

Agenda
2023 Columbia River Estuary Conference: *Reconnection*

Tuesday May 16, 2023

8:00 AM	Registration
8:30 AM	Invocation and Welcoming Remarks <i>Tony Johnson, Chinook Nation</i>
8:50 AM	Panel Session led by the Chinook Nation (<i>invited</i>) Traditional Fire Management Shared Stewardship/Co-Management of Resources
9:20 AM	Welcome and Overview of Columbia River Estuary Conference <i>Catherine Corbett, Steering Committee Chair</i>
<i>Session 1: Meeting the Challenge of Ecosystem Restoration in a Changing Climate</i> <i>Session Moderator – Laura Brown, Washington Department of Fish and Wildlife</i>	
9:30 AM	A Challenge to the Lower Columbia River Community - Weaving Climate Mitigation into our Conservation and Restoration Programs <i>Catherine Corbett</i>
9:50 AM	Blue Carbon Research to Establish Baseline Conditions and Inform Restoration Planning in the Pacific Northwest <i>Amy Borde, Christopher Janousek, Craig Cornu, Heida Diefenderfer, Scott Bridgham, Trevor Williams, Maggie McKeon, Matthew Brand, Katrina Poppe, John Rybczyk, Jude Apple, Boone Kauffman, Laura Brophy, and others in the PNW Blue Carbon Working Group</i>
10:10 AM	Thermal Refuge Enhancement at the Horsetail/Oneonta Creek - Columbia River Confluence <i>Matt Cox, Keith Marcoe, and Chris Collins</i>
10:30 AM	Break
<i>Session Moderator – Tom Josephson, Columbia River Estuary Study Taskforce</i>	
10:50 AM	Designing Effective Revegetation Strategies for Restoration Projects on the Lower Columbia River <i>Simon Apostol and Ian Sinks</i>

11:10 AM	Lessons Learned for the Columbia from Puget Sound Estuary Restoration <i>Dan Elephant and Sky Miller</i>
11:30 AM	Action Plan for Restoring Chum Salmon Resulting from Outreach and Studies of the Youngs Bay and Big Creek Watersheds <i>Graham Klag</i>
11:50 AM	Question and Answer Period
12:00 PM	Lunch (on your own)

Session 1: Meeting the Challenge of Ecosystem Restoration in a Changing Climate (continued)

Session Moderator – Heida Diefenderfer, Pacific Northwest National Laboratory

1:30 PM	Scaling Up to Implement Complex, High-Risk, Climate-Resilient Floodplain Restoration <i>Chris Collins, Curtis Loeb, Darlene Siegel, Curtis Helm, and Doug Kreuzer</i>
1:50 PM	Restoration incorporating living shorelines, Stage 0 alluvial fans, and other design measures for climate adaptability on a 1,000 acre floodplain of the Lower Columbia River <i>Curtis Loeb, Amanda Jones, and Rowyn Cooper-Caroselli</i>
2:10 PM	Setback Levee Design, Construction, and Monitoring for the Steigerwald Reconnection Project <i>Wade Osborne</i>
2:30 PM	Revegetation and Carbon Sequestration on a Large Columbia River Floodplain <i>Doug Kreuzer, Curtis Helm, Chris Collins</i>
2:50 PM	Question and Answer Period
3:00 PM	Break

Session Moderator – Leslie Bach, Northwest Power and Conservation Council

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| 3:30 PM | Connections with the Nearshore Ocean at the Mouth of the Columbia River
<i>Hans R. Moritz, Jarod Norton, Rachel Stolt, Julia Keiter, Austin Hudson, James McMillan, Curtis Roegner, and Andrew Stevens</i> |
| 3:50 PM | The Effects of Dredged Material Placement on Benthic Assemblages at Woodland Islands
<i>Nikki Sather, Kailan Mackereth, and Narmada Meenu Mohankumar</i> |
| 4:10 PM | Wetland Reconnection and Habitat Restoration on South Bachelor Island: Working in Dredge Material on the Lower Columbia River
<i>Alex Uber, Nicole Czarnomski, Allen Lebovitz, Tom Josephson, and Eric Anderson</i> |
| 4:30 PM | New Solutions for Tide Gates, Fish Passage, and Working Landscapes
<i>Jason Nuckols and Shonene Scott</i> |
| 4:50 PM | Lightning - Lessons Learned for the Columbia Using Blasting to Excavate Tide Channels
<i>Dan Elefant and Sky Miller</i> |
| 4:55 PM | Question and Answer Period |
| 5:10 PM | Poster Session Overview
Leslie Bach and Amy Horstman |
| 5:20 PM | Poster Session (McTavish Room upstairs) |

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Wednesday May 17, 2023

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| 8:00 AM | Registration |
| 8:50 AM | Welcome
<i>Catherine Corbett, Steering Committee Chair</i> |
| 9:00 AM | Salmon's Journey: Connecting the Ocean to the Land, Nourishing Ecosystems, and Sustaining Human Cultures
<i>Aja DeCoteau, Columbia River Inter-Tribal Fish Commission</i> |

Session 2: Recent Ocean Research Results and Implications

Session Moderator – Charles Seaton, Columbia River Inter-Tribal Fish Commission

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| 9:20 AM | Highlights from the 2022 IYS Pan-Pacific Winter High Seas Expedition
<i>Laurie Weitkamp</i> |
| 9:40 AM | Growth, size, and survival: The impact of growth in the early ocean and lower Columbia River estuary on early ocean survival of Interior Columbia River Spring Chinook salmon
<i>Craig Norrie, Jessica Miller, Cheryl Morgan, Brian Burke, Brian Beckman, and Laurie Weitkamp</i> |
| 10:00 AM | The secret lives of European green crabs: Habitat utilization as revealed by acoustic telemetry
<i>Curtis Roegner, Zach Forster, and David Beugli</i> |
| 10:20 AM | Question and Answer Period |
| 10:30 AM | Break |

Session Moderator – Joe Needoba, Oregon Health and Science University

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| 11:00 AM | Oregon's Coordinating Council on Ocean Acidification and Hypoxia: Increasing Knowledge, Awareness, and Action on Ocean Change
<i>Jennifer Koester, Leif Rasmuson, and Laurie Juranek</i> |
| 11:20 AM | The Past, Present, and Future of the CMOP Observatory at the Columbia River Inter-Tribal Fish Commission (CRITFC)
<i>Mary R. Gradoville, Michael Wilkin, Sarah Riseman, Joseph Needoba, Mike Swirsky, and Charles Seaton</i> |

11:40 AM **Estuaries as microbial bioreactors: relationships between organic matter, bacterial productivity, and microbial diversity in the Columbia River Estuary**
Byron Crump, Susie Cummings, Lindy Fine, and Joseph Needoba

12:00 PM Question and Answer Period

12:10 PM **Lunch** (on your own)

Session 3: Assessing Restoration Site Function and Recovery
Session Moderator – Chanda Littles, US Army Corps of Engineers

1:40 PM **Lightning - Looking beyond the restoration site: Lessons from the Columbia River estuary**
Laurie Weitkamp, Nikki Sather, Curtis Roegner, Regan McNatt, and Gary Johnson

1:45 PM **Lightning - Implementing a Large Wood Estuarine Experimental Design at South Tongue Point Restoration**
Heida Diefenderfer, Kailan Mackereth, Ian Sinks, Amy Borde, Tracy Hruska, Tom Josephson, and Ryan Kilgren

1:50 PM **Lightning - New applications for Passive Integrated Transponder (PIT) interrogation in the lower Columbia River estuary**
Kara Jaenecke, Joe Vinarcsik, Matt Morris, and Paul Bentley

1:55 PM **Tidal-Hydrological Dynamics of Water Temperature across Freshwater Forested Wetlands**
Kate Buenau, Heida Diefenderfer, and Amy Borde

2:15 PM **Status and Trends from a Decade of Time Series Water Quality Monitoring in the Mainstem and Intertidal Wetlands of the Columbia River Estuary**
Joseph Needoba, Tawnya Peterson, and Catherine Corbett

2:35 PM **Lightning - Juvenile Chinook salmon diets at Environmental Monitoring Program sites in the lower Columbia estuary**
Kerry Accola, Jason Toft, and Jeffery Cordell

2:40 PM **Update on Oregon Water Science Center Columbia River Basin contaminant studies**
Sean Payne

3:00 PM | **Lightning - Researching the presence of 6PPD-Q and Roadway Runoff Chemicals in Northwestern Clatsop County: River TALC**
Kelli Daffron and Ed Kolodziej

3:05 PM | Question and Answer Period

3:15 PM | **Break**

Session Moderator – Carla Cole, Lewis and Clark National Historical Park

3:40 PM | **Visualizing and Analyzing 10 years of Wetland Habitat Monitoring Data in Tableau**
Ian Edgar, Sarah Kidd, and Sneha Rao Manohar

4:00 PM | **Multispectral UAV Data for Wetland Plant Community Mapping: Predicting and Evaluating Restoration Impacts**
Sarah Kidd, Sneha Rao Manohar, and Ian Edgar

4:20 PM | **Lightning - Don't Look Up: Practical Methods for Incorporating Satellite Data in Monitoring Columbia River Ecosystems**
Austin Hudson, Matthew Brand, Heida Diefenderfer, S.A. Talke, David Jay, Will Templeton, and Maggie McKeon

4:25 PM | **Lightning - Surface Elevation Tables for Sediment Accretion Measurements and Sediment Stake Data Verification**
Shon Zimmerman, Maggie McKeon, Heida Diefenderfer, and Amy Borde

4:30 PM | **Columbia River Sediment Loads: Evaluating Historical Changes and Observing the Response of Lower Columbia Wetlands**
Maggie McKeon, David Jay, Stefan Talke, and Heida Diefenderfer

4:50 PM | **Collaborative Analysis of Sediment Accretion Rate Data**
Zachary Weller, Heida Diefenderfer, Amy Borde, Ian Sinks, Tom Josephson, Sarah Kidd, Ian Edgar, and Maggie McKeon

5:10 PM | Question and Answer Period

5:20 PM | **Adjourn**

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Thursday May 18, 2023

8:00 AM	Registration
8:50 AM	Welcome <i>Catherine Corbett, Steering Committee Chair</i>
Session 4: Evaluating Performance Across Varying Spatial Scales <i>Session Moderator – Sarah Kidd, Lower Columbia Estuary Partnership</i>	
9:00 AM	Describing and Assessing a Basin-scale Mitigation Program: The Northwest Power and Conservation Council’s Fish and Wildlife Program <i>Leslie Bach and Kris Homel</i>
9:20 AM	Columbia Estuary Ecosystem Restoration Program: Documenting Performance and Leveraging Opportunities for Programmatic Reporting and Accountability <i>Chanda Littles, Jason Karnezis, Lynne Krasnow, Mark Bierman, Chris Magel, Kelsey Swieca, and Anne Creason</i>
9:40 AM	Development of Site Evaluation Cards: Preliminary Findings Based on Restoration Project Revisits in Fall 2022 <i>Dan Bottom, Janine Castro, Kim Jones, Kirk Krueger, and Ron Thom</i>
10:00 AM	Predicting near-future juvenile salmon response to water management and engineered structures across diverse tidal river conditions <i>Andrew Goodwin</i>
10:20 AM	Lightning - Quantifying Benefits of Mitigation-Funded Dam Removal in the Columbia River Basin <i>Luke Johnson and Sky Miller</i>
10:25 AM	Question and Answer Period
10:35 AM	Break

Session 5: New Modeling and Data Products

Session Moderator – Curtis Roegner, NOAA National Marine Fisheries Service

11:00 AM	Columbia River Estuary and Nearshore Data Products and Tools <i>Kate Sherman, Joe Bizzarro, Jamey Selleck, Joan Drinkwin, Van Hare, Dave Fox, Tanya Haddad, Andy Lanier, and Allison Bailey</i>
11:20 AM	Modeled future wetland habitat impacts of an M9 Cascadia earthquake on the Columbia River Estuary <i>Matthew Brand, Heida Diefenderfer, David Jay, Stefan Talke, Amy Borde and Maggie McKeon</i>
11:40 AM	The Columbia River Intertribal Fish Commission (CRITFC)'s CMOP program: modeling the Columbia River from watershed to the Pacific Basin <i>Charles Seaton, Antonio Baptista, Aja DeCoteau, Laura Gephart, Ed Meyers, Shachak Pe'eri, Greg Seroka, Mike Swirsky, and Joseph Zhang</i>
12:00 PM	Shallow-Water Habitat in the Lower Columbia River and Estuary: A Highly Altered System <i>William Templeton, David Jay, Heida Diefenderfer, and Stefan Talke</i>
12:20 PM	Lower Columbia River Suspended Sediment Modeling and Real-Time Data Network <i>Paul Diaz, Patrick Haluska, and Will Long</i>
12:40 PM	Question and Answer Period
12:50 PM	Closing Remarks
1:00 PM	Adjourn

Posters

Longitudinal Temperature Monitoring on Tributaries of the Lower Columbia River

Kelli Daffron

Restoration of 1,000 acres of Lower Columbia River floodplain - Several big reasons why the project almost never happened

Allen Dysart, Curtis Loeb, Darlene Siegel, Wade Osborne, Stephen Whittington, Curt Vanderzanden, and Chris Collins

The Regional Coordination of Hopper Dredging Along the West Coast

Terrance S. Geroux and Alyssa K. Moore

Tracking Soil Dynamics to Understand Plant Community Development in Restored Tidal Wetlands

*Sarah Kidd, *Derek Marquis, Sneha Rao Manohar, and Ian Edgar*

Tracing History: Morphological Changes of the Lower Columbia River

Austin Hudson

Relationship of Benthic Invertebrate Communities to Sediment Characteristics in the Columbia River Estuary

**Kailan Mackereth, Nikki Sather, and Narmada Meenu Mohankumar*

From Concept to Operation: A New Nearshore Dredged Material Placement Site in the Pacific Ocean at the Columbia River Mouth, Southwest Washington

James M. McMillan, Jarod K. Norton, H. Rod Moritz, Julia R. Keiter, Rachel O. Stolt, Terrance S. Geroux, Andrew Stevens, Guy Gelfenbaum, George M. Kaminsky, Bridgette A. Lohrman, and Curtis G. Roegner

Design & Application of a New Submerged Diffuser for Targeted In-Water Placement of Dredged Material within the Lower Columbia Estuary

Hans R. Moritz, Jarod K. Norton, Aaron Litzenberg, Max Wilson-Fey, Jessica Stokke, Travis Davidson, Todd Hash, Rachel Stolt, Doyle Anderson, Chet Thomas, Mark Wright, Neil DeRosier, and Jase Ousley

Regulatory, Landowner, and Real Estate Challenges to Removing Federally Authorized Levees to Reconnect 1,000 Acres of Floodplain Along the Columbia River

Darlene Siegel, Chris Collins, and Curtis Loeb

Trends in Lower Columbia and Willamette River Water temperatures over the past 170 years

Stefan A. Talke, Malia H. Scott, Heida L. Diefenderfer, and David A. Jay



Improvement of Juvenile Salmon PIT Tag Detection Systems using Pile Dikes in the Lower Columbia River

Joe Vinarcsik, Kara Jaenecke, Matt Morris, and Paul Bentley