NORTHWEST HYDROELECTRIC ASSOCIATION

2020 ANNUAL CONFERENCE PROGRAM

#NWHYDRO

FEBRUARY 18–21, 2020

Hyatt Regency Downtown
Seattle, Washington
Welcome to the NWHA Annual Conference. We are glad you joined us!

The Northwest Hydroelectric Association is known for its grassroots approach to connecting members together to have important conversations as we navigate the many facets of hydropower here in the beautiful Northwest. This week you will hear from our industry leaders on a broad-ranging set of topics and explore shared experiences, lessons learned and where opportunities lie ahead for hydropower.

A common thread you will see this year is that we are approaching topics with new strategies. You will see shorter mini-sessions, a new mobile app to provide connectivity for you to our content and each other, live polling, a networking breakfast that answers your pressing questions, and a dinner reception hosted by our sponsors. NWHA is dynamic and yet we continue to be solely focused on our members’ needs. The topics this week are driven by our members through their elected board members.

We look forward to the dialogue and hope you have a successful event.

Columbia A is the General Session Room, Columbia B-D will be for exhibits, lunch on the 20th, socials and breaks.

Lunch on the 19th will be in the Elwha Ballroom on Level 5

Women in Hydro luncheon on the 20th will be in 302 Beckler

Hiring for Hydro on the 19th will be in 302 Beckler
Thank You!

Northwest Hydroelectric Association (NWHA) would like to recognize the following Sponsor companies. We thank them for their support of the conference and for hosting a Seattle Celebration on 2/20/2020.

Sponsors

BLACK & VEATCH
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ERM provides hydroelectric planning and development, licensing, impact assessments, permitting, compliance, and ongoing operational evaluation services. ERM’s hydropower project experience extends across North America, to South America, Asia, Africa, Europe, and Australia. Our clients include utilities, municipalities, private developers, national governments, and energy agencies. Projects range from 250 kW to over 1,200 MW and include designs such as run-of-river, large hydro storage reservoirs, hydro retrofits to existing reservoirs, and pumped storage facilities.

GE Hydro’s portfolio covers a variety of hydro power plants, from high and low head to storage and run-of-river. Our plant capabilities draw from more than a century’s experience in all aspects of hydro power production—from initial studies to design, manufacturing, construction, installation, maintenance, operation, and training. Now local to the NW, Seattle is 1 of 4 regional Service Hubs GE is opening 1Q20, providing our customers local expertise and fast, quality service.

Hatch
Whatever our clients envision, our engineers can design and build. With over six decades of business and technical experience in the energy, infrastructure, and mining sectors, we know your business and understand that your challenges are changing rapidly. We respond quickly with solutions that are smarter, more efficient and innovative. We draw upon
our 9,000 staff with experience in over 150 countries to challenge the status quo and create positive change for our clients, our employees, and the communities we serve.

**HDR**

HDR is an employee-owned engineering and consulting firm with over 10,000 professionals in more than 200 locations worldwide. With offices throughout the Northwest, HDR stands ready to support your hydropower and pumped storage projects with the full range of engineering, regulatory, and environmental consulting services. Our hydropower services include dam safety, modernization and upgrades to existing facilities, greenfield hydropower, fish passage, water quality, regulatory compliance, and licensing/relicensing. Our power services also include transmission and distribution.

**Kleinschmidt Associates**

Kleinschmidt Associates performs engineering, regulatory and environmental consulting for North American energy companies and governmental agencies who strive to protect and enhance the natural environment without compromising performance. We work at the intersection of regulatory requirements, environmental science, and engineering solutions to achieve our client’s objectives. For over half a century we have provided practical solutions to complex problems affecting energy, water, and the environment. Visit us on the web at kleinschmidtgroup.com.

**Mackay Sposito**

A small firm brings enthusiasm and personal service. A large firm offers a wealth of expertise. With MacKay Sposito, you get it all. MacKay Sposito leads the industry as a provider of Civil Engineering, Construction/Project Management, Construction Inspection, Land Surveying, Landscape Architecture, Environmental, and UAV (drone) Services related to hydropower operation, maintenance, improvement, recreation engineering, and shoreline management.

**Mead & Hunt**

Mead & Hunt is an employee-owned engineering firm with 700 employees in more than 30 offices nationwide. Offering dam and hydropower services since our inception in 1900, we now provide strategic planning through operational life; delivering planning, environmental, engineering, commissioning, operations and decommissioning services for hydropower projects.

**Meridian Environmental**

Meridian Environmental provides aquatic and terrestrial environmental sciences, regulatory compliance and permitting, and project management services to the hydropower industry from our offices in Seattle and Portland. Meridian is known for analyzing project effects on fisheries, water quality, wildlife, riparian habitat and wetlands, and threatened and endangered species. We design study plans; conduct field investigations; write technical and licensing documents; and develop long-term plans for resource protection, mitigation, and enhancement.
Our clients depend on our substantive expertise in FERC hydropower licensing, relicensing, dam safety, and license implementation and compliance—together with the unique technical and policy issues faced by hydropower projects and new development—to reach their strategic objectives. Our attorneys are regularly involved in the full range of energy regulatory, transactional, and environmental and natural resources issues affecting hydropower.

Van Ness Feldman is home to the premier hydropower law practice in the United States and to one of the largest and most experienced teams of attorneys available. Our current and recent matters involve over 50 percent of all FERC-licensed hydroelectric capacity in the country. Additionally, the firm advises developers of new hydropower projects, including conventional large and small hydro, pumped storage, and emerging technologies such as ocean and tidal projects.

Stoel Rives has significant experience advising clients on all aspects of FERC hydropower licensing, relicensing and compliance and related federal and state proceedings, including new waterpower technologies. We resolve issues effectively and identify cost-effective measures in such complex and precedent setting proceedings as Endangered Species Act consultations and Clean Water Act section 401 certifications. Our attorneys are honored to serve on NWHA’s Board of Directors and to have served as the association’s General Counsel.

Troutman Sanders’ hydropower practice is nationally focused, reaching every region of the United States. Our clients depend on our substantive expertise in FERC hydropower licensing, relicensing, dam safety, and license implementation and compliance—together with the unique technical and policy issues faced by hydropower projects and new development—to reach their strategic objectives. Our attorneys are regularly involved in the full range of energy regulatory, transactional, and environmental and natural resources issues affecting hydropower.

Thank You to this year’s media sponsor:

Stantec unites 22,000 people across 400 global offices to bring sustainable and reliable water and power solutions that improve the quality of life in communities around the world. It takes creativity, expertise, and collaboration to successfully bring together the many pieces needed for large-scale, life-changing infrastructure projects. Stantec brings highly experienced, multidisciplinary teams together to deliver innovative solutions that meet our client’s needs. Visit us at stantec.com or find us on social media.

New Mobile App for the Conference

New this year is an interactive mobile conference app. Download the app now to get access to the live polling, speaker bios, maps, live conference information, networking opportunities with other attendees, and surveys. You can download on Google Play Store or Apple App Store and search for NWHydroCon.
DOE HydroWIRES WORKSHOP

New Roles for Hydropower: Understanding Hydropower’s Capabilities to Support Grid Reliability and Environmental Outcomes

ROOM 302

DOE's recently launched HydroWIRES Initiative focuses on understanding, enabling, and improving hydropower's contributions to grid reliability, resilience, and integration.

This workshop will highlight the forthcoming Hydropower Value Study, including a case study that examined flexible operations in the Chelan Public Utility District under different hydrologic scenarios.

In addition, an interactive breakout segment will ask attendees to discuss and provide technical feedback and industry prospective on implications of changing power systems, operations optimization, balancing environmental outcomes with flexible operations, and hydropower fleet contributions to resilience.

Objective:

• Share project results and plans from DOE's HydroWIRES Initiative with the NWHA community
• Solicit feedback and inputs from the community to ensure that efforts under HydroWIRES address the right questions and are designed for maximum positive impact
• Network with prospective partners for current and future HydroWIRES projects

CONTINUED ON NEXT PAGE ➤
Tuesday, February 18

Draft Agenda:

1:00–1:05 pm  Welcome and Introductions
1:05–1:15 pm  Overview of DOE-WPTO Hydropower Program
Tim Welch (DOE-WPTO)
1:15–1:30 pm  Overview of HydroWIRES
Sam Bockenhauer (DOE-WPTO)
1:30–2:00 pm  Hydropower Value Study
Abhishek Somani (PNNL)
2:00–2:45 pm  Chelan PUD Case Study from Hydropower Value Study
Nathalie Voisin (PNNL)
Gregg Carrington (Chelan County PUD)
2:45–3:00 pm  Break
3:00–4:00 pm  BREAKOUT GROUP DISCUSSIONS
Potential breakout topics:
- Implications of Changing Power Systems
- Hydropower Operations Optimization
- Balancing Hydropower Flexibility with Environmental Outcomes
- Hydropower’s Contributions to Resilience
4:00–4:45 pm  Breakout Reporting
4:45–5:00 pm  Summary and Wrap-Up

1:00–7:00 p.m.  Exhibitor Setup

5:00–9:00 p.m.  NWHA Board Meeting
7:00 a.m.
Registration/Breakfast in Exhibit Area

8:00 a.m.
Welcome: NWHA President

OPENING KEYNOTE:
Debra Smith, General Manager and CEO, Seattle City Light

8:30–9:00 a.m.
Communicating Around Hydro
Continuing the messages and themes of the keynote address, this interactive panel will provide a chance for the audience to directly engage with NWHA in helping shape its communication priorities and messages to support hydropower through live polling. Results will be shared during the session.

FACILITATORS:
Heidi Wahto, Principal, Regulatory and Licensing Lead, Stantec
Kelsey Rugani, Director, Kearns & West
Kurt Miller, Executive Director, Northwest RiverPartners

9:00–10:15 a.m.
Green and Clean the Grid and Hydro
As the shift from fossil generation to renewable generation in the US accelerates via Renewable Portfolio Standards, individual generation companies update their Integrated Resource Plans, and consumers weigh in on energy preferences, green power is becoming an important market. This panel will discuss these new green markets, why they are important to their shareholders, how they are being modeled and challenges they are experiencing getting to 100% green power procurement.

MODERATOR:
Sandy Slayton, Principal Consultant, Impact Assessment, ERM

PANELISTS:
Rob Aldridge, Business Development Oregon, 3 Phases Renewable
Phillip de Mello, Senior Engineer, Energy Consulting, GE Power
Phillip Popoff, Manager, Resource Planning and Analysis, Puget Sound Energy

10:15 a.m.
Break — Exhibit Area
10:45 a.m.–12:00 p.m.

**Changes in the Hydro Playing Field: Legislative, Policy, and Regulatory Initiatives Affecting Large, Small and Pumped Storage Hydro**

Come find out how your projects may be affected by changes in state Renewable Portfolio Standards, climate policies, the 401 water quality certification process, and FERC regulatory and licensing changes.

**MODERATOR:**

*Hallie Meushaw*, Counsel, Troutman Sanders

**PANELISTS:**

*Dustin Till*, Assistant General Counsel, Pacific Power

*Suzanne Grassell*, Governmental Affairs Program Manager, Chelan County PUD

*Nate Sandvig*, Director, National Grid

*Malcolm Woolf*, President/CEO, National Hydropower Association

12:00 p.m.

**Lunch: NWHA Annual Membership Meeting and Presentation of the Pamela E. Klatt Award**

1:30–3:00 p.m.

**Changing Climate: How Operators and Hydrologists are Adapting Their Work**

When and how much water is available to generate hydroelectricity, design conveyance facilities, and balance resource needs is changing. In this panel, industry experts will discuss technical and operational strategies to address climate change unknowns. The session will showcase real case studies and applied research.

**MODERATOR:**

*Catrin Bryan*, Director of Dam Safety, McMillen Jacobs Associates

**PANELISTS:**

*John Chandler*, Water Resources Technical Lead, Puget Sound Energy—Case study on how PSE is incorporating climate research into current and future operations

*Patricia Dillon*, Principal Hydrologist, Northwest Hydraulic Consultants—How models are being used to incorporate climate change for dam safety, fisheries, and resource planning

*Greg Pederson*, Research Scientist, Northern Rockies Science Center—Role of climate variability in driving changes in water resources, and other biological and physical components of mountainous ecosystems in the western North America
3:00 p.m.

Break — Exhibit Area

3:30–5:00 p.m.

**Wildfires: From Prevention to Recovery**

Changes to our region's population, land use, urban/wildland interface, invasive species and climate mean that the traditional notion of wildfire management no longer exists. Utilities and land managers are facing increased pressure from the damages and liabilities related to longer and more serious fire seasons. This session will look at the range of wildfire-related issues: from aging equipment to land management practices, from proactive maintenance to wildfire safety programs, and beyond!

**MODERATOR:**

*Allison Murray*, Environmental Manager, Idaho Power

**PANELISTS:**

*Andy Delmas*, Acting Assistant Fire Management Officer, Bureau of Land Management, Idaho State Office

*Kendra Fallon*, Wildland Fire Program Coordinator, Columbia-Pacific Northwest Region, Bureau of Reclamation

*Chris Lautenberger*, Principal Engineer, REAX Engineering

*Alex Konopka*, Manager, Vegetation Management, Portland General Electric

5:00–6:00 p.m.

**NWHA Sponsored Social — Exhibit Hall**
7:15 a.m.
Registration/Breakfast in Exhibit Hall

8:00–9:00 a.m.

**Breakfast Club:**
**Topical Small Group Discussions**

Need informal guidance or advice on a hydro-related issue? Want to share your knowledge with industry colleagues on issues? Submit your issue/questions on Wednesday for small group discussions during breakfast on Thursday. Small group settings based on topic areas will discuss issues faced by your fellow conference attendees. Moderators and experts will be on hand to help facilitate discussions in areas of dam safety, engineering, communications/education, licensing, asset management, fisheries/water quality, land management, and permitting. So grab your breakfast in the exhibit hall and head to the tables set up in the foyer to get involved in topical discussions.

9:00–10:30 a.m.

**Existing Hydro Installed Base—Already Integrating Intermittent Renewables—But at What Cost?**

With over 100GW of hydro generation in the US, of which 21GWs are pumped storage, operators of this installed base are seeing increased operation cycles due to the integration of intermittent renewables and this new cyclic generation is causing issues. This panel of hydro operators and OEMs will share their current day operation and what issues they are starting to experience. OEMs will also share equipment cycling concerns and areas that need to be monitored.

**MODERATOR:**
**Matt Pevarnik,** Senior Sales Leader, GE Renewable Energy

**PANELISTS:**
**Ed Hanson,** Hydro Project Engineer, Power Generation, Pacific Gas & Electric
**Chad Croft,** Plant Manager, Portland General Electric
**Tom Brittain,** Senior Hydro Mechanical Engineer, Black & Veatch

10:30 a.m.
**Break — Exhibit Hall**
11:00 a.m.–12:00 p.m.

**Contracting for Success—Perspectives in Risk Management**

Managing capital projects involves assessing unknowns and finding appropriate mechanisms for mitigating risk; developers, utilities and contractors approach the problem from very different perspectives. This panel will explore creative ways that these projects get completed and what success means from all parties.

**MODERATOR:**
Craig Massie, Principal Project Manager, Jacobs

**PANELISTS:**
Tim Saville, Senior Engineering Consultant, Kleinschmidt Associates  
Patty Boyle, Generation Contracts Supervisor, Eugene Water and Electric Board  
Erik Steimle, Vice President, Rye Development  
Tim Foley, Vice President of Construction Business Development, McMillen Jacobs Associates

12:00–1:30 p.m.

**Lunch in Exhibit Area**

**Women in Hydro Luncheon in Beckler 302**

Attendees may attend the Women in Hydro Luncheon (no registration required) or enjoy lunch in the exhibit area and foyer.

**KEYNOTE:** Michelle Vargo, Deputy Chief Operating Officer, Seattle City Light

1:30–3:00 p.m.

**The Power of Collaboration**

This panel provides agencies with a platform to address the hydropower industry as a whole, with emphasis on the benefits of the ongoing collaboration and problem solving between the agencies and the industry.

**MODERATORS:**
Matt Love, Partner, Van Ness Feldman  
Steve Padula, Principal/Senior Consultant, Hydro Regulatory Services Inc.

**PANELISTS:**
Chad Brown, Water Quality Standards Unit Supervisor, Washington Department of Ecology  
Jennifer Quan, Branch Chief – Central/South Puget Sound, National Marine Fisheries Service  
David Turner, Chief, Northwest Branch Division of Hydropower Licensing, Federal Energy Regulatory Commission

3:00–3:30 p.m.

**Break — Exhibit Hall**
3:30–5:00 p.m.

Cyber Security: Navigating NERC, FERC and Your Friendly Neighborhood Cyber Security Audit

Bad operators are out there attacking your IT systems every minute of every day and night. They do not stop, they do not rest. This panel will review how bad operators commonly get into your IT system, what they can do and have done once they are in your system, common ways to defend your IT system, and how to prepare for a FERC cyber security audit which is designed to foil bad operators’ attempts to get into your IT system.

MODERATOR:
Marie Whyatt, Senior Researcher/Cybersecurity, Pacific Northwest National Laboratory

PANELISTS:
Michael Robinson, IT Security Services Manager, PacifiCorp
Collin Miller, Director of Cloud Security, Structured Communications
Liza Velez, Cyber Security Specialist–Division of Dam Safety and Inspections, FERC
Paul Haase, NERC CIP Compliance Lead, Seattle City Light

5:15–8:00 p.m.

A Seattle Celebration of 02/20/20 for all NWHA Attendees

All conference attendees are warmly invited to a culinary evening at the Palace Ballroom, a Tom Douglas event venue near the conference. Tom Douglas has earned the James Beard Award several times and is renowned for bringing Seattle onto the map as a top town for foodies. We are pleased to invite guests to this event and thank our sponsors of the conference for hosting this event.
7:30 a.m.
Registration/Breakfast in Exhibit Area

8:00 a.m.
NWHA Committee Meetings—All Attendees Welcome
See page 17 for meeting locations.

9:00–10:30 a.m.
Please Note the Following are Concurrent Sessions

Operations and Maintenance: Aging Assets, Changing Operational Requirements and Shared Knowledge

COLUMBIA A

Our speakers will present case studies and share experiences with respect to today’s operation and maintenance related challenges. They will also speak to modernization efforts that include appropriate instrumentation and monitoring that allows for increased knowledge and better decision making. The new Hydro Research Institute will also be discussed.

MODERATOR:
Mark Jones, Senior Management Consultant, HDR

PANELISTS:
Rick Werner, Operation Project Manager, Chief Joseph Dam, U.S. Army Corps of Engineers, Seattle District
Ty Ehrman, Managing Director, Power Production, Grant County PUD
Ram Veeraraghavan, Electrical Engineer Manager, Tacoma Power

Migrating Towards Success: Case Studies for Fish

BECKLER 302

Case studies and lessons learned, including balancing needs of diverse species will be covered in this session.

MODERATOR:
Alene Underwood, Manager–Fish and Wildlife Programs, Chelan County PUD

PANELISTS:
Steve Hemstrom, Senior Fish Biologist, Chelan County PUD—Lamprey
Tim Shibahara, Westside Biological Services Manager, Portland General Electric—Clackamas River Case Study
Crystal Ball, Executive Manager, Bonneville Power Administration
Barry Thom, Regional Administrator, National Marine Fisheries Services—Columbia Basin Partnership
10:30 a.m.

Break — Exhibit Hall

11:00 a.m.–12:30 p.m.

_Please Note the Following are Concurrent Sessions_

**Selling Mitigation to Operators and Management**

COLUMBIA A

It seemed like a good idea at the time: a “reasonable” PME measure in response to an agency concern, mandate, or identified resource impact. Until it got explained to the folks who have to implement it! This panel explores ways to get buy-in from managers and operators for measures that will inevitably cost money, foul screens, and confound the trading floor.

**MODERATOR:**

*Jeff Deason*, Section Manager/Project Manager, Kleinschmidt Associates

**PANELISTS:**

*Mike McCann*, Electric Generation Manager, Eugene Water and Electric Board

*Marcie Clement*, Water Resources Program Manager, Chelan County PUD

*Keith Underwood*, Natural Resources Manager, Tacoma Power

*Andy Welch*, Manager, Hydropower License Compliance, Northwestern Energy

**Natural Resources Legal and Policy Update**

BECKLER 302

Natural resources legal and policy update of regulatory and litigation developments relevant to the intersection of natural resource issues including fish and water quality for hydropower.

**MODERATOR:**

*Angela Levin*, Partner, Troutman Sanders, NWHA General Counsel

**PANELISTS:**


*Dennis Cakert*, Manager of Regulatory Affairs and Markets Policy, National Hydropower Association–NEPA reform proposal

*Gary Frazer*, Assistant Director–Ecological Services, U.S. Fish and Wildlife Services

12:30 p.m.

Closing Remarks, Evaluation Prize Winner Announced, Adjourn
Join a Committee of NWHA

The best way to dive in and get involved with NWHA as a member is joining a committee. This is one of the largest member benefits to ensure that NWHA is meeting members’ needs and working on issues that matter most.

We invite any interested members to join us at our committee meetings at **8:00 a.m. on Friday February 21st** to get involved and hear about the latest topics within each committee. You can sign up to be a member of a committee(s) at the conference or by emailing brenna@nwhydro.org. If you are interested in starting a committee or conversation, please also let us know so we can ensure NWHA is being timely and relevant with our programming efforts.

- Legislative/Regulatory
- Small Hydro
- Technical Operations
- Pumped Storage
- Young Professionals
- Communication
- Women in Hydropower
- Natural Resources Committee

NWHA Committees

Columbia A–front rows, west side
Beckler 302
Methow 307
Columbia A–back rows, east side
No meeting scheduled at conference
Columbia A–back rows, west sides
**Thursday Luncheon**, Beckler 302
**Thursday 3:30–4:30**, Beckler 302
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2020 Pamela E. Klatt Award

NWHA members nominate potential candidates for this award honoring Pam Klatt, in memory of her strong advocacy in promoting hydropower during her long-standing support of NWHA. The award recognizes individuals, like Pam, who have made significant contributions to the hydropower industry in the Northwest. For more information, visit nwhydro.org/awards.

The 2020 awardee will be presented the award at the luncheon on February 19th.

Past recipients —

2010  Jan Lee, NWHA
2011  Julie Keil, Portland General Electric
2012  Bruce Meaker, Snohomish PUD
2013  John “Jack” Snyder, McMillen LLC
2014  Patti Kroen, Kroen Consulting
2015  Charles “Chick” Sweeney, Alden Labs
2016  John Esler, Portland General Electric
2017  Steve Padula, McMillen Jacobs Associates
2018  Pat McCarty, Tacoma Power
2019  Gregg Carrington, Chelan County PUD

Scholarship Honors Industry Colleague

NWHA established the JULIE A. KEIL WOMEN IN HYDRO SCHOLARSHIP FUND in honor of Julie’s long-term commitment to the industry. In 2019, the scholarship committee selected Surabhi Karambelkar to receive the award. Applications are now being accepted for the 2020 scholarship.

Julie worked at Portland General Electric for over 25 years and was a mentor and industry leader. Many of the utilities and companies nationwide have been able to benefit from Julie’s leadership, her insight and her ability to work with agencies toward mutual goals.

You can honor Julie and help support the advancement of women in the hydropower industry by making a tax-deductible donation to the Julie A. Keil Women in Hydro Scholarship Fund. To donate with a debit or credit card or PayPal, go to nwhydro.org/scholarships.

You can also mail a donation to the Hydropower Foundation. Checks should be made payable to Hydropower Foundation with the notation Julie Keil Fund in the memo line.

Hydropower Foundation, 10118 Spotted Owl, Highlands Ranch, CO 80129
Win an Apple Watch!

Be sure and return your Evaluation Form with all sections completed by 12:30 on February 21, at the registration desk following the last panel, to be entered into the drawing for an Apple watch.

Join NWHA

Supporting NWHA through membership provides access to industry information, events and enhances the impact of the Northwest hydropower industry.

Members of NWHA represent leaders in the Northwest who understand that by being involved in NWHA they have a louder voice to advocate for hydropower, a space to share ideas, and a community to gain insight from. All employees of a member company will receive discounted registrations to all NWHA events. See page 22 for a list of upcoming events.

To learn more about NWHA member benefits and to join, visit www.nwhydro.org
This year the Hydropower Foundation, formerly, The Hydro Research Foundation, joins with the Northwest Hydroelectric Association on Wednesday, February 19th as part of the fourth annual Hiring for Hydro event. The event will be held at the Hyatt Regency Hotel in Seattle, WA, from 8:30 a.m. to 4:30 p.m.

Hiring for Hydro is a recruiting and educational event designed to attract and recruit bright, capable new workforce entrants, including: those interested in electronics, controls, industrial technology, electricians, electrician apprentices, meter and relay technicians, communications technicians, SCADA engineers, journeymen, energy systems engineering, utility resources, machinists, welders and transmission hydropower in the Pacific Northwest Region. At this event, pre-screened students, educators, hydro companies and their recruiters will meet for an action-packed day.

Participating Schools:

- Eastern Washington University
- Portland State University
- Seattle University
- Portland Community College
- Walla Walla Community College
- University of Washington–Seattle
- Washington State University–Vancouver
- University of Portland
- Delhi Technological University
- Wenatchee Valley College

The Hydropower Foundation invites NWHA conference attendees to an open house at Hiring for Hydro beginning at 3:00pm to see participating organizations and view first-hand, the work of Hiring for Hydro. The Hydropower Foundation is working hard to make a strong conduit between the hydropower industry and local schools and we welcome your ideas, input and support in this effort that benefits the industry. More information is at: hydrofoundation.org.

Thank you to our Program Sponsors:

- U.S. Bureau of Reclamation
- NWHA
- Chelan County PUD
- International Brotherhood of Electrical Workers
- Seattle City Light
- Electron Hydro
- Black & Veatch
- AECOM

Organizations interested in participating in this hiring event should contact the Program Director for the Hydropower Foundation, Bree Mendlin at Bree@hydrofoundation.org.

Learn more about this event at hydrofoundation.org/hiring-for-hydro
November 4-5, 2020
Northwest Regional Workshop
Hood River Inn
Hood River, Oregon
Tour of Bonneville Dam and Locks

February 17-19, 2021
2021 Annual Conference
Marriott Downtown Waterfront Hotel
Portland, Oregon
Thank you to our Board of Directors who spend countless hours planning, organizing and executing the strategy and mission of NWHA. They are responsible for setting the tone, content and identifying speakers for the Annual Conference. Please join us in thanking them.

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Southeast Alaska Power Agency

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ERM

Alene Underwood
Chelan County PUD

Heidi Wahto
Stantec

Lewis Wardle
WSP
Conference At-A-Glance

Breakfast, Lunch, Breaks and Socials will be in the Exhibit Area.

**Tuesday, February 18**
- 1:00–5:00 p.m. DOE HydroWIRES Workshop
- 1:00–7:00 p.m. Exhibitor Setup
- 5:00–9:00 p.m. NWHA Board Meeting

**Wednesday, February 19**
- 7:00 a.m. Registration/Breakfast in Exhibit Area
- 8:00 a.m. Welcome/Keynote
- 8:30–9:00 a.m. Communicating Around Hydro
- 9:00–10:15 a.m. Green and Clean the Grid and Hydro
- 10:15 a.m. Break in the Exhibit Area
- 10:45 a.m.–Noon Changes in the Hydro Playing Field
- 12:00 p.m. Lunch: Annual Membership Meeting, Klatt Award
- 1:30–3:00 p.m. Changing Climate
- 3:00 p.m. Break in the Exhibit Area
- 3:30–5:00 p.m. Wildfires: From Prevention to Recovery
- 5:00–6:00 p.m. NWHA Sponsored Social in the Exhibit Hall

**Thursday, February 20**
- 7:15 a.m. Registration/Breakfast in Exhibit Hall
- 8:00–9:00 a.m. Breakfast Club: Topical Small Group Discussions
- 9:00–10:30 a.m. Existing Hydro Installed Base—Already Integrating Intermittent Renewables—But at What Cost?
- 10:30 a.m. Break in the Exhibit Hall
- 11:00 a.m.–Noon Contracting for Success—Perspectives in Risk Management
- 12:00–1:30 p.m. Lunch in Exhibit Area and Foyer/Women in Hydro Luncheon
- 1:30–3:00 p.m. The Power of Collaboration
- 3:30–5:00 p.m. Cyber Security: Navigating NERC, FERC and Your Friendly Neighborhood Cyber Security Audit
- 5:15–8:00 p.m. A Seattle Celebration of 02/20/20 for all NWHA Attendees

**Friday, February 21**
- 7:30 a.m. Registration/Breakfast in Exhibit Area
- 8:00–9:00 a.m. NWHA Committee Meetings—All Attendees Welcome
- 9:00–10:30 a.m. Concurrent Sessions Operations and Maintenance: Aging Assets, Changing Operational Requirements and Shared Knowledge Migrating Towards Success: Case Studies for Fish
- 10:30 a.m. Break in the Exhibit Hall
- 11:00 a.m.–12:30 p.m. Concurrent Sessions Selling Mitigation to Operators and Management Natural Resources Legal and Policy Update
- 12:30 p.m. Closing Remarks, Evaluation Prize Winner Announced, Adjourn