NORFMA
NORTHWEST REGIONAL FLOODPLAIN MANAGEMENT ASSOCIATION

Conference Agenda Guide

Presenter Name	Organization	Title of Presentation	Abstract	Category	Session
Ryan Cahill	U.S. Army Corps of Engineers-Portland District	Columbia River Treaty and Flood Risk Management	The Columbia River Treaty has provided significant benefits to flood risk management in the United States with the construction and operation of dams in Canada in the 1960's and 1970's. In September 2024, the way the United States accesses the Canadian storage for flood risk management changes. This presentation provides an overview of the Flood Risk Operating Plan that the U.S. Army Corps of Engineers will use to continue managing flood risk in 2025 and beyond.	**River Management**	PLENARY
Kas Guillozet (Facilitator); Rowyn Cooper-Caroselli; Panel of practitioners and local governments	Bonneville Environmental Foundation, Wolf Water Resources, Others	Integrating flood risk perspectives into permitting efficiency solutions	With growing calls from floodplain project proponents for permitting improvements, there is an opportunity to consider implications for local jurisdictions and communities, and how engagement of floodplain managers and agency experts can strengthen efforts. This panel will provide a grounding in local flood codes, the NFIP, FEMA's CRS, and 2D flood modeling with attention to feedback loops and the sequence of improvements for integrated/ecological restoration projects to incentivize durable efficiencies. Please come ready to discuss challenges and opportunities.	**Multi-benefit**	A

Presenter Name	Organization	Title of Presentation	Abstract	Category	Session
Luke Russell	Wolf Water Resources, Inc.	From Abstract to Actionable: Demystifying Stream Power	A fundamental question floodplain managers ask at the start of every project is: How much room does the river need? Cue stream power: a measure of the energy expended by a river on its channel and floodplain. It is a simple and scalable tool for floodplain management, but the abstract units of energy can often be difficult to interpret. We provide examples on how to derive relevant and meaningful stream power targets for long-term resilience and function of a healthy river corridor.	**Science, sediment**	B
Yacoub Raheem & JD McLandrich	AECOM	Consequences Rule Everything Around Me (C.R.E.A.M.): FY22 Willamette River Bank Protection Consequence Assessment	The C.R.E.A.M. study developed a consequence assessment methodology for ranking 45 revetment reaches based on likelihood of loss of life and damage to critical infrastructure if revetments were to fail. Population near revetments were estimated using the FEMA Hazus database. Critical infrastructure included government institutions (e.g., airports, fire stations, medical centers, schools, and post offices), bridges, oil and natural gas pipelines, railroads, commercial/industrial/agricultural buildings, and transmission lines. The goal of the consequence assessment was to prioritize repairs to the revetments and identify sites that have the potential to be repaired using bioengineering methods.	**River Management**	B
Gary Freeman	River Research & Design, Inc.	Climate Emergency: Real or Contrived?	While nearly everyone accepts that climate changes, there has been a push to declare a `climate emergency` based on sensationalized interpretations of data. Data has been manipulated and modified to support radical views and end of world consequences if trillions of dollars are not immediately spent to fix `problems`. Available data does not support the radical views being presented as fact.	**Climate**	B
Eric Zgonina	HDR	Building Statewide Resilience: Lessons for the PNW in Risk Reduction and Floodplain Management from the Louisiana Watershed Initiative	The Louisiana Watershed Initiative (LWI) is a holistic approach to flood risk reduction. This statewide program focuses on watersheds, not political boundaries, and utilizes HUC8 scale modeling and regional collaboration to tackle flooding. LWI Region 5 is situated in a coastally sensitive area, and the lessons from this project will be used as a case study to explore floodplain management best practices transferable to the Pacific Northwest at both the programmatic and local level.	**River Management**	C

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Patrick VanDeWiele and Azadeh, Bloorchian-Verschuyl	Stantec Consulting Inc.	Stream Level Approach in HUC-10 Watershed Scale 2D Hydraulic Models for Flood Study Application	With the advancement of 2D hydraulic modeling software, watershed-scale 2D hydraulic modeling is becoming more popular for use in large-scale rural flood studies. Stantec is applying a new Stream Level Approach for HUC-10 size 2D HEC-RAS for two FEMA Region 10 county flood insurance studies in Idaho. It is a new approach that helps resolve issues encountered in the relatively new watershed-scale 2D hydraulic modeling for floodplain studies.	**Modeling**	C
Jake Edington, Garrett Blauch	AECOM	Adapting to Unforeseen Challenges, Lessons learned Delivering BLE FIRMs in FEMA Region VI	One-dimensional (1D) and Two-dimensional (2D) Base Level Engineering (BLE) models were incorporated in the production of updated Flood Insurance Rate Maps (FIRMs) across FEMA Region VI Counties in an effort to provide communities with best-available data of their changing flood risk. This presentation will utilize 3 case studies to outline some of the common issues encountered in BLE-to-FIRM conversions as well as explore solutions developed to adhere to FEMA standards and best practices.	**Modeling**	C
Christina Wollman	Perteet	Floodplain Managers Roundtable	Facilitated discussion with floodplain managers.	**Regulatory**	D
J. Scott Kindred	Kindred Hydro, Inc.	Groundwater Monitoring of the Fall City Floodplain Restoration Project	Groundwater monitoring of the Fall City floodplain restoration project was conducted to assess how floodplain reconnection projects may affect streamflow and river temperatures. The temperature data identified a 4-to-6-month delay in groundwater temperatures compared with river temperatures due to latent heat storage in the subsurface. Encouraging groundwater discharge into the river in the late summer may be useful for creating low-temperature refuges or general river cooling.	**Restoration**	E

Presenter Name	Organization	Title of Presentation	Abstract	Category	Session
Christina Avolio	Herrera Environmental Consultants	Enhancing Natural Flood Storage as a Stormwater Management Alternative in the Longfellow Floodplain	Seattle Public Utilities (SPU) is evaluating the use of floodplain reconnection and natural flood storage in the Longfellow Creek Watershed as a restoration and stormwater management strategy. Floodplain reconnection would function as an alternative approach to using traditional runoff detention to meet the Seattle Stormwater Code flow control requirements triggered by two public multimodal transportation improvement projects in the watershed. Like many urban creeks, Longfellow Creek has been channelized and its floodplain altered, and as a result, the creek does not engage the floodplain as it did under natural conditions. This presentation will highlight some of the opportunities, constraints, and tools for evaluating performance of flow control improvements in an urban floodplain setting.	**Restoration, Stormwater**	E
Kevin Coulton, PE, CFM	Environmental Science Associates	Pendleton's Flood Response in McKay Creek: Balancing flood risk, habitat, and water supply in Northeast Oregon	This presentation describes the McKay Creek Basin Study funded by the FEMA HMGP, which included Lower McKay Creek, McKay Dam and Reservoir, and the upper watershed, to identify actions that can be taken to reduce flood risk along the lower creek reach, while seeking a balance for: 1) the safety needs of the residents; 2) contractual obligations to store enough water in the reservoir for irrigators; and, 3) improvements in natural floodplain functions to restore and enhance habitat for endangered fish species.	**Restoration**	E
Ben Davis & Garrett Thompson	Keller Associates, Inc.	Leading Idaho Local Bridge Program - Hydraulics, Accelerated Methods, and More!	The Leading Idaho Local Bridge Program (LILB) had a lofty goal of using $200M in state funds to replace 40% of local bridges in the State of Idaho over 50 years old. The program was expanded to include additional bridges as funding was procured. This presentation covers the successes of the program presented by one of the lead design engineering firms involved in the design of over 20 bridges in the program. Additional topics include hydraulics methods used and accelerated design/construction methods.	**Modeling, Infrastructure**	F

Presenter Name	Organization	Title of Presentation	Abstract	Category	Session
David Cline & Nathan Dasler	Kiewit	WSDOT Fish Passage Program, Alternative Delivery Methods and Lessons From the Field	The WSDOT Fish Passage Program has 1,000 fish passage barriers within the injunction with 500 barriers planned for replacement by 2030. WSDOT is using alternative Design-Build and Progressive-Design-Build methods to meet the timeline. This presentation provides discussion of Kiewit's design-build and progressive-design-build delivery methods, the benefits and challenges of the program, and real-world lessons from the field for this complex and inspiring program to restore endangered salmon.	**Restoration, Infrastructure**	F
Brandon Hobbs	HDR	Collective Management of the Boise River Floodplain	The 2017 Boise River flood was a wake-up call to communities and stakeholders. After the water receded, communities, agencies, and other stakeholders began working together with shared responsibility on a more holistic approach to floodplain management. Partnerships and combining resources led to new data collection, improved floodplain modeling, and a comprehensive Channel Management Plan. While still evolving, there is now more cohesive floodplain management from all levels of government and stakeholders, starting from the same set of tools and data and working together.	**River Management**	F
FEMA, State of Oregon, Local Governments	Multiple	Oregon Biological Opinion	A panel of experts (FEMA, State, local communities) will provide an overview of the NFIP compliance with the Endangered Species Act (ESA) in Oregon, including Pre-Implementation Compliance Measures (PICMs), frequently asked questions, and options that communities are exploring.		PLENARY
Sarah Owen	FEMA Headquarters	Ins and Outs of the Redesigned NFIP Compliance Audit Program	The Federal Emergency Management Agency (FEMA) is transforming the National Flood Insurance Program (NFIP) Compliance Audit process to increase nationwide consistency, transparency, efficiency, and accountability. This presentation will provide an overview of FEMA's new NFIP Compliance Audit process, which is slated to launch in 2025. Floodplain administrators and other attendees will learn why the CAV/CAC process has been redesigned, what is changing, and what to expect?	**Regulatory**	G
Christina Wollman	Perteet	Oops, I permitted that. Now what do I do?	Many agencies are challenged with the compliance process, especially when the non-compliance was permitted by oversight or negligence by the review staff. This presentation will review best practices and examples of successful compliance strategies.	**Regulatory**	G

Presenter Name	Organization	Title of Presentation	Abstract	Category	Session
Celinda Adair & Michelle Gilbert	AtkinsRealis	Best Practices and Tools for Developing a Substantial Damage Plan	A Substantial Damage Plan (SDP) helps communities be prepared for what comes after a disaster or damage event. This session will discuss the benefits and challenges with developing an SDP and walk through tools and resources that can help. The session will also cover example SDP templates that we've developed and go over best practices for what to include in an SDP.	**Planning**	G
Tim Bedford	Jacobs	Field Forensics: Why Working in the River didn't go as Planned	In 2019, the City of Corvallis and Jacobs planned to install a 36 inch transmission main beneath the Marys River. Rainfall in September 2019 caused overtopping of the cofferdam. Jacobs worked to develop an innovative solution to mitigate risk. A culvert on the Middle Fork of Wildcat Creek outside of McCleary, WA was replaced with a 100-foot span bridge in 2018. In 2021, the right bank had migrated over 40 feet, threatening the northwest abutment of State Route 8, why and how did this happen?	**River Management**	H
Heather Rogers	Ecology	CMZ Working Group	In the interest of starting and continuing a conversation around channel migration zones (CMZ) following the 2023 NORFMA conference, a working group will convene to discuss relevant topics and share information. Topics include the current State of CMZ Mapping in RX States and planned updates for the future, CMZ mapping by location and technical approaches, regulation, funding sources, and CMZ information to support public works projects.	**Risk Reduction**	H
Andrew Giles	B.C. Ministry of Water, Land and Resource Stewardship	Flood Risk Reduction in British Columbia	Approaches to flood risk reduction have many common elements across jurisdictions. In this session we will explore the British Columbia context, including our governance framework, an overview of the B.C. Flood Strategy, and a few current initiatives.	**River Management**	I

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Julie Morse, Paula Harris, Andrew Giles	Ecology, Whatcom County, BC Ministry of Water, Lands, and Resource Stewardship	Mostly West, Sometimes North. A snapshot in time in managing the Nooksack River through a collaborative transboundary initiative.	The Nooksack River is a complex and dynamic river system — with its headwaters originating in a high elevation sediment-rich volcanic basin, with rapidly receding glaciers, and a historic avulsion flow path that crosses an international border. During peak floods, the Nooksack River bifurcates and overflows into Canada. Following the 2021 catastrophic flood, an agreement was signed by 9 governments to collaborate on developing flood mitigation strategies to reduce flood risk and restore ecosystems in the Nooksack Sumas transboundary area. This presentation will share stories from both sides of the border on the challenges of managing a dynamic river with the realities of past management decisions and future climate conditions.	River Management	I
Theo Malone, Bridger Banco	HDR	Island Unit Estuary Restoration Project	Island Unit Estuary, on the South Fork Skagit River, is owned by the Washington Department of Fish and Wildlife, since the 1950s. Dikes have disconnected the estuary from tidal and riverine waters. HDR is designing the removal of 5 miles of dikes while creating over 12 miles of tidal channels, restoring 270 acres of estuarine habitat. The community-supported project enhances the area's adaptive capacity to future climate conditions, reestablishes natural processes, and mitigates flood risks.	Restoration	I
Paula Harris, Helmut Schmidt, Scott Anderson, Nick Chapman	Whatcom County Public Works, Pierce County Planning & Public Works, US Geological Survey; Seward-Bear Creek Flood Service Area	Sediment as a Driver of Floodplain Management Solutions in the Puyallup and Nooksack Rivers: a Panel Discussion	Pierce and Whatcom counties share a common challenge in the Puyallup and Nooksack rivers: accommodating high sediment loading, with sediment removal from the river channel not a viable approach. Both counties are leading multi-benefit floodplain management efforts with partner organizations, and struggling to find long-lasting solutions that can reliably transport and store sediment amid targeted riverine project sites. This session will include brief presentations of the issues that the two counties are confronting followed by a panel discussion with audience interaction.	Sediment	J
Catherine Billor	Northwest Hydraulic Consultants	Preparing a Comprehensive Flood Hazard Management Plan for Columbia County, Washington Under the New 2021 Ecology Guidance	Preparing a Comprehensive Flood Hazard Management Plan for Columbia County, Washington Under the New 2021 Ecology Guidance	Planning	J

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Collin Haffey	WA Dept of Natural Resources	Improving Post-Wildfire Recovery: Coordinated Assistance for Landowners and Communities in Washington	In the aftermath of wildfires, landowners and communities in Washington face challenges in navigating recovery efforts due to information gaps and disjointed assistance programs. This initiative aims to provide coordinated technical and financial aid to aid in landscape recovery, involving various agencies and stakeholders. Close collaboration and timely assistance are key priorities to ensure effective post-fire restoration.	**Risk Reduction**	K
Kevin Mickey & Shane Hubbard	Indiana University / University of Wisconsin	Leveraging FEMA's Hazus Tool to Assess Flood Impacts	FEMA's Hazus software estimates the physical, economic, and social impacts of riverine and coastal floods in support of activities such as hazard mitigation and climate action planning. This session explores Hazus capabilities, recent and upcoming enhancements, and best practices such as applying precise, user provided flood hazard and inventory data. They will also discuss how this technology can be leveraged in combination with other current and emerging tools and resources. (1 hr session)	**Risk Reduction**	K
John Niedfeldt	OTT HydroMet	Proactive Management of Flooding with Innovative Technology for Every Budget	As water managers and engineers, it's important to understand our watersheds, urban landscapes, their response to extreme events like heavy precipitation, and efficient ways to protect and inform the public with the resources we have available. With a flood warning system available one can not only warn the public but can also capture data to be able to view trends for future use as well as capture data that cannot be obtained from other entities. Many communities know they need to modernize their water data management, but shy away due to cost, implementation pains, or the learning curve as they move away from a legacy client-server application. In this presentation, we will discuss how a flood monitoring network will be able to benefit your data collections and community safety.	**Technology**	L
Daniel Determan	NOAA's National Geodetic Survey (NGS)	New Datums for an Improved National Spatial Reference System (NSRS) and Floodplain Management	I will introduce NGS, who we are, what we do, and why we matter. Talk about the current (NAD83 and NAVD88) and future NSRS datums (NATRF2022 and NAPGD2022). To be released in the latter part of 2025. I will explain how we measure elevations today and how we will measure in the future. And I will introducing some current and future NGS tools and services, as well as how to learn more about NGS, the new datums, and where to get additional information.	**Technology**	L

Presenter Name	Organization	Title of Presentation	Abstract	Category	Session
Jeffery Budnick	WEST Consultants Inc.	River Gaging: Best Practices	Best practices for river gaging will cover important topics related to the installation and maintenance of river and stream gaging stations. The principles apply to rivers and streams of all sizes and are used to ensure high quality and reliable data collection. Water level sensors and telemetry will be discussed, as well as various methods to compute flow. Tips, tricks, and lessons learned will allow attendees to gain valuable knowledge to apply to their own gaging networks.	**Technology**	L
Erin Cooper	FEMA	Federal Flood Risk Management Standard - Updates on FEMA's implementation of the FFRMS	FEMA is proposing to amend its regulations to incorporate amendments to EO 11988 and implement the Federal Flood Risk Management Standard. Currently, FEMA and other federal agencies have established partial implementation policies to improve resilience and address increasing flood risk, taking into consideration current and future changes in flooding based on climate science. This proposed rule change would change how FEMA defines a floodplain with respect to certain federally-funded actions.	**Regulatory**	PLENARY
John Graves & Tony Hake	FEMA	Community Rating System Redesign: Working Toward a More Resilient Future	FEMA is working to transform the Community Rating System (CRS) through a multi-year effort. FEMA has been working to analyze and evaluate the current program along with several options for transforming the program. The CRS Redesign effort focuses on incentivizing communities to take measurable actions that reduce flood risk, embedding equity as a fundamental principle into the CRS, encouraging property owners to obtain flood insurance, and delivering a community-centric and modernized program. This presentation will focus on presenting some of the highlights from the past year of the CRS Redesign project and the upcoming milestones.	**CRS**	PLENARY
Josha Crowley, PE, PMP, BC.WRE, CFM; Wendy Shaw, PE	STARR II, FEMA	Why Won't the Flood Stay in the [Mapped] Floodplain?	Jökulhlaups (glacial lake outburst flooding) had never occurred in Juneau, AK before 2011. Climate change has accelerated glacial retreat and jökulhlaup now occur annually. The FEMA SFHA is based on the historic record, and this may not show the true risk. The Future of Flood Risk Data will give a more comprehensive picture of the flood risk. Federal Flood Risk Management Standard will include climate informed science and/or freeboard. Both are intended to support a more resilient future.	**Risk Reduction**	PLENARY