



**2019 Conference Program Committee Report
Winter Trustees Meeting
Vancouver, WA**

2019 Conference Program – Vancouver, Washington

Moderators – Moderators have been identified for all of the conference sessions. Moderators were contacted by the program committee in early January. The moderators were instructed to contact their speakers to determine if there was any anticipated change in program content so the program committee could update CEU applications for a resubmittal deadline of mid-February. Moderators also communicated with speakers about room arrangements, presentation expectations and registration requirements.

Accreditation

Drinking Water - The conference program content has been accepted by Oregon, Washington and Idaho for 1.7 drinking water CEUs. The 1.7 CEUs includes five full-day preconference seminars, including a session new to the line-up “Using Excel to Perform Functions & Calculations for the Drinking Water Industry (0.6 CEUs).” Oregon accepted the program content in full, Washington and Idaho accepted the full program excluding some sessions from non-technical tracks.

Wastewater –Idaho approved an unprecedented 68 sessions for CEUs, allowing for a full 1.7 WW CEUs if curated properly. Oregon accepted the Wastewater track for 0.6 CEUs. CEU approval is still pending from Washington Ecology.

CEU Application Update – There have been five speakers who have pull out of the Conference as of February 1, 2019 (and potentially a sixth). The committee chairs have been able to find replacements for all but one of those presentations. The program committee will resubmit CEU applications to the States for program updates in the middle of February so there will be adequate time for review and approval prior to the conference.

Committee Meetings – The program committee will begin to schedule the committee meetings in the middle of February. Due to the limited number of available rooms at this venue, we will offer two shortened Thursday lunch sessions, allowing us to schedule up to ten 45-minute committee meetings instead of five hour long committee meetings. The committees hosting meetings offsite will still make

arrangements through the program committee so that all committee meetings can be included in signage, the conference app and in Water Matters.

Conference App – The Conference App is up to date with the current schedule and CEU offerings. The program committee will continue to provide updates for the app as changes are made.

Respectfully submitted,

Cheryl Capron, Chair

Elizabeth Edgar, Vice-Chair 2019 Vancouver

| 2019 Technical Program - Calendar Summary | | Oregon - 1.7 DW CEUs, ?? WW CEUs | | Idaho - 1.7 DW CEUs, 1.65 WW CEUs | | WDOH - 1.7 CEUs, WDOE ?? CEUs | |
|---|--|---|---|--|---|-------------------------------|-------------|
| Morning | Wednesday Morning Pre-Conference Seminars | | | | | | |
| Room | Spruce (45 max classroom) | Pine | Oak | Hemlock | Cedar (50 max classroom) | Discovery D | Discovery E |
| Hosting Committee - Moderator | Water Information Technology - Full Day Seminar | Water Treatment - Full Day Seminar | Engineering - Carmen Brown | Distribution | Training Coordination | | |
| Seminar | Using Excel to Perform Functions and Calculations for the Drinking Water Industry | Water Treatment Classroom | Utilizing Advanced Engineering Tools to Increase Value / Improve Delivery | Efficiency and Water Loss | Train the Trainer - Math for Operators | | |
| 8:30 | Overview of Best Practices and Interpreting Operator Records to Determine System Supply Patterns - Jason Van Gilder, Kevin Wyckoff | Groundwater Treatment - Overview of Constituents and Technologies - Lee Odell | Covington Water District's Hydro-turbine and Grant Success in Western Washington - Tom Keown, Andrew Williamson | Cherry-Picking Pump Stations: Consolidating System Assets for Operational Flexibility - Brian Casey, Jay Hummel, Nathan Rostad | Train the Trainer - Math for Operators - Jeff Lundt, Eric Schey | | |
| 9:00 | | | | Developments on Water Demand Projects from WRF - Michael Dirks | | | |
| 9:30 - 9:45 Break | | | | | | | |
| 9:45 | Water Industry Spreadsheet Calculators | Treatment for Iron and Manganese and Related Constituents - Milt Larsen | A Rock in the River: Navigating Obstacles in the Quest for Energy Efficiency at Hannah Mason Pump Station, Portland Water Bureau - Mike Carr, Kate Conrad, Keith Walker | Washington State Water Audit Pilot Results and the Future of Water Loss Tracking - Lucy Andrews, Reinhard Sturm, Will Jernigan | Train the Trainer - Math for Operators (continued) | | |
| 10:15 | | Formation, Degradation, and Treatment: Addressing Water Quality Challenges in Salem's ASR Wells - Ali Leeds, DeEtta Fosbury | Knowledge Development and Transfer - Sustainable Documentation - Alena Thurman, Allie Leeds, Gary Tollefson | Pioneering Water Loss Control – Groundbreaking Statewide Technical Assistance Programs - Reinhard Sturm, Will Jernigan, Lucy Andrews | | | |
| 10:45 - 11:00 Break | | | | | | | |
| 11:00 | Writing Water Industry Procedures, Tutorials and Training Documents | Vancouver Water Station No. 1 - TBD | How to Simulate Operation of a 320-MGD Conventional Water Treatment Plant - Qianru Deng | The Non Revenue Water Journey to Capturing More Revenue and Saving Costs - Travis Smith | Train the Trainer - Math for Operators (continued) | | |
| 11:30 | | Carol Curtis Water Treatment Plant - Lee Odell, Russ Knutson | The EchoWater Project: Leveraging Technology to Enhance Project Delivery - Leveraging BIM and 4D/5D Tools to Manage Multiple Construction Projects at an Operating Treatment Plant - Christina Brown, Ron Perkins, Vick Kyotani | | | | |

| Afternoon | Wednesday Afternoon Pre-Conference Seminars | | | | | | |
|-------------------|---|--|--|---|--|--------------------------|-------------|
| Room | Spruce | Pine | Oak | Hemlock | Cedar | Discovery D | Discovery E |
| Hosting Committee | Water Information Technology - Full Day Seminar | Water Treatment - Full Day Seminar | Engineering - Patrick Weber | Distribution | Training Coordination | | |
| Seminar | Using Excel to Perform Functions and Calculations for the Drinking Water Industry | Treatment Plant Tours | Case Studies and Lessons Learned | Planning & Modeling | Train the Trainer - Reading P&IDs | | |
| 1:00 | Lab | Travel to Carol Curtis Water Treatment Plant (1:00 - 1:30) | City of Vancouver Water Station 1 Upgrade Project - Site Electrical, Pump Station, Treatment, and Control System Replacement - Michelle Henry, Brittany Hughes | The Office Side of Water Main Flushing: How to Ensure Data is Collected and Distributed Efficiently During Annual Maintenance - Kevin Wyckoff | Train the Trainer - Reading Process and Instrumentation Diagrams - Jeff Lundt, Butch Perry | | |
| 1:30 | | | Water System Disinfectant Conversion - Chlorine Gas to On-site Sodium Hypochlorite Generation - Patrick Craney | Lessons From the Field - Design Improvements for Increased Sanitary Protection - Jolyn Leslie | | | |
| 2:00 - 2:15 Break | | | | | | | |
| 2:15 | Lab | Tour of Carol Curtis Water Treatment Plant - Russ Knutson (1:30 - 2:30) | How to Decide, the \$500M Question - David Peters | Drones Need Water Too: Meeting Industrial Water System Demands in Pendleton's Airport Area - Lael Alderman, Bob Patterson, Brian Ginter | Train the Trainer - Reading Process and Instrumentation Diagrams (continued) | | |
| 2:45 | | Travel (2:30 - 3:00) | A Tale of Two Tanks: Construction and Assessment of a New and an Existing Steel Reservoirs - Pat Van Duser, Casey Ferguson, Jeff Fuchs, Wes Bleisner | Adding Transmission Capacity Without Bigger Pipes - Camas Downtown Supply Operational Improvements - Daniel Reisinger, Sam Adams | | | |
| 3:15 - 3:30 Break | | | | | | | |
| 3:30 | Lab | Tour of Water Station No. 1 - Michelle Henry (3:00 - 4:00) | Keep It Down Out There! Pump Station Facility Noise Issues and Mitigation Design - Alan Burt, Joe Foote | Using GIS and Hydraulic Modeling to Save Time and Add Value - Doug Lane | Train the Trainer - Reading Process and Instrumentation Diagrams (continued) | | |
| 4:00 | | Travel to Conference Center (4:00 - 4:30) | Balancing Safety, Process Performance, and Costs in Design, Construction, and Operations - Kim Ervin | Combining Two Water Systems Into One - Matt Huang, Adam Bjornstedt | | | |
| Early Morning | Thursday Early Bird Sessions | | | | | | |
| Room | Spruce | Pine | Oak | Hemlock | Cedar | Discovery D | Discovery E |
| Hosting Committee | History - Catherine Howells | Public Officials - Len Englund | Engineering | Distribution | Research / Water Quality | | |
| 7:00 | History of NW Utilities: Portland and Vancouver - Catherine Howells, Tyler Clary | Public Engagement Provides Valuable Community Input in Milestone Bull Run Water Treatment Decisions - Libby Barg, David Peters | A Tale of Two Tanks: Water Facility Planning and Design in Idaho Falls - Dennis Galinato | Water Well Rehabilitation & Asset Management: Maintaining Well Performance and Water Quality - Michael Judkins | Lessons Learned from Salem's 2018 Algal Toxin Event - Jude Grounds, Tim Sherman | (Set up General Session) | |
| 7:30 | | Cross Connections We All Should Be Making Within Our Communities - Rich McConaghy, Suzanne Hebert | Fire and Water Unite: Providing Water System Improvements and Firefighter Training With a 103-foot-tall Reservoir - Marshall Meyer | Well Rehabilitation in Alaska Bush Country: Techniques to Improve Wellfield Productivity - Ida Fischer, John Koreny | | | |

| 8:00 - 9:30 | | | | | | | | | |
|--|--|---|--|--|---|--|--|--|--|
| Opening General Session - Discovery Ballroom | | | | | | | | | |
| Late Morning | | | | | | | | | |
| Thursday Morning Technical Sessions | | | | | | | | | |
| Room | Spruce | Pine | Oak | Hemlock | Cedar | Discovery D | Discovery E | | |
| Hosting Committee | Young Professionals | Water Resources - Kim Swan | Engineering - Doug Lane | Cross Connection - Tonya Reiss | Water Quality / Water Treatment | (Strike General Session, set up tech sessions) | | | |
| 9:45 | Cover Letter and Resumes: How To Stand Out in a Crowded Job Market - Kevin Wyckoff | Source Water Protection Basics 101 - Kimberly Swan | How Taking a Holistic Approach to Master Planning Can Provide Added Value - David Stangel | Nightmare on Worthen Street and Other Backflow Incidents - Jessica Shaw | Managing Cyanotoxins in Oregon - Kari Salis | | | | |
| 10:15 | | Developing a Source Water Protection Program in the Rogue River Basin - Craig Harper | Leveraging Industry Experience to Anticipate the Trade-offs of Alternative Water Supplies - Joanie Stultz, Lynn Stephens | Small Public Water System Cross Connection Control Program Development - Terry Pickel, Mary Howell | Blue-Green Algae Control from Source to Tap - Lee Odell | | | | |
| 10:45 - 11:00 Break | | | | | | | | | |
| 11:00 | Tapping into a Network: How to Make the Right Connections - Chris Young | The Path to Healthy Headwaters - Kimery Wiltshire | Feeding the Machine: Water Facilities to Keep Up With Development - Dennis Galinato | Test Fraud: How to Find Bad Testers and What Should/Can Be Done About Them - Scott Hallenberg | Combating Algae - Startup of the Bellingham Dissolved Air Flotation Facility - Joshua Kennedy | | | | |
| 11:30 | Capitalizing on Generational Strengths: A MurraySmith Case Study - Shelby Asato | How to Communicate to Ratepayers and Build Capacity for Source Water Protection - Cathy Kellon | Waterline Alignment Coordination for Land Use and Seismic Constraints - Tammy Cleys, Faride Abzade | | A Bacteria That Acts Like a Plant? Demystifying Cyanobacteria and Their Toxins - Bryan Black | | | | |
| Afternoon | | | | | | | | | |
| Thursday Afternoon Technical Sessions | | | | | | | | | |
| Room | Spruce | Pine | Oak | Hemlock | Cedar | Discovery D | Discovery E | | |
| Hosting Committee | Young Professionals | Water Resources - Andrew Austreng | Water Information Technology | Distribution | Water Treatment (Mac Gifford) | Cross Connection - Tonya Reiss | Public Information - Robin Pederson | | |
| 2:30 | Women in Leadership – Learning to Lead - Erika Schuyler | Reclaimed Water - New Water Solutions for Washington - Jacqueline Klug | Replacement of Legacy SCADA, Telemetry, & Control Systems: Planning, Budgeting, and Implementation - Rob Barrett | Seismic Facility Updates and Operational Planning - Mike Britch | Comparison of GAC vs PAC for DBP Reduction at Two WTPs With the Same Source Water - Todd Reynolds | State Regulations: Updates, Incidents, Differences - Bill Bernier (WA); Molly Keller & Scott Ruyle (OR); Anna Moody (ID) | What Do Your People Really Know? Summarizing Public Knowledge and Understanding of Drinking Water Issues in Today's Information-Rich World - Sean Thompson | | |
| 3:00 | Self-Guided Leadership - Blaze Your Own Trail - Michael Lubovich | Siting, Characterization, and Preliminary Design for Groundwater Recharge and Watershed Augmentation, Kitsap County and Suquamish Tribe, Kingston Facility - Jonathan Turk, Tadd Geisbrecht, Barbara Zaroff, Bob Gatz | Assessing Maturity of GIS Programs with the SLIM GIM Model - Kevin Wyckoff | Water Industry Seismic Guidelines and Practice Updates - Mike Britch | Treatment Considerations for Surface Water T&O Issues - Kim Ervin | | Communicating About Risk - Jaymee Cuti | | |
| 3:30 - 3:45 Break | | | | | | | | | |
| 3:45 | Keep Flowing, Don't Be Stagnant - Motivation Tools for Lifelong Success - Joanie Stultz, Kyle Wong | Domestic and Instream Flow Mitigation Strategies in Mission Creek - Mike Kaputa | Effective SCADA Graphics - Enable Situational Awareness - Michael Karl | Seismic Resilience of Two Water Lines: Case Studies in Everett, WA - Jeff Blakely, Richard Hefti | Preliminary Results of Portland's Treatment Pilot Study - Kimberly Gupta | How to Do a Site Survey and Obscure Things to Look For - Dale Baxmann | The Power of "We" - Nicki Pozos | | |
| 4:15 | How Saying Yes Can Derail Success - Lael Alderman | Evaluation of Municipal Residential Stormwater Reuse With Aquifer Storage and Recovery - Jason Melady | | Existing Steel Reservoirs – Retrofit or Build New? - Myron Basden | Portland Water Bureau's Improved Corrosion Control Treatment Project - Michelle Cheek | A Fully Web-Based Cross Connection Control Program: How TVWD Made the Leap - Joel Cary | | | |

| Morning | | Friday Morning Technical Sessions | | | | | |
|---------------------|--|--|--|---|--|---|---|
| Room | Spruce | Pine | Oak | Hemlock | Cedar | Discovery D | Discovery E |
| Hosting Committee | Water Resources - DeEtta Fosbury | Public Information - Robin Pederson | Engineering - Greg Loscher | Distribution | Water Quality | Utility Management - Diane Pottinger | Wastewater Treatment - Eric Schey |
| 8:30 | Managing Alluvial and Confined Aquifers Across the Washington-Oregon State Boundary in the Walla Walla Subbasin - John Warinner | Get Your Kit Together - Bonny Cushman | Is Alternate Project Delivery Appropriate for My Project? - Dick Talley | Storage Facility Inspection and Maintenance – Tools and Tips - Alex Chen, Joe Herold | Proactive Treatment Solutions for PFAS Drinking Water Contamination – Coupeville/Navy Fort Casey WTP Improvements - Esther Chang, Andrew Ryder | Transitional Leadership in the Electronic Age - Timothy Murrell | How to Optimize Polymer Efficiency for Better Sludge Dewatering - Two Case Studies - Yong Kim |
| 9:00 | Know No Boundaries: Creative Use of Storage for Trans-boundary Water Management in the Klamath Basin - Ronan Igloria, Jason Melady | Disaster Sanitation – What Can Water Utilities Do? - Libby Barg, Eric Frank | Part 1 of 2 - Progressive Design Build for a 5 MG Water Tank? TVWD's Unique Approach for Replacing a 5 MG Water Tank - Nicholas Augustus, Andrew Barrett, Corie Moolenkamp | Concrete Tank Rehabilitation: Why Coat Concrete Structures in Water and Wastewater Systems - Jeff Austin | PFOS/PFOA Contamination of Groundwater at the City of Airway Heights - Kevin Anderson | How to Attract and Keep a Younger Workforce - Catherine Howells, Bob Andersen | Low Cost, Rapid Nitrogen Removal in Wastewater - Kirsten Sims |
| 10:00 - 10:15 Break | | | | | | | |
| 9:45 | IWAC: Collaborative Management of a Shared Resource - Daniel Kegley | Using Planned Events to Normalize Utility ICS Activation - Jill Hoyenga, Jeannine Parisi | Part 2 of 2 - Progressive Design Build for a 5 MG Water Tank? TVWD's Unique Approach for Replacing a 5 MG Water Tank - Nicholas Augustus, Andrew Barrett, Arin Atiyeh, James Bledsoe | Leveraging AMI Data for Distribution System Modeling - Aurelie Nabonnand, Katie Nolan, Ed Wicklein | Corrosion Control Studies in the Pacific Northwest, Part 1 of 2: Use of Spreadsheet Tools to Understand Corrosion Control and Metals Release - Danbi Won | Retool Your Communications Program Utilizing Public Opinion Research - Marlys Mock, Libby Barg, Andrea Watson | Coordinating Equipment Manufacturer Package Control Systems and Existing Plant Control Systems - Bud Titus |
| 10:15 | A Look Beneath the Surface: Developing a Transboundary Groundwater Governance Framework and Agreement for the Memphis Sand Aquifer - Holly Mondo | | How to Use Design/Build For Your Next Project - Tom Paul | Improving Utility Operations through AMI Data Analytics - Robert Gustin | Corrosion Control Studies in the Pacific Northwest, Part 2 of 2 Corrosion Control Studies: Putting the Tools to Use - Virpi Salo-Zieman | | |
| 10:45 - 11:00 Break | | | | | | | |
| 11:00 | Portland's Multi-Faceted Approach to Groundwater Protection - Douglas Wise | Excellence in Communications Awards | CM/GC - Using Qualifications, Experience and Price to Select the Best Contractor - Erika Murphy | Navigating AMI - Central Point's Path to Selection - Micheal McClenathan, Nicole Kaiser, Steven Farabaugh | The Role of Contaminants of Emerging Concern in Aquifer Recharge Projects Using Reclaimed Water - John Koreny | Where Do Good Ideas Come From? - Nicki Pozos, Katney Baird | Best Practices for Sodium Hypochlorite Storage and Metering Systems - Jeffrey Zahller |
| 11:30 | Taming the Wild – Understanding Risks and Responses to Water Supplies from Wildfires - Glen Leverich, Rodrigo Prugue | | Alternate Project Delivery: Panel Discussion With Local Contractors - Advantages and Disadvantages of CM/GC, Progressive Design Build, and Design-Bid-Build - Erika Murphy, Steve Flett, Mark Bertolero, Tom Paul, TBD | Advanced Metering Infrastructure in Tacoma - Matt Hubbard | Operating Data and Lessons Learned from Sunny Slope Water Company's Microvi Nitrate Removal System - Kirsten Sims | Top Ten Public Works Leader Recipient - How, What, When, Where, & Why! - Bob Patterson | |

| Afternoon | Friday Afternoon Technical Sessions | | | | | | |
|--------------------------|--|--|--|---|-------------------------------------|---|--|
| Room | Spruce | Pine | Oak | Hemlock | Cedar | Discovery D | Discovery E |
| Hosting Committee | Research / Water Treatment | Conservation - Shelley Searle | Engineering - Faride Abzade | Distribution | SAC Competitions - Doug Priest | Utility Management - Diane Pottinger | Wastewater Treatment - Eric Schey |
| 1:30 | A Comparison of Treatment Technologies to Treat Algae Through Pilot Testing of a New Surface Water Source - Lynn Stephens, Ben Watson, Bill Persich, Joanie Stultz | A Look At Portland's Residential and Commercial - Portland Residential and Commercial Water Conservation Efforts - Jeff Sandberg, Penny Milton | Source Water Challenges and the Need for Cooperative Water Resource Policy on Guam - Michelle Sorensen | Lessons Learned in Using CIPP for Water Main Rehabilitation - Michelle Henry, Nathan Meuler | Gimmicks & Gadgets | Advancing Water Pipeline Asset Management Through Artificial Intelligence, Economic Life Modeling, and Condition Assessment - Andrew Lee , Darin Johnson | Headworks: Screening - Butch Perry |
| 2:00 | Treating Cyanotoxins with Activated Carbon - Ben Goecke | | Cocktail Napkin or Four-Inch Binder? Rightsizing Your Project Management Plan - Mark Graham | Returning Water System Confidence With CIPP - Brendan O'Sullivan, Michael Linn, Rob Lee | | In-Place Pipe Rehabilitation Utilizing Advanced 100% Solid High MIL Epoxy Lining Systems - Jeff Austin | |
| <i>2:30 - 2:45 Break</i> | | | | | | | |
| 2:45 | Using GAC and Ion Exchange Resins to Remove PFAS and Similar Compounds from Drinking Water - Ben Goecke | Love Your Graywater - Reuse and Communicating the Value of Water - Julie Smitherman | Smart Utility as a Technology Platform: From Design to Utility Management - Kevin Stively | 30-inch Water Main Rehabilitation Design Case Study - Daniel Buonadonna | Top Ops | Larger Facility Needs, Constrained Site, Oh My! - Jenna Anderson, Jay Hummel | Headworks: Grit Removal - Butch Perry |
| 3:15 | Development of Technologies for Effective PFAS Removal and Destruction - YuJung Chang | Making the Case for Non-Potable On-site Water Systems - Chris Wanner | Building a Framework to Optimize CIP Delivery for Honolulu Board of Water Supply - Chris Cleveland | Ice Pigging: Advanced Pipe Cleaning Technology - Jeff Austin | | Navigating a Boom: How Lakewood Water District Provides Information to External Stakeholders - Kevin Wyckoff | |
| <i>3:45 - 4:00 Break</i> | | | | | | | |
| 4:00 | Pacific Northwest Case Studies in Biofiltration - Austin Peters, Kari Duncan | Making System Improvements Through Tracking and Validating Non-Revenue Water - Jeanne Finger, Andrew Chastain-Howley | Construction: Expect the Unexpected - Matthew Perkins | Cutting In a 16-Inch Tee During a Water Advisory - Don Lovas | Subsection Advisory Council Meeting | Strategic Asset Planning at the City of Vancouver - Elaine Huber | Considerations in Monitoring and Pre-Treating Brewery Waste - Ryan Salem |
| 4:30 | Biofiltration - Lynn Stephens | Hassalo on 8th - Wastewater Reuse - Thomas Puttman | Owner Implementation of New Technology - John Bowen | Practical Guide to Locating Water Pipes - Brian Moss | | Using GIS to Assess Water Pipe Assets and Help Prioritize Capital Projects - Eugene Durshpek | |

Wednesday, May 1 - Pre-Conference Seminars

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|---|--|--|--------------------------------|--------------------------------|
| Location | Water Information Technology - Using Excel to Perform Functions and Calculations in the Drinking Water Industry | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Spruce - Wednesday Morning | 8:30 | Overview of Best Practices; Interpreting Operator Records to Determine System Supply Patterns | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Water Industry Spreadsheet Calculators | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | Writing Water Industry Procedures, Tutorials and Training Documents | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| <i>Must attend entire day for credit</i> | | | | |
| Location | Water Treatment | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Pine - Wednesday Morning | 8:30 | Groundwater Treatment - Overview of Constituents and Technologies | ID 0.1, OR 0.1, WA 0.1 pend | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Treatment for Iron and Manganese and Related Constituents | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Formation, Degradation, and Treatment: Addressing Water Quality Challenges in Salem's ASR Wells | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | Vancouver Water Station No. 1 | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 11:30 | Carol Curtis Water Treatment Plant | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire day for credit</i> | | | | |
| Location | Engineering - Utilizing Advanced Engineering Tools | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Oak - Wednesday Morning | 8:30 | Covington Water District's Hydro-Turbine and Grant Success in Western Washington | ID 0.1, OR 0.1, WA 0.1 pend | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | A Rock in the River: Navigating Obstacles in the Quest for Energy Efficiency at Hannah Mason Pump Station, Portland Water Bureau | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Knowledge Development and Transfer - Sustainable Documentation | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | How to Simulate Operation of a 320-MGD Conventional Water Treatment Plant | ID 0.05, OR 0.05, WA 0.05 pend | |
| 11:30 | The EchoWater Project: Leveraging Technology to Enhance Project Delivery - Leveraging BIM and 4D/5D Tools to Manage Multiple Construction Projects at an Operating Treatment Plant | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | |
| <i>Must attend entire session for credit</i> | | | ID 0.3, OR 0.3, WA 0.3 pending | ID 0.1 |
| Location | Water Information Technology - Using Excel to Perform Functions and Calculations in the Drinking Water Industry | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Spruce - Wednesday Afternoon | 1:00 | Analysis & Calculator Lab | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | 2:00 - 2:15 Break | | | |
| | 2:15 | Analysis & Calculator Lab (continued) | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | 3:15 - 3:30 Break | | | |
| | 3:30 | Analysis & Calculator Lab (continued) | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| <i>Must attend entire day for credit</i> | | | ID 0.6, OR 0.6, WA 0.6 pending | ID 0.6 |
| Location | Water Treatment | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Bus Loading Zone - Wednesday Afternoon | 1:00 - 1:30 Travel | | | |
| | 1:30 | Tour of Carol Curtis Water Treatment Plant | ID 0.1, OR 0.1, WA 0.1 pend | |
| | 2:30 - 3:00 Travel | | | |
| | 3:00 | Tour of Vancouver Water Station No. 1 | ID 0.1, OR 0.1, WA 0.1 pend | |
| | 4:00 - 4:30 Travel | | | |
| | <i>Must attend entire day for credit</i> | | | ID 0.5, OR 0.5, WA 0.5 pending |
| Location | Engineering - Case Studies and Lessons Learned | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Oak - Wednesday Afternoon | 1:00 | City of Vancouver Water Station 1 Upgrade Project - Site Electrical, Pump Station, Treatment, and Control System Replacement | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 1:30 | Water System Disinfectant Conversion - Chlorine Gas to On-site Sodium Hypochlorite Generation | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 2:00 - 2:15 Break | | | |
| | 2:15 | How to Decide, the \$500M Question | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 2:45 | A Tale of Two Tanks: Construction and Assessment of a New and an Existing Steel Reservoirs | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 3:15 - 3:30 Break | | | |
| | 3:30 | Keep It Down Out There! Pump Station Facility Noise Issues and Mitigation Design | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| 4:00 | Balancing Safety, Process Performance, and Costs in Design, Construction, and Operations | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | |
| <i>Must attend entire session for credit</i> | | | ID 0.3, OR 0.3, WA 0.3 pending | ID 0.1 |

| Location | | Distribution - Efficiency and Water Loss | | CEUs | | Location | | Distribution - Planning and Modeling (Aurelie Nabonnand) | | CEUs | |
|--|---------------------|--|--------------------------------|--------------------------------|--------------------------------------|--|---|--|---------|--------------------------------|---------|
| Time | Presentation | Water | Wastewater | Time | Presentation | Water | Wastewater | | | | |
| Hemlock - Wednesday Morning | 8:30 | Cherry-Picking Pump Stations: Consolidating System Assets for Operational Flexibility | ID 0.05, OR 0.05, WA 0.05 pend | | Hemlock - Wednesday Afternoon | 1:00 | The Office Side of Water Main Flushing: How to Ensure Data is Collected and Distributed Efficiently During Annual Maintenance | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | | |
| | 9:00 | Developments on Water Demand Projects from WRF | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | | 1:30 | Lessons From the Field - Design Improvements for Increased Sanitary Protection | ID 0.05, OR 0.05, WA 0.05 pend | | | |
| | 9:30 - 9:45 Break | | | | | 2:00 - 2:15 Break | | | | | |
| | 9:45 | Washington State Water Audit Pilot Results and the Future of Water Loss Tracking | ID 0.05, OR 0.05, WA 0.05 pend | | | 2:15 | Drones Need Water Too: Meeting Industrial Water System Demands in Pendleton's Airport Area | ID 0.05, OR 0.05, WA 0.05 pend | | | |
| | 10:15 | Pioneering Water Loss Control – Groundbreaking Statewide Technical Assistance Programs | ID 0.05, OR 0.05, WA 0.05 pend | | | 2:45 | Adding Transmission Capacity Without Bigger Pipes - Camas Downtown Supply Operational Improvements | ID 0.05, OR 0.05, WA 0.05 pend | | | |
| | 10:45 - 11:00 Break | | | | | 3:15 - 3:30 Break | | | | | |
| | 11:00 | The Non Revenue Water Journey to Capturing More Revenue and Saving Costs | ID 0.1, OR 0.1, WA 0.1 pend | | | 3:30 | Using GIS and Hydraulic Modeling to Save Time and Add Value | ID 0.05, OR 0.05, WA 0.05 pend | | | |
| Must attend entire session for credit | | | | ID 0.3, OR 0.3, WA 0.3 pending | ID 0.05 | Must attend entire session for credit | | | | ID 0.3, OR 0.3, WA 0.3 pending | ID 0.05 |

| Location | | Train the Trainer - Math for Operators | | CEUs | | Location | | Train the Trainer - Reading P&IDs | | CEUs | |
|--|--------------------------------|--|-----------------------------|-----------------------------|--|--|--|-----------------------------------|--------|-----------------------------|--------|
| Time | Presentation | Water | Wastewater | Time | Presentation | Water | Wastewater | | | | |
| Cedar - Wednesday Morning | 8:30 | Math for Operators | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | Cedar - Wednesday Afternoon | 1:00 | Reading Process and Instrumentation Diagrams | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | | |
| | 9:30 - 9:45 Break | | | | | 2:00 - 2:15 Break | | | | | |
| | 9:45 | Math for Operators (continued) | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | | 2:15 | Reading Process and Instrumentation Diagrams (continued) | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | | |
| | 10:45 - 11:00 Break | | | | | 3:15 - 3:30 Break | | | | | |
| 11:00 | Math for Operators (continued) | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | 3:30 | Reading Process and Instrumentation Diagrams (continued) | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | | | | |
| Must attend entire session for credit | | | | ID 0.3, OR 0.3, WA 0.3 pend | ID 0.3 | Must attend entire session for credit | | | | ID 0.3, OR 0.3, WA 0.3 pend | ID 0.3 |

Thursday, May 2 - Early Bird Sessions

| 7:00 - 8:00 am | | CEUs | | 7:00 - 8:00 am | | CEUs | | | |
|---|------|---|--------------------------------|---|---|---|--|--------------------------------|------------|
| Location | Time | Presentation | Water | Wastewater | Location | Time | Presentation | Water | Wastewater |
| Spruce - History | 7:00 | History of Northwest Utilities | ID 0.1, OR 0.1, WA 0.1 pend | | Hemlock - Distribution | 7:00 | Water Well Rehabilitation & Asset Management: Maintaining Well Performance and Water Quality | ID 0.05, OR 0.05, WA 0.05 pend | |
| | | | | | | 7:30 | Well Rehabilitation in Alaska Bush Country: Techniques to Improve Wellfield Productivity | ID 0.05, OR 0.05, WA 0.05 pend | |
| Must attend entire hour for credit | | | | Must attend entire hour for credit | | | | | |
| Pine - Public Officials | 7:00 | Public Engagement Provides Valuable Community Input in Milestone Bull Run Water Treatment Decisions | ID 0.05, OR 0.05, WA 0.05 pend | | Cedar - Research / Water Quality | 7:00 | Lessons Learned from Salem's 2018 Algal Toxin Event | ID 0.1, OR 0.1, WA 0.1 pend | |
| | 7:30 | Cross Connections We All Should Be Making Within Our Communities | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | | Must attend entire hour for credit | | | |
| Must attend entire hour for credit | | | | Must attend entire hour for credit | | | | | |
| Oak - Engineering | 7:00 | A Tale of Two Tanks: Water Facility Planning and Design in Idaho Falls | ID 0.05, OR 0.05, WA 0.05 pend | | | | | | |
| | 7:30 | Fire and Water Unite: Providing Water System Improvements and Firefighter Training With a 103-foot-tall Reservoir | ID 0.05, OR 0.05, WA 0.05 pend | | | | | | |
| Must attend entire hour for credit | | | | | | | | | |

Thursday, May 2 - Technical Sessions

| Thursday, May 2 - Technical Sessions | | | | |
|---|--|--|--------------------------------|------------|
| Location | Young Professionals, Moderator | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Spruce - Thursday Morning | 9:45 | Cover Letter and Resumes: How To Stand Out in a Crowded Job Market | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | Tapping into a Network: How to Make the Right Connections | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 11:30 | Capitalizing on Generational Strengths: A MurraySmith Case Study | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| Location | Water Resources (Kim Swan) | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Pine - Thursday Morning | 9:45 | Source Water Protection Basics 101 | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Developing a Source Water Protection Program in the Rogue River Basin | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | The Path to Healthy Headwaters | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 11:30 | How to Communicate to Ratepayers and Build Capacity for Source Water Protection | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | | |
| Location | Engineering | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Oak - Thursday Morning | 9:45 | How Taking a Holistic Approach to Master Planning Can Provide Added Value | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 10:15 | Leveraging Industry Experience to Anticipate the Trade-offs of Alternative Water Supplies | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | Feeding the Machine: Water Facilities to Keep Up With Development | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 11:30 | Waterline Alignment Coordination for Land Use and Seismic Constraints | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | | |
| Location | Cross Connection Control (Tonya Reiss) | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Hemlock - Thursday Morning | 9:45 | Nightmare on Worthen Street and Other Backflow Incidents | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Small Public Water System Cross Connection Control Program Development | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 10:45 - 11:00 Break | | | |
| 11:00 | Test Fraud: How to Find Bad Testers and What Should/Can Be Done About Them | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | |
| <i>Must attend entire hour for credit</i> | | | | |
| Location | Young Professionals, Moderator | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Spruce - Thursday Afternoon | 2:30 | Women in Leadership – Learning to Lead | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 3:00 | Self-Guided Leadership - Blaze Your Own Trail | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 3:45 | Keep Flowing, Don't Be Stagnant - Motivation Tools for Lifelong Success | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 4:15 | How Saying Yes Can Derail Success | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| <i>Must attend entire hour for credit</i> | | | | |
| Location | Water Resources (Andrew Austreng) | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Pine - Thursday Afternoon | 2:30 | Reclaimed Water - New Water Solutions for Washington | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 3:00 | Siting, Characterization, and Preliminary Design for Groundwater Recharge and Watershed Augmentation, Kitsap County and Suquamish Tribe, Kingston Facility | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 3:45 | Domestic and Instream Flow Mitigation Strategies in Mission Creek | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 4:15 | Evaluation of Municipal Residential Stormwater Reuse With Aquifer Storage and Recovery | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| <i>Must attend entire hour for credit</i> | | | | |
| Location | Water Information Technology | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Oak - Thursday Afternoon | 2:30 | Replacement of Legacy SCADA, Telemetry, & Control Systems: Planning, Budgeting, and Implementation | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 3:00 | Assessing Maturity of GIS Programs with the SLIM GIM Model | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| 3:45 | Effective SCADA Graphics - Enable Situational Awareness | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | |
| <i>Must attend entire hour for credit</i> | | | | |
| Location | Distribution (Doug Schlepp) | | CEUs | |
| | Time | Presentation | Water | Wastewater |
| Hemlock - Thursday Afternoon | 2:30 | Seismic Facility Updates and Operational Planning | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 3:00 | Water Industry Seismic Guidelines and Practice Updates | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 3:45 | Seismic Resilience of Two Water Lines: Case Studies in Everett, WA | ID 0.05, OR 0.05, WA 0.05 pend | |
| 4:15 | Existing Steel Reservoirs – Retrofit or Build New? | ID 0.05, OR 0.05, WA 0.05 pend | | |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | Water Quality / Water Treatment | | CEUs | |
|---|---|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Cedar - Thursday Morning | 9:45 | Managing Cyanotoxins in Oregon | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Blue-Green Algae Control from Source to Tap | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 11:00 | Combating Algae - Startup of the Bellingham Dissolved Air Flotation Facility | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 11:30 | A Bacteria That Acts Like a Plant? Demystifying Cyanobacteria and Their Toxins | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | Water Treatment (Mac Gifford) | | CEUs | |
|---|---|---|-------------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Cedar - Thursday Afternoon | 2:30 | Comparison of GAC vs PAC for DBP Reduction at Two WTPs with the Same Source Water | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 3:00 | Treatment Considerations for Surface Water T&O Issues | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 3:45 | Preliminary Results of Portland's Treatment Pilot Study | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 4:15 | Portland Water Bureau's Improved Corrosion Control Treatment Project | ID 0.05 pend, OR 0.05, WA 0.05 pend | ID 0.05 |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | General Session | | |
|---------------------------------------|-----------------|--|--|
| Discovery D - Thursday Morning | | | |

| Location | Cross Connection Control (Tonya Reiss) | | CEUs | |
|---|---|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Discovery D - Thursday Afternoon | 2:30 | State Regulations: Updates, Incidents, Differences | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 3:45 | How to Do a Site Survey and Obscure Things to Look For | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 4:15 | A Fully Web-Based Cross Connection Control Program: How TWWD Made the Leap | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |

| Location | General Session | | |
|---------------------------------------|-----------------|--|--|
| Discovery E - Thursday Morning | | | |

| Location | Public Information (Robin Pederson) | | CEUs | |
|---|---|--|--|------------|
| | Time | Presentation | Water | Wastewater |
| Discovery E - Thursday Afternoon | 2:30 | What Do Your People Really Know? Summarizing Public Knowledge and Understanding of Drinking Water Issues in Today's Information-Rich World | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 3:00 | Communicating About Risk | ID 0.05 pend, OR 0.05 pend, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:30 - 3:45 Break | | | |
| | 3:45 | The Power of "We" | ID 0.1, OR 0.1, WA 0.1 pend | |
| | <i>Must attend entire hour for credit</i> | | | |

Friday, May 3 - Technical Sessions

| Location | Water Resources (DeEtta Fosbury) | | CEUs | |
|---|---|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Spruce - Friday Morning | 8:30 | Managing Alluvial and Confined Aquifers Across the Washington-Oregon State Boundary in the Walla Walla Subbasin | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 9:00 | Know No Boundaries: Creative Use of Storage for Trans-boundary Water Management in the Klamath Basin | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | IWAC: Collaborative Management of a Shared Resource | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 10:15 | A Look Beneath the Surface: Developing a Transboundary Groundwater Governance Framework and Agreement for the Memphis Sand Aquifer | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | | |
| 10:45 - 11:00 Break | | | | |

| Location | Research / Water Treatment | | CEUs | |
|---|---|---|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Spruce - Friday Afternoon | 1:30 | A Comparison of Treatment Technologies to Treat Algae Through Pilot Testing of a New Surface Water Source | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 2:00 | Treating Cyanotoxins with Activated Carbon | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 2:30 - 2:45 Break | | | |
| | 2:45 | Using GAC and Ion Exchange Resins to Remove PFAS and Similar Compounds from Drinking Water | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 3:15 | Development of Technologies for Effective PFAS Removal and Destruction | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| <i>Must attend entire hour for credit</i> | | | | |
| 3:45 - 4:00 Break | | | | |

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|---|--|-----------------------------------|--|
| 11:00 | Portland's Multi-Faceted Approach to Groundwater Protection | ID 0.05, OR 0.05, WA 0.05 pend | |
| 11:30 | Taming the Wild – Understanding Risks and Responses to Water Supplies from Wildfires | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | |

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|---|---|-----------------------------------|--|
| 4:00 | Pacific Northwest Case Studies in Biofiltration | ID 0.05, OR 0.05, WA 0.05 pend | |
| 4:30 | Biofiltration | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | |

| Location | Public Information (Robin Pederson) | | CEUs | |
|-----------------------|---|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Pine - Friday Morning | 8:30 | Get Your Kit Together | ID 0.03, OR 0.05, WA 0.05 pend | |
| | 9:00 | Disaster Sanitation – What Can Water Utilities Do? | ID 0.05, OR 0.05, WA 0.05 pend | |
| | Must attend entire hour for credit | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Using Planned Events to Normalize Utility ICS Activation | ID 0.1, OR 0.1, WA 0.1 pend | |
| | Must attend entire hour for credit | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | Excellence in Communications Awards | ID 0.1, OR 0.1, WA 0.1 pend | |
| | Must attend entire hour for credit | | | |

| Location | Water Conservation (Shelley Searle) | | CEUs | |
|-------------------------|---|--|-------------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Pine - Friday Afternoon | 1:30 | A Look At Portland's Residential and Commercial - Portland Residential and Commercial Water Conservation Efforts | ID 0.1, OR 0.1, WA 0.1 pend | |
| | Must attend entire hour for credit | | | |
| | 2:30 - 2:45 Break | | | |
| | 2:45 | Love Your Graywater - Reuse and Communicating the Value of Water | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 3:15 | Making the Case for Non-Potable On-site Water Systems | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 3:45 - 4:00 Break | | | |
| | 4:00 | Making System Improvements Through Tracking and Validating Non-Revenue Water | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 4:30 | Hassalo on 8th - Wastewater Reuse | ID 0.05 pend, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |

| Location | Engineering | | CEUs | |
|---|---|---|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Oak - Friday Morning | 8:30 | Is Alternate Project Delivery Appropriate for My Project? | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 9:00 | Part 1 of 2 - Progressive Design Build for a 5 MG Water Tank? TVWD's Unique Approach for Replacing a 5 MG Water Tank | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Part 2 of 2 - Progressive Design Build for a 5 MG Water Tank? TVWD's Unique Approach for Replacing a 5 MG Water Tank | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 10:15 | How to Use Design/Build For Your Next Project | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | CM/GC - Using Qualifications, Experience and Price to Select the Best Contractor | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 11:30 | Alternate Project Delivery: Panel Discussion With Local Contractors - Advantages and Disadvantages of CM/GC, Progressive Design Build, and Design-Bid-Build | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| Must attend entire hour for credit | | | | |

| Location | Engineering | | CEUs | |
|---|---|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Oak - Friday Afternoon | 1:30 | Source Water Challenges and the Need for Cooperative Water Resource Policy on Guam | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 2:00 | Cocktail Napkin or Four-Inch Binder? Rightsizing Your Project Management Plan | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 2:30 - 2:45 Break | | | |
| | 2:45 | Smart Utility as a Technology Platform: From Design to Utility Management | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 3:15 | Building a Framework to Optimize CIP Delivery for Honolulu Board of Water Supply | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 3:45 - 4:00 Break | | | |
| | 4:00 | Construction: Expect the Unexpected - Matthew Perkins | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 4:30 | Owner Implementation of New Technology | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| Must attend entire hour for credit | | | | |

| Location | Distribution (Bill Reynolds) | | CEUs | |
|--------------------------|---|---|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Hemlock - Friday Morning | 8:30 | Storage Facility Inspection and Maintenance – Tools and Tips | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 9:00 | Concrete Tank Rehabilitation: Why Coat Concrete Structures in Water and Wastewater System | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Leveraging AMI Data for Distribution System Modeling | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Improving Utility Operations through AMI Data Analytics | ID 0.05, OR 0.05, WA 0.05 pend | |
| | Must attend entire hour for credit | | | |
| | 10:45 - 11:00 Break | | | |

| Location | Distribution | | CEUs | |
|----------------------------|---|---|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Hemlock - Friday Afternoon | 1:30 | Lessons Learned in Using CIPP for Water Main Rehabilitation | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 2:00 | Returning Water System Confidence With CIPP | ID 0.05, OR 0.05, WA 0.05 pend | |
| | Must attend entire hour for credit | | | |
| | 2:30 - 2:45 Break | | | |
| | 2:45 | 30-inch Water Main Rehabilitation Design Case Study | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 3:15 | Ice Pigging: Advanced Pipe Cleaning Technology | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | Must attend entire hour for credit | | | |
| | 3:45 - 4:00 Break | | | |

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|--|--|-----------------------------------|--|
| 11:00 | Navigating AMI - Central Point's Path to Selection | ID 0.05, OR 0.05, WA 0.05 pend | |
| 11:30 | Advanced Metering Infrastructure in Tacoma | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | |

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|--|--|-----------------------------------|----------------|
| 4:00 | Cutting In a 16-Inch Tee During a Water Advisory | ID 0.05, OR 0.05, WA 0.05 pend | |
| 4:30 | Practical Guide to Locating Water Pipes | ID 0.05, OR 0.05, WA 0.05 pend | <i>ID 0.05</i> |
| <i>Must attend entire hour for credit</i> | | | |

| Location | Water Quality | | CEUs | |
|---|---|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Cedar -Friday Morning | 8:30 | Proactive Treatment Solutions for PFAS Drinking Water Contamination – Coupeville/Navy Fort Casey WTP Improvements | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 9:00 | PFOS/PFOA Contamination of Groundwater at the City of Airway Heights | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Corrosion Control Studies in the Pacific Northwest, Part 1 of 2: Use of Spreadsheet Tools to Understand Corrosion Control and Metals Release | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 10:15 | Corrosion Control Studies in the Pacific Northwest, Part 2 of 2 Corrosion Control Studies: Putting the Tools to Use | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | The Role of Contaminants of Emerging Concern in Aquifer Recharge Projects Using Reclaimed Water | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 11:30 | Operating Data and Lessons Learned from Sunny Slope Water Company's Microvi Nitrate Removal System | ID 0.05, OR 0.05, WA 0.05 pend | |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | SAC Competitions | | CEUs | |
|--------------------------|---|----------------------|-----------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Cedar - Friday Afternoon | 1:30 | Gimmicks and Gadgets | ID 0.1, OR 0.1, WA 0.1 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 2:30 - 2:45 Break | | | |
| | 2:45 | Top Ops | ID 0.1, OR 0.1, WA 0.1 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| SAC Committee Meeting | | | | |

| Location | Utility Management | | CEUs | |
|---|--|--|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Discovery D - Morning | 8:30 | Transitional Leadership in the Electronic Age | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 9:00 | How to Attract and Keep a Younger Workforce | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Retool Your Communications Program Utilizing Public Opinion Research | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 10:45 - 11:00 Break | | | |
| | 11:00 | Where Do Good Ideas Come From? | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| 11:30 | Top Ten Public Works Leader Recipient - How, What, When, Where, & Why! | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | Utility Management | | CEUs | |
|---|--|---|--------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Discovery D - Afternoon | 1:30 | Advancing Water Pipeline Asset Management Through Artificial Intelligence, Economic Life Modeling, and Condition Assessment | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 2:00 | In-Place Pipe Rehabilitation Utilizing Advanced 100% Solid High MIL Epoxy Lining System | ID 0.05, OR 0.05, WA 0.05 pend | |
| | <i>Must attend entire hour for credit</i> | | | |
| | 2:00 - 2:15 Break | | | |
| | 2:45 | Larger Facility Needs, Constrained Site, Oh My! | ID 0.05, OR 0.05, WA 0.05 pend | |
| | 3:15 | Navigating a Boom: How Lakewood Water District Provides Information to External Stakeholders | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:15 - 3:30 Break | | | |
| 4:00 | Strategic Asset Planning at the City of Vancouver | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | |
| 4:30 | Introduction, Development and Use of InfoMaster AM Prioritization Tool | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 | |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | Wastewater Treatment (Eric Schey) | | CEUs | |
|---|---|--|----------------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Discovery E - Morning | 8:30 | How to Optimize Polymer Efficiency for Better Sludge Dewatering - Two Case Studies | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | 9:00 | Low Cost, Rapid Nitrogen Removal in Wastewater | ID 0.05, OR 0.05, WA 0.05 pend | ID 0.05 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 9:30 - 9:45 Break | | | |
| | 9:45 | Coordinating Equipment Manufacturer Package Control Systems and Existing Plant Control Systems | ID 0.1 pend, OR 0.1, WA 0.1 pend | ID 0.1 |
| | <i>Must attend entire hour for credit</i> | | | |
| 10:45 - 11:00 Break | | | | |
| 11:00 | Best Practices for Sodium Hypochlorite Storage and Metering Systems | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 | |
| <i>Must attend entire hour for credit</i> | | | | |

| Location | Wastewater Treatment (Eric Schey) | | CEUs | |
|---|---|-------------------------|-----------------------------|------------|
| | Time | Presentation | Water | Wastewater |
| Discovery E - Afternoon | 1:30 | Headworks: Screening | ID 0.1, OR 0.1, WA 0.1 pend | ID 0.1 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 2:30 - 2:45 Break | | | |
| | 2:45 | Headworks: Grit Removal | OR 0.1, WA 0.1 pend | ID 0.1 |
| | <i>Must attend entire hour for credit</i> | | | |
| | 3:45 - 4:00 Break | | | |
| 4:00 | Considerations in Monitoring and Pre-Treating Brewery Waste | OR 0.1, WA 0.1 pend | ID 0.1 | |
| <i>Must attend entire hour for credit</i> | | | | |