

**RIPPLE  
EFFECT**



**AMPLIFYING THE  
IMPORTANCE OF  
THE DAM INDUSTRY**

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# 2024 ANNUAL CONFERENCE AND EXHIBITION

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## SCHEDULE

**USSD**  
U.S. National Committee of ICOLD



## REGISTRATION

Sunday, April 21	4:00p – 6:00p	Grand Foyer 4th Floor
Monday, April 22	7:00a – 6:00p	Grand Foyer 4th Floor
Tuesday, April 23	7:00a – 5:00p	Grand Foyer 4th Floor
Wednesday, April 24	7:00a – 5:00p	Grand Foyer 4th Floor
Thursday, April 25	7:30a – 2:00p	Elliott Bay

## EXHIBIT HALL

Monday, April 22	Exhibit Hall Move In	12:00p – 4:00p
	Welcome Reception <i>Grand Ballroom 4th Floor</i>	6:00p – 7:30p
Tuesday, April 23	Exhibit Social <i>Grand Foyer 4th Floor</i>	5:30p – 7:00p
Wednesday, April 24	Exhibitor Move Out <i>Grand Foyer 4th Floor</i>	1:20p – 5:00p

## MONDAY, APRIL 22

### LEGACY LECTURE: FLOODS, REAL AND IMAGINED

12:30p – 3:00p

**Ellen Faulkner** will discuss a career focused on the analysis of extremely large floods. The practical value of this work is clear: dams need to withstand extraordinary hydrologic events. Its professional challenges and rewards come from being part of industry progress towards a logical, consistent, and technically informed approach to deciding what is “extraordinary” enough – while studying a natural phenomenon that is chaotic, unpredictable, poorly documented and enormously complex.

### ACTIVITIES

#### USSD Owner’s Forum on Risk

8:15a – 12:15p *Puget Sound 1st Floor*

#### Communicate, Connect, Excel:

#### The Proactive Professional’s Toolbox

8:15a – 12:15p *Vashon 3rd Floor 1 & 2*

### COMMITTEE MEETINGS

	10:00–11:00	10:00–11:00	11:00–12:00	3:00–4:00	4:00–5:00	5:00–6:00	Room
Levees Committee Meeting							<i>Mercer/Denny Lower Level</i>
DEI Committee Meeting							<i>Grand Crescent 4th Floor</i>
Climate Change Committee Meeting							<i>Orcas 3rd Floor</i>
Earthquake Committee Meeting							<i>St. Helens 2nd Floor</i>
Construction & Rehab Committee Meeting							<i>Adams 2nd Floor</i>
Hydraulics & Hydrology Committee Meeting							<i>Puget Sound 1st Floor</i>
Monitoring of Dams Committee Meeting							<i>Mercer/Denny Lower Level</i>
Tailings Committee Meeting							<i>Grand Crescent 4th Floor</i>
Environment & Sustainability Committee Meeting							<i>Orcas 3rd Floor</i>
Concrete Dams Committee Meeting							<i>Adams 2nd Floor</i>
Embankment Dams Committee Meeting							<i>Vashon 3rd Floor 1 &amp; 2</i>
Dam Safety Committee Meeting							<i>Mercer/Denny Lower Level</i>
PSSEM Committee Meeting							<i>St. Helens 2nd Floor</i>
E & T Committee Meeting							<i>Blakely 2nd Floor</i>
Awards Committee Meeting							<i>Whidbey 3rd Floor</i>
YP Committee Meeting							<i>Grand Crescent 4th Floor</i>
Bulletin Committee Meeting							<i>Orcas 3rd Floor</i>

## PLENARY SESSION: INNOVATION IS A STATE OF MIND

8:45a – 10:15a

Innovation can have a ripple effect reaching well-beyond a specific technical advancement. While stagnant technology garners little attention and is taken for granted as the steady-state condition, innovation causes disruption which many times results in even more innovation. Broader interest, discussion, debate, and sometimes even controversy ensues as the ripples of innovation extend outward from the initial source. Colleagues, competitors, policy-makers, and even the general public can inform, improve, and expand upon the initial idea. Embracing these interactions breeds opportunities for even more innovation.

**Ron Klemencic** is a recognized innovator and leader being named a three-time Newsmaker by Engineering News Record Magazine, including ENR’s Award of Excellence for his evangelism in research and development. In his presentation, Ron will explore how to identify opportunities for innovation and the ingredients which lead to success. While innovation is perhaps daunting to some, the formula is quite simple, and everyone has the opportunity each day to contribute to advancing the profession. In addition, he will share his experience engaging a broader audience including the general public and policy makers in order to better the mission of civil engineers.

Graduating Purdue University with a BSCE in 1985, and UC Berkeley with a MSSE in 1986, Ron is now Chairman and CEO of Magnusson Klemencic Associates, an internationally acclaimed structural and civil engineering practice. In addition, Ron served as Chairman of the Council on Tall Buildings and Urban Habitat for five years and currently serves on the Board of Directors of the Charles Pankow Foundation, the most influential research funding organization supporting building construction in the United States. His presentation is intended to inspire, motivate, and cause all who attend to look at the world a bit differently.

## DAM SAFETY

### Cascade 1 2nd Floor

10:30a – 10:55a Synthetic Data Generation for Deep Learning-Based Damage Detection in Concrete Dams

10:55a – 11:20a Improving dam safety assessments using three-dimensional subsurface models

11:20a – 11:45a Data Management of Dam Construction - Pipestem Dam Safety Modification Project

## ENVIRONMENT AND SUSTAINABILITY

### Pike Lower Level

10:30a – 10:55a Climate Change Impacts On Dams: A Comprehensive Assessment

10:55a – 11:20a Phase 2 Los Vaqueros Reservoir Expansion Project: Objectives, Benefits, Opportunities, and Challenges

11:20a – 11:45a Climate Change impacts causing the Largest Forest Fire in New Mexico history which severely affected the City of Las Vegas municipal water supply.as

## LEVEES

### Pine Lower Level

10:55a – 11:20a Rigid Inclusion Design Mitigating a Challenging Levee Segment on the Texas Gulf Coast

11:20a – 11:45a Lessons Learned from the Freeport Field Investigation

11:45a – 12:10p Levee Soil Type Classification Using Shear Wave Velocity and Electrical Resistivity Measurements

## CONCRETE DAMS

### *Vashon 3rd Floor*

<b>10:30a – 10:55a</b>	Bond Characterization of FRPs under Flexure for Concrete Dam Applications
<b>10:55a – 11:20a</b>	Structural health monitoring and damage detection of concrete dams using aerial photography and deep learning methods
<b>11:20a – 11:45a</b>	Expedited Assessment of Dam's Seismic Collapse Capacity

## HYDRAULICS AND HYDROLOGY

### *Cascade 2 2nd Floor*

<b>10:30a – 10:55a</b>	Eliminating the Guess Work With Sediment Management: Sonar, Hydroacoustic and Hydrodynamic Monitoring
<b>10:55a – 11:20a</b>	Hydrologic Insights from 14,000 Square Miles: Unique Dynamics of the Coosa and Tallapoosa Site-Specific PMP & PMF Study
<b>11:20a – 11:45a</b>	Understanding Key Factors in LifeSim modeling in Support of Portfolio Risk Assessment: A case study of three dams in Southern California
<b>11:45a – 12:10p</b>	Hydraulic Considerations of Dam Outlet Works and Replacement of Large Flow Control Valves – an Example at Platoro Dam

## SCHOLARSHIP PRESENTATIONS

### *St. Helens 2nd Floor*

<b>10:30a – 10:55a</b>	Comparative Analysis of Dam Stability: Integrating Simplified Methods with FEA Seepage and Undrained Shear Strength Assessments
<b>10:55a – 11:20a</b>	Improvement of Probabilistic Liquefaction Triggering Curves for Gravelly Soil
<b>11:20a – 11:45a</b>	Evaluating Failure Mechanisms of Mine Tailings Dams Under High Stress
<b>11:45a – 12:10p</b>	Viability of geomembranes to reduce overtopping and erosion failures in dams and levees

## DAM SAFETY

### *Cascade 1 2nd Floor*

<b>1:40p – 2:05p</b>	Reclamation's Approach to Interim Risk Reduction Action
<b>2:05p – 2:30p</b>	Risky Business: Developing a Framework for Dam Safety System Risk
<b>2:30p – 2:55p</b>	USACE Dam Screening Tool

## CONCRETE DAMS

### *Pike Lower Level*

<b>1:40p – 2:05p</b>	Subaqueous Construction of a Replacement Dam on the Ohio River
<b>2:05p – 2:30p</b>	Unexpected Seismic Behavior of Passively Anchored Spillway Tainter Gates Shown in Nonlinear Analyses
<b>2:30p – 2:55p</b>	Cyclopean Concrete Spillways – Coring, Testing and Repair

## HYDRAULICS AND HYDROLOGY

### *Vashon 3rd Floor*

<b>1:40p – 2:05p</b>	3D CFD Modeling and Design of a Staged Arced Labyrinth Weir and Converging Chute at Springton Dam
<b>2:05p – 2:30p</b>	Spillway Rating Capacity Curves: A Comparison using Empirical Equations, Numeric Models and Physical Models
<b>2:30p – 2:55p</b>	Physical Hydraulic Modeling of the Round Butte Dam Spillway Aerator

## EMBANKMENT DAMS

### *Pine Lower Level*

<b>1:40p – 2:05p</b>	Revised Becker Calibration Data Sets and Standard Penetration Test Correlations
<b>2:05p – 2:30p</b>	Testing Hydraulic Asphalt Core at Chimney Hollow Dam using ASTM and EN Standards
<b>2:30p – 2:55p</b>	Halloysite clay and the construction of large rockfill dams in the Pacific Northwest

## CONSTRUCTION AND REHABILITATION

### *Cascade 2 2nd Floor*

- 1:40p – 2:05p Laser Scans for Detection and Evaluation of Spillway Slab Uplift and Cracking
- 2:05p – 2:30p “Directional Drilling Techniques for shaft construction into the Pardee Reservoir Outlet Tunnel”
- 2:30p – 2:55p How Do We Get to the Gate?

## SCHOLARSHIP PRESENTATIONS

### *St. Helens 2nd Floor*

- 1:40p – 2:05p Quantifying the impacts of seasonal weathering cycles on the mechanical properties of soil
- 2:05p – 2:30p Numerical modeling of deteriorating concrete dams and their safety assessment
- 2:30p – 2:55p Geotechnical trends: musings on education, research, practice, and the gaps in between.

## EARTHQUAKES

### *Cascade 1 2nd Floor*

- 3:40p – 4:05p An Evaluation of International and US Earthquake Policies and Guidance and Rationale for Recent USACE Policy Updates
- 4:05p – 4:30p One Station to Rule Them All: Can One Seismic Station Forecast Seismic Performance of Embankment Dams?
- 4:30p – 4:55p Incorporating earthquake-induced hydrodynamic effects into input ground motions: Application to simplified seismic analyses of gravity dams and their appurtenant structures

## CONSTRUCTION AND REHABILITATION

### *Cascade 2 2nd Floor*

- 3:40p – 4:05p Priest Rapids Right Embankment Improvement Project - Design and Construction of a Downstream Replacement Dam to Address Liquefaction Potential of an Existing Dam’s Foundation
- 4:05p – 4:30p Priest Rapids Right Embankment Improvement Project – Design and Construction of a Plastic Concrete Secant Pile Wall to connect a New Dam to an Existing Embankment Dam
- 4:30p – 4:55p Challenges in Construction of Priest Rapids Dam Right Embankment Improvements
- 4:55p – 5:20p Priest Rapids Right Embankment Improvement Project – Permitting and Regulatory Compliance Owner Considerations

## FOUNDATIONS

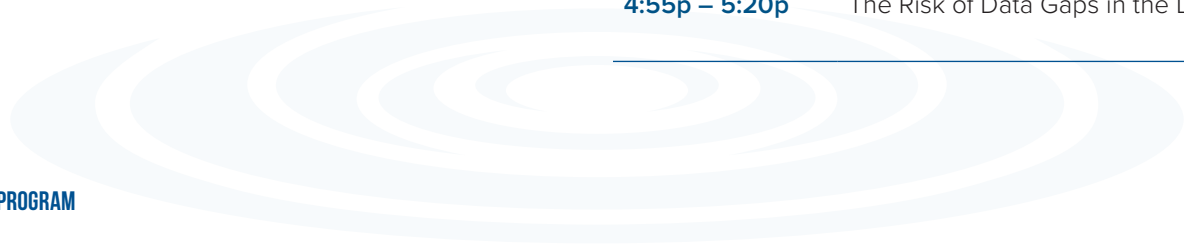
### *Pike Lower Level*

- 3:40p – 4:05p Geologic Factors for Design of Santa Felicia Dam Safety Improvements
- 4:05p – 4:30p Geologic Mapping and Inspection of Shear Key Foundations at B.F. Sisk Dam, California
- 4:30p – 4:55p Shaping blocks and foundation beneficiation features of the raised Gross Dam

## LEVEES

### *Pine Lower Level*

- 3:40p – 4:05p USACE Levee Screening Tool 2.0
- 4:05p – 4:30p Wait...a Levee Costs How Much?
- 4:30p – 4:55p Levees? Why Should States Care? Don’t They Have Enough DAM Problems?
- 4:55p – 5:20p The Risk of Data Gaps in the Levee Design Process



## PUBLIC SAFETY, SECURITY AND EMERGENCY MANAGEMENT FOR DAMS

### Vashon 3rd Floor

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|----------------------|--|
| <b>3:40p – 4:05p</b> | November 2021 Flood of Record: Challenges and Lessons Learned at the Skagit Hydroelectric Project                  |
| <b>4:05p – 4:30p</b> | Rain-On-Snow Events For Critical Design Infrastructure – A Case Study Of The June 2022 Yellowstone Region Flooding |
| <b>4:30p – 4:55p</b> | Atmospheric River Control (ARC) Spillway at New Bullards Bar Dam: Regional Impacts on Flood Management             |
| <b>5:00p – 5:25p</b> | Diamond Valley Lake Emergency Action Plan: Challenges, Opportunities, and Lessons Learned                          |

## OTHER CONTEMPORARY ISSUES

### St. Helens 2nd Floor

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|----------------------|--|
| <b>3:40p – 4:05p</b> | The Dam Safety Toolbox – A New Online Resource for the Dam Safety Industry             |
| <b>4:05p – 4:30p</b> | Incorporating cultural values into the determination of dam consequence classification |
| <b>4:30p – 4:55p</b> | Jumpstarting a Jedi/Dei Program Where You Work   |

## YP MENTORING LUNCH

**12:10p – 1:20p** Elliott Bay, 1st floor

## 5K FUNDS RUN

Meet at **6:50p** in Elliott Bay, 1st floor

## YP SOCIAL (RSVP REQUIRED)

**7:30p – 10:00p** Tapster



# WEDNESDAY, APRIL 24

<b>7:00a – 8:00a</b>	Dam Safety Contractor Discussion with the United States Army Corp of Engineers (USACE) Risk Management Center (RMC)	Whidbey 3rd Floor
<b>7:30a – 8:30a</b>	2025 Conference Planning Committee Outreach	Fifth Avenue 4th Floor

## DAM SAFETY

### Cascade 1 2nd Floor

<b>8:20a – 8:45a</b>	Complex Risk Analysis on Rock Wedge Stability at Libby Dam, Montana
<b>8:45a – 9:10a</b>	Erodibility Assessment of New Bullards Bar Dam Atmospheric River Control Spillway: A Novel Approach
<b>9:10a – 9:35a</b>	Spillway Capacity Rehabilitation in the USA: A Review of the Past 40 Years
<b>9:35a – 10:00a</b>	Comparing Radial Gate Analyses With New And Outdated USACE Design Manuals, A Case Study
<b>10:20a – 10:45a</b>	Improving quantitative methods in the SQRA process: A case study for a Vermont portfolio of 18 dams
<b>10:45a – 11:10a</b>	A Tool for Estimating Consequence Classification of Small Dams in an Urban Setting
<b>11:10a – 11:35a</b>	Sensitivity Analysis on the Influence of Friction on the Structural Performance of Radial Gates
<b>11:35a – 12:00p</b>	Improving Condition Surveys of Large Concrete Spillways using Artificial Intelligence and Robotics

## DAM DECOMMISSIONING

### St. Helens 2nd Floor

<b>8:20a – 8:45a</b>	Dam Removals - best practices in predicting construction costs
<b>8:45a – 9:10a</b>	Protecting Infrastructure and Enhancing our Community through Dam Decommissioning and Rehabilitation
<b>9:10a – 9:35a</b>	A Perspective on U.S. Dam Removal
<b>9:35a – 10:00a</b>	Decision Making Process for Future of a Century Old Critical Dam Infrastructure

## HYDRAULICS AND HYDROLOGY

### Cascade 2 2nd Floor

<b>8:20a – 8:45a</b>	Optimization of Operations to Reduce TDG Production at the Boundary Hydroelectric Project
<b>8:45a – 9:10a</b>	New Experimental Determination of Required Air Concentration to Prevent Cavitation Damage in Chute Type Spillways
<b>9:10a – 9:35a</b>	Cavitation with Consequences - A Case Study of the Round Butte Dam Spillway Tunnel
<b>9:35a – 10:00a</b>	Design of Step Aerator to Increase Dissolved Oxygen Content of Hydropower Discharge

## EARTHQUAKES

### Pike Lower Level

<b>8:20a – 8:45a</b>	Seismic Stability of an Historic Masonry Dam in California
<b>8:45a – 9:10a</b>	Evaluating the Cetin et al. (2018) Liquefaction Triggering Relationship with an Alternate $K\sigma$
<b>9:10a – 9:35a</b>	A Probabilistic Framework to Develop Aftershock Target Spectra
<b>9:35a – 10:00a</b>	Subduction megathrust record selection assisted with a deep-learning-based model

## MONITORING OF DAMS AND THEIR FOUNDATIONS

### Pine Lower Level

<b>8:20a – 8:45a</b>	Practical Implementation of Flow-Induced Monitoring at Multiple Concrete Dam Sites
<b>8:45a – 9:10a</b>	Towards Smart TARPS: Setting Dynamic Instrument Thresholds Using Simple Multivariable Analyses
<b>9:10a – 9:35a</b>	John Martin Dam: Issue Evaluation Study Field Investigation Program and Testing

## PUBLIC SAFETY, SECURITY AND EMERGENCY MANAGEMENT FOR DAMS

### Vashon 3rd Floor

<b>8:20a – 8:45a</b>	An alternative procedure to assess public safety risk at dams, based on the Canadian Dam Association's Method
<b>8:45a – 9:10a</b>	Response and Recovery Plan: A Dam Owner's Go-To When Crisis Occurs
<b>9:10a – 9:35a</b>	Risk Management via Prevention - Holistic Approach to Protection for the Dam Sector

## CONSTRUCTION AND REHABILITATION

### Cascade 2 2nd Floor

<b>10:20a – 10:45a</b>	Temporary Dewatering for Dam Modifications
<b>10:45a – 11:10a</b>	Constructability and Value Engineering for the New Bullards Bar Dam Atmospheric River Control (ARC) Spillway
<b>11:10a – 11:35a</b>	Quality Assurance Surveys for Large Infrastructure Projects Deliver Multiple Benefits

## TAILINGS DAMS

### Pike Lower Level

<b>10:20a – 10:45a</b>	Improved Mine Tailings Characterization Using Dual CPT Filter Elements
<b>10:45a – 11:10a</b>	Deciphering tailings runout sensitivity to the many modeling options and parameter uncertainties associated with tailings dam breach flood modeling
<b>11:10a – 11:35a</b>	Role of Permeability on Undrained Instability Triggering During Copper Tailings Dam Static Liquefaction
<b>11:35a – 12:00p</b>	Applying Lessons Learned from Fly Ash Tailings Pond Closures to Dam Tailings

## CONCRETE DAMS

### Vashon 3rd Floor

<b>10:20a – 10:45a</b>	Supplementary Cementitious Materials: Driving Performance and Sustainability in Mass Concrete
<b>10:45a – 11:10a</b>	Using Past Experience in Modern Analysis of Arch Dams
<b>11:10a – 11:35a</b>	Using Performance Data to Evaluate the Current Conditions of Post-Tensioned and Fully Grouted Anchors in Concrete Dams

## HUMAN FACTORS

### St. Helens 2nd Floor

<b>10:20a – 10:45a</b>	Transforming the Nation's Understanding of Risk – Why a Risk Estimate is Not Enough
<b>10:45a – 11:10a</b>	Preparing the North American Hydropower and Dams Industry for the Upcoming Surge in Workload
<b>11:10a – 11:35a</b>	Human Factors in Dam Safety Risk Analysis
<b>11:35a – 12:00p</b>	Human Factors in Dam Failures

## EMBANKMENT DAMS

### Pine Lower Level

<b>10:20a – 10:45a</b>	Contra Loma Dam: Seismic Stability of Fine-Grained Foundation Soils
<b>10:45a – 11:10a</b>	Calibration of fp4Silt to simulate behavior of a fine-grained embankment foundation
<b>11:10a – 11:35a</b>	Patterns of Deformation: Applying Machine Learning to Nonlinear Deformation Analysis Results to Extract Meaningful Trends in Dam Behavior
<b>11:35a – 12:00p</b>	Using the Material Point Method to Examine Post-Earthquake Stability of Slopes and Embankment Dams



## TAILINGS DAMS

### *St. Helens 2nd Floor*

**2:20p – 3:10p** Tailings Dams Engineer of Record - Terms of Reference Development and Use

## CONSTRUCTION AND REHABILITATION

### *Vashon 3rd Floor*

**2:20p – 2:32p** Finding a Needle in a Haystack: Terminal Dam Seepage Investigations and Repair

**2:32p – 2:45p** Tuolumne Log Pond Dam Spillway Improvement Project

**2:58p – 3:10p** Innovative Revetment Technology Protects Dam Spillway During Numerous Overtopping Events

## LEVEES

### *Pine Lower Level*

**2:20p – 2:45p** Case History-Based Validation of Numerical Simulations of Backward Erosion Piping Using the Bois Brule Levee Breach

**2:45p – 3:10p** Manmade Floating Islands: Potential Benefits and Lessons Learned

## EARTHQUAKES

### *Cascade 2 2nd Floor*

**2:20p – 2:45p** Dams and February 2023 Turkey Earthquake – Part 1: Understanding Mechanism, Recordings and Monitoring

**2:45p – 3:10p** Dams and February 2023 Turkey Earthquake – Part 2: Assessing Reported Damage to Embankments

## DAM SAFETY

### *Cascade 1 2nd Floor*

**3:30p – 3:55p** What's the Probability of My Spillway Gate Failing to Operate

**3:55p – 4:20p** Risk Informed Design For Dams and Levees – Owner and Project Benefits

**4:20p – 4:45p** Operational Reliability of Spilltubes and Turbines

## CONCRETE DAMS

### *Pike Lower Level*

**3:30p – 3:55p** Characterizing the Shear Strength of Submerged Fractured Concrete

**3:55p – 4:20p** Stabilization of Existing Dam Discharge Structure Piers

**4:20p – 4:45p** Finite Element Simulation of Alkali-Aggregate Reaction in Concrete Dams

## HYDRAULICS AND HYDROLOGY

### *Vashon 3rd Floor*

**3:30p – 3:55p** Challenges Associated with Extreme Flood Analysis of a 15,000 Square Mile Basin Spanning Arizona and New Mexico- Critical Storm Study

**3:55p – 4:20p** An Improved Method for Incorporating Climate Change Scenarios into Reservoir Design and Operation

**4:20p – 4:45p** A Practicable Web-Based Interface for Accessing Precipitation Frequency and Probable Maximum Precipitation Data to Meet Dam Safety Needs

**4:45p – 5:10p** Flood Forecasting on the Sacramento and San Joaquin River Systems downstream of thirteen dams using CA-NV River Forecast Center (CNRFC) Flow Data Located: Central Valley, California

## EMBANKMENT DAMS

### *St. Helens 2nd Floor*

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|----------------------|--|
| <b>3:30p – 3:55p</b> | The Development of 3D Geospatial Models for Assessing and Monitoring Embankment Dam Performance                  |
| <b>3:55p – 4:20p</b> | Analysis of Earth Dam Settlement Using Advanced Machine Learning Models  |
| <b>4:20p – 4:45p</b> | Rapid Drawdown for Embankment Dams: Looking Beyond the Factor of Safety  |
| <b>4:45p – 5:10p</b> | Comparison of the Mini-Jet Erosion Test and Original Jet Erosion Test with a Range of Soils and Analysis Methods |

## CONSTRUCTION AND REHABILITATION

### *Cascade 2 2nd Floor*

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|----------------------|--|
| <b>3:30p – 3:55p</b> | Minidoka Dam: Addressing cold weather impacts on a spillway over 100-years old |
| <b>3:55p – 4:20p</b> | Mitigating Impacts of PLC in Post-Tensioned Anchor Grout                       |

## DAM SAFETY

### *Pine Lower Level*

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|----------------------|---|
| <b>3:30p – 3:55p</b> | Prevention is Worth a Pound of Cure: The City of Tampa's Hillsborough River Dam Risk Assessment |
| <b>3:55p – 4:20p</b> | First Generation Risk Analysis for Private Dam Owners   |
| <b>4:20p – 4:45p</b> | SQRA Preparation for Dams: Doing Your Homework  |
| <b>4:45p – 5:10p</b> | Comprehensive Assessments - Lessons Learned and Advice for Future Ones                          |

## AWARDS CEREMONY

**1:20p---2:00p** *Cascade 1 2nd Floor*

## SEATTLE CITY LIGHT

**2:20p---3:10p** *Pike Lower Level*

JD Ross's influence on the development and promotion of the public power movement and electrical power industry in the 20th

## WRAP PARTY: MOPOP

**6:30p---9:30p**

RSVP Required. Ride the monorail (ticket QR code in App) or walk straight up 5th Ave to wrap up the conference with us at the Seattle Museum of Pop Culture.



# THURSDAY, APRIL 25 & FRIDAY, APRIL 26

## THURSDAY, APRIL 25

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<b>8:00a – 12:00p</b>	Enhancing Community Awareness and Integration in Areas with Dam and Levee Risks: Human Factors	<i>Mercer/Denny Lower Level</i>
<b>8:00a – 5:00p</b>	Instrumentation Lifecycle: Planning, Installation, Maintenance and Troubleshooting Considerations with Site Visit: Monitoring of Dams and their Foundations	<i>Pike Lower Level</i>
<b>8:00a – 12:00p</b>	That Dam Game! Level Up Your Climate Resilience Through a Game of Smart Planning, Collaboration, and Strategy: Environment and Sustainability	<i>Pine Lower Level</i>
<b>8:00a – 5:30p</b>	Site Visit: Tacoma Power - Salmon Hatchery Meet at lower level entrance by 7:45am. Breakfast to go will be available on the bus, and coffee will be available in the lobby as you exit	<i>Westlake Lobby Lower Level</i>
<b>1:00p – 5:00p</b>	Workshop (4-hour): Reservoir Sedimentation Analysis for Pre- and Post-Wildfire using HEC-HMS: Hydraulics and Hydrology	<i>Mercer/Denny Lower Level</i>
<b>1:00p – 5:00p</b>	Verification, Validation and Uncertainties Quantification in Analysis of Concrete Dams: Concrete Dams	<i>Pine Lower Level</i>

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## FRIDAY, APRIL 26

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<b>7:00a – 4:30a</b>	Site Visit: Instrumentation Lifecycle Meet at lower level entrance (Westlake) by 6:50am- breakfast to go will be available on the bus, and coffee will be available in the lobby as you exit	<i>Westlake Lobby Lower Level</i>
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