



ONCORHYNCHUS

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Subsistence fish wheel near Nenana on the Tanana River, a Yukon River tributary. Photo by Jeff Estensen.

Fall Chum on the Yukon – A Balancing Act for Management

Jeff Estensen

Salmon fisheries management is a difficult task no matter the fishery type, species, or location. Each manager is presented with a set of issues and uncertainties that makes for challenging decisions. Fall Chum Salmon management in the Yukon River provides a great example. The Yukon River is an expansive drainage that originates in British Columbia, Canada, within 30 miles of the Gulf of Alaska, then flows north and west over 1,980 miles through the Yukon Territory, Canada, and across Alaska before emptying into the Bering Sea at the Yukon-Kuskokwim Delta. Fall Chum Salmon are vitally important for Yukon Area residents to meet their annual subsistence needs, and are highly valued commercially. Because the Yukon River is a trans-boundary river with Canada, an international treaty has been established stipulating Fall Chum Salmon border passage and harvest sharing objectives. While many complexities face Fall Chum Salmon management, this article focuses on the management actions taken in the lower river Districts 1 and 2. Management in the lower river is critical to providing commercial opportunity when warranted, yet ensuring sufficient numbers of Fall Chum Salmon migrate upriver to provide for escapement, subsistence, and international treaty obligations.

Fall Chum Salmon enter the Yukon River from mid July through early September in pulses that are unpredictable in terms of pulse timing, duration, and abundance. Generally speaking, the annual Fall Chum Salmon run to the Yukon is comprised of three to four pulses. Individual pulses can range from two days to a week in duration, with 42,000 to over 300,000 fish entering the Yukon River each day. Since 2010, total run sizes have ranged from just over 843,000 to as large as 1.3 million fish. In the last five years, runs have generally achieved or exceeded their drainagewide and tributary escapement goals, and most treaty escapement and harvest sharing objectives have been met.

Fall Chum Salmon spawn in spring fed and upwelling areas of upper drainage tributaries. The most important spawning areas are the Chandalar, Porcupine and Tanana

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The President's Corner

Mary Beth Loewen



Mary Beth Loewen, AFS Alaska Chapter President.

In this season of change, the inevitable turn from summer to fall, I find myself in a favorite place, the Alaska Department of Fish and Game's weir site on the Chignik River. I've overseen and been involved in various sockeye salmon research projects here for eight years, and I enjoy the time to step out of my town routine to work with great crews and coworkers, getting into the river multiple times each day, and getting hands on fish every day. As the sun rises later in the mornings, and the alders and willows turn a rainbow of colors, it's a good time to look back over what I did and didn't accomplish over the summer, and what my plans for the fall and winter may include.

It's also a chance to look back over the years of Chignik. There's been a fish counting structure here consistently since 1921, with seasonal crews coming and going like the sandhill cranes overhead. Many fish biologists throughout the state have passed through Chignik during their career- a reunion of past Chignik crews would find fishy folks of every age bracket in every corner of the state. Framed photos of past area managers line the upper edge of the office walls, going back to before statehood. Some people came for a season and got out, others stayed for years and helped shape the place and its work. It's a bit of nostalgia every time I come across remnants of past crews – names I recognize from

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Fall Chum on the Yukon, continued

rivers in the U.S., and the mainstem Yukon River in Canada. It can take three weeks to a month for Fall Chum Salmon stocks to migrate from the lower river to U.S. spawning grounds, and five weeks to reach the Canadian Border.

Subsistence salmon fishing occurs throughout the drainage with the largest harvests occurring upriver in District 5. Since 2011, the total Yukon Area subsistence harvest of Fall Chum Salmon has averaged over 94,000 fish. An average of 57,000 fish, about 61% of the total harvest, was caught in District 5. The importance of Fall Chum Salmon to overall subsistence harvests has increased in recent years because subsistence harvest opportunities for Chinook Salmon have been severely restricted due to poor Chinook returns. This importance is particularly pronounced in District 5 because few Summer Chum and Coho salmon migrate above the Yukon River's confluence with the Tanana River in the lower portion of District 5. Commercial salmon fishing is allowed along the entire mainstem Yukon River and in portions of the Tanana River, though only districts and subdistricts with interested buyers are opened. However, the vast majority of the commercial harvest occurs in Districts 1 and 2. Since 2011, commercial harvests have averaged 215,000 Fall Chum Salmon with 92% of the harvest, about 199,000 fish, caught in Districts 1 and 2. Commercial fishing in Districts 1 and 2 occurs throughout the fall season, from July 16 through August 31, provided that run strength is adequate.

Maintaining sustainability by meeting drainagewide and tributary escapement goals, as well as treaty objectives into Canada, are the top priorities for Fall Chum Salmon management. When surpluses exist above needs for escapement and treaty objectives, subsistence stakeholders have the top priority for the harvest allocation, followed by commercial harvesters. However implementing this management strategy is complicated because most harvest and escapement locations are spatially ordered in reverse of the management priority along the Yukon River. That is, most commercial harvests occur in the lower river. In contrast, most subsistence harvests

Continued on page 4

President's Corner, continued

past years, written on totes or hearing protection or hard hats. The buoy on the subsistence net still bears the name of a manager two managers ago. A technician here in 2010 made sure to etch every welding project he did with his name, ensuring his legacy in the camp. The float coat I wear has the initials of a former co-worker written inside; that co-worker is now my husband! Coal-dust covered reports from previous managers back to the 1970s are referenced every year for insight. This year, a regional Wildlife Trooper came out for a visit, 35 years after he spent summers here with his father, a former manager whose photo hangs in the office. Like the river, our lives move relentlessly on.

Some people are more energized to label than others, vigorously sorting into research projects and management needs, labelling everything with paint pens without thinking of how they, too, will probably move on from this place. I tend to not label with my name, preferring instead to date everything trying to remind myself that the best I can do with my temporary ownership of projects is to improve efficiencies, make our data collection standards ever more robust, and train my staff to operate in my absence, or preferably, to step into my role when I move on! Looming budget cuts have eliminated my position with ADF&G, so my winter plans involve wrapping up grant funding obligations, developing detailed notes for future project work, and leaving my digital files as easy to navigate as possible. My time at Chignik will come to a close, but the weir will undoubtedly continue under the guidance of the current manager.

Throughout the state, each year we all try to make improvements to our projects, our professional lives, and the fisheries or systems we are involved with. With the additional knowledge (and, I hope, wisdom) that the recent

summer field season has provided, many of us are making notes about upgrades for next year's efforts, revising field plans, and planning enhancements for future work. But I think we should all keep an eye towards the long game, thinking in terms of ecosystem and statewide resource health far beyond the scope of our own projects. Educating ourselves and others about invasive species, ocean acidification, the importance of fish passage devices, and being involved with the future of our state's aquatic resources should be a constant goal. Introducing students and co-workers to the lifelong professional benefits of AFS, training and promoting competent staff, developing impactful projects with an anticipation of future climate change, and building strong working relationships with colleagues will provide long term benefits throughout the state. Continuing Education makes us all better scientists and resource stewards, and can broaden our own horizons beyond our normal focused projects.

As the school year begins again, I'm also reminded that ensuring a passion and commitment to Alaska's fisheries and aquatic resources to those who come after us may be the most lasting impact we can make. The current Chignik assistant manager, Lucas Stumpf, was going through piles of video camera gear and came across a box labelled to his former U.S. Park Service boss. Lucas now holds the same position in Chignik as his early-career supervisor, 20 years prior. I know some of the students I've been able to interact with through AFS will likely step into my boots and improve projects I've left behind. Hopefully, clearly labeled.

(Oh yeah, Dave Sarafin, there's a pink ruler out here with your name on it that still gets used weekly. Grateful thanks for sending us Lucas.) 🐾

Riparian Award Challenge

The Riparian Award Challenge was developed to encourage the Bureau of Land Management, U.S. Forest Service, conservation organizations, and private industry to pursue excellence in riparian and watershed habitat management. In particular, submissions must document efforts that have already or will contribute to improved resource values. Examples of resource values include, but are not limited to: stream bank stability, water quality, stream flow, aquatic/fish habitat, forage production, education, and recreation/aesthetics. For more information on the application process, contact Tracy Wendt at tracywendt@gmail.com. 🐾

AFS Alaska Chapter Meeting

The next meeting of the AFS Alaska Chapter will be held in March 21-13, 2017 at the Westmark Fairbanks Hotel & Conference Center in downtown Fairbanks. Continuing Education courses will begin March 19. Discounted lodging reservations may be made with the group code FSW031917 by going to www.westmarkhotels.com or calling 800-544-0970.

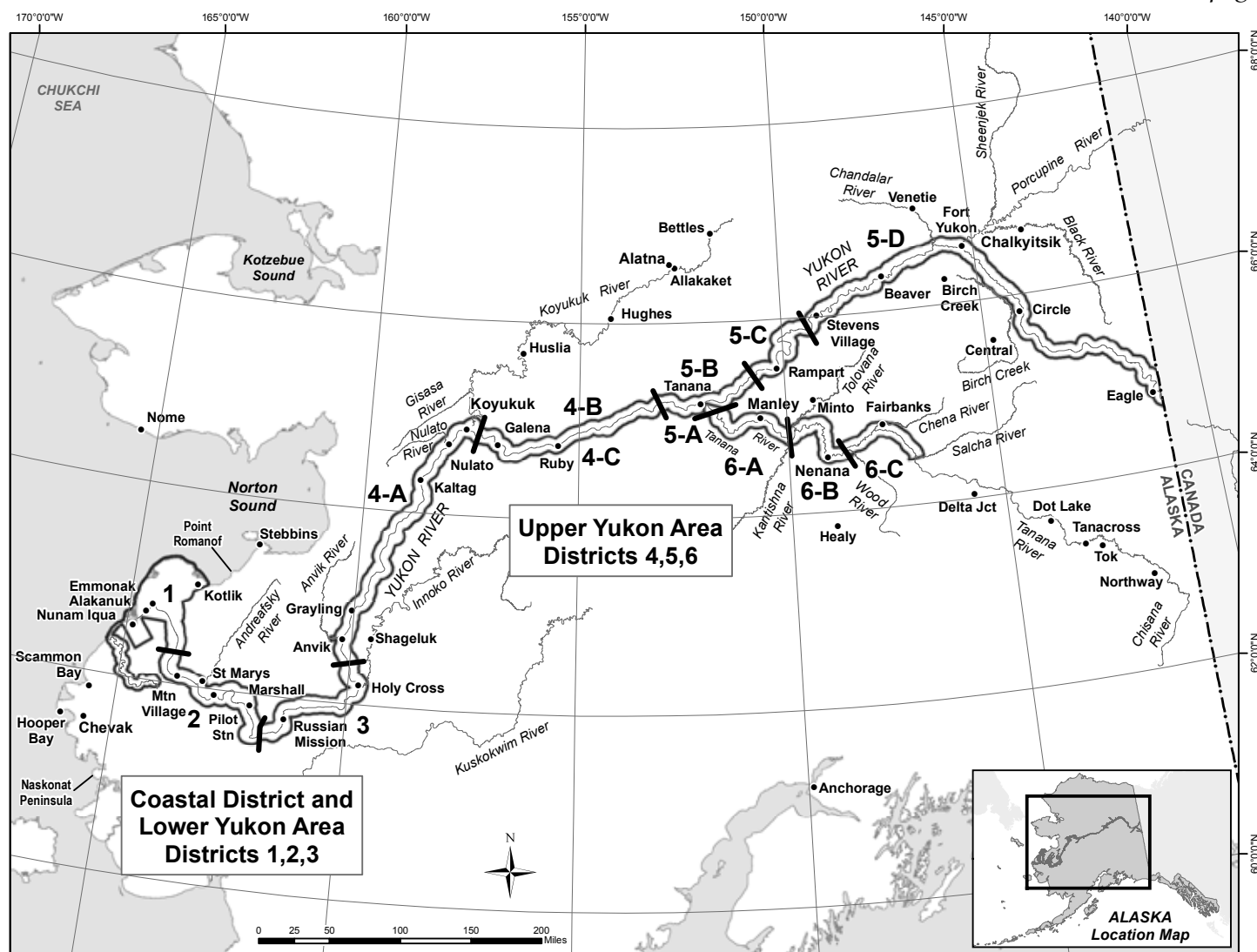
The 2017 meeting represents the recent shift to a spring meeting timing to reduce conflicts with

other fall meetings, and to allow people more time to analyze and summarize data from the summer field season. The 2017 meeting will also be a joint effort with the American Water Resources Association, similar to the 2014 Juneau meeting. Session descriptions are under development and will be released by the end of September. Please contact Program Chair Aaron Martin with AFS (aaron_e_martin@fws.gov) if you have questions, suggestions, or need more information.

Fall Chum on the Yukon, continued

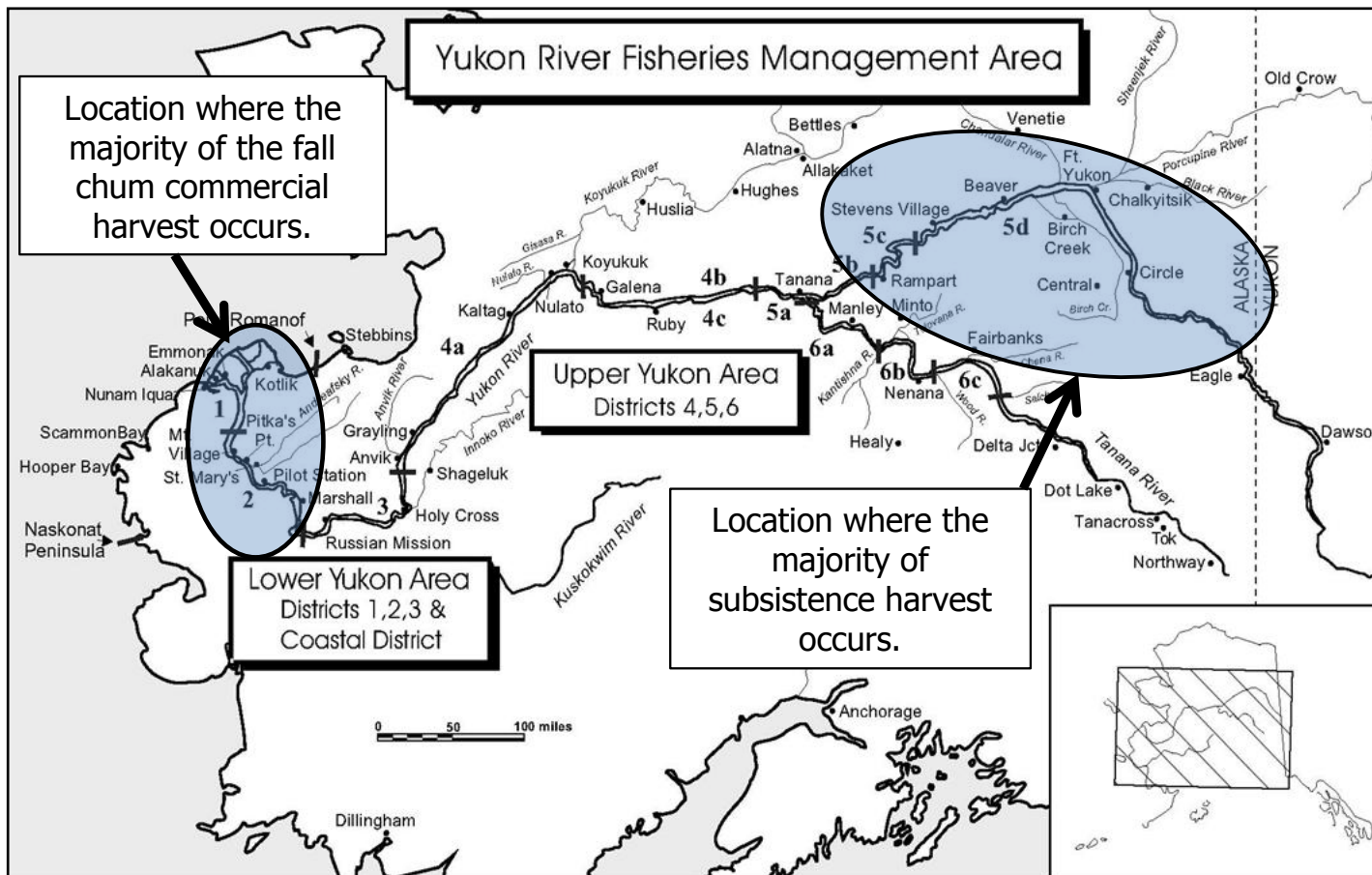
occur upriver in District 5, and these harvests occur primarily later in the season after the lower river commercial fisheries have closed. Finally, tributary escapements and harvest sharing objectives into Canada occur last with reliable indications on whether these measures will be met not available until mid September. This is a classic gauntlet system in which those fish destined for the uppermost portions of the river must first pass through a myriad of downstream uses. Thus, in years when commercial fishing

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Fishing districts and major tributaries of the Alaska portion of the Yukon River. Figure from Jeff Estensen

Fall Chum on the Yukon, continued



General locations where commercial and subsistence fisheries occur for Fall Chum Salmon in the Alaska portion of the Yukon River. Figure from Jeff Estensen.

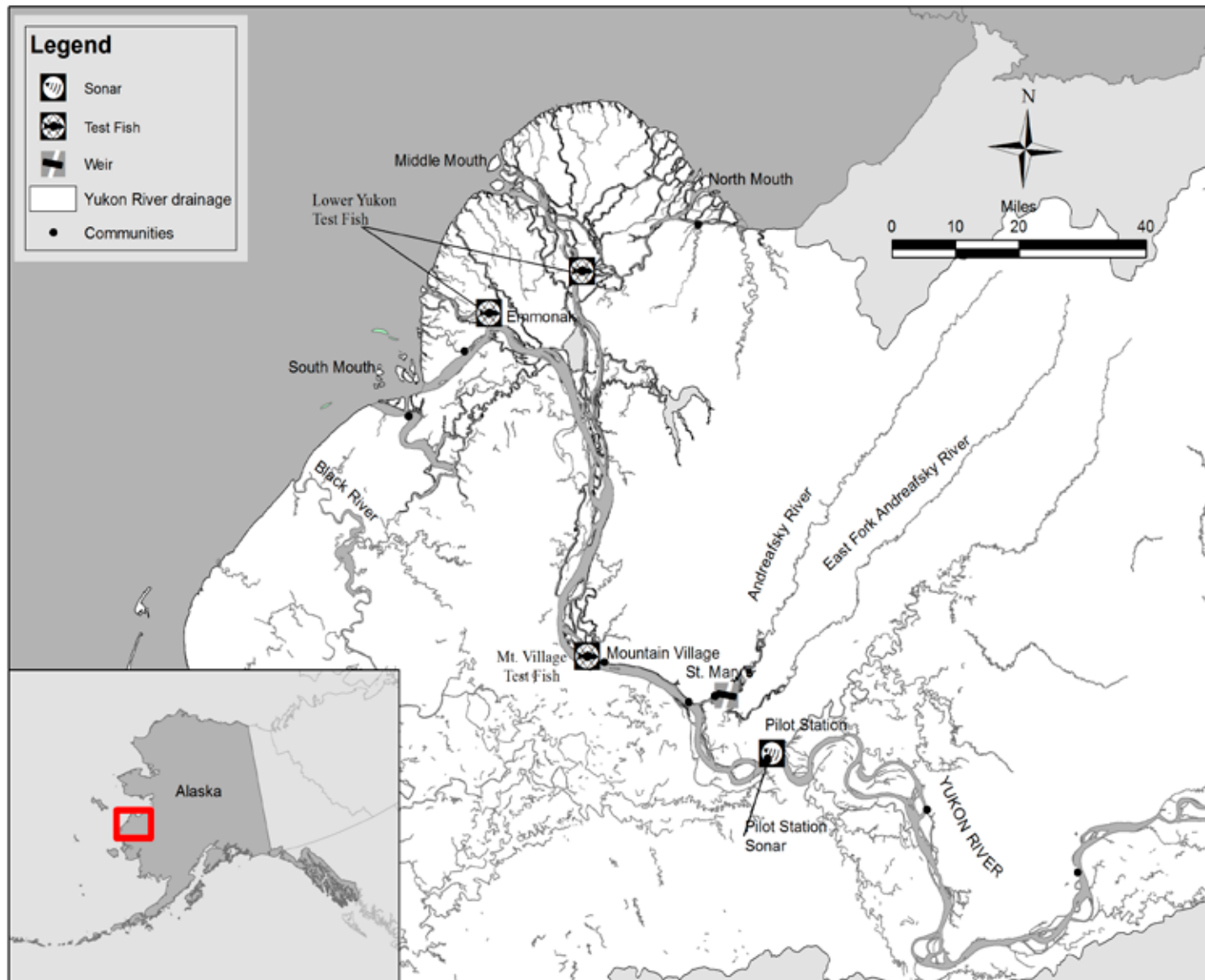
is warranted, a balance must be struck between providing an appropriate amount of commercial harvest and letting enough fish migrate upriver to provide for the higher priorities of escapement, the majority of the subsistence harvest, and the treaty objectives with Canada. This balance is critical for management, and uncertainties in available data complicate this aspect of management.

During the fishing season, lower river management relies largely on preseason projections, inseason abundance indices from the Lower Yukon River test fishery (LYTF) and the Mountain Village test fishery (MV), and abundance estimates from the mainstem sonar project at Pilot Station. It takes approximately two days for Fall Chum Salmon to migrate from LYTF to MV, and another day to pass the mainstem sonar. But the majority of commercial harvest occurs downriver of the sonar, and before managers have actual abundance estimates. Managers must use indices from both test fisheries to make decisions on how much surplus is

available for commercial harvest and determine dates, duration, and expected effort to allow appropriate openings. Uncertainty always exists using catch-per-unit-effort (CPUE) to estimate the number of fish in a pulse, and managers must weigh various risks: commercially harvesting too many Fall Chum Salmon in the lower river prevents enough fish from getting upriver to meet needs, but excessive restrictions result in foregone commercial harvest. The consequences of the former are potentially having to implement upriver restrictions on subsistence fishing if upriver data indicates escapement and treaty objectives will not be met. For the latter, although enough Fall Chum Salmon are available upriver to provide for subsistence and border passage needs, the fish foregone downriver will not likely be harvested upriver but will potentially increase escapements to areas where goals are already being met or exceeded, therefore underutilizing the abundant

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Fall Chum on the Yukon, continued



Location of test fisheries on the Lower Yukon River. Figure from Jeff Estensen.

resource. Subsistence users tend to harvest only the number of fish needed, regardless of run size, and the amount of commercial harvest that occurs above Districts 1 and 2 is small. Management and research biologists have attempted to translate test fish information to numbers of fish by looking at the inseason relationship between test fish CPUE and corresponding daily passage at the mainstem sonar. Estimates are based on models using historical data when the season begins, but switch to inseason data as the season progresses. Issues such as tides, commercial harvest, water level, and fish migration speed can affect CPUE and must be considered. Confidence bounds around daily passage estimates of Fall Chum Salmon can be quite large. In any case, there is always an element

of uncertainty in estimating the numbers of fish coming in with pulses.

Another challenge centers around the pulse entry pattern exhibited by Fall Chum Salmon (in contrast to the bell shaped entry pattern exhibited by many salmon runs) and its effect on inseason run assessment. Directed commercial fishing for Fall Chum Salmon is allowed when run sizes exceed 550,000 fish. As long as pre-season and inseason run projections are above the threshold, commercial fishing may occur or continue. The number of fish exceeding the threshold is available for commercial harvest. But pulses can greatly vary in numbers of fish. For example, after a large pulse has moved through the lower river,

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Fall Chum on the Yukon, continued

inseason run projections may indicate that the run is above the commercial threshold and that a commercial surplus beyond what has already been taken still exists. In between pulses are lulls. Lulls may exhibit a level of fish entry that results in inseason run projections remaining stable. Or, lulls may have such low fish numbers that projections drop below the commercial threshold, or indicate the commercial surplus is less than what has already been taken. During extended lulls with few fish, it is generally a clear decision to reduce or halt commercial fishing. However, management decisions when the next pulse enters can be particularly challenging. A good example was found in 2012 when a lull in daily Fall Chum Salmon passage occurred during August 9–18. Only 18,000 Fall Chum Salmon entered the river over nine days and inseason run projections dropped from 655,000 fish (meeting the threshold needed to commercial fish) to 478,000 fish (well below the threshold). In addition, about 174,000 Fall Chum salmon had already been harvested in the commercial fishery. Managers have clues on when pulses may enter the river, such as strong offshore SW winds and large high tides. What is unknown is how many fish are in the next pulse. As the pulse started entering the river in 2012, managers evaluated the best available information to estimate the number of fish in the pulse. Would this pulse contain enough fish to get inseason projections back above the commercial threshold and accommodate the commercial harvest already taken? In the end, approximately 357,000 fish entered the river in a six-day period, however managers chose to delay resumption of commercial

fishing at the beginning of the pulse, choosing to let fish get upriver. In hindsight, managers could have allowed additional commercial harvest. Managers now put more trust in a Fall Chum Salmon run projection, based on the relationship between total run size of Summer Chum and Fall Chum salmon, in estimating the total run size for the season. Since 2011, projections from the relationship have performed well when compared to the observed runs. The strength of this relationship provides more confidence to managers when estimating the number of Fall Chum Salmon contained in the pulses that follow lulls. In turn, this allows managers to make more informed decisions on whether to allow commercial fishing, and how much, or to let fish move upriver.

While there are certainly other complexities and issues that confront fall season managers, management in the lower river is arguably the most crucial. Commercial harvest, which is a lower management priority, must be balanced with getting sufficient fish upriver to meet escapement, subsistence, and international treaty needs, which are all higher management priorities. Managers have to weigh the information and connectivity of assessment projects and commercial harvest data to make the decisions that maintain that priority balance. It is not always an easy job!

Jeff Estensen currently resides in Fairbanks as the Yukon Area Fall Season Manager for the Alaska Department of Fish and Game. Jeff has worked for ADF&G for 15 years as a management biologist and a research biologist in the Kuskokwim, Norton Sound, and Yukon Areas. He earned an M.S. in Biology from the University of Alaska Fairbanks. 🐟

2017 Molly Ahlgren Scholarship Amount \$4,000

The Alaska Chapter of the American Fisheries Society is pleased to announce the 2017 Molly Ahlgren Scholarship consisting of a \$4,000 award to a qualifying undergraduate student pursuing a baccalaureate degree in fisheries, aquatic, or biological science at the University of Alaska System (UA) or Alaska Pacific University (APU). Applicants must be an undergraduate student considered to be a junior by accumulation of credits

as determined by UA or APU academic criteria and in good academic standing with UA or APU. All travel and meeting registration expenses will be paid for by the Alaska Chapter to attend the annual Alaska Chapter Conference during March 19–23, 2017 in Fairbanks, Alaska. Applications must be received by 5:00 p.m. Alaska Time on 31 October 31, 2016. For more application information go to <http://www.afs-alaska.org/awards-scholarships>. 🐟

Student Subunit Happenings

Cheryl Barnes, Student Subunit Representative

The Student Subunit of the AFS Alaska Chapter would like to recognize the following University of Alaska Fairbanks (UAF) students for defending their M.S. theses in fisheries during summer 2016:

- Sarah Apsens (M.S.) - "Examination of diet and trophic ecology of four eelpout species (genus *Lycodes*) in the U.S. Beaufort Sea"
- Heather Scannell (M.S.) - "Seasonal thermal habitat use and bathymetric distribution of Burbot in Tanada and Copper lakes, Alaska"

Elections for new Student Subunit officers were held this past spring. The following individuals initiated academic year-long terms to represent fisheries students at UAF's Fairbanks campus:

President Chelsea Clawson, Vice President Kristin Neuneker, Treasurer Stephanie Berkman, Secretary Genevieve Johnson, and Social Coordinator Benjamin Meyer. Ms. Clawson moved from Oregon to Alaska in 2015 to pursue an M.S. in fisheries; her thesis involves mapping thermal variability and physical habitat



Chelsea Clawson, President for the UAF – Fairbanks campus Student Subunit of the AFS Alaska Chapter. Photo from Cheryl Barnes.



Casey McConnell, President for the Remote Student Subunit of the AFS Alaska Chapter. Photo from Cheryl Barnes.

characteristics in the Chandalar River to evaluate the relationship to spawning site selection by Fall Chum Salmon.

In an effort to synchronize elections for student subunit officers across the state, Casey McConnell agreed to serve another term, this time as President for the evolving AK-AFS Remote Student Subunit. Casey was born and raised in Alaska and his M.S. thesis study focuses on quantifying differences between wild and hatchery-reared Chum Salmon straying, and identifying how straying behavior relates to physiology (stress responses). The Remote Student Subunit was designed in an effort to serve fisheries students residing in locations outside of Fairbanks, AK. Any interested students are invited to join the AK-AFS Remote Student Subunit. Please contact Casey McConnell (cmcon13@alaska.edu) for information about how to get involved. 🗨️

Fish Waste Composting Offers Alternative to Landfill Disposal

In summer 2015 Gabe Dunham, Alaska Sea Grant Marine Advisory agent in Bristol Bay, started a project at the Dillingham landfill to compost fish waste generated by local subsistence harvesters. Local subsistence harvesters take salmon fish heads, bones, and guts to the Dillingham landfill, attracting bears. Dunham first worked with City of Dillingham and state waste officials on layout approval for a donated compost site in the landfill. Compost piles were then created using wood chips, soil, paper, and fish waste, the piles covered with a fleece material to regulate moisture and reduce odor, and a temperature monitoring system added. The finished compost site includes a waste collection receptacle, a shelter for equipment, and

a tractor for material handling. The 2,000 pounds of waste collected in summer 2015 produced about 4,000 pounds of finished compost for distribution to gardeners in fall 2016.

The composting project was implemented as a "proof of concept" with a grant from the Alaska Coastal Impact Assistance Program in partnership with the Alaska Department of Environmental Conservation, US Fish and Wildlife Service, and National Fisheries Institute. The City of Dillingham donated the site for the project. The project shows that fish waste can produce a usable soil amendment that contributes to the local economy by supporting locally grown food and replacing the cost of imported, pre-made composts. 🗨️

Marine Debris Funding Opportunities

The NOAA Marine Debris Program is providing several funding opportunities related to marine debris. The amount of funding available and the application deadline varies by project type, described below. For more information, contact Peter Murphy (peter.murphy@noaa.gov) or go to <http://marinedebris.noaa.gov/funding/funding-opportunities>.

Community-Based Marine Debris Removal

As part of the national grant program supported through the NOAA Marine Debris Program, applications are now being accepted for project funding related to removal of marine debris in FY2017. The grant focuses on supporting community-based, locally-driven, marine debris removal activities with a priority on projects targeting medium to large-scale debris, including derelict fishing gear. A major aspect may include cost-effective habitat monitoring that measures the benefits of debris removal. Removal projects can be paired with outreach and education to prevent further introduction of marine debris, though the overall focus is on removal. Successful proposals will be funded through cooperative agreements. Projects awarded through this grant will implement effective, on-the-ground marine debris removal activities. Projects should provide benefits to coastal communities, and create long-term ecological habitat improvements. Awards in previous years have typically ranged from \$50,000 to \$150,000. Applications are due October 14, 2016.

Marine Debris Impacts

The Marine Debris Program is also seeking proposals for research on marine debris impacts and behaviors. This opportunity provides funding to support eligible organizations to conduct research directly related to marine debris through field, laboratory, and modeling experiments. A particular focus is on research that explores the ecological risk associated with marine debris, determines debris exposure levels, and examines the fate and transport of marine debris in nearshore, coastal environments. Projects may address one or more of these research priorities and should be original, hypothesis-driven projects that have not previously been addressed to scientific standards. A total of \$1,500,000 is anticipated to be available for FY17 with individual awards expected to range from \$150,000 to \$250,000. Applications are due December 19, 2016. 🐞

Hutton Junior Fisheries Biology Program Working in Alaska



Hutton Scholar Katy Price helped further the approach to determining age in Tanner Crab. Photo from Joel Webb.

The Hutton Junior Fisheries Biology Program, funded by the American Fisheries Society (AFS), provides a paid summer internship and mentoring opportunity to educate high school students and stimulate careers in fisheries sciences and management. The Hutton program was named in honor of the late Dr. Robert F. Hutton who served from 1965–1972 as the first full-time Executive Director for AFS. In 1986, Dr. Hutton was awarded the first AFS Meritorious Service Award in recognition of outstanding service to AFS and excellence in scientific accomplishments during his fisheries career. Further information on the Hutton Scholar program is available at <http://hutton.fisheries.org/>. Recognized here are two Hutton Scholars that interned in Alaska this past summer. 🐞

Katy Price Researches Crab Age Determination

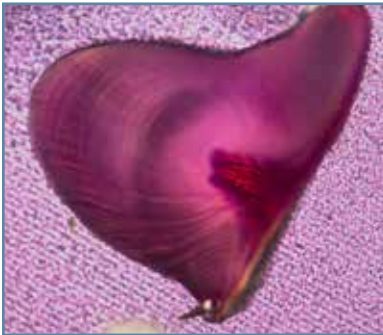
“Crabs have teeth in their stomachs that may not only give away their age, but are also much prettier in pink,” says Katy Price, a 2016 Hutton Scholar. Katy, a senior at Thunder Mountain High School in Juneau, partnered with mentors Joel Webb, Kevin McNeel, and April Rebert from the Alaska

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Hutton Junior Fisheries Biology Program, continued

Department of Fish and Game (ADF&G) Age Determination Unit on a project to develop a new technique for age determination of crabs and shrimps in Alaska.

Similar to fish ear bones (otoliths) and scales, as well as cross-sections of trees, it was discovered several years ago that the gastric teeth of crabs and lobsters could contain alternating light and dark bands that relate to age. Yes, decapod crustaceans such as crabs actually have calcified teeth, made of chitin and silica and referred to as the gastric mill, in the anterior portion of the stomach! A 2015 study funded by the North Pacific Research Board and involving a collaboration among ADF&G, the National Marine Fisheries Service, and the University of Alaska Fairbanks found banding in the gastric teeth of both Red King and Tanner crabs.



Banding pattern in a thin-section of a gastric tooth stained with Alizarin Red. Photo from Joel Webb.

A challenge to determining age in both fishes and crabs is variability in band quality among individuals and species. Numerous methods are available to improve band visibility, including breaking, sectioning, burning, baking, chemical etching, and chemical staining. Katy's Hutton Scholar project was to determine which, if any, of these methods increase band clarity and reliability of band counts using the gastric mill teeth of Tanner Crab.

Katy successfully prepared and stained sections of the gastric mill teeth to examine differences in band quality. Steps involved dissecting, cleaning, and embedding teeth in epoxy, preparing thin-sections (each the thickness of five human hairs), and staining sections with one of three acid etching and staining protocols. Key outcomes were that etching with a weak acid increased the effectiveness of all stains, and an Alizarin Red stain improved band clarity in some thin-sections. The Alizarin Red stain reacts with different forms of calcium to give a red or pink color to the bands.

What did Katy learn during her Hutton Scholar experience? "It is important for conservation and fisheries management to be able to age animals and understand trade-offs between how long they live, being caught in a fishery, and how old they need to be to reproduce." Would she recommend the Hutton Scholar program to other students? "Yes! It was cool and a good experience."

Gary Hoppenworth Explores Host-Microbe Interactions in Threespine Stickleback

High school intern and Hutton Scholar Gary Hoppenworth was mentored by Dr. Kat Milligan-Myhre, University of Alaska Anchorage biological sciences professor, and postdoctoral fellow Dr. Emily Lescak this past summer as part of the AFS Hutton program. Gary, a student at West High in Anchorage, spent eight weeks learning about the evolution of Threespine Stickleback, and how to measure potentially different host-microbe interactions.

In the field, Gary helped collect stickleback biological and environmental data, and in the laboratory he learned how to culture and characterize microbes, and assisted in the construction of Dr. Milligan-Myhre's fish research facility. Ultimately, the measurements Gary collected on morphological traits allowed the scientists to determine that somatic development is differentially affected by tetracycline exposure in genetically distinct populations of stickleback. This experiment indicates that antibiotic effects on development are influenced by the host genetic background. 🐟



Hutton Scholar Gary Hoppenworth exploring the genetics of Threespine Stickleback. Photo from Emily Lescak.

Joe Margraf Installed as Society President

Former AFS Alaska Chapter member Joe Margraf was installed as the 132nd President of the American Fisheries Society on August 24, 2016 at the AFS 146th Annual Meeting in Kansas City. After receiving his B.S. degree in fisheries from Cornell University in 1970, Margraf went to work in New Jersey for an ecological consulting company. He then completed his M.S. and Ph.D. in fisheries at Texas A&M University and again went into ecological consulting, this time in Texas. In 1980, Margraf joined the Cooperative Fish and Wildlife Research Unit at Ohio State University. He moved to West Virginia in 1987 to start a new Co-op Unit at West Virginia University, and then established another new Co-op Unit at the University of Maryland Eastern Shore in 1995. In 1999 he moved to Alaska to work with the Co-op Unit in Fairbanks. Margraf was the supervisor of western Cooperative Research Units of the U.S. Geological Survey from 2010 until retiring in August 2016 and now lives in Pagosa Springs, Colorado. As an AFS life member, Margraf's long and active role in AFS has included serving as president of the Texas A&M, Ohio, and West Virginia chapters; president of the Western Division; and president of the Education and Fish Habitat Sections. Margraf also served as the AFS Constitutional Consultant and has worked on numerous committees. He received the AFS Distinguished Service Award in 2001 and the Meritorious Service Award in 2009.



Former AFS Alaska Chapter member was recently installed as the 132nd president of the American Fisheries Society. Photo from AFS.



Processing subsistence salmon in St. Mary's. Photo from the Yukon River Drainage Fisheries Association.

AmazonSmile

Please spread this message far and wide! Tell your family and friends, your colleagues, and anyone who shops online at Amazon. Anyone interested AFS and Alaska's fisheries can now support the AFS Alaska Chapter financially, at no additional cost! When customers shop on AmazonSmile (smile.amazon.com), the AmazonSmile Foundation will donate 0.5% of the price of eligible purchases to the charitable organizations selected by customers.

There is no additional expense to the customer, not a price add-on, and at no cost to the AFS Alaska Chapter. The shopping experience is identical to Amazon.com with the added benefit that the AmazonSmile Foundation will donate to the charitable organizations selected by customer.

ONCORHYNCHUS

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**AFS memberships
may be renewed online**

<http://fisheries.org>

Meetings and Events

ShoreZone Annual Partner Meeting



October 12–13, 2016: The annual gathering of ShoreZone partners and interested parties will be held in Anchorage.

Live, online access will also be available. See www.shorezone.org for the agenda and more information.

Center for Salmon and Society Workshop: Long-term Challenges to Alaska's Salmon and Salmon-Dependent Communities

November 1–3, 2016: This meeting will be held in Anchorage, AK. For further information see <https://seagrant.uaf.edu/conferences/2016/salmon-and-society/>.



PICES 25

November 1–13, 2016: This conference, celebrating 25 years of efforts by the North Pacific Marine Science Organization to further understanding of the North Pacific's natural and socioeconomic systems, will be held in San Diego, CA. For more information, go to <https://www.pices.int/meetings/>.



Alaska Ocean Acidification – State of the Science

November 30–December 1, 2016: This workshop, sponsored by the Alaska Ocean Acidification Network, will be held in Anchorage, AK. For more information, visit <http://www.aos.org/alaska-ocean-acidification-network/>.



Developing a Harmful Algal Bloom Action Plan for Alaska

December 8–9, 2016: This workshop, will be held in Anchorage, AK. For more information, visit <https://seagrant.uaf.edu/conferences/2016/harmful-algal-blooms/>.



Alaska Marine Science Symposium

January 23–27, 2017: This meeting will be held in Anchorage, AK. For information, see <http://amss.nprb.org>.



Alaska Forum on the Environment

February 6–10, 2017: This meeting will be held in Anchorage, AK. For more information, visit <http://www.akforum.com/>.



42nd Annual Meeting of the American Fisheries Society Alaska Chapter

March 19–23, 2017: This meeting will be held in Fairbanks, AK. The meeting chair and program contact is Aaron Martin at aaron_e_martin@fws.gov.

Impacts of the Environment on the Dynamics of High-Latitude Fish and Shellfish

May 9–12, 2017: This 31st symposium in the Lowell Wakefield Fisheries Symposium series will be held in Anchorage, AK. More information is at <https://seagrant.uaf.edu/conferences/2017/wakefield-fish-dynamics/>.



American Fisheries Society 147th Annual Meeting

August 20–24, 2017: This meeting will be held in Tampa, FL. For more information, see <http://afsannualmeeting.fisheries.org/>.



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