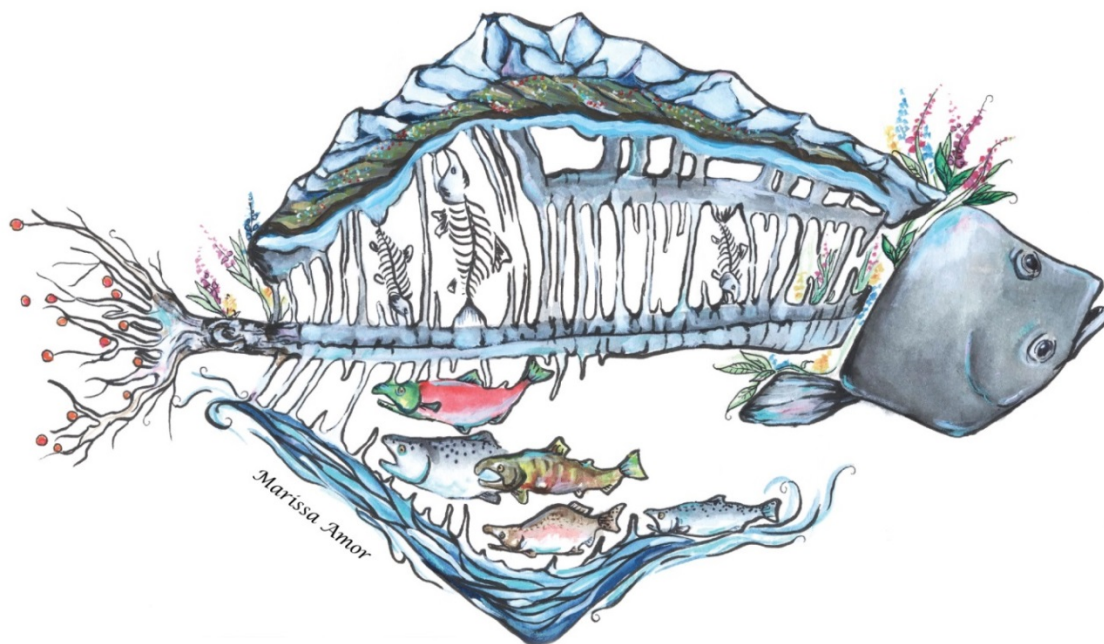


Conference Program

ALASKAN FISHERIES AND WATERS: SUCCESS, LIMITATION AND INNOVATION IN THE FACE OF DATA SCARCITY AND UNCERTAINTY

Fairbanks, Alaska • March 19-23, 2017



Joint meeting of the
American Fisheries Society, Alaska Chapter
American Water Resources Association, Alaska Section



Page left blank intentionally.

Westmark Hotel Layout

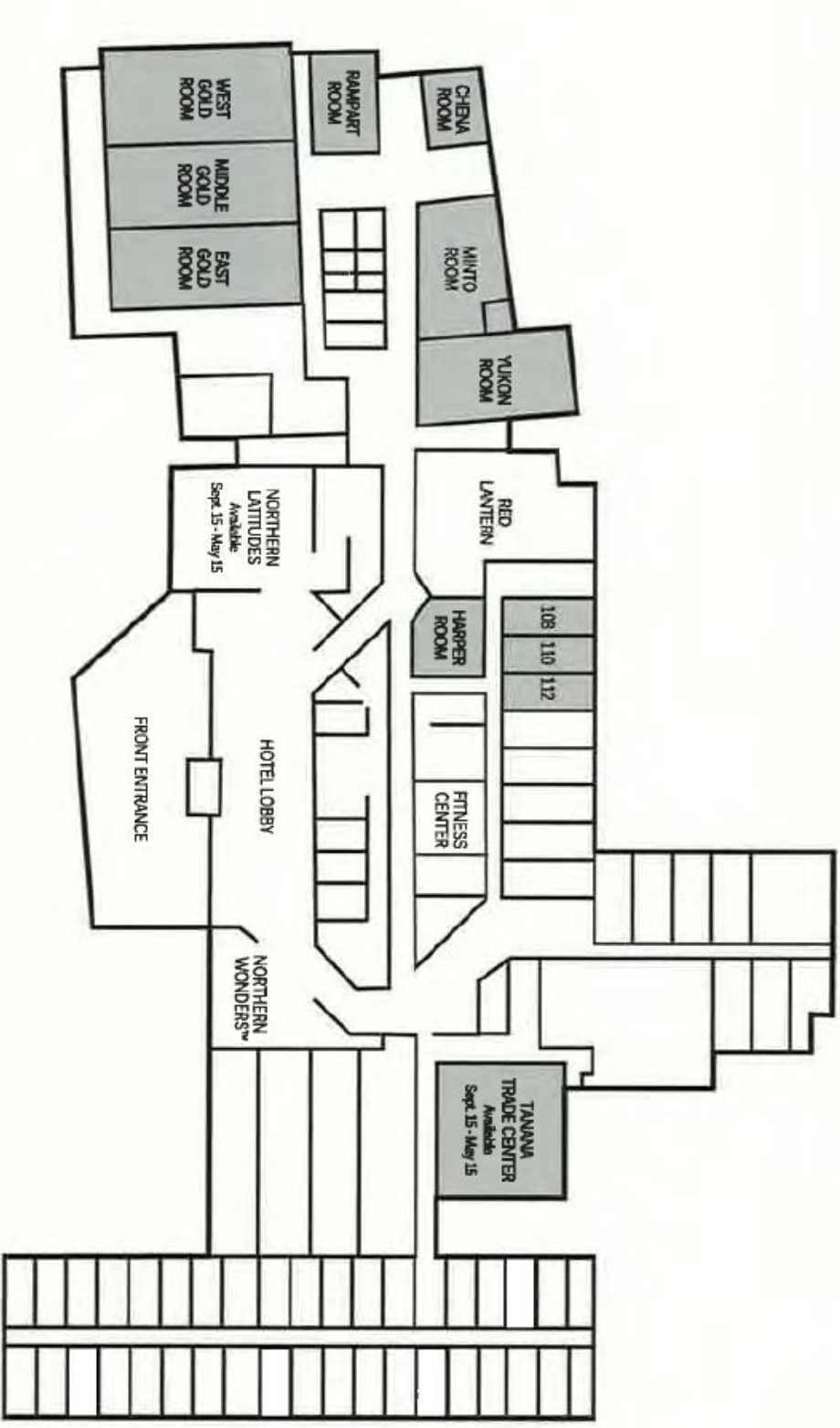


Table of Contents

Meeting Introduction and Host City.....	1
Downtown Fairbanks Map.....	2
Program at a Glance	3
Plenary Speaker Biographies	4
Executive Boards & Conference Organizing Committee	5
Alaska Chapter – American Fisheries Society Standing Committees	6
Conference Donors, Sponsors, and Contributors	7
Attendee and Presenter Information	8
Sunday, March 19 th	9
Continuing Education Workshops	9
Monday, March 20 th	9
Continuing Education Workshops	9
Welcoming Social	9
Tuesday, March 21 st	10
Plenary Speaker Abstracts	10
Changing Processes	11
Alaska Gems.....	12
Science in Support of Alaska’s Future	12
Statewide Chinook Salmon Research.....	13
Poster Session and Film Festival Information.....	14
Wednesday, March 22 nd	18
Plenary Speaker Abstracts	18
Changing Processes (cont.)	18
Statewide Chinook Salmon Research (cont.).....	19

Resource Security	20
Shared Knowledge – West Gold Room: Session Chair: Stephanie Quinn–Davidson	20
5K Fun Run/Walk	21
Banquet, Awards, and Live Auction	21
Thursday, March 23 rd	22
Plenary Speaker Abstracts	22
Contributed Papers	23
Ecosystem Management	23
Speed Talks	24
AK–AFS Best Student Poster and Oral Presentation Awards and Closing Remarks	24
AWRA Special Session – Interagency Hydrology Committee for Alaska	24
Closing Remarks	24
World Ice Art Championship	25
Friday, March 24 th	25
Chena Hot Spring Resort	25
43 rd Annual AK–AFS Business Meeting Agenda	26

Meeting Introduction and Host City

Meeting Introduction

The American Fisheries Society – Alaska Chapter and the American Water Resources Association are pleased to come together again to co-host the 2017 annual chapter meeting in Fairbanks, Alaska March 19-23, 2017 at the Westmark Hotel. The Program Planning Committee drafted a set of workshops, plenary speakers, special sessions, and activities that attempt to foster collaboration across issues that span disciplines, species, and ecosystems which will benefit the broad audience our organizations represent

Host City – Fairbanks, Alaska

Welcome to the Golden Heart City. Fairbanks is the second-largest city in Alaska and its history dates back to 1901 when Felix Pedro, an Italian immigrant from Italy was searching for gold in the hills of the Tanana Valley, and he spotted the smoke of a steamboat unloading on the banks of the Chena River. Hoping to purchase supplies, he headed in the direction of the boat. Meanwhile, E.T. Barnette had argued with the captain of the riverboat on which he was traveling. He had hired the captain to take him up the Tanana River to the present day site of Tanacross. However, the Tanana River could not be passed and the Chena River also proved too shallow. So, the captain put Barnette and his large stock of trade goods ashore near the present site of First Avenue and Cushman in August of 1901. E.T. Barnette was quite disgruntled with the prospect of establishing his trading post so far from the existing gold fields. He had left the area to re-supply, and when he returned in 1902, Felix Pedro had found gold in the area in July of that year. Barnette elected to keep his trading post at its location on the banks of the Chena, figuring he could make money with gold fields this close. Mr. Barnette went on to convince early settlers to name Fairbanks in honor of Charles W. Fairbanks, an Indiana senator. Charles Fairbanks later became the Vice President of the United States under Theodore Roosevelt.

On November 10, 1903, an election was held to decide whether Fairbanks should be incorporated. The residents believed that Fairbanks was sufficiently established and that they should be given the responsibility to provide for their own daily community functions. By a 75% majority vote, Fairbanks was incorporated on November 10, 1903. At the same election, the people also chose a mayor, council members, and school board members. E.T. Barnette became the first Mayor of the City of Fairbanks. Since the gold rush era of the early 1900's, the City of Fairbanks has continued to grow and prosper. Today Fairbanks, Alaska, is a popular tourist destination offering a mix of its gold-rush era mystique, as well as the unparalleled natural beauty of Denali Peak and the Alaskan countryside.

A few things to do while here:

- BP World Ice Art Championships
- Birch Hill Recreation Area and the Jim Whisenhant Cross Country Ski Trail system
- UAF - Museum of the North
- Fairbanks Curling Club
- Chena Hot Springs Resort

Conference Venue

We will hold the workshops, sessions, Welcoming Social, and the Banquet at the Westmark Hotel (907 456-7722; 813 Noble St, Fairbanks, AK 99701). The Tuesday night Poster Session and Film Festival will occur at the Morris Thompson Cultural and Visitor Center (907-459-3700 101; Dunkel St, Fairbanks, AK 99701).

Downtown Fairbanks Map



Map developed by Alaska.org

Program at a Glance

Sunday, March 19, 2017			
8:00 - 16:00	Continuing Education	UAV-based Remote Sensing Ice Jam Processes and Ice Discharge Measurements	University of Alaska Fairbanks campus University of Alaska Fairbanks campus
Monday, March 20, 2017			
10:30 - 17:00		Registration / Information	Westmark Hotel Hallway
8:00 - 17:00	Continuing Education	Electrofishing 2 Part Course UAV-based Remote Sensing (cont.) Ice Jam Processes and Ice Discharge Measurements (cont.)	Chena Room University of Alaska Fairbanks campus Rampart Room
12:00 - 19:00		Vendor Set Up	Minto Room
17:00 - 19:00		Welcoming Social	Westmark Hotel Northern Latitudes Room
Tuesday, March 21, 2017			
7:00 - 17:00		Registration / Information / Sales Desk Open / Vendor Set Up	Westmark Hotel Hallway and Minto Room
7:00 - 17:00		Coffee and Refreshment Service	Minto Room
7:00 - 17:00		Silent Auction	Yukon Room
8:00 - 8:15		Welcoming and Plenary Introductions	Combined Gold Rooms
8:15 - 9:15		AFS and AWRA Plenary Speakers (1 each)	Combined Gold Rooms
9:30 - 12:05		Changing Processes	Middle Gold Room
9:30 - 12:05		Alaska Gems	East Gold Room
9:30 - 12:05		Statewide Chinook Salmon Research	West Gold Room
12:05 - 13:30		Student Mentoring Lunch (East Room) & AK-AFS Past Presidents Lunch (West Room)	Gold Rooms
13:30 - 16:45		Changing Processes (cont.)	Middle Gold Room
13:30 - 14:10		Alaska Gems (cont.)	East Gold Room
14:15 - 15:50		Science in Support of Alaska's Future	East Gold Room
13:30 - 17:30		Statewide Chinook Salmon Research (cont.)	West Gold Room
17:00 - 18:00		Poster Session Set Up	Morris Thompson Cultural & Visitors Center
18:00 - 21:00		Evening Social, Poster Session, & Film Festival	Morris Thompson Cultural & Visitors Center
Wednesday, March 22, 2017			
7:00 - 17:00		Registration / Information / Sales Desk Open	Westmark Hotel Hallway and Minto Room
7:00 - 17:00		Coffee and Refreshment Service	Minto Room
7:00 - 17:00		Silent Auction	Yukon Room
8:00 - 9:00		AFS and AWRA Plenary Speakers (1 each)	Combined Gold Rooms
9:10 - 12:10		Changing Processes (cont.)	Middle Gold Room
9:10 - 12:05		Resource Security	East Gold Room
12:10 - 14:00		AK-AFS (East Room) & AS-AWRA (West Room) Business Meetings	Gold Rooms
14:05 - 14:25		Changing Processes (cont.)	Middle Gold Room
14:30 - 17:25		Statewide Chinook Salmon Research (cont.)	Middle Gold Room
14:05 - 15:55		Resource Security (cont.)	East Gold Room
14:05 - 16:40		Shared Knowledge	West Gold Room
17:30 - 18:30		5K Run/Walk	Downtown Fairbanks - Course TBD
18:30 - 20:30		Silent Auction	Yukon Room
19:00 - 22:00		Banquet / Awards / Live Auction	Combined Gold Rooms
22:00		After Party @ Lavelle's Tap House	Downtown Fairbanks
Thursday, March 23, 2017			
7:00 - 12:00		Registration / Information / Sales Desk Open	Westmark Hotel Hallway and Minto Room
7:00 - 16:00		Coffee and Refreshment Service	Westmark Hotel Minto Room
8:00 - 9:00		AFS and AWRA Plenary Speakers (1 each)	Westmark Hotel Gold Room
9:10 - 12:05		Contributed Papers	East Gold Room
9:10 - 12:05		Ecosystem Management	Middle Gold Room
9:10 - 10:15		Speed Talks	West Gold Room
12:10 - 14:00		2018 Western Division AFS Meeting Planning - Lunch	Middle Gold Room
14:05 - 15:25		Contributed Papers (cont.)	East Gold Room
13:30 - 15:50		AWRA/IHCA Special Session	West Gold Room
15:30 - 16:00		AK-AFS Best Student Presentation and Poster Awards	Middle Gold Room
16:00 - 16:20		Closing Remarks	Middle Gold Room
18:00 - 20:00		World Ice Art Championship Field Trip	Downtown Fairbanks
Friday, March 24, 2017			
10:00 - 17:00		Chena Hot Springs Field Trip	Transportation Provided

Plenary Speaker Biographies

Dan Isaak - is a Research Scientist with the U.S. Forest Service in Boise, Idaho where he works on aquatic species conservation and management issues across the western U.S. His current research focuses on understanding the effects of climate change, environmental gradients, and natural disturbance on stream habitats and fish communities; stream temperature, water quality, and species distribution monitoring and modeling; development and application of spatial statistical models for stream networks; and use of digital and social media to connect people, information, and landscapes.

Ken Stahlnecker - graduated with a Forest Science degree from Penn State University and began his career as a Natural Resource Manager for the National Park Service. Through his 34 years with the federal government, Ken worked in six different National Park Service units from Maryland to Alaska. Ken transferred to the US Fish and Wildlife Service in June of 2016 and is currently working as Refuge Manager for Yukon Delta National Wildlife Refuge.

Ian Stewart - is a quantitative scientist for the International Pacific Halibut Commission, where he has been the lead for their annual stock assessment since 2012. Prior to his work with the Commission, Ian was a stock assessment scientist for the National Marine Fisheries Service's Northwest Fisheries Science Center, contributing to many assessments and rebuilding plans for west coast groundfish species. He has collaborated with trawl, acoustic, and hook-and-line survey programs to investigate methods for standardizing catch rates and incorporating these results into stock assessments. Recent research has focused on improving stock assessment methods, characterizing uncertainty, and the development of modelling and presentation approaches to support multi-model based risk assessment. Ian earned a Ph.D from the University of Washington's School of Aquatic and Fishery Sciences in 2006, working with Ray Hilborn.

Jon Zufelt – is a Senior Hydraulic Engineer with HDR in Anchorage, Alaska focusing on the topics of cold regions hydrology and hydraulics, coastal and riverine bank protection, ice engineering, and hydropower. Prior to HDR, Jon served 30 years with the US Army Cold Regions Research and Engineering Laboratory (CRREL) researching all aspects of river ice. Jon received his BS in Forest Engineering from Syracuse, MS in Civil Engineering from CSU, and his PhD from the University of Iowa. He is the Editor of the *ASCE Journal of Cold Regions Engineering* and the Chair of the AWRA Alaska Awards and Grants Committee.

Pete Bieniek – is a research associate at the International Arctic Research Center at the University of Alaska Fairbanks working with the DOI Alaska Climate Science Center on dynamical downscaling of past and future Alaska climate information. He is broadly interested in studying Alaska climate variability and change and how it is linked with the global climate system. Peter earned his PhD in Atmospheric Sciences at the University of Alaska Fairbanks in 2012.

Christopher Estes - is an Aquatic Resources and Habitat Scientist and has been contributing to international instream flow and water level conservation science, technical, legal and policy solutions for the past 40+ years. He currently consults for Chalk Board Enterprises, LLC on instream flow and water level conservation projects, provides related training, and serves on national and international advisory panels in addition to active participation in professional organizations. He is the founder and former Chief of the Statewide Aquatic Resources Coordination Unit for the Alaska Department of Fish and Game and has authored and coauthored numerous instream flow and water level conservation related publications.

Executive Boards & Conference Organizing Committee

Alaska Chapter – American Fisheries Society:

- President Marybeth Loewen
- President Elect Aaron Martin
- Vice-President Jeff Falke
- Treasurer Lee Ann Gardner
- Secretary Karson Coutre
- Past-President Jenni Stahl
- Awards Committee Chair Jon Gerken
- Student Subunit Representative Cheryl Barnes

Student Subunit Presidents:

- Casey McConnell University of Alaska – Southeast Subunit
- Chelsea Clawson University of Alaska – Fairbanks Subunit

Alaska Section – American Water Resources Committee:

- President Robin Beebee
- President Elect Erica Betts
- Treasurer Nicole Neuman
- Secretary Joe Miller
- Past President Ryan Toohey
- Northern Region Director Molly Tedesche
- South-Central Region Director David Nyman
- South-East Region Director David D'Amore

2017 Joint Conference Contributors

- Program Committee – Aaron Martin, Erica Betts, Diana Stram, Stephanie Quinn-Davidson, Ryan Toohey, Jeff Falke, Robin Beebee, Michael Lilly, Jordi Cristobal Rossello
- Fundraising Committee – Peter Westley, Nate Cathcart, Madeline Jovanovich, Michael Lilly, Diana Stram, Stephanie Quinn-Davidson, Lee Ann Gardner, and Aaron Martin
- Local Arrangements Committee – Erica Betts, Chelsea Clawson, Brian McKenna, and Stephanie Berkman
- Volunteer Coordinator – Cheryl Barnes
- Audio and Visual Technical Support – Student Subunit Volunteers
- Student Poster and Oral Presentation Judging Coordinator – Jon Gerken
- Conference Program Cover Design – Marissa Amor
- AK-AFS Student Subunit Shirt Design – Nick Ingram and Subsurface Style
- Alaska Native Fish Shirt Design – Karen Lybrand

Conference Contacts (Co-Chairs)

Aaron Martin (AK-AFS): afs.alaska.presidentelect@gmail.com, 907-378-0568

Erica Betts (AS-AWRA): ericabetts@pdceng.com, 907-452-1414

Alaska Chapter – American Fisheries Society Standing Committees

- Awards Committee – Chair: Jon Gerken
- Continuing Education - Co-Chairs: Sara Miller and Katie Palof
- Cultural Diversity Committee - Chair: Sara Gilk-Baumer
- Electronic Communications Committee – Chair: Bert Lewis
- Webmaster: Audra Brase, List-Serve Manager: Hamachan Hamazaki
- Environmental Concerns Committee – Chair: Bert Lewis
- Financial Assets Oversight Committee – Chair: Ray Hander, members: Lee Ann Gardner, Tim Joyce
- Fisheries and Environmental Education Committee – Chair: Katrina Mueller
- Molly Ahlgren Scholarship Award Committee – Chair: Ray Hander, members: Lee Ann Gardner, Tim Joyce, Brenda Norcross, Hall Geiger, Carol Kerkvliet
- Resolutions and Bylaws Committee – Chair: Toshihide “Hamachan” Hamazaki, member: Lisa Stuby, Bill Bechtol
- Wally Noerenberg Award Committee – Chair: Ken Gates

Conference Donors, Sponsors, and Contributors

We wish to thank the following organizations and businesses for sponsoring the 2017 Joint Meeting.

Yukon Sponsor (\$1,000 +)

Alaska Travel Source
Foss Maritime
North Pacific Fishery Management Council
North Pacific Fishery Research Foundation
Geo-Watersheds Scientific

Chinook Sponsor (\$500 +)

Advanced Telemetry Systems
Center for Salmon and Society
Lotek Wireless
Barry Whitehill & Patty Picha
Tanana Chiefs Conference

Tanana Sponsor (\$50 +)

Alaska Sea Grant
Cold Spot Feeds
Hal Geiger
Jim Brashear Pottery
Bert Lewis
Silver Gulch Brewing & Bottling, Co.
Tidal Vision
United Fishermen of Alaska
Mary Ver Hoef
Wipfli Pottery
Carol Ann Woody
Student Career Association
Bill Wilson

Sockeye Sponsor (<\$50)

Alaska Grown, Department of Natural Resources
American Fisheries Society Bookstore
Alex Wertheimer

Some donor names were not available by the time this program went to print. We extend a sincere thank you to those of you whose names are not listed above, your generous support of this conference and of our organizations is sincerely appreciated!

Attendee and Presenter Information

Locations

See “Program at a Glance” for room location of specific events.

Oral Presenters

When you arrive at the meeting, please visit with your session chair to confirm your talk gets uploaded successfully.

Your presentation needs to be uploaded onto the session laptop by the morning of the day you present.

The AV Center desk will be open at the following times:

Tuesday 21 March 07:30 – 16:00

Wednesday 22 March 07:30 – 16:00

Thursday 23 March 07:30 – 16:00

Please take note of your presentation date and time. Please note that all general session talks are limited to 20 minutes total (which includes 5 minutes for questions), whereas **Speed Talk** session talks are limited to a 3 minute presentation with several minutes afterwards for questions. Respect other speakers and your audience by staying within your scheduled time. It is extremely important that we maintain this schedule, so that attendees can move amongst sessions.

Finally, please check with your session chair well in advance of the start of your session to make sure that you know where the tools are that you need for your talk (e.g., remote control, laser pointer) and how to use them.

Notice to all attendees:

As a courtesy to all presenters, we request that you turn off or mute your cellular phones while attending sessions and meetings.

Posters

The poster session will be held before the conference social and banquet on Wednesday, March 22, at the Morris Thompson Cultural and Visitor Center (MTCVC). Poster displays should be set up between 17:00-18:00. Materials to secure posters to the wall will be provided, however, please bring some if you have them just in case. All authors should be at their posters and prepared to discuss their work from 18:00 to 19:30 on Wednesday evening. Posters must be removed before leaving the MTCVC for the evening.

Student Mentoring Lunch

A student mentoring lunch (food provided) is set for **Tuesday, March 21, 12:10-13:30 in the Middle Gold Room**. This event aims to provide connect students with professionals in the field of fisheries and water sciences. Students will have opportunities to ask questions and seek advice from professionals from across different fields working in the private and public sector. This event is limited in capacity so please check with the registration desk about available spots for students and mentors.

Sunday, March 19th

Continuing Education Workshops

- 8:00 – 12:00 UAV-based Remote Sensing – University of Alaska Fairbanks
- 8:00 – 12:00 Ice Jam Processes and Ice Discharge Measurements – University of Alaska Fairbanks
- 12:00 – 13:30 *Lunch break on your own*
- 13:30 – 16:00 UAV-based Remote Sensing – University of Alaska Fairbanks
- 13:30 – 16:00 Ice Jam Processes and Ice Discharge Measurements – University of Alaska Fairbanks

Monday, March 20th

8:30 – 16:30 Registration / Information Desk Open – Westmark Hotel West Entrance Hallway

Continuing Education Workshops

- 8:00 – 12:00 UAV-based Remote Sensing (continued) – University of Alaska Fairbanks
- 8:00 – 12:00 Ice Jam Processes and Ice Discharge Measurements (continued) – Rampart Room
- 8:00 – 12:00 Electrofishing 2 Part Course – Chena Room
- 12:00 – 13:30 *Lunch break on your own*
- 13:00 – 16:00 UAV-based Remote Sensing (continued) – University of Alaska Fairbanks
- 13:00 – 16:00 Ice Jam Processes and Ice Discharge Measurements (continued) – Rampart Room
- 12:30 – 17:00 Electrofishing 2 Part Course – Chena Room
- 12:00 – 19:00 Vendor Set up – Minto Room

Welcoming Social

- Westmark Hotel Northern Latitudes Room 17:00 – 19:00

Tuesday, March 21st

Plenary Speaker Abstracts

Dan Isaak: Research Fish Biologist, Rocky Mountain Research Station, U.S. Forest Service

Title: Crowd-sourcing and creating interagency stream databases for broad geographic areas: Lessons learned in the American West with utility for Alaska

Conserving and managing aquatic resources across broad geographic areas during times of rapid environmental change are significant challenges that require sound information for decision making. New sensor technologies, genomics, geostatistics, and digital-social media provide powerful tools for developing that information through collaborative interagency networks, standardized data collections protocols, and centralized database teams that service the needs of many. In this presentation, I share lessons learned in the American West where our small technical team has facilitated coordination of temperature monitoring networks and aquatic biodiversity surveys using eDNA among >100 natural resource agencies across a land area comparable in size to Alaska. Key to efficient coordination at such massive scales is the consistent geospatial framework provided by the National Hydrography Dataset, which is under development for Alaska. Once a working system based on efficient data sharing and monitoring is developed among agencies, it creates synergies and efficiencies of scale as the underlying databases grow.

Jon Zufelt: Senior Hydraulic Engineer, HDR

Title: Clues in the Ice: Understanding Winter Hydraulics

The hydraulics of waterways are defined by the relationships of discharge, depth, and velocity and how they influence sediment transport, scour, floodplain inundation, and assist in assessments of habitat suitability. When designing bridge crossings, culverts to accommodate fish passage, or flood protection for a river community we need physical measurements to properly characterize the hydraulics. In Alaska in particular, we must also consider the effects of ice covers, aufeis, ice jamming, and ice forces on structures. Winter data collection is difficult at best and often impossible for reasons of safety, cost, and logistics. Ice-affected hydraulic data usually has to be gleaned from observations of small changes or the aftermath of dynamic events. In this presentation, I'll point out some of the sources of winter data, how to recognize hidden clues, and what these observations tell us about hydraulics under the ice.

7:30 – 16:30 Registration / Information Desk Open – Westmark Hotel West Entrance Hallway

Welcoming and Plenary Session – Combined Gold Rooms

- | | |
|-------------|--|
| 8:00 – 8:15 | Welcoming by Tanana Chiefs Conference and the meeting co-chairs: Aaron Martin (President-Elect, AK-AFS); Erica Betts (President-Elect, AS-AWRA) |
| 8:15 – 8:45 | Crowd-sourcing and creating interagency stream databases for broad geographic areas: Lessons learned in the American West with utility for Alaska. Isaak, Dan |
| 8:45 – 9:15 | Clues in the Ice: Understanding Winter Hydraulics. Zufelt, Jon |
| 9:15 – 9:30 | <i>Networking Break</i> |

Concurrent Sessions

Name of presenters are in bold; student presenters are marked with an *.

Changing Processes – Middle Gold Room: Session Chair: Ryan Toohey

- 9:30 – 9:50 Perception and instrumented data, do differences affect ability to adapt? **Williams, Paula**
- 9:50 – 10:10 What the heck are random effects? **Ganz, Phil***
- 10:10 – 10:30 The Application of Water Policy to Climate Change Adaption Planning for Alaska Native Communities. **Shepherd, Hal**
- 10:30 – 10:50 Rescuing skippers’ logbooks to elucidate king crab distributions under changing temperature regimes. **Sloan, Leah***
- 10:50 – 11:05 *Networking Break*
- 11:05 – 11:25 Salmon 2050: Using scenario analysis to develop an integrated understanding of uncertainty. **Trammell, E. Jamie**
- 11:25 – 11:45 Pacific Salmon in the Face of Climate and Landscape Change: Insights from the Kenai River. **Schoen, Erik**
- 11:45 – 12:05 Growth and Foraging Patterns of Juvenile Chinook and Coho Salmon in Three Geomorphically Distinct Sub-Basins of the Kenai River. **Meyer, Benjamin***
- 12:05 – 13:30 *Student Mentoring Catered Lunch (East Gold Room) and AK-AFS Past Presidents Catered Lunch (West Gold Room) – Preregistration Required*
- 13:30 – 13:50 Climate and conspecific density trigger pre-spawning mortality in sockeye salmon (*Oncorhynchus nerka*). **Tillotson, Michael***
- 13:50 – 14:10 Influence of Water Temperature on Synchrony Spawning, Hatching, and Emergence of Coho Salmon on the Copper River Delta. **Campbell, Emily**
- 14:10 – 14:30 An Appraisal of Pacific Salmon’s Nest Egg: Warming Climate Reduces Landscape-Scale Variability in Incubation Duration on the Copper River Delta, Alaska. **Adelfio, Luca**
- 14:30 – 14:50 Using Lake Trout (*Salvelinus namaycush*) Otoliths to Recreate Past Patterns of Recent Climate and Growth in Arctic Lakes. **Torvinen, Eric***
- 14:50 – 15:10 Are Dolly Varden “a winner” in a changing Arctic? **Seitz, Andrew**
- 15:10 – 15:25 *Networking Break*
- 15:25 – 15:45 The influence of geomorphic and landscape characteristics on stream temperature and streamwater sensitivity to air temperature in the coastal temperate rainforest of southeast Alaska. **Winfrey, Michael***
- 15:45 – 16:05 Transforming AKOATS, the Alaska Online Aquatic Temperature Site, from Metadata to Mega-data without megabucks or mega-apps. **Geist, Marcus**
- 16:05 – 16:25 Snow persistence and snow regime mapping in Alaska. **Macander, Matthew**

- 16:25 – 16:45 Runoff generation from neighboring headwater basins with differing glacier coverage using a distributed hydrological model, Eklutna, Alaska. **Ostman, Johnse***

To be continued on Wednesday morning at 9:10 in the Middle Gold Room.

Alaska Gems – East Gold Room: Session Chair: Joshua Ashline

- 9:30 – 9:50 Where Do They Go and How Do They Get There? Juvenile Coho Salmon Overwinter Habitat Selection? **Ashline, Joshua**
- 9:50 – 10:10 Water Faucets, Back Alleys and Haul Outs: Groundwater Guiding Salmon Through Warm Streams. **Mauger, Sue**
- 10:10 – 10:30 A remote sensing and occupancy estimation approach to quantify spawning habitat use by fall Chum Salmon (*Oncorhynchus keta*) along the Chandalar River, Alaska. **Clawson, Chelsea***
- 10:30 – 10:50 Generalist feeding strategies of Arctic fishes stabilize lentic food webs. **Laske, Sarah**
- 10:50 – 11:05 *Networking Break*
- 11:05 – 11:25 Predation on Salmon smolts by Dolly Varden in estuaries near Juneau, Alaska. **Douglas, Duncan***
- 11:25 – 11:45 Characterizing the diet of Arctic lamprey *Lethenteron camtschaticum* using Next-generation sequencing (NGS). **Shink, Katie***
- 11:45 – 12:05 Assessing a role for environmental DNA occurrence data in modeling species distribution: A case study of wood frogs in Alaska. **Spangler, Mark***
- 12:05 – 13:30 ***Student Mentoring Catered Lunch (East Gold Room) and AK-AFS Past Presidents Catered Lunch (West Gold Room) – Preregistration Required***
- 13:30 – 13:50 Vertical movement and temperature experience of Greenland turbot in the Eastern Bering Sea. **Coutre, Karson**
- 13:50 – 14:10 Movement Patterns and Habitat Use of Juvenile Sablefish in Southeast Alaska. **Ehresmann, Rhea***

Science in Support of Alaska's Future – East Gold Room:

Session Chairs: Erica Betts, Jordi Cristobal, and Jim Munter

- 14:15 – 14:35 Integrated Ecological Assessments: Quantifying Intactness and Cumulative Change throughout Alaska. **Trammell, Jamie**
- 14:35 – 14:55 A Review of Hydrologic and Fish Studies in the National Petroleum Reserve – Alaska (NPR-A) Prior to Petroleum Development. **Arp, Christopher**
- 14:55 – 15:15 Streambed Scour Monitoring in Alaska, Successes, Challenges, Data, and Debris. **Beebee, Robin**

15:20 – 15:50 Improving ADCP Measurements by Maintaining an Upstream Boat Heading. **Brailey, David**

Statewide Chinook Salmon Research – West Gold Room: Session Chair: Jeff Falke

9:30 – 9:50 Overview of the Chinook Salmon Research Initiative. **Jones, Ed**

9:50 – 10:10 Chinook salmon stock assessment on the Taku and Stikine rivers, a half century of methods and results. **Richards, Philip**

10:10 – 10:30 Chinook salmon stock assessment on the Chilkat and Unuk rivers, how intensive, long-term projects provide precise deliverables for management and research needs. **Frost, Nathan**

10:30 – 10:50 The decline of Southeast Alaska Chinook stocks and population trends for four Southeast Alaska rivers: Chilkat, Taku, Stikine, and Unuk. **Jaacks, Troy**

10:50 – 11:05 *Networking Break*

11:05 – 11:25 Sampling of the Chinook Salmon Marine Sport Fishery in Southeast Alaska. **Jaenicke, Mike**

11:25 – 11:45 The influence of environmental and biological factors on the freshwater and marine survival of Chinook Salmon in two Southeastern Alaska rivers. **Berkman, Stephanie***

11:45 – 12:05 Migration patterns of adult Chinook Salmon in two Southeast Alaska transboundary rivers. **Neuneker, Kristin***

12:05 – 13:30 *Student Mentoring Catered Lunch (East Gold Room) and AK-AFS Past Presidents Catered Lunch (West Gold Room)*

13:30 – 13:50 Chinook and coho salmon mark recapture abundance estimates in the Susitna River drainage, 2013-2015. **Cleary, Peter**

13:50 – 14:10 Coded Wire Tagging of Chinook Salmon on the Copper River; laying the groundwork for estimating smolt abundance and marine survival. **Joy, Philip**

14:10 – 14:30 Genetic Stock Identification of Chinook Salmon Harvested in Marine Waters of Cook Inlet. **Barclay, Andrew**

14:30 – 14:50 Monitoring Chinook Salmon smolt in Western AK to evaluate freshwater density dependency. **Harper, Ken**

14:50 – 15:10 Expanding the Nushagak River Chinook escapement index: a comparison of two methods. **Buck, Greg**

15:10 – 15:25 *Networking Break*

15:25 – 15:45 Kuskokwim River Chinook salmon stock assessment program – making the most out of every opportunity. **Liller, Zachary**

15:45 – 16:10 Indirect evidence for evolutionary change in age at maturity of western Alaska Chinook salmon. **Siegel, Jared***

- 16:10 – 16:30 Assessment of the spawning distribution of Chinook salmon in the Gulkana River and evaluation of the efficacy of a counting tower project used to estimate escapement. **Schwanke, Corey**
- 16:30 – 16:50 “You’re Gonna Need a Bigger Boat”: Assessing Juvenile Yukon River Chinook salmon Abundance and Ecology in a Funding-Limited World. **Garcia, Sabrina**
- 16:50 – 17:10 Where Did You Come From? Using Genetics to Better Understand Chinook Salmon Productivity in Alaska. **Shedd, Kyle**
- 17:10 – 17:30 Communicating Chinook Salmon Research Initiative Outcomes to the Public. **Thompson, Terry**

To be continued on Wednesday afternoon at 13:30 in the Middle Gold Room.

End of Sessions for the Day 1

Poster Session and Film Festival Information

18:30 – 20:00 at the

Morris Thompson Cultural and Visitor Center

Posters

Name of presenters are in bold; student presenters are marked with an *.

1. Marine movement, behavior, and survivorship of Chinook salmon in Cook Inlet, Alaska. **Andy Seitz**
2. Processed based water balance modeling on the Arctic Coastal Plain to assess the linkages between hydrology and aquatic habitat. **Anne Gaedeke**
3. Alaska Water Quality Standards for Temperature. **Chandra McGee**
4. Communicating Integrated Scientific Data Utilizing the Participatory Scenario Process. **Courtney Breest**
5. BIG BIOLOGY meets microclimatology: Defining thermal niches of aquatic species for conservation planning using large interagency databases. **Dan Isaak**
6. The crowd-sourced NorWeST temperature database and massive microclimate scenarios for streams and rivers of the American West. **Dan Isaak**
7. Environmental DNA (eDNA) sampling for aquatic species. **Dan Isaak**
8. Quantifying drivers of mercury in resident lake fish from Southwest Alaska I&M Network parks. **Dan Young**
9. Introducing the Alaska Ocean Acidification Network: connecting researchers and stakeholders to expand the understanding of ocean acidification in Alaska **Darcy Dugan**

-
10. Forecasting Alaska River Ice Breakup. **Edward Moran**
 11. Cumulative effects of size-selective fishing on size-at-age of Pacific halibut in the northeast Pacific Ocean. **Gordon Kruse**
 12. Freshwater growth of wintering juvenile stream-type Chinook Salmon. **James Boersma**
 13. Stretching fisheries across vast distances and technological landscapes to meet Alaskas needs. **Joel Markis**
 14. Observations on First Reports of Saprolegniosis in Aanaakliq, Broad Whitefish (*Coregonus nasus*), from the Colville River near Nuiqsut, Alaska . **John Seigle**
 15. SASAP - State of Alaska's Salmon and People. **Katherine Schake**
 16. Building a Foundation of Decision-Support Tools Integrating Existing Mapping and Monitoring Information for the Benefit of Long-Term Shellfish Sustainability and Management in Kachemak Bay and Cook Inlet, Alaska. **Marcus Geist**
 17. Office work can wait- summer funemployment with ADF&G. **Mary Beth Loewen**
 18. Potential Impacts of Industrial Winter Lake Water Extraction on Summer Fish Habitat and Lake-Stream Connectivity in the Arctic. **Matthew Whitman**
 19. A comparative analysis of the Bristol Bay, Southeast, and Kenai River Fisheries: tracking stakeholder participation through the governance mechanisms of proposals, agenda change requests, and emergency petitions, over the last 15 years. **Meagan Krupa**
 20. History of Aerial Imagery in the Fairbanks, Alaska, Area and Applications For Water Resources and Fish Habitat Evaluations. **Michael Lilly**
 21. Meteorological field measurements transitioning from lowlands to mountains, Jarvis Creek, Interior Alaska. **Aaron J. Orr***
 22. Trophic feeding ecology of mercury in Kotzebue Sound fish: emphasis on monomethylmercury. **Andrew Cyr***
 23. The influence of feeding ecology and migration barriers on mercury accumulation Dolly Varden char (*Salvelinus malma*). **Andrew Cyr***
 24. Phylogeography and species boundaries of the cryptic species, *Harmothoe imbricata* (Polychaeta, Polynoidae). **Angela Gastaldi***
 25. Stress Hormone Levels as a Physiological Metric to Improve Understanding of the Catch-and-Discard Process in Commercial Fishing. **Anita Kroska***
 26. Contributing to the life history of data-poor octopus stocks: applying stable isotope analysis to Alaskan populations of the giant Pacific octopus, *Enteroctopus dofleini* . **Ben Jevons***
 27. Spatiotemporal assessment of Pacific halibut (*Hippoglossus stenolepis*) growth performance in IPHC Area 3A. **Brian Ritchie***
 28. Quantifying Seafloor Contact in Commercial Fishing Gear. **Brianna Bowman King***
 29. Patterns of growth, age, and habitat use of nearshore fishes from Barrow, Alaska. **Caitlin Forster***

-
30. Landscape genetic diversity of native and invasive Northern pike in Alaska. **Chase Jalbert***
 31. A comparative assessment of resource use by Pacific Halibut and Arrowtooth Flounder throughout the Gulf of Alaska. **Cheryl L. Barnes***
 32. Using PPGIS to spatialize future management responses to a changing environment. **Christine Brummer***
 33. DNA barcoding and next generation sequencing of arthropod prey in shorebird feces. **Danielle Gerik***
 34. Diet Characteristics and Condition of Juvenile Chinook Salmon in the Eastern Bering Sea. **Jarred Stone***
 35. Near shore fish sampling in the Alaskan Arctic, 2001–2016. **Justin Priest***
 36. Microbiota and the immune system. **Kelly Ireland***
 37. Examination of structure-forming benthic features inside and outside the Red King Crab Savings Area in the Bering Sea. **Kelsey M. Bockelman***
 38. Assessment of Habitat Information to Improve the Aleutian Island Pacific Cod (*Gadus macrocephalus*) Stock Assessment. **Laura A. Junge***
 39. Identifying Genetically Distinct Juvenile Coho Salmon Stocks in the Jim Creek Watershed, Alaska. **Maggie Schaffer***
 40. Identifying overwintering habitat for whitefishes in Arctic coastal lagoons using remote sensing. **Marguerite Tibbles***
 41. Climate Driven Extent Changes in Brooks Range Perennial Snowfields in Gates of the Arctic National Park & Preserve. **Molly Tedesche***
 42. Ice and Snow Coverage on Rivers and Streams: Characteristics that Indicate Upwelling and Winter Fish Habitat. **Phillip Wilson***
 43. Effects of tetracycline on somatic development in threespine stickleback fish. **Ryan Burl Lucas***
 44. Impacts of the Parasite *Ichthyophonus* (sp.) on Groundfish Growth and Condition. **Sioned Sitkiewicz***
 45. Stomach Content Analysis of Pacific Razor Clams on the Kenai Peninsula, AK. **Taylor Duclos***
 46. Optical assessment of the Gulf of Alaska benthos east of Kodiak Island, AK. **Victoria Batter***

Films:

Producer's name is in bold with length of film (minutes:seconds).

1. *Iliamna Lake - A Land Worth Preserving* - **Jason Ching (1:59)**
Dr. Thomas Quinn is a professor at the University of Washington who has been studying the ecology of Iliamna Lake since 1987. Iliamna Lake in Southwest Alaska is a unique ecosystem that thrives as an intact watershed.
2. *It's All For the Fish: Shelikof Salmon Stream Restoration* - **Maia Mares (5:29)**
It's all for the fish. "We like the fish around here," says Ariel Miller, daughter of Todd Miller, who owns TM Construction. "So that's why we're doing this." She's talking about the restoration of Shelikof Creek on Kruzof Island, an iconic volcanic island in Southeast Alaska. Damaged by past large-scale timber harvests and wood removal, the stream lacked salmon spawning habitat. By helping the salmon, we're helping Southeast Alaska, which depends on fish both ecologically and economically. This short film

follows Ariel, her family, and the Forest Service experts who worked together to restore salmon habitat in the Shelikof Stream.

3. *A Fish-friendly Nature-based Solution to Erosion* - **Katrina Liebich (00:30)**
This timelapse features a 300 foot section of the Chena River's waterfront receiving a fish-friendly makeover. Watch the week-long transformation in 30 seconds flat.
4. *Sun'aq Tribe of Kodiak: Buskin Watershed Signal Crayfish Project 2016* - **Kelly Krueger (5:12)**
Signal crayfish (*Pacifastacus leniusculus*), which are not indigenous to Alaska, were first recorded in the Buskin River Watershed on Kodiak Island in 2002. In 2016, the Bureau of Indian Affairs Invasive Species Program provided funding for Sun'aq Tribe of Kodiak to survey for signal crayfish within the watershed. To enhance the success of signal crayfish detection and removal from the watershed, this project utilized capture methods not previously used by others, including kick seining and electrofishing techniques. This video highlights project work from the 2016 field season, including sampling methods and collaboration with the public.
5. *The Super Salmon* - **Ryan Peterson (25:02)**
A salmon in Alaska makes an unlikely journey on "the Mount Everest of rivers" - the Susitna - as residents consider the costs/benefits of a government-proposed mega-dam.
6. *Voices of the Chena* - **Jimmy Fox (12:28)**
Deep in the heart of the Great Land lies the Chena River. This river is home to the second-largest run of Yukon River king salmon in Alaska yet it flows through one of the most populated cities in the state. This film celebrates the progress the community is making to conserve, restore and protect king salmon and the Chena River for themselves and future generations.
7. *Fish-friendly Solutions Where Roads Cross Streams* - **Katrina Liebich (XX:XX)**
Ever been locked out of your house? For us, it's an inconvenience. For fish - always on the move to survive - it's everything. This short film features timelapse footage of two road-stream crossings receiving a fish-friendly makeover.

Wednesday, March 22nd

Plenary Speaker Abstracts

Ken Stahlnecker: Refuge Manager, Yukon Delta National Wildlife Refuge; U.S. Fish and Wildlife Service

Title: Kuskokwim River Chinook Salmon Management and Prototype Structured Decision Framework.

The Chinook salmon run on the Kuskokwim River in western Alaska is one of the largest in North America and supports one of the biggest subsistence Chinook salmon fisheries on the continent. Over the last decade, the Chinook salmon run has declined to historic population lows and remained at consistently low levels for an unprecedented numbers of years. The U.S. Fish and Wildlife Service assumed in-season management authority for Kuskokwim River Chinook salmon in 2014, 2015, and 2016 leading to weekly in-season management discussions between decision-makers. This plenary session describes the objective-based, stakeholder-involved decision making process employed during these discussions to provide a transparent and predictable process that uses best available science to determine the most effective management actions to meet salmon harvest and escapement targets on the Kuskokwim River.

Peter Bieniek: Research Associate, International Arctic Research Center, University of Alaska Fairbanks

Title: Downscaled Climate Data for Alaska

Climate variability and change is occurring at an amplified rate in Alaska/Arctic compared to lower latitude regions with significant impacts on numerous local processes. Model projections indicate that these changes will continue over the next century leading to a warmer climate than present. However, modeled reanalysis and GCM data are typically too coarse (i.e. grid sizes often ~100KM and larger) for addressing local climate impacts, especially in areas of complex topography. Downscaling is a collection of methods that help to bridge the gap between the limited coarse climate data and the need for finer-scale information. Downscaling activities are currently underway for Alaska and we will explore the types of data currently available, their uses and limitations.

7:30 – 16:30 Registration / Information Desk Open – Westmark Hotel West Entrance Hallway

Plenary Session - Combined Gold Rooms

8:00 – 8:30	Kuskokwim River Chinook Salmon Management and Prototype Structured Decision Framework. Stahlnecker, Ken
8:30 – 9:00	Downscaled Climate Data for Alaska. Bieniek, Peter
9:00 – 9:10	Networking Break

Concurrent Sessions:

Name of presenters are in bold; student presenters are marked with an *.

Changing Processes (cont.) – Middle Gold Room. Session Chair: Ryan Toohey

- 9:10 – 9:30 Potential changes in stream discharge and ecology at the Arctic-Boreal Transition related to evapotranspiration and permafrost thaw. **Koch, Josh.**
- 9:30 – 9:50 Transport of CH₄ through open-talik lakes in discontinuous permafrost aquifers. **Eckhardt, Bridget***
- 9:50 – 10:10 Glaciated streams in Interior Alaska recharge aquifers. **Liljedahl, Anna**
- 10:10 – 10:30 Assessing the Risk of Marine Invasive Species in the Bering Sea. **Reimer, Jesika**
- 10:30 – 10:50 It's what you don't know that gets ya - Implementing an early detection rapid response plan for aquatic invasive species in data poor environments. **Martin, Aaron**
- 10:50 – 11:05 *Networking Break*
- 11:05 – 11:25 Elodea Eradication: The Good, the Bad, and the Needed. **Stewart-Lescanec, Heather**
- 11:25 – 11:55 Trophic plasticity of a renowned piscivore: Dietary patterns of Northern Pike in its native and introduced range of Alaska. **Cathcart, Nathan**
- 11:55 – 12:05 Electrofishing and Kick Seining Efforts for Invasive Signal Crayfish (*Pacifastacus leniusculus*) on Kodiak Island, Alaska. **Martin, Aaron for Kelly Krueger**
- 12:10 – 14:00 **AK-AFS (East Gold Room) and AS-AWRA (West Gold Room) Business Meetings**
- 14:05 – 14:25 Trophic Ecology of Heavy Metals in Lake Atitlán, Guatemala. **Villavicencio, Hugo***

Statewide Chinook Salmon Research (cont.) – Middle Gold Room.

Session Chair: Jeff Falke – Note change of room from previous day.

- 14:30 – 14:50 Freshwater predation of juvenile Chinook Salmon in the Arctic-Yukon-Kuskokwim region of Alaska. **Schoen, Erik**
- 14:50 – 15:10 Testing a new model of optimal prey capture maneuvers and their role in the time and energy budgets of drift-feeding fish. **Neuswanger, Jason**
- 15:10 – 15:30 Growth Potential of Juvenile Chinook Salmon (*Oncorhynchus tshawytscha*) Across a Boreal Riverscape. **Falke, Jeff**
- 15:30 – 15:50 Beyond the ocean or freshwater debate: Insights from an integrated Bayesian stage-structured assessment model of Yukon River Chinook salmon survival. **Westley, Peter**
- 15:50 – 16:05 *Networking Break*
- 16:05 – 16:25 Patterns of Chinook Salmon Growth in Alaska. **Wilson, Lorna***
- 16:25 – 16:45 Genetic stock composition of the commercial and sport harvest of Chinook salmon in the Kodiak area, 2014-2016. **Witteveen, Mark**
- 16:45 – 17:05 Reexamining assumptions about marine mortality of Chinook salmon. **Seitz, Andrew**
- 17:05 – 17:25 Estimates of annual salmon shark consumption. **Manishin, Kaitlyn***

Resource Security – East Gold Room: Session Chair: Caroline Brown

- 9:10 – 9:30 Documenting Nuiqsut’s Traditional Knowledge on Fish Creek for Fish CAFÉ (Response of an Arctic Freshwater Ecosystem to Climate and Land-use Change in the Fish Creek Watershed, Beaufort Coastal Plain of Alaska). **Fritz, Stacey**
- 9:30 – 9:50 Alaska Peninsula Salmon Sharing Networks. **Wiita, Amy***
- 9:50 – 10:10 Assessing the resilience and adaptive capacity of the community of Yakutat, Alaska through the lens of subsistence. **Sill, Lauren**
- 10:10 – 10:30 How People of the Yukon River Value Salmon. **Moncrieff, Catherine**
- 10:30 – 10:50 Salmon 2050: Participatory Scenario Planning on Alaska's Kenai Peninsula. **Megan Krupa and Trammell, Jamie**
- 10:50 – 11:05 *Networking Break*
- 11:05 – 11:25 Landscape heterogeneity stabilizes southeast Alaska freshwater food webs and fish productivity. **Bellmore, J. Ryan**
- 11:25 – 11:55 Hypoxia: mechanisms, frequency, and implications for coastal Alaskan stream ecosystems. **Seargent, Chris***
- 11:55 – 12:05 Prioritizing Hydrological Data Collection in the Matanuska - Susitna Basin. **Dekker, Franklin**
- 12:10 – 14:00 *AK-AFS (West Gold Room) and AS-AWRA (East Gold Room) Business Meetings*
- 14:05 – 14:25 11:50 – 12:10 Updating Title 16: Ensuring Strengthened Protections for Alaska’s Fish Habitat and Fisheries Resources. **Snyder, Samuel**
- 14:25 – 14:45 Variability in Sockeye Salmon Abundance in Sapsuk Lake, Alaska Peninsula over the last 3,000 years. **Misarti, Nicole**
- 14:45 – 15:05 Does life history diversity influence population productivity at small spatial scales? An examination with Olga Lakes Sockeye Salmon. **Ree, Marta***
- 15:05 – 15:25 Assessing effects of Asian pink and chum salmon on western Alaska chum salmon **Minicucci, Tessa***
- 15:25 – 15:55 An investigation of genetic population structure of Tanner crab (*Chionoecetes bairdi*) in Alaska. **Johnson, Genevieve***

Shared Knowledge – West Gold Room: Session Chair: Stephanie Quinn-Davidson

- 14:05 – 14:25 Conflict Based Conversation - Win the Crowd! **Hjelmgren, Jim**
- 14:25 – 14:45 Giving a Voice to the Yukon River. **Stickman, Danielle**
- 14:45 – 15:05 Community-Based Research and Monitoring Initiatives for Depressed Kuskokwim River Chinook Salmon. **Bechtol, William**

- 15:05 – 15:25 A comparative analysis of the Bristol Bay, Southeast, and Kenai River Fisheries: tracking stakeholder participation through the governance mechanisms of proposals, agenda change requests, and emergency petitions, over the last 15 years. **Krupa, Meagan**
- 15:25 – 15:40 *Networking Break*
- 15:40 – 16:40 SASAP - State of Alaska's Salmon and People Synthesis. **Dutton, Ian**

End of Sessions for Day 2

5K Fun Run/Walk

– Location TBD 17:30 –18:30

Banquet, Awards, and Live Auction

– Combined Gold Room 19:00 – 22:00

Awards

Alaska Chapter - American Fisheries Society

Cultural Diversity Travel Award

Molly Ahlgren Scholarship

Wally Noerenberg Award

Cultural Diversity Award

Alaska Section - American Water Resources Association

Student Travel Award

Live Auction

Thursday, March 23rd

Plenary Speaker Abstracts

Ian Stewart: Quantitative Fisheries Scientist, International Pacific Halibut Commission.

Title: Moving beyond point estimates: some challenges and benefits in presenting our scientific uncertainty.

Fisheries science, and stock assessment in particular, are rapidly improving the methods with which uncertainty is characterized and reported for management use. Clear separation of risk assessment and risk management results in a more transparent decision-making process. I will discuss the International Pacific Halibut Commission's process for addressing uncertainty within our stock assessment models as well as the structural uncertainty in how they are constructed. I will also suggest some avenues for further development in multi-model inference and weighting that are applicable to many fisheries applications.

Christopher Estes: Aquatic Resources and Habitat Scientist, Chalk Board Enterprises, LLC

Title: Conserving Adequate Water for Alaskan Fisheries: limitations, innovation, and successes in the face of data scarcity and uncertainty.

Compared to the rest of the nation and many locations on the planet, a large proportion of Alaska's freshwater and estuarine waterbodies remain unaltered or have been subject to limited anthropogenic alterations. Conversely, there is limited inventory data for Alaska's water sources when compared to the remainder of the country. In this presentation, I will summarize opportunities and challenges for conserving (protecting, rehabilitating and enhancing) adequate amounts of water for fish, wildlife and associated habitat purposes. I will argue for increased individual and cooperative state, federal, industrial, academic, tribal, and private participation and investments in collection, analyses, and reporting of strategic hydrologic, hydrographic, and biologic data to improve and facilitate private and governmental outcomes associated with conserving adequate water flows and water levels needed to sustain fish and wildlife production. I will explain why and how these investments will benefit all Alaska's water stakeholders, result in better natural resource management, and contribute to improved socioeconomic benefits for all Alaskans.

Name of presenters are in bold; student presenters are marked with an *.

7:30 – 16:30 Registration / Information Desk Open – Westmark Hotel West Entrance Hallway

Plenary Session

- | | |
|-------------|---|
| 8:00 – 8:30 | Moving beyond point estimates: some challenges and benefits in presenting our scientific uncertainty. Stewart, Ian |
| 8:30 – 9:00 | Conserving Adequate Water for Alaskan Fisheries: limitations, innovation, and successes in the face of data scarcity and uncertainty. Estes, Christopher |
| 9:00 – 9:10 | Networking Break |

Concurrent Sessions

Contributed Papers – East Gold Room: Session Chair: Mike Carey

- 9:10 – 9:30 Don't Trash Those Data: The FAST Approach to Halibut Research. **Webster, Sarah**
- 9:30 – 9:50 How many fish are in this barrel? Sustainably harvesting two easily caught skate species. **Farrugia, Thomas***
- 9:50 – 10:10 Evaluating the accuracy of remote sensing using aerial, water and land platforms to quantify glacial habitats utilized by pinnipeds. **Pegus, Courtney***
- 10:10 – 10:30 Eklutna River Lower Dam Removal-history, Challenges and Opportunities. **Miller, Joseph***
- 10:30 – 10:50 The riverdist package for R: a toolset for river network distance. **Tyers, Matthew**
- 10:50 – 11:05 *Networking Break*
- 11:05 – 11:25 Density dependence and spawning segregation lead to the evolutionary stability of partial migration in female steelhead and rainbow trout. **Ohms, Haley***
- 11:25 – 11:45 Using a food-web model to examine restoration potential of river reaches. **Whitney, Emily**
- 11:45 – 12:05 The Office of Subsistence Management fisheries program. **Ayers, Scott**
- 12:10 – 14:00 **2018 Western Division AFS Meeting Planning – Catered Lunch in Middle Gold Room**
- 14:05 – 14:25 Enumerating Sheefish in the Upper Kuskokwim River. **Stuby, Lisa**
- 14:25 – 14:45 Do the 2016 USGS Flood-Peak Regression Equations Systematically Over- or Under-Estimate Flood-Peak Discharge. **Aldrich, James**
- 14:45 – 15:05 Discovering Coho Salmon Spawning Habitats in the Resurrection River, Kenai Fjords National Park. **Young, Daniel**
- 15:05 – 15:25 Migration of Sockeye Salmon at the Northern Edge of Their Distribution. **Carey, Michael**
- 15:30 – 16:00 AK-AFS Best Student Poster and Oral Presentation Awards and Closing Remarks – Middle Gold Room**

Ecosystem Management – Middle Gold Room:

Session Chairs: Karen Murphy and Amy Pocewicz

- 9:10 – 9:30 2017 Non Fishing Impacts Report. **Limpinsel, Douglas**
- 9:30 – 9:50 Seascape-scale modelling of benthic habitat disturbance from commercial fishing activities. **Harris, Brad**
- 9:50 – 10:10 Fishing effects in 3D – it's not all about bottom contact anymore. **Nimick, Aileen***
- 10:10 – 10:30 Ecosystem-based fishery management: Lessons from down under. **Kruse, Gordon**
- 10:30 – 10:50 ShoreZone Imaging and Mapping in Alaska - over 92,000 Kilometers of Imagery and Mapping Data. **Hartmann Moore, Cindy**

- 10:50 – 11:05 *Networking Break*
- 11:05 – 11:25 Informing and implementing landscape-scale freshwater and marine ecosystem management through Alaska’s Landscape Conservation Cooperatives. **Murphy, Karen**
- 11:25 – 11:45 Assessing the accuracy of Landsat derived stream temperatures for use in juvenile salmonid habitat assessments on the Anchor River, Alaska. **Hagan, John***
- 11:45 – 12:05 The aquatic eDNA Atlas: All species, all streams through crowd-sourcing and one interagency database. **Isaak, Dan**
- 12:10 – 14:00 **2018 Western Division AFS Meeting Planning – Catered Lunch in Middle Gold Room**

Speed Talks – West Gold Room: Session Chair: Marybeth Loewen

- 9:10 – 9:15 If you can’t catch em’ grow em’. **Markis, Joel**
- 9:15 – 9:20 Do scales protect fish from electroshock? **Reynolds, Jim**
- 9:25 – 9:30 Exploring the dynamics of fish DNA in streams: Can environmental DNA be used to estimate the abundance of spawning salmon? **Tillotson, Michael***
- 9:30 – 9:35 Seeing the Big Picture: A Better Way to Visualize Stock-Specific Harvest Data? **Shedd, Kyle**
- 9:35 – 9:40 The More Variety, the Better Society! **Loewen, Mary Beth**
- 9:40 – 9:45 Fisheries sustainability through collaboration. **Jovanovich, Madeline**
- 9:45 – 9:50 Documenting habitat for anadromous species: Exploring affordable methods for protecting Alaska’s salmon streams. **Sarah O’Neal***
- 9:50 – 9:55 Changing flowpaths, groundwater, and permafrost: long-term chemical flux increases within the Yukon and Tanana Rivers. **Toohey, Ryan**
- 9:55 – 10:00 Ocean Acidification Research Center: 3 Ps for OA samples. **Monacci, Natalie***
- 10:00 – 10:05 Beaver Dam Management: Mitigating Obstructions to Salmon Migration in the Yukon Territory. **Treerice, Jesse**
- 10:05 – 10:10 Instream Flow Reservations in the Nushagak Watershed. **Larquier, Ann Marie**
- 10:10 – 10:15 Dispersal Ecology of Larval Lake Sturgeon (*Acipenser fulvescens*) in a connecting channel of the Great Lakes. **Krieger, Joseph***

AK-AFS Best Student Poster and Oral Presentation Awards

– Middle Gold Room 15:30 – 16:00

AWRA/IHCA Joint Session – West Gold Room: Session Chair: Erica Betts

- 13:30 – 13:35 Welcoming and Introductions
- 13:35 – 14:20 Mapping Alaska's Water: an update on hydrography work in Alaska. **Krieger, Kacy**

14:20 – 15:05 ADEC Environmental Monitoring in Southeast Alaska, 2017-2020. **Bethe, Amber**

15:05 – 15:50 National Springs (Water) Inventory and Alaska's Status. **Stevens, Larry**

Closing Remarks

- Middle Gold Room 16:00 - 16:20

End of Meeting

World Ice Art Championship

- Field Trip 18:00 – 20:00

Friday, March 24th

Chena Hot Spring Resort

- Field Trip 10:00 – 17:00, preregistration required

43rd Annual AK-AFS Business Meeting Agenda

March 22nd, 2017, Fairbanks, Alaska

1. Call to Order
2. Determination of a Quorum
3. Approval of Agenda
4. Approval of committee reports from the 2015 Alaska Chapter AFS Business Meeting
5. Old Business:
 - a) 2016 Reports:
 - i. Treasurer's report Lee Ann Gardner
 - ii. Finance Assets Oversight Committee Lee Ann Gardner *for* Ray Hander
 - iii. Molly Ahlgren Scholarship Lee Ann Gardner *for* Ray Hander
 - iv. Awards Jonathon Gerken
 - v. Cultural Diversity Sara Gilk-Baumer
 - vi. Wally Noerenberg Award Ken Gates
 - vii. Electronic Communication Mary Beth Loewen *for* Bert Lewis
 - viii. Environmental Concerns Mary Beth Loewen *for* Bert Lewis
 - ix. Continuing Education Mary Beth Loewen *for* Sara Miller & Katie Palof
 - x. Fisheries Communication and Education Katrina Liebech
 - xi. Membership Jeff Falke
 - xii. Resolutions and Bylaws Mary Beth Loewen *for* Hamachan Hamazaki
 - xiii. Past Presidents Mary Beth Loewen *for* Jennifer Stahl
 - xiv. Program Aaron Martin
 - c) Additional reports:

Newsletter	Bill Bechtol
Student Sub-units	Cheryl Barnes
 - d) Farewell remarks from Outgoing President
 - e) Remarks from new President
 - f) New Business
 - a. Appointment of new officers
 - b. Motion from FAOC to move Cultural Diversity Fund to Vanguard for self-management
 - c. AFS Western Division report : Travis Neebling
 - d. Hosting 2018 Western Division meeting: Jeff Falke
 - g) Open forum

Adjourn