



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWIT5

**Title:** From Excel Chaos to Cloud Clarity: Tacoma Water's Data Makeover

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water successfully replaced its complex, error-prone, and manually-updated Excel-based water supply reporting system. This presentation outlines the "Water Data Makeover," a multi-year initiative that used Agile/Scrum methodologies to develop a modern, cloud-based reporting solution. The resulting RWSS Cloud Reporting platform now serves as a single, reliable source of truth for water production and supply data, mitigating risks and enabling new analytical capabilities. Attendees will learn about our journey through cross-functional collaboration and incremental delivery to replace a critical but outdated system.

**CEU Relevance Statement:** This session directly supports certified operators by detailing the transition to a more reliable and accurate data system for operational decision-making. The content is directly related to the management and maintenance of water systems, as it focuses on improving the integrity of foundational production and supply data. By ensuring operational data is accurate, automated, and auditable, the new system enhances the protection of public health.

**Primary Speaker/Author:** Robert Saul

**Company:** Tacoma Water

**Job Title:** Data & Analytics Manager

**Email:** rsaul@tacoma.gov

**Phone:** 2533070633

**Registrations or Certifications:** Master of Science (MS), Public Policy and Management

**Primary Job Responsibilities:** As the Data & Analytics Manager at Tacoma Water, Robert is a people manager who also serves as an internal consultant and project resource on critical data-related projects. He develops automated data pipelines to cloud-based platforms like Snowflake and utilizes tools such as Tableau, SQL, and Python to execute projects. He provides training on various tools, facilitates user groups, and supports data governance to advance the organization's data culture.

**Related Past Employment:** Robert previously worked as a Senior Consultant for EMI Consulting, where he managed and conducted program evaluations for utility-sponsored energy programs across North America. In that role, he presented findings to public utility commissions, analyzed large-scale datasets using R and SQL, and developed data visualizations in Tableau.



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**Date:** 5/7/2026

**Session ID:** TechWIT9

**Title:** SmartWater: Leveraging OT Data for Actionable and Predictive Insights

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Learn how SmartWater solutions are transforming utility operations through data-driven insights and predictive analytics. This session will showcase real-world examples of connected Operational Technology (OT) improving performance, efficiency, and service reliability. Explore strategies for making complex data more actionable, reducing alarm fatigue, using intuitive visualizations, and applying predictive maintenance analytics.

**CEU Relevance Statement:** This presentation is highly relevant to the operation and maintenance of water systems, as it demonstrates how SmartWater tools can improve system efficiency, reliability, and responsiveness through actionable data insights. Certified operators will learn how to optimize alarm strategies, visualize system performance, and use predictive analytics to proactively address equipment issues like pump degradation. By enhancing situational awareness and reducing unplanned downtime, operators can maintain more consistent water quality and system performance.

**Primary Speaker/Author:** Robin Wilson

**Company:** Brock Solutions

**Job Title:** Water/Wastewater Business Development Leader

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**Phone:** +1 (519) 589-7132

**Registrations or Certifications:** None

**Primary Job Responsibilities:**

Robin co-leads the Water Team at Brock Solutions, bringing over 19 years of hands-on experience in automation, control systems, and operational technology across the Water/Wastewater sector. He has designed and implemented connected OT solutions, led multidisciplinary project teams, and worked closely with engineers, operators, and maintenance staff to optimize system performance and reliability. His expertise in process monitoring, predictive analytics, alarm management, and data visualization equips him to translate complex technical concepts into practical, actionable strategies that water professionals can apply to improve efficiency, reduce downtime, and maintain consistent water quality.



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**Date:** 5/8/2026

**Session ID:** TechDist10

**Title:** Resilient Design: Infrastructure Solutions to Improve Reliability of Water Delivery in Southern NV

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation explores the design of two major pumping stations—Rice and Fayle—for the Las Vegas Valley Water District (LVVWD), developed in partnership with the Southern Nevada Water Authority (SNWA) as part of the Horizon Lateral Program. Distinctively, these distribution-level facilities are being integrated to enhance resiliency and flexibility in SNWA’s regional transmission system—an innovative collaboration between purveyor and wholesaler infrastructure. This approach not only strengthens interconnectivity across aging distribution zones but also provides adaptive capacity to respond to uncertain long-term demand trends. The design and planning strategies offer replicable insights for utilities navigating similar infrastructure and regulatory challenges across the Pacific Northwest.

**CEU Relevance Statement:** This presentation is highly relevant to the operation and management of water systems by demonstrating how integrated pumping station design enhances system resiliency, redundancy, and adaptability to shifting water demands. Certified operators can apply these insights to optimize inter-zone water transfers, improve infrastructure flexibility, and address site-specific challenges—all of which support reliable water supply and protect public health. The adaptive planning strategies showcased also help operators respond effectively to conservation-driven demand reductions, ensuring continued water quality and service reliability.

**Primary Speaker/Author:** Courtney Thomas

**Company:** Black & Veatch

**Job Title:** Design Engineering Manager

**Email:** ThomasC@bv.com

**Phone:** 530-417-7861

**Registrations or Certifications:** P.E., ENV SP

**Primary Job Responsibilities:** A Design Engineering Manager at Black & Veatch leads multidisciplinary teams through all phases of complex infrastructure projects, including feasibility studies, detailed engineering, construction support, and commissioning. This role involves coordinating with project managers and stakeholders to ensure technical alignment, quality standards, and schedule adherence—particularly for large-scale EPC (Engineering, Procurement, and Construction) projects. The manager also drives innovation through digital engineering tools and BIM modeling, while solving site-specific challenges in water treatment and industrial infrastructure.



# PNWS-AWWA Water 2026

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**Date:** 5/6/2026

**Session ID:** PCEng6

**Title:** Impacts of Siting Water Infrastructure in Flood-Prone Areas, A Case Study of the Willamette Valley

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Critical water infrastructure that has successfully served communities for centuries is becoming a liability across the United States due to recent history's once in a lifetime flood events becoming today's common events due to changes occurring on our planet. Siting of water infrastructure in flood-prone areas can have severe consequences, both understood and unintended. This presentation will summarize considerations for siting water infrastructure in a flood-prone area, discuss mitigation measures against flood events, and evaluate case studies of floodplain siting consequences in the Willamette Valley System.

**CEU Relevance Statement:**

- Understand the importance of flood prevention measures and impacts of flooding on water infrastructure including design and operational considerations.
- Understand the risks and have knowledge to develop contingency operational plans for water treatment in a flood-prone area.

**Primary Speaker/Author:** Corey Kipp

**Company:** Carollo Engineers

**Job Title:** Senior Water Treatment Engineer

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**Phone:** 9138086074

**Registrations or Certifications:** PE

**Primary Job Responsibilities:**

- Water treatment engineer at Carollo Engineers working on design and operations optimization of drinking water treatment plants.
- Carollo project engineer for studying expected impacts of flood management risks and developing recommended response and operational strategies for treating water in a flood-zone impacted area.

**Related Past Employment:**

- Water treatment engineer at Burns & McDonnell responsible for designing and executing water treatment projects within the power industry.
- Ultrapure water treatment engineer at Intel responsible for overseeing operations, maintenance, and startup of water treatment equipment utilized in the semiconductor industry.



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**Date:** 5/7/2026

**Session ID:** TechUM9

**Title:** Leadership in Crisis: Rebuilding Trust and Infrastructure at Castle Pines North

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In 2021, a utility owning/operating a 5 MGD groundwater treatment plant abruptly lost its sole operator, revealing severe neglect. After limping the plant through the summer and a boil water notice, the utility faced the daunting task of upgrading critical assets during a scheduled 6-month shutdown, while simultaneously facing pandemic supply chain issues, all without record drawings of the facility.

With public trust waning, the utility embedded a team of contractors and consultants for 6 months to bring the WTP back online. Within months, the team replaced vertical turbine pumps and valves, installed chemical feed systems, and a new MCC- no small feat given supply chain issues. The team then pivoted to develop a capital improvement and staffing plan, completing 4 capital improvement projects, conducting condition assessments, developing record drawings and smart P&IDs, and building the asset hierarchy and work order management system.

**CEU Relevance Statement:** This presentation will focus on the leadership needed to build a swift and effective response team under emergency conditions. Through a case study, attendees will learn about the technical details of assembling a utility crisis response team, engineering and implementing facility upgrades, and supply chain management. Attendees will also learn how a peer utility managed staffing vulnerabilities, succession planning, and documentation of institutional knowledge to prevent future similar crises while prioritizing building community trust and transparency with ratepayers.

**Primary Speaker/Author:** Alex Page

**Company:** Kennedy Jenks

**Job Title:** Deputy Water Practice Lead

**Email:** AlexPage@KennedyJenks.com

**Phone:** 916.612.1744

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Alex serves as both the Deputy Water Practice Lead and Client Service Manager at Kennedy Jenks. She works in planning, design, and construction management of potable, non-potable, and advanced water treatment projects.



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**Date:** 5/8/2026

**Session ID:** TechEng27

**Title:** PDB in Action: Tacoma Water's First Step in the Pipeline 1 Program

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water is delivering the Canyonfalls Creek Pump Station (CCPS) Project using Progressive Design-Build (PDB) delivery. This project marks the first capital investment in Tacoma's Pipeline 1 (P1) pressurization program. The construction of CCPS and associated infrastructure will enable temporary operation of P1—one of the City's critical transmission mains—during future upgrade efforts. This session will explore the rationale behind the City's selection of PDB delivery for the CCPS Project, and share key steps, insights, and lessons learned from the procurement and design phases.

**CEU Relevance Statement:** This presentation is designed for water industry professionals—including decision-makers, capital project managers, engineers, operators, and utility staff—who are involved in planning, procuring, designing, or constructing capital projects. It provides essential knowledge and practical insights into alternative delivery methods, specifically Progressive Design-Build (PDB), and prepares participants to engage effectively in processes that differ from traditional approaches. The content supports professional development by enhancing competencies in project delivery strategy, interdisciplinary collaboration, and implementation practices.

**Primary Speaker/Author:** Alicia Flatt

**Company:** Tacoma Public Utilities - Water

**Job Title:** Principal Engineer

**Email:** aflatt@tacoma.gov

**Phone:** 253.320.1189

**Registrations or Certifications:** PE, Associate DBIA

**Primary Job Responsibilities:** Alicia Flatt is a Principal Engineer at Tacoma Water, serving in the Planning and Engineering Division. With 14 years of civil engineering experience, she leads a team focused on distribution system design and capital projects that support water delivery. As program manager for the 30-year Pipeline 1 Pressurization and Capital Improvements Plan, she guides long-term infrastructure strategy and execution.



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**Date:** 5/6/2026

**Session ID:** PCWR4

**Title:** Washington State Water/Wastewater Funding Opportunities

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This session will provide an overview of water and wastewater funding opportunities in the State of Washington, an overview of different funding programs, and resources available through the Infrastructure Assistance Coordinating Council (IACC) to help infrastructure owners navigate the funding systems. The session will also detail the open or upcoming funding opportunities with the Washington State Public Works Board.

**CEU Relevance Statement:** This session will help water and wastewater system owners and managers plan for infrastructure upgrades by accessing funding opportunities.

**Primary Speaker/Author:** Amie Smith

**Company:** Small Communities Initiative, WA Department of Commerce

**Job Title:** Program Lead

**Email:** amie.smith@commerce.wa.gov

**Phone:** 564-669-8596

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Amie has worked for the Department of Commerce Small Communities Initiative since March of 2024. She helps small water and sewer entities find creative solutions to complex challenges.

**Related Past Employment:** Prior to this, she managed a water and sewer district in Lewis County for eight years. As the District Manager, she brought the district from the brink of insolvency to a flourishing, self-sustaining utility through adaptive, deliberate financial management practices.



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**Date:** 5/8/2026

**Session ID:** TechEng20

**Title:** Navigating Complexity: Coordination Strategies for Cascade Groundwater Alliance Package 3

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation explores the operator-centric, collaborative approach behind the construction of a new 1.9 MG reservoir, a new 4.3 MGD drinking water treatment facility, and capacity upgrades for an existing pump station in Portland, OR. The success of this project hinged on three-way communication among engineering, operations, and construction teams to balance interdependent responsibilities and complex sequencing needs. Careful coordination during a utility power switchover, pump station startup, and generator commissioning minimized shutdown time and ensured successful operational transitions, despite tight scheduling constraints. Key lessons include the benefits of a shared understanding of sequencing priorities and how operator-informed contingency plans help navigate challenges while on a deadline.

**CEU Relevance Statement:** This presentation supports drinking water operators by demonstrating how three-way collaboration during facility operational transitions during construction directly impacts water system reliability and performance. Attendees will learn how operator input on sequencing and contingency planning can reduce downtime, prevent water quality disruptions, and ensure regulatory compliance. These practices support efficient project delivery and safeguard drinking water infrastructure.

**Primary Speaker/Author:** Natalie Petersen

**Company:** Jacobs Engineering Group

**Job Title:** Civil Engineering Professional

**Email:** natalie.petersen@jacobs.com

**Phone:** 541-441-9795

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** As a junior civil engineering professional, I support a wide range of water infrastructure projects across the Pacific Northwest including pipelines, drinking water and wastewater treatment facilities. My responsibilities include assisting with project management, data analysis, and utility coordination. In the field, I regularly provide engineering services during construction through site observations and inspections to ensure the safe, and compliant construction of water system infrastructure.

**Related Past Employment:** I joined Jacobs in 2023 as a water engineering intern and transitioned to a full-time role in 2025 after graduating with a bachelor's in civil engineering. Previously, I interned at Grayling Engineers in 2020 and worked as a researcher for Portland State University's Center for Climate and Aerosol Research in 2021.



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**Date:** 5/8/2026

**Session ID:** TechDist16

**Title:** What to Expect in the upcoming ASCE Manual of Practice on Seismic Design of Buried Pipelines

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The American Society of Civil Engineers (ASCE) is preparing a Manual of Practice (MOP) on Seismic Design for Water and Wastewater Pipelines. This guide will outline a prescriptive method, with design tables, to address seismic hazards such as transient and permanent ground deformations, landslides, liquefaction, and fault rupture, streamlining the design process for common pipelines. Pipelines in high seismic risk areas, however, will still need site-specific analysis. The presentation highlights major aspects of the upcoming MOP release.

**CEU Relevance Statement:** Attendees will learn why seismic design for water and wastewater pipelines is essential for post-disaster service. The presentation covers hazard levels, subsurface conditions, pipeline criticality, prescriptive seismic design methods, and detailed site-specific analysis. Utility professionals, engineers, operators, and public officials will find this session valuable.

**Primary Speaker/Author:** Sri Rajah

**Company:** CDM Smith

**Job Title:** Principal Engineer and Discipline Leader for Seismic Analysis & Design

**Email:** rajahs@cdmsmith.com

**Phone:** +1-425-229-3952

**Registrations or Certifications:** Ph.D., P.E., G.E., P.Eng., ENV SP, BC.PLW, F.ASCE

**Primary Job Responsibilities:** Dr. Rajah, a national leader in North American pipeline engineering with over 30 years of civil, technical, and project management experience, specializes in structural, geotechnical, seismic, and hydraulic aspects. As principal engineer and discipline leader at CDM Smith, he provides expertise in seismic analysis and design, technical reviews, and management of complex soil structure interaction and failure investigations for underground and above ground structures.

**Related Past Employment:** He has served as national technical leader for large diameter pipeline and dam designs, providing technical reviews, complex analyses, and management support for soil structure interaction and failure investigations of various structures.



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**Date:** 5/8/2026

**Session ID:** TechEng16

**Title:** Pump it Up: An Innovative Approach to Enhancing Water Infrastructure Resiliency

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation delves into critical elements and challenges of pump design, emphasizing managing high discharge head, designing for reliability, allowing room for future expansion, mitigating transient pressures through the implementation of a flywheel, The benefits of performing a physical model to identify potential flow instabilities and integrating these findings into a practical design.

As a case study, the presentation further examines the Davis Aqueduct Reach 1 Pump Station and Intake Structure project for the Weber Basin Water Conservancy District. This project highlights efforts to build system resilience for the 700,000 people it serves. Key components include developing an intake structure engineered to minimize debris accumulation, optimize pump reliability, reduce start-up time, and ensure simplified maintenance.

**CEU Relevance Statement:** This presentation explores several key design considerations and innovative solutions used to develop resilient pump stations and intake structures. The presentation dives into the "why" behind essential design criteria utilized to select and size pumps and how these decisions (made early in the design process) affect the operation of a pump long term. It further provides a basis in which key personnel within an organization may use to more actively participate in discussions of these parameters during the design process to provide perspective specific to their organization and responsibilities.

**Primary Speaker/Author:** Jake Himebaugh

**Company:** Brown and Caldwell  
Process Mechanical Drinking Water

**Job Title:** National Specialty Leader -

**Email:** [jhimebaugh@brwncald.com](mailto:jhimebaugh@brwncald.com)

**Phone:** 8016565037

**Registrations or Certifications:** P.E.

**Primary Job Responsibilities:** As a Senior Professional Process Mechanical Engineer, my responsibilities include leading technical design and project execution for water infrastructure systems, including treatment plants, pump stations, and pipelines. My responsibilities also include work within the Drinking Water sector at a National level within Brown and Caldwell as a National Specialty Leader, specifically in talent development, organizational growth, mentoring emerging leaders and shaping drinking water standards used within BC nationwide.

**Related Past Employment:** Prior to joining Brown and Caldwell, I worked for a large original equipment manufacturer specializing in water treatment. I served as a Senior Engineer over multiple product lines with equipment installations found throughout the United States and Worldwide.



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**Date:** 5/8/2026

**Session ID:** TechWR11

**Title:** Legal Issues in Water Reuse in Washington, Oregon, and Idaho

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will focus on the legal framework affecting reuse of water in Washington, Oregon, and Idaho. Topics covered will be (1) water rights framework affecting reuse in each state (2) state-specific programs for water reuse (3) challenges in implementing water reuse programs under each state's respective legal framework. The presentation can also provide an update on Washington and Oregon municipal water law policy following the reuse section.

**CEU Relevance Statement:** The presentation will provide a basic overview of the legal framework for the operation of water reuse facilities, focusing on water rights considerations and available regulatory programs. Certified operators may use the program to inform decisions regarding planning for future water reuse facilities and to understand legally available options for beneficial reuse of wastewater. The policy update will assist certified operators in understanding future legislative and administrative actions that could affect planning for water reuse facilities.

**Primary Speaker/Author:** Natalie Reid

**Company:** Van Ness Feldman LLP

**Job Title:** Attorney

**Email:** nreid@vnf.com

**Phone:** 206-561-3376

**Registrations or Certifications:** None

**Primary Job Responsibilities:** As an environmental attorney, I provide legal advice to clients subject to environmental regulatory programs. I also represent clients in state and federal court and in administrative adjudications.



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**Date:** 5/6/2026

**Session ID:** PCDist2

**Title:** Pipes, Patterns, and Predictions: Evergreening your System Management with Data Science

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Machine learning is emerging as the new best practice in water and wastewater asset management, offering far more accurate and adaptive risk predictions than traditional statistical models. As new data becomes available—such as inspection results, break history, or environmental conditions—the model continuously improves and refines its forecasts. Utilities are using these insights not only to prioritize maintenance and capital planning, but also to align projects across departments, reducing redundant work and cutting costs. This session highlights real-world examples of how ML is transforming planning, budgeting, and decision-making across the utility.

**CEU Relevance Statement:** This presentation demonstrates how machine learning supports the operation, maintenance, and management of water systems by identifying high-risk assets, optimizing inspection and repair schedules, and improving capital planning. Certified operators can use these insights to proactively prevent main breaks, reduce water loss, and prioritize work that protects water quality and public health. By continuously incorporating new data, the models help utilities respond to changing conditions and make better-informed, risk-based decisions. This leads to more efficient use of resources, improved system reliability, and enhanced regulatory compliance.

**Primary Speaker/Author:** Bridget Garlinghouse

**Company:** VODA.ai

**Job Title:** Director of Sales, West

**Email:** [bridget@voda.ai](mailto:bridget@voda.ai)

**Phone:** 5033581920

**Registrations or Certifications:** None

**Primary Job Responsibilities:** As Director of Sales at VODA.ai, I work with water and wastewater utilities to implement machine learning tools that improve infrastructure planning and asset management. I help clients translate technical insights into actionable strategies that reduce risk, optimize budgets, and protect public health. This includes coordinating with utility leaders, engineers, and operators to ensure successful adoption and measurable results.

**Related Past Employment:** Prior to VODA.ai, I worked in environmental engineering and business development roles focused on water quality and infrastructure solutions. I supported utilities with technology adoption, regulatory compliance, and long-term planning to improve system performance and sustainability.



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**Date:** 5/8/2026

**Session ID:** TechEng22

**Title:** Load and Behold: Key Updates to Structural Code Requirements

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The 2024 International Building Code introduces significant updates to structural design criteria, with major implications for water and wastewater infrastructure. Snow loads have been revised using nearly 30 years of new data and improved reliability metrics, resulting in substantial increases across much of the Pacific Northwest. These changes require more robust roof construction and may amplify seismic loads where snow-earthquake interaction is considered. Updated seismic provisions address prior shortcomings in ground motion estimates, and revised hazard maps and classification systems provide a more coherent approach for determining seismic parameters. Expanded geotechnical testing requirements are also expected to increase up-front engineering efforts and coordination across disciplines. This session will review key code changes, highlight project impacts, and offer insights to help owners and design professionals navigate the evolving regulatory landscape.

**CEU Relevance Statement:** This presentation is relevant to certified operators and utility managers responsible for planning, overseeing, or supporting capital improvement projects in water and wastewater systems. Structural resilience is critical to maintaining reliable service, protecting public health, and ensuring the safety and operability of essential infrastructure. The 2024 code changes directly affect the design and performance expectations for tanks, treatment facilities, and other water infrastructure, with implications for both new construction and upgrades. By understanding the latest code requirements, operators will be better equipped to support infrastructure decisions that enhance system resiliency and safeguard water quality and supply.

**Primary Speaker/Author:** Nicholas Welling

**Company:** Peterson Structural Engineers

**Job Title:** Project Manager

**Email:** nick.welling@psengineers.com

**Phone:** 425-418-1981

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** As Project Manager at Peterson Structural Engineers (PSE), you will lead technical design, support engineers, create proposals, coordinate with clients and contractors, and act as the main contact during construction. PSE Project Managers combine technical expertise with strategic project delivery to fulfill project and client requirements.

**Related Past Employment:** Nick Welling has been employed at Peterson Structural Engineers since graduating from Seattle University in 2017. While employed at PSE, Nick has served as the primary designer and project manager on various water and wastewater projects. Other market focuses include seismic evaluations and retrofits of existing structures and industrial system structural design.



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**Date:** 5/7/2026

**Session ID:** TechUM6

**Title:** Leading the Way: Developing People Leaders at Every Level of a Public Utility

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Seattle Public Utilities launched two complementary leadership programs to establish a shared language and foundational skillset for people leaders across the organization, from team leads to executive leadership. The Supervisor Training Program (STP) delivers SPU-specific content focused on operational responsibilities, policies, and expectations. The Leadership Development Program (LDP) emphasizes core people leadership skills such as coaching, psychological safety, feedback, and performance management. Together, these programs aim to strengthen leadership consistency and support a values-driven organizational culture.

**CEU Relevance Statement:** Effective leadership is critical to the operation and management of any water utility. This presentation demonstrates how SPU's leadership programs enhance consistency, accountability, and communication across all levels of leadership. By developing supervisory and people management skills, certified operators can improve team performance, reinforce safety and compliance, and support a culture that ensures reliable service delivery and protects community health.

**Primary Speaker/Author:** Jessica Rojas

**Company:** Seattle Public Utilities  
Manager

**Job Title:** Learning & Development

**Email:** [jessica.rojas@seattle.gov](mailto:jessica.rojas@seattle.gov)

**Phone:** 206.945.7552

**Registrations or Certifications:** None

**Primary Job Responsibilities:** As the Learning & Development Manager at SPU, I lead the strategy, design, and delivery of learning programs that support employee growth, leadership development, and workforce readiness. I oversee core initiatives, including new employee orientation, compliance training support through our Learning Management System, and the People Leader Programs, ensuring all efforts align with SPU's strategic goals. I also partner across the organization to assess training needs and implement solutions that strengthen performance and organizational culture.

**Related Past Employment:** In the private sector, I led L&D teams at Levi's, Nordstrom, Citigroup, and Amazon, serving as Director of Upskilling, L&D Manager, Sr. L&D OPs Manager, and Regional Training Manager. I've supported both global and regional organizations, leading geographically dispersed and culturally diverse teams to deliver impactful learning programs.



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**Date:** 5/8/2026

**Session ID:** TechUM15

**Title:** Developing a Digital Twin: Improved Access and Analysis of Siloed Data to Increase Efficiencies

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** For 24 years, the Willamette River Water Treatment Plant (WRWTP) in Wilsonville, OR, has consistently exceeded regulatory standards due to the robust plant design, but also the dedication of the operators who make all of the control decisions. SCADA is air-gapped from the internet to ensure cybersecurity. The question then is: how to best improve ready access to historical data in order to inform operators?

Begun in July, 2025, with the support of plant operations staff, Veolia's Hubgrade team took up the challenge with the following steps: Audit existing data uploaded to Hach WIMS; Build a Digital Twin 3-D model; Assess additional monitoring needs, feasibility, and costs; Decide on a process for uploading data from SCADA Historian; and Train operators on their use!

**CEU Relevance Statement:** For a water plant with SCADA controls air-gapped from the internet for cybersecurity, overcoming the barriers of siloed information in order to inform decisions is a challenge. But, operators need to be able to analyze data to make good decisions. The presentation covers how one facility provided easier access to trends, particularly looking back years to capture historic operations parameters, especially targeting seasonally variable surface water quality.

**Primary Speaker/Author:** Kim Reid

**Company:** Veolia

**Job Title:** Plant Manager

**Email:** kim.reid@veolia.com

**Phone:** 5038262633

**Registrations or Certifications:** Oregon WTO 4

**Primary Job Responsibilities:** As the manager and DRC of the 20 MGD water treatment plant serving Wilsonville and Sherwood, Oregon, Kim is responsible for the healthful quality of the water leaving the plant. This includes overseeing two supervisors and six operators for the 24/7 facility and monitoring process controls. She is responsible for budgeting, asset management, identifying a team for troubleshooting problems, and interacting with the public.

**Related Past Employment:** After achieving a Master's of Environmental Engineering, Kim worked in the Water Division of EPA Region IV and as a design engineer for site stormwater controls before changing to the drinking water field.



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**Date:** 5/6/2026

**Session ID:** PCEng8

**Title:** Developing a Site-Specific Seismic Design for Willamette Water Supply Program, Raw Water Facility

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Willamette Water Supply Program is a consortium of local agencies in the Tualatin Valley that aim to develop a new resilient water supply for the region. This work involves new pipelines, reservoirs, water treatment plants, and seismic retrofits/expansions to existing raw water facilities. The presentation will focus on how the design incorporated the program's unique level of service goals into a site-specific basis of design that met the intent of ASCE design guidelines for both retrofit and new structures, including a 56-foot-diameter embedded caisson. Throughout the presentation, we will cover hazard identification, developing practical mitigation strategies, and cost-benefit analysis. Key takeaways will include steps for understanding system-specific expectations for resilience, demystifying seismic analyses and design, and strategies to prepare infrastructure to be resilient.

**CEU Relevance Statement:** This presentation is highly relevant for engineers seeking PDH/CEU credit as it offers practical insights into applying ASCE seismic design guidelines to both new and retrofit infrastructure within a critical regional water supply program. Attendees will gain valuable knowledge on resilience planning, hazard mitigation, and cost-benefit considerations—key competencies for designing infrastructure that meets evolving performance expectations.

**Primary Speaker/Author:** Scott Schlechter

**Company:** GRI

**Job Title:** Principal

**Email:** msanfelipe@gri.com

**Phone:** 503-708-5334

**Registrations or Certifications:** PE, GE, BC.PE

**Primary Job Responsibilities:** As the President and Principal Engineer for the firm, he is responsible for providing both internal firm leadership and oversight and review of technical projects.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWR14

**Title:** Protecting Fisheries: Addressing Low Dissolved Oxygen and Algal Blooms in Island Park Reservoir

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** For decades, the Henry's Fork Foundation (HFF) has been collecting data on the Henry's Fork River to support its conservation efforts. Beginning in 2016, HFF expanded its program to include monitoring of Island Park Reservoir. Both the river and the reservoir are key habitats for a variety of trout species, which have made the region a famous destination for fishing, providing economic benefits through tourism and recreation. Recent data in Island Park Reservoir have revealed low dissolved oxygen (DO) concentrations in the hypolimnion. This, combined with warmer summer temperatures, threatens the trout populations, which prefer cooler water temperatures and require a DO concentration of 6.5 mg/L or higher to thrive. Additionally, harmful algal blooms (HABs) have been increasing throughout the reservoir, emphasizing the need for proactive source water management. Hypolimnetic oxygenation has been proposed as a solution to improve the habitat for fish populations and limit algal growth.

**CEU Relevance Statement:** This presentation is highly relevant to the management of surface water systems, particularly reservoirs that serve ecological, recreational, or water supply functions. It highlights how low dissolved oxygen levels and rising temperatures can degrade aquatic habitat and promote harmful algal blooms (HABs), both of which impact water quality and ecosystem health. Certified operators can use this information to implement or support hypolimnetic oxygenation and source water protection strategies that improve water quality, enhance fish habitat, and mitigate HAB risks. These efforts contribute directly to public health protection and sustainable water resource management.

**Primary Speaker/Author:** Ricky Wood

**Company:** Hazen and Sawyer

**Job Title:** Assistant Engineer

**Email:** ESWood@hazenandsawyer.com

**Phone:** 5417458733

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Assist drinking water and wastewater treatment projects.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT19

**Title:** Digging Deeper: Case studies on filter surveillance, filter excavation, and underdrain inspection

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Filter surveillance, including solids retention and backwash profiling can provide a great deal of good information about filter performance and health. But digging deeper; excavating the filter media down to the underdrain level, as well as inspecting filter underdrains from below provides even more insights into the condition and efficacy of the filter's media and underdrain system. This presentation will provide 'in-depth' lessons learned from four conventional water treatment plants –the Jordan Valley WTP in Salt Lake City, the Seattle's Tolt WTP, Tacoma Water's Green River Filtration Facility and the Polonio Pass Water Treatment Plant in Shandon, CA. It will also provide guidance and methods for safely accomplishing these activities.

**CEU Relevance Statement:** Granular media filters are a key part of many conventional water treatment systems. Improving overall understanding of the inner-workings of filters, by learning the value of in-depth inspection of the media and underdrains, learning how to spot problems, and troubleshooting techniques to improve operations based on the findings from these activities, can improve overall WTP operational efficiency as well as better protect public health.

**Primary Speaker/Author:** Austin Peters

**Company:** Carollo Engineers

**Job Title:** Design Manager

**Email:** apeters@carollo.com

**Phone:** 253-229-0440

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Austin Peters is a design manager and water treatment plant design lead at Carollo Engineers. Austin leads engineering teams in all manner of water treatment plant design and optimization activities, from facility assessments and optimization studies, to WTP expansions and greenfield WTP construction.

**Related Past Employment:** Over his nearly 20 year career Austin has conducted multiple filter studies, including condition assessments, filter coring, solids retention profiling, backwash profiling, filter excavations, underdrain inspections, and equipment and overall filter system evaluations. Additionally, they have lead the process and mechanical design of several new or upgraded filtration facilities.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWR17

**Title:** Climate-Based Modeling and Prioritization for Capital Planning: A Spokane Case Study

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Spokane Valley—Rathdrum Prairie Aquifer is the sole water supply source for the City of Spokane and surrounding communities. The City's obtains most of its groundwater from large-diameter caisson wells that penetrate only a short depth below the water table. After experiencing historically low summertime water levels in some caisson wells, the City commissioned a groundwater modeling analysis of the potential effects of future increased water demands and potential climates on groundwater levels at each well. The model identified a range of summertime water level declines that could arise 20 and 50 years into the future. This presentation will discuss the technical methods and results and how these results along with other variables such as social responsibility, affordability and sustainability criteria were developed, ranked, and applied into the City's multi-objective planning process, which prioritizes capital improvement requirements for the City's water system infrastructure.

**CEU Relevance Statement:** This presentation provides a case study to water managers and public officials of how using models to evaluate a spectrum of scenarios for future growth, climate, and aquifer conditions may increase prioritize capital improvement projects for its groundwater supply sources.

**Primary Speaker/Author:** Beryl Fredrickson

**Company:** City of Spokane Integrated Capital Management Program

**Job Title:** Senior Engineer

**Email:** bfredrickson@spokanecity.org

**Phone:** 509-625-6008

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Beryl Fredrickson is a senior engineer in the City of Spokane's department that leads all capital planning for the City. Beryl has 10XX years of experience in water supply engineering and currently serves as the Chair of the Washington Water Utility Council.

**Related Past Employment:** Beryl began her career working for AECOM in Spokane, WA and worked on the Combined Sewage Overflow Reduction program. She joined municipal government in 2016 at the City of Spokane, where she has worked on water, sewer, and stormwater capital system projects.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWR12

**Title:** Drought-Ready Communities: A County-Level Approach

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Drought does not spare small water systems and rural communities, yet their capacity to respond is often disproportionately limited. This session explores drought resilience planning in Marin and Modoc Counties in California, undertaken in response to state legislation, with a focus on risk and vulnerability assessments and actionable short- and long-term mitigation strategies. The contrasting contexts of the two counties – one wealthy, coastal county with limited groundwater, and the other more rural with greater groundwater reliability but fewer institutional resources – highlight the value of locally led planning, interagency coordination, and integration with sustainable groundwater management. Attendees will gain insights into community engagement methods that helped shape these plans, as well as adaptive implementation approaches that could inform regional resilience efforts for dispersed or underserved communities.

**CEU Relevance Statement:** This presentation provides drought risk assessment techniques for small water systems and domestic wells in rural and resource-limited settings. It helps operators identify vulnerabilities, prioritize risks, and coordinate with agencies to improve drought preparedness. The session also covers strategies to safeguard water quality and public health during drought through targeted monitoring, conservation, and treatment, supporting long-term system resilience.

**Primary Speaker/Author:** Bonnie Robison

**Company:** West Yost

**Job Title:** Senior Engineer

**Email:** brobison@westyost.com

**Phone:** (949) 981-5791

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Bonnie Robison is a Senior Engineer at West Yost with over a decade of experience in civil and environmental engineering, with a focus on water resource and water supply planning. She leads and supports county-wide drought resilience and urban water planning efforts, evaluating vulnerabilities, infrastructure capacity, and long-term supply reliability. Her work emphasizes regulatory compliance and community engagement to develop practical, sustainable strategies for managing water use.

**Related Past Employment:** Bonnie previously managed water and wastewater projects for municipal utilities, developed the City's Urban Water Management Plan, and contributed to regional groundwater initiatives under California's Sustainable Groundwater Management Act.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWQ1

**Title:** Future Proof Your Chlorine Facility - Chlorine Evaluations and Case Studies at SPU and Lake Oswego

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Many utilities are evaluating alternatives to chlorine gas and liquid bulk hypochlorite to address concerns with supply chain resiliency, operator safety, community safety, and chemical costs, among others. This presentation provides an overview and lessons learned to effectively evaluate alternatives and walks through the typical advantages and disadvantages of gas chlorine, liquid bulk hypochlorite, and on-site hypochlorite generation. We will discuss prioritization of non-monetary criteria with capital cost and life cycle cost, in addition to common pitfalls and lessons learned. Two case studies for Seattle Public Utilities Cedar Treatment Facility and Lake Oswego-Tigard Water Treatment Plant will demonstrate the decision factors and priorities for each of these facilities.

**CEU Relevance Statement:** Operation of legacy chlorine equipment can pose hazards or reliability issues due to single suppliers. This presentation is relevant in that it touches on the cost and non-cost components of chlorine systems and discusses how to gain consensus when making planning decisions for upgrades to infrastructure.

**Primary Speaker/Author:** Brian Rowbotham

**Company:** Jacobs

**Job Title:** Project Manager, Drinking Water Engineer

**Email:** brian.rowbotham@jacobs.com

**Phone:** 509-994-3310

**Registrations or Certifications:** MS, PE

**Primary Job Responsibilities:** Brian is a drinking water engineer and project manager with Jacobs. He assists clients with planning, design, and construction services for water treatment plants across the Western USA and has experience in the design of surface water and groundwater plants. He has experience with all phases of the design process.

**Related Past Employment:** Brian was previously at Stantec where he worked as a process/mechanical engineer for treatment plants across the western USA. He lead the design process and collaborated with discipline engineers to complete the design of treatment facilities.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechEng14

**Title:** Modernizing the RFP: Creating Clearer, Smarter, and More Defensible Selections

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Outdated Request for Proposal (RFP) practices can directly affect a utility's ability to procure the technologies, equipment, and services needed to maintain safe and reliable drinking water systems. This session features utility procurement leaders and consulting partners discussing how modernized RFPs can improve outcomes for critical drinking water projects—from treatment upgrades to distribution system improvements and digital tools like SCADA, AMI, or asset management platforms. Through presentations, panel dialogue, and audience Q&A, participants will learn how to craft clear, effective RFPs that encourage innovative solutions, reduce ambiguity, strengthen compliance with state and federal requirements, and secure the best-fit technologies to support system reliability and public health protection.

**CEU Relevance Statement:** Effective RFP practices are critical to ensuring that drinking water utilities procure safe, reliable, and compliant systems and equipment. This session helps operators and utility staff understand how modernized RFPs improve regulatory compliance, support documentation and audit readiness, and reduce operational and public health risks. Participants will gain practical insights on crafting clear, actionable requests that secure appropriate technologies and services to maintain system reliability, water quality, and consistent service delivery.

**Primary Speaker/Author:** Brian Murphy

**Company:** CDM SMith

**Job Title:** Client Service Lead

**Email:** murphybm@cdmsmith.com

**Phone:** 5038662203

**Registrations or Certifications:** PE, MS

**Primary Job Responsibilities:** Business development and client relations

**Related Past Employment:** Thirty-three years as consultant



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechWT10

**Title:** Tracking PFAS in Surface Water: Watershed to Treatment

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This work will present the data from two PFAS studies completed in the Denver Metro area: a watershed study and a PFAS media treatment study. In the watershed study, the variability of PFAS in the South Platte was evaluated over the course of one year at 19 sites. The levels of PFAS and their relationship with other water quality parameters, e.g., conductivity, will be discussed. The results from a corresponding PFAS treatment study at one of the utilities in the watershed area, City of Englewood, will also be discussed. The pilot study will show data comparing the performance of two granular activated carbons, one ion exchange resin, and two alternative medias (a surfactant-modified clay and a beta-cyclodextrin) in the combined filter effluent. The lessons learned from pilot operation will be discussed.

**CEU Relevance Statement:** With the upcoming US EPA MCLs, understanding the presence and variability of PFAS in a watershed can be critical to helping utilities understand if they need to implement treatment. The subsequent treatment of PFAS by adsorptive media, e.g., GAC, IX, and alternative adsorbents, has been infrequently evaluated in surface waters. This work will provide insights into operational challenges and media PFAS removal performance for one surface water utility in the Denver Metro Area.

**Primary Speaker/Author:** Caitlin Glover

**Company:** Stantec

**Job Title:** Senior Environmental Designer

**Email:** caitlin.glover@stantec.com

**Phone:** 2135983063

**Registrations or Certifications:** PhD

**Primary Job Responsibilities:** Caitlin primarily works on PFAS and potable reuse treatment projects, but is also a member of the research group at Stantec.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechEng8

**Title:** Improving Asset Management and Creating Operationsl Efficiencies

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Asset management programs deliver large amounts of data that can be leveraged to create operational efficiencies across the business. Covington Water District, like many utilities, has a lot of data but wasn't putting that data to its best use. In recent years we have leveraged systems to create efficiencies in business processes using this data in clever ways.

**CEU Relevance Statement:** This is relevant to operations, maintenance, and management of a water systems by teaching how various data sources can be leveraged to drive cost-savings and increased levels of service to stakeholders. Additionally, better data leads to better planning, and better planning leads to better outcomes for utilities that take the time to utilize data effectively.

**Primary Speaker/Author:** Chris Guest

**Company:** Covington Water District  
Supervisor

**Job Title:** Customer Service

**Email:** [chris.guest@covingtonwater.com](mailto:chris.guest@covingtonwater.com)

**Phone:** 2534869375

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Chris Guest has worked in water utilities for 14 years in various roles. He has bachelors in business management and holds numerous State of Washington certifications including; Water Distribution Manager 4, Water Treatment Plant Operator 2, and Cross Connection Specialist. He is currently working as the Customer Service Supervisor at Covington Water District where he provides oversight of the day-to-day activities related to customer support representatives, utility billing, receipting, meter reading installation and repair. Formerly, he worked as the Business Analyst at Covington Water District where he supported financial and business decisions regarding strategic planning, asset management, and process improvement.

**Related Past Employment:** Customer Service Supervisor, Business Analyst, Maintenance Lead, Water Treatment Plant Operator, Facility Operator, Meter Technician.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechPI4

**Title:** Transforming a Water Tower into a Civic Landmark in Mountlake Terrace

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** As the City of Mountlake Terrace prepares to recoat its 2.5-million-gallon steel standpipe in Jack Long Park, a unique opportunity has emerged: transforming critical infrastructure into a cultural and visual landmark. Prominently visible and located near a city park, the tank will receive new artwork in early 2026, timed to capitalize on increased regional visibility from the 2026 World Cup. The city and its consultant team are coordinating technical recoating needs with a public art overlay, balancing maintenance, safety, and aesthetics. This session explores the lessons learned from peer cities, community engagement models, and the logistical realities of implementing large-scale artwork on a functioning utility asset.

**CEU Relevance Statement:** While the visual enhancement of infrastructure may seem outside traditional utility operations, this session reinforces core competencies critical to certified operators. Participants will gain a deeper understanding of tank recoating requirements, surface preparation, paint system compatibility, and the sequencing of artistic overlays in compliance with safety and coating standards. The case study also highlights how municipalities are using scheduled maintenance windows as opportunities for cross-departmental collaboration, without compromising the integrity of potable water storage systems.

**Primary Speaker/Author:** Chris Young

**Company:** Parametrix

**Job Title:** Senior Engineer

**Email:** cyoung@parametrix.com

**Phone:** 5038935288

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Chris is a civil engineer with over 16 years of experience specializing in the planning, design, and construction of water storage reservoirs, with particular expertise in prestressed concrete tanks. His work integrates seismic resilience, emergency preparedness, and long-term system reliability to support utility planning and capital project delivery. At Parametrix, Chris leads efforts in reservoir design as well as water system master planning and risk and resilience assessments for municipal clients.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechDist15

**Title:** Advanced Construction Lessons Learned: Large Diameter Pressure CIPP Lining

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** For many industry professionals, navigating the post-installation acceptance criteria for large diameter pressure cured-in-place-pipe (CIPP) lining applications can be uncharted territory. As the technical envelope of the technology for pressure systems expands, including longer runs and larger diameters, the industry standards and guidelines that address acceptance criteria haven't quite kept pace. This presentation reviews industry standards and guidelines associated with CIPP acceptance criteria and the applicability of various criteria to large diameter pressure CIPP. Specifics from a recent 42-inch pressure main CIPP rehabilitation project will be highlighted, including:

- Visual appearance of the final CIPP product versus actual conditions
- Basis of construction acceptance for fins and wrinkles against limitations of governing standards
- Curing report inconsistencies against the wet out log reports
- Lab testing protocol variations against the contract requirements

**CEU Relevance Statement:** Large diameter pressure CIPP lining presents challenges for operators and public confidence due to outdated industry standards. This presentation will clarify best practices and relevant standards for certified operators, including post-lining anomalies and lab testing requirements and results.

**Primary Speaker/Author:** Cindy Preuss

**Company:** CDM Smith, Inc.

**Job Title:** Water Conveyance Discipline Leader

**Email:** preusscl@cdmsmith.com

**Phone:** 9255033812

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Cindy serves as an internal resource to project teams across the country, providing her insight and knowledge in water and wastewater pipeline rehabilitation and construction. Her expertise with trenchless technology project planning, evaluation, design and inspection has been of particular benefit to those with whom she works.

**Related Past Employment:** Cindy has worked with a total of three engineering consulting firms (Harris & Associates, HydroScience Engineers, and CDM Smith) over the last 26 years. She also had a small stint working in business development for a CIPP lining manufacturer (Insituform) prior to joining CDM Smith, her current employer.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechWR8

**Title:** City of Snoqualmie ASR Program: Sustainable Water Supply & Streamflow Enhancement

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of Snoqualmie is a growing community working to develop sustainable water supply for its customers while at the same time providing benefits to the Snoqualmie River watershed. This presentation will provide an overview of the City's approach to evaluating and developing an Aquifer Storage and Recovery (ASR) program and the ability of the program to conjunctively provide additional water supply and streamflow benefits during the dry season. Practical, technical, and regulatory considerations will be presented in the context of City operations.

**CEU Relevance Statement:** Water system operators and managers will learn about the regulatory framework (drinking water standards, groundwater quality, and water rights) that applies to a newly developed ASR program. Engineers will learn about the water system modifications needed to operate a new ASR program. Public officials and administrators will learn about the stakeholder engagement, state funding, and regulatory assistance programs that are applicable to this and similar projects.

**Primary Speaker/Author:** Jeff Hamlin

**Company:** City of Snoqualmie

**Job Title:** Director of Parks and Public Works

**Email:** JHamlin@snoqualmiewa.gov

**Phone:** (425) 559-3465

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Civil Engineer with over 30 years of professional experience in design, development and leadership of Public Works and Community Development projects throughout the Pacific Northwest. Since joining the Snoqualmie in 2017 as City Engineer, Jeff has progressively taken on more responsibilities, eventually becoming the Director of Parks and Public Works in 2023. Throughout his career, Jeff has led numerous community enhancement projects, including infrastructure improvements, water resources initiatives, water and wastewater treatment facilities, environmental studies, and public building facilities. His extensive experience and leadership have significantly contributed to the development and improvement of community facilities and services in Snoqualmie.

**Related Past Employment:** Began career in engineering and has held various significant roles in Engineering and Environmental consulting, business management, and municipal government.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechWT12

**Title:** Tracer Studies 101 - Design, Regulatory Approval, and Implementation of Tracer Studies

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tracer studies are required for any chlorine contact tank to establish the baffling factor and the flow and level boundaries for the tank. Tracer studies are commonly performed when changes are made to the tank baffling or flow/level targets. This presentation will focus on drivers, key contact tank design considerations, regulatory considerations, and best practices for performing tracer studies. A case study for Medford Water's new 3 MG chlorine contact reservoir.

**CEU Relevance Statement:** Chlorine disinfection is a critical treatment step for most treatment facilities in the US. Tracers studies are beneficial to establish a baffle factor and illuminate the actual hydraulics in chlorine contact tanks.

**Primary Speaker/Author:** Claire Jing

**Company:** Jacobs

**Job Title:** Entry Level Process Engineer

**Email:** [claire.jing@jacobs.com](mailto:claire.jing@jacobs.com)

**Phone:** 5106125995

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** Claire is a process engineer with Jacobs in Bellevue, WA. She provides engineer support for drinking water treatment plants for planning, design, and construction support.

**Related Past Employment:** With Jacobs in Washington since 2025 after graduating with a master's degree from Stanford in civil and environmental engineering. Previously worked as an intern at Carollo Engineers in 2024, assisting water and wastewater projects.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechUM5

**Title:** Lessons Learned from 12 Months of Risk and Resilience Assessments and Emergency Response Plan Reviews

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** It has been a busy year for RRA and ERP reviews. With over 10 assessments completed, a number of critical similarities and common lessons were learned that could help utilities with their organizational resilience and prepare them for the 2030 resubmission. I plan to discuss these lessons learned, and the practical ways in which they can be applied across the sector.

**CEU Relevance Statement:** By taking lessons learned from other utilities, O&M can implement these actions in the planning and preparedness phase, which will ensure improved response and recovery by reducing costs and time to recovery. Overall, this will reduce the impacts on the community and ratepayers.

**Primary Speaker/Author:** Jonathan Reeves

**Company:** Risk Resiliency

**Job Title:** Managing Director

**Email:** jon.reeves@riskresiliency.com

**Phone:** 2404614211

**Registrations or Certifications:** CIPS

**Primary Job Responsibilities:** Conduct Risk and Resiliency assessments and support utilities with organizational resilience programs (EM, CM, BC, DR)

**Related Past Employment:** Director of OEM at DC Water (10 years) and over 15 years of experience in supporting utility preparedness



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWT16

**Title:** An Ounce of Pretreatment is Worth a Pound of Filter Media

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Pretreatment is a crucial water treatment process to chemically condition the water and facilitate removal of particles and contaminants. This presentation will provide an overview of the theory and chemistry of pretreatment processes (including coagulation, flocculation, and sedimentation), with a focus on water quality and chemistry challenges specific to Pacific Northwest water supplies. A range of commonly utilized pretreatment technologies will be covered, focusing on water quality conditions they most effectively treat along with considerations for selecting these technologies. A case study of different pretreatment technologies used in the Pacific Northwest will be used to demonstrate the importance of effective pretreatment and demonstrate examples of optimizing treatment performance to provide high quality treated water.

**CEU Relevance Statement:** This presentation will provide operators and engineers with understanding of pretreatment system design and operations and treatment technologies. This information can be used to help optimize the performance of existing systems to improve water quality and efficiency of plant operations. Case studies for other PNW sources will provide real-world examples of opportunities for optimization and means to improve pretreatment and overall water treatment performance.

**Primary Speaker/Author:** Connor Mancosky

**Company:** Carollo Engineers, Inc.

**Job Title:** Senior Engineer

**Email:** cmancosky@carollo.com

**Phone:** 720-939-9235

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Connor has been with Carollo Engineers in Seattle for over 8 years. He currently serves as a senior engineer supporting planning and design of water treatment projects throughout the United States. He has recently supported multiple utilities in the planning, design, and operation of surface water treatment facilities, with a focus on pretreatment.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng5

**Title:** SPEED (Selecting PDB for Effective and Efficient Delivery)

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Not every project requires a fast design and construction schedule. However, when TVWD's 189th Pump Station experienced recent pump failures and emergency repairs, they made the decision to utilize a progressive design build (PDB) contract for the design and construction of a new pump station. This PDB contracting method allowed for early procurement of long lead items with a targeted and expedited design schedule. It also provided access to a contractor if the pumps fail again within the design phase. During this presentation, the attendees will hear from the Owner (TVWD), the Contractor (Slayden) and the Engineer (Carollo Engineers) the benefits and challenges of a PDB contract from each of their prospective.

**CEU Relevance Statement:** Operators will learn how progressive design projects allow for flexibility of operating existing systems while constructing replacement systems.

**Primary Speaker/Author:** Corianne Burnett

**Company:** Carollo Engineers

**Job Title:** Project Manager

**Email:** cburnett@carollo.com

**Phone:** 5038819604

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Consultant Engineering, Project Management, Detailed Design



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechEng17

**Title:** Astoria Water Main Replacement in Century old Hand-dug Tunnel

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The 16th St. Waterline project in Astoria Oregon is a unique and challenging project. The story begins with a corroded 18-inch diameter cast iron water main running through a century old hand-dug tunnel with depths up to 110-feet deep. Knowing the waterline's days were numbered, with little ability to access and repair, the City needed to come up with a long-term and resilient solution. HDR evaluated different options such as HDD in an adjacent alignment, and various options for replacement inside the tunnel. In collaboration with the City, a path was set to design for replacement inside the tunnel and to use the CM/GC process so that constructability and costs could be closely managed.

**CEU Relevance Statement:** The 16th Street water main is one of the critical supply mains to the City's distribution system. Replacement of the old corroded line is critical for reliability and operation of the system. Operators can use this presentation information to understand better how to operate with critical mains offline, how to create new interties based on hydraulics, how to determine which valves to operate for isolation in the system, and how to come up with solutions for replacement of an inaccessible water main.

**Primary Speaker/Author:** Daniel Johnston

**Company:** HDR

**Job Title:** Sr. Water/Wastewater Engineer

**Email:** daniel.johnston@hdrinc.com

**Phone:** 503-758-1648

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Current job responsibilities include project management and project engineering for various water and wastewater design projects. Specialty areas include conveyance pipelines and appurtenances for water and wastewater systems. Also complete planning and feasibility studies. Has 25 years of experience initially in the Air Force, and then in private consulting. The majority of experience falls within water planning and design.

**Related Past Employment:** I have worked for HDR for 7 years in the Water Business Group. Previously I was with Berger/ABAM for 15 years primarily doing water/wastewater and water resources design work. Prior to that, I was in the Air Force for 5 years as a civil engineer.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechUM16

**Title:** How WIFIA Financing Accelerates Water Infrastructure Projects in the Pacific Northwest

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Water Infrastructure Finance and Innovation Act (WIFIA) program is a government bank operated by EPA headquarters that provides supplemental, flexible, low-cost loans to public and private borrowers for all types of wastewater, drinking water, and stormwater projects. In this session, we provide an overview of the WIFIA program and explain the program's eligibilities, priorities, and financial flexibilities. We will also demonstrate the benefits of WIFIA financing by highlighting several WIFIA-funded projects in the Pacific Northwest.

**CEU Relevance Statement:** This presentation is extremely relevant to the operation, maintenance, or management of a water system. WIFIA financing helps water systems invest and modernize in their infrastructure, protect public health and the environment, address compliance issues, and promote sustainable, long-term solutions. Certified operators can use the information in this presentation to have knowledge about a funding source that can address public health and water quality challenges and help systems meet drinking water and water quality standards.

**Primary Speaker/Author:** Dallas Shattuck

**Company:** U.S. Environmental Protection Agency

**Job Title:** Senior Program Manager

**Email:** [shattuck.dallas@epa.gov](mailto:shattuck.dallas@epa.gov)

**Phone:** 202-564-0972

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Dallas Shattuck is a Senior Program Manager for the U.S. Environmental Protection Agency's WIFIA program, where she focuses on program processes, policy, communications, and stakeholder engagement. Dallas has been with the WIFIA program since 2023

**Related Past Employment:** Previously, Dallas spent approximately 5 years working on the Drinking Water State Revolving Fund team at U.S. EPA, focusing on domestic preference requirements, policy, communications, and technical assistance.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT21

**Title:** Reducing Capital Improvement Sizing through Residuals Optimization

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of San Deigo has a future capital project planned at the Miramar Water Treatment Plant (MWTP) to permanently discontinue discharging biofilter backwash and sedimentation basin blowdown waste to the Miramar Reservoir by redirecting these residuals streams to equalization and clarification processes prior to disposal in a nearby sewer. To reduce the sizing of these improvements, two demonstration-scale optimization projects have been conducted to optimize the biofilter backwash and sedimentation basin blowdown operations, respectively.

This presentation will detail the optimization methods evaluated to minimize residuals production, including bench-scale settleability and rheology testing to assess physical characteristics of the current blowdown streams, and the findings of the demonstration testing.

**CEU Relevance Statement:** This presentation will provide operators with a greater understanding of how treatment operations influence the characteristics of the residuals solids that are produced and how, in turn, these characteristics influence solids management decisions at the treatment plant. Audience members will also learn how to develop and execute optimization studies for water treatment, which they can implement to optimize treatment at their own facilities to improve treated water quality and reduce operating complexity and costs.

**Primary Speaker/Author:** Damon Roth

**Company:** Brown and Caldwell  
Drinking Water Process Engineering

**Job Title:** National Specialty Leader,

**Email:** droth1@brwncald.com

**Phone:** 5097704322

**Registrations or Certifications:** PE, BCEE

**Primary Job Responsibilities:** Damon provides technical oversight and support across Brown and Caldwell's offices on projects related to drinking water treatment process engineering.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDist6

**Title:** Tacoma Water Experiments with Conventional Water Main Swabbing (pigging)

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water recently partnered with Confluence Engineering to conduct conventional water main swabbing in two unique and distinct areas of the water service area. This presentation will discuss our history of sedimentation loading, historical flushing practices, why we selected the areas we did, planning and execution of swabbing operations and the results/outcomes of our swabbing experience.

**CEU Relevance Statement:** Clean water is essential to public health and clean water mains are essential to clean water. This presentation will describe with some detail the process Tacoma Water followed, in collaboration with Confluence Engineering, to conduct trial water main swabbing operations in two distinct areas of our distribution system. This is relevant to all drinking water operators as swabbing involves the core functions of water system operations. From researching water system conditions, limitations and capabilities prior to flushing all the way through to manipulating the water distribution and supply system to meet need volumes and flows the drinking water operator is involved must understand the process.

**Primary Speaker/Author:** Daniel Broussard

**Company:** Tacoma Water

**Job Title:** Water Quality Specialist

**Email:** shallenb@cityoftacoma.org

**Phone:** 253.377.5699

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Daniel has been employed by Tacoma Water for 20 years with the last 11 as a Water Quality Specialist in the Source Water Treatment and Operations Section. As a Water Quality Specialist he is responsible for sampling and monitoring of the source and distribution system waters, inspecting premises for adherence to Cross-Connection Control requirements, and addressing customer concerns regarding water quality issues. One of the primary responsibilities in his role is to oversee and coordinate the Tacoma Water Flushing Programs, including dead-end and unidirectional flushing.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCEng3

**Title:** Accelerated project delivery for new groundwater supply

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** When faced with a threat to its surface water source, a Willamette Valley water provider undertook a project to increase groundwater capacity in less than two years from concept to full operation. This presentation will discuss the key decisions, risks, and workflows associated with accelerated project delivery by the water provider and consultant team.

**CEU Relevance Statement:**

- Understand the impacts of schedule on key design decisions.
- Understand the risks associated with accelerated project delivery.
- Understand the importance of including operations staff in design decisions.

**Primary Speaker/Author:** DeEtta Fosbury

**Company:** Summit Water Resources

**Job Title:** Senior Hydrogeologist

**Email:** dfosbury@summitwr.com

**Phone:** 503-789-6753

**Registrations or Certifications:** RG

**Primary Job Responsibilities:** DeEtta has 18 years of consulting experience conducting hydrogeologic and groundwater resource evaluations for clients throughout the Pacific Northwest. She is an experienced project manager who specializes in planning and implementing multifaceted municipal groundwater supply and managed aquifer recharge projects. Her expertise includes water system master plans, hydrogeologic investigations, and production well design, construction, and testing.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT8

**Title:** Control Without Compromise: PLC Migration While Maintaining Operations of an Ozone System

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will cover the challenges and lessons learned from upgrading an ozone control system and power supply unit at the Cedar Water Treatment Facility in Renton, WA. Upgrading the ozone control system while keeping the ozone system and plant operations online and in automatic mode required careful planning and real-time adaptability. Close coordination with the ozone vendor and clear communication across teams were essential to manage shifting priorities and technical constraints. Equipment delays demanded a flexible schedule, while field conditions called for quick thinking and on-the-spot problem-solving. Key lessons learned include the value of proactive collaboration, developing a good set of as-builts during design, and contingency planning to maintain operational continuity during the system transitions.

**CEU Relevance Statement:** This presentation will cover design and construction of ozone equipment and control systems. It will also provide lessons learned on how to maintain plant critical disinfection process operation to maintain water supply without compromise.

**Primary Speaker/Author:** Amy Gao

**Company:** Jacobs

**Job Title:** Water Engineer

**Email:** amy.gao@jacobs.com

**Phone:** 9172169135

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Design engineer for various drinking water treatment facilities, including ozonation, flocculation/sedimentation, filtration, PFAS treatment, chemical systems. Worked on both surface water and groundwater treatment designs.





# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechWIT3

**Title:** Machine Learning and Water Treatment

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In the last decade, advances in artificial intelligence (AI) and machine learning (ML) have precipitated changes across diverse industries. More recently, ML tools have generated significant interest within the water sector, and have been applied to problems of prediction, control, and optimization. However, terminology definitions, best practices, and common pitfalls around ML remain murky at best. This presentation will provide a broad overview of ML as it relates to water treatment, including a brief introduction to ML, a case study of current research, and finally recommendations on how to get started.

**CEU Relevance Statement:** This presentation will provide engineers and operators key practical knowledge toward better leveraging data at their utilities. Water systems produce an immense amount of data, but that data is often underutilized. Machine learning techniques can be used to leverage that historical data to provide decision support and optimization for ongoing operations.

**Primary Speaker/Author:** Henry Croll

**Company:** HDR

**Job Title:** Wastewater Data Scientist and Process Engineer

**Email:** henry.croll@hdrinc.com

**Phone:** 6124947897

**Registrations or Certifications:** PhD, PE

**Primary Job Responsibilities:** Develop data model and data visualization tools support the design and operation of water and wastewater treatment facilities. Provide process engineering support, including process modeling, to the conceptual design of wastewater treatment facilities.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechWQ7

**Title:** Establishing Water Treatment Design Criteria for Bacteria Disinfection Credits

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Surface Water Treatment Rule defines treatment levels needed to achieve virus and protozoa log removal credit (LRC) values based on published research. Additionally, the SWTR assumes if you achieve virus/protozoa credit, you sufficiently control bacteria. A study, funded by Minnesota Department of Health with technical support from USEPA Office of Research and Development, performed a global, systematic review of literature to create bacterial log removal credit values for multiple disinfectants and membrane filter processes. Findings and published results now show that bacteria may require anywhere from 2- to 270-fold more disinfection (measured by disinfectant residual "C" multiplied by contact time "T") for processes that include chlorine, chloramine, chlorine dioxide, and ozonation. This presentation will summarize study results and how findings can be applied to the water treatment industry.

**CEU Relevance Statement:** Bacteria are the most significant cause of waterborne illness and utilities need to be informed as to what level of disinfection may be needed to maintain protection against opportunistic and environmental bacteria that cause illness. If utilities determine they need to improve disinfection to control bacteria, this presentation will provide them with the information needed to improve design criteria of facilities and/or operation of facilities to achieve this need. This presentation summarizes work that has been recently completed and is now being published in peer reviewed literature.

**Primary Speaker/Author:** Alex Mofidi

**Company:** Confluence Engineering Group LLC

**Job Title:** Associate

**Email:** alex@confluence-engineering.com

**Phone:** 206-866-4562

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Develop water quality and treatment design criteria for utilities so that drinking water treatment and distribution systems can be optimized for microbial and chemistry stability.

**Related Past Employment:** Engineer with MWD So Cal for the first 16 years of my career, and a consulting engineer for the past 18 years. I have been with Confluence for the past 8 years.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechPI2

**Title:** Crown Hill Water Boil Notice - SPU Response to a Large Main Break and Precautionary Boil Notice

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** On the night of April 2, 2025, a 16-inch water main broke near NW 100th St and 8th Ave NW in Seattle's Crown Hill neighborhood. Water pressure in the surrounding area dropped to zero for about four hours, and some customers were without water for nearly 18 hours. SPU activated a modified Incident Management Team (IMT) and used an adapted version of the Incident Command System (ICS) to organize response operations and implement the Water Main Break/Depressurization guide. SPU issued a precautionary boil water advisory to approximately 3000 people due to the loss of pressure. The advisory was lifted on the morning of April 5 after lab testing confirmed the water was safe to drink. This presentation describes the operational response, decision making process to issue a non-regulatory boil advisory, communication strategies for customers, and how SPU used ICS to collaborate across multiple groups including external stakeholders.

**CEU Relevance Statement:** Certified WDM holders will learn how SPU restored water service, sustained public health protection with a precautionary boil advisory, and coordinated with the community, regulators, and elected officials.

**Primary Speaker/Author:** Wylie Harper

**Company:** Seattle Public Utilities

**Job Title:** SPU Water Transmission and Distribution Division Director

**Email:** wylie.harper@seattle.gov

**Phone:** 206 790-5669

**Registrations or Certifications:** PE, WDM4

**Primary Job Responsibilities:** Direct and manage the SPU Water Transmission and Distribution Maintenance Division. Approximately 130 staff at four operating locations repair watermains, install new services, replace hydrants and valves, as well as maintain the transmission system supplying wholesale water districts and the City of Seattle.

**Related Past Employment:** Previous roles at SPU include Water Quality and Treatment Director, Laboratory Manager, and Sr. Water Quality Engineer. Prior to SPU, worked as a Senior Environmental Engineer for the Army Center for Health Promotion and Preventive Medicine.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechUM10

**Title:** Effective Utility Management Framework at Seattle Public Utilities

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Seattle Public Utilities serves 1.6 million people clean, safe drinking water. Part of our mission is to continue to grow and improve how we deliver these essential services. By using the new Effective Utility Management Framework, SPU can evaluate areas of strength and areas for growth, and then develop action plans for how to continue to improve. The goal is sustainable, forward looking, and efficient management of the utility for the long term.

**CEU Relevance Statement:** This presentation focuses on core concepts that are requirements for any water utility to operate successfully. Elements that will be included are: sustainable operations and maintenance philosophy; sound financial management; long-term planning for future needs; improving customer programs and experience; regulatory compliance, and succession planning.

**Primary Speaker/Author:** Alex Chen

**Company:** Seattle Public Utilities

**Job Title:** Director, Drinking Water

**Email:** alex.chen@seattle.gov

**Phone:** 206-335-3651

**Registrations or Certifications:** PE, WTPO4, WDM4

**Primary Job Responsibilities:** Director of drinking water and utility O&M. Responsible for long term financial and water supply planning (serving 1.6 million people in the region); water quality and treatment including two surface water treatment plants with a capacity of 300 mgd; management of 100,000 acres of watersheds for water supply and environmental benefit; O&M and CIP for 1900 miles of buried pipe, 30 pump stations and a series of treated water reservoirs and elevated tanks. Manage 350 people, including several 24/7 staff groups, and serve as an Executive helping manage SPU overall, which provides drinking water, drainage and wastewater, and solid waste services.

### **Related Past Employment:**

- 1994-1998 East Bay Municipal Utility District, treatment plant process engineer.
- 1998-2000 Black & Veatch, project manager for water and wastewater utility projects
- 2000-2005, Tetra Tech/KCM, project manager for water and wastewater utility projects
- 2005-2014, Seattle Public Utilities, treatment plant contract manager
- 2014-2020, SPU, division director, water planning
- 2020-present, SPU, director



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWT24

**Title:** Wildfire impacts on DBP formation and removal by PAC, coagulation, and membrane filtration

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Wildfires produce partially combusted materials that can release dissolved organic matter (DOM) and disinfection byproduct (DBP) precursors to drinking water sources following precipitation events. However, little is known about fire-derived DOM and DBP precursor treatability or how DOM characteristics vary spatially in burned watersheds with impacts on the performance of treatment processes. In this study, DOM optical properties, DBP formation potential, and treatability by powered activated carbon, coagulation, and membrane filtration are being characterized in stream samples collected seasonally from ~50 sites varying in burn severity in the Pacific Northwest. Surprisingly, preliminary results suggest that burn severity impacts DBP formation and more severely burned catchments can release DBP precursors that are easier to remove by each treatment process evaluated in this study.

**CEU Relevance Statement:** This presentation shows that different field-appropriate water quality monitoring parameters, such as UV254 and fDOM, can be used to detect changes in water quality from wildfires. Moreover, these parameters are shown to correlate with the treatability of water and disinfection byproduct formation. Therefore, these water quality parameters can be measured by water treatment operators to detect potential impacts of wildfires on raw water quality and downstream treatment processes.

**Primary Speaker/Author:** Kyle Shimabuku

**Company:** Gonzaga University

**Job Title:** Associate Professor

**Email:** shimabuku@gonzaga.edu

**Phone:** 805-415-4548

**Registrations or Certifications:** PhD, PE

**Primary Job Responsibilities:** Dr. Kyle Shimabuku is an associate professor at Gonzaga University where he teaches courses on water treatment and sustainability. His research focus is on adsorption technologies such as activated carbon and biochar. More recently he has been involved in studying ways drinking water utilities can reduce their vulnerability to water quality disruptions post-wildfire.

**Related Past Employment:** Prior to joining Gonzaga University, Dr. Kyle Shimabuku was a water process engineer for Corona Environmental Consulting. He focused on addressing water quality challenges through treatment and distribution system improvements for water systems primarily relying on groundwater.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechEng26

**Title:** Designing for Efficient Pump Station Operation

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation explores how to optimize pump selection to maximize both efficiency and pump lifespan by targeting the preferred operating region (POR) for the pump's operation. Key topics include developing an accurate system curve and determining the station's current and future demand, including fire flow, and how multiple pumps can allow the station to operate efficiently across various demand conditions. The presentation also addresses how to develop an operational strategy that considers pump staging, VFD speeds, and ramp-up and ramp-down procedures, all while maintaining operation within the POR.

**CEU Relevance Statement:** This presentation helps certified operators understand the design parameters that affect the life and reliability of pumps in their system and enables them to contribute to design discussions early and influence decisions that can improve the pump selection. Having these informed discussions minimizes the effort required for maintenance, improves water supply reliability, and ensures public health protection long term.

**Primary Speaker/Author:** Dylan Bright

**Company:** RH2 Engineering, Inc.

**Job Title:** Project Engineer

**Email:** dbright@rh2.com

**Phone:** (425) 949-9129

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Dylan specializes in hydraulic modeling and water system planning for municipal clients, while also providing technical support for facility design projects alongside RH2's multidisciplinary design team.

**Related Past Employment:** Comprehensive water system planning involving sizing and site selection of booster pump stations, hydraulic analyses involving operational strategies and the resulting pressure and flows, and providing technical support to design teams. One key project involved the design and startup of a closed-zone booster pump station with a firm capacity of 9,300 gallons per minute.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechUM1

**Title:** Rebuilding the Future: Utility Management Lessons from Legacy Water Systems

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** When utility providers acquire aging or underinvested water systems, the path to modernization is rarely linear. Northwest Natural Water has taken on the challenge of managing and transforming legacy water infrastructure, often fragmented and unprepared for growth, while aligning treatment operations, planning system upgrades, and developing long-term capital strategies. This presentation explores the complexities of coordinating utility operations across “inherited” systems, balancing urgent operational needs with long-term visions, and navigating community expectations and regulatory realities.

**CEU Relevance Statement:** This session directly supports certified water system operators by addressing the real-world complexities of managing and upgrading legacy utility infrastructure, an increasingly common scenario in small and mid-sized communities. Attendees will gain practical insights into coordinating treatment and distribution operations, maintaining regulatory compliance, and planning capital improvements across systems not originally designed for future growth or integration. The strategies presented will help operators enhance system reliability, safeguard water quality, and ensure continuity of service, all of which are essential to protecting public health.

**Primary Speaker/Author:** Isabella Campbell

**Company:** Parametrix

**Job Title:** Engineer IV

**Email:** bcampbell@parametrix.com

**Phone:** 2538782084

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Engineer IV specializing in municipal water and wastewater projects. Responsibilities include water and sewer system master planning, hydraulic modeling, and the design of reservoirs and storage facilities. Provides technical leadership on capital projects ranging from conceptual planning through design.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechDist12

**Title:** Critical Hospital Ductile Iron Pipe Supply Using Slippage Based Seismic Design Approach

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation describes a seismic design approach for a critical ductile iron pipe serving a major regional hospital that is located near a major crustal earthquake fault. The approach is based on pipeline seismic design procedures developed as part of the Willamette Water Supply Program (WWSP). It solves for the required pipe joint strength to account for slippage-based pipe loads combined with loads due to high internal pressures. It provides a practical means to calculate the required pipe seismic design performance as well as illustrates how choices made during design and construction can influence the pipe's seismic performance requirements.

**CEU Relevance Statement:** In the Pacific Northwest, a major subduction zone and other faults exist that pose significant risks to the region and associated infrastructure. The earthquakes that result from these fault ruptures will produce extreme ground motions in some cases. Engineers and owner staff will benefit from the practical seismic design solutions for ductile iron pipe that are part of this presentation.

**Primary Speaker/Author:** Mike Britch

**Company:** Tualatin Valley Water District

**Job Title:** WWSP Engineering and Construction Manager

**Email:** mikeb@tvwd.org

**Phone:** 503-701-1343

**Registrations or Certifications:** P.E., MPA

**Primary Job Responsibilities:** Engineering and Construction Manager for the Willamette Water Supply Program (WWSP). The WWSP is a \$1.6 billion infrastructure program to deliver a new potable water supply to the Washington County area on the west side of the Portland metro area.

**Related Past Employment:** Chief Engineer and Senior Engineer for TVWD. Prior to that worked for two design consulting firms in the Portland area.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCEng4

**Title:** Extending Water Treatment Seismic Resiliency to the Process Mechanical/Electrical Equipment Level

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Traditional seismic resiliency focuses largely on buildings to ensure they can be occupied immediately and safely. The Willamette Water Supply Commission's new 60 mgd Water Treatment Plant (WTP\_1.0) project sought to extend resiliency to the equipment level and targets plant production of finished water that meets drinking water regulations in the first 24-48 hours following the design earthquake (a presumed Cascadia Subduction Zone regional seismic event) in a way that will aid other recovery efforts throughout the region if and when the design earthquake hits. This presentation will share lessons learned from the WTP\_1.0 seismic resiliency efforts, which targeted ASCE 7-16 special seismic certification (or demonstrated equivalency) for all level-of-service (LOS) critical mechanical and electrical equipment. The viability of shaker table testing as well as various approaches to demonstrate equivalency by analysis or experience for different equipment types will be discussed.

**CEU Relevance Statement:** Providing engineers, utilities, and operators an understanding of the value of ASCE 7-16 special seismic certification (or equivalency) for critical equipment (i.e., all equipment required to produce finished water) in a region with high seismicity.

**Primary Speaker/Author:** Michael Hyland

**Company:** CDM Smith inc.

**Job Title:** Senior Project Manager

**Email:** HylandMP@cdmsmith.com

**Phone:** 206.518.2297

**Registrations or Certifications:** P.E.

**Primary Job Responsibilities:** Engineer-of-record (EoR) for the design of the 60 mgd WTP\_1.0 water treatment plant; project and design manager for large, municipal water and wastewater projects throughout the Northwest United States and British Columbia, Canada

**Related Past Employment:** CDM Smith Inc. (2006 to present, Seattle, Portland); Malcom Pirnie Inc. (2001-2006, New York City)



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechDist7

**Title:** I Have My Lead and Copper Inventory—Now What?

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** With lead and copper service line inventories now complete or well underway, many utilities are confronting the next critical phase: translating data into action. As the industry responds to the Lead and Copper Rule Revisions (LCRR), utilities need accurate data, clear communication, and scalable program management. This presentation will explore how utilities can effectively navigate post-inventory challenges through strategic planning, integrated digital platforms, and targeted fieldwork. Case studies will illustrate how utilities across the country are advancing their LCRR compliance efforts while simultaneously strengthening long-term operational resilience and public trust.

**CEU Relevance Statement:** This presentation supports the operation and management of water systems by guiding utilities on how to transition from completing lead and copper service line inventories to implementing effective compliance strategies under the Lead and Copper Rule Revisions (LCRR). Certified operators will gain insight into using inventory data to prioritize replacements, improve public communication, and support regulatory planning. The session emphasizes tools and practices that enhance water quality and protect public health, helping operators make informed, data-driven decisions that strengthen system resilience.

**Primary Speaker/Author:** Evelyn Choudhary

**Company:** Black & Veatch

**Job Title:** Project Manager

**Email:** ChoudharyE@bv.com

**Phone:** 8452498847

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Evelyn is a project manager overseeing and guiding water and wastewater projects across the Pacific Northwest.

**Related Past Employment:** Evelyn has been a consultant project engineer and project manager, having experience working for several consulting firms including Black & Veatch. Evelyn has worked on a wide array of water and wastewater projects including drinking water, planning, design, hydraulics, and project management.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng6

**Title:** Data Driven Decisions: Because Guessing Isn't a Strategy

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Water utilities are navigating increasingly complex decisions that demand technical rigor and transparent communication. Data-driven approaches provide a foundation for defensible choices, especially when paired with tools suited to the type of decision being made. This session explores the application of a range of decision-support methods and how and how to select the right tool for the context. Examples demonstrate how different tools support decisions related to capital investment, risk management, regulatory compliance, and stakeholder preferences. The discussion highlights how aligning the decision process with the appropriate analytical approach improves clarity, builds trust, and supports long-term outcomes.

**CEU Relevance Statement:** This presentation helps water system operators apply decision-support tools to improve planning, risk management, and regulatory compliance. Certified operators can use these methods to make informed, transparent choices that enhance water quality, protect public health, and ensure reliable supply.

**Primary Speaker/Author:** Evelyn Choudhary

**Company:** Black & Veatch

**Job Title:** Project Manager

**Email:** ChoudharyE@bv.com

**Phone:** 845-249-8847

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Evelyn is a project manager overseeing and guiding water and wastewater projects across the Pacific Northwest.

**Related Past Employment:** Evelyn has been a consultant project engineer and project manager, having experience working for several consulting firms including Black & Veatch. Evelyn has worked on a wide array of water and wastewater projects including drinking water, planning, design, hydraulics, and project management.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWQ5

**Title:** Corrective Actions: Identifying, Investigating, and Resolving Field Sampling Nonconformities

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Economic decisions are based upon environmental data, but the quality of the decision can only be as good as the quality of the sample collected. This presentation discusses how field sampling groups can utilize corrective actions to provide permanent fixes to procedural problems and increase their field data reliability. In addition to discussing the steps for implementing effective corrective actions, this presentation will discuss a corrective action case study and the resulting effects on water quality monitoring in the Portland Water Bureau distribution system.

**CEU Relevance Statement:** Relevant for operators and sampling staff and what they can learn from sampling, correct, and implement permanent fixes that will increase data reliability. This increased reliability allows for more informed decision making.

**Primary Speaker/Author:** Thomas Krause

**Company:** Portland Water Bureau

**Job Title:** Environmental Specialist

**Email:** Thomas.Krause@portlandoregon.gov

**Phone:** 5035487960

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Field and laboratory sampling, pilot treatment support, distribution water quality

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWQ2

**Title:** Managing Ammonia from Source to Tap: Strategies for Water Treatment, Disinfection, and Distribution

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will cover, in two parts, key concepts for treating water sources with background ammonia and for managing nitrification risks in chloraminated systems. The first portion of the presentation will feature examples of two approaches to treating elevated ammonia concentrations in source water – biological filtration and breakpoint chlorination – using data from drinking water treatment plant studies. The second portion of the presentation will focus on tools and best practices for managing ammonia in chloraminated distribution systems and mitigating nitrification. These practices include distribution system water quality monitoring, booster chlorination, optimizing disinfection at the plant, and maximizing disinfectant residual stability to minimize release of free ammonia. If a system is already experiencing nitrification, strategies such as shock chlorination, strategic water quality monitoring, physical cleaning, or implementation of mixers will be discussed.

**CEU Relevance Statement:** Ammonia in source water, while unregulated, can complicate treatment by promoting nitrification, which may cause corrosion, low disinfectant residuals, elevated nitrite, and taste or odor issues. This presentation covers how ammonia interacts with chlorine, tools for optimizing disinfection, and strategies to monitor and mitigate nitrification. The material is relevant to both groundwater systems—more susceptible to high ammonia—and surface water systems that use ammonia for secondary disinfection, with practical examples from real-world case studies.

**Primary Speaker/Author:** Andrew Dow

**Company:** Kennedy Jenks

**Job Title:** Project Engineer

**Email:** AndrewDow@KennedyJenks.com

**Phone:** 5592403761

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** For the past 10.5 years, I have worked as a consulting engineer specializing in drinking water and wastewater treatment processes. I provide a range of technical design, analysis, and project management services, primarily for public agencies who manage drinking water and wastewater infrastructure. I prepare technical reports, conduct planning studies and alternatives evaluations, design pilot tests, and prepare drawings and specifications for permitting, bidding, and construction.

**Related Past Employment:**



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechUM7

**Title:** Hybrid Utility Work: What Works, What Doesn't, and What's Next

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Six years after the pandemic began, we've experienced every facet of remote work, return to office, and hybrid schedules. Since not every job can be done from home, how do we support staff and consultant diverse needs and wants, keep teams connected and engaged, and align with our missions and values? This presentation shares simple, practical ways to approach the issue and work through common roadblocks.

**CEU Relevance Statement:** Balancing remote, hybrid, and on-site work is critical for retaining skilled water utility staff and maintaining operational continuity. This session provides practical strategies to support diverse workforce needs while keeping teams engaged and aligned with organizational goals, helping utilities sustain reliable operations, effective management, and safe, consistent delivery of drinking water.

**Primary Speaker/Author:** Gabriel Solmer

**Company:** Stantec

**Job Title:** Program Manager

**Email:** Gabriel.Solmer@stantec.com

**Phone:** 6199331134

**Registrations or Certifications:** JD

**Primary Job Responsibilities:** Gabriel Solmer (she/her) is a Program Manager at Stantec, where she works with water and wastewater utilities to deliver strategic, data-driven infrastructure programs. She helps clients develop governance frameworks for long-term infrastructure planning and decision-making and oversees the implementation of engineering and asset management initiatives.

**Related Past Employment:** She served as Director of the Portland Water Bureau, where she led Oregon's largest water utility through a transformation that integrated climate resilience, community engagement, and asset management. With more than 20 years in public service, Gabriel brings deep expertise in utility strategy, stakeholder coordination, and organizational change management.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCDist1

**Title:** Pressure Monitoring to Optimize Water Distribution Systems

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Using historical pressure data, a predetermined time matrix and Dijkstra's algorithm for shortest network path for water infrastructure, the source of a hydraulic event can be inferred as well as generate a heat map of how the disturbance propagated through the water distribution system. Attendees will learn how advanced pressure monitoring data can provide valuable insight to operational issues, where and how they impact the network.

**CEU Relevance Statement:** Attendees will learn how advanced pressure monitoring data can provide alerts to operational fluctuations in the system, including transient events and how they propagate across the water distribution system. By understanding where and how anomalies may impact the water distribution system, and knowing how pressure events can help identify event localization, the data can help support capital improvement decisions, and risk resiliency during planned outages or service disruptions.

**Primary Speaker/Author:** Dylan Boyle

**Company:** Clow Valve Company

**Job Title:** Territory Sales Manager

**Email:** dylan.boyle@clowvalve.com

**Phone:** 406-970-3406

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Supports water utilities in Montana, Idaho, and Wyoming, helping optimize system performance using advanced pressure monitoring and network analysis. With hands-on experience in identifying operational fluctuations, transient events, and system vulnerabilities, they guide utility teams in interpreting data to improve reliability, inform capital planning, and enhance resiliency across water distribution networks.

**Related Past Employment:** He has extensive experience supporting water utilities across the Southeast, working with Neptune Technology Group and Clow Valve Company. In these roles, he partnered with utility teams to implement water system technologies, optimize operations, and address infrastructure challenges, gaining hands-on knowledge of distribution systems, pressure management, and field operations.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechPI1

**Title:** Building Awareness and Support Through Themed Campaigns

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Cascade Groundwater Alliance—a partnership between the City of Gresham and the Rockwood Water People's Utility District—is building a new groundwater system to ensure their customers have a reliable and affordable source of drinking water for the future. To build awareness and support this effort, the partners launched an integrated outreach campaign built on consistent, ongoing communications and clear messaging themes to engage and educate the public, businesses, and policymakers. This presentation will highlight how utilities can deploy a coordinated ongoing outreach campaign to build trust, raise awareness, and prepare stakeholders through every phase of complicated water infrastructure projects from design and construction to the transition to a new water source.

**CEU Relevance Statement:** Operators play an important role in communicating with the public. They are the ones in the field, answering phones, and providing information to the public, policymakers, and their friends and families. During this presentation they will learn how to better communicate and improve their roles as operators.

**Primary Speaker/Author:** Nyla Clark

**Company:** Rockwood Water People's Utility District  
Government Affairs Coordinator

**Job Title:**

**Email:** tammy.menkerud@consoreng.com

**Phone:** 971-563-9503

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Government Affairs

**Related Past Employment:** More than 10 years of experience in various communications roles within government and utilities.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWT12

**Title:** On-Site Sodium Hypochlorite Generation: A Safe and Cost-Effective Solution for Disinfection

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will provide water system managers, operators and engineers a practical understanding of the science and implementation behind on-site sodium hypochlorite generation (OSHG) as a source of chlorine disinfection capacity for water and wastewater plants as well as distributed well systems.

**CEU Relevance Statement:** Attendees will understand the roles of OSHG components as part of an overall OSHG system

Attendees will be able relate to many applications of OSHG in both large and small plants as well as in applications distant from plants in the well fields or distribution systems

**Primary Speaker/Author:** Haley Goddard

**Company:** Cleanwater1  
Engineer

**Job Title:** Sales and Business Development

**Email:** grock@cleanwater1.com

**Phone:** 970-946-4005

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Haley Goddard is a Regional Manager at Cleanwater1, responsible for providing sales and engineering support for the application of disinfection, chemical feed, and drinking water quality solutions in the Northwest U.S.

**Related Past Employment:** Prior to joining Cleanwater1, Haley worked for 7 years in consulting as a project engineer, leading multi-disciplinary teams in the design of water and wastewater systems for both municipal and industrial clients. Her experience features the design of reverse osmosis treatment, chemical feed, dewatering, and water conveyance systems for both municipal and industrial clients.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWQ3

**Title:** The Role of Smart Tanks in Distribution Water Quality Management

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will provide water system managers, operators and engineers a practical understanding of the science and implementation of distribution system-based water treatment to address low residual levels and disinfection byproducts.

**CEU Relevance Statement:**

Attendees will gain knowledge of THM removal mechanisms, the chemistry behind chloramine and free-chlorine residual destruction, and how to use the breakpoint curve for efficient, automated residual management.

**Primary Speaker/Author:** Haley Goddard

**Company:** Cleanwater1

**Job Title:** Sales and Business Development Engineer

**Email:** grock@cleanwater1.com

**Phone:** 970-946-4005

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Haley Goddard is a Regional Manager at Cleanwater1, responsible for providing sales and engineering support for the application of disinfection, chemical feed, and drinking water quality solutions in the Northwest U.S.

**Related Past Employment:** Prior to joining Cleanwater1, Haley worked for 7 years in consulting as a project engineer, leading multi-disciplinary teams in the design of water and wastewater systems for both municipal and industrial clients. Her experience features the design of reverse osmosis treatment, chemical feed, dewatering, and water conveyance systems for both municipal and industrial clients.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechCons4

**Title:** Water Wise Design: How We Built SpokaneScape to Make Lawn Removal Approachable

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** SpokaneScape is the City of Spokane's turf replacement program, designed to help residents replace thirsty lawns with water-efficient landscapes. But in a region where lawns are the cultural norm, simply offering rebates isn't enough. This session explores how strategic branding, behavior-based messaging, and human-centered design helped make SpokaneScape more approachable—and more effective. We'll share lessons from marketing, design consultation services, and program structure that made participation easier, more attractive, and ultimately more successful.

**CEU Relevance Statement:** By promoting long-term reductions in outdoor water use, SpokaneScape supports source water protection, improves system reliability, and reduces peak demand—all of which help certified operators meet operational and public health goals.

**Primary Speaker/Author:** Cathy Spokas

**Company:** City of Spokane

**Job Title:**

**Email:** cspokas@spokanecity.org

**Phone:** 8158302602

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Hannah supports the City of Spokane's water conservation programs by coordinating outreach activities, managing community engagement efforts, and assisting with the delivery of programs like SpokaneScape. She helps develop educational materials, facilitates workshops and consultations, and ensures residents have the tools and resources they need to use water efficiently.

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/6/2026

**Session ID:** PCEng2

**Title:** Master Planning for a Wildfire in the Watershed

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** On July 24, 2024, 33 lightning strikes started 15 fires in the Deschutes National Forest near Bend, Oregon. Fortunately, the fires were extinguished while still small, but events like these serve as stark reminders that a wildfire could burn through the City's watershed without warning, severely limiting water supply unless the treatment system is ready to handle runoff from a burned watershed.

This presentation will describe how the City of Bend developed a Facility Master Plan to systematically identify the facilities needed to treat runoff from a wildfire and address seasonal rain events that cause the membrane filtration plant to be taken offline several times each year. The multifaceted plan incorporates hydropower generation to harvest energy from 1000-feet of fall between the intake and the filtration plant, plans for replacement and new reservoirs, plans for groundwater supply upgrades, and much needed accommodations for the people who operate the facility.

**CEU Relevance Statement:** Operators in forested watersheds should know options for pre-treating water from burned areas before primary treatment. Plate settlers were chosen for extra turbidity removal ahead of membrane filtration. The plan also allows for future PFAS (or other contaminant) removal from groundwater or surface water if needed. These decisions are relevant to any agency supplying surface water from a forested watershed.

Certified operator involvement in facility planning and pre-treatment design ensured the facility will meet operational needs long-term.

**Primary Speaker/Author:** Heather Burns

**Company:** Consor

**Job Title:** Senior Engineer

**Email:** Heather.Burns@consoreng.com

**Phone:** 817-229-6160

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Heather Burns is a Senior Engineer with Consor. She designs and manages drinking water and wastewater projects. Her primary focus is on drinking water treatment engineering.

**Related Past Employment:** Heather has 11 years of engineering experience, with past employment at Black & Veatch and Tacoma Water. Heather started her career in Dallas, Texas before moving to the PNW in 2020.



# PNWS-AWWA Water 2026

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**Date:** 5/6/2026

**Session ID:** PCWR7

**Title:** Review of Current Issues Related to Water Rights in Oregon

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will review recent legislation, case law, and other major development impacting Oregon surface and groundwater rights in the last couple of years, as well as water quality permitting.

**CEU Relevance Statement:** The presentation will provide information to attendees about recent legal and political developments impacting the management of water systems, opportunities to participate in future processes that may impact those systems. It will also provide an update on changes related to water quality permitting in the state.

**Primary Speaker/Author:** Olivier Jamin

**Company:** Davis Wright Tremaine, LLP

**Job Title:** Counsel

**Email:** olivierjamin@dwt.com

**Phone:** 5098599303

**Registrations or Certifications:** J.D., LLM (Attorney)

**Primary Job Responsibilities:** I advise clients, including local governments, on a variety of environmental and water-related issues, including water rights due diligence, water rights applications and transfers, and litigation. I also frequently help clients address issues related to stormwater and wastewater, and hazardous waste. Clients include municipalities, food and beverage companies, industrial and manufacturing companies, and tech companies.

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWT27

**Title:** Filter Optimization for Removal of Iron and Manganese from Groundwater Source

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Iron and manganese remain prevalent secondary contaminants in drinking water treatment. This pilot study was conducted at Castle Pines North Water Treatment Plant in Castle Pines, Colorado to tailor removal of iron and manganese in a groundwater direct filtration plant through media selection and operational strategies. Medias tested included four configurations including GreensandPlus™, sand, anthracite, and Pyrolox Advantage.

The data from pilot testing supported plant removal objectives and resulted in an increased capacity rating for the existing filters at the plant from the Colorado Department of Public Health and Environment (CDPHE). Thus, the District was able to secure an increase in plant throughput to support population growth in the area without adding additional infrastructure.

**CEU Relevance Statement:** This presentation examines strategies to optimize iron and manganese removal in water systems, offering practical methods to improve treatment efficiency and filter performance. Certified operators can use these findings to boost contaminant removal, cut chemical use, extend media life, and increase plant capacity—helping maintain water quality and reliability for growing communities.

**Primary Speaker/Author:** Erica Wirski

**Company:** Kennedy Jenks

**Job Title:** Wastewater Process Engineer

**Email:** ericawirski@kennedyjenks.com

**Phone:** 7207442221

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** I am a wastewater process engineer at Kennedy Jenks, specializing in tertiary treatment and disinfection. I lead early project phases, shaping direction and treatment processes from design through construction. My role includes conducting research, performing engineering design and calculations, coordinating across disciplines, ensuring quality control, and managing task delegation to project staff.

**Related Past Employment:** My previous employment related to this field included research positions in academia and at national laboratories (Lawrence Livermore National Lab, and National Renewable Energy Laboratory). My research focus spanned desalination, potable reuse, and PFAS removal.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWT1

**Title:** Establishing the Weber West Water Campus - One Site, Two Treatment Plants

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Rapid population growth in areas across the United States has prompted innovative planning to increase available water supplies. Such planning led to the establishment of the Weber Water Campus, a 25-acre site that will house two treatment plants in Weber County, UT, a reuse facility and a water treatment facility. Both facilities will initially have a 10 MGD net capacity, with each being expandable to 20 MGD. The reuse facility will treat tertiary wastewater effluent to further reduce nitrogen and phosphorus. The water treatment plant will utilize advanced treatment technologies to provide high-quality drinking water. The focus of this presentation will include planning and design phases, including the alternative delivery approach.

**CEU Relevance Statement:** Presentation will talk about water quality, water quality goals, treatment technologies to meet water quality goals, design approach, and permitting. All of this is pertinent to operations staff.

**Primary Speaker/Author:** Michael Bundy

**Company:** Hazen and Sawyer

**Job Title:** Project Manager

**Email:** mbundy@hazenandsawyer.com

**Phone:** 2082970355

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** I am actively involved completion projects associated with the planning and design of water and wastewater facilities.

**Related Past Employment:** 24 years of experience in planning, design, and construction of water related projects.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng2

**Title:** Assessing the Flow: Facility Condition Assessments to Maintain Water Treatment and Prevent Failures

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Water and wastewater utilities face growing pressure to do more with less, maintaining aging infrastructure, ensuring reliability, and meeting regulatory demands. A Facility Condition Assessment (FCA) is a proactive strategy that helps operators and utility managers make informed decisions, prioritize critical maintenance, and plan capital investments effectively. This session explores the operational and financial benefits of FCAs, including reduced risk of failure, improved safety, and extended facility life. Attendees will learn how FCA data supports a shift from reactive to proactive maintenance, improving long-term performance while protecting public health. If your facilities are aging or your budget decisions are reactionary, this session will show how an FCA can give you the clarity and confidence to plan ahead.

**CEU Relevance Statement:** This presentation highlights how Facility Condition Assessments (FCAs) support the effective operation, maintenance, and management of water treatment facilities. By identifying deteriorating equipment, infrastructure risks, and deferred maintenance issues, FCAs help operators and utility staff prioritize critical repairs before failures impact system performance. This proactive approach enhances water quality, reduces the likelihood of service disruptions, and extends the life of essential assets. Certified operators will gain insight into how FCA data can be used to advocate for maintenance investments that directly support public health and reliable water supply.

**Primary Speaker/Author:** Valeria Norato

**Company:** CDM Smith

**Job Title:** Architect

**Email:** noratovp@cdmsmith.com

**Phone:** 5205995051

**Registrations or Certifications:** None

**Primary Job Responsibilities:** I am an architectural designer responsible for the architectural design of industrial water and wastewater treatment plants, as well as laboratories, data centers, and maintenance facilities for transportation. My role includes developing building layouts, coordinating architectural components with engineering systems, ensuring code compliance, and creating functional, efficient designs that support the operations of these specialized facilities.

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWR13

**Title:** Oregon: Focusing on Water Reuse

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will provide an overview of existing policies and legal frameworks that govern water reuse in Oregon, including relating to water rights and water quality. The presentation will discuss examples of successful water reuse projects in Oregon and barriers to implementation of future projects. Finally, the presentation will highlight recent efforts in Oregon under HB 2010 (2023) and HB 2169 (2025) to expand opportunities for water reuse.

**CEU Relevance Statement:** This presentation is relevant to water system managers because it will address the legal frameworks governing water reuse in Oregon. It will cover current statutes, regulations, and policies that directly impact water reuse projects. For water system managers not based in Oregon, it will offer an example of approaches for expanding water reuse and barriers to those efforts, which may influence similar efforts to encourage water reuse projects throughout the Pacific Northwest.

**Primary Speaker/Author:** Hayley Siltanen

**Company:** Stoel Rives LLP

**Job Title:** Attorney

**Email:** hayley.siltanen@stoel.com

**Phone:** 541-805-9772

**Registrations or Certifications:** J.D.

**Primary Job Responsibilities:** I am an attorney who provides legal counsel to water providers in Oregon on water rights, land use permitting, and regulatory compliance.

**Related Past Employment:**



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**Date:** 5/7/2026

**Session ID:** TechEng9

**Title:** Cyber-Informed Engineering (CIE): Embedding Cyber Defense into Water Infrastructure

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** As cyber threats increasingly target critical infrastructure, the integration of cybersecurity principles into engineering design—known as cyber-informed engineering (CIE)—has become essential. This panel will examine how a recent booster pump station design was reviewed through a cyber-informed lens, highlighting challenges, successes, and cross-disciplinary collaboration. Panelists from engineering, operations, and operational technology will discuss how CIE principles were practically applied to bolster system resiliency.

**CEU Relevance Statement:** This session supports certified operators by addressing the technical and managerial aspects of protecting critical water infrastructure. Attendees will gain a deeper understanding of how cybersecurity intersects with operations and design, supporting the continued delivery of safe, potable water in compliance with public health.

**Primary Speaker/Author:** Jeff Hesse

**Company:** West Yost

**Job Title:** Principal Technical Specialist

**Email:** [jhesse@westyost.com](mailto:jhesse@westyost.com)

**Phone:** 9169053245

**Registrations or Certifications:** PE, GICSP, GRID

**Primary Job Responsibilities:** I am an operational technology consultant and registered engineer providing services to the water and wastewater industries for over 18 years. My experience includes control systems and technology master planning, design, data integration and reporting, programming, and implementation.

**Related Past Employment:** My career began in operations and maintenance support of water and wastewater facilities including facility startup and commissioning, O&M manual development, and staff training for new systems.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng4

**Title:** Machine Learning-Assisted Coagulant Dosing and Control

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Utilizing machine learning (ML) to optimize coagulation, flocculation, and sedimentation in existing drinking water plants could potentially lead to chemical cost savings, proactive operational control, and increased energy and removal efficiency without major infrastructure changes. In this project, a bench-scale coagulation-flocculation basin is fitted with sensors monitoring the influent, effluent, and in situ water quality. Based on real-time data, appropriate chemical dosing will be determined by a model called Fuzzy Predictive Control (FPC) which applies Fuzzy Logic Control (FLC) to a Model Predictive Control (MPC) framework. The results of this project will inform the usefulness and applicability of ML in drinking water applications.

**CEU Relevance Statement:** Sudden high sediment loads in the influent water from events like rainstorms, mudslides, and dam removals can be stressful and exhausting for operators. Rain events, particularly in Oregon, can last for days on end and operators must be present to constantly monitor chemical dosing and run jar tests to adjust chemical dosing when influent parameters suddenly change. To have a tool with predictive power that can accurately anticipate needed chemical dosing could drastically improve conditions for operators.

**Primary Speaker/Author:** Perry Wilson

**Company:** Oregon State University

**Job Title:** Graduate Research Assistant

**Email:** wilsoper@oregonstate.edu

**Phone:** 978-491-9450

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** I am currently a master's student at Oregon State University. My current job responsibilities include constructing bench-scale water treatment systems, sensor networks, and machine learning models with the goal of understanding machine learning applications in drinking water treatment.

**Related Past Employment:** As an undergraduate research assistant at the University of Vermont, I assessed the viability of dairy wash-water from Cabot Creamery as a feedstock for anaerobic digestion with the ultimate goal of methane production and nutrient recovery.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechUM3

**Title:** Ho'ola Hou - Planning and Rebuilding Maui Post Wildfires

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In August 2023, the historic town of Lahaina on the island of Maui was struck by a fast-moving wildfire that killed over 100 people and destroyed 2,200 structures. Meanwhile another wildfire broke out 25 miles away in Upcountry that destroyed numerous structures and burned approximately 700 acres. Although rarely reported but essential for the recovery effort to begin is the repair of the damaged water system. As many utilities across the US are facing increasing threats from wildfires, this presentation will share lessons learned on the many questions that arise in the aftermath of a disaster. From water quality testing to damage assessments and rethinking water distribution.

**CEU Relevance Statement:** Shows vulnerability of water infrastructure to natural disasters like wildfires and insights into how a water utility and its operators are impacted by these types of events. The County of Maui is dealing with staffing shortages in both its operations and engineering team prior to the Maui wildfires. This event spread staffing even thinner and complicated the normal daily duties of County staff in providing safe, reliable drinking water to its customers.

**Primary Speaker/Author:** Brandon Nakamura

**Company:** Carollo Engineers

**Job Title:** Staff Professional

**Email:** bnakamura@carollo.com

**Phone:** 5032902785

**Registrations or Certifications:** None

**Primary Job Responsibilities:** I am currently a staff infrastructure planning and drinking water treatment engineer. In my 2 years at Carollo I have supported numerous master planning projects and designs of water treatment facilities in the Pacific Northwest and Hawaii.

**Related Past Employment:** Spent my first year on Maui supporting the County of Maui, DWS after the Lahaina and Upcountry wildfires. Assisted with water permit reviews and gathered field data for developing and calibrating hydraulic models across five water systems. Coordinated closely with engineers and operators navigating the aftermath of the wildfires.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWT31

**Title:** Beneath the Surface: A Filter Evaluation in Anacortes

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Anacortes Water Treatment Plant has eight filters downstream of their Actiflo ballasted sedimentation system. Filter backwashing is vital to the life of the filter. Increased filter backwashing leads to a higher portion of the raw water withdrawn from the Skagit River being diverted to the City's lagoons and creates operational challenges during periods of high water demands in the City's distribution system. During typical operations, it is very common to achieve 96-hour filter run times, however, there are situations where filter runtimes decrease significantly, as low as 20 hours. The WTP treats water with a wide range in water quality depending on the time of year, posing challenges to operators. This evaluation analyzed water quality data to determine which factors impact filter run times to reduce incidences of low filter runtimes. Data considered included settled water turbidity, seasonality, settled water polymer dosing, filter aid polymer dosing, and raw water turbidity.

**CEU Relevance Statement:** Dealing with fluctuating water quality poses additional challenges to operators. This presentation strives to analyze data to figure out what works well to ultimately make operators' lives easier and provide some clarity on how to best optimize filter performance throughout the year. Filters are important for operations, maintenance, and management of a water system and are very relevant for certified operators working at a treatment plant.

**Primary Speaker/Author:** Sanyukta Gokhale

**Company:** HDR, Inc

**Job Title:** Water/Wastewater Engineer

**Email:** Sanyukta.Gokhale@hdrinc.com

**Phone:** 3014376820

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** I am responsible for the design of water treatment systems, prepare calculations, drawings, and specifications. Additionally, I write reports and provide engineering services during construction.

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechCross5

**Title:** Fire Sprinkler Systems – Protecting Public Health Through Cross-Connection Control

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** We will examine the water quality implications for fire sprinkler systems, the importance of cross-connection control applications for these systems, and the importance of coordinating between your cross-connection control department and your Fire Marshall department. In the event backflow occurs, to protect public health, adding a backflow prevention assembly as a form of cross-connection control to the fire sprinkler system will prevent non-drinkable water from the fire sprinkler system from traveling back into our public drinking water system. Cross-connection control plays a key role in the protection of public health for fire sprinkler systems. Coordination between your cross-connection control department and your Fire Marshall department is a great way to share information, collaborate on projects, and improve communication between your departments.

**CEU Relevance Statement:** Cross-connection control training for fire sprinkler systems is a great way to sharpen skills for identifying the hazards posed by fire sprinkler systems. Operators will learn to identify the best type of backflow prevention assembly best suited for the various types of fire sprinkler systems. Operators can use these skills to help identify hazards within their water system and educate customers on cross-connection control requirements. Cross-connection control plays a direct role in the protection of public health.

**Primary Speaker/Author:** Kristi Lucht

**Company:** City of Vancouver

**Job Title:** Water Quality Coordinator

**Email:** kristi.lucht@cityofvancouver.us

**Phone:** 360-518-7268

**Registrations or Certifications:** BS in Chemistry, BS in Environmental Science and AAS in Water/Wastewater Technology,

**Primary Job Responsibilities:** I am the cross-connection control program manager for the City of Vancouver. I oversee staff to ensure we comply with state drinking water quality sampling requirements.

**Related Past Employment:** I have spent the last 20 years with the City of Vancouver in the Water Quality Department. Over the course of my career I have collected water distribution water quality samples, coordinated sampling, developed our cross-connection control procedures manual, integrated new backflow software, and answer customer questions regarding water quality and backflow.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT9

**Title:** From Forever Chemical to Forever Treated: Sustainably Removing PFAS via GAC Treatment & Reactivation

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** GAC is a well-established technology for removing PFAS from water, however, some uncertainty remains about how to effectively dispose of or destroy PFAS compounds once they have been adsorbed by the media. Thermal reactivation of GAC has been practiced for decades and allows for the removal and destruction of adsorbed contaminants to currently detectable limits, including PFAS, while restoring the GAC to a virgin-like state for reuse. This presentation will review the reactivation process for GAC through two case studies of full-scale reactivation facilities. During testing, standard operating procedures for the facilities were followed to represent typical conditions for the reactivation of GAC. An overall total PFAS destruction removal efficiency of >99.9% was confirmed via third-party emissions testing using USEPA analytical methods. Participants will learn the basics of GAC reactivation and how PFAS can be removed and destroyed during thermal reactivation of spent GAC.

**CEU Relevance Statement:** Granular activated carbon (GAC) is a leading method for removing PFAS from water. Once spent, GAC is typically thermally reactivated. It is important for water systems considering GAC to understand when to replace the media, how reactivation works, the quality of reactivated GAC, and its environmental and cost benefits.

**Primary Speaker/Author:** Angela Rodriguez

**Company:** Calgon Carbon Corporation

**Job Title:** Technical Director

**Email:** [angela.rodriguez@kuraray.com](mailto:angela.rodriguez@kuraray.com)

**Phone:** 412-418-9472

**Registrations or Certifications:** PhD

**Primary Job Responsibilities:** I am the technical director for Calgon Carbon's Drinking Water Solutions and Innovative Carbon Technologies business units. I oversee a group of applications engineers that support our current and future customers from a technical perspective. We provide pilot study assistance, bed life estimates, and full-scale system troubleshooting among other tasks. My group is also involved with field and lab research, standards committees such as AWWA and NSF, and regularly provide educational presentations at conferences.

**Related Past Employment:** Prior to Calgon Carbon, I was an assistant engineer at Hazen and Sawyer. I supported various engineering projects including pilot work, site assessments, and feasibility reports.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT4

**Title:** Water System Factors that Impact Exposure Risks from Opportunistic Pathogens

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Opportunistic pathogens (OPs) in drinking water have emerged as one of the biggest causes of waterborne diseases over the last several decades, primarily Legionella, which can often be difficult to detect and predict. To elucidate factors impacting proliferation of OPs, this study examined two distinct drinking water systems, one sourced from surface water and the other sourced from ground water, where a suite of water quality parameters were used in conjunction with next generation sequencing. The results show significant distinctions between the systems, particularly in the presence of Legionella, detected in 75% groundwater samples in contrast to only 13% of the samples from the surface water system. With these results, a major challenge for utilities was explored with focus on these pervasive OPs, as well as showing the water quality factors that correspond to the prevalence of these organisms, indicating other factors that utilities may leverage for monitoring of these organisms.

**CEU Relevance Statement:** This session will provide drinking water professionals with practical knowledge and understanding of opportunistic pathogen growth within water distribution systems. Additionally, methods for broad detection of opportunistic pathogens will be demonstrated including for Legionella and Mycobacterium. This study represents a real-world example of opportunistic pathogen detection for two Idaho utilities.

**Primary Speaker/Author:** Kyle Schulz

**Company:** University of Idaho

**Job Title:** Graduate Research Assistant

**Email:** schu0276@vandals.uidaho.edu

**Phone:** 208-315-7741

**Registrations or Certifications:** None

**Primary Job Responsibilities:** I am under employment as a research assistant at the University of Idaho as I am working towards my master's degree. I collect the samples, do the lab work, and analyze the data relevant to this study along with my advisor Clifford Swanson. I am also a full time student continuing classes in civil engineering classes.

**Related Past Employment:**



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechCross1

**Title:** Backflow and Beyond: Water System Revamp at Intel Aloha

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Intel's Aloha Campus in unincorporated Washington County, OR began operations in 1976, and Tualatin Valley Water District (TVWD) has been the campus' water provider for nearly 50 years. After a cross-connection inspection on October 19, 2023, backflow deficiencies were identified at multiple water connections at the campus. TVWD and Intel embarked on a two-year journey to collaboratively upgrade the backflow assemblies, water meters, and services to three of the meters serving their fab facilities – all without downtime to critical production. This presentation will highlight the importance of an active cross-connection control program and engagement between engineers, operations, and customers.

**CEU Relevance Statement:** This presentation is relevant to earn CEUs for certified operators and PDHs for engineers because it will focus on how an effective cross-connection control program can protect public health. We hope the presentation will inspire other agencies with their own programs and tackle issues with their high-risk customers, such as Intel. Working with these customers has a high impact on reducing cross-connection concerns and potential backflow incidences.

**Primary Speaker/Author:** Sarah Alton

**Company:** Tualatin Valley Water District

**Job Title:** Engineering Manager

**Email:** sarah.alton@tvwd.org

**Phone:** 503-707-9963

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** I lead a talented team of 9 engineers and inspectors, and help them maintain a collaborative and high-performing work environment. In addition to supporting staff development and team success, I participate in the planning and execution of our capital improvement program. TVWD's engineering team is fairly lean, so I also take on a few projects to stay hands-on and contribute directly to the growth and reliability of our infrastructure.

**Related Past Employment:** Prior to my role as Engineering Manager, I served as the Development Services Engineer/Engineering Associate at TVWD for 7 years. In that role, I grew familiar working with TVWD's customers and how best to enforce our Water System Standards.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechPI3

**Title:** Capital Funding and Affordability: Managing Competing Goals

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Our local utilities provides vital services that are necessary for safety, sanitation, and health for customers and the environment. This critical role provided by utilities is possible through vast, sophisticated systems requiring continual operations and infrastructure investments. The challenge of infrastructure financing has not gone away, and it will only become more challenging to communicate the costs and impacts to customer rates and the challenge of affordability. The AWWA 2025 SOTWI survey shows that financing for capital is the top issue for utilities followed closely by public understanding/value (#4). This presentation will review the approach and case studies for establishing utility rates to support capital funding and financial sustainability, with support of an outreach approach while balancing customer affordability impacts and a review of customer assistance programs.

**CEU Relevance Statement:** The development of capital improvement plans needs to incorporate the impacts to rates over the short, and long, term. Proactive planning and reviewing the impacts to rates during the planning process to evaluate the timing and funding of projects will result in a well thought out capital funding plan and information to relay to the customers on the approach. With the increase in utility rates, utilities are evaluating alternative approaches and attempting to minimize the rate impacts where possible for those customers that qualify for customer assistance programs..

**Primary Speaker/Author:** Shawn Koorn

**Company:** HDR Engineering Inc.

**Job Title:** Associate Vice President

**Email:** shawn.koorn@hdrinc.com

**Phone:** 425-633-4596

**Registrations or Certifications:** None

**Primary Job Responsibilities:** I lead HDR's Utility Rates and Finance group which provides comprehensive rate and studies to water, wastewater, stormwater, solid waste, and electric utilities. I manage studies and provide technical advice and QC on other studies being completed by HDR staff. I also instruct AWWA's Rate Setting Essentials three day training seminar which provides the basis for establishing cost based rates and fees.

**Related Past Employment:** I have been employed at HDR for over 25 years providing utility rate and fee studies.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechCons5

**Title:** Self-Competition for the Win: How Personalized Goals Drive Water Conservation Success

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Since 2020, the City of Spokane's Water Wise Challenge has encouraged customers to compete against their own past water use, offering utility bill credits for achieving water savings of 10% or more. By focusing on self-competition rather than neighbor-to-neighbor comparisons, the Challenge fosters sustained, personal engagement. This presentation explores how individualized goals, behavior change strategies, and smart water technologies have led to meaningful conservation outcomes—over 1 million gallons saved in one year alone. We'll share how the Challenge was designed, evolved, and scaled, and offer ideas for replication in other communities.

**CEU Relevance Statement:** This session supports certified operators by showcasing customer-side demand reduction strategies that protect source water, improve system reliability, and reduce peak demand, contributing directly to public health and water system resilience.

**Primary Speaker/Author:** Kristen Zimmer

**Company:** City of Spokane

**Job Title:** Water Conservation Program Manager

**Email:** kzimmer@spokanecity.org

**Phone:** 509-981-8584

**Registrations or Certifications:** None

**Primary Job Responsibilities:** I lead the City of Spokane's water conservation programs, focusing on public outreach, behavior change, and strategic program design to promote efficient water use. My responsibilities include managing campaigns like the Water Wise Challenge, overseeing educational initiatives, and developing partnerships that support long-term conservation goals.

**Related Past Employment:**



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechYP1

**Title:** Succession Planning - Water Pipe Apprentice Program

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Seattle Public Utilities (SPU) drinking water system serves approximately 1.7 million customers and requires hundreds of staff to plan, manage, operate, and maintain the system infrastructure. As many experienced staff retire, their knowledge and experience can be challenging to replace. This is especially true for skilled water pipe workers who keep the distribution and transmission system running. This presentation describes how SPU utilizes a robust apprenticeship program to bring on new employees, integrate them into the workforce, and accelerate their skills and expertise.

**CEU Relevance Statement:** Water systems with frontline staff vacancies or significant future retirements will hear how we use a combination of structured on the job training, classroom instruction, and feedback to prepare new employees to become effective journey level staff. Much of the learning content of the apprentice program relates to Washington State Distribution Manager certification topics and how we prepare new employees to protect water quality while performing their operation and maintenance roles.

**Primary Speaker/Author:** Wylie Harper

**Company:** Seattle Public Utilities

**Job Title:** Director, Water Transmission and Distribution Maintenance

**Email:** wylie.harper@seattle.gov

**Phone:** 206 790-5669

**Registrations or Certifications:** PE, WDM4

**Primary Job Responsibilities:** I lead the division in SPU responsible for the maintaining the water distribution and transmission system. This includes valves, meters, hydrants, water main installation, leak repair, and new water services.

**Related Past Employment:** Prior to my current role, I served as the SPU Water Quality and Treatment Director, Laboratory Manager, and Sr. Water Quality Engineer at SPU. Previously I worked as a Sr. Environmental Engineer for the Army Center for Health Promotion and Preventive Medicine.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechEng19

**Title:** Pumping with Curb Appeal: A Residential Approach to Utility Design

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Faced with the challenge of replacing a 1960s-era pump station built across the existing right-of-way, this new water pump station project combines complex site constraints with neighborhood-conscious design. Navigating a web of special and building setbacks, the design team developed a compact site plan that maximizes efficiency while complying with modern standards. The new building—intentionally crafted to resemble a home—seamlessly integrates into its residential surroundings while delivering robust water infrastructure improvements. This project is a showcase of creative problem-solving and aesthetic sensitivity in utility engineering.

**CEU Relevance Statement:** This presentation highlights how thoughtful pump station design directly impacts the reliability and efficiency of water system operations. By addressing challenges such as outdated infrastructure, regulatory setbacks, and site limitations, the project demonstrates best practices for ensuring uninterrupted service and system resilience. Certified operators can use insights from this project to advocate for upgrades that improve maintainability and system performance—ultimately enhancing water quality and supply reliability. Additionally, the integration of infrastructure into residential environments supports public health by fostering community acceptance and protecting critical assets.

**Primary Speaker/Author:** Daphne Marcyan

**Company:** West Yost

**Job Title:** Principal Engineer

**Email:** dmarcyan@westyost.com

**Phone:** 503-915-2647

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** I lead the planning and design of critical water infrastructure projects such as pump stations, pipelines, and storage facilities. I oversee technical deliverables, manage project budgets and schedules, and ensure compliance with regulatory and client requirements. Additionally, I mentor junior staff and collaborate closely with multidisciplinary teams to deliver high-quality, sustainable solutions.

**Related Past Employment:** Daphne has over 23 years of experience as a civil engineer consultant. Over 17 years of her career have focused on the design and delivery of water infrastructure projects in the Pacific Northwest.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechCons2

**Title:** Non-Potable Water Reuse in the Pacific Northwest: Case Studies and Emerging Insights

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** What role can distributed onsite water reuse systems, such as rainwater harvesting and greywater reuse, play in advancing water management strategies in the Pacific Northwest? Key to this question is understanding the motivations behind system installation, barriers to implementation and long-term maintenance, system performance, and service life. As part of its Water Demand Reduction Potential Assessment, Seattle Public Utilities conducted a survey of selected installed systems across the Seattle area to gather lessons learned and identify key themes. This presentation will share the study's methodology and findings and explore the programmatic and policy implications for expanding non-potable reuse.

**CEU Relevance Statement:** Non-potable water reuse systems are a form of distributed water supply. Depending on their prevalence and use patterns within a utility's service territory, they act as an alternative source of supply and reduce the potable water use intensity of the buildings associated with them. Depending on the end-use of the water, non-potable water reuse systems also intersect with public health and plumbing code.

**Primary Speaker/Author:** Thor Peterson

**Company:** Seattle Public Utilities    **Job Title:** Indoor Water Efficiency Program Manager

**Email:** thor.peterson@seattle.gov    **Phone:** 206-472-4557

**Registrations or Certifications:** MPA

**Primary Job Responsibilities:** I manage all indoor water conservation programs for residential, commercial, industrial and institutional sectors. This includes the full program lifecycle, including design, implementation and evaluation.

**Related Past Employment:** Energy efficiency program manager; green building consultant.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWR3

**Title:** Oregon Drinking Water Program Status Overview and Regulatory Updates

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This session covers updates on Oregon's drinking water regulations, funding, and operational issues. Experts from OHA and DEQ will discuss new rules, compliance changes, and topics like lead, copper, PFAS, and algal blooms. Funding options for infrastructure, source protection, and resilience planning will be presented. The session also addresses statewide challenges such as staffing, regulations, and funding gaps, offering strategies for water systems to adapt. Attendees will learn about current issues impacting decision-making for Oregon's public water systems.

**CEU Relevance Statement:** Water operators need to be aware of new regulations and situations that might impact their operations and water quality. Hearing how the state or other water systems have dealt with these scenarios is useful to help other water operators plan for similar events.

**Primary Speaker/Author:** Kari Salis

**Company:** Oregon Drinking Water Program  
Services Manager

**Job Title:** Technical

**Email:** karyl.l.salis@oha.oregon.gov

**Phone:** 503-385-7158

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** I manage the Technical Services Unit, overseeing engineers and environmental health specialists conduct inspections and follow up on deficiencies, respond to drinking water contamination, review and approve plans for infrastructure modifications.

**Related Past Employment:** I have worked for the Oregon Drinking Water Program for 30 years. Before that I briefly worked as a land surveyor and served two years in the Peace Corps in Nepal helping villages develop water system maintenance programs and training village water system operators.



# PNWS-AWWA Water 2026

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**Date:** 5/6/2026

**Session ID:** PCWR1

**Title:** Emergent issues in Washington for water resource management

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Ecology manages water resources in Washington balancing the competing demands from a wide variety of users and uses, including needs to support instream resources. I will provide an overview of Ecology's Water Resources Program Strategic Plan and goals for coming years. The presentation will include the agency's perspective on the emergent issues, including recent legislation, relevant case law, and Ecology's policy priorities.

**CEU Relevance Statement:** Understanding your system's water rights portfolio and how those rights may be used to meet customer growth is essential for an operator and manager of a water system. Planning for meeting demand needs requires a deep knowledge of water rights. This presentation will provide that background for operators and managers to effectively manage existing portfolio of water rights and how to consider additional water supplies for future needs.

**Primary Speaker/Author:** Dave Christensen

**Company:** Washington Department of Ecology

**Job Title:** Water Resources Deputy Program Manager

**Email:** [davc461@ecy.wa.gov](mailto:davc461@ecy.wa.gov)

**Phone:** 360-489-4227

**Registrations or Certifications:** MS

**Primary Job Responsibilities:** I oversee Ecology's Water Resources Program statewide support, including water rights permitting, policy development, budget and IT. I oversee more than 40 professional staff that support the core work of the Water Resources Program.

**Related Past Employment:** I was the Policy Unit Supervisor at the Washington State Department of Health for five years. In that role, I oversaw all rule and policy development and led legislative coordination.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng12

**Title:** Your project is unique – your selection process should be too!

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Your project is unique, so why are you using the same old consultant selection process? For the Cascade Supply Program we took a unique approach to the RFQ/RFP/interview phases that included letting consultants self-select to move from stage to stage, offering the ability to change subs/teams between the RFQ/RFP, pre-supplying charts/forms to standardize our reviews and a different scoring approach to limit/remove bias. Plus changes to the interview format (that haven't happened at the time of submitting this abstract) so we can't share the details yet!

**CEU Relevance Statement:** Selecting the right consultant is critical to the success of water utility projects, from design and construction to operational improvements. This session provides utility professionals with practical strategies for improving the RFQ/RFP and interview process, reducing bias, and ensuring the best match between project needs and consultant expertise. Attendees will gain insights that help optimize project outcomes, improve team collaboration, and support efficient, compliant, and well-managed water system operations.

**Primary Speaker/Author:** Brian Bartle

**Company:** Cascade Water Alliance

**Job Title:** Program Executive

**Email:** [bbartle@cascadewater.org](mailto:bbartle@cascadewater.org)

**Phone:** 2064911695

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** As Program Executive at Cascade Water Alliance, Brian oversees the Cascade Supply Program, Cascade's largest infrastructure project ever, which includes 20–30 miles of large-diameter pipe, storage facilities, and chlorination systems. In this role, they manage complex project planning, coordination, and execution, providing practical insights into capital project delivery, consultant selection, and strategies to optimize water system performance, reliability, and safe drinking water delivery.

**Related Past Employment:** Has 25 years of experience leading water utility and engineering programs, including serving as Deputy Director of Utilities for the City of Bellevue, overseeing \$3.5B in assets. In senior roles at HDR and Murraysmith, he managed water sector projects, capital planning, and proposal review, spanning treatment facilities, pipelines, reservoirs, and pump stations. His experience provides deep insight into delivering safe, reliable, and resilient water services.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechGR6

**Title:** Infrastructure Funding - A Rapidly Changing State and Federal Landscape

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The current environment is extremely fluid in the area of infrastructure funding and policy implementation. The presentation will provide attendees insight into how the shifts are affecting public infrastructure financing and program implementation nationwide, with a specific emphasis on Washington State.

**CEU Relevance Statement:** Funding options are vital to the planning and implementation success of infrastructure projects. This course will increase the knowledge of participants on how to successfully develop a project proposal, solicit technical assistance where needed, and understand the overarching policy frameworks being implemented by governing agencies.

**Primary Speaker/Author:** Christopher Pettit

**Company:** Washington State Department of Health

**Job Title:** Program Manager, Washington DWSRRF

**Email:** [chris.pettit@doh.wa.gov](mailto:chris.pettit@doh.wa.gov)

**Phone:** 5642331408

**Registrations or Certifications:** None

**Primary Job Responsibilities:** I oversee the DWSRF program, including traditional infrastructure funding, technical assistance, innovative projects, utilizing funding to achieve regulatory compliance, consolidation and restructuring activities, and policy implementation.

**Related Past Employment:** Chris previously directed two state agencies in Florida and Washington State responsible for the implementation of water resources policy and regulatory frameworks. Prior to that he was the policy, legislative and regulatory manager for a large local government in Florida with responsibility for the water and wastewater utility, as well as an attorney for two regional water management districts.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT18

**Title:** Hazen PHASter: A Web Application for Rapid Modeling and Design of PFAS Fixed-Bed Adsorbent Systems

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The increasing number and time sensitivity of drinking water design projects aimed at meeting PFAS MCLs led us to develop an online application unifying and improving a suite of tools to rapidly design and model PFAS fixed-bed adsorbent systems. The app can develop breakthrough predictions using machine learning if practical data is not available, fit breakthrough data to appropriate kinetic models, help in the design of contactors and pressure vessel treatment systems, and simulate lifetime operation of the system for media changeout and operational condition analyses. The ease of iteration and reporting using the app has greatly improved the speed and ease of design and quality control at 12 WTPs during the first 3 months of deployment.

**CEU Relevance Statement:** Users of the tool can simulate operation over the projected lifecycle of the designed system for analysis of media replacement frequency and effluent concentrations over the course of operation. The daily model incorporates operational decisions made by the user such as start-up and changeout regimes, blending practices, and demand growth projections, and treatment goals. The simulation only takes seconds to run, allowing the user to quickly compare and optimize systems by changing any of the adsorption data, design parameters, and/or operating conditions.

**Primary Speaker/Author:** Elin Nybonn

**Company:** Hazen and Sawyer

**Job Title:** Assistant Engineer

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**Phone:** 4254997994

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** I primarily work on integrating data analytics and machine learning into the design and optimization of water treatment systems. This covers a range of projects ranging from conventional drinking water system design to the development and implementation of advanced data techniques.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWIT6

**Title:** From Visibility to Vulnerability: The Role of Asset Management in Cybersecurity

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Effective asset management is a critical component of a comprehensive cybersecurity strategy. It involves the systematic process of monitoring, maintaining, and optimizing assets (physical and digital) within industrial environments. This approach integrates advanced technologies such as IIoT, artificial intelligence (AI), and data analytics to enhance asset performance, reduce downtime, and improve overall efficiency. By understanding and managing assets throughout their lifecycle, organizations can identify vulnerabilities, prioritize risk mitigation efforts, and enhance overall security posture. This presentation explores the intersection of asset management and cybersecurity, highlighting why this integration is essential for maintaining a solid security posture.

**CEU Relevance Statement:** Cybersecurity for Operational Technology is essential to improve availability and integrity of critical infrastructure. It directly affects the ability of a utility to meet their highest priorities: employee safety and public welfare. General awareness of important fundamental topics such as asset management remains a challenge and a barrier to progressing with confidence.

**Primary Speaker/Author:** James Schultz

**Company:** Black & Veatch

**Job Title:** Principal Consultant - OT Cybersecurity

**Email:** schultzj@bv.com

**Phone:** 609-914-5770

**Registrations or Certifications:** PE (PA), CISSP, CCNA, GICSP, CISA, C|EH

**Primary Job Responsibilities:** I provide cybersecurity consulting for primarily for water and wastewater utilities. My work involves all phases of a project lifecycle from planning to decommissioning.

**Related Past Employment:** I have extensive experience in integration of SCADA data with enterprise applications and also control systems engineering.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWT20

**Title:** A Mass Balance Approach to Managing Geosmin and MIB

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** At a terminal reservoir in Colorado, persistent taste and odor (T&O) issues driven by geosmin and MIB have limited its use as a preferred water source, and despite internal investigations and infrastructure improvements, the root causes of these challenges have remained elusive. This presentation outlines the mass balance modeling approach used in a comprehensive 2024 study aimed at unraveling the complex factors behind these events and development of proactive management strategies. The study yielding insight into the timing and relationship between shifts in nutrient dynamics and cyanobacteria growth resulting in geosmin and MIB events, informing source water mitigation and operational strategies to provide resiliency against taste and odor challenges.

**CEU Relevance Statement:** This presentation is relevant to water system management because it emphasizes the importance of a comprehensive water quality monitoring program and provides strategies to use monitoring data to protect against taste and odor events. The methods outlined can inform proactive operational strategies that mitigate cyanobacteria growth, resulting in improved water quality and reducing frequency of geosmin and MIB events. Increased understanding of the underlying causes of harmful algal blooms also enables better protection of public health at recreational reservoirs.

**Primary Speaker/Author:** Beth Rossman

**Company:** Hazen and Sawyer  
Engineer

**Job Title:** Assistant Water Resources

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**Phone:** 7203155454

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** I support a wide range of water resources projects, including source water protection, reservoir management, water supply modeling and planning, and water quality modeling. Within these projects, my work includes model development, data analysis, authoring planning studies, QA/QC, and more.

**Related Past Employment:** My previous employment includes internships at Tacoma Water and a consulting firm.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWR6

**Title:** Seattle Long-Term Demand Forecast Model: Data-driven updates and improvements

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Seattle Public Utilities (SPU) developed a new long-term water demand forecast model. The model was developed using regionally-specific data and an econometric approach in order to identify the water use drivers most pertinent to Seattle's demands. The updated model more explicitly accounts for Seattle's strong conservation planning in its historical and future demands. The new model now uses temperature data directly which allows the utility to plan for future temperature-driven increases to summer demands. This information supports SPU's planning for water supply resiliency now and in the future.

**CEU Relevance Statement:** This presentation shows how a water demand forecast is developed for one of the largest utilities in Washington State. It focuses on what variables are most important to understand annual demands and provides examples of how to plan for future water needs.

**Primary Speaker/Author:** Elizabeth Garcia

**Company:** Seattle Public Utilities

**Job Title:** Water Resources Planning Unit Supervisor

**Email:** elizabeth.garcia@seattle.gov

**Phone:** (206) 375-2591

**Registrations or Certifications:** PE, PhD

**Primary Job Responsibilities:** I'm responsible for management of major mountain reservoirs for the Seattle area's water supply for people and aquatic resources. My team and I also plan for future water supply resiliency.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT3

**Title:** Water Rights - Capturing every last drop

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Our water system recently upgraded a stream diversion to fully automate as to capture all allowable water rights. The basic valve was outfitted with a PLC panel, controls, cellular communication and then integrated to our water plant SCADA system for viewing and HMI capabilities. This project has allowed us to utilize technology to maximize water while minimizing environmental impacts and maintaining compliance.

**CEU Relevance Statement:** This project implementation has allowed our water plant to maintain compliance, even while the facility was short staffed. The ability to capture water is critical to our operation and maintaining a steady flow of product to our facility. This was a highly technical project and one of the first to be implemented in our area.

**Primary Speaker/Author:** Rob Sager

**Company:** Skagit Public Utility District #1

**Job Title:** Water Treatment Plant Foreman

**Email:** sager@skagitpud.org

**Phone:** 3608401091

**Registrations or Certifications:** WTPO 4, WDM4, CCS

**Primary Job Responsibilities:** I'm the point person at the water plant for projects and maintenance. I also can be put in the rotation of shift operators as needed to cover as needed

**Related Past Employment:** Small water system operator, private company



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDEI2

**Title:** Strength in every Drop: Women Shaping the future of Water

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Discussion of unique challenges, advantages, and successes we have experienced being women in the field. Unique qualities we bring to the table. Inspiring the next generation through our story.

**CEU Relevance Statement:** We will highlight direct contributions of women working on water construction crews & operations teams, emphasizing practical experiences, leadership, & on-the-ground problem-solving. By sharing real-world challenges & solutions encountered in system maintenance, field operations, & infrastructure projects, the panel reinforces critical best practices & approaches that are directly applicable to the management & maintenance of water systems. We will also discuss workforce resilience & retention by addressing diversity & leadership development—key components in effective utility management. Operators will gain insights into how inclusive teams foster innovation, safety, & accountability in the field, all of which influence water quality & public health. The session underscores the importance of communication, adaptability, & collaborative problem-solving—traits essential for ensuring reliable service delivery, emergency response, & consistent compliance with water quality standards.

**Primary Speaker/Author:** Sami Pielak

**Company:** Tacoma Water

**Job Title:** Water Service Worker

**Email:** [spielak@tacoma.gov](mailto:spielak@tacoma.gov)

**Phone:** 253-349-0920

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Install, repair & maintain potable water system assets through customer facing interactions, supporting the deliver of safe and reliable water.

**Related Past Employment:** Sami has worked as a wastewater field technician with an emphasis on storm water.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT6

**Title:** Ion Exchange Essentials: The Foundations of Design and Operations for Water Treatment

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Ion exchange (IX) has been one of the key treatment methods since the late 1940s, offering effective removal of charged contaminants across a wide range of applications. For operators, understanding how selection, design, and operational factors impact IX efficiency is crucial. This presentation delivers practical guidance on maximizing IX performance, covering core concepts in resin selection, hydraulic design, process configurations, regeneration techniques, and waste brine handling. It also explores operational considerations for single-use resin in PFAS removal, highlights the importance of pretreatment, and lead/lag configuration strategies. In support of better understanding regulatory compliance with multiple rules, the presentation addresses potential downstream impacts of IX systems and shares actionable operational strategies to mitigate microbial growth and corrosion—ensuring reliable, safe, and sustainable IX operations.

**CEU Relevance Statement:** This presentation provides practical guidance for optimizing ion exchange (IX) treatment in water systems, including resin selection, hydraulic design, pretreatment, and regeneration. It covers PFAS-related challenges, microbial growth, corrosion risks, and regulatory compliance, helping operators maintain reliable water quality and public health.

**Primary Speaker/Author:** Jasmina Markovski

**Company:** Consor

**Job Title:** Technical Principal, Water Treatment

**Email:** [Jasmina.markovski@consoreng.com](mailto:Jasmina.markovski@consoreng.com)

**Phone:** 480-818-7069

**Registrations or Certifications:** PhD, PE

**Primary Job Responsibilities:** Jasmina is the Principal Technologist at Consor in Arizona, specializing in drinking water treatment. With over 14 years' experience in regulatory, research, and academic roles, she advances water treatment technology and leads R&D. Jasmina has implemented federal regulations, managed permitting, authored guidance documents, and trained water professionals statewide.

**Related Past Employment:** At ADEQ, Jasmina led PFAS and corrosion permitting, provided technical support and training, wrote PFAS guidance, and coordinated state-federal rules. As an ASU Faculty Associate, she teaches senior water treatment capstone courses.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR3

**Title:** Differentiating Aquifer Storage and Recovery Regulatory Systems in the Pacific Northwest

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Aquifer storage and recovery (ASR) is a water management technique implemented around the world and is increasingly being utilized across the Pacific Northwest (PNW) for seasonal water storage. The number of ASR projects is expected to grow across the PNW as a result of the impacts of climate change, with increasing temperatures predicted to reduce annual snowpack, which provides a significant source of natural water storage. Environmental challenges of developing surface water storage make traditional surface water storage projects cost prohibitive and impractical in many cases. In contrast, ASR can be cost effective tool for water providers to effectively increase their systems redundancy and ensure emergency preparedness. Aquifer storage and recovery experts from OR, WA, and ID, will present information about regulatory systems related to groundwater storage to highlight the differences, similarities and complexities that can be a challenge in implementing these kinds of projects.

**CEU Relevance Statement:** This presentation will describe Oregon, Washington, and Idaho's Aquifer storage and recovery (ASR) regulatory framework to provide information to utility managers and operators necessary to develop ASR across the Pacific Northwest.

**Primary Speaker/Author:** Jason Melady

**Company:** Summit Water Resources LLC.

**Job Title:** Principal Hydrogeologist

**Email:** [jmelady@summitwr.com](mailto:jmelady@summitwr.com)

**Phone:** 503 799 2198

**Registrations or Certifications:** RG, CWRE

**Primary Job Responsibilities:** Jason Melady, RG, CWRE, is a principal hydrogeologist at Summit Water Resources in Portland, Oregon, specializing in water resources, groundwater supply, and water rights evaluations. He is an expert in the design and operation of ASR well systems for municipal and agricultural clients. Jason is a registered geologist in Oregon and Washington and a certified water rights examiner in the state of Oregon.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCEng5

**Title:** Groundwater Rising: Designing Resilient Water Systems for a Sustainable Future

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In the face of seismic vulnerability and rising water demands, the Cascade Groundwater Alliance is reshaping regional resilience through several groundwater development projects—a bold transition from Portland’s surface water to a self-sustaining groundwater supply. The Package 5 project addresses the complex realities of deep aquifer development, including hydrogeologic uncertainty and silica-rich water, while designing for future expansion. Unique to this site is the absence of sewer infrastructure, which required innovative backwash handling strategies not seen at other locations. This presentation will focus on the detailed design of high-horsepower vertical turbine pumps, greensand plus media filters, and an on-site hypochlorite system—key components tailored to meet evolving water quality and operational needs. Package 5 offers a case study in how utilities can navigate technical and environmental challenges to secure long-term public health and supply reliability.

**CEU Relevance Statement:** This presentation focuses on the design and implementation of a groundwater treatment facility that replaces surface water with supply from deep aquifers. Certified operators will gain practical insights into managing hydrogeologic uncertainty, interpreting well test data, and selecting high-horsepower vertical turbine pumps to meet variable aquifer performance. The session also covers how pump sizing, treatment design, and infrastructure planning can be adapted to ensure long-term reliability, operational flexibility, and public health protection. These lessons are directly applicable to operators managing groundwater systems in seismically vulnerable regions or transitioning from surface water sources.

**Primary Speaker/Author:** Jennifer Kersh

**Company:** Brown and Caldwell

**Job Title:** Associate Engineer

**Email:** jkersh@brwncald.com

**Phone:** 9712556954

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Jennifer Kersh, P.E. has a background in both drinking water and wastewater infrastructure. She works on projects that range from groundwater treatment to conveyance pipeline design, with a focus on building resilient, community-centered systems. Jennifer brings hands-on experience in design drawings and specification development, hydraulic modeling, treatment process selection, and site planning—most recently contributing to the Cascade Groundwater Alliance’s Package 5 project.

**Related Past Employment:** None



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWR16

**Title:** Adaptation Planning for a New Era: Why Every Utility Needs a Resilience Strategy

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Water utilities are facing increasing risks from climate-driven events such as wildfire, drought, and extreme heat, alongside ongoing threats like earthquakes. These challenges now directly impact the delivery of safe, reliable water. This presentation explains why adaptation planning is essential for all utilities. We'll discuss how it helps anticipate demand, protect infrastructure, and guide investments. Real-world cases from the Pacific Northwest and California will show the consequences of failing to plan and the advantages of proactive adaptation.

**CEU Relevance Statement:** This presentation provides certified operators with practical tools to identify and address vulnerabilities in water systems caused by climate-driven hazards and other disasters. By incorporating adaptation planning into routine operations and emergency preparedness, operators can help ensure service continuity, protect source water quality, and reduce risks to public health during events like wildfires, droughts, and earthquakes. The session highlights real-world scenarios where operational decisions impacted water safety and customer trust. Attendees will gain actionable strategies to strengthen their systems and safeguard community well-being.

**Primary Speaker/Author:** Jessica Farrington

**Company:** Black & Veatch

**Job Title:** Lead Climate Resilience Planner

**Email:** farringtonj@bv.com

**Phone:** 917-751-1706

**Registrations or Certifications:** MBA

**Primary Job Responsibilities:** Jessica works with utilities and municipalities to manage climate risk. She leads hazard analyses for threats such as wildfire, drought, extreme heat, and severe storms, and develops practical mitigation strategies to inform capital improvement planning, funding prioritization, and operational continuity. Her work helps ensure that communities can adapt to changing risks while protecting public health and building resilience.

**Related Past Employment:** Jessica has 18 years of cross-sector experience leading environmental resilience initiatives. She has supported utilities, local governments, and Fortune 100 companies with risk assessments, stakeholder engagement, and long-term adaptation planning. Prior to her current role, she spent 12 years at AT&T, where she led national climate resilience strategy.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT2

**Title:** Roadmap to 4 ppt: PFAS Treatment Lessons Learned

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The new federal PFAS MCLs of 4 ppt are stringent but achievable. Driven by state regulations, many utilities have implemented PFAS treatment successfully over the past years. To highlight the critical considerations for successful PFAS treatment, this presentation will include a summary of the EPA's PFAS regulations, recommended compliance approach, and lessons learned from at least four case studies of testing, design, construction, startup, and operation experiences from both groundwater and surface systems. The four case studies will be diverse in water quality, geography, and existing infrastructure and provide valuable insights into PFAS treatability, alternative analysis, funding, leveraging existing infrastructure, and emerging PFAS.

**CEU Relevance Statement:** Attendees will be able to apply the lessons learned from other utilities who have implemented PFAS treatment successfully and are operating new treatment systems. They will also learn that PFAS compliance is complex from the case studies demonstrating the importance of diligence in incorporating each plant's unique considerations, such as PFAS/TOC levels, pretreatment requirements, existing infrastructure, costs, O&M requirements, etc. for overall treatment success. Bench-scale, pilot-scale, and full-scale treatment data on PFAS removal and other water quality impacts will be presented that can educate operators who may have to run PFAS treatment systems.

**Primary Speaker/Author:** Ji Im

**Company:** CDM Smith

**Job Title:** Project Technical Leader

**Email:** imj@cdmsmith.com

**Phone:** 603-608-8164

**Registrations or Certifications:** P.E.

**Primary Job Responsibilities:** Ji Im is a Project Technical Leader and Principal Environmental Engineer at CDM Smith with over ten years of experience in drinking water quality and treatment tackling both conventional and emerging water quality challenges. She specializes in PFAS treatment having led many alternative analysis, treatability studies, bench-scale and pilot testing, regulatory review, design and construction projects throughout the country. She's an active volunteer for AWWA, currently serving as a member a Member-At-Large for Technical & Education Council, PFAS Technical Advisory Workgroup & Organic Contaminants Committee.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT26

**Title:** Planning Amid Uncertainty: Tacoma Water's approach to managing PFAS in their Supplemental Supply

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water has detected PFAS in their supplemental groundwater supply at or near the EPA MCLs for PFOA and PFOS. While the groundwater wells will continue to serve as a supplemental supply, the frequency and quantity of use is anticipated to increase in the future. This presentation will summarize Tacoma Water's planned strategy for PFAS management over the next several decades with a focus on its approach to regulatory compliance, utilizing blending as a mitigation strategy, and development of specific triggers to implement PFAS treatment systems. The scenario planning process, which included Tacoma Water staff from across the organization (operations, planning, management), will also be discussed. This presentation builds on last year's presentation to show the outcomes from the planning effort and to focus on the triggers and stepwise actions for PFAS mitigation.

**CEU Relevance Statement:** This presentation will focus on the steps for planning for PFAS management in a backup, supplemental groundwater supply. The presentation will highlight PFAS treatment options and costs, and considerations for operation and maintenance for PFAS treatment systems used intermittently, as well as monitoring approaches.

**Primary Speaker/Author:** Joanie Stultz

**Company:** Brown and Caldwell

**Job Title:** Environmental Engineer

**Email:** [jstultz@brwncald.com](mailto:jstultz@brwncald.com)

**Phone:** 2064998282

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Joanie Stultz is an environmental engineer with Brown and Caldwell's Seattle Office. Joanie's focus is on drinking water treatment, with expertise in PFAS treatment design, and is part of BC's National PFAS team. In Joanie's free time, she serves as the Section's Trustee-at-Large.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechEng24

**Title:** Easements Made Easier: Timing, Budgeting, and Lessons from a Major Capital Program

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Acquiring easements for major capital programs requires thoughtful planning, realistic budgeting, and strategic timing. This session will cover how to budget for easement costs and right-of-way consultant support, when to begin acquisition during design, and how to prepare design documents that support property restoration and owner satisfaction. We'll also explore how to manage a wide range of property owner communication and responses, from quick acceptance to lengthy negotiation, and how to plan accordingly. Lessons learned from the Willamette Water Supply Program will be shared to apply to projects large and small.

**CEU Relevance Statement:** This session will help participants expand their understanding of the critical project planning and stakeholder management needed for easement acquisition by addressing the financial, technical, and interpersonal aspects. Attendees will gain practical strategies that reduce project risk, improve schedule certainty, and strengthen collaboration with property owners, these skills are directly applicable to capital project delivery.

**Primary Speaker/Author:** Joelle Bennett

**Company:** Tualatin Valley Water District

**Job Title:** WWSP Assistant Director

**Email:** joelle.bennett@tvwd.org

**Phone:** 503.349.7236

**Registrations or Certifications:** PE, MPA

**Primary Job Responsibilities:** Joelle Bennett, PE, MPA, has over 20 years of experience delivering complex water resources and infrastructure projects. At Tualatin Valley Water District, she leads property acquisition, risk management, and supports multi-agency coordination for the Willamette Water Supply Program, combining engineering expertise with a public administration perspective to advance collaborative program delivery.

**Related Past Employment:** HDR Engineering - 11 years of engineering design and planning work in water and water resources

Carollo Engineers - 2 years of support in project management and risk analysis for the Willamette Water Supply Program



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWR10

**Title:** Incorporating Climate Change Into Demand Forecasting: Tools and Case Studies From the AWWA Guidebook

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** As utilities grapple with the uncertainties of climate change, demand forecasting must evolve to incorporate weather-driven impacts. This presentation summarizes the AWWA's new guidebook developed by Carollo Engineers, which outlines practical steps and technical methods for integrating climate science into water demand models. The session includes methodological overviews, key challenges, and insights from real-world case studies across Texas, California, and Virginia.

**CEU Relevance Statement:** Supports certified operators and planners by providing best practices for resilient, long-term water demand planning under changing climate conditions. Promotes data-driven decision-making that protects public health and ensures sustainable supply.

**Primary Speaker/Author:** John Michael Najarian

**Company:** Carollo Engineers

**Job Title:** Staff Engineer

**Email:** [jnajarian@carollo.com](mailto:jnajarian@carollo.com)

**Phone:** 2068908968

**Registrations or Certifications:** None

**Primary Job Responsibilities:** John Michael Najarian is a water resources engineer at Carollo Engineers, where he specializes infrastructure master planning. He supports utility clients in integrating data science and climate analytics into long-range planning efforts.

**Related Past Employment:** Prior to joining Carollo Engineers, John Michael Najarian worked as a research assistant at Washington State University supporting water rights and curtailment risk analysis for the Columbia River Basin. He also held an internship at Schweitzer Engineering Laboratories, where he developed risk assessment tools, industrial sampling plans, and hazardous waste management protocols.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT4

**Title:** On-site Hypochlorite Generation 101 - Tips for Design and Operation of OSHG Equipment

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** On-site hypochlorite generation (OSHG) is a growing technology and is being implemented to replace gas chlorine and liquid bulk hypochlorite systems across the United States to address concerns with supply chain resiliency and safety. This presentation will focus on drivers, key design considerations, and operational best practices for OSHG, as well as an update on the new AWWA M65 OSHG manual which is scheduled to be released by 2027. Several case studies will be included as well.

**CEU Relevance Statement:** The use of chlorine for oxidation, disinfection, and distribution residual is common in the industry. The use of OSHG equipment is becoming more common - this presentation will break down the decision factors and provide examples of how to approach the design and operation to help engineers and operators avoid common pitfalls and ensure the equipment is resilient.

**Primary Speaker/Author:** Joshua Kennedy

**Company:** Jacobs

**Job Title:** Northwest Treatment Department Lead

**Email:** joshua.kennedy@jacobs.com

**Phone:** 206-765-7652

**Registrations or Certifications:** MS, PE

**Primary Job Responsibilities:** Joshua is a Project Manager, Water Treatment Engineer, and the Northwest Water Treatment Department Lead for Jacobs. He is also the Chair for the revisions to the AWWA M65 On-Site Hypochlorite Generation manual. Joshua provides planning, pilot testing, design, and startup and commissioning leadership for drinking water treatment plants across the West.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT1

**Title:** The Case of the Crowded Chemical Room: Codes, Collaboration, and Compromise

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Chemical storage and metering are an integral part of most treatment plants whether it's simply for disinfection or multi-step processes. When designing a new chemical facility, collaboration is essential to get the details right. This session explores how engineers, operations staff, and regulators can work together to address pipe materials, spacing constraints, and layout challenges while navigating IBC, IFC, OSHA, and local regulatory requirements. Real world examples will show how early operator input and lessons learned from past projects can prevent access and maintenance issues, improve safety, and reduce long term risks. Attendees will walk away with strategies to balance codes, usability, and the reality that in chemical system design, collaboration—not perfection—is the key to success.

**CEU Relevance Statement:** This session links chemical system design to everyday safety and maintenance tasks, helping reduce incidents and improve reliability. It promotes public health protection through more accurate chemical dosing and safer handling practices.

**Primary Speaker/Author:** Julia Cummings

**Company:** Carollo Engineers

**Job Title:** Staff Professional

**Email:** [cummings.julia.rose@gmail.com](mailto:cummings.julia.rose@gmail.com)

**Phone:** 5105011204

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** Julia assists with the design and optimization of water treatment processes including chemical system and conventional filtration design. She collaborates with other engineering disciplines, plant operators, and regulators to create practical, maintainable solutions

**Related Past Employment:** Julia has worked in the water treatment process design for 3.5 years with the first 2 years spent at HDR Engineering and the remaining time spent at Carollo Engineers. She has worked on projects in Washington, Idaho, Utah, Alaska, California, Nevada, Texas, and New Mexico.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechGR4

**Title:** Managing increasing wildfire risk in Seattle's Source Watersheds

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The frequency and size of wildfires is changing in western forests. Over the past decade there have been numerous large wildfires on the west side of the Washington Cascades, near where the City of Seattle's two source watersheds are located. Together these two forested watersheds provide drinking water to 1.6 million people.

Seattle Public Utilities (SPU) is navigating increasing uncertainty as they implement their wildfire risk reduction strategy to protect their drinking water sources. To prepare for wildfire events, SPU is considering all aspects of wildfire planning – prevention, suppression, risk analysis, pre-wildfire mitigation, and post-wildfire recovery.

The presentation will demonstrate how SPU proactively manages increasing wildfire risk within their source watersheds. Specific topics will include current prevention and suppression strategies and the forward-leaning strategic planning efforts for handling future wildfire risk.

**CEU Relevance Statement:** The presentation will demonstrate the value of managing wildfire risk prior to any wildfire occurring. SPU is taking proactive measures that will mitigate and/or minimize the possibility of a major turbidity-related event after a wildfire. These measures are crucial to ensure reliable water sources that meet regulatory compliance and avoid disruption of services to SPU's customers. Since 65-70% of SPU's customer base is supplied by the unfiltered Cedar River Municipal Watershed under the designation of "Limited Alternative to Filtration", these measures become even more important.

**Primary Speaker/Author:** Julia Munger

**Company:** Seattle Public Utilities  
Manager

**Job Title:** Watershed Natural Resources

**Email:** julia.munger@seattle.gov

**Phone:** 206-450-3916

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Manage Seattle's municipal watersheds with a focus on landscape monitoring, adaptive management, forest management, weed control, stream restoration, and fish and wildlife oversight.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWQ8

**Title:** Pin the Tail on the PFAS: Advanced PFAS Fingerprinting for Source Differentiation

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Understanding sources of PFAS can be challenging when determining remediation steps. By refining known PFAS compounds against ratios and isomer patterns, a database of PFAS fingerprints were developed. Machine learning and AI-driven tools were applied to distinguish source-specific chemical signatures, formulations, and transportation dynamics. Integrating these new tools along with compound-specific metrics and statistical clustering allows for informed remediation decision-making.

**CEU Relevance Statement:** This presentation will use multiple DoD project case studies ranging from source differentiation to removal actions to demonstrate how a cutting-edge PFAS data evaluation toolset can effectively evaluate and concisely communicate PFAS data to support effective site management decision making. This tool features data visualization capabilities that simplify the analysis of complex datasets, an up-to-date repository of literature-based biotransformation pathways, and robust source differentiation functionalities, which rely on data clustering techniques.

**Primary Speaker/Author:** Katie Walker

**Company:** Jacobs

**Job Title:** Global Principal for PFAS - Drinking Water & Reuse

**Email:** [katie.walker@jacobs.com](mailto:katie.walker@jacobs.com)

**Phone:** 919-713-6322

**Registrations or Certifications:** PE, ENVSP

**Primary Job Responsibilities:** Katie Walker serves as the global subject matter expert for Jacobs on PFAS strategies for drinking water and reuse. Her job responsibilities include preparing testing protocols and analyzing results, conducting treatability studies, and preparing engineering designs.

**Related Past Employment:** Katie has served as a project manager on the evaluation of PFAS treatment technologies on more than seven projects. She has evaluated numerous types of media including GAC, ion exchange, and novel sorbents; high pressure membranes; foam fractionation; and destruction technologies for their capability to remove or destroy PFAS.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT23

**Title:** Collaborative Approach to Implementing 18 MGD IX PFAS Facility

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** South Adams County Water and Sanitation District (SACWSD), located in Colorado, serves approximately 70,000 residents. In 2018, SACWSD detected elevated levels of PFAS in the water supply, prompting the need for immediate action. SACWSD partnered with Brown & Caldwell (BC) starting in 2021 to begin evaluating alternatives for treatment, followed by the design of an ion exchange (IX) facility. To optimize project delivery, SACWSD adopted a Construction Manager at Risk (CMAR) approach with PCL Construction. CMAR cultivated a highly collaborative environment between SACWSD, BC, and PCL, enabling the successful installation of Colorado's largest IX PFAS treatment facility (18 MGD). This presentation will highlight the benefits of collaborative project delivery, as well as an alternatives analysis on PFAS treatment technologies, strategies for securing and complying with federal and state funding, and SACWSD's development of in-house PFAS lab-testing capabilities.

**CEU Relevance Statement:** Attendees will learn an overview of the available treatment technologies for PFAS and tradeoffs will be provided for operators and engineers to be aware of the options available to remove PFAS from drinking water. This presentation will provide details on how the design and construction accounted for operator input, and considerations for O&M for the lifetime of the facility.

**Primary Speaker/Author:** Kipp Scott

**Company:** South Adams County Water Sanitation District

**Job Title:** Water Operations Manager

**Email:** [jstultz@brwncald.com](mailto:jstultz@brwncald.com)

**Phone:** 2064998282

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Kipp has over 40 years experience in water treatment and currently serves as the Special Project Manager for South Adams County and Water Sanitation District. Kipp has overseen the South Adam's PFAS treatment program since PFAS was detected in their system, and has managed the implementation of PFAS treatment through initial evaluation, procuring the CMAR (PCL), and now through construction.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT17

**Title:** Basics of Surface Water Monthly Operations Reports

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** There are over 120 surface water treatment plants in WA State that all track daily performance data in monthly operations reports (MORs). MORs not only enable utilities to comply with the Surface Water Treatment Rule, they provide valuable data and can identify treatment performance trends. We will review the basics of filling out an MOR, what reviewers look for in MOR data, common mistakes, tips, and ways DOH tracks MOR data to encourage excellent performance at rapid filter plants.

**CEU Relevance Statement:** Operators, Engineers, and Managers will learn some of the details of surface water treatment plant compliance and optimization.

**Primary Speaker/Author:** Laura McLaughlin

**Company:** WA State Dept. of Health

**Job Title:** Regional Engineer

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**Phone:** 206-707-3984

**Registrations or Certifications:** PE, MSCE

**Primary Job Responsibilities:** Laura currently serves as the Regional Engineer for Whatcom County and is the NW Regional Surface Water Lead. In addition to supporting regional engineers that regulate surface water plants, she reviews water system projects and construction drawings, responds to emergencies, and inspects water systems in Washington State.

**Related Past Employment:** Laura has over a decade of experience researching, developing products, and implementing chlorine and water treatment projects in the US and Kenya, Malawi, Ghana, Mali, Thailand, and Mexico. Her Bachelor's and Master's degrees are in environmental policy, Environmental Health, and Civil and Environmental Engineering from UC Santa Cruz, UC Berkeley, and the UW.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT15

**Title:** Separation and Destruction of PFAS from Reverse Osmosis Concentrate

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Per- and polyfluoroalkyl substances (PFAS) have gained significant public health and regulatory attention, thus elevating concerns regarding their impact on water reuse. Reverse osmosis (RO) is widely used in water reuse, and while RO effectively separates PFAS in the permeate stream, a PFAS laden RO concentrate (ROC) stream is created as a byproduct. Despite already stringent regulations regarding monitoring and disposal of ROC, there is potential for regulation of PFAS in such discharges, which could necessitate additional treatment. This study reports on pilot-scale assessments evaluating PFAS separation in RO concentrate using GAC, IX, fluorosorb, and the pairing of regenerable IX resins and electrochemical oxidation for PFAS separation and destruction. All testing was performed at Orange County Water District (OCWD)'s Groundwater Replenishment System (GWRS), which is the world's largest water purification system for potable reuse.

**CEU Relevance Statement:** PFAS treatment has largely focused on simple matrices such as groundwater, with few systems evaluating PFAS treatment in challenging matrices like RO concentrate. Herein, we discuss challenges with PFAS treatment in complex matrices such as RO concentrate. Operators can then apply knowledge from this presentation to better understand how to deal with PFAS treatment in challenging water matrices, and the impact water quality can have on impact of PFAS treatment.

**Primary Speaker/Author:** Charlie Liu

**Company:** Kennedy Jenks Consultants

**Job Title:** National PFAS Lead

**Email:** CharlieLiu@KennedyJenks.com

**Phone:** 3035475650

**Registrations or Certifications:** PhD

**Primary Job Responsibilities:** Lead National PFAS practices, deputy water community of practice leader, and applied research group lead.

**Related Past Employment:** PhD Student at the Colorado School of Mines



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT7

**Title:** West Side WTP Bench and Pilot Study – Process Selection and Evaluation

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Washington County Water Conservancy District (WCWCD) is advancing plans to construct the West Side Water Treatment Plant (WSWTP), a new 10–15 MGD surface water treatment facility using Gunlock Reservoir as raw water. Hazen and Sawyer are leading a phased pilot study, with Phase 1 testing pre-sedimentation, DAF, dual media filtration, and ozone treatment, while Phase 2 serves as a backup option using conventional coagulation/flocculation and ultrafiltration (UF). This presentation will provide a review of the key bench-scale testing results, bridge bench to pilot scales, and share progressive insights from pilot study including process optimization, operational parameters, and performance metrics.

**CEU Relevance Statement:** This presentation provides critical insights into optimizing treatment processes, operational parameters, and performance metrics for a new surface water treatment plant, directly supporting efficient system operation and maintenance. Certified operators will gain actionable knowledge on advanced treatment technologies (DAF, ozone, filtration, ultrafiltration) to enhance water quality and adapt to varying raw water conditions. By understanding these pilot study findings, operators can implement best practices to ensure reliable water supply, meet regulatory standards, and protect public health.

**Primary Speaker/Author:** Rock Xu

**Company:** Hazen and Sawyer

**Job Title:** Senior Principal Engineer

**Email:** lxu@hazenandsawyer.com

**Phone:** 979-422-7190

**Registrations or Certifications:** PhD, PE

**Primary Job Responsibilities:** Lead the water and wastewater treatment projects on strategically planning, designing, and testing innovative process concepts to drive scientific advancement and tackle complex challenges. In this project, I mainly focus on system design, on-site technical support, and detailed data analysis.

**Related Past Employment:** 2022 – 2024, Keller Associates, Inc.; 2021 – 2022, HECO Engineers; 2018 – 2021, Carollo Engineers, Inc



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDEI1

**Title:** Flowing Together: Investing in Community and the Next Generation of Water Leaders

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water is committed to investing in the future through robust community outreach and workforce development efforts. Our employees—from engineers to maintenance and construction professionals—actively mentor and engage with youth through programs like Steps to STEM with Girl Scouts and MESA, TPU Academy with Boys and Girls Clubs, TPU Explorers with YMCA afterschool care, high school tours at the Headworks Facility, and library-based outreach. We also support career exploration through internships such as the Engineering Fellowship with UW Tacoma, the TPU Summer Internship Cohort, and the Next Move high school internship. For those entering the trades, we offer project-based positions through the Tacoma Training Employment Program. These programs foster early interest in utilities careers and reflect our commitment to community, education, and equity.

**CEU Relevance Statement:** This course focuses on community outreach strategies and workforce development initiatives that are essential for attracting and training the next generation of water utility professionals. Participants will explore best practices for engaging with diverse communities, building talent pipelines, and implementing training programs that align with current and emerging utility needs. By addressing both strategic and practical approaches to workforce development, this course enhances the skills, leadership capacity, and community engagement capabilities of drinking water/wastewater professionals at all levels.

**Primary Speaker/Author:** Alicia Flatt

**Company:** Tacoma Public Utilities - Water

**Job Title:** Principal Engineer

**Email:** aflatt@tacoma.gov

**Phone:** 253.320.1189

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Leads a team of engineers working on water distribution system design and other capital projects that support water delivery. Oversees long-term infrastructure strategy and implementation for a 30-year capital transmission pipeline program. Active participant/supporter of community outreach and mentorship opportunities hosted by Tacoma Water.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR5

**Title:** The Perks of Being a Municipality (and What to Know About Your Water Rights If You Aren't)

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In Oregon, municipalities are often treated differently when it comes to water rights, which can provide greater certainty and flexibility for development, but can also mean more regulatory hurdles and requirements. From incremental perfection to fish persistence conditions, being aware of these considerations will help water suppliers remain in compliance while managing their water rights portfolios to meet the needs of their communities. Not all water suppliers are municipalities, and municipalities may also hold water rights for non-municipal uses. It is therefore also essential to understand how these "perks" and restrictions could affect other utilities (e.g., a water district) and non-municipal water rights (e.g., quasi-municipal or group domestic).

**CEU Relevance Statement:** Acquiring and maintaining water rights in good standing is a prerequisite to being able to serve water to meet a utility's customer demands. This presentation will help water systems understand some of the unique considerations for managing municipal and non-municipal water rights to provide a reliable water supply. The presentation will also provide updates on changes affecting utilities' water rights during the 2025 legislative session in Oregon.

**Primary Speaker/Author:** Leah Cogan

**Company:** GSI Water Solutions, Inc.

**Job Title:** Water Resources Analyst

**Email:** lcogan@gsiws.com

**Phone:** 971-200-8529

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Leah assists clients in managing complex portfolios of water rights and facilitates development of Drinking Water Protection Plans and Water Management and Conservation Plans for communities. Her primary job responsibilities at GSI include project management, due diligence evaluations and water rights strategy development, water rights applications and transactions, meeting facilitation, and writing planning documents.

**Related Past Employment:** Prior to joining GSI, Leah worked as a grant writer for a nonprofit youth conservation corps, where she secured funding and drafted environmental analysis documents for habitat restoration and trail projects. She also served as an AmeriCorps Watershed Steward restoring salmonid habitat, conducting watershed education, and monitoring water quality.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWR2

**Title:** Idaho Water Law Updates: What Municipal Water Managers Need to Know

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will explore key Idaho water law updates impacting municipal water supply managers, including:

(1) The recent Eastern Snake Plain Aquifer (ESPA) settlement between surface water and groundwater users, which imposes new compliance requirements and planning challenges for junior groundwater users and carries implications for municipal water supply providers as they adapt their water portfolios, engage with groundwater districts, and manage for long-term demand growth under Idaho's conjunctive management regime.

(2) Senate Bill S1083 (2025), which redefines and restricts the scope of "exempt" domestic water use in Idaho and requires subdivisions to integrate water systems with municipal providers where feasible, posing new water supply planning and management challenges for municipal providers.

(3) Recent case law updates and legislative updates from Idaho's 2026 legislative session.

**CEU Relevance Statement:** This presentation is relevant to water system managers because it will address the legal frameworks governing municipal water rights in Idaho. It will cover recent legislative changes, regulatory actions, and compliance strategies that directly impact water system operations, planning, and infrastructure investment. For water suppliers not based in Idaho, it will offer "lessons learned" and case studies of emerging trends that may influence similar legislative, regulatory, and judicial actions in other states throughout the Pacific Northwest.

**Primary Speaker/Author:** Merissa Moeller

**Company:** Stoel Rives LLP

**Job Title:** Partner (Water Resources Attorney)

**Email:** merissa.moeller@stoel.com

**Phone:** 208-863-0933

**Registrations or Certifications:** J.D.

**Primary Job Responsibilities:** Legal counsel and strategic advisor to municipal water providers in Idaho and Oregon on water rights, environmental and land use permitting, and regulatory compliance.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT5

**Title:** Improving Water Treatment Resilience and Sustainability with Biological Treatment (AWWA M80)

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Utilities continue to face new source water quality challenges from climate change and emerging contaminants that require more robust and flexible treatment. Biological treatment processes have the potential to boost treatment resiliency, as well as improve the overall sustainability of water treatment processes by leveraging microorganisms found in natural water systems to biologically transform or degrade compounds. The AWWA Biological Drinking Water Treatment Committee has developed a new Manual of Practice for Biological Treatment (M80). The manual addresses each application of biological treatment providing an overview of the benefits and contaminants removed, guidance for planning and evaluating biological processes, design considerations, operations and monitoring best practices, and case studies where design criteria and performance is presented.

**CEU Relevance Statement:** This presentation will provide a preview to the new manual of practice (M80) on Biological Treatment. M80 provides guidance on planning, designing, and operating biological treatment processes for treating surface water, groundwater, and reuse water to drinking water standards. The presentation will highlight the similarities and differences between the different forms of biological treatment and how biological treatment can be beneficial across a variety of water supply applications. The proposed speaker, who led the development of the new M80, will share how implementation and operation of biological treatment has evolved and will share case study presentations.

**Primary Speaker/Author:** Lynn Stephens

**Company:** Brown and Caldwell  
Leader

**Job Title:** Northwest Drinking Water

**Email:** lstephens@brwnald.com

**Phone:** 906-281-0530

**Registrations or Certifications:** PE in Washington and Oregon

**Primary Job Responsibilities:** Lynn Stephens works for Brown and Caldwell in Seattle as BC's Northwest Drinking Water Leader. Lynn's expertise is in water quality and treatment. Lynn is the past-Chair of the Biological Treatment Symposium and past-Chair of the Biological Drinking Water Treatment Committee. She was the Co-Chair for the Manual of Practice on Biological Drinking Water Treatment (M80) and authored two chapters in M80.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWIT4

**Title:** Graceful Failure vs. Flawless Operations: Understanding Your AMI System's True Fortitude

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The water sector is facing unprecedented challenges, from extreme weather to cyber-attacks, while also managing aging infrastructure and resource scarcity. This paper examines how utilities can balance the dual imperatives of reliability and resilience in advanced metering infrastructure (AMI) systems. By defining these concepts clearly and showing why reliability underpins resilience, it provides actionable steps for selecting and operating systems that withstand both routine demands and rare disasters. Kamstrup's real-world performance data is presented as a case study in achieving both.

**CEU Relevance Statement:** This course will explain the differences between system reliability and resilience in water utility operations, with a focus on advanced metering infrastructure (AMI) systems. Participants will learn how to evaluate AMI technologies using real-world performance data, uptime metrics, and failure rates. The session will outline practical strategies for building reliability into daily operations while incorporating resilience for disaster recovery. Attendees will leave with a framework for selecting and managing systems that meet both everyday and emergency operational needs.

**Primary Speaker/Author:** Blake Michal

**Company:** Kamstrup Water Metering

**Job Title:** Manager, Solution Management

**Email:** blmi@kamstrup.com

**Phone:** 4704320134

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Manage a team of technical solution personnel who serve as the subject matter experts on AMI systems and advanced smart meter technologies. Responsible for maintaining market insight and emerging AMI technology capabilities.

**Related Past Employment:** Previously held a project engineering role and was responsible for many functions for delivering AMI solutions including: AMI propagation studies, billing system integration, and end customer solution training for both hardware and software.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechCross3

**Title:** Cross Connection Control for Wastewater, Reclaimed Water, & Potable Water

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This session will provide an overview of the relationship between wastewater, reclaimed water, and potable water as it pertains to cross connection control. The reclaimed water rule and CCC surveys at wastewater treatment plants will provide the basis for discussion.

**CEU Relevance Statement:** Cross connection control is important for protecting water quality and public health. More communities may be utilizing reclaimed water and it will be important to understand how apply cross connection control regulations.

**Primary Speaker/Author:** Bill Bernier

**Company:** Washington State Department of Health, Office of Drinking Water

**Job Title:** Compliance and Operator Certification Section Manager

**Email:** William.bernier@doh.wa.gov

**Phone:** 360-236-3562

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Manage and oversee the statewide Compliance and Operator Certification programs, distribution and cross connection control, surface water, and coordinated training in Washington State.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR2

**Title:** Are We There Yet? Case Studies in Navigating and Implementing Oregon's Aquifer Recharge Rules

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Aquifer recharge is becoming an increasingly important component of water supply strategies given recent restrictions on groundwater rights in the State of Oregon and the need for water system redundance/resiliency. The presentation will highlight three recent case studies of ASR and AR from western and eastern Oregon, with a focus on the unique benefits of each project and challenges with implementing recharge. The benefits of these projects include conditioning of an aquifer to address poor water quality conditions, establishing source redundancy, maximizing a water right to overcome fish-related limitations imposed by the Oregon Water Resource Department, and achieving water supply sustainability goals. The presentation will also discuss real-world, practical strategies for overcoming challenges of implementing recharge, including navigating divergent goals from stovepiped regulatory agencies, and overcoming a lack of cost-certainty due to unforeseen regulatory requirements.

**CEU Relevance Statement:** The presentation will discuss how aquifer recharge can be used to overcome specific challenges faced by water system operators, including water quality benefits. The talk will also touch on where aquifer recharge is applicable (to help operators assess relevancy). Finally, the discussion will contain practical information that engineers can use when designing a system.

**Primary Speaker/Author:** Matthew Kohlbecker

**Company:** GSI Water Solutions, Inc.  
Hydrogeologist

**Job Title:** President and Principal

**Email:** mkohlbecker@gsiws.com

**Phone:** 503-877-8086

**Registrations or Certifications:** RG

**Primary Job Responsibilities:** Manage aquifer recharge projects, oversee water well drilling, design water wells, conduct aquifer testing

**Related Past Employment:** Amec Earth and Environmental (2002-2007), Department of Environmental Quality (2014-2016)



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechDist17

**Title:** "Rock-in" Pipe: Why experience matters when installing water pipelines

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will focus on the challenges of installing mid-size ductile iron pipe in a congested corridor and the pitfalls of under-qualified crews. It will discuss the steps that were taken to ensure proper installation and pipe cleanliness following discovery of loads of rock inside the pipe.

**CEU Relevance Statement:** Operators will be able to use this information to help avoid future pitfalls in pipe installation. It will help provide information of how to avoid challenges with pressure testing, and other ideas of how to clean pipe and avoid damage to the internal lining.

**Primary Speaker/Author:** Nicholas Augustus

**Company:** Tualatin Valley Water District

**Job Title:** Capital Improvement Program Manager

**Email:** [nick.augustus@tvwd.org](mailto:nick.augustus@tvwd.org)

**Phone:** 801-557-0567

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** Manage the capital improvement program including large >\$1M individual projects from pre-design through construction and startup.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWR6

**Title:** Oregon's New Groundwater Appropriation Process - Water Supply Challenges and Opportunities

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Oregon adopted new rules for the appropriation of groundwater in September 2024. This process has drastically changed the landscape for acquiring a new groundwater right. This presentation will describe the new process that the Oregon Water Resources Department uses to evaluate groundwater appropriation applications, how that differs from the previous process, and what that means for securing a new groundwater permit in the State. Because it has become significantly more difficult to obtain a new groundwater right, this presentation will also cover some alternative water right mechanisms for developing water supply resources.

**CEU Relevance Statement:** Municipalities that rely on groundwater for drinking water sources will most likely not be able to obtain new groundwater rights. This presentation will educate operators and planners on the process that OWRD uses to evaluate groundwater right applications, and will include other options that may be pursued. This information will be helpful for managing water right portfolios and finding creative solutions for future water supply.

**Primary Speaker/Author:** Robyn Cook

**Company:** GSI Water Solutions, Inc.

**Job Title:** Principal Hydrogeologist

**Email:** rcook@gsiws.com

**Phone:** 503-930-3382

**Registrations or Certifications:** RG, PG, LG, CWRE

**Primary Job Responsibilities:** Manages and supports multiple ongoing projects, including projects for municipal, agricultural, and private clients, including groundwater assessments, production well construction and rehabilitation, aquifer testing, and water rights transactions. Manages the Pacific Northwest Groundwater group.

**Related Past Employment:** Prior to re-joining GSI in 2014, Robyn worked as a geologist for an environmental consulting firm on the East Coast, specializing in groundwater remediation and vapor intrusion projects. Her primary duties included soil and groundwater sampling, and conducting environmental site assessments.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWR10

**Title:** Municipal Code and Water Rights

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Water rights are critical to long term water system planning. Cities with growing water systems must plan for having adequate legal water authority to serve their future population and potential future customers with large water demands. In Washington state, new water rights are often unavailable and acquiring new water rights is often a lengthy and expensive process. In order to offset the financial impact of ongoing and future acquisitions, and shore up legal water authority for future growth, Cities across the state are implementing Municipal Code for "water right or payment in lieu" for new water system connections. This talk will explore different existing code language and provide considerations for communities who may want to develop their own.

**CEU Relevance Statement:** This talk provides water system managers guidance on one creative solution to improving access to adequate legal water authority for their public water system customers. Assuring adequate access to legal water authority is key for water supply and public health protection.

**Primary Speaker/Author:** Kelsey Mach

**Company:** Geosyntec Consultants

**Job Title:** Senior Geologist

**Email:** kelsey.mach@aspectconsulting.com

**Phone:** 5709800490

**Registrations or Certifications:** LG, CWRE

**Primary Job Responsibilities:** Managing, completing technical tasks and providing technical review for hydrogeologic water supply and water rights projects in Washington and Oregon state.

**Related Past Employment:** Staff to Senior Project Geologist, Landau Associates (4 years)



# PNWS-AWWA Water 2026

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**Date:** 5/6/2026

**Session ID:** PCWR8

**Title:** Washington Water Law: Current Legal Framework and Emerging Issues

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Margaret Lee will present an overview of Washington State's water rights framework, including the prior appropriation doctrine, permit and certificate processes, beneficial use and relinquishment, and the interplay between surface water and groundwater rights. The presentation will also address key emerging topics impacting water suppliers, including recent judicial and administrative decisions, evolving policies on instream flow protection and mitigation, and regulatory developments in areas such as water banking, drought management, and municipal supply.

**CEU Relevance Statement:** This presentation addresses the legal framework governing water rights acquisition, maintenance, and administration—foundational elements for ensuring adequate water supply to meet customer demands. By better understanding Washington's water law operators and managers will better be able to identify compliance requirements, protect existing water rights from relinquishment, and strategically plan for future supply needs through permits, or transfers. Knowledge of emerging legal developments, including instream flow policies and drought management regulations, allows certified operators to proactively adapt their systems to maintain reliable supply during regulatory changes or water scarcity conditions.

**Primary Speaker/Author:** Margaret Lee

**Company:** Cascadia Law Group

**Job Title:** Attorney

**Email:** mlee@cascadialaw.com

**Phone:** 619-757-8801

**Registrations or Certifications:** JD

**Primary Job Responsibilities:** Margaret provides legal services and advises municipalities, port districts, Tribal government, and private clients on a wide array of complex environmental matters, including environmental policy and permitting, water resources, and water quality. Margaret also serves as a mediator.

**Related Past Employment:** Administrative Appeals Judge at the Pollution Control Hearings Board for Washington State (2020-2023)



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechUM4

**Title:** Growth by Design: Restructuring a Division for Talent Development and Sustainable Growth

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** When a small company grows quickly, its internal structure can buckle under the pressure of project delivery, staff development, and long-term sustainability. This presentation explores the strategic restructuring of Parametrix's Greater Washington Water Division to meet increasing workload resourcing and project delivery demands, and most critically, support its people, while transitioning to a significantly larger operation. By fostering intentional mentoring and teaching pathways between the senior and principal engineers with our rising professionals and integrating "learning communities" to support individual growth, enhance technical development, and strengthen team cohesion throughout the Division, we create a culture of shared growth and accountability. This restructuring improved collaborative project delivery and retention, established clearer growth paths and role clarity, and cultivated more engaged, connected teams.

**CEU Relevance Statement:** This session supports certified operators and public health objectives by showing how structured mentorship, defined career paths, and collaborative learning communities strengthen operational effectiveness. By fostering staff development and team cohesion, utilities can improve workforce readiness, project performance, succession planning, and ultimately ensure reliable, safe water service for the community.

**Primary Speaker/Author:** Maricris Orama

**Company:** Parametrix, Inc.  
Conveyance, & Storage Group Lead

**Job Title:** Senior Consultant; Collection,

**Email:** meleno-orama@parametrix.com

**Phone:** 2533553656

**Registrations or Certifications:** EDD, PE, PMP

**Primary Job Responsibilities:** Mari is a Senior Consultant and leads the Collections, Conveyance, and Storage Group at Parametrix, Inc. in Greater Washington Water Division. With over 19 years of experience, she manages water and wastewater projects statewide. Mari earned a Doctor of Education in Organizational Leadership from Nova Southeastern University, focusing on team development, sustainable leadership, and organizational change. She combines technical expertise with organizational strategy, centering her leadership on equity, mentorship, workforce resilience, and long-term success.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWIT7

**Title:** Technology Integration: Balancing Innovation and the Workforce

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In utility operations, integrating new technologies offers both opportunities and challenges. This presentation focuses on a human-centric approach to technology adoption, emphasizing the importance of considering workforce needs and capabilities. We will explore strategies for stakeholders to foster a collaborative environment where technology enhances human potential, rather than replacing it. We aim to provide a roadmap for successful technology integration that prioritizes the human element, ensuring a resilient and innovative workforce.

**CEU Relevance Statement:** New technologies are emerging at an accelerating pace. Effectively incorporating new technology is critical to the continued efficient and sustainable operation of utilities. A human-centric approach ensures that these technologies enhance, rather than disrupt, the workflow of utility workers.

**Primary Speaker/Author:** Mark Semrau

**Company:** Public Utility District No. 1 of Skagit County

**Job Title:** Capital Program Management

**Email:** msemrau@pnws-awwa.org

**Phone:** 360-853-6545

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** Mark Semrau is the Capital Program Manager at the Skagit PUD, where he oversees the implementation and execution of the District's Capital Improvement Plan. Mr. Semrau has worked in the water supply industry for the past 41 years. Mr. Semrau received his bachelor's degree in Civil Engineering and his master's degree in Environmental Engineering from Washington State University. Mr. Semrau received his Professional Engineer certificate in 1989 and his Project Management Professional certification in 2007.

**Related Past Employment:**



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**Date:** 5/7/2026

**Session ID:** TechEng7

**Title:** Tacoma Water Pinnacle Ridge Reservoir and Booster Pump Station – Procurement Strategies

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Tacoma Water Pinnacle Ridge Reservoir and Booster Pump Station project, designed during COVID and bid in summer 2022, integrated pre-purchased materials and contractual safeguards to prevent supply chain disruptions and limit market volatility. Key electrical components and a packaged booster pump station were pre-purchased before bidding site work and reservoir construction to minimize potential delays. Additionally, the reservoir bid documents featured cost-sharing clauses for steel prices to mitigate fluctuating costs. These measures aimed to keep prices low and minimize scheduling risks in an unpredictable market.

**CEU Relevance Statement:** This session demonstrates practical strategies for managing water infrastructure projects under uncertain market conditions. Attendees will learn how proactive planning, pre-purchasing critical materials, and incorporating contractual safeguards can reduce schedule delays, control costs, and mitigate supply chain risks. System managers and operators can use these tools to help their own capital projects stay on budget and on time, ensuring reliable delivery of critical water system assets.

**Primary Speaker/Author:** Max Freimund

**Company:** RH2 Engineering, Inc.

**Job Title:** Civil Project Manager 1

**Email:** mfreimund@rh2.com

**Phone:** (206) 498-7474

**Registrations or Certifications:** PE, Assoc. DBIA.

**Primary Job Responsibilities:** Max has spent his entire 11 plus year career at RH2 and has worked his way up from a staff engineer to a project manager. Max currently manages a variety of projects, ranging from water transmission mains and wells to sewer lift stations and Engineering Reports for wastewater treatment plant improvements.

**Related Past Employment:** Max has been involved in a number of reservoir and booster pump station projects throughout his career for a variety of clients, which provided him with experience to draw from during the design and construction of this project. Max also has experience pre purchasing materials ahead of construction to facilitate construction schedules and minimize risks.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWT6

**Title:** Holistic Assessment of Point of Use Carbon Filters on Drinking Water Safety

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Heavy metals, disinfection byproducts, emerging contaminants, and opportunistic pathogens all represent the major risks associated with Public Water Systems (PWS), which have led to widespread use of point of use treatment systems as an additional barrier of safety for drinking water. Despite this, full characterization of how these systems impact water safety is rarely done, leading to potentially improper use of these systems. For example, carbon block filters have been used to reduce heavy metal exposure, by up to 99% reduction, and chlorine tastes, but they can also lead to elevated exposure to Legionella and Mycobacterium, the major emerging pathogens in water. This work demonstrates a holistic assessment to better understand the application of point of use systems, where risk of exposure from both heavy metals and potential pathogens was assessed to better understand the public health impact of this point of use treatments.

**CEU Relevance Statement:** This study presents an overview of how point of use carbon block filters may impact drinking water quality, particularly with heavy metals and chlorine residuals. Additionally, how this then impact bacterial exposures is assessed, and compared with heavy metal changes. This work presents a more holistic assessment of point of use treatments in order to demonstrate where these systems are most applicable.

**Primary Speaker/Author:** Clifford Swanson

**Company:** University of Idaho

**Job Title:** Assistant Professor

**Email:** cliffords@uidaho.edu

**Phone:** 6154766435

**Registrations or Certifications:** PhD

**Primary Job Responsibilities:** Mentor and teach students on topics relevant to environmental engineering and drinking water treatment. Conduct research on drinking water and other environmental systems.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechEng13

**Title:** Blueprints for Leadership in Collaborative Delivery

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Water industry projects are becoming increasingly complex, and Owners are turning towards “alternative” delivery methods to increase early collaboration between owners, designers, and contractors to unlock insights that improve constructability and project outcomes. While these “alternative” delivery methods are more collaborative inherently, maximizing the potential benefits GC/CM or Progressive Design-Build offer require project leaders to think, plan, and execute differently. This session highlights essential leadership skills that elevate performance in collaborative delivery environments, including team incentive alignment, trust-building, and construction-focused design. The session draws upon real experiences from projects such as the Award-Winning Morro Bay Water Reclamation Facility Progressive Design-Build, to illustrate how to leverage approaches that strengthen leadership effectiveness, promote team cohesion, and support confident action in dynamic project settings.

**CEU Relevance Statement:** This presentation is relevant to water system management by demonstrating how collaborative project delivery methods like Progressive Design-Build can improve constructability and outcomes. Certified operators will gain leadership strategies that enhance team performance, align incentives, and support confident decision-making. These approaches ultimately contribute to more effective infrastructure, benefiting water quality, supply reliability, and public health protection.

**Primary Speaker/Author:** Michael Lubovich

**Company:** Black & Veatch

**Job Title:** PNW Regional Director

**Email:** LubovichM@bv.com

**Phone:** 2069497998

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** Michael is a regional director for water, wastewater and energy projects for public entities across the Pacific Northwest. Michael provides guidance and leadership to engineering teams related to alternative delivery of water and wastewater projects.

**Related Past Employment:** Michael has been a consultant project engineer, project manager, and now PNW leader, having worked for several consulting firms, including Black & Veatch. Michael has worked on a wide array of water and wastewater projects including drinking water, planning, design, project management with alternative delivery.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDist1

**Title:** Contingency Planning for Emergency Pipeline Repair – Lessons Learned

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Discussion regarding the importance of developing check sheets of critical information required to expedite timely solutions from a manufacturer. These check sheets should be established with regard to priorities of specific anticipated and unanticipated emergencies or maintenance of your pipeline system. Lessons learned from working with Engineers, Utilities, distributors, and Contractors emphasize the importance of complete and

accurate information from the very beginning of the situation for a manufacturer to understand, design, and manufacture complex fittings that are involved with a focus on large-diameter pipelines.

Included will be examples of major repairs of all types of pipes in water supply, treatment, and distribution, as well as sewer treatment, force mains, and air supply for treatment.

The presentation will focus on large-diameter pipelines, including HDPE, Ductile Iron, Steel, VC, AC, RCP, and CSSP.

**CEU Relevance Statement:** This presentation is focused on furthering the education of Contingency Planning for Emergency Pipeline Repairs, and understanding the critical information needed for the proper selection and installation of mechanical products for all types of pipes while limiting service disruptions and avoiding pipeline shutdowns.

**Primary Speaker/Author:** Mike Scholz

**Company:** JCM Industries  
Manager

**Job Title:** Western Regional Technical Products

**Email:** mscholz@jcmind.com

**Phone:** 9168032888

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Mike Scholz is responsible for direct sales, territory, and independent sales representation management along with application and product training. Mike is on the team responsible for JCM's national conference presence and virtual participation

**Related Past Employment:** Entered the industrial and waterworks industries in 1986 and working with JCM Industries since 1999.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechEng10

**Title:** Successful Implementation of a Condition Assessment Program

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Many water and wastewater utilities have not undertaken condition assessment projects or developed a program and one of the common reasons is not knowing where to start. This presentation will walk the audience through successful implementation of a condition assessment program and discuss various approaches and strategies to meet the unique needs of each utility. Case studies of industry leading utility programs will be shared focusing on different approaches and the long-term benefits.

**CEU Relevance Statement:** This presentation provides a practical framework for initiating and implementing condition assessment programs. Operations can use the strategies and case studies presented to identify infrastructure vulnerabilities, prioritize maintenance, and extend asset life. By adopting these approaches, operations can improve system reliability, protect water quality, and enhance public health outcomes. The presentation supports informed decision-making and proactive asset management, which are critical to sustainable utility operations.

**Primary Speaker/Author:** Scott Jauch

**Company:** Black & Veatch  
Lead

**Job Title:** Condition Assessment Regional Practice

**Email:** [jauchs@bv.com](mailto:jauchs@bv.com)

**Phone:** 702-343-3028

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Mr. Scott Jauch is a Condition Assessment Regional Practice Lead at Black & Veatch, based out of their Phoenix, AZ office. Mr. Jauch has been working in the water sector for 8 years, where he has focused on condition assessment and rehabilitation of buried infrastructure. Currently, he serves as Chair for AWWA's Water Main Condition Assessment Committee and is Chair for the revision of AWWA's Manual of Practice for Condition Assessment of Water Mains. Mr. Jauch has a BS degree in Chemical Engineering from the University of Arizona.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechDist13

**Title:** Extending the Useful Life of Water Mains Through Condition Assessment and Rehabilitation

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The condition of buried infrastructure is continuing to decline and as a result, the condition assessment industry is continuing to advance with new technologies and approaches. This presentation will walk the audience through common water main materials and failure modes, available technologies for gathering condition information, and available rehabilitation methods. Case studies of industry leading utility programs will be shared on condition assessment projects that led to rehabilitation and the benefits of these projects.

**CEU Relevance Statement:** This presentation addresses the challenges of aging buried infrastructure and showcasing advanced condition assessment technologies. Operations can apply this information to identify at-risk assets, select appropriate assessment tools, and implement effective rehabilitation strategies. These practices help ensure consistent water quality, reduce service disruptions, and protect public health. The case studies offer real-world examples that reinforce the value of proactive infrastructure management.

**Primary Speaker/Author:** Scott Jauch

**Company:** Black & Veatch  
Lead

**Job Title:** Condition Assessment Regional Practice

**Email:** [jauchs@bv.com](mailto:jauchs@bv.com)

**Phone:** 702-343-3028

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Mr. Scott Jauch is a Condition Assessment Regional Practice Lead at Black & Veatch, based out of their Phoenix, AZ office. Mr. Jauch has been working in the water sector for 8 years, where he has focused on condition assessment and rehabilitation of buried infrastructure. Currently, he serves as Chair for AWWA's Water Main Condition Assessment Committee and is Chair for the revision of AWWA's Manual of Practice for Condition Assessment of Water Mains. Mr. Jauch has a BS degree in Chemical Engineering from the University of Arizona.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWT10

**Title:** Sandy's New Breakpoint Chlorination System

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Once the Portland Water Bureau Water Treatment Plant (WTP) is complete, the City of Sandy, Oregon water system will receive filtered, chloraminated water from the WTP to meet peak demands in the summer. Sandy's other sources use free chlorine as their disinfectant residual. This presentation covers the design and operational parameters for the Revenue Reservoir Breakpoint Chlorination System which will convert the chloraminated water to free chlorine water. The presentation will cover the decision points from predesign through design concerning chlorine dosage, mixing options, how the water will blend with existing water sources, appropriate monitoring, and the final design of the treatment system.

**CEU Relevance Statement:** Presentation will go over breakpoint kinetics, typical chlorine to ammonia ratios in breakpoint systems, and contact time needed. Discussion will include how the water sources will mix and how operators would respond if chloraminated water enters the system. The hydraulics of the pipeline from the WTP to Revenue Reservoir will be discussed as it relates to fire flow at the WTP and service to Skyview Acres Water System that receives water from the pipeline between the WTP and Revenue Reservoir.

**Primary Speaker/Author:** Bart Stepp

**Company:** Consor

**Job Title:** Senior Engineer

**Email:** Bart.Stepp@consoreng.com

**Phone:** 503-509-0777

**Registrations or Certifications:** PE, WD4, CCS

**Primary Job Responsibilities:** Mr. Stepp is a Senior Engineer with Consor working primarily on the design and construction of water treatment facilities and water pipelines on the west coast. He also works as a contract water operator for Consor. He has 29 years of engineering experience with stints as a drinking water regulator, private consultant, and water manager at public agencies.

**Related Past Employment:** I have worked 4 years for the Oregon Health Authority, 10 years as a private consultant, and 15 years for public agencies working on capital improvement projects and managing utilities. His public agency jobs include stints as City Engineer and Public Works Director.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechWT22

**Title:** Startup Challenges in Parallel Operations: Serving 500,000 While Commissioning a New Facility!

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Originally constructed in 1925, the McCarrons Water Treatment Plant is one of only 31 facilities nationwide to receive the Presidents' Award for Water Treatment from the Partnership for Safe Water. With much of its infrastructure nearing 100 years of age, the facility continues to provide uninterrupted service to approximately 500,000 residents.

This project involved significant upgrades to the plant's pre-filtration processes, including lime handling, softening, settling, and recarbonation, as well as the integration of an ozonation system to improved disinfection. The presentation will focus on the final phase of design and construction, and will detail the technical and operational challenges encountered during startup and commissioning of the new systems under continuous plant operation, system integration strategies, and key lessons learned.

**CEU Relevance Statement:** This presentation emphasis will be placed on strategies for system integration, process sequencing, coordination between legacy and new infrastructure, and maintaining regulatory compliance throughout the transition. The presentation is CEU-relevant because it will provide lessons learned and recommendations for future parallel commissioning efforts for complex systems such as lime handling, softening, recarbonation, and ozonation.

**Primary Speaker/Author:** Benedicte Diakubama

**Company:** Jacobs Engineering Group  
Engineer

**Job Title:** Water Treatment

**Email:** benedicte.diakubama@jacobs.com

**Phone:** 503-369-8513

**Registrations or Certifications:** None

**Primary Job Responsibilities:** My role as a water treatment engineer is supporting design, construction, and startup and commissioning of water and wastewater treatment systems to ensure regulatory compliance and reliable service. I support performance and collaborate with operators during commissioning, troubleshooting, and routine operations.

**Related Past Employment:**



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWT7

**Title:** PFAS Treatment Selection: Not Just About Cost & Performance

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of Vancouver (City), Washington is in the process of adding PFAS treatment at multiple groundwater production stations throughout its system that serves over 270,000 customers. Piloting showed similar performance for anion exchange resins (AER) and granular activated carbon (GAC), giving the City flexibility to implement either depending on site conditions and constraints. This presentation focuses on the City's Water Station 4 project where NPV analysis showed similar costs for AER and GAC, and the decision-making process that was used to make final treatment selection. It highlights ancillary features that need to be addressed in most PFAS projects including – well pump upgrades, pretreatment impacts, and residuals handling.

**CEU Relevance Statement:** Operations staff will learn about the different ways to treat PFAS and things to consider when adding PFAS to a system. The net present value section will discuss the different construction costs of treatment and how operations costs could also be impacted.

**Primary Speaker/Author:** Andrew Nishihara

**Company:** Stantec

**Job Title:** Principal Engineer

**Email:** andrew.nishihara@stantec.com

**Phone:** 208-573-0849

**Registrations or Certifications:** PE, ENV SP

**Primary Job Responsibilities:** Oregon area manager for Stantec's water group. Serve as a project manager or project technical lead on water treatment related projects in the region.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechEng21

**Title:** How a design-build approach resolved a critical vulnerability and enhanced electrical resiliency.

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The 2021 ice storm in Portland exposed a critical vulnerability in Lake Oswego's new WTP utility feed. The storm caused lost power. To address this risk, the City launched this project using a progressive design-build approach, chosen to accelerate delivery and reduce risk; focusing on enhancing electrical resiliency by enabling rapid connection of portable generators. An alternatives analysis evaluated permanent and mobile generator options, considering cost, permitting and schedule constraints. Faced with long lead times, the team pivoted to a cost-effective strategy: installing infrastructure to support rental generators now, while preserving flexibility for future. This decision allowed design in just three months and phased construction to overcome equipment delays. This presentation will explore why design-build was critical to fast-tracking improvements, how early contractor involvement informed key decisions, and tradeoffs of cost and speed under real-world constraints.

**CEU Relevance Statement:** This presentation is relevant to not just managers, but operations and engineers as more and more decisions have to be made about back up power from a risk and resiliency perspective, taking into account schedule constraints with long lead times alongside unknown risk. The design-build contracting method allowed a non-traditional approach compared to the standard design-bid-build that is valuable for management and operators to learn more about for future work in the industry.

**Primary Speaker/Author:** Chris Warren

**Company:** City of Lake Oswego  
Manager

**Job Title:** Assistant Water Treatment Plant

**Email:** cwarren@ci.oswego.or.us

**Phone:** 971-930-0117

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Oversee day-to-day operations of seven operators and two maintenance employees along with project management.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechUM17

**Title:** How to Rehabilitate a Leaking Major Drinking Water Supply Line in 120 Days

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In April 2024, a leak was discovered in a major Seattle Public Utility (SPU) supply line to Mercer Island and needed to be brought back to service as soon as possible. SPU entrusted HDR to lead the rehabilitation effort, requesting the use of Primus Lining, a Flexible Fabric Reinforced Pipe (FFRP) lining technology. Remarkably, just 120 days after the leak was discovered, the supply line was restored. This presentation will detail the collaborative efforts between SPU, City of Mercer Island, HDR, and the contractor so that this amazing feat was accomplished.

**CEU Relevance Statement:** A key component of an water system manager's and operator's job is responding to when things go wrong. This presentation discusses the collaboration necessary between operators and engineers to successfully address an emergency situation that directly affected the drinking water supply for Mercer Island. The lessons learned from this project can be directly applied to future emergency situations in other drinking water systems.

**Primary Speaker/Author:** Judy Arnobit

**Company:** HDR

**Job Title:** Senior Water/Wastewater Engineer

**Email:** Judy.Arnobit@hdrinc.com

**Phone:** 215-845-6787

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Senior pipeline engineer responsible for water and wastewater planning and design.

**Related Past Employment:** Staff engineer at Kleinfelder, Project Manager/engineer at RVE.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechWQ4

**Title:** Practical aspects of Chlorine residual analysis and coliform bacteria sampling

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Present a history of disinfection with chlorine. Analysis of chlorine with handheld colorimeter. Practical aspects for collecting samples and maintaining meters. Coliform bacteria analysis. Collecting a representative sample. Sample handling and submission.

**CEU Relevance Statement:** This is key to public health and having defensible results. Practical tips to minimize chances of contaminated samples. This will help operators in keeping good chlorine residual.

**Primary Speaker/Author:** Doug Greenlund

**Company:** City of Spokane Water Department  
Coordinator

**Job Title:** Water Quality

**Email:** dgreenlund@spokanecity.org

**Phone:** 509 720-3716

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Oversee water quality for the City of Spokane. Lab manager for Department of Ecology accredited lab.

**Related Past Employment:** 10 years as environmental analyst for the City of Spokane. 18 years as a first line supervisor and process engineer for Weyerhaeuser.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCDist3

**Title:** Listening to the Flow: How AMI Helps Beaverton Serve Better

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Beaverton, Oregon is modernizing its water infrastructure with a citywide deployment of Advanced Metering Infrastructure (AMI) to improve service delivery, reduce water loss, and enhance system visibility. This session will highlight how Beaverton selected and implemented an AMI solution with acoustic leak detection and high-frequency meter reads, replacing manual processes and enabling proactive maintenance. Presenters will share lessons learned, implementation progress, and best practices for using AMI data to support operational efficiency and public health goals. Insights from peer utilities and vendor collaboration will also be discussed.

**CEU Relevance Statement:**

- Demonstrating how AMI technology enhances water quality monitoring and leak detection.
- Promoting efficient water use and infrastructure sustainability.
- Providing actionable insights for improving system reliability and service delivery.

**Primary Speaker/Author:** Dan Graff

**Company:** City of Beaverton, Oregon

**Job Title:** Public Works Utility Manager

**Email:** tim@loosier.net

**Phone:** 503-880-8231

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Oversees planning, operation, and maintenance of Beaverton's water distribution system. Manages staff, budgets, and capital projects; ensures regulatory compliance; and implements technologies to improve service and sustainability. Coordinates with departments, agencies, and the public to ensure reliable access to clean water.

**Related Past Employment:** Dan Graff began his career in residential construction, later co-founding a business building custom homes. He transitioned to light civil construction, managing excavation projects and operating heavy equipment. In 2012, he joined the City of Beaverton as a utility worker and advanced into leadership roles.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWR5

**Title:** Current challenges and issues for utilities seeking water rights

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Obtaining adequate water rights that support customer needs is an essential part of running utilities. Changes to the law, court rulings affecting case law, and new policies adopted by Ecology affect utilities' ability to meet their mission. This presentation will cover recent changes that staff, managers and elected officials should be aware of in order to be effective.

**CEU Relevance Statement:** This session is relevant to professionals in the drinking water field, particularly those involved in utility management, water resources planning, and regulatory compliance. Understanding current water rights laws and policy changes is essential for operators and utility staff to ensure access to adequate water supplies and to maintain compliance with state and federal requirements. Participants will gain knowledge applicable to day-to-day decision-making, long-term planning, and effective communication with regulators and governing bodies.

**Primary Speaker/Author:** Dave Christensen

**Company:** Department of Ecology Water Resources

**Job Title:** Deputy Program Manager

**Email:** [davc461@ecy.wa.gov](mailto:davc461@ecy.wa.gov)

**Phone:** 360-489-4227

**Registrations or Certifications:**

**Primary Job Responsibilities:** Oversight of water resource management in Washington State. Specific areas of responsibility include statewide operations, policy development, budget and information technology.

**Related Past Employment:** I have worked in environmental consulting, nonprofit organizations, local and state government in environmental protection, water resource management, and drinking water regulation for 30 years.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechGR5

**Title:** Leveraging ARPA Funds to Form a Water Campus and Urbanization Strategy in Brooks, Oregon

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** When the small, incorporated community of Brooks, Oregon without its own water source but strategically located near Salem and along I-5 with farming, industrial and housing potential was awarded \$15 million in ARPA funding, it faced a key question: how to strategically invest the funds under aggressive timelines with the understanding that 15 million will not be able to cover a whole distribution line, water campus and acquiring a water source? With no additional funding available and a tight three-year expenditure deadline, the community focused on constructing a new water campus—including a 750,000-gallon storage tank and VFD booster station—as the foundation for long-term system urbanization in a phased long term project implementation strategy.

**CEU Relevance Statement:** This presentation is geared towards administration, planning, and project implementation.

**Primary Speaker/Author:** Peter Olsen

**Company:** Keller Associates, Inc.  
Manager

**Job Title:** Regional Manager/Project

**Email:** polsen@kellerassociates.com

**Phone:** 503-910-2421

**Registrations or Certifications:** Professional Engineer

**Primary Job Responsibilities:** Peter is responsible for state wide water and wastewater projects from planning through construction. Additionally he is the Salem, Oregon office manager.

**Related Past Employment:** Peter has spent his career working at Keller Associates.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechWQ1

**Title:** Want Good Lab Data? Do your Homework. Accurate & usable lab data takes preparation prior to sampling

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Remember as a child, “Don’t go to bed without finishing your homework”. Well, in the laboratory industry, “Don’t take samples without doing your homework”. Receiving accurate and usable lab data takes preparation “prior” to sampling. Research and detailed communication with your laboratory prior to sampling is imperative to make sure the analytical data will be usable, legally defensible, and fit for the purpose of your testing program.

This presentation will cover:

- 1) What needs to be considered and reviewed with the laboratory prior to field sampling
- 2) Considerations for taking samples and delivery to the laboratory
- 3) Evaluating Analytical Results and Laboratory Quality Control (QC)

**CEU Relevance Statement:** Important water treatment, operations, and distribution system decisions are made based on the accurate and usable analytical data. This presentation will provide guidance on correctly preparing for and executing a sampling plan that yields accurate results. Topics will range Sampling Plan preparation to evaluating QC results.

**Primary Speaker/Author:** Kevin Calcagno

**Company:** Eurofins Drinking Water

**Job Title:** Senior Account Manager

**Email:** kevin.calcagno@et.eurofinsus.com

**Phone:** 916-960-7479

**Registrations or Certifications:** B.S.

**Primary Job Responsibilities:** Account Manager at Eurofins Eaton Analytical, supporting drinking water testing programs across the Western U.S. They provide guidance on water quality testing, program design, and regulatory compliance, helping utilities implement effective monitoring strategies. With extensive experience working directly with utility teams, they bring practical insights into water testing processes, data interpretation, and ensuring safe, reliable drinking water for communities.

**Related Past Employment:** Has over 37 years of experience in the environmental and water testing industry, serving in roles including Sales Director, Account Manager, Project Manager, and Client Services Manager. He has worked closely with technical and regulatory workgroups and routinely engages with utilities to ensure testing programs meet operational and compliance needs. His extensive background provides deep knowledge of water quality monitoring, laboratory operations, and best practices for safe and reliable drinking water delivery.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng1

**Title:** Enhancing Multi-Objective Utility Planning with Decision Tree Screening

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of Bellevue has implemented a structured Business Case Analysis (BCA) approach to support capital planning for a transparent criteria-driven decision-making process. While the core of the process relies on Multi-Objective Decision Analysis (MODA), a recent project assessing sewer collection system upgrades for the Newport Shores service area included a refinement to improve how alternatives are developed and evaluated. This presentation will share how a decision tree framework was introduced upstream of the MODA process to systematically screen, refine, and focus the list of alternatives before entering full analysis. The result: a more efficient and transparent BCA process that reduces complexity, aligns the City's Core Team stakeholders earlier, and delivers higher confidence in recommended actions.

**CEU Relevance Statement:** This session provides utility professionals and certified operators with decision-support strategies to improve capital project planning and evaluation. By integrating decision tree logic into the Business Case Analysis process, agencies can streamline alternative development, reduce unnecessary analysis, and better align solutions with operational and long-term system needs. The presentation highlights a real-world application of structured decision-making tools that directly support effective infrastructure investment, asset management, and regulatory compliance planning.

**Primary Speaker/Author:** Joseph Foote

**Company:** Parametrix

**Job Title:** Principal Consultant

**Email:** JFoote@parametrix.com

**Phone:** 5099791557

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** Principal Consultant and Project Manager for municipal wastewater and water projects. Responsibilities include utility system master planning. Design and construction management of wastewater and water projects, which include sewer collection systems, pump stations, and water supply, treatment, and distribution infrastructure.

**Related Past Employment:** Principal Engineer, Consor, supporting as a technical lead for standards and pumping systems.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechEng28

**Title:** From Rust to Resilience: Storage Overhaul in the Desert

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** When five aging storage tanks totaling 5.5 million gallons were identified as high risk, Foothills Utilities launched an emergency replacement project to protect water service for the growing Fortuna Hills community. A Construction Manager at Risk (CMAR) approach was selected to expedite delivery and manage evolving priorities across multiple years. The project team has navigated complex permitting and regulatory requirements while phasing construction to maintain uninterrupted water operations. This presentation shares key lessons learned in alternative delivery, stakeholder coordination, and balancing urgency with compliance under pressure.

**CEU Relevance Statement:** Focus on the planning and construction of critical water infrastructure through alternative delivery methods, specifically in an emergency response context. Attendees will gain a better understanding of how to manage operational continuity during phased construction, navigate permitting and regulatory input on a compressed timeline, and select effective construction teaming partners. The presentation also addresses operator-involved strategies for maintaining service during infrastructure replacement and highlights measures to preserve and extend the life expectancy of newly constructed facilities. These lessons apply directly to the operation, maintenance, and long-term management of drinking water systems.

**Primary Speaker/Author:** Joseph Foote

**Company:** Parametrix

**Job Title:** Principal Consultant

**Email:** JFoote@parametrix.com

**Phone:** 5099791557

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** Principal Consultant and Project Manager for municipal water projects. Responsibilities include water system master planning. Design and construction management of water projects, which include supply wells and treatment, pump stations, water storage tanks, and pipelines.

**Related Past Employment:** Principal Engineer, Consor, supporting as a technical lead for standards and pumping systems.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechEng25

**Title:** Two Directions, One System: Lessons from Managing Hydraulic Shifts in Hillsboro's Water Supply

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of Hillsboro, Oregon is supplied from the West through transmission line connections to the Joint Water Commission. A new connection to the Willamette Water Supply System will introduce water into the City's system from the East. This presentation will discuss the analysis and activities performed to prepare for this new source of supply. Analysis was completed to better understand impacts to system performance resulting from supply from the new direction under different operating conditions – adjustments to PRV settings, pump operations to promote cycling in storage reservoirs, and meeting different seasonal supply goals. Results include understanding the impacts to water age, PRV usage, and the distribution of water from each source. The results of this analysis helped City staff implement operational strategies (e.g., pre-flushing pipelines) preparing the system for water from the new source, and understanding the implications of serving their system from two directions.

**CEU Relevance Statement:** This session directly supports certified operators by highlighting operational and management strategies that can be performed prior to the introduction of a new source of supply. This session will describe system analysis, field activities performed, and lessons learned in preparing a distribution well in advance of the introduction of the new source. Activities are aimed to minimize system disruption and mitigate potential water quality issues when the new source of supply becomes active.

**Primary Speaker/Author:** Peter Brandsgaard

**Company:** HDR

**Job Title:** Project Engineer/Hydraulic Modeler

**Email:** Peter.Brandsgaard@hdrinc.com

**Phone:** 8168967300

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project engineer for planning and hydraulic modeling projects. Strong background in water modeling supporting master planning and other hydraulic analysis.

**Related Past Employment:** 7 years with HDR



# PNWS-AWWA Water 2026

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**Date:** 5/6/2026

**Session ID:** PCWT8

**Title:** Rapid Results for Long-Term Success: Identifying PFAS Adsorbents to Treat WA Groundwater Sources

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** To prepare for the upcoming PFAS compliance deadline, utilities across Washington state are proactively moving forward with the design of new treatment facilities to remove PFAS from their source waters. Sammamish Plateau Water and the City of Kennewick have PFAS levels at and/or above the MCL and are moving forward with rapid small-scale column tests (RSSCTs) to evaluate adsorbent alternatives for PFAS removal from groundwater. RSSCTs will help inform adsorbent treatment longevity, empty bed contact time requirements, and the extent of background water quality inhibition under different well operational scenarios. Both utilities will be testing a conventional GAC product Calgon F400 and novel GAC product Arq GAC 1240; Kennewick will also be evaluating ion exchange. This presentation will highlight the RSSCT results from both utilities including PFAS breakthrough curves as a function of background water quality and PFAS speciation. Preliminary design elements will also be discussed.

**CEU Relevance Statement:** This presentation is relevant to other water systems that currently or may in the future face challenges with the presence of PFAS in their source water and need to identify treatment methods for removal.

Operators will gain a greater understanding of how different PFAS adsorbents can impact breakthrough of PFAS and frequency of media changeouts. Different media types also impact full-scale operations and anticipated treatment costs.

**Primary Speaker/Author:** Victoria Nystrom

**Company:** Hazen and Sawyer

**Job Title:** Senior Principal Engineer

**Email:** vnystrom@hazenandsawyer.com

**Phone:** 6103896572

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project engineer supporting local and national drinking water treatment process and water quality projects. Job responsibilities include managing engineers and scientists, writing reports, analyzing data, QA/QC of engineering calculations, and project management.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT5

**Title:** Chlorine Source Selection – Take-Aways from a Range of Evaluations

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** With a focus on safety and resiliency, many utilities are looking more closely at 12.5% liquid sodium hypochlorite or onsite sodium hypochlorite generation as an alternative to using chlorine gas. With the significant increase in cost of chlorine gas in the past 5 years as well as the limited availability of suppliers, what do the economics and resiliency considerations look like? This presentation will present highlights from several recent evaluations along with general conclusions on capital costs and life cycle costs, and key ancillary considerations that impact this information.

**CEU Relevance Statement:** Water treatment and the ability to disinfect is dependent on the source of disinfectant – largely chlorine for utilities in the Pacific Northwest. Operations staff are included in decisions about the source of chlorine; this presentation will provide information on key considerations, both economic and resiliency focused, comparing a number of recent evaluations.

**Primary Speaker/Author:** Ali Leeds

**Company:** Carollo Engineers Inc  
Manager

**Job Title:** Design Manager / Project

**Email:** aleeds@carollo.com

**Phone:** 206-661-6324

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project management and technical oversight for water treatment plant design. 18 years of experience in water treatment design. Expertise in chemical system, pretreatment, and ozone planning, design, and startup.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechUM2

**Title:** Navigating the Rapids: Guiding a Team Through Turbulence

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Following technology selection, the City of Grants Pass Replacement WTP project experienced several project-altering changes, including: considerable value engineering, a highly dynamic schedule, and major funding challenges. Each change ushered in the need to rapidly create new plans, coordinate design team members, and inform and educate the City Council – all while moving the project forward. This presentation will discuss lessons learned while persevering through turbulent waters, providing guidance and strategies to help you and your team navigate the currents to reach calm, treated water.

**CEU Relevance Statement:** Team management is a critical skill, especially in a changing or uncertain environment, whether leading a group of operations staff or leading a design designing infrastructure and coordinating with operations staff. This presentation will help operators and organization leaders consider their approaches to management and offer lessons learned.

**Primary Speaker/Author:** Ali Leeds

**Company:** Carollo Engineers Inc.

**Job Title:** Design Manager / Project Manager

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**Phone:** 2066616324

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project management and technical oversight for water treatment plant design. 18 years of experience in water treatment design. Expertise in chemical system, pretreatment, and ozone planning, design, and startup.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT32

**Title:** Coagulation through Filtration: Operational highlights from AWWA's recently updated M37 Manual

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** AWWA's M37 Manual, released in Dec, provides guidance and information on coagulation, clarification and filtration in drinking water. This valuable resource contains a combination of theoretical background and practical information for typical conventional WTP processes. It also includes supplementary information for membrane and reuse applications. This presentation will provide an overview of the updated manual, guidance to optimize WTP processes, and references to additional information that is available in the updated manual.

**CEU Relevance Statement:** This presentation will provide key information on coagulation, clarification, and filtration, covering basics of the process operation and control, as well as troubleshooting techniques and maintenance considerations. Certified operators will be able to utilize this information to understand chemical and process adjustments they may make in their facility to optimize water production and water quality.

**Primary Speaker/Author:** Ali Leeds

**Company:** Carollo Engineers Inc.

**Job Title:** Design Manager / Project Manager

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**Phone:** 2066616324

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project management and technical oversight for water treatment plant design. 18 years of experience in water treatment design. Expertise in chemical system, pretreatment, and ozone planning, design, and startup.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT9

**Title:** Quail Creek WTP Expansion: Targeted Approach for Water Quality, Construction, and Cost Control

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Quail Creek WTP in Southern Utah is a 60 mgd surface water treatment plant being expanded to 90 mgd. The expansion project includes a new 90 mgd pre-ozone facility, new 35 mgd Dissolved Air Flotation over Filters (DAFF) Facility, addition of UV for primary disinfection, and residuals handling improvements.

A new pre-ozone process will be added to address T&O/algae issues that occur during the late summer/early fall. However, advanced oxidation using peroxone and multistage ozone injection is required for bromate formation mitigation with ozone doses higher than 1 mg/L. In addition, a new integrated DAFF process will be added to increase capacity while mitigating site and capital cost constraints.

Multiple construction phases were required to prepare QCWTP to operate at full capacity during construction of the new ozone and DAFF facilities. In addition, several design revisions and alternates were evaluated to ensure capital costs remain within the project budget constraints.

**CEU Relevance Statement:** Water operators can use the information provided to better understand how to control T&O, algae, and bromate formation in surface water treatment using advanced oxidation processes.

**Primary Speaker/Author:** Tyler Bird

**Company:** Hazen and Sawyer

**Job Title:** Associate

**Email:** [tbird@hazenandsawyer.com](mailto:tbird@hazenandsawyer.com)

**Phone:** 801-455-2168

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project management, design management, water treatment process design lead

**Related Past Employment:** Design management and water treatment process design lead with approximately 14 years of experience.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechEng15

**Title:** A Brand New Drinking Water Source and Supply

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Developing a new drinking water source for two large water suppliers is a heavy lift that takes a lot of people working together. Rockwood Water People's Utility District and the City of Gresham recently completed and began operating a jointly owned groundwater supply system to provide drinking water to 140,000 customers. The new 30 MGD water source replaces surface water that both communities used to purchase from the City of Portland.

The new water system began with an integrated Water Master Plan that identified improvements needed to move from purchased surface water to self-owned groundwater. The Master Plan identified 9 development packages that included new wells, reservoirs, treatment, transmission piping, and pump stations, integrating new facilities into the existing water supply system. The presentation will discuss water quality considerations, engineering and construction, public outreach, and funding as well as lessons learned and things to consider "next time."

**CEU Relevance Statement:** Operators from Rockwood and Gresham were involved throughout the planning, design, and construction phases to ensure the finished system meets their needs. Early and continuous involvement enabled the operators to become familiar with every aspect of the system as it was being implemented. The lessons learned during planning, design, and construction of this program should be useful to anyone implementing a major change to their water supply.

**Primary Speaker/Author:** Jeff Fuchs

**Company:** Consor

**Job Title:** Principal Engineer

**Email:** Jeff.Fuchs@consoreng.com

**Phone:** 541-788-6621

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project Manager and Principal Engineer for a variety of water supply projects. I collaborate with teams of technical experts and our clients to deliver water treatment and water supply projects.

**Related Past Employment:** I have 34 years of experience working with multiple consulting companies on a wide variety of projects. Before joining Consor in 2021, I was Public Works Director and City Engineer for Tualatin, Oregon. Prior to that, I worked for HDR managing their Water Business Group in Oregon and serving as project manager for the preliminary design phase of the new Willamette Water Supply Program.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechYP2

**Title:** Learning how to juggle: Multidisciplinary project management 101

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Management of multidisciplinary water design projects presents unique challenges integrating diverse expertise and the need for seamless coordination among various technical disciplines. Projects require collaboration among process, pipeline, civil, structural and controls engineers as well as environmental scientists and regulatory experts, all working toward the common goal of creating sustainable water solutions. Effective project management in this context requires a strategic approach to communication, risk management, resource allocation, and scheduling, ensuring that all team members remain aligned throughout the project lifecycle.

**CEU Relevance Statement:** Management of water system upgrades frequently requires project management for implementation of projects. Projects are not always simple and straightforward and good project management practices are key to a successful project delivery. Understanding the process of project management is a valuable tool for operators to understand and consider as part of the multidisciplinary nature of water projects.

**Primary Speaker/Author:** Laura Nolan

**Company:** HDR

**Job Title:** Senior Project Manager

**Email:** laura.nolan@hdrinc.com

**Phone:** 7812545281

**Registrations or Certifications:** PE, Assoc DBIA

**Primary Job Responsibilities:** Project manager for major water/wastewater projects.

**Related Past Employment:** 20 years of experience in water/wastewater consulting



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechUM12

**Title:** Seattle's Bitter Lake Reservoir Replacement Project

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Bitter Lake Reservoir is a 21 MG distribution reservoir in north Seattle. Originally constructed in 1957 as an open, 25-foot-deep basin on an 11-acre property, the reservoir was fitted with a floating cover in 2002. As the floating cover approached the end of its life, Seattle Public Utilities (SPU), with expert support from Consor Engineering, performed options analysis, considering floating cover replacement, aluminum cover installation, and building a new DN-type prestressed reinforced concrete structure. While not the lowest lifecycle cost option, SPU chose to build a new reservoir as that would allow a large portion of the property to be opened as a public park. The new reservoir design included increasing the depth by 10 feet thereby shrinking its footprint to maximize the open space created. The project will be advertised for bids in September 2025, with construction expected to start in the second quarter of 2026.

**CEU Relevance Statement:** Data-driven objective options analysis, distribution reservoir design, detail-oriented design development, public involvement best practices.

**Primary Speaker/Author:** Andrew Karch

**Company:** Seattle Public Utilities

**Job Title:** Project Manager Supervisor

**Email:** andrew.karch@seattle.gov

**Phone:** 206-437-0000

**Registrations or Certifications:** PE, PMP

**Primary Job Responsibilities:** Project manager of large complex projects and supervisor of a group of project managers



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechUM18

**Title:** Growing a Small City Water System on a Small City Budget

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of Banks operates an independent water system that currently serves approximately 800 connections. After supply-related curtailments were triggered in 2015 the City began to plan, design, build, and operate to maximize the City's assets to meet existing water demands and prepare for planned growth of another 1,000 connections. This presentation will walk through the processes that maximizes the City's water existing water rights and assets, pursues new water rights and supply/storage strategy, grow the water system through public/private partnerships, develop Public Works Staff to operate and maintain the system, and implement available funding strategies to grow the City's water supply through 2050.

**CEU Relevance Statement:** Our planning team worked with the City's operations team to select treatment alternatives that will maximize the use of the City's existing water rights.

**Primary Speaker/Author:** Rob Peacock

**Company:** Kennedy/Jenks Consultants  
Engineer

**Job Title:** Senior Associate

**Email:** robertpeacock@kennedyjenks.com

**Phone:** 5037042786

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Project Manager, Engineer of Record, Project Technical Lead, Quality Control Reviewer, Client Service Manager

**Related Past Employment:** Worked in consulting engineering for 30 years in field of environmental cleanup, wastewater treatment, water quality, water treatment/distribution.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWIT1

**Title:** Tabletops or Keystone Cops - Steps To Protect Water Systems from Cybersecurity Attacks

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation covers best practices for protecting critical infrastructure systems from degraded operations during cybersecurity attacks. Additionally, links to industry and government assistance sites are discussed. Finally, new State and Federal regulations regarding cybersecurity procedures will be covered.

**CEU Relevance Statement:** This information can be used by managers to assist with capital planning for cybersecurity expenditures. Additionally, information will be discussed regarding actions Operators can take to help their systems become more cyber-ready.

**Primary Speaker/Author:** Peter Barry

**Company:** HDR Engineering  
Engineer

**Job Title:** Control Systems Cybersecurity

**Email:** pbarry@hdrinc.com

**Phone:** 2063273096

**Registrations or Certifications:** PE, GICSP

**Primary Job Responsibilities:** Provide cybersecurity consulting services for municipal water suppliers and Department of Defense facilities, 2022 - present.

**Related Past Employment:** Provided Instrumentation and Controls Engineering services for municipal water and wastewater facilities, 2013 - present.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCWR9

**Title:** Idaho Drinking Water Program status overview and regulatory updates

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This discussion will describe the status of the drinking water program in Idaho. It will include regulatory updates, current funding information and future concerns.

**CEU Relevance Statement:** History shows that whenever a new or revised rule is implemented, violations increase. For many water systems, the operator is often the sole person responsible for managing all aspects of the drinking water system. Therefore, this presentation is crucial to the continued success of the systems as it will provide updates to the rule, including new monitoring, public notice or other requirements placed on systems.

**Primary Speaker/Author:** Cassandra Lemmons

**Company:** Idaho Department of Environmental Quality  
Water Compliance and Enforcement Supervisor

**Job Title:** Drinking

**Email:** [cassandra.lemmons@deq.idaho.gov](mailto:cassandra.lemmons@deq.idaho.gov)

**Phone:** 208-421-4321

**Registrations or Certifications:** MBA, REHS, CPM

**Primary Job Responsibilities:** Provide statewide compliance assistance and rule implementation/interpretation of the Safe Drinking Water Act, National Primary Drinking Water Regulations and Idaho Rules for Public Drinking Water Systems. Where necessary to provide coordination with DEQ attorneys and staff, to develop enforcement cases for upper management review and consideration.

**Related Past Employment:** I previously provided direct regulatory oversight of drinking water systems as the regional compliance officer for DEQ. I provided technical and compliance assistance through education and hands-on evaluations of systems or processes within the drinking water system.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechEng11

**Title:** Fundamentals of Ductile Iron Pipe

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** I will go over the manufacturing, quality control, quality management, and fundamental of ductile iron pipe. It will cover the fundamentals and basics of joints, linings, and applications of ductile iron pipe.

**CEU Relevance Statement:** This presentation provides valuable insights into advanced tools and strategies that support the efficient operation, maintenance, and management of water systems. By applying this information, certified operators can improve system reliability, reduce response time to issues, and optimize treatment processes.

**Primary Speaker/Author:** Jacob Lovin

**Company:** McWane Ductile

**Job Title:** Regional Engineer

**Email:** jacob.lovin@mcwaneductile.com

**Phone:** 7406103364

**Registrations or Certifications:** ENV SP, MBA

**Primary Job Responsibilities:** providing technical expertise and support to municipalities, consulting engineers, contractors, and internal sales teams across the western united states.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR7

**Title:** Implementing Aquifer Storage and Recovery (ASR) for Long-Term Water Supply Resiliency

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The City of Prosser (City) relies solely on groundwater supply wells completed in the Lower Saddle Mountains and Wanapum basalt aquifers. Both aquifers have been experiencing significant long-term groundwater level declines that threaten the current and future reliability of the City's municipal water supply. In 2023, the City identified an opportunity to incorporate Aquifer Storage and Recovery (ASR) into their municipal water system. By recharging the confined and locally laterally bounded basalt aquifers, the City will be able to reverse groundwater level declines and maintain the source for long-term municipal water supply. The City's proposed ASR project also has the potential to address multiple additional goals of the Yakima Basin Integrated Plan (YBIP), including expansion of both instream and out-of-stream uses, with a Total Water Supply Available (TWSA)-positive outcome.

**CEU Relevance Statement:** The City of Prosser (City) relies solely on groundwater supply wells completed in the Lower Saddle Mountains and Wanapum basalt aquifers. In 2023, the City identified an opportunity to incorporate Aquifer Storage and Recovery (ASR) into their municipal water system. By recharging the confined and locally laterally bounded basalt aquifers, the City will be able to reverse groundwater level declines and maintain the source for long-term municipal water supply.

**Primary Speaker/Author:** Marty Groom

**Company:** City of Prosser

**Job Title:** Public Works Director

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**Phone:** 509-786-8201

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Public Works Director for the City of Prosser



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/6/2026

**Session ID:** PCDist6

**Title:** Reducing Frustration: 6 Key Features of Pressure Reducing Stations

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Reducing Frustration: The Six Key Features of Pressure Reducing Station Design" explores the essential components and best practices for designing effective pressure reducing stations (PRS). PRS play a critical role in regulating and stabilizing pressure across pipelines, ensuring safe and efficient operations. This presentation highlights six key features that are vital to the successful design and function of these stations: the pressure reducing valves, bypass system, filtration mechanisms, pressure relief valve, flow metering and monitoring, and locking/isolation mechanisms.

**CEU Relevance Statement:** Reducing Frustration: 6 Key Features to Pressure Reducing Stations" is highly relevant to the operation, maintenance, and management of water systems. Pressure reducing stations are essential for controlling system pressure and protecting water quality and infrastructure. This presentation equips certified operators with the knowledge needed to effectively maintain and troubleshoot these stations by focusing on six critical design features. Applying this information helps prevent failures, extend equipment life, and ensure consistent water supply and public health protection.

**Primary Speaker/Author:** Ray Velasquez

**Company:** Cimco-GC Systems  
Support

**Job Title:** Technical Sales and Engineering

**Email:** ray@cimco-GCsystems.com

**Phone:** 2532054760

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Ray Velasquez works closely alongside water and wastewater district operators, engineers, and independent engineering firms to select valves and specific valve functions for a wide range of applications. Ray has extensive experience in valve service, assisting engineers in system design, and outside sales support to distributors and contractors.

**Related Past Employment:** Ray Velasquez has transitioned his career in the military to be a leader in the waterworks industry. He applies the skills he learned as a Special Forces Officer to train, advise, and assist operators and engineers in specification, application, and troubleshooting and work by, with, and through distribution professionals to support public infrastructure development.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechDist3

**Title:** Protect Your Pipes: Key Components of an Effective Locating Wire Solution

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Each year, underground water utilities in the U.S. suffer nearly a billion dollars in damage due to inaccurate or failed pipeline locating. This presentation explores the science and practical application of tracer wire systems used to locate and protect buried pipelines of various materials and ages. Attendees will learn key aspects of installation, troubleshooting, and system design to improve accuracy and reduce the risk of costly damage. The session emphasizes the importance of proper locating methods for operational efficiency, public safety, and infrastructure protection.

**CEU Relevance Statement:** This presentation is highly relevant to the operation and maintenance of both water and wastewater utility systems, focusing on the ongoing challenges of accurately locating underground pipelines. Certified operators will gain practical knowledge about how pipeline materials, installation practices, and tracer wire systems affect the success of locating efforts. The session explains how tracer wire works, why it can fail, and how to design and maintain a reliable system that lasts the life of the pipeline. Applying this information helps utilities reduce service disruptions, protect water quality, and ensure public access to essential utilities.

**Primary Speaker/Author:** Ray Velasquez

**Company:** Cimco-GC Systems

**Job Title:** Technical Sales and Engineering Support

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**Phone:** 2532054760

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Ray Velasquez works closely alongside water and wastewater district operators, engineers, and independent engineering firms to select valves and specific valve functions for a wide range of applications. Ray has extensive experience in valve service, assisting engineers in system design, and outside sales support to distributors and contractors.

**Related Past Employment:** Ray Velasquez has transitioned his career in the military to be a leader in the waterworks industry. He applies the skills he learned as a Special Forces Officer to train, advise, and assist operators and engineers in specification, application, and troubleshooting and work by, with, and through distribution professionals to support public infrastructure development.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDist4

**Title:** What the Flush? Advanced Water Quality Monitoring and Condition Mitigation

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation introduces water utility professionals to advanced technologies used to maintain and improve drinking water quality in distribution systems. It explains how automated flushing and water sample stations can be integrated into system operations to proactively manage water quality and reduce risks such as stagnation, biofilm formation, and chlorine loss. Certified operators will learn how these tools support real-time condition monitoring and data-driven decision-making across the distribution network. The session highlights how these strategies can enhance system performance, protect public health, and ensure regulatory compliance.

**CEU Relevance Statement:** This presentation is directly relevant to the operation and maintenance of water distribution systems by introducing technologies that support proactive water quality management. It explains how automated flushing devices and water sample stations can be used to reduce stagnation, maintain disinfectant residuals, and prevent biofilm buildup—key factors in protecting water quality. Certified operators will gain insight into how real-time data from these systems can guide decision-making, improve system performance, and enhance public health protection. The session emphasizes strategies that help utilities ensure regulatory compliance and deliver safe, clean drinking water consistently.

**Primary Speaker/Author:** Ray Velasquez

**Company:** Cimco-GC Systems  
Support

**Job Title:** Technical Sales and Engineering

**Email:** ray@cimco-gcsystems.com

**Phone:** 2532054760

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Ray Velasquez works closely alongside water and wastewater district operators, engineers, and independent engineering firms to select valves and specific valve functions for a wide range of applications. Ray has extensive experience in valve service, assisting engineers in system design, and outside sales support to distributors and contractors.

**Related Past Employment:** Ray Velasquez has transitioned his career in the military to be a leader in the waterworks industry. He applies the skills he learned as a Special Forces Officer to train, advise, and assist operators and engineers in specification, application, and troubleshooting and work by, with, and through distribution professionals to support public infrastructure development.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCDist7

**Title:** Sound Strategies: Pipe Condition Assessment and Water Loss Prevention Techniques

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation covers the use of acoustic leak detection and pipe condition assessment technologies in water utilities to identify leaks, evaluate pipeline health, and prioritize repairs. Certified operators will learn how these tools help reduce water loss, improve system reliability, and protect public health by detecting leaks that are not visible on the surface. The session also highlights how acoustic methods support proactive asset management and discusses the potential integration of managed monitoring technologies to enhance ongoing system performance and maintenance. This information equips operators with practical strategies to optimize water supply and infrastructure management.

**CEU Relevance Statement:** This presentation is relevant to the operation and management of water systems by explaining how acoustic leak detection and pipe condition assessment technologies help reduce water loss and evaluate pipeline health. Certified operators will gain insight into how these tools support system reliability, guide maintenance planning, and enhance public health protection by identifying non-surfacing leaks and infrastructure risks. The session also highlights the role of managed monitoring solutions in improving long-term water supply management and asset performance. This knowledge supports informed decision-making and more efficient utility operations.

**Primary Speaker/Author:** Ray Velasquez

**Company:** Cimco-GC Systems  
Support

**Job Title:** Technical Sales and Engineering

**Email:** ray@cimco-gcsystems.com

**Phone:** 2532054760

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Ray Velasquez works closely alongside water and wastewater district operators, engineers, and independent engineering firms to select waterworks solutions that power success for a wide range of applications. Ray has extensive experience in valve service, assisting engineers in water and wastewater system design, and outside sales support to distributors and contractors.

**Related Past Employment:** Ray Velasquez has transitioned his career in the military to be a leader in the waterworks industry. He applies the skills he learned as a Special Forces Officer to train, advise, and assist operators and engineers in specification, application, and troubleshooting and work by, with, and through distribution professionals to support public infrastructure development.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/7/2026

**Session ID:** TechGR3

**Title:** Was it Always This Hard? Modern Project Delivery in the PNW (Panel Discussion)

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Every large (>\$1B) Programs/Projects in our region has been plagued with delivery challenges: land use appeals result in significant costs/schedule delays, previously awarded federal funding was revoked, cost escalation and contractor availability significantly increase costs... The challenges never seem to end. Has it always been this hard? Or is this just a sign of the times? This panel will discuss the 'thrills of victory, and the agonies of defeat' from several large Programs in the region (Willamette Water Supply Program, Portland Water Bureau Projects and many more!)

**CEU Relevance Statement:** The Program Directors from the largest project/programs in the region will be sharing lessons learned from their implementation efforts, ranging from permitting, cost control, scheduling, supply chain and public acceptance. These learnings can help others avoid similar pitfalls, helping ensure their rate payers realize the value of their investments.

**Primary Speaker/Author:** Jude Grounds

**Company:** Carollo Engineers

**Job Title:** Senior Vice President

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**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Regional manager, project manager for design of water treatment infrastructure.

**Related Past Employment:** Have held this job for more than 25 years.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCDist5

**Title:** Tacoma Water's SmartWater Program: Installation and Implementation

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water (Washington) is in the process of installing pressure sensors, flow meters, and various pieces of equipment and technology to create DMA's (District Metered Areas) to gain system knowledge, prevent resource loss, ensure environmental stewardship, and improve service to customers through predictive operational awareness.

**CEU Relevance Statement:** The goal and purpose of the presentation is to express the importance and relevance of creating DMA's (District Metered Areas), and how to install the equipment, assets, and infrastructure to obtain pertinent and relevant data to improve any water department and water system. This presentation will show specific equipment installation, data communication / data receiving software, and program implementation to improve the Tacoma Water system. This presentation will be relevant to any water department interested in developing DMAs to develop their own 'SmartWater' program.

**Primary Speaker/Author:** John Vance

**Company:** Tacoma Water (Tacoma Public Utilities)  
Operations & Maintenance Analyst

**Job Title:** Water

**Email:** [jvance@tacoma.gov](mailto:jvance@tacoma.gov)

**Phone:** Work: 253.345.8023, Cell: 253.961.2047

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Researches, compiles and analyzes data; develops business case evaluations; identifies maintenance and construction alternatives for risk and life-cycle costs; assesses and recommends action.

Participates in the development and implementation of maintenance plans, capital improvement programs and strategic initiatives.

Identifies process improvement opportunities.

**Related Past Employment:** Previously I managed the meter shop for the Tacoma Water Department during the implementation of the AMI (Advanced Metering Infrastructure) program and during the creation of the previously mentioned SmartWater program. I was also at the Tacoma Water Department I was a Water Meter Repair Worker, Service Worker, and Apprentice (Graduate) of the Tacoma Water JATC Apprentice Program.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechCross4

**Title:** Glow up your Cross Connection Control Program!

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Portland Water Bureau's Cross Connection Control Program is essential for the protection of public health in the Portland metro area. This well-established program is undergoing a "glow up" transformation that is leveraging available staff, technology, and other resources while in a budget-constrained environment. These changes are leading to better administration of the program and improved customer experience. Staff will present their 2+ year Work Plan which includes elements such as revising their Backflow Assembly Installation Requirements, reducing test report backlog, handling customer calls, moving to an electronic test submittal portal, and other Program improvements.

**CEU Relevance Statement:** This presentation is targeted to Cross Connection Control Specialists who are required to administer their program for the continued protection of public health. These Specialists will learn how to better communicate complicated issues to the public and how to improve their public education materials. Specialists will also learn ways to increase their efficiency and gain improvements in their testing and inspection compliance.

**Primary Speaker/Author:** Lyda Hakes

**Company:** Portland Water Bureau  
Manager

**Job Title:** Bull Run Supply & Treatment

**Email:** [lyda.hakes@portlandoregon.gov](mailto:lyda.hakes@portlandoregon.gov)

**Phone:** 503-865-6357

**Registrations or Certifications:** PE, Cross Connection Control Specialist

**Primary Job Responsibilities:** Responsible for administering PWB's Cross Connection Control Program and managing PWB's surface water supply and treatment, and hydraulic modeling team.

**Related Past Employment:** Worked at Alameda County Water District for 9 years as a process engineer and as a consultant for 6 years.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechDist14

**Title:** Creative Approach to Construct 30-Inch and 8-Inch Water Mains in Major Arterial

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** As one of the oldest cities west of the Mississippi, the City of Oregon City has miles of undersized, old water mains. Growth in the area has increased not only water demand but traffic on its major arterial, Molalla Avenue. The city secured federal funding through the Water Infrastructure Finance and Innovation Act to complete critical improvements to its water system, including replacement and upsizing of an existing 6-inch distribution main and 16-inch distribution main in Molalla Avenue. In an effort to reduce project cost and minimize traffic impacts, a unique design approach was taken to install the new 8-inch distribution main and new 30-inch transmission main in a shared trench. This approach proved successful during construction, allowing increased production and realizing the desired reduction in traffic impacts.

**CEU Relevance Statement:** This presentation will include information regarding how to fund water system improvements - when local water rates are limited. This would be of interest to management. The shared trench approach and traffic management will be informative to operations and maintenance.

**Primary Speaker/Author:** Patty Nelson

**Company:** City of Oregon City

**Job Title:** Senior Engineer

**Email:** pnelson@orcite.org

**Phone:** 503-422-2463

**Registrations or Certifications:** P.E.

**Primary Job Responsibilities:** Responsible for development of and management of the Oregon City WIFIA Program funding over \$33 million dollars in water infrastructure improvements. Project Manager for water transmission improvements projects and SCADA Isolation project as part of the WIFIA program.

**Related Past Employment:** I have been employment at the Oregon Department of Transportation, City of Portland, City of Wilsonville and Oregon City. In addition, I have worked in the private sector with a focus on public works projects.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCEng7

**Title:** Steel Resolve: Installing Pipe Through Streams, Streets, and Sensitive Spaces

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** As part of the Willamette Water Supply Program (WWSP), a 3,500 linear foot section of 48-inch welded steel pipeline presented a range of construction challenges. This segment navigated an open cut creek crossing, a trenchless light rail crossing, seismically vulnerable slopes, close proximity to residential homes, and construction through a popular nature park and major arterial road. This presentation will share key lessons learned and highlight the successful strategies used to overcome these complex conditions.

**CEU Relevance Statement:** This presentation includes considerations for long-term maintenance during design and construction (location of blow-offs, operator access to appurtenances, easements, etc.) The engineering challenges that were overcome during construction are important for the long-term reliability of the water system and protection of public health, even after a major seismic event.

**Primary Speaker/Author:** Erika Murphy

**Company:** Carollo Engineers  
Manager/Supervising Associate

**Job Title:** Conveyance Project

**Email:** emurphy@carollo.com

**Phone:** 7202124717

**Registrations or Certifications:** PE (Oregon)

**Primary Job Responsibilities:** Responsible for managing pipeline projects for the WWSP from design, permitting, ROW acquisition, to construction and long-term operations. Constant communication with operators, owners, design engineers, regulatory agencies, stakeholders, and the public.

**Related Past Employment:** Previously a project manager for the City of Hillsboro, where I managed projects on behalf of the City. Managing pipeline projects, including design, permitting, construction, and long-term operations. Constant communication with operators, contractors, design engineers, regulatory agencies, stakeholders, and the public.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWQ6

**Title:** Transforming water supply in the Puget Sound: Cascade Water Alliance's Regional Blending Study

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Cascade Water Alliance (Cascade) is a municipal corporation formed in 1999 managing water supply and planning for seven member agencies and 400,000 people in east King County, Washington. In 2025, Cascade finalized a new agreement with the City of Tacoma for long-term water supply, beginning in 2041 and ramping up to 24 MGD through 2060. After construction of \$1 billion in new infrastructure, Tacoma's Green River supply will be introduced into the transmission and distribution systems of Cascade Members, resulting in new blending regimes with SPU and potentially Member groundwater supplies. This presentation provides an overview of the blending study completed to identify risks and mitigation for the new blending scheme.

**CEU Relevance Statement:** Certified operators must be aware of potential implications to water quality and regulatory compliance when bringing new and/or different water supplies into service. These implications can arise from changes in chemistry, and impacts to legacy deposits on pipe walls, and major changes to system hydraulics, which may affect formation of disinfection byproducts, chlorine residual, and therefore public health.

**Primary Speaker/Author:** Chris McMeen

**Company:** Confluence Engineering

**Job Title:** Sr. Project Manager

**Email:** [chris@confluence-engineering.com](mailto:chris@confluence-engineering.com)

**Phone:** 253-377-8739

**Registrations or Certifications:** PE, WTPO4, WDM4

**Primary Job Responsibilities:** Responsible for the evaluation and analysis of data and information related to water quality and utility resilience, and development of recommended courses of action for drinking water systems. This work includes analysis of source water or treated water data to support optimization of water quality and developing responsive monitoring plans and programs for regulatory compliance and operational optimization.

**Related Past Employment:** Deputy Superintendent and Manager of Water Quality and Water Supply for Tacoma Water (retired 2020). Responsible for planning, executing water quality programs, regulatory compliance, watershed management and resilience programs. Prior, was Water Treatment Engineer for the WA State Department of Health, consultant (Gray & Osborne), and a Peace Corps Volunteer (Water Engineer).



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR1

**Title:** Source Water Protection Planning in an Agricultural Watershed

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Joint Water Commission (JWC) is a drinking water provider formed by the Cities of Hillsboro, Forest Grove, Beaverton, and the Tualatin Valley Water District. The JWC is responsible for treating, transmitting, and storing potable water for approximately 458,000 customers and several wholesale customers. The JWC received a grant from the Natural Resources Conservation Service to review agricultural impacts to water quality as part of a comprehensive Source Water Protection Plan (SWPP) update for the Drinking Water Source Area (DWSA) where one of the predominant land uses is agriculture. This presentation will provide background on the DWSA and an overview of the analyses conducted as part of the SWPP development including a contaminant source and risk assessment, with an emphasis on agricultural sources. The SWPP paves the way for outreach to local producers and additional support from the NRCS to implement non-point source pollution mitigation strategies.

**CEU Relevance Statement:** This presentation is relevant for CEUs because it addresses practical approaches to source water protection planning, agency coordination, and stakeholder engagement. Attendees will gain insight into effective analyses and best management practice strategies and stakeholder outreach that supports long-term source water protection.

**Primary Speaker/Author:** Rob Annear

**Company:** Annear Water Resources, LLC

**Job Title:** Founder / Senior Principal

**Email:** [rob@annearwaterresources.com](mailto:rob@annearwaterresources.com)

**Phone:** (503) 936-0115

**Registrations or Certifications:** PhD, PE

**Primary Job Responsibilities:** Rob Annear is an environmental engineer with 25 years specializing in hydrodynamic and water quality modeling. Rob supports clients with regulatory permits and requirements, drinking water studies, source water protection studies and planning, surface water system assessments, climate change studies, and water quality management for multiple uses.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWR15

**Title:** Modeling Thermal Impacts and Mitigation with CE-QUAL-W2 to Support Temperature Compliance in Oregon

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Many rivers in the Pacific Northwest are 303(d) listed for high water temperatures that threaten ESA-listed species, leading to temperature TMDLs and thermal loading limits for dischargers. In 2016, Oregon DEQ launched a water quality trading program to help mitigate thermal impacts, especially for projects with a nexus to rivers supporting ESA-listed species. Numeric temperature standards in Oregon require rigorous assessment and mitigation of thermal impacts, and water providers proposing new surface water withdrawals must seek a 401 Water Quality Certification for potential thermal impacts. This presentation will show how CE-QUAL-W2, a two-dimensional hydrodynamic and water quality model well-suited to simulating longitudinal and vertical temperature dynamics in rivers and reservoirs, can be integrated into modeling workflows to support 401 Certification, evaluate thermal impacts, and develop defensible mitigation and flexible compliance strategies such as thermal trading.

**CEU Relevance Statement:** This presentation supports water system management by addressing how temperature standards affect new water withdrawals and compliance requirements. It shows how CE-QUAL-W2 modeling can assess thermal impacts and evaluate mitigation options. Certified operators can apply this information to learn about the permitting process, protect water quality, and support compliance with aquatic life criteria.

**Primary Speaker/Author:** Rob Annear

**Company:** Annear Water Resources

**Job Title:** Senior Principal

**Email:** [rob@annearwaterresources.com](mailto:rob@annearwaterresources.com)

**Phone:** 503.936.0115

**Registrations or Certifications:** PhD, PE

**Primary Job Responsibilities:** Rob Annear is an environmental engineer with 25 years specializing in hydrodynamic and water quality modeling. Rob supports clients with regulatory permits and requirements, drinking water studies, source water protection studies and planning, surface water system assessments, climate change studies, and water quality management for multiple uses.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDist2

**Title:** Solutions for Control: Distribution Maintenance & Repair Techniques to Avoid System Shutdown

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This session provides an in-depth look at insertion valve technology and its applications in water system maintenance. Participants will learn how permanent valves can be installed under pressure without service interruptions, and how this method compares to traditional shutdown approaches. The presentation will cover valve design and components, performance testing against industry standards, and real-world uses such as hydrant replacements, water main rehabilitation, and lift station improvements.

**CEU Relevance Statement:** This training supports operator competency in valve insertion techniques, industry standards, and safe installation practices. Participants will gain an understanding of how live insertion methods reduce the operational, financial, and water-quality risks associated with planned or emergency shutdowns. The session also reviews field applications and product specifications that meet or exceed AWWA C509 and C515 standards, helping operators make informed decisions that enhance system reliability and maintenance effectiveness.

**Primary Speaker/Author:** Michael Urwin`

**Company:** Hydra-Stop

**Job Title:** Sales Western US- Hydra-Stop

**Email:** Murwin@hydra-stop.com

**Phone:** 480-861-7019

**Registrations or Certifications:** None

**Primary Job Responsibilities:** With six years working directly with utilities, engineers, and field crews, Michael has built strong expertise in insertion valve technology and live system maintenance. He supports utility teams in planned and emergency interventions, provides technical installation guidance, and educates operators on real-world valve performance. His hands-on experience covers distribution system challenges, valve operations, industry standards, and infrastructure maintenance, enabling him to effectively train water professionals on the benefits of insertion valve methods.

**Related Past Employment:** Michael brings over twenty years supporting utilities across the Western United States through roles at AVT, Birmingham Controls, and GE Energy. His experience includes preventive maintenance, valve audits, system rehabilitation, and reliability improvements, working closely with field crews and utility teams to optimize system performance.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026    **Session ID:** TechWT28

**Title:** PFAS detections, now what? Using bench-scale testing of Tacoma's backup supply to inform planning.

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The remediation of PFAS-contaminated groundwater is a widespread challenge for drinking water utilities, requiring site-specific evaluations to support treatment selection and regulatory compliance. Bench-scale testing, specifically rapid small scale columns tests (RSSCTs), offers a cost-effective and time-efficient method to assess treatment performance of multiple medias, which aids in life-cycle cost evaluations and decision making. This presentation highlights bench-scale testing results from a wellfield in Tacoma, WA impacted by PFAS, focusing on how media treatment results informed a PFAS treatment implementation plan for site alternative evaluations and feasibility. Tested medias include Calgon F400, Norit Hydrodarco 4000, Arq CarbPure 1240, Xylem APR-2, Calgon 2301, and F-200. Through sharing Tacoma's RSSCT results in this presentation, the team will demonstrate the benefits of bench-scale PFAS testing and how results can be utilized for broader full-scale treatment decisions.

**CEU Relevance Statement:** This session will support the understanding of media treatment for PFAS removal and how to determine PFAS breakthrough for media change-out.

**Primary Speaker/Author:** Savannah Wujastyk

**Company:** Brown and Caldwell

**Job Title:** Environmental Engineer

**Email:** swujastyk@brwncald.com

**Phone:** 7168015240

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** Savannah Wujastyk is an environmental engineer with Brown and Caldwell's Seattle office, and has focused primarily on drinking water treatment in her time with BC, supporting multiple planning and design projects in the Northwest from PFAS studies to On-site Hypochlorite Design

**Related Past Employment:** Previous experience includes graduate studies researching metabolic pathways for resource recovery in waste streams for alternative fuel sources.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT3

**Title:** PFAS Mitigation in the PNW: Challenges, Strategies, and Future Directions

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Over 2 years have passed since EPA's federal PFAS rule promulgation, and over 5 years have passed since Washington developed State Action Levels for PFAS – what are the challenges we're seeing with the implementation of PFAS mitigation, and where are we headed? This discussion will utilize local case studies to zoom in our community's efforts to mitigate PFAS, manage costs, and maintain public trust. Highlights will include: fast-tracking treatment for a GW well while concurrently developing a system-wide plan, addressing the cascading effects of site improvements needed to accommodate treatment, and crafting a comprehensive communications strategy. With this framework, this discussion will forecast the PNW's PFAS mitigation journey and offer insights into future opportunities for collaboration, partnerships, and public engagement.

**CEU Relevance Statement:** This presentation will provide insight on PFAS treatment design, which will help operators understand the features, nuances, and external considerations that make up a PFAS treatment system. This will provide operators better background knowledge if PFAS mitigation projects are forthcoming at their utility (empowering them to provide insight into the design process). The presentation will also provide operations and management staff tips for sharing data amongst peer utilities and communicating with stakeholders.

**Primary Speaker/Author:** Tyler Kane

**Company:** Carollo Engineers

**Job Title:** Engineer

**Email:** TKANE@CAROLLO.com

**Phone:** 508-423-0014

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Senior engineer, primarily involved in design of water treatment system processes, including filtration, chemical systems, and disinfection. I perform calculations, develop conceptual designs, detailed design documents, and serve as project engineer to coordinate between design disciplines.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCDist4

**Title:** No more Chart Recorders - Digitally SmartWater Monitoring of Tacoma Water PRV Stations

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water's SmartWater Program seeks to service to customers through operational awareness. Our 75+ Pressure Reducing Valve Stations are now monitored digitally using SmartWater technology, instead of time consuming manual Chart Recorders. The near-real time data is used to alert water operators of issues - dispatching mechanics if needed. Additionally, mechanics can access a digital 7-day report of station operation. The presentation will review how Tacoma Water deployed digital sensors, developed visualizations and alarms, and lessons learned.

**CEU Relevance Statement:** Pressure Reducing Valves are common in Water Systems, often operating without controls or monitoring. This presentation presents information on how Operators can use digital information to better monitor and maintain this equipment.

**Primary Speaker/Author:** Daniel Reisinger

**Company:** Tacoma

**Job Title:** Planning & Engineering System Planning

**Email:** dreisinger@tacoma.gov

**Phone:** 253-316-2477

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Serves as Program Manager for Tacoma Water SmartWater Program. Professional engineer that supervises Planning & Engineering System Planning team, which provides hydraulic information for customer requests, initiates projects, and conducts long-term planning. Tacoma Water employee for 5 years.

**Related Past Employment:** Prior to joining Tacoma Water, served as an engineering Consultant for public utilities for 15 years



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechCons3

**Title:** Do you have a leak? - Tacoma Water Advanced Metering Infrastructure Customer Benefits

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water has deployed Advanced Metering Infrastructure (AMI) Technology that allows the identification of potential customer side leaks. Tacoma Water alerts customers of leaks and has a grant program to assist with potential repairs. The presentation will discuss the process and materials, outcomes after a full year of deployment, and lessons learned.

**CEU Relevance Statement:** Water use efficiency is a key component of Utility operations. Operators and other Utility staff are sometimes tasked with differentiating between Utility and Customer leaks when questions arise. This presentation reviews a technological solution that can provide operators information to better conduct their activities.

**Primary Speaker/Author:** Daniel Reisinger

**Company:** Tacoma Water

**Job Title:** System Planning Supervisor

**Email:** dreisinger@tacoma.gov

**Phone:** 253-316-2477

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Serves as Program Manager for Tacoma Water SmartWater Program. Professional engineer that supervises Planning & Engineering System Planning team, which provides hydraulic information for customer requests, initiates projects, and conducts long-term planning. Tacoma Water employee for 5 years.

**Related Past Employment:** Prior to joining Tacoma Water, served as an engineering Consultant for public utilities for 15 years.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechUM14

**Title:** What is EJCDC? Leveraging Industry Standard Contracts to Deliver Your Capital Projects

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Engineers Joint Contract Documents Committee (EJCDC) represents a collaborative effort by three industry professional organizations (ASCE, ACEC, and NSPE) to publish standardized construction contract templates to deliver capital projects, focusing in particular on public agency owners building infrastructure. For 50 years, EJCDC has supported owners with balanced and thorough contract documents suitable for use on a wide range of type and complexity of projects. These documents are written and reviewed by experienced industry experts to be customizable for your projects, to balance risks, and to reduce conflicts and litigation. In 2026, EJCDC is publishing updated versions of both its longstanding design-bid-build project delivery documents and its progressive design-build documents. Join this presentation to learn about the latest EJCDC publications, the benefits of using industry standard templates, and how to leverage 50 years of EJCDC experience on your next project.

**CEU Relevance Statement:** No amount of technical specification will make up for a poorly written construction contract. Utility managers have a responsibility to see that capital projects are bid and administered using construction agreements that support a successful delivery of the project, which requires careful planning by owner's project managers, procurement agents, risk managers, and legal counsel, as well as the owner's design professional or other consultants. This presentation describes the challenges of preparing contract documents for capital projects and explores the benefits of using industry standard contract templates like those published by EJCDC.

**Primary Speaker/Author:** Spencer Adams

**Company:** HDR

**Job Title:** Water Project Manager

**Email:** spencer@ninepointengineering.com

**Phone:** 2143357810

**Registrations or Certifications:** PE, CCCA, DBIA

**Primary Job Responsibilities:** Spencer manages project scope and delivery for municipal water projects, leveraging 14 years of civil engineering experience in both consulting and utility roles to ensure operational quality and high engineering standards.

**Date:** 5/6/2026

**Session ID:** PCEng1



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Title:** What's the Best Delivery Method for My Public Water Utility Capital Project?

**Length of Presentation:** 120-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** How do you determine the best approach for delivering a capital improvement project? This workshop offers an opportunity for professionals to collaborate with water utility experts on how to make informed decisions about the major project delivery methods used in the water sector. By the end of the workshop, participants will be able to (1) identify high-level advantages and disadvantages of the major project delivery methods used in the water sector and identify the mainstream resources available on project delivery, (2) select and justify the best project delivery method and risks for example projects in a live group activity and compare input from other attendees on their selected delivery methods, risks, and risk mitigations for the same examples, and (3) question and interact in-person with panels of experienced owners and practitioners to gain their real-life perspective on the implementation of collaborative project delivery methods in the water sector.

**CEU Relevance Statement:** Utility managers have a responsibility to see that capital infrastructure projects are delivered successfully so that utilities can build and upkeep the assets that allow them to deliver clean water, reclaim wastewater, and manage stormwater. Empowering utility staff with training and resources to make the best decision on the method of construction project delivery contributes to the successful delivery of those projects.

**Primary Speaker/Author:** Spencer Adams

**Company:** HDR

**Job Title:** Water Project Manager

**Email:** [spencer@ninepointengineering.com](mailto:spencer@ninepointengineering.com)

**Phone:** 214-335-7810

**Registrations or Certifications:** PE, DBIA, CCA

**Primary Job Responsibilities:** Spencer manages engineering project scope and delivery in the water sector, specializing in drinking water treatment and conveyance. With over 14 years of municipal water experience as both a consultant and utility staff member, he enjoys infrastructure projects and technical details. He has chaired AWWA committees and received the AWWA Vernon Lucy Award for volunteer work.

**Date:** 5/7/2026

**Session ID:** TechDist5



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Title:** AWWA C655 and Best Practices for Field Dechlorination

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** AWWA C655, Field Dechlorination, is widely used in the water sector as a reference standard for hydrant flushing, pipeline disinfection, and other needs to discharge water which has been highly chlorinated. A new revision of the standard was published in 2025 and includes new information regarding the development of Disinfection and Dechlorination Plans, which is a best practice for any utility staff or contractor planning to discharge highly chlorinated water. Join this presentation to discuss the latest revision to AWWA C655, best practices for pipeline disinfection and field dechlorination, and the steps to plan your next project to protect the environment from the effects of untreated highly chlorinated water discharges.

**CEU Relevance Statement:** Review of best practices for field dechlorination of hydrant flushing water or pipeline disinfection water based on AWWA standard C655 Field Dechlorination and state regulations. Presentation will explore the challenges for field dechlorination of chlorinated and chloraminated waters which must be discharged to the environment.

**Primary Speaker/Author:** Spencer Adams

**Company:** HDR

**Job Title:** Water Project Manager

**Email:** [spencer@ninepointengineering.com](mailto:spencer@ninepointengineering.com)

**Phone:** 2143357810

**Registrations or Certifications:** PE (OR, WA, GA), CWRE (OR), WTPO3 (GA)

**Primary Job Responsibilities:** Spencer is a project manager and design manager responsible for managing the scope and the delivery of engineering projects in the water sector, focusing on drinking water treatment and conveyance. As a civil engineer with over 14 years' experience in the municipal water sector as both as a consultant and on a utility's staff, and as a past AWWA local section Distribution Committee chair, he is always looking for an opportunity to engage with operators on field best practices. Spencer is the incoming chair of the national AWWA Disinfection of Facilities Committee, which publishes multiple AWWA standards including C655 Field Dechlorination.

**Related Past Employment:** With Jacobs in Oregon since 2021, previously employed as a project manager for capital facility projects for the Gwinnett County Dept of Water Resources in Atlanta, Georgia, including primarily water treatment plant and pump station work. Prior to tenure in the public sector, worked as a consulting engineer across the southeastern United States on a variety of municipal water sector projects.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechUM8

**Title:** AWWA Manual M47: Your Roadmap to Capital Project Delivery in the Water Sector

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** AWWA's Manual M47, Capital Project Delivery, gathers wide-ranging guidance for water, wastewater, and stormwater utilities related to project delivery methods and presents the potential benefits of flexibility, cost savings, schedule acceleration, and risks. AWWA's Capital Project Delivery Committee develops and updates M47, and the 3rd Edition of the manual will be published in 2026. This hands-on workshop highlights the significant updates of the manual since its 2nd Edition was published in 2010, with a focus on flexibility in construction contracting, choosing the best project delivery method for your projects, and on the valuable resources available both in the building construction industry and specifically in the water sector. Hundreds of cumulative years of project delivery experience are represented by the authors of AWWA Manual M47, and the legacy of that experience is a sincere hope to support water sector owners in creating the best outcomes for your capital projects.

**CEU Relevance Statement:** Utility managers have a responsibility to see that capital infrastructure projects are delivered successfully so that utilities can build and upkeep the assets that allow them to deliver clean water, reclaim wastewater, and manage stormwater. Empowering utility staff with training and access to industry resources like AWWA Manual M47 contributes to that project delivery success.

**Primary Speaker/Author:** Spencer Adams

**Company:** HDR

**Job Title:** Water Project Manager

**Email:** spencer@ninepointengineering.com

**Phone:** 2143357810

**Registrations or Certifications:** PE, CCCA, DBIA

**Primary Job Responsibilities:** Spencer serves as a project and design manager overseeing engineering projects in the water sector, with an emphasis on drinking water treatment and conveyance. He brings over 14 years of civil engineering experience across consulting and utility roles. Spencer has chaired national committees for AWWA and received the Vernon Lucy Award for volunteer service.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT14

**Title:** Overview of Tracer Studies and Baffling Factors

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tracer studies are an important part of the design process to ensure that disinfection meets the necessary treatment objectives. Factors like size, shape, configuration, flow, and number and types of baffles have a significant impact on the overall baffling factors. In addition, the type of tracer used can be very important. This presentation will provide a general introduction to tracer studies, considerations and tips for planning them, and also include some real-life examples to show how all these factors can affect the design.

**CEU Relevance Statement:** Tracer studies are an important part of the design process to ensure that disinfection meets the necessary treatment objectives. Having a better understanding of tracer studies can help operators with disinfection treatment.

**Primary Speaker/Author:** Jolyn Leslie

**Company:** Washington State Department of Health

**Job Title:** Surface Water Treatment Engineer

**Email:** Jolyn.Leslie@doh.wa.gov

**Phone:** 206-945-6927

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Statewide lead on surface water treatment



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT13

**Title:** Treatment Landscape in Washington State

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In Washington State, both groundwater and surface water systems have treatment ranging from chlorine injection to oxidation/filtration to PFAS removal to full surface water treatment. Treatment can be required to meet certain rules like the Surface Water Treatment Rule or to meet MCLs, like arsenic, nitrate, and PFAS or it can be installed as a preference to improve water quality, for instance reducing iron. This presentation will cover the myriad of treatment types and purposes across the state of Washington.

**CEU Relevance Statement:** Operators will gain a good understanding of the variety of treatment options and purposes that are used in Washington State.

**Primary Speaker/Author:** Jolyn Leslie

**Company:** Washington State Department of Health

**Job Title:** Surface Water Treatment Program Manager

**Email:** Jolyn.Leslie@doh.wa.gov

**Phone:** 206-945-6927

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Statewide lead on surface water treatment, part of Engineering & Technical Services.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWT2

**Title:** Deployment of a Virtual Operating System for Operator Training

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** London's Tideway company is completing the London Tideway Tunnels (LTT) system to intercept storm sewage from the Thames Water (TW) network that was destined for combined sewer overflow (CSO) locations along the River Thames, store it and then later pump it to treatment. Proper operation of the LTT assets during storm events is critical to successful reduction of the CSO volumes. Traditionally, training on a new system is provided through classroom sessions to familiarize operators with the system's SCADA graphics, process controls, and hydraulic limitations. Then, it is up to operations staff to transfer the knowledge gained during the classroom training to properly operate the system during a storm event. Tideway envisioned and then deployed an innovative approach to reduce the risk associated with reliance on classroom training for this unique, large, integrated sewer & tunnel system.

**CEU Relevance Statement:** The successful operation of a system is dependent on the people monitoring and responding to the information available at SCADA. Empowering utility staff through innovative training better prepares them to make high risk decisions efficiently and effectively during a failure scenario.

**Primary Speaker/Author:** Stephanie McGregor

**Company:** Jacobs

**Job Title:** Instrumentation & Control Engineer

**Email:** stephanie.mcgregor@jacobs.com

**Phone:** 541-231-1779

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Stephanie McGregor is an instrumentation and controls engineer for Jacobs in Portland, Oregon. She received her process engineering degree from Oregon State University and is a licensed PE. Her experience includes design, programming and startup of control systems for water and wastewater treatment systems. Stephanie's expertise includes controls modeling for treatment plants and conveyance systems using dynamic simulation.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechEng14

**Title:** Seismic Design of Waterlines on Bridges

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** With the Cascadia Subduction Zone Earthquake becoming a top priority for many water agencies, it's important that water agencies understand the risks to water lines that are attached to bridges which include accommodating the movements from the bridge itself. Seismic design of waterlines has several performance targets that the Owner can select from to ensure their waterline meets their resiliency goals. This presentation will outline the risks a waterline bridge crossing is exposed to, how that risk is mitigated and what the role of the Owner, water engineer, bridge engineer is when designing a waterline crossing.

**CEU Relevance Statement:** Understanding how waterlines are supported under a bridge and why seismic bracing is important.

**Primary Speaker/Author:** Kenton Alldritt

**Company:** DOWL

**Job Title:** Project Engineer

**Email:** kalldritt@dowl.com

**Phone:** 503-407-4281

**Registrations or Certifications:** PE, SE

**Primary Job Responsibilities:** Structural engineer of water related structures



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechCross2

**Title:** Cross Connection: Authority Having Jurisdiction Agreements, What to Know?

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will cover items to consider when drafting a agreement with an Authority Having Jurisdiction (AHJ) from the water purveyor's point of view. There will be discussions about pros and cons to some approaches because not every water system has the same type of program and resources. This cross connection AHJ agreement is a formal agreement for how two agencies will work together and is beyond a hand shake agreement.

**CEU Relevance Statement:** There is not a lot of material about backflow AHJ agreements and this presentation is to bring up potential topics that would potentially to be prudent to include in a agreement with an AHJ. This class will engage percipients to think about these topics and think about how they could be solved with their local agencies.

**Primary Speaker/Author:** Tom Bagley

**Company:** Northshore Utility District

**Job Title:** Utility Superintendent

**Email:** tbagley@nud.net

**Phone:** 425-471-8020

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Supervises all field utility staff to carry out various programs for the maintenance and operation of all components of the District's water distribution and sewage collection systems, including water quality and cross connection control programs and Scada systems.

**Related Past Employment:** For the past 20 years, I have work my way up the ranks starting as a Utility worker at Alderwood water District. I left Alderwood as a Lead Utility worker in 2016 and started as a Utility Supervisor for Northshore Utility District. After 18 months in that position I was promoted to my current position as the Utility Superintendent at Northshore Utility District.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT29

**Title:** Facing Obsolescence: Ozone and UV replacement with Limited Alternative to Filtration requirements

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation will share key evaluation and design criteria for replacing and modernizing existing treatment technologies at Cedar Water Treatment Facility (Seattle, WA) as it passes its twenty-first year of continuous operation and deals with obsolescent equipment. Since being commissioned in 2004, the Plant PLCs, Ozone Power Supply Units, and thirteen UV reactors have reached the end of their operating life, leaving Jacobs and Seattle Public Utility to evaluate available alternatives to replace components or the entire system for each system. Cedar Water Treatment Facility is a critical water production facility for the City of Seattle and plant downtime is not feasible, so a phased construction approach is planned to keep one of the two parallel treatment trains in operation while each aging system is upgraded. This presentation will share lessons-learned during the design, implementation planning, and construction to phase three retrofit projects while limiting plant downtime.

**CEU Relevance Statement:** Ozone and UV treatment help surface water plants like Cedar Treatment Facility meet disinfection standards for cryptosporidium and giardia. Facilities built or updated in the last 20 years now face replacing key equipment as it nears the end of its lifespan. This project highlights common utility challenges: limited expansion space, simultaneous major maintenance, and maintaining water production during upgrades.

**Primary Speaker/Author:** Tessora Young

**Company:** Jacobs

**Job Title:** Engineer

**Email:** tessora.young@jacobs.com

**Phone:** 5417061920

**Registrations or Certifications:** EIT, PhD

**Primary Job Responsibilities:** Tessora Young is a process engineer for Jacobs in Bellevue, WA with 5 years working experience on drinking water and wastewater projects. She is the Chair of the PNWS Treatment Committee. Tess has experience designing and starting-up ozonation, UV treatment, filtration, and chlorine disinfection processes.

**Related Past Employment:** Tess was previously employed (2020-2021) at Kubota Membrane as an Application Engineer with Membrane Bioreactors. Tess also graduated with a PhD at the University of Washington in 2019 focused on bench scale drinking water treatment, including: chlorine photolysis, ozone, and advanced oxidation processes.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechWT30

**Title:** Push it to the limit! Challenge Testing of the 65 MGD Duff Treatment Plant in Medford

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** After five years of planning, design, and construction this generational project to expand the Medford Water Duff Water Treatment Plant to 65 MGD has been completed. This presentation will share lessons learned from challenge testing and max flow testing after completion of the project -- once the construction is done you have to prove that it can meet the design flow targets! Presentation will provide a project overview and focus on the startup and commissioning of the new reservoir and finished water pump station which were the last pieces to bring the plant capacity to 65 mgd. Start-up of the new facility includes disinfection prior to connection to the distribution system, medium voltage equipment startup, and performance testing.

**CEU Relevance Statement:** This presentation will share key construction phasing and start up activities. Utility Managers, Operators, and engineers can all benefit from a seamless startup. This case study will include relevant topics, such as: operating new and existing facilities, challenge tests for new equipment, and continuous water production during construction activities.

**Primary Speaker/Author:** Tessora Young

**Company:** Jacobs

**Job Title:** Water Engineer

**Email:** tessora.young@jacobs.com

**Phone:** 5417061920

**Registrations or Certifications:** EIT, PhD

**Primary Job Responsibilities:** Tessora Young is a process engineer for Jacobs in Bellevue, WA with 5 years working experience on drinking water and wastewater projects. She is the Chair of the PNWS Treatment Committee. Tess has experience designing and starting-up ozonation, UV treatment, filtration, and chlorine disinfection processes.

**Related Past Employment:** Tess was previously employed (2020-2021) at Kubota Membrane as an Application Engineer designing Membrane Bioreactors. Tess also graduated with a PhD at the University of Washington in 2019 focused on bench scale drinking water treatment, including: chlorine photolysis, ozone, and advanced oxidation processes.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechGR1

**Title:** Yakima Basin Integrated Plan: Sustaining Multi-Stakeholder Collaboration for Water Supply Resilience

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Yakima Basin Integrated Plan (YBIP) is a nationally recognized model for collaborative, multi-benefit and multi-objective water resource management. Built on over 30 years of studies and stakeholder engagement, the YBIP has successfully advanced ecological restoration, drought resilience, and infrastructure improvements. This session explores the structural, procedural, and relational elements that have sustained the plan's momentum over a decade of implementation. Lessons learned offer a transferable framework for other regions facing complex water challenges.

**CEU Relevance Statement:** This session directly supports certified operators by highlighting operational and management strategies that improve municipal and irrigation water supply reliability while supporting other operational objectives. Collaborative, consensus-based infrastructure planning allows for multiple objectives to be balanced and optimized in short- and long-term planning. This encourages all stakeholders to think holistically about their watershed and adjust planning goals to improve holistic watershed health while maintaining primary objectives. This program emphasizes adaptive, consensus-based approaches that align with public health and environmental protection goals.

**Primary Speaker/Author:** Heather Baxter

**Company:** HDR

**Job Title:** Dams, Levees, and Civil Works Business Class Lead (Oregon and Southwest Washington)

**Email:** heather.baxter@hdrinc.com

**Phone:** 503.720.0254

**Registrations or Certifications:** PE, MS CE

**Primary Job Responsibilities:** The DLCW BCL leadership role focused on business development and project execution within the dams, levees, and civil works areas. This requires a strong background in dams, levees, and civil works, along with experience in team management and business development. This also involves coordinating with other business classes and technical leaders.

**Related Past Employment:** Water planning studies, policy updates, water management, and stakeholder engagement on water supply projects at the US Army Corps of Engineers. Water resilience and policy studies and research at Washington State University.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/6/2026

**Session ID:** PCWT11

**Title:** Tour of Green River Filtration Facility

**Length of Presentation:** 120-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This presentation and guided tour of the Green River Filtration Facility will introduce attendees to how Tacoma's largest surface-water filtration plant safeguards public health by removing pathogens like cryptosporidium and sediment from the Green River supply. Built in 2015 under evolving EPA standards, the facility operates at up to 150 MGD. Attendees will get a behind-the-scenes look at pretreatment, coagulation, sedimentation, filtration, and disinfection processes, and see how design, operations, and regulatory oversight come together in real-time. Attendees will leave with a deeper understanding of how a treatment facility evolves over time with cooperation between engineers, operators, and managers to support water quality, system reliability, and regulatory compliance in a modern filtration facility.

Bus will leave at 8:30 AM; Safety Information will be shared on the 30 minute drive. The tour will approximately 1.5 hours and the ride back will be 30 minutes.

**CEU Relevance Statement:** This presentation supports operators by reinforcing key skills in monitoring, process control, sampling, and maintenance as critical to public health protection. Seeing working treatment plants connects daily responsibilities with EPA and state requirements, improving execution of sampling, alarm responses, and corrective actions. It underscores the role operators play in ensuring Tacoma's system stays compliant, reliable, and safe for more than 300,000 residents.

**Primary Speaker/Author:** Julia Cummings

**Company:** Carollo Engineers Inc.  
Vice-Chair

**Job Title:** Water Treatment Committee

**Email:** cummings.julia.rose@gmail.com

**Phone:** 5105011204

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** The Water Treatment Committee supports drinking water professionals across the Pacific Northwest by advancing best practices in water treatment design, operations, and regulatory compliance. The committee brings together utility operators, engineers, consultants, and regulators to share knowledge, solve real-world challenges, and improve public health outcomes through collaboration.

**Related Past Employment:** In past years, the Water Treatment Committee has coordinated visits to Boise's Columbia and Marden Water Treatment Plants and West Boise Water Renewal Facility as well as Spokane's Riverside Park Water Reclamation Facility.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechGR2

**Title:** Funding in Flux: Navigating Water Infrastructure in a Shifting Federal Landscape

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Agencies across the country are grappling with tighter budgets, rising costs, and shifting federal priorities, making it harder to balance affordability with infrastructure needs. While the BIL and IRA initially boosted funding, recent changes under the new Administration—such as reduced federal workforce, regulatory shifts, and tariff-driven cost increases—have created uncertainty. Addressing today's challenges will require rebranding projects, updating planning documents with integrated and cost-effective approaches, and tapping into new financial models and revenue streams. This presentation highlights current federal funding trends, strategies to align capital planning with available resources, and innovative funding mechanisms to support sustainable investment.

**CEU Relevance Statement:** This presentation is relevant to all operations and management of a water system. As internal finances are tight, external funding opportunities are important to do the infrastructure and other necessary work required to continue delivering clean drinking water to our communities. This presentation will review these challenges and provide an update on the status of the common funding mechanisms we are used to.

**Primary Speaker/Author:** Seema Chavan

**Company:** Brown and Caldwell

**Job Title:** Senior Director for Strategic Funding

**Email:** SChavan@BrwnCald.com

**Phone:** 415.205.2582

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** To be provided

**Related Past Employment:**



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechCons1

**Title:** Modernizing Tacoma's Water Leak Adjustment Policy in a Post-AMI Landscape

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In 2025, Tacoma Water initiated a project to review and update their Water Leak Adjustment Policy to align with several changes: mass deployment of advanced meters, converting customers to monthly billing, and going live with proactive leak notifications (letters, texts, and email) as well as a customer-facing water usage dashboard. This presentation will cover the development and implementation of the updated policy, the benefits it has brought to both customers and the utility, and lessons learned along the way.

**CEU Relevance Statement:** A well-defined and transparent policy reduces customer confusion and billing disputes, which often involve operators as frontline responders. Incorporating smart meter (AMI) data into the policy supports faster leak detection and resolution, allowing operators to work more efficiently. By learning from peer utilities and refining internal processes, operators gain a clearer framework for addressing leaks and supporting the utility's overall goals of reliability, equity, and service excellence. Participants in this session will have the opportunity to hear Tacoma's story and draw parallels to their own work, examining whether Tacoma's progress and lessons learned might influence their own operations.

**Primary Speaker/Author:** Tyler Cummings

**Company:** Tacoma Water

**Job Title:** Sustainability Analyst

**Email:** tcummings@tacoma.gov

**Phone:** 509-859-3559

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Tyler Cummings is a Sustainability Analyst working in the Water Conservation and Community Engagement space within Tacoma Public Utilities. This includes overseeing how leaks are identified, communicated to customers, and adjusted if a request is made after resolution. He facilitates bi-weekly meetings with customer service staff and AMI data SMEs to review leak report performance, modify leak criteria based on emerging changes, and establish long-term goals for effective leak communication, resolution, and detection. Tyler also served as project lead for Tacoma's Water Leak Adjustment Review and Recommendation Project.

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechEng18

**Title:** Designing for the Future - Planning for Future Expansion at Greenfield Water Treatment Plants

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Planning for future expansions can be challenging, due to the uncertainty around future design requirements and ever-evolving design codes and construction standards. How much effort is too much when designing for an assumed expansion that may not come to fruition? How can unnecessary constraints on the future design be avoided? This presentation explores how future plant expansion is being taken into consideration at a 19.5 MGD greenfield water treatment plant, which is expandable to 46.5 MGD. Design considerations throughout the overall treatment process will be discussed, including future treatment processes, pressure reduction at the head of the facility, chemical systems, yard piping, and clearwell capacity.

**CEU Relevance Statement:** This presentation will be primarily applicable to the management of a water system, providing insight into design considerations for future expansions and how Owner preferences and existing design requirements into account.

**Primary Speaker/Author:** Tyler Kurtz

**Company:** Jacobs

**Job Title:** Drinking Water Engineer

**Email:** tyler.kurtz@jacobs.com

**Phone:** 7192334895

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Tyler Kurtz is a drinking water engineer at Jacobs, where his focus is on the design of water treatment processes. He has experience with designing greenfield water treatment plants and retrofits, as well as the development of raw water sampling programs and condition assessments.

**Related Past Employment:** Prior to moving to the PNW, Tyler worked for nearly 4 years at engineering design firms in Colorado, focusing on civil and environmental engineering projects.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/8/2026

**Session ID:** TechDist11

**Title:** Nor Any Drop To Drink: Liquefaction Analysis of the Cedar River Pipelines

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Constructed in the early 1920s, the Cedar River Pipeline system (CRPL) supplies water to Seattle through three steel-riveted transmission lines that traverse liquefiable soils within the former Black River channel in Renton, Washington. Due to the region's seismic vulnerability and the pipeline's critical role in municipal water supply, Seattle Public Utilities (SPU) commissioned a comprehensive structural and seismic assessment of the pipe-soil system. A three-dimensional finite element model (FEM) was developed using SAP2000 to simulate seismic-induced soil displacements and evaluate their effects on the pipelines. Results indicated that stresses in all three steel pipes exceeded the limits of the rivets, suggesting a high risk of post-seismic failure. The purpose of this presentation is to highlight the vulnerability of infrastructure constructed prior to modern seismic design standards and to offer a framework for assessing similar legacy systems in seismically active regions.

**CEU Relevance Statement:** Pipeline maintenance is of paramount importance in seismically-active regions. While many treatment facilities have been designed or retrofitted to withstand a major seismic event, many of the pipelines that convey water to the populace are vulnerable. Understanding how to safeguard pipelines against failure is conducive to the long-term recovery of the Pacific Northwest by ensuring the population has uninhibited access to clean water.

**Primary Speaker/Author:** Joshua Yung

**Company:** Stantec

**Job Title:** Structural Engineer - EIT

**Email:** josh.yung@stantec.com

**Phone:** 8323672824

**Registrations or Certifications:** EIT

**Primary Job Responsibilities:** Under the guidance of licensed professionals, I am responsible for the structural design, analysis, and seismic resilience of both drinking water and wastewater-related structures across the West Coast, as well as the condition assessment of existing structures to determine current risks. During the construction phase of a project, I am responsible for submittal reviews and field observations to ensure compliance with design documents and specifications.

**Related Past Employment:** I previously designed foundation and support-of-excavation structures with Mueser Rutledge in New York City, and performed structural diagnostics investigations throughout Texas and Georgia as an intern with Walter P Moore.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWIT2

**Title:** Succession Plan Like-A-Boss

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** With a significant portion of water utility staff approaching retirement, valuable institutional knowledge is at risk of being lost. This session provides practical strategies for capturing and preserving operational expertise. Attendees will leave with three actionable steps that can be implemented immediately to strengthen knowledge retention and ensure the continued reliability and efficiency of their water system.

**CEU Relevance Statement:** Water utilities nationwide are facing knowledge gaps due to workforce attrition. This session equips operators and utility staff with practical methods to capture and institutionalize critical operational knowledge, helping maintain consistent system performance, enhance staff readiness, and support safe, reliable drinking water delivery.

**Primary Speaker/Author:** Joseph Blackman

**Company:** Vitendo Training Solutions

**Job Title:** Founder

**Email:** joe@vitendo.us

**Phone:** 925 628 7646

**Registrations or Certifications:** None

**Primary Job Responsibilities:** founder of Vitendo Training Solutions, where they specialize in capturing and preserving institutional knowledge within public works and utility organizations. With over six years of experience developing training solutions and producing the Public Works Podcast—featuring 360+ industry interviews—they help agencies improve staff onboarding, knowledge retention, and operational consistency. Their expertise equips water professionals with practical strategies to document, share, and sustain critical operational knowledge across their teams.



# PNWS-AWWA Water 2026

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Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechDist8

**Title:** Chemical Feed Lines Replacement - Green River Filtration Facility

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Tacoma Water is replacing the reinforced PVC chemical feed lines that were originally installed during the construction of the Green River Filtration Facility with fusion-welded HDPE pipe; over 4 miles of piping will be replaced for seven different chemicals. HDPE pipe lasts twice as long, was half the cost of reinforced PVC, and eliminates the need for couplings and clamps as the pipes are fusion welded together.

Critical coordination between the contractor and Tacoma Water staff is necessary to successfully complete this project. Precise planning and timing is required to switch chemical feed from the existing reinforced PVC lines to temporary high lines and then to the permanent lines without interruption to the daily operations and maintenance of the Green River Filtration Facility.

**CEU Relevance Statement:** Planning how to keep the plant running while construction of new chemical feed lines, ensuring proper dosing is being met before switching to temporary and permanent piping (chemical dosing prediction spreadsheet for flushing and feeding chemical, online analyzer response after switchover, maintenance staff involvement for preparing connections for temporary lines).

**Primary Speaker/Author:** Gary Fox

**Company:** Tacoma Water

**Job Title:** Professional Engineer

**Email:** gary.fox@tacoma.gov

**Phone:** 253-377-1138

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** The Water Treatment and Quality Planning Professional Engineer supports water treatment operations, planning, maintenance, and capital projects. This role ensures systems meet drinking water standards for public health, makes cost-effective decisions on design and maintenance, and provides engineering support for water quality initiatives. The position may also manage water quality and treatment projects from start to finish.

**Related Past Employment:** Water Quality Engineer 2008-2009, Project Engineer on GRFF 2009-2015, Plant manager of the Green River Filtration Facility 2015-2019, Asset Management Engineer 2019-2020, Asset Planning Manager 2020-2021, Asset Management Engineer 2021-2022, Water Treatment and Quality Planning Engineer 2022 to present.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWT11

**Title:** Future-Proofing Greater Victoria's Water: CRD's 20-Year Path to Resilient Supply

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Capital Regional District (CRD) in Greater Victoria, BC, is preparing a 20-year capital plan to add filtration to its surface water source and enhance system resilience. Driven by climate change challenges and regional growth, this generational investment will require careful planning, robust communications, and a clear understanding of costs and rate impacts. With a regulatory framework distinct from that of the U.S., CRD's approach offers valuable insights and lessons for the Pacific Northwest water community.

**CEU Relevance Statement:** Operators must be actively involved in capital improvement programs (CIP) and project planning. As the staff most familiar with day-to-day facility operations, operators bring essential knowledge of on-the-ground needs. Equally important, operators should understand the process of developing a program for a generational investment in a water system so they are prepared to fully participate in planning efforts.

**Primary Speaker/Author:** Jude Grounds

**Company:** Carollo

**Job Title:** Senior Vice President

**Email:** JGrounds@carollo.com

**Phone:** 503-936-1112

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** With 26 years of experience in the water and wastewater industry, Jude Grounds serves as Senior Vice President and Senior Project Manager at Carollo Engineers. He oversees large-scale water infrastructure projects and programs, drawing on a career that spans technical, operational, and leadership roles in water treatment and related fields.

**Related Past Employment:** Before Carollo, Jude was a principal engineer at MWH Global for more than 15 years.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechUM13

**Title:** My raw water facilities are vulnerable, what should I do if a CSZ earthquake happens tomorrow?

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Joint Water Commission (JWC) is undertaking a long-term, multi-phased, hazard mitigation strategy to mitigate seismic vulnerability and improve resiliency of their system. The first step (Phase 1) of the hazard mitigation is to develop a contingency raw water supply plan that can be implemented under emergency seismic response situation before major upgrades to vulnerable raw water facilities can be completed.

With close collaboration with JWC engineering and maintenance/operation staff, the Phase 1 Contingency Plan was developed focusing on the practicality (with reasonable level of service goal and cost) and the deploy-ability (can be deployed quickly, within days, immediately after the seismic event).

**CEU Relevance Statement:** Emergency response, contingency/temporary system implementation and operation, hazard mitigation.

**Primary Speaker/Author:** Wolfe Lang

**Company:** Carollo Engineers

**Job Title:** Project Manager/Vice President

**Email:** wlang@carollo.com

**Phone:** 971-3009538

**Registrations or Certifications:** PE, GE

**Primary Job Responsibilities:** Wolfe is a senior project manager and a client service manager with Carollo Engineers in Portland, Oregon.

**Related Past Employment:** Wolfe has over 30 years of experience in geotechnical, seismic and civil engineering. He was the Geotechnical Practice Lead for Delve Underground before joined Carollo Engineers in 2024. has worked on some of the largest underground infrastructure projects as the geotechnical engineering and seismic hazard mitigation design leads.



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechEng3

**Title:** Salt Lake City Future-Proofs Its Large Diameter Water Mains

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The paper will detail the Benefits of CFRP use in critical water pipelines where access is an issue, quick turnaround is essential and long duration of use is ideal. Presentation will outline the material qualification process as well as the pre-qualification of contractors. The paper will detail the circumstances for the CFRP selected solution, and the site challenges the installer addressed to provide a full structural result.

**CEU Relevance Statement:** This presentation will inform operations, maintenance and management personnel of the benefits of CFRP as a long-term trenchless rehabilitation process for large diameter pipelines where access is limited and return to service in a timely manner is critical.

**Primary Speaker/Author:** Joel Ogle

**Company:** Fyfe Fiber

**Job Title:** Business Development

**Email:** joel.ogle@henkel.com

**Phone:** 928-273-296

**Registrations or Certifications:** None

**Primary Job Responsibilities:** Work with municipal owners, engineers and consulting engineering teams to specify FRP for pipeline rehabilitation.

**Related Past Employment:** Municipal Water/Wastewater infrastructure inspection and rehabilitation for over 20 years, focusing on pipeline, water storage and treatment plants.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR4

**Title:** Source Water Protection Planning for the Willamette Intake Facilities Commission

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Willamette Intake Facilities (WIF) Commission brings together multiple public water providers in Oregon to manage shared source water on the Middle Willamette River. Now in the early implementation phase of its Watershed Protection, Monitoring, and Outreach Plan, the WIF Commission has focused early implementation on outreach, stakeholder engagement, and coordination strategies. This presentation will share lessons learned from early engagement with local stakeholders such as Soil and Water Conservation Districts and emergency response agencies to build shared expectations, strengthen partnerships, and tailor communication strategies for greater impact. It will also outline how early feedback is shaping implementation of the Plan and supporting regional emergency preparedness efforts.

**CEU Relevance Statement:** This presentation is relevant for CEUs because it addresses practical approaches to source water protection planning, inter-agency coordination, and stakeholder engagement. Attendees will gain insight into effective communication strategies and early implementation lessons that support emergency preparedness and long-term source water protection.

**Primary Speaker/Author:** Zoe Rodriguez del Rey

**Company:** Annear Water Resources

**Job Title:** Principal

**Email:** zoe@annearwaterresources.com

**Phone:** (971) 400-9878

**Registrations or Certifications:** MS Environmental Sciences

**Primary Job Responsibilities:** Zoe Rodriguez del Rey, MS, Environmental Science, is an environmental scientist with 20 years of experience in water resources planning, water quality, and stakeholder engagement. She has worked for public utilities including the Coachella Valley Water District (CA) and Portland Water Bureau (OR), supporting water resources planning and integrated water resource management. She now serves as Principal at Annear Water Resources.

**Related Past Employment:**



# PNWS-AWWA Water 2026

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**Date:** 5/7/2026

**Session ID:** TechWIT8

**Title:** Integrating Live Data into a Hydraulic Water Model

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** In this presentation we will explore real world examples of water network digital twins. We will discuss how live information like AMI metering and SCADA data can be integrated with hydraulic models to provide new insights. Some examples are leakage detection, network optimization, and asset replacement priority.

**CEU Relevance Statement:** Demonstrates how integrating real-time data from AMI meters and SCADA with hydraulic models can improve decision-making. Certified operators will learn how digital twins can support leakage detection, optimize network performance, and prioritize asset replacement, helping to maintain system efficiency, reduce water loss, and ensure consistent water quality for the community.

**Primary Speaker/Author:** Mike Uthe

**Company:** AutoDesk

**Job Title:** Product Specialist

**Email:** mike.uthe@autodesk.com

**Phone:** (406) 610-3922

**Registrations or Certifications:**

**Primary Job Responsibilities:** Brings extensive experience in water infrastructure technologies and system optimization

**Related Past Employment:** I previously managed the Western United States for Mueller's smart water technologies team. Our goal was to help municipalities and engineers provide clean water to their customers with minimal losses. I handled Echologics, Hydro-Guard, and i2O product lines. I also hold a Master of Engineering Degree from Montana State University.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

Greater Tacoma Convention Center, 1500 Commerce St, Tacoma, WA 98402

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**Date:** 5/7/2026

**Session ID:** TechWR9

**Title:** Everybody Drinks! Evaluate Risks and Build Water System Resiliency Through Source Water Protection

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** This session will introduce tools and strategies that Oregon water systems and their communities are using to protect and restore both groundwater and surface water sources of drinking water. In this session we will share Oregon's updated Source Water Assessments as a key data resource, along with examples of successful local partnerships and funding pathways that can be adapted by other communities. Participants will learn how to identify and prioritize risks—such as harmful algal blooms, land use pressures, and emerging contaminants—and how to engage partners and secure financial resources. Emphasis will be placed on the long-term benefits of source water protection, including reduced treatment costs, improved public health outcomes, and stronger community involvement. DEQ will also highlight Oregon's initiatives with small water systems, multi-water system collaboratives, and land acquisition.

**CEU Relevance Statement:** This session provides CEU-eligible content for certified water system operators by offering practical tools and strategies to protect and restore drinking water sources. The session provides technical learning opportunities, risk management education, regulatory insight, ways to find local partners and funding. By emphasizing the long-term benefits of source water protection (e.g., lower treatment costs, fewer operational disruptions), the session helps operators improve both performance and cost-efficiency of their systems. Emphasis is placed on long-term benefits like reduced treatment costs, public health protection, and regulatory alignment.

**Primary Speaker/Author:** Shersten Finley

**Company:** Oregon Department of Environmental Quality

**Job Title:** Drinking Water Specialist

**Email:** Shersten.Finley@deq.oregon.gov

**Phone:** 503-860-0812

**Registrations or Certifications:** Master of Environmental Science and Management Portland State University, GIS graduate certificate PSU

**Primary Job Responsibilities:** Assisting public water system officials, local government officials, State/Federal agencies, and other interested partners to develop local strategies for protecting their drinking water sources. She has been working with the Drinking Water Protection Team at Oregon DEQ since June 2022.



# PNWS-AWWA Water 2026

Tacoma, Washington • May 6-8

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**Date:** 5/8/2026

**Session ID:** TechEng23

**Title:** Your Funding is Expiring: The Sprint to Design a New Disinfection Facility

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** The Joint Water Commission recently completed a design to relocate the disinfection chemical system at their Fern Hill Water Treatment Plant to a new seismically resilient building, using FEMA Hazard Mitigation Grant Program funding for the design effort. The expiration of that funding was quicker than initially expected as a result of program changes at the federal level, and JWC sought to complete the design on expedited schedule. To meet that schedule, JWC needed to leverage institutional knowledge and stakeholder familiarity with previously completed studies to accelerate decision making. The availability of information on existing plant conditions was critical in setting up the design team for success and serves as a reminder of the critical importance of knowledge management at treatment plants. This presentation focuses on the challenges of navigating federal funding programs and the steps taken to launch a schedule-constrained design project on a successful trajectory.

**CEU Relevance Statement:** Engineering design at water or wastewater treatment plants requires thorough coordination with operations and maintenance staff to understand existing conditions, historical performance, and design requirements for improvements to the existing facilities. This presentation will empower operations and maintenance staff to engage during the design phase, maintain the critical plant knowledge needed to inform engineering design, and make design decisions under pressure.

**Primary Speaker/Author:** Joshua Kennedy

**Company:** Jacobs

**Job Title:** Water Treatment Engineer

**Email:** Joshua.Kennedy@jacobs.com

**Phone:**

**Registrations or Certifications:** MS, PE (WA, OR, TX, NM)

**Primary Job Responsibilities:** Perform planning, design, pilot testing, startup and commissioning, and construction services support for drinking water treatment facilities. Duties include process selection and calculations, unit process sizing and development of design criteria, coordination with design disciplines, and management and orchestration of the work.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** TechWT25

**Title:** Developing a Treatment Resilience Framework for Wildfires

**Length of Presentation:** 30-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Wildfire season has been extending with increasing temperatures from climate change, and more regions are being impacted by severe wildfires. As a part of Water Research Foundation project #5168, ash was collected from five wildfires in Oregon, Washington, and British Columbia. Bench- and pilot-scale testing assessed multiple conventional treatment approaches. A treatment resilience framework was developed to guide operational responses that utilities could take post-fire. This presentation will focus on modifications that utilities can make to monitoring, operations, and treatment processes through capital investment to improve resiliency to wildfire events.

**CEU Relevance Statement:** As an outcome from this testing, the project team developed a treatment resilience framework, specifically identifying operational responses that utilities can make in a post-fire situation. Adjustments to monitoring and operational techniques will be highlighted based on lessons learned from this testing. Specifically, trade-offs of coagulation adjustments will be summarized by sharing data comparing treatment efficacy (e.g., filter unit filter run volumes [UFRVs], filtrate particle counts, organic levels, and simulated distribution system [SDS] disinfection by-products [DBPs]).

**Primary Speaker/Author:** Lynn Stephens

**Company:** Brown and Caldwell

**Job Title:** Northwest Drinking Water Leader

**Email:** LStephens@brwnncald.com

**Phone:** 206-749-2893

**Registrations or Certifications:** PE

**Primary Job Responsibilities:** Lynn Stephens works for Brown and Caldwell in Seattle as BC's Northwest Drinking Water Leader. Lynn's expertise is in water quality and treatment. Lynn is the past-Chair of the Biological Treatment Symposium and past-Chair of the Biological Drinking Water Treatment Committee.



# PNWS-AWWA Water 2026

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**Date:** 5/8/2026

**Session ID:** SAC

**Title:** Gadgets & Gimmicks

**Length of Presentation:** 60-minutes

**Area of Relevancy:** Drinking Water

**Abstract:** Gimmicks & Gadgets is the competition where ideas are shared in a way to help and improve operators' work in the field. Most innovations include the use of simple items that can be used every day in the field.

**CEU Relevancy Statement:** Each contestant will present their innovation and describe how it assists them, improving their work, making them more efficient and effective in completing their work tasks in their respective systems. Entries in this competition have competed at a local level.

**Primary Speaker/Author:** Ryan Murphy

**Company:** Tacoma Water

**Job Title:** Operations Analyst

**Email:** rdmurphy@cityoftacoma.org

**Phone:** 253-381-8497

**Registrations or Certifications:**

**Primary Job Responsibilities:** Construction Planning