Rewetting Our Waterways: Floodplain Restoration in an Occupied Landscape

Knowledge Exchange Workshop November 18th, 2025 ~ 9:00am – 3:30pm PST

Speaker Profiles and Resources

DR. BRIAN CLUER – Resilient Rivers and NOAA-Fisheries (ret.)

Dr. Brian Cluer is a proud Idaho native who earned his PhD in fluvial geomorphology and sediment transport from Colorado State University. For 25 years, he served as the West Coast regional geomorphologist for NOAA Fisheries, playing a key role in many of the major dam removal projects across the western United States. Brian is also the lead author of one of the most influential papers in our field – the landmark 2013 publication co-written with Colin Thorne – that introduced the Stream Evolution Model. Throughout his career, he has been committed to advancing both the science and the practice of river restoration. Brian recently retired from NOAA and now runs his consulting firm Resilient Rivers, and has a bit more spare time to pursue his many interests that include skiing, fishing, flying airplanes, wood working, and spending time on and around rivers.

Cluer and Thorne: A STREAM EVOLUTION MODEL INTEGRATING HABITAT AND ECOSYSTEM BENEFITS - Cluer - 2014 - River Research and Applications - Wiley Online Library

Wohl et al: Frontiers | Rediscovering, Reevaluating, and Restoring Lost River-Wetland Corridors

Hauer et al: Gravel-bed river floodplains are the ecological nexus of glaciated mountain landscapes

Powers et al 2019: A process-based approach to restoring depositional river valleys to Stage 0, an anastomosing channel network - Powers - 2019 - River Research and Applications - Wiley Online Library

Powers et al 2022: Rediscovering, reevaluating, and restoring Entiatqua: Identifying pre-Anthropocene valleys in North Cascadia, USA - Powers - 2022 - River Research and Applications - Wiley Online Library

Collins et al: Restoration of Puget Sound Rivers - Google Books

Harvey et al 2025: Assessing the Benefits of Valley-Bottom Restoration for Salmonids Using Spatially Explicit, Individual-Based Modeling - Harvey - River Research and Applications - Wiley Online Library

Rancho Canada Golf Course to FP: Home — Rancho Cañada Floodplain Restoration Project

Russian River gravel pits to FP: Russian River Floodplain Restoration Project - Russian Riverkeeper

JACOB KATZ – California Trout

Dr. Jacob Katz is a Senior Scientist with California Trout, a conservation nonprofit organization**.** Jacob has always been fascinated with what happens below the water line and grew up chasing fish in every creek, pond, and river he could find. He spent 10 years in Alaska working as a river and fishing guide before university, and went on to earn his PhD in ecology at UC Davis. Jacob currently directs CalTrout's Central California region where his work focuses on redesigning California's antiquated water infrastructure.

GJ Rossi, JR Bellmore, JB Armstrong, C Jeffres, SM Naman, SM Carlson et al - Foodscapes for salmon and other mobile consumers in river networks

M Bell-Tilcock, CA Jeffres, AL Rypel, M Willmes, RA Armstrong, P Holden et al - Biogeochemical processes create distinct isotopic fingerprints to track floodplain rearing of juvenile salmon.

M Bell-Tilcock, CA Jeffres, AL Rypel, TR Sommer, JVE Katz, G Whitman et al - Advancing diet reconstruction in fish eye lenses

EJ Holmes, P Saffarinia, AL Rypel, MN Bell-Tilcock, JV Katz, CA Jeffres - Reconciling fish and farms: Methods for managing California rice fields as salmon habitat

NJ Corline, RA Peek, J Montgomery, JVE Katz, CA Jeffres - Understanding community assembly rules in managed floodplain food webs

ALLEN CHILDS – The Confederated Tribes of the Umatilla First Nation

Allen Childs works with the Confederated Tribes of the Umatilla Indian Reservation as the Fish Habitat Project Lead for the Grande Ronde Model Watershed project. Allen has worked 33 years with the Confederated Tribes of the Umatilla and in that time has served many roles in its extensive fish and wildlife program. Since 2001, he has led the fish habitat program in the Grande Ronde watershed and been involved in all aspects of this long-term project.

NATASHA LUKEY – Okanagan Nation Alliance

Natasha Lukey works as a Fish Habitat Restoration Biologist with Okanagan Nation Alliance in the Syilx Okanagan Nation Territory. Natasha studied at both the University of British Columbia and University of Waterloo, and has worked with the Okanagan Nation Alliance for over 10 years. Her early career focused on amphibians and wetlands and she since shifted to specializing in rivers, floodplains and fish. Her work focuses on taking an ecosystem-based approach to restoring habitat for fish, wildlife and people, especially as it relates to Pacific salmon recovery in the Syilx Okanagan Territory.

Parker et al. 2007: Physical basis for quasi-universal relations describing bankfull hydraulic geometry of single-thread gravel bed rivers - Parker - 2007 - Journal of Geophysical Research: Earth Surface - Wiley Online Library

Parker 2004 – the Gravel River Bankfull Discharge Estimator Tool: BankfullChannelEstimator.ppt

The salmon story, as one of the syilx captikʷɬ, is a very complex, intricate story which takes days to tell. The only source we can point to is the following link where some parts of the story have been simplified and published in the children's book here: Shop – Okanagan Nation Alliance, **How Coyote Broke the Salmon Dam**

ALLAN WARREN – Bonneville Environmental Foundation, Floodplains by Design

Allan Warren is a Senior Program Manager with Bonneville Environmental Foundation, a national nonprofit organization that partners with businesses, communities and governments to create solutions for clean water and renewable energy. Allan holds a Masters degree in environmental journalism and has a passion for conservation and community engagement. He is here today to present about Washington's Floodplains by Design program, that is an ambitious public-private partnership between the State of Washington, many local agencies, tribes and landowners, as well as the Bonneville Environmental Foundation.

FloodplainsbyDesign.org

Interactive map of flood risk: https://mil.wa.gov/enhanced-hazard-mitigation-plan

Study in Washington that was similar to the CA 'floodplain fatties': Josh Kubo at King County is leading this study, and Jacob Katz's presentation reminded me of a site tour where I learned a bit about it. I reached out to Josh after the webinar and I don't know if he's published the studies yet, but he did share a couple of story links: https://kingcountyscience.com/2025/06/11/salmon-science-and-side-channels-on-the-snoqualmie-river/ and Seattle Times: https://www.seattletimes.com/seattle-news/climate-lab/scientists-confine-study-chinook-at-restored-snoqualmie-river-habitat/

Two studies recently published by the US Chamber of Commerce and Allstate Insurance Co. about the long-term economic impacts of disasters and the benefits of doing this work:

1. The Preparedness Payoff: The Economic Benefits of Investing in Climate Resilience (2024)
2. Beyond the Payoff: How Investments in Resilience and Disaster Preparedness Protect Communities (2025)

JESSICA HAMILL – Snohomish County

Jessica Hamill is CFS Program Manager and Integrated Project Coordinator with Snohomish County. Jessica has over 12 years of experience working in floodplains, leading strategic planning projects, and facilitating and coordinating multi-interest stakeholder groups. Jessica previously worked at the Department of Ecology in the early days of Floodplains by Design and worked with folks to help build the grant program. Jessica is a Project Specialist IV with Snohomish County Surface Water Management, worked with SLS partners to build the CFS program, and has managed the program since its inception in 2019.

Comprehensive Planning for Flood Hazard Management: A Guidebook

TAMSIN LYLE – Ebbwater Consulting

Tamsin Lyle is the Principal and founding engineer of Ebbwater Consulting and a well-known thought leader on flood management in Canada. She has invested her academic and professional careers in the exploration of various aspects of floods and other climate hazards. She is particularly interested in exploring the nexus of science, engineering, policy, and planning—disciplines that often work apart when best practice suggests they should work together.

Coastal flood risk assessment guidelines for building and infrastructure design: supporting flood resilience on Canada's coasts

Planning to Build Resilient Infrastructure: A case study of sea level rise adaptation planning in the City of Vancouver

Assessing coastal flood risk in a changing climate for the City of Vancouver