24 hours
District 6	Two 42-hour periods/week	By Regulation	Mon. 6 pm to Wed. Noon /Fri. 6 pm to Sun. Noon
Old Minto Area	5 days/week	By Regulation	Friday 6pm to Wednesday 6pm
Coastal District	7 days/week	By Regulation	M/T/W/TH/F/SA/SU – 24 hours
Koyukuk River	7 days/week	By Regulation	M/T/W/TH/F/SA/SU – 24 hours

PLEASE NOTE: THIS SCHEDULE IS SUBJECT TO CHANGE DEPENDING ON RUN STRENGTH

Henshaw Creek Weir: YRDFA supplies 1/3 the operating costs (about \$25K) by supplying technician time to this USGS-led project. **Funding:** Provided by Pacific Salmon Recovery

Andrafsky Weir: YRDFA supplies technicians to extend the service of the weir into coho season. **Funding:** Provided by Pacific Salmon Recovery

Ichthyophonus Planning Meeting: This project brings together parties who have demonstrated a significant interest in the epizootiology of Ichthyophonus in Yukon River salmon. Meeting participants create a gap analysis to identify important research areas not currently addressed by ADF&G or other Ichthyophonus projects. Participants create a master plan suite of projects to address those needs and complement the on-going projects. It is expected that several potential sources of appropriate funding will be pursued by participants to support these projects. **Funding:** Provided by Pacific Salmon Recovery

TANANA CHIEFS CONFERENCE, SUMMER 2004

Radio Telemetry Study of the Migration Patterns and Important Habitats of Two Whitefish Species Found in the Kanuti National Wildlife Refuge: Gillnet sampling will be conducted at sites within the Kanuti NWR and the South Fork Koyukuk Drainages. Harvests will be sampled in the fall from residents of Allakaket to identify species involved in spawning activities in the drainage. Size and age data as well as maturity and spawning readiness will be assessed. Radio transmitters will be placed into adult humpback whitefish and adult broad whitefish from the Kanuti River in the spring of 2004. Transmitters will be placed into adult humpback and adult broad whitefish in the South Fork Koyukuk River during the spring of 2005. Seasonal migrations of all fish will be monitored for 13 months using tags and remote radio receiving stations as well as aerial surveys. Spawning, over-wintering, and feeding habitats will be based on seasonal locations of tagged fish. **Cooperators:** USFWS and TCC

Capacity Development and Community Involvement through the Collection of Subsistence Fisheries Harvest Data: This project focuses on community involvement through the collection of subsistence harvest data. Ten villages will collect subsistence harvest data at various fish camp locations along the Yukon and Koyukuk River drainages. The following communities will be involved in this project: Holy Cross, Kaltag, Nulato, Galena, Ruby, Minto, Huslia, Hughes, Koyukuk, and Alatna/Allakaket. This project will address the inadequacies involved in subsistence fisheries harvest data and help to characterize harvests and provide additional biological data concerning Chinook and Chum salmon. Data will be used to generate information on genetic stock identification, diseases such as Ichthyophonus, and age, sex, and length distributions. A total of 20 youth and 10 supervisors will be hired in 10 villages. This equates to 2 youth per village and one supervisor per village. **Cooperators:** TCC and BSFA

Contemporary Subsistence Uses and Population Distribution of Non-Salmon Fish: There are three components to this project:

- A.) Collection of Traditional Ecological Knowledge
 - 1.) Collect information on taxonomy, life history, traditional/contemporary harvest and preparation methods, use, and relative abundance and population trends on non-salmon species
 - 2.) Generate maps depicting important non-salmon species habitat areas
 - 3.) Convert collected TEK information into a useable database
 - 4.) Train TCC and local tribal staff in use of database
 - 5.) Assess coverage of information by species, geographic area, and topic
- B.) Harvest Assessment
 - 1.) Estimate non-salmon species harvested for the calendar year 2002 by species, by season, for Grayling, Anvik, Holy Cross, and Shageluk
 - 2.) Sample of subsistence harvest and tag recovery
- C.) Capacity building in local communi-

ties, tribal organizations, and non-profit organizations

Cooperators: ADFG Subsistence Division; TCC; ADFG Sport Fish Division

TEK Camp, Fort Yukon: A fish camp will provide the setting for a science camp that integrates youth, elders, and local fishermen with agency fisheries biologists, social scientists, and managers. This forum will cover a different agenda every day. Eight to 10 students will attend the camp for five days over the course of two sessions on July 19-23 and July 26-30. A total of 10 students will participate in 2004, and a total of 15 students will be participating in 2005. Six subject areas will be covered over the course of five days with guest speakers each day.

Objectives of this project include the following: 1.) Provide a forum for youth, elders, fisheries biologists, social scientists, and managers to interact. 2.) Provide training in fisheries science by incorporating Western and Traditional science. 3.) Collect biological and anthropological data that could be used in future fisheries management.

Cooperators: TCC, CATG, and ADFG Subsistence Division

Good Pasture River Counting Tower: This project will collect population estimates on Chinook and Chum salmon as each species migrates to their spawning grounds on the Good Pasture River. Data collected will consist of genetic samples, age, sex, and length data, and possibly hearts for Ichthyophonus. This project will hire a field crew of at least 3 people and possibly six people to monitor population numbers of Chinook and Chum salmon. **Cooperators:** TCC, BSFA

ADFG	Alaska Department of Fish and Game
BSFA	Bering Sea Fishermen's Association
CATG	Council of Athabaskan Tribal Governments
CDQ	Community Development Quota Program
DFO	Department of Fisheries and Oceans, Canada
NOAA	National Oceanic and Atmospheric Association
NPS	National Parks Service
OSM	Office of Subsistence Management, USFWS
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
R&E Fund	Restoration and Enhancement Fund
RIT	Refuge Information Technician
TCC	Tanana Chiefs Conference
TEK	Traditional Ecological Knowledge
YDFDA	Yukon Delta Fisheries Development Association
YRDFA	Yukon River Drainage Fisheries Association

ALASKA DEPARTMENT OF FISH AND GAME, SUMMER AND FALL 2004

Lower River Test Fishery, Emmonak: This project provides managers with run timing information at Emmonak and is the first project in the lower river to provide information used to assess the run in a given year. The test nets provide an index of abundance, an indication of how many fish are in the river, which means when more fish are present more fish get caught, when less fish are present less get caught.

Main River Sonar, Pilot Station: This project estimates the amount of fish passing Pilot Station, and while not an absolute count of the fish that are passing, is a better index than the test fish nets for some species.

Phone Calls to Subsistence Fishers: While not a formal project still a valuable source of information. The fishing success of subsistence fishers is another tool managers use inseason to confirm other sources of data.

Rampart Rapids & Tanana River Test Fishing Wheels: These projects are indices that provide managers with inseason assessments of fish passage at different points in the river.

Anvik Sonar: This project is designed to use sonar to estimate summer chum salmon escapement into the Anvik River.

Chena River Counting Tower: This project is designed to estimate escapement the Chena River. Estimates are developed by counting fish for a portion of each hour and then extrapolating for the part of the hour not counted.

Radio Telemetry Project: This project provides managers with information inseason on percentages of fish heading for Canada, where the major populations of fish are, and about how fast the fish are moving, and eventually a population estimate (post season), among other things.

Ichthyophonous: This project is in the early stages of gathering information on the disease. The nagging question about the dis-

ease is whether or not fish are dying in significant numbers and where that mortality takes place. This project is designed to provide insight into these questions.

Post-Season Subsistence Harvest Surveys: This project is designed to estimate the subsistence harvest of each species from year to year. It is an important project because it helps managers to evaluate how management actions affected both escapement and subsistence harvest.

Lower Yukon Fall Season Drift Gillnet Test Fishery: This project is operated in Emmonak and is used to index fall chum and coho salmon run timing and relative abundance using drift gillnets. Salmon captured are sampled for age, gender, and size composition information. **Funding:** Provided by OSM and CDQ

Mountain Village Fall Season Drift Gillnet Test Fishery: This project is used to index fall chum and coho salmon run timing and relative abundance using drift gillnets. Salmon captured are sampled for age, gender, and size composition information. **Cooperators:** Asa'carsarmiut Traditional Council and ADFG, funded by R&E Fund

Pilot Station Sonar: This is the mainstem Yukon River sonar project which is used to estimate the abundance of fall chum and coho salmon passage through August 31. Apportionment of species includes other salmon and non-salmon species.

Lower Yukon Chum Salmon Genetics Sampling: Fall chum salmon fin clips taken from Pilot Station apportionment gillnet samples during July and August. The SNPs samples will be used to test feasibility of turning the samples around quickly to provide managers with stock composition after each pulse. **Cooperators:** USFWS

Kaltag Fall Season Drift Gillnet Test Fishery: This project is used to index fall chum and coho salmon run timing and relative abundance using drift gillnets. Salmon captured are sampled for age, gender, and size composition information. **Cooperators:** City of Kaltag and ADFG, funded by R&E Fund

Sheenjek River Sonar: Estimate daily escapement of fall chum salmon into the Sheenjek River. Estimate age, gender and size composition of the fall chum salmon escapement.

Tanana/Kantishna River Mark-Recapture Project: This project provides in-season estimates of fall chum salmon abundance in the upper Tanana River and the Kantishna River drainages using mark-recapture techniques. **Cooperators:** BSFA and NPS

Nenana Test Fish Wheel: Index timing and relative abundance of chinook, chum and coho salmon runs with a long historical database, as well as provides tag recoveries for fall chum salmon during the upper Tanana River mark-recapture project.

Delta and Toklat River Ground Surveys: Estimate fall chum salmon spawning escapement in the Delta and Toklat Rivers. Recover tags from the Tanana/Kantishna mark-recapture to provide information on stock timing. Chum salmon carcasses are sampled at each location for age, gender, and size composition information.

Fall Season Aerial Surveys: Enumerate and monitor fall chum and coho salmon spawning escapements in other portions of the drainage particularly in the upper Tanana River area (south side Tanana River from Harding Lake to Sawmill Creek) which is heavily utilized for other resources such as timber, agriculture and mining.

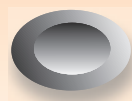
Subsistence Harvest Monitoring: Yukon River subsistence and personal use harvest estimate project conducted post-season for the Alaska portion of the drainage to assess level of use and reconstruct total returns that can lead to future run expectations.

Summer and Fall Salmon Harvest Monitoring: In-season monitoring of commercial harvests, catch sampling, and providing fishery announcement and information throughout the drainage.

Eagle Sonar: This sonar project is located downstream of the community of Eagle on mainstem Yukon River and is being tested for feasibility for use in estimating the abundance of chinook and fall chum salmon passage nearest to the US/Canada border. 🐟

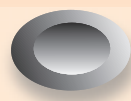
Yukon River Salmon In-Season Management Teleconferences

EVERY TUESDAY AT 1:00PM, CALL 1-800-861-4084, CODE 9966815#

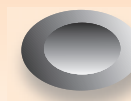


TELECONFERENCE CALLS:

A means to facilitate respectful lines of dialogue and understanding between users and managers and between different communities on the river.



JOIN IN WEEKLY: From June 1 to mid-September, you are invited to participate every Tuesday. Following a standard agenda, YRDFA encourages consistent participation each week.



BE PREPARED TO SHARE:

Report on subsistence harvests and traditional/local knowledge, as managers give run assessment highlights and discuss potential management strategies.

Agenda & Protocol

YRDFA suggests that designated locations such as Tribal Council or City offices be utilized as a central meeting location.

Teleconference calls usually last 1 and a half hours, depending on the time of season. Calls are open to the public; however YRDFA promotes consistent participation from week-to-week from a core group of fishermen. The following is the standard agenda followed during the calls:

- 1) Village I.D. and Subsistence Reports
- 2) Management Update, ADFG & USFWS
- 3) Management Strategy
- 4) Local Input & Public Comments
- 5) Closing Comments

When reporting on subsistence fishing activities, please consider the following questions:

- 1) What is the current level of fishing activity?
- 2) Is participation high or low?
- 3) How far along are fishers in their subsistence harvests?
- 4) What is the quality of the fish?
- 5) What are the current water conditions?

It is important to keep in mind the following, as they will be emphasized during the teleconference calls:

- River-wide perspective must be maintained.
- Escapement goals are a priority.
- Subsistence fishers have priority use.
- Other uses such as commercial, personal use & sport, will be provided for when there are enough fish.

Examples of Traditional & Local Knowledge

Tie-In to Management	Indicator/Observation	Significance
BIOLOGICAL/ ENVIRONMENTAL DATA	Water Temperature	Colder water slows down fish, makes them less mobile. Warmer water promotes development of disease and fungus
FISHING OPPORTUNITY	Debris in the River	A lot of debris physically impacts fishing activities
RUN STRENGTH	Lamprey/eel strength	Strong eel run means strong king salmon run and vice versa
	Water Level	High water means fish are less concentrated and have more places to go and vice versa, which influences harvest rates
STOCK HEALTH	Fish Size	Can indicate what marine conditions were like when fish were growing in the ocean
	Fish Quality	Signs of infection or disease means unhealthy fish
ARRIVAL TIME	Cottonwood seed/pollen	When pollen starts flying, king salmon start arriving
	Geese/Migratory birds	If birds arrive early, fish will be early and vice versa

“Working to Bring Together Fishers and Managers Along the Yukon River”

Listen to others, speak politely, make concise statements and state your opinion clearly.



YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

Funding provided by: U.S. Fish and Wildlife Service, Office of Subsistence Management; Yukon Delta Fisheries Development Association; and Yukon River Panel