## Washington-British Columbia Chapter of the American Fisheries Society and

### 2010 Pink and Chum Salmon Workshop

#### March 1-4, 2010 Vancouver Island Conference Center, Nanaimo, British Columbia

"New Research and Applied Science to Meet Fishery Management Needs"

	Monday,	March 1 Training Session	(No Charge for registrants!) 1	1:10-5:10 PM
1:10- 5:10 PM 3:30- 5:00P	Newcastle Is. Lobby  Early Registration and  Poster drop-off	Millstone River Room  AFS ExComm and Local Planning Committee meeting	Lantzville Room  "Acoustic Telemetry Technology and Products" Lead: Denise King, VEMCO Division of AMIRIX Systems Inc.	
5:30- 7:00 PM			Dorchester - Pedersen Suite Informal Social 5:30-7:00 PM - Hosted by Washington-British Columbia Chapter AFS	
9:00- 9:45 AM	Tue	Lantzville Room  "Criteria for Entrance in the College of Applied Biology"  Linda Stordeur, R.P.Bio, Registrar for the College of Applied Biology	Development Sessions 9:00-9:	45 AM
:30-9:3	0		2011 Committee Planning - Millstone Benson Ballroom Jim Shannon, W	
10:05- 10:25	Opening Welcome: Jim Shannon, WA-BC Chapter AFS, President	Opening ceremony blessing: Geraldine Manson, Snuneymuxw First Nation	Opening Greetings: The Honourable John R. Ruttan, Mayor, Nanaimo	

			Plenary Speakers			
		Keynote Speaker: Dr. John (Jack) Helle Retired Scientist from Auke Bay Lab	PSF Scientist: Dr. Brian Riddell Pacific Salmon Foundation	Keynote Speaker: Mr. Jim Humphreys. Fisheries Director - Americas, Marine Stewardship Council		
11:50-	11:50-11:55 AM Looking forward to the national/international AFS Annual Meeting in Seattle Washington September 2011 - Cleve Stewart/Eric Knudsen					

# Lunch - Mt. Benson Ballroom 11:55 AM - 1:00 PM Presentation by Jenny Atkinson, Executive Director The Whale Museum

## **March 2-4 Concurrent Sessions**

	Tuesday, March 2 Concurrent Sessions 1:10-3:10 PM				
	Pink and Chum Workshop - Ballroom C	AFS Sessions - Departure Bay Room	AFS Sessions - Lantzville Room	AFS Sessions - Duke Point Room	
Time	Fisheries management. Chair: Pieter Van Will, Dept. Fisheries and Oceans Canada.	<b>Groundfish Topics</b> Chair: Jackie King, Dept Fisheries and Oceans, Canada	Lamprey ecology and life history. Chair: Larry Dominguez, Entrix	Contributed Papers on Research Methods Chair - Mathew M. Klungle, Washington Department of Fish and Wildlife	
1:10	"Pink and Chum workshop:Keynote: "Applying genetic variation to fisheries management, assessment, and enforcement" Terry Beacham,	"The stock structure of canary rockfish (Sebastes pinniger): evidence from the correlation of d180 versus d13C of otoliths" Yongwen Gao, Makah Fisheries Management	"Life history polymorphism and speciation in lampreys" Richard J. Beamish, Fisheries and Oceans Canada	"The use of PIT and acoustic tags to estimate migration mortality of Okanagan sockeye in 2010" Jeffrey K. Fryer, Columbia River Inter-Tribal Fish Commission	
1:30	Fisheries & Oceans Canada	"Long distance migration and evidence for annual homing in English sole (Parophrys vetulus): these flatfish are not so flat." Mary L. Moser, National Marine Fisheries Service	"Myth Busters: There's no information on lamprey" Joshua G. Murauskas, Public Utility District No. 1 of Douglas County.	"Survey of Sonar Applications for Population and Habitat Assessment" Drew Hubbard, Sound Metrics Corp	
1:50	"Timing and survival of Fraser River Pink salmon" Michael Folkes, Department of Fisheries and Oceans.	"Estimating species and size composition of rockfish in acoustic surveys of untrawlable areas using an ROV, stereo video and bottom trawls" Chris Rooper, Alaska Fisheries	"Methow Lamprey Inventory and Restoration Assessment" John D. Crandall, Wild Fish Conservancy.	"A summary of Chinook salmon acoustic tagging results" Anna N. Kagley, NOAA/NWFSC	
2:10	"Didson counters Pinks/Glendale" Pieter VanWill, Department of Fisheries and Oceans	"Ecological history of rockfish exploitation in Puget Sound" Gregory D.Williams, NOAA Fisheries	"Identification of putatuive migratory and sex pheromones of Pacific lamprey" David A. Close, University of British Columbia	"Efficiency trials in juvenile salmonid trapping studies: When is enough, enough?" Mathew M. Klungle, Washington Department of Fish and Wildlife	

2:30	Recent Volatility Related to Chum	"Reconstructing historical trends in	"Do surgically-implanted radio transmitters	"Accuracy of Using Scales to Age Mixed Stock
	Salmon Abundance (Oncorhynchus	marine species abundance from local	alter the climbing ability of adult Pacific	Chinook Salmon of Hatchery Origin" Shayne
	keta) in Western Alaska: Today's	ecological knowledge in Puget Sound,	lamprey (Lampetra tridentata)? Mary L.	E. MacLellan, Pacific Biological Station,
	Residents' Perspectives" Karen	Washington" Anne H. Beaudreau,	Moser, National Marine Fisheries Service	Fisheries and Oceans Canada
	Gillis, Bering Sea Fisherman's	University of Washington School of		
	Assn.	Aquatic and Fishery Sciences		
2:50	"Cascades fish passage - Quinsam	"Rockfish bycatch in spot prawn traps"	"Estimating Lamprey Abundance at Columbia	Space available
	River - pretty in pinks?" David	Brett Favaro, Simon Fraser	Basin dams" J effrey K. Fryer, Columbia	
	Ewart, Fisheries and Oceans	University.	River Inter-Tribal Fish Commission	
	Canada			
	1	3.10-3.30 PM Rreal	z - Newcastle Island I ohhv	

#### 3:10-3:30 PM Break - Newcastle Island Lobby

		Tuesday, March 2 Cond	current Sessions 3:30-5:30 PM	
	P&C WS Ballroom C	Departure Bay Room	Lantzville Room	Duke Point Room
Time	Conservation biology/genetics. Chair Blair Flannery (USFWS).	Improving Understanding of Freshwater Capacity for Increasing Salmonid Fish Populations. Sponsored by Trout Unlimited Chair: Larry Dominguez, Entrix.	Continuation of Lamprey Symposium with Larry Domiguez, then transition to Technical Innovations for Fisheries Field Work Chair: Mark Pedersen, Margenex International	Kokanee Ecology and Management. Roger Tabor, US Fish and Wildlife Service
3:30	"Hood Canal Summer chum salmon - interim genetic analysis of subpopulation structure in a metapopulation receiving supplementation" Maureen Small,	"Salmon spawner escapements for maximum ecological, social, and economic benefits? Eric Knudsen, Consulting Fisheries Scientist	"Lessons from 830 kilometers upstream: Solutions for Pacific lamprey in a biotelemetry and salmon-oriented world" Joshua G. Murauskas, Public Utility District No. 1 of Douglas County.	"Anadromous sockeye salmon return after an absence of nearly 90 years: a case of reverse evolution?" Lyse Godbout, Fisheries and Oceans Canada
3:50	"Stock identification of Fraser River pink salmon using microsatellite DNA" Bruce White, Pacific Salmon Commission	"Prediction of stream carrying capacity for spring Chinook salmon: the Unit Characteristic Method" Mark E. Teply, Cramer Fish Sciences	"Demonstration of a novel continuous passive mark recapture technique to estimate chum salmon escapement in the Cheakamus River, BC." Peter M. Troffe, InStream Fisheries Research Inc.	"Interactions among hatchery-origin sockeye salmon (Oncorhynchus nerka), wild kokanee (O. nerka) and the invasive species Mysis relicta in Skaha Lake, British Columbia: a food web and competition analysis" Kim D. Hyatt, Fisheries and Oceans Canada (invited)
4:10	"Genetic Stock Identification of chum salmon in the Tanana River, Alaska" Nick DeCovich, Alaska Department of Fish and Game	"Vulnerability and adaptation in British Columbia's freshwater ecosystems" Katherine Wieckowsk, ESSA Technologies Ltd.	New technology developments for understanding spatial and temporal activity patterns off fish in nature? Denise T. King, Vemco	"Genetic Characterization of Kokanee within Lake Roosevelt, Arrow Lakes, B.C., and Surrounding Basins" <b>Todd Kassler, WDFW</b>
4:30	"Southern Chums-hanging in there: Population biology & genetics at the southern limit of their range" Orlay Johnson NOAA Seattle	"Estimating population capacity in the Ecosystem Diagnosis and Treatment Model" Greg, R. Blair, ICF International	"Estimating Sockeye Escapemements Using Weirs, Mark-Recapture, and Video" Benjamin W. Van Alen, U.S. Forest Service	"The effect of temperature and dissolved oxygen on the vertical distribution of kokanee and cutthroat trout in Lake Sammamish, Washington" Hans Berge, King County

4:50	chum salmon" Blair Flannery,	ů,		"Assessment of Lake Sammamish population for possible listing under the Endangered Species Act" <b>Jeff Chan, USFWS</b>
		Western Washington University	University of Washington	
	"Microsatellite variation in a chum salmon population genetically marked at two allozyme loci" Adrian Spidle - Northwest Indian Fisheries Commission	1 2 1	· ·	"Oncorhynchus nerka transplants and their impact on kokanee population structure in the Columbia River Basin" E. M. Iwamoto, Northwest Fisheries Science Center, National Marine Fisheries Service

### Student Mentoring 5:45-6:30 PM Newcastle Island Lobby Lounge Poster Session Social 6:30 - 8:30 PM - Mt. Benson Ballroom A/B

## Wednesday, March 3 Concurrent Sessions 8:20-9:40 AM

	P&C WS Ballroom C	Departure Bay Room	Lantzville Room	Duke Point Room
Time	Habitat assessment, enhancement and restoration. Chair Greg Bonnell (DFO)	Coastal and Westslope Cutthroat Trout. Chair: James Baxter, BC Hydro.	Contributed Papers on Population Ecology. Chair: Mathew M. Klungle, Washington Department of Fish and Wildlife	Plankton. Chair: Chrys Neville, Dept Fisheries and Oceans, Canada
8:20	"An overview of pink enhancement in the Pacific Region & planning new fishery development projects" Greg Bonnell, Fisheries & Oceans	"Habitat effects on energy equivalence and self-thinning in juvenile cutthroat trout". Jordan S. Rosenfeld, BC Ministry of Environment	"Influence of resident rainbow trout on abundance of sympatric steelhead in the Upper Yakima Basin" Ian, I. Courter, Cramer Fish Sciences	"Multiple Currencies of Zooplankton Change in the Strait of Georgia" Rana El-Sabaawi, University of Victoria - Department of Biology
8:40	"A mulit-year investigation of chum salmon escapements in the Cheakamus River, B.C" Peter Troffe, InSteam Fisheries Research Inc.	"Logistic regression models for resolving primary stream-bearing length or area for coastal cutthroat (Onchorhyncus clarki clarki) and steelhead trout (Onchorhyncus mykiss) at the landscape and reach scale"  Ronald A. Ptolemy, Ecosystems	"Coho salmon productivity in relation to salmon aquaculture" Brendan M. Connors, Simon Fraser University	"Interannual variability (1990-2006) in zooplankton communities in the Strait of Georgia, British Columbia, and evidence for a 1997/98 regime shift" Lingbo Li, Fisheries Centre, University of British Columbia.
9:00	"Trophic interactions among wild and hatchery juvenile chum salmon in Taku Inlet, Southeastern Alaska" Molly Sturdevant, NOAA-Juneau	"Early marine migration patterns of Coastal cutthroat trout (Oncorhynchus clarki clarki), steelhead trout (Oncorhynchus mykiss), and cutthroat x steelhead hybrid smolts" Megan E. Moore, NOAA Fisheries	"Link between hydrologic variability and freshwater fish life histories in the United States" Meryl C. Mims, University of Washington	"Discovery Passage Plankton Monitoring and Juvenile Salmonid Assessment" Dr. Alexandra Eaves, BC Centre for Aquatic Health Sciences
9:20	"An examination of the biological basis of return variability for Nitinat River hatchery" Ron Tanasichuk, Fisheries and Oceans Canada	"Use of radio telemetry to address population characteristics & entrainment risk of an above barrier westslope cutthroat trout (O. clarki lewisi) population" James Baxter, BC	Space available	"What makes a "good year"? Time series evidence linking zooplankton abundance and composition to growth and survival of juvenile fish" David L. Mackas, Fisheries and Oceans Canada, Institute of Ocean Sciences.

#### 9:40-10:00 AM Break - Newcastle Island Lobby

	P&C WS Ballroom C	Departure Bay Room	Lantzville Room	Duke Point Room
	Marine Ecology Co-Chairs - Rusty Sweeting (DFO), Orlay Johnson (NOAA).	Alternative Energy Development. Chair: Bob McClure, BioSonics	Contributed Papers on Salmonid Physiology and Stressors Chair - Jessica Hayden-Spear, Landau Associates, Inc.	Plankton. Chair: Chrys Neville, Dept Fisheries and Oceans, Canada
	"The effects of elevated water temperature on adult pink salmon survival and blood physiology" Ken Jefferies, University of British Columbia	Ocean Energy Technology Overview" Larry Armbruster, Sound & Sea Technology	"Effects of thermal and capture stress on physiology, behaviour, and survival of adult sockeye salmon (Oncorhynchus nerka)" Marika Kirstin Gale, University of British Columbia	"Plankton and Nekton Time Series from Permanent Inverted Echo-Sounders in the Salish Sea" Richard K, Dewey, Univiersity of Victoria - VENUS Project
10:20	"Evidence of competition between pink salmon and other juvenile Pacific salmon in the Strait of Georgia" Dick Beamish, Fisheries and Oceans Canada	"Kinetic Hydropower: Extended-term, continuous monitoring of biological activity by automated, autonomous hydroacoustic systems? Bob McClure, BioSonics	"Fisheries and handling-related stressors on adult Pacific salmon physiology, behaviour and survival" Michael, R. Donaldson, University of British Columbia	"One-year record of variability in diel vertical migration from the VENUS observatory in Saanich Inlet" Mei Sato, School of Earth and Ocean Sciences, University of Victoria.
10:40	"Trophic variability within and among juvenile salmon species in years of contrasting ocean conditions" Erica Jenkins, University of British Columbia	"Tidal Energy and Fish" Daryl B.Williams, Tulalip Tribes	"Effects of extended transportation on smolt survival in the lower Columbia River" Bruce, D. Watson, ICF International	Available space
11:00	"Growth of Bristol Bay, Alaska Chum salmon in relation to climate factors and inter-specific competition" Beverly Agler, ADFG	"Marine and Hydrokinetic Energy Development - What are the Real Environmental Effects?" Andrea E. Copping, Pacific Northwest National Laboratory	"Searching for SNPs: Mining the sockeye salmon, Oncorhynchus nerka, transcriptome for high-resolution molecular markers" Caroline, G. Storer, University of Washington	Available space
11:20	"Juvenile Chum salmon biophysical parameters in SE Alaska: Examing relationships to survival & harvest" Emily Fergusson, NOAA-Juneau	TBA Alternative Energy	"Factors affecting the early marine growth and survival of juvenile Chinook salmon (Oncorhynchus tshawyscha) on the west coast of Vancouver Island, BC" Katherine Rose Middleton, University of Victoria	Available space

	Wednesday, March 3 Concurrent Sessions 1:10-2:50 PM				
	P&C WS Ballroom C Departure Bay Room Lantzville Room Duke Point Room				
	<b>Future Directions, New</b>	Recovery of Depleted Species: Tools	Contributed Papers on Juvenile Salmon-	Available for informal meeting as needed	
	Technologies. Chair Brian Riddell,	and Targets. Chair: Dr. Carrie Holt,	The early Years Chair - Jessica Hayden-		
	Pacific Salmon Foundation.	Fisheries and Oceans Canada, Pacific	Spear, Landau Associates, Inc.		
Time		Biological Station			

Lunch - Mt. Benson Ballroom 11:50 AM - 1:05 PM WA-BC Chapter Annual Business Meeting

1:10	"Performance evaluation of automated counting of Pink salmon in the Lower Fraser River with DIDSON Imaging Sonar" Li Ding, Vitech Innovative Research and	"Mean trophic levels and the Worm- Hilborn collaboration" Trevor A. Branch, University of Washington.	"Production, survival, and life history diversity of juvenile Chinook in the Skagit River, Washington" Mara S. Zimmerman, Washington Department of Fish and Wildlife	Available space
1:30	"Enumeration of near-shore pink salmon in the Lower Fraser River with dual-frequency identification sonar (DIDSON). Yumbo Xie, Pacific Salmon Commission	"Estimating thresholds to optimal harvest rate for long-lived, low-fecundity sharks accounting for selectivity and density dependence in recruitment" Robyn E. Forrest, Pacific Biological Station, Fisheries	"A comparison of early development between a domesticated stock of coho salmon (Oncorhynchus kisutch) and its parent stock" Kathleen, G. Neely, National Marine Fisheries Service	Space Available
1:50	"A blueprint for in-season estimation using test fishery data within a Bayesian cumulative normal model" Jim Cave, Pacfic Salmon Commission	"Harvest control rules for Pacific herring management: business as usual or in need of repair?" Jaclyn S. Cleary, Pacific Biological Station, Fisheries and Oceans Canada	"The differential early marine mortality of juvenile coho salmon in the Strait of Georgia and Puget Sound? Krista, L. Lange, Fisheries and Oceans Canada	Space Available
2:10	"Chehalis experimental chum and pink fisheries" Kim Charlie, Chehalis First Nations	"Do rockfish conservation areas work?" Ryan, N. Cloutier, Simon Fraser University	"Family matters: parental & temperature influences on early life survival, morphology & burst swim performance of sockeye salmon" Jenn M. Burt, University of	Space Available
2:30	"Pinks for the pier" Brian Banks, Nanaimo River Hatcheries	"Applications of spatially-explicit PVA to prioritize research and identify population and distribution recovery targets for species at risk" Janelle Curtis, Fisheries and Oceans Canada	"Acoustic tagging of juvenile chinook salmon in the Strait of Georgia indicates exceptionally high levels of mortality within the Strait of Georgia" Chrys Neville, Fisheries and Oceans Canada	Space Available

#### 2:50-3:10 AM Break - Newcastle Island Lobby

	Wednesday, March 3 Concurrent Sessions 3:10-4:30 PM				
	P&C WS Ballroom C	Departure Bay Room	Lantzville Room	Duke Point Room	
	Vacant for Set up	Recovery of Depleted Species: Tools	Methods for Estimating Escapement from	Fisheries Videos from the Scientists of the	
		and Targets. Chair: Dr. Carrie Holt,	Periodic Counts. Chair: David O'Brien,	Pacific Biological Station	
		Fisheries and Oceans Canada, Pacific	Fisheries and Oceans Canada		
		Biological Station			
Time					
3:10	Vacant for Set up	"Effectiveness and applications of a	"A habitat-based framework to improve the	Title to be announced	
		large scale acoustic array for	accuracy of peak count salmon escapement		
		estimating juvenile salmon survival in	estimation" Chuck Parken, Fisheries &		
		the ocean" Erin L. Rechisky,	Oceans Canada		
		University of British Columbia			

3:30	Vacant for Set up	Fisheries and Oceans Canada	"Improving abundance estimates on the Fraser River's South Thompson Aged 0.3 Chinook Aggregate" Michael Chamberlain, Fisheries & Oceans Canada	Title to be announced		
3:50	Vacant for Set up	"A multi-faceted approach to the recovery of Cultus Lake sockeye salmon is needed in the face of adverse marine conditions" Mike J. Bradford,		Title to be announced		
4:10	Vacant for Set up	"Population viability analysis of Cultus lake Sockeye Salmon, its performance and prospects" Michael Folkes, Fisheries & Oceans Canada	"An arrival-departure model for the estimation of escapement when survey area options are spatially limited" Robert Bison, BC Fish & Wildlife Branch	Space Available		
5:00-5:	:00-5:30 pm Meeting for 2011 AFS Seattle meeting (Millstone Room)					

6:00-6:30

Special: Snuneymuxw Drummers/Dancers.
Special Blessing: Geraldine Manson, Snuneymuxw First Nations

6:30-9:00 pm	Annual Banquet and Awards Ceremony - Mt. Benson Ballroom		
	Featured Speaker: Ken Kirkby - Artist, Conservationist, and President of the Nile Creek Enhancement Soc		
9:00 to 11:45 pm	The DFO Band, "Freelane" will entertain us!		

	Thursday, March 4 Concurrent Sessions 8:20-9:40 AM						
	P&C WS Ballroom C	Departure Bay Room	Lantzville Room	Duke Point Room			
	Contributed Papers Session	Contributed Papers on Righting the	Effects of Climate Change: Chair: Mark	Available for informal meeting as needed			
	Chair: John Candy, Fisheries and	Ship: Restoration, Reintroduction	Pedersen, Margenex International				
	Oceans Canada.	and Recovery Chair - Mark G.					
Time		LaRiviere, Tacoma Power.					
8:20	"Diet, size, and distribution of chum	"Habitat Restoration: Its role in the		Available space			
	salmon in the Strait of Georgia"	stabilization of coho smolt yields on the					
	Rusty Sweeting, Dept. Fisheries &	Keogh River based on a 30 year data					
	Oceans Canada	time series" Don McCubbing,					
		InStream Fisheries Research Inc.					
8:40	"Estimation of mortality of wild	"Cowlitz Falls Anadromus Fish	"A dynamic model of bottom-up and top-	Available space			
	juvenile Pink salmon	Reintrodcution, the Good, the Bad and	down mechanisms influencing managed				
		the Ugly" Michael S. Kohn, Lewis	species in the Strait of Georgia" David B.				
		County Public Utility District	Preikshot, Fisheries & Oceans Canada				
	in the Broughton Archipelago, B.C"						
	Vic Palermo, Fisheries & Oceans						
	Canada						
9:00	"Abundance modelling of sea lice	"Sizing a hatchery coho program using	"The declining trend in early marine survival	Available space			
	and pink salmon on the BC north	HSRG recommendations" Mark G.	of coho salmon in the Strait of Georgia				
	coast" Allen Gottesfeld, Skeena	LaRiviere, Tacoma Power.	reaches alarming low levels" Richard J.				
	Fisheries Commission		Beamish, Fisheries and Oceans Canada				

9:20	"Food web interactions and stable	"Smolt movement and early marine	"Climate Change as a Motif in the Fisheries	Available space
	isotopes in Hecate Strait and	survival of tow neighbouring stocks of	Literature" Stephen J.Boe	
	Southeast Alaska" Marc Trudel,	steelhead trout (O. mykiss) of different		
	Fisheries & Oceans Canada	conservation status" Bruce Ward,		
		Retired Scientist		

#### 9:40-10:00 AM Break - Newcastle Island Lobby

#### Thursday, March 4 Concurrent Sessions 10:00-11:20 AM P&C WS Ballroom C Departure Bay Room Lantzville Room Duke Point Room Contributed Papers Chair: Mark G. **Contributed Papers Session** Biology, management and recovery of Available for informal meeting as needed Chair: John Candy, Fisheries and LaRiviere, Tacoma Power. Pacific sturgeon, sculpin and dace species Oceans Canada. Chair - Louise, M. Porto, AMEC Earth & Time Environmental 10:00 "Chum salmon in the arctic and "Adult salmon and steelhead passage "Recovery strategy for white sturgeon Available space how they avoid lethal low evaluations involving low elevation (Acipenser transmontanus) in BC? Louise, temperatures" James Irvine, obstructions in the Umatilla River" M. Porto, AMEC Earth & Environmental Fisheries and Oceans Canada Kinsey E. Frick, NOAA Fisheries/Northwest Fisheries Science **10:20** "Heavy infections of Aniskis "Fisheries programs at the Cushman Recovery efforts for white sturgeon Available space simplex(Nematoda Anisakidae) Hydroelectric Project" Christopher J. Acipenser transmontanus in the upper larvae in the muscle of maturing Columbia River, Washington" Jason Sergeant, Tacoma Public Utilities chum salmon" Shigehiko Urawa, Mclellan, WDFW North Pacific Anadromous Fish **10:40** "The effects of high water "Adfluviual bulltrout spawner "Upper Columbia River white sturgeon Available space populations in BC" Gary Birch, BC Hydro temperture on the maturation of evaluations utilizing resistivity counter: and their application in calibrating (invited) pink salmon and their offspring" Ted Sweeten, Fisheries and redd count surveys" Don McCubbing, Oceans Canada Instream Fisheries Research Inc. 11:00 "Hatchery chum salmon straying in 'Using PIT technology to study sculpin and Available space "Flow velocity enhancement systemsoutheast Alaska Streams" Andrew dace life history? Rachel Keeler, AMEC Analysis of smolt guidance in the Piston, Alaska Department of Fish | Cowlitz River, Summer 2008" Jean D. Earth & Environmental and Game, Ketchikan Johnson, Natural Solutions...a Dam

Concurrent Sessions Ends 11:20 a.m.