

	Understanding the Drivers of Chinook Salmon Decline in Western Alaska	Making Fish Habitat Great Again	Changing Food Webs and Challenges for Freshwater Fisheries Management	Conservation of Western Native Trout: Challenges and Advances	Salmon Enhancement in the Last Frontier	Contributed Papers	Evolving Methods for Specifying Anadromous Waters in Alaska
Room	1	2	3	4	5	6	7
Chair	Spaeder / Schindler	Matt Varner	Ryan Bellmore	Julie Meka Carter	Joel Markis	Lisa Stuby	T. Troll / E. Ammann
9:40 AM	Nushagak R Chinook salmon assessment program, management structure, and stock status <b>Jack Erickson</b>	Identifying a moving target: estimating the rate of change in stream habitats at sites with little land-use pressure <b>W. Carl Saunders</b>	Understanding the indirect effects of climate change on pristine arctic lakes and arctic char <b>Phaedra Budy</b>	Programmatic approach provides genetic specific connectivity for Bull Trout in the Baker River Basin, WA <b>Arnold Aspelund</b>	Evaluating introgressive hybridization between native and propagated non-native steelhead <b>Christopher Caudill</b>	Future of salmon in the face of change: lessons from one of the world's remaining productive salmon regions <b>Erik Schoen</b>	Building digital river networks to improve detection of salmon habitats across Alaska <b>Lee Benda</b>
10:00 AM	Kuskokwim River Chinook Salmon assessment program, management structure, and stock status <b>Zachary Liller</b>	A quick history of National Forest stream restoration in depositional areas of the Pacific Northwest <b>Matt Helstab</b>	Deciphering changes in seasonal predator-prey relationships within a mixed fishery to manage Kokanee production <b>Brian Lanoutte*</b>	Evaluating fish passage and making management decisions: review of fish passage on the lower Clark Fork River <b>L. Brent Mabbott</b>	Steelhead kelt reconditioning and reproductive success studies in the Columbia River Basin <b>Doug Hatch</b>	Younger smolts may explain Kvichak Sockeye Salmon decline <b>Haley Ohms</b>	Production from diverse stock groups within the large and complex Sockeye Salmon run to the Kvichak River <b>Michael Link</b>
10:20 AM	Yukon River Chinook Salmon assessment program, management structure, and stock status <b>Zachary Liller</b>	BLM's National Aquatic Monitoring Framework: collecting scalable data to address management challenges <b>Colin Brady</b>	Riparian defoliation by the invasive green alder sawfly influences terrestrial prey subsidies to salmon streams <b>David Roon*</b>	Optimizing ladder operations - upstream fish passage at Thompson Falls Dam, lower Clark Fork River <b>Kristi Webb</b>	Alaska mariculture initiative – tangible indications of progress as a result of a three-year comprehensive planning process <b>Julie Decker</b>	Monitoring the status of salmon populations and their habitats in British Columbia using the Pacific Salmon Explorer <b>Eric Hertz</b>	Strategies for identifying Alaska's anadromous fish habitat <b>Michael Wiedmer</b>
10:40 AM	Genetic diversity of Chinook Salmon populations inhabiting the Yukon and Kuskokwim rivers <b>Jim Seeb</b>	Stream restoration on Medicine Lodge Creek, Wyoming <b>Laura Burckhardt</b>	Riverine food webs and the contribution and quality of food sources to the threatened Australian lungfish <b>Mark Kennard</b>	Monitoring Bull Trout reintroduction in the Clackamas River, Oregon <b>Marshall Barrows</b>	Using genetics and coded wire tags to understand harvest of Southeast Alaska Chinook Salmon to improve management <b>Kyle Shedd</b>	Reintroducing endangered Sacramento River winter-run Chinook Salmon to historic habitat in Battle Creek, CA <b>Laurie Earley</b>	Documenting habitat for anadromous species: exploring affordable methods for protecting salmon streams <b>Sarah O'Neal*</b>

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11:00 AM	Assessing the relative contribution of genetic sub-stocks to the lower Kuskokwim River Chinook Salmon subsistence fishery <b>Daniel Prince</b>	Geomorphic analysis for river restoration design of salmon habitat in dredge-mined rivers <b>Tim Hanrahan</b>	Investigating the trophic status of an invasive crayfish in an oligotrophic lake: bottom-up view of a warm and cold-water sport fishery food web <b>John Loffredo*</b>	Hedging bets: dealing with uncertain outcomes by diversifying management approaches <b>Christopher Downs</b>	Harvest of Southeast Alaska wild-origin Chinook Salmon in the Southeast Alaska Troll and Sport Fisheries, 2005–2017 <b>Randy Peterson</b>	Thermal experience modifies energy depletion of Sockeye Salmon migrating at the northern edge of their distribution <b>Michael Carey</b>	Quantifying habitat use of anadromous fish using space-time isotope models <b>Sean Brennan</b>
11:20 AM	Effective population size of Chinook Salmon in Yukon and Kuskokwim river tributaries <b>Wes Larson</b>	The “Resurrection” of Resurrection Creek near Hope, Alaska <b>Brian Bair</b>	Exotic species alter food web structure in Pacific Island streams <b>Richard MacKenzie</b>	The role of aquaculture to support Bull Trout recovery in Glacier National Park <b>Mark Maskill</b>	Stand tall and go wild <b>Ben Van Alen</b>	Is bigger always better? Size-selective early marine survival in an Alaskan Sockeye Salmon population <b>Marta Ree*</b>	Metabarcoding of Alaskan freshwater fish communities using amplicon-based next-generation sequencing of environmental DNA <b>Trey Simmons</b>
11:40 AM	Strontium isoscapes as a tool to quantify production dynamics and life history diversity of Yukon and Kuskokwim Chinook Salmon <b>Sean Brennan</b>	Applying natural channel design techniques to reclaim placer mined streams in Alaska <b>Matthew Varner</b>	Contemporary phenotypic divergence among populations of Northern Pike in its introduced and native ranges of Alaska <b>Katja Berghaus*</b>		Possible roles of hatcheries and dams as bridges to conserve salmon and trout during changing climate <b>Todd Pearsons</b>	Growth rate variation among juvenile Chinook Salmon cohorts and rearing conditions <b>Elianna Rosenthal*</b>	
12:00 PM	LUNCH (12:00 to 1:20 PM)						

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Room	1	2	3	4	5	6	7
Chair	Spaeder/ Schindler	Matt Varner	Ryan Bellmore	Julie Meka Carter	Peter Westley	Sara Gilk-Baumer	Dan Isaak
1:20 PM	Four decades of changing demographic structure in Chinook Salmon across the Northeast Pacific <b>Jan Ohlberger</b>	Stream Restoration: comparing Alaska with the rest of the West: what have we learned and where do we go next? <b>William Rice</b>	Sculpin and trout sensitivity to environmental change in streams: a bioenergetics approach <b>Jason Dunham</b>	Coordinated re-establishment of Lahontan Cutthroat Trout, Truckee River <b>Robert Al-Chokhachy</b>	Alaska salmon and people: setting the stage for the symposium <b>Peter Westley</b>	Emerging genetic baseline for Coho Salmon in Alaska: using on small scale challenges to create large scale solutions <b>Sara Gilk-Baumer</b>	The National Hydrography Infrastructure: water information waves on the NHDPlus framework <b>Becci Anderson</b>
1:40 PM	Demographics of Chinook Salmon spawning runs in the Yukon River using known-sex sample data <b>Randy Brown</b>	Aquatic habitat rehabilitation of placer mined streams in Alaska: past, present and future <b>Matthew Varner</b>	Growth and foraging of juvenile Chinook and Coho Salmon in 3 geomorphically distinct sub-basins, Kenai River <b>Benjamin Meyer*</b>	The salmonid population viability project: modeling trout viability in a desert landscape <b>Daniel Dauwalter</b>	Salmon synthesis: Using open science to integrate and analyze Alaskan salmon data <b>Jeanette Clark</b>	A new Chinook Salmon genetic baseline for Cook Inlet: opening doors to new analyses <b>Andrew Barclay</b>	Spatial stream network models and isoscapes <b>Sean Brennan</b>
2:00 PM	Patterns of Chinook Salmon declines: The story of growth at age <b>Lorna Wilson*</b>	Making Waves: the effects of whitewater parks on fish passage <b>Ashley Brubaker</b>	Incorporating food web dynamics into river restoration planning <b>Emily Whitney</b>	The effect of Tui Chub forage base and declining lake levels on Lahontan cutthroat trout in Pyramid Lake <b>Gary Thiede</b>	PyRiv: new methods for calculating minimum aquatic distance across marine and freshwater habitats <b>Jared Kibele</b>	Partial tetrasomy conserves duplicated genes following whole-genome duplication in Rainbow Trout <b>Matthew Campbell</b>	Controls on the spatial variation of mercury in the Kuskokwim River <b>David French*</b>
2:20 PM	Assessing the limits to production for Upper-Yukon Chinook Salmon <b>Joel Harding</b>	Assessing fish passage in culvert structures with a two-dimensional algorithm <b>Alexandra Jefferies</b>	Juvenile salmon predation by Pacific staghorn sculpins and Dolly Varden in SE Alaska estuaries <b>Douglas Duncan*</b>	Status of Golden Trout on the Kern Plateau during and after prolonged drought <b>David Lentz</b>	Salmon and People: understanding relationships and disconnections through time <b>Courtney Carothers</b>	High throughput genotyping in the world's highest volume fish genetics lab <b>Heather Hoyt</b>	Ecological applications of SSN models in 20 river networks in Europe <b>David Cowley</b>
2:40 PM	Feeding ecology of juvenile Chinook Salmon in the Chena River, Interior Alaska <b>Jason Neuswanger</b>	Variables influencing Cutthroat Trout colonization and abundance in newly accessible habitats <b>Travis Schill</b>	Bioenergetics-based habitat suitability curves for modelling flow effects on juvenile salmonids <b>Sean Naman</b>	Fishery management approach for Rainbow Trout in the diverse Kenai R <b>Brian Marston</b>	Socio-economic dimensions of Alaska's Salmon System: synthesis of available indicators <b>Tobias Schwoerer</b>	DNA mixtures for ecology <b>Suresh Sethi</b>	Predicting the distribution of Yellowstone Cutthroat Trout, upper Snake River <b>Cody Feldman*</b>
3:00 PM	<b>BREAK (3:00 – 3:20 PM)</b>						

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3:20 PM	Longitudinal patterns of logjams and occupancy by juvenile Chinook Salmon in the Chena River, Alaska <b>Charles Cathcart</b>	Fish passage improvements post replacement of a partial barrier culvert, Buddy Creek, Alaska <b>Gillian O'Doherty</b>	Do anadromous salmon populations recolonizing the Cedar River, WA influence the resident food web? <b>Peter Kiffney</b>	Abundance, productivity, and spatial structure of a mixed O. mykiss population, Central Washington <b>Gabriel Temple</b>	Governance systems for subsistence salmon in Alaska <b>James Fall</b>	Understanding the genetic basis of ecotypic variation in Sockeye Salmon from across Alaska <b>Wes Larson</b>	Thermal and habitat characteristics of a headwater fish species: population success under climate change <b>Mischa Turschwell</b>
3:40 PM	Monitoring Chinook Salmon smolt in Western AK to evaluate freshwater density dependency <b>Ken Harper</b>	Yes we can! Collaborative efforts to improve fish passage in Southcentral Alaska <b>Megan Marie</b>	Foodweb response during and after removal of the Elwha River dams <b>Sarah Morley</b>	Trout Creek Ranch, Wyoming G&F, and East Yellowstone TU conserving Yellowstone Cutthroat Trout <b>Erin Leonetti</b>	Using participatory modeling to empower community engagement in salmon science <b>Michael Jones</b>	Index of relative abundance for combining CPUE across gear types for fish-habitat associations <b>Alice Shelly</b>	Thermal niches of fishes in northern Canada: examining variation of thermal regimes across stream networks <b>Neil Mochnacz*</b>
4:00 PM	Do beavers negatively impact freshwater habitat for juvenile Chinook? <b>Rachel Malison</b>	Fish and floods: a 20 year perspective on fish passage at road-stream crossings in south central Alaska <b>William Rice</b>	Live fish, dead fish, fake fish, no fish: alternative MDN subsidies in central Idaho streams <b>Andre Kohler</b>	Identifying invasive lake trout spawning locations to improve suppression efficacy <b>Jacob Williams*</b>	Conceptualizing and measuring human well-being in Alaska's salmon fisheries <b>Rachel Donkersloot</b>	Integrating fish use of headwaters, backwaters, and big rivers: a Fish Use Habitat Index (FUHI) <b>Kai Steimle</b>	Subsampling ideas for large spatial data sets <b>Jay Ver Hoef</b>
4:20 PM	Assessing heat stress in migrating Yukon River Chinook Salmon <b>Vanessa von Biela</b>	Productivity in the Hanford Reach: flow management benefits for fall Chinook Salmon <b>Peter Graf</b>	Glaciers and salmon, SE Alaska: landscape complexity and mobility influences energy pathways <b>Matthew Dunkle*</b>	Suppressing hybrid and rainbow trout to conserve Westslope Cutthroat in the upper Flathead River <b>Amber Steed</b>	Salmon governance dynamics: the Kuskokwim River Inter-Tribal Fisheries Commission <b>Taylor Brelsford</b>	The Pebble mine and safeguarding Bristol Bay <b>Nelli Williams</b>	Testing for types of spatial dependence on stream networks <b>Dale Zimmerman</b>
4:40 PM	Proximate composition and bioelectrical impedance of Yukon Chinook Salmon <b>Kristin Neuneker</b>		Climate change induced resource synchronization disrupts brown bear and salmon food webs <b>William Deacy</b>	Fluvial population of Bonneville Cutthroat Trout in the highly fragmented Weber River <b>Clint Brunson</b>	Governing salmon and people in Alaska: frameworks, practices and challenges <b>Steve Langdon</b>	Mapping the historical mining footprint related to fish habitat across Alaska and Canada <b>Marcus Geist</b>	Fusing data, spatial stream models, and social networks for conservation, science, and mgmt <b>Dan Isaak</b>

	Understanding the Drivers of Chinook Salmon Decline in Western Alaska	Hooked: Creative Solutions to Engage the Public in Fish Conservation and Management	Challenge, Change, and Opportunities for Marine Fisheries	Conservation of Western Native Trout: Challenges and Advances	Pink and Chum	Turning the Tide: Enhancing Diversity and Inclusion in the Fisheries Profession
Room	1	2	3	4	5	6
Chair	J. Spaeder / D. Schindler	Katrina Liebich	G. Kruse / V. R. von Biela	Julie Meka Carter	Pete Rand	C. Owens / L. Lee
9:40 AM	Beyond mortality of individuals: population-level indices informing estuarine/marine drivers of Yukon River Chinook Salmon productivity <b>Katie Howard</b>	FISH TALK: Thirty years of talking "fish" <b>Bill Hauser</b>	Reproductive biology informs fishery management of Snow and Tanner Crabs in the eastern Bering Sea <b>Gordon H. Kruse</b>	Structure and spatial distribution of an isolated population of Greenback Cutthroat Trout in a high altitude and high gradient mountain stream <b>Jason J. McFarland</b>	Detecting patterns of covariation between ocean conditions and size at age of Oregon coast Chum Salmon using dynamic linear models <b>Kathleen Neely</b>	A look at diversity and inclusion initiatives within AFS <b>April N. Croxton</b>
10:00 AM	Estuarine ecology of juvenile Chinook Salmon on the Yukon River Delta <b>Katharine Miller</b>	Salmon Blitz: engaging citizen scientists in documenting salmon habitat in the Copper River Watershed <b>Kate Morse</b>	Optical assessment of Weathervane Scallop density and abundance off Kodiak Island, AK <b>Victoria Batter*</b>	Estimating the seasonal migration of Sakhalin Taimen using environmental DNA <b>Hiroki Mizumoto*</b>	Why we need to know why wild Alaska salmon taste better. <b>Eric Jordan</b>	Engaging fishery stakeholders and communities: storytelling with oral history and visual ethnography <b>Jean Lee</b>
10:20 AM	Diet reconstruction of juvenile Chinook Salmon using stable isotope Bayesian modeling <b>Jarred J. Stone*</b>	Diverse efforts to restore a complex fish species – Pacific Lamprey <b>Brian McIlraith</b>	Reduced portfolios in salmon populations in British Columbia <b>Eric Hertz</b>	Effects of instream complexity on habitat suitability for stream-dwelling Cutthroat Trout populations <b>Tyson Hallbert*</b>	Using otolith thermal marks to understand and manage hatchery-wild Pink Salmon interactions in Lower Cook Inlet commercial fisheries <b>Ted Otis</b>	Seeking the mountain top-gaining ground and new perspectives on gender diversity in fisheries <b>Jesse Trushenski</b>
10:40 AM	Do Pink Salmon structure North Pacific ecosystems and contribute to declining Chinook Salmon in the Arctic-Yukon-Kuskokwim region of Alaska? <b>Greg Ruggerone</b>	From creek to plate: a summer of firsts <b>Katrina Liebich</b>	Movement patterns of juvenile Sablefish within a nursery area in Southeast Alaska <b>Rhea Ehresmann*</b>	Tributary reconnection and restoration increases recruitment of wild Cutthroat Trout in Bear Lake (Idaho, Utah) <b>James DeRito</b>	Using thermal marks to identify and enumerate hatchery Pink Salmon strays to streams in Lower Cook Inlet <b>Glenn Hollowell</b>	Native Alaska women in Bristol Bay fisheries <b>Anna Lavoie</b>

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11:00 AM	Life cycle modeling of Yukon River Chinook Salmon reveals signals of large scale climate drivers, hatchery enhancement, and density-dependent juvenile survival <b>Curry J. Cunningham</b>	Cryptic but reel: using social psychology in videos to acquaint the public with lesser known fishes <b>Taylor Ulrich*</b>	Size-based patterns of energy allocation in juvenile Sablefish <b>Matt Callahan*</b>	Temporal variability in the upper extent of fish distributions in southwest Washington <b>Renata Tarosky</b>	Long term productivity trends in natural populations of Pink and Chum Salmon from Puget Sound, Washington, USA <b>Marisa Litz</b>	Bristol Bay Guide Academy: A model for other rural communities? <b>Nelli Williams</b>
11:20 AM	Development and evaluation of a run timing forecast model for Kuskokwim River Chinook Salmon <b>Ben Staton*</b>	Applied fisheries education in a semester package <b>Reid Brewer</b>	Declining condition of a key forage fish in the Gulf of Alaska during the North Pacific marine heatwave <b>Vanessa von Biela</b>	Recovery of fish populations and physical channel characteristics in streams impacted by catastrophic debris flows <b>Jason Walter</b>	Effects of Asian Pink Salmon and Chum Salmon on the growth of western Alaska Chum Salmon <b>Tessa J. Minicucci*</b>	Unity and empowerment of Kuskokwim youth as our future fisheries leaders <b>Janessa Esquible*</b>
11:40 AM	Overview on Chinook salmon bycatch management measures in the Bering Sea <b>Jordan Watson</b>		Assessing the potential for competition between Pacific Halibut and Arrowtooth Flounder throughout the Gulf of Alaska <b>Cheryl L. Barnes*</b>	Using net rate of energy intake foraging model to predict salmonid carrying capacity across multiple reaches <b>Nicolaas Bouwes</b>	Spawning habitat characteristics and phenology of fall Chum Salmon <i>Oncorhynchus keta</i> on the Teedriinjik River, Alaska <b>Chelsea Clawson</b>	Using authentic science with fish to increase participation in fisheries <b>E Dale Broder</b>
12:00 PM	LUNCH (12:00 to 1:20 PM)					

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Room	1	2	3	4	5	6	7
Chair	Spaeder / Schindler	Lisa Stuby	Kruse / V. von Biela	Julie Scheurer	Peter Westley	Cunningham / Brenner	A. Martin / T. Davis
1:20 PM	Potential effects of late marine mortality on Chinook Salmon populations <b>Kaitlyn Manishin*</b>	Introgressive hybridization between native and artificially propagated non-native steelhead <b>Christopher C. Caudill</b>	Does fishing disturbance explain distribution of structure-forming benthic features in the Bering Sea? <b>Kelsey Bockelman*</b>	Monitoring, managing, and mitigating marine mammal and fisheries interactions under the MMPA and ESA <b>Julie Scheurer</b>	Characterizing salmon habitats and diversity across the state of Alaska <b>Leslie Jones</b>	Introduction to the Salmon Forecasts symposium <b>Curry Cunningham / Rich Brenner</b>	Aquatic invasive species change ecosystem services derived from Sockeye Salmon: bioeconomic risk analysis <b>Tobias Schwoerer</b>
1:40 PM	Population coherence and environmental impacts on population productivity in AK Chinook Salmon <b>Jan Ohlberger</b>	An evaluation of recycling summer steelhead on the Cowlitz River <b>Scott Gibson</b>	A fishing impacts model to assess tradeoffs between spatial closures and gear modifications <b>T. Scott Smeltz*</b>	Understanding sea otter impacts on subsistence fisheries in Southeast Alaska <b>Sonia Ibarra*</b>	Linkages between salmon diversity and habitat heterogeneity across Alaska <b>Jorge F. Cornejo-Donoso</b>	Salmon forecasting methods used in Alaska: where to go from here? <b>Rich Brenner</b>	Management of the invasive aquatic plant <i>Elodea</i> spp. in interior Alaska <b>Aditi Shenoy</b>
2:00 PM	Harvest-population diversity tradeoffs in salmon management: Chinook in the Kuskokwim and Yukon <b>Brendan Connors</b>	Combining runoff modeling and fuzzy classification to identify transitional flow regimes in southeast Alaska <b>C. J. Sergeant*</b>	Should fisheries biologists stop using the PDO and NPGO indices? <b>Mike Litzow</b>	Aquatic farming as an emerging industry in Alaska: Assessing impacts to marine mammals <b>Sue Goodglick</b>	Status of Alaska salmon: a review of escapement and management goals <b>Madeline Jovanovich</b>	Can selective use of historical data improve pre-season forecasts of Fraser River Sockeye Salmon <b>Mike Lapointe</b>	Elodea eradication in south central Alaska <b>Daniel Coleman</b>
2:20 PM	Barriers and bridges to implementing management strategy evaluation in a data limited system <b>Michael L. Jones</b>	Vital rate estimation and reduced handling stress using passive floating PIT tag detectors <b>Ben Stout*</b>	Biodiversity and assemblage structure in demersal fisheries surveys: the role of tow duration <b>Meadhbh Moriarty*</b>	Potential effects of motorized watercraft use on Cook Inlet Beluga Whale activity during seasonal fish spawning periods <b>Suzanne Steinert</b>	Widespread changes in the size and age of Alaska salmon <b>Krista Oke</b>	Was simpler better? 20 years of Sockeye Salmon forecasting in the Columbia Basin <b>Jeffrey K. Fryer</b>	Rapid response for invasive waterweeds in high latitude systems: impacts from herbicide treatment <b>Suresh Andrew Sethi</b>
2:40 PM	Structured decision making to support cooperative in-season management of Kuskokwim River Chinook Salmon <b>Lew Coggins</b>	Mad first impressions: invertebrate communities in three northern California estuaries <b>Kaitlyn Manishin*</b>		Understanding the problem and working toward solutions: Steller sea lions and salmon troll fishing in SE AK <b>Kim Raum-Suryan</b>	Unravelling how climate and competition shape Sockeye Salmon dynamics across the SE Pacific Ocean <b>Brendan Connors</b>	Age-structured state-space models: Can they provide insight into the future? <b>Matt Tyers</b>	Investigating the effects of fluridone on metabolism and host microbiota diversity in Threespine Stickleback <b>Patrick Tomco*</b>
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3:40 PM	Influence of fecundity variation on management reference points for Kuskokwim River Chinook Salmon <b>Matthew Catalano</b>	Return to creel of catchable trout and factors influencing angler satisfaction and catch rates in Arizona streams <b>Zachary Beard</b>	Harnessing eDNA to monitor spatial and temporal dynamics of Eulachon in northern southeast Alaska <b>Meredith Pochardt*</b>	Will pingers reduce entanglement risk of AK humpback whales in commercial fishing gear? <b>Fred Sharpe</b>	Consequences of declining salmon size and age for fisheries management <b>Bert Lewis</b>	Forecast error of Bristol Bay Sockeye Salmon in relation to Sockeye Salmon interactions at sea with Pink Salmon <b>Greg Ruggerone</b>	Invasive Northern Pike suppression in Alexander Creek <b>Parker Bradley</b>
4:00 PM	Does quality matter: relating age, sex and length of spawning Chinook to fecundity and yield potential <b>James Boersma</b>	Quantifying drivers of mercury in resident lake fish from Southwest Alaska network parks <b>Krista Bartz</b>	Spawning migration of Least Cisco in the Chulitna River watershed, southwest Alaska <b>Dan Young</b>	Community science and coop. research: rebounding marine mammals in the Northeast US <b>Andrea Bogomolni</b>	Research in a connected salmon landscape: Understanding and opportunity <b>Coowe Walker</b>	Impact of genetic-based construction of brood tables on Bristol Bay Sockeye Salmon forecasts <b>Greg Buck</b>	Vulnerability of salmonids to invasion by Northern Pike in south central Alaska <b>Chase Jalbert*</b>
4:20 PM	Otolith shape revealing life history traits of Chinook Salmon in Patagonia and Oregon <b>Alex Koeberle*</b>	Warming up the waters in Arctic lakes: implications from individuals to ecosystems <b>Nick Barrett*</b>	Population structures of invasive Alaska Blackfish <b>Patrick McCormick</b>		Decision support for salmon landscapes: Tool development and applications <b>Syverine Bentz</b>	Do smolt data reduce errors in forecasts of Sockeye Salmon returns to the Chignik? <b>Nyssa Baechler*</b>	Invasive Northern Pike suppression begins in Lake Roosevelt, WA <b>Alix Silver</b>
4:40 PM		An overview of FLOW 2018: managing rivers, reservoirs, and lakes in the face of drought <b>Christopher Estes</b>	Wild salmon and shifting baseline syndrome: using redd counts to estimate historical Chinook Salmon production <b>Russ Thurow</b>		SASAP: An approach to our understanding of Alaska's salmon and people systems <b>Ian Dutton</b>	In-season assessment of Fraser River Sockeye Salmon. <b>Mike Lapointe</b>	Assessing effects and probability of suppression of an illegally introduced Walleye population <b>Jason Burckhardt</b>



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Room	1	2	3	4	5	6
Chair	Spaeder / Schindler	Trent Sutton	Cathcart / Schultz	C. Owens / L. Lee	Pete Rand	P. Kusnierz
9:40 AM	Natural indicators of salmon run timing and abundance <b>Catherine Moncrieff</b>	Ghosts of fishes past, present, and future: confronting data-limited stocks in a changing Arctic <b>Trent M. Sutton</b>	Waste water effluent, estrogenic exposure, and the future of eastern plains native fishes <b>Dana L. Winkelman</b>	Public outreach in secondary schools, lessons from a teacher <b>Patrick McCormick</b>	Alaska Hatchery Research Program: an examination of hatchery-wild interactions <b>Steve Reifensstuhl</b>	Potential impacts of selenium on fish populations in Thompson Creek, Idaho <b>Shai Kamin</b>
10:00 AM	Rampart Rapids Student Data Collection Project 2001-2013 <b>Stan Zuray</b>	Assessing spatial patterns of Arctic Cod ( <i>Boreogadus saida</i> ) abundance and distribution in the Chukchi and Beaufort seas <b>Caitlin Forster*</b>	Food webs, hypoxia, and stable isotopes in a bar-built estuary: Rodeo Lagoon, CA <b>Matthew Young</b>	Indigenous integration of aquatic sciences and traditional-ecological-knowledge <b>Alex Alexiades</b>	Contributions of hatchery- and natural-origin Pink and Chum Salmon returning to Prince William Sound <b>Pete Rand</b>	Mother Nature isn't always kind: impacts of landslides and acidic runoff on biological communities, NM <b>Christopher Craft</b>
10:20 AM	Building a vision for tribal involvement in management of Yukon River Chinook Salmon <b>Stephanie Quinn-Davidson</b>	Arctic Cod, <i>Boreogadus saida</i> , and Snow Crab, <i>Chionoecetes opilio</i> , in Alaska's Arctic <b>Franz Mueter</b>	A conceptual framework on pathways of stress in large rivers – A case study of age-0 White Sturgeon recruitment <b>Tim Counihan</b>	Hooked on Aquatic Sciences: a fishing program to teach diverse youth about aquatic ecology and conservation <b>Taylor Ulrich*</b>	Performance in migration and reproduction in natural- and hatchery-origin Pink Salmon using stable isotopes <b>Kristen Gorman</b>	Municipal and industrial effluents contributing to fish mortality and harmful algal blooms in Arabian Sea, Pakistan <b>M. Naeem Khan</b>
10:40 AM	Integrating rural residents into co-management and rebuilding of Kuskokwim River Chinook Salmon <b>William R. Bechtol</b>	Environmental and biological influences on the southern distribution of Arctic Cod ( <i>Boreogadus saida</i> ) in the Bering Sea <b>Jennifer M. Marsh*</b>	Stream-specific and generalized habitat suitability criteria for three native desert fishes <b>Zach Nemeč*</b>	Introducing the Western Division Diversity and Inclusion Committee <b>Cheyenne Owens</b>	Stress, straying, and performance on spawning grounds by hatchery chum salmon, SE Alaska <b>Peter Westley</b>	Roads to ruin: the threats of urbanization to conservation of a sentinel species <b>Blake Feist</b>

	<b>Understanding the Drivers of Chinook Salmon Decline in Western Alaska</b>	<b>Ghosts of Fishes Past, Present, and Future</b>	<b>Western Native Fishes</b>	<b>Turning the Tide: Enhancing Diversity and Inclusion in the Fisheries Profession</b>	<b>Pink and Chum</b>	<b>Water Quality in Fisheries: Keeping an Eye on a Vital Resource</b>
Room	1	2	3	4	5	6
Chair	Spaeder / Schindler	Trent Sutton	Cathcart / Schultz	C. Owens / L. Lee	Pete Rand	P. Kusnierz / A. Todd
11:00 AM	Linking communities to in-season salmon management: Kuskokwim River community-based salmon monitoring program <b>William R. Bechtol</b>	Upper thermal tolerance of Arctic and Pacific Lamprey larvae and instream thermal dynamics in Japan, Washington, USA <b>Hiroaki Arakawa*</b>	Captive propagation of the Devils Hole Pupfish at the Ash Meadows Fish Conservation Facility <b>Corey Lee</b>	Town Hall	Ecological barriers and bridges to introgression of hatchery produced and natural origin Pink Salmon in Prince William Sound, Alaska <b>Julia McMahon*</b>	Nutrient flux in Sawtooth Valley sockeye salmon nursery lakes, Idaho <b>Kurt Tardy</b>
11:20 AM	Approaches to sustainability for Chinook local populations: exploring a place-based management paradigm <b>Rick Williams</b>	The Chronicles of Charnia: abiotic and biotic factors that structure arctic lake food webs with Arctic Char <b>Stephen Klobucar</b>	June Sucker recovery efforts: response of an endangered species to instream flows and captive rearing <b>Michael Mills</b>	Town Hall	Population structure of even-year Pink Salmon from Prince William Sound, Alaska <b>Wei Cheng*</b>	Addressing water chemistry differences affecting post-release survival of Snake River Sockeye Salmon smolts <b>Jesse Trushenski</b>
11:40 AM	Creatively communicating salmon fisheries management in the Alaskan context <b>N. Tamburello</b>	Migration timing, habitat use, survival, and drainage exchange of Dolly Varden, Arctic Nat'l Wild. Ref <b>Randy J. Brown</b>	Waterfall formation at a dynamic desert river delta isolates endangered fishes <b>Nate Cathcart*</b>	Town Hall	An evaluation of collaborative salmon fishery management in Prince William Sound, Alaska. <b>Tommy Sheridan</b>	Total dissolved gas and gas bubble disease in the lower Clark Fork River: What have we learned in the last 20 years? <b>Paul Kusnierz</b>
12:00 PM	<b>LUNCH (12:00 to 1:20 PM)</b>		WD Native Fish Committee Meeting <b>Luke Schultz</b>	<b>LUNCH (12:00 to 1:20 PM)</b>		

	Marine Derived Nutrients: Myth vs. Reality	Ghosts of Fishes Past, Present, and Future	Western Native Fishes	Salmon Management to Salmon Stewardship	Fishing for Solutions to Important Salmonid Diseases	Beyond the Dartboard: Methods for Salmon Forecasts	Keeping the West Wild by Minimizing Aquatic Invasive Species Impacts
Room	1	2	3	4	5	6	7
Chair	Daniel Schindler	Trent Sutton	Cathcart / Schultz		Winkelman / Fetherman	Cunningham / Brenner	Martin / Davis
1:20 PM	Patterns of food web responses to marine nutrients in stream ecosystems <b>Mark S. Wipfli</b>	Stock assessment of Inconnu in the Kobuk R. Arctic Estuary Complex: where do we begin? <b>James Savereide</b>	Evaluating relationships between fish and flow regime in four Arizona streams <b>Larissa Lee*</b>	Salmon Management to Salmon Stewardship	Introduction to the symposium <b>Dana L. Winkelman</b>	Pink salmon forecasts using data from the SE Alaska Coastal Monitoring program <b>Jordan Watson</b>	What limits invasions in arctic systems? role of temperature on survival and repro., Bering Sea <b>Amanda Droghini</b>
1:40 PM	Effects of Pacific salmon on freshwater and riparian ecosystems <b>John Reynolds</b>	Selawik R. Inconnu age structure and abundance in relation to permafrost thaw <b>Raymond Hander</b>	Translocations lead to a reproducing population of an endangered fish in Grand Canyon, AZ <b>Brian Healy</b>	Salmon Management to Salmon Stewardship	Eradication of whirling disease in a Cutthroat Trout stream through management <b>R. Barry Nehring</b>	Improving Pink Salmon harvest forecasts in southeast Alaska <b>Andrew W. Piston</b>	Capturing an emerging invasion: status of European Green Crab in the Salish Sea, WA <b>Emily Grason</b>
2:00 PM	Consequences of salmon nutrient enrichment on riparian nitrogen cycling <b>Gordon Holtgrieve</b>	Factors influencing harvest rates of Arctic Cisco during the Colville River Delta under-ice subsistence fishery <b>John C. Seigle</b>	The Delta's smelts – demise and discovery among California's estuarine osmerids <b>Levi Lewis</b>	Salmon Management to Salmon Stewardship	Whirling disease resistant Rainbow Trout fry survival: A comparison of two strains <b>Brian Avila*</b>	Applications of oceanographic data to improve inseason forecasts of Sockeye runs into Cook Inlet <b>Mark Willette</b>	Current status of the invasive signal crayfish population of Kodiak Island <b>Kelly Krueger</b>
2:20 PM	Can short-term nutrient additions lead to long-term recovery of Pacific salmon? <b>Joseph Benjamin</b>	Seasonal fish distribution and movements in the National Petroleum Reserve, AK, 2001-17 <b>William Morris</b>	Genomics predict temporal and spatial distribution of life history diversity for a native lamprey <b>Jon E. Hess</b>	Salmon Management to Salmon Stewardship	Whirling disease resistant Rainbow Trout fry stocking in the upper Colorado River <b>Eric Fetherman</b>	Evaluation of Bayesian updating of pre-season indicators of run strength in Pacific salmon fisheries <b>Ben Staton*</b>	Minimizing the impact of introduced Brown Trout on native salmonids in the Trinity River, CA <b>Justin Alvarez</b>
2:40 PM	Movement response of juvenile Chinook Salmon to carcasses of Rainbow Trout and Pacific Lamprey <b>Ryan A. Dunbeck*</b>	Potential implications of climate change for Broad Whitefish ( <i>Coregonus nasus</i> ) in Arctic Alaska <b>Jason Leppi*</b>	An examination of Inconnu life history using radio-telemetry, otolith microchemistry, and sonar <b>Lisa Stuby</b>	Salmon Management to Salmon Stewardship	Improvement of disease resistance through selective breeding: concepts, considerations, and limitations <b>Timothy Leeds</b>	Lessons learned from adaptive management of the Port Moller Sockeye Salmon Test Fishery <b>Scott Raborn</b>	Should we be concerned about Brown Trout invading native trout habitat in the West? <b>Robert Al-Chokhachy</b>
3 PM	BREAK (3:00 – 3:20 PM)						

	Marine Derived Nutrients: Myth vs. Reality	Ghosts of Fishes Past, Present, and Future	Western Native Fishes	Salmon Management to Salmon Stewardship	Fishing for Solutions to Important Salmonid Diseases	Beyond the Dartboard: Methods for Salmon Forecasts	Keeping the West Wild by Minimizing Aquatic Invasive Species Impacts
Room	1	2	3	4	5	6	7
Chair	Daniel Schindler	Trent Sutton	Cathcart / Schultz		Winkelman / Fetherman	Cunningham / Brenner	Martin / Davis
3:20 PM	Landscape heterogeneity mediates flows of salmon subsidies to consumers <b>Jonny Armstrong</b>	Bioenergetics modeling of Broad Whitefish growth in the Alaskan Arctic <b>Duncan G. Green*</b>	Influence of dams and diversions on Burbot movement in the Wind River, Wyoming using genetic, isotopic, and field data <b>Annika Walters</b>	Salmon Management to Salmon Stewardship	Development and optimization of a bacterial coldwater disease vaccine <b>Ken Cain</b>	Use of Port Moller Test Fishery CPUE and genetic composition of catch data to improve in-season Bristol Bay run size forecasts <b>C. J. Cunningham</b>	More cowbell, not invasives: a multi-stakeholder communications plan <b>Katrina Liebich</b>
3:40 PM	Have nitrogen stable isotopes led us astray in our efforts to understand salmon effects in watersheds? <b>Daniel Schindler</b>	Shifts in the baseline: changes to a nearshore Arctic fish community <b>Justin Priest*</b>	Restoring hydrologic connectivity in a desert spring system <b>Corey Lee</b>	Salmon Management to Salmon Stewardship	Quality vs. quantity: manipulating rearing density to increase survival of Rainbow Trout fry pre- and post-stocking <b>Brian Avila*</b>	Stikine Sockeye Salmon Management Model; improving management uncertainty <b>Sara Miller</b>	Harnessing eDNA for early detection and removal of invasive Northern Pike and elodea in Alaska <b>Jeffrey B. Olsen</b>
4:00 PM	The influence of fall-spawning Coho Salmon on juvenile Coho Salmon rearing in beaver ponds, Copper R. Delta, AK <b>Gordon Reeves</b>	An InSAR habitat suitability model to evaluate overwinter conditions for whitefishes in Arctic lagoons <b>Marguerite Tibbles*</b>	PIT tag expulsion in a small-bodied native catfish <b>Timothy D'Amico*</b>	Salmon Management to Salmon Stewardship	Erythromycin injections for controlling bacterial kidney disease in Colorado hatcheries <b>Eric Fetherman</b>	Stikine inseason forecast cross validated <b>Sarah Power</b>	Portable, onsite environmental DNA detection of invasive Northern Pike <b>Adam Sepulveda</b>
4:20 PM			Habitat selection and movement of Stonecat in St. Vrain Creek <b>Timothy D'Amico*</b>	Salmon Management to Salmon Stewardship	Proliferative Kidney Disease in West <b>Patrick Hutchins</b>	Forecasts Group Discussion	Early detection of dreissenid mussels in Tiber Reservoir, MT <b>Adam Sepulveda</b>
4:40 PM						Forecasts Group Discussion	