American Water Works Association (AWWA)
Annual Conference & Exposition (ACE25) - June 8-11, 2025 in Denver, Colorado
Session Descriptions for State Operator Licencing Agency - CEU assessments

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
MON032	Wastewater	MON032 - Water Reuse: Exploring Resilient Solutions for a Sustainable Future	This session showcases water-intensive projects and programs across different regions, providing insights into challenges, successes, and paradigm shifts in the realm of potable and non-potable water reuse and reclaimed water utilization. Explore the evolving landscape of water reuse and discover how these endeavors provide drought resilience and efficient water resource management.	06/09/25	2:00 PM	3:30 PM	Rachel	Schwaab
TUE033	Wastewater	TUE033 - A Deeper Dive into the Largest Issues in Potable Reuse: The Potable Water Reuse Report	The Potable Water Reuse Report (PWRR) connects the potable water reuse community — including practitioners, regulators, and academics — to keep them up-to-date with the industry's rapidly evolving developments. The PWRR has published two series about DPR regulations and the importance of crediting treatment processes to ensure public health protection.	06/10/25	8:30 AM	10:00 AM	Amy	Childress
TUE073	Wastewater	TUE073 - Regional Approaches to Building Strong Partnerships and Solidifying Successful Interagency Reuse Projects	This presentation is based on findings from WRF 5250 and will define the elements of successful multi-utility water reuse programs and create practical Guidance and related Toolkit to help agencies work together more effectively. These practitioner-informed outcomes will help agencies overcome their differences and related challenges to forging successful water reuse partnerships, by providing advice, examples, techniques, and ongoing support so they can collectively increase the speed, effectiveness, and scale with which they implement	06/10/25	10:00 AM	11:30 AM	Shannon	Spurlock
TUE112	Wastewater	TUE112 - Elevating the Nationwide Potential for Water Reuse: Fresh Research Insights	This will take the format of a panel presentation; panelists will be given 15 minutes to provide current findings and updates in project work for each of the four topic areas. There will be interactive opportunities for attendees to ask questions and provide feedback on opportunities they see for elevating reuse and collaboration. A formal Q&A session will be available with pre-prepared questions	06/10/25	1:30 PM	3:00 PM	TBA	TBA
WED033-01	Wastewater	Reclaimed Water Meets Stormwater/Rainwater: Water Quality Improvement for Potable Reuse	This presentation explores the feasibility of using excess urban stormwater as a low-total dissolved solids (TDS) diluent to improve reclaimed water quality for direct and indirect potable reuse (DPR/IPR). A key challenge for DPR/IPR is reducing TDS, as treated wastewater often exceeds the secondary contaminant level of 500 mg/L. We evaluate stormwater from well-managed systems as a low-TDS source in a non-RO-based DPR treatment train. Using Central Texas water quality and precipitation data, we model water blending scenarios and discuss	06/11/25	8:30 AM	9:00 AM	Keisuke	Ikehata
PCW10	Water	PCW10 - Hands-On Workshop - Water Distribution Hydraulic Testing	This Hands-On workshop is intended for water distribution system professionals - operators, engineers, planners and modelers - anyone who needs to collect hydraulic data from a distribution system. We will review data collection procedures such as where best to collect data, types of data collection, test and safety procedures, including a live hydrant flow test and hands-on with field data collection equipment.	06/08/25	8:00 AM	12:00 PM	James	Cooper
PCW01	Water	PCW01 - Public Utility: Your Toolkit for Best Practices & Industry Standards for Implementing a Capital Improvements Plan & Delivering Projects	This workshop is an opportunity for both new and seasoned professionals to join owners and practitioners in the same room to discuss the Implementation and management of a Capital Improvement Plan in the public water utility sector. The concept of the workshop is a drive-through the life cycle of a project, from validation and prioritization to Procurement methods and resources available to select the best delivery method for the project in-hand. Panelist and presenters will also share experiences and tools utilized by different experts that	06/08/25	9:00 AM	4:00 PM	Aliza	Caraballo

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PCW02	Water	PCW02 - Connecting the Dots: Extending the Useful Life of Large Diameter Water Mains Through Innovative Condition Assessment & Rehabilitation	The Condition assessment and rehabilitation industry is continuing to advance with new technologies and approaches. This workshop will walk the audience through common water materials and failure modes, available technologies for collecting condition information, and available rehabilitation methods. Case studies by industry leading utilities will be shared to condition assessment projects that led to rehabilitation for multiple water main materials.	06/08/25	9:00 AM	4:00 PM	Scott	Jauch
PCW03	Water	PCW03 - Key Enablers for Effective Asset Management Programs: Technology and People	Successful implementation of Asset Management Programs typically includes answering the five core questions about asset inventory, service levels, risk mitigation and funding needs. However, there are key enablers required for program success including leveraging technology and having people that are supportive of the program and accept changing the way business is done. This workshop will delve into effective technology applications and change management strategies.	06/08/25	9:00 AM	4:30 PM	Celine	Hyer
PCW04	Water	PCW04 - Filter Surveillance	This workshop will be off-site at Denver Water Marston Water Treatment Plant Granular media filters are the final physical barrier to pathogens in water treatment. Filters must perform optimally under all conditions to assure public safety. Attendees will be taught the filtration process and operational considerations. The workshop focuses on how to conduct a filter surveillance program to determine filter performance over time, as well as analyzing ways to optimize treatment efficiency and treated water quality.	06/08/25	9:00 AM	4:45 PM	Enoch	Nicholson
PCW05	Water	PCW05 - Scenario Planning for Lead Service Line Replacement Programs	A successful lead service line (LSL) replacement program prepares for different scenarios despite a high level of uncertainty in funding, regulations, the number of LSLs, the participation by the public and the cooperation of other city departments. This workshop will incorporate scenario planning and other planning tools to open interactions among participants, identify problems and issues, and perform creative brainstorming of ideas and solutions.	06/08/25	9:00 AM	4:30 PM	William	Elledge
PCW06	Water	PCW06 - Extending the Lives of Old Water Mains--Using Proven, Cost-Effective Methods	This workshop focuses on the practical applications of water main rehabilitation and is geared to utility managers and engineers at all levels of experience (novice to expert). Participants will gain the tools needed to start or strength a program that accomplishes more infrastructure renewal for fewer dollars, and with minimal	06/08/25	9:00 AM	4:30 PM	Dan	Ellison
PCW07	Water	PCW07 - Operationalizing Data-driven Decision Support – Data Management, Analytics, and AI/ML	Many utilities are just beginning their digital transformation journey, and data management is the key first step. This workshop introduces strategies for data management, leveraging cloud services as well as on-premise tools, and consequently operationalize advanced analytics such as AI/ML with data-driven modeling.	06/08/25	9:00 AM	4:00 PM	Yoko	Koyama
PCW08	Water	PCW08 - Partnership for Safe Water Principles & Live Demonstration	This full-day workshop covers the principles of the Partnership for Safe Water, focusing on strategies for operational excellence. The morning session will provide theoretical knowledge, while the afternoon includes a tour of the Aurora Water Binney WTP to see these principles in action. Attendees will learn to implement PSW principles in daily operations and define steps to achieve operational excellence.	06/08/25	9:00 AM	4:45 PM	Angie	Brown
CRT1	Water	CRT1 - Introduction to Water and Sewer Operating Environments	Attendees completing this course will acquire a basic understanding of the regulatory environment and water supply concerns surrounding public water systems. The course will discuss the regulatory environment that utilities operate in and why, the rule making process and permitting agencies.	06/08/25	1:00 PM	5:00 PM	Fred	Bloetcher
PCW09	Water	PCW09 - From Technical to Relatable: Crafting Clear Messages on Lead and PFAS	The water sector is dealing with significant new regulatory demands relating to lead and PFAS. Utilities are currently navigating the economic and technical difficulties involved in completing Lead Service Line Replacement and implementing appropriate treatment for PFAS. This hands-on workshop focuses on bridging the gap between complex water quality issues related to lead, PFAS and public understanding to improve public	06/08/25	1:00 PM	5:00 PM	Alice	Fulmer

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AEESP	Water	AEESP - Association of Environmental Engineering & Science Professionals Lecture	Annual Science Professionals Lecture - spotlighting the latest in University water research.	06/09/25	11:30 AM	12:15 PM	TBA	
CRT2	Water	CRT2 - Water and Sewer Infrastructure Operations, and Maintenance	This course explores the mission and inner workings of water treatment and piping assets, with a focus on the management of these assets to protect public health and reduce outage risk, including maintenance requirements and utility expenditures.	06/09/25	1:00 PM	5:00 PM	Fred	Bloetcher
MCHAT	Water	MCHAT - Fireside Chat with EPA	With an interactive audience discussion moderated by AWWA's CEO, David LaFrance, the Fireside Chat with EPA will cover EPA's perspective a variety of relevant topics in the water sector. You will not want to miss this opportunity for discourse with key EPA regulators and the chance to have your questions addressed.	06/09/25	1:00 PM	1:45 PM	David	LaFrance
MON000	Water	MON000 - Monday Keynote	Annual Monday Keynote: The speaker (to be announced) is the winner of AWWA's prestigious A.P. Black Water Research Award. The topic will cover cutting-edge water research.	06/09/25	1:00 PM	2:30 PM	TBA	TBA
MON001	Water	MON001 - Inorganic Contaminants: Prevalence and Treatment	This session discusses various strategies for monitoring and managing manganese in water treatment. The prevalence of lithium and potential lithium treatment strategies is covered. The session will highlight innovative approaches for inorganics removal including case studies.	06/09/25	2:00 PM	5:00 PM	Nicole	Blute
MON001-01	Water	Is Lithium the next NPDWR? Don't Worry, Be Happy! There Are Treatment Options!	In 2021, a USGS and USEPA collaboration reported that lithium is a frequently observed contaminants in groundwater supplies. Continuing efforts, such as UCMR5, have produced occurrence information showing it is found in drinking water at levels that may be relevant to human health. The 2021 USGS study found lithium in public supply wells up to 400 ug/L. UCMR5 data to date confirms the wide occurrence of lithium in drinking	06/09/25	2:00 PM	2:30 PM	Christine	Owen
MON003	Water	MON003 - Nationwide assessment of DBPs and OPs: Research Results from a USEPA National Priorities Grant project	This session shares findings from an EPA National Priorities grant research program on the study of OPs and DBPs. Occurrence of these contaminants at participating utilities across 9 of the 10 EPA regions as well as the trends emerging from the first year of the study and model results will be presented.	06/09/25	2:00 PM	5:00 PM	Carly	Gomez
MON003-01	Water	Prevalence and Spatial Distribution of Opportunistic Pathogens in Full-Scale Municipal Drinking Water Distribution Systems	This talk summarizes OP (Legionella and P. aeruginosa) occurrence based on 2024 sampling of 25 U.S. water utilities, and trends related to system characteristics and treatment processes.	06/09/25	2:00 PM	2:30 PM	Tiong Kim	Aw
MON004	Water	MON004 - WRF session	Annual session from research professionals at Water Research Foundation. Groundbreaking water research will be shared.	06/09/25	2:00 PM	5:00 PM	TBA	TBA

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MON006	Water	MON006 - Advances in Asset Management Processes	Utilities continue to advance their processes in evaluating likelihood of failure, consequence of failure, evaluating risk, and making risk based decisions on water system capital projects. This session will present successful utility case studies and share important lessons learned.	06/09/25	2:00 PM	3:30 PM	Celine	Hyer
MON009	Water	MON009 - Innovations in Pipeline Management: Exploring AWWA M77's New Chapters	Condition assessment technologies evolve every year and can change current practices in the industry. This special topic sessions covers overall updates to the AWWA M77 – Condition Assessment of Water Mains and presentations from the four newly chapters.	06/09/25	2:00 PM	3:30 PM	Scott	Jauch
MON011	Water	MON011 - Lessons Learned from Full-Scale PFAS Treatment at Water Utilities	This session will present the challenges, successes, performance, and lessons learned from water utilities with experience designing and operating full-scale PFAS treatment at their water treatment plants. Presentations will include utilities with groundwater and surface as well as GAC and IX treatment. Experience with in-house PFAS analysis will also be covered.	06/09/25	2:00 PM	3:30 PM	Alice	Fulmer
MON011-01	Water	Laying the Foundation: Treatment Selection and Design of the City of Vancouver's First PFAS Treatment System	The City of Vancouver has eight water stations supplied by groundwater wells where PFAS have been detected at concentrations above EPA's MCLs for perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Design of the City's first PFAS treatment upgrades at Water Station 14 initiated in the Fall 2023, and will be in construction starting April 2025. This presentation will discuss the decision making behind the selection of the PFAS treatment media between GAC and IX, the sizing basis for the pressure vessels, and how the design built in flexibility given unknowns around the future regulatory changes and development in treatment solutions.	06/09/25	2:00 PM	2:30 PM	Lynn	Stephens
MON014	Water	MON014 - Advancing the Water Sector through Artificial Intelligence	Exploring how AI is transforming the water sector, focusing on innovations that enhance water management, conservation, and quality. Experts share insights on using AI to optimize resources, minimize environmental impacts, and improve operational efficiency. The discussion highlights emerging technologies and AI's role in addressing the challenges of sustainable water management.	06/09/25	2:00 PM	3:30 PM	James	Cooper
MON014-01	Water	AI-Enhanced Digital Twin Journey of Houston Water: A Walkthrough	Houston Water is transforming its utility operations by integrating Artificial Intelligence (AI) with digital twin technology to optimize water management. This AI-enhanced digital twin provides real-time monitoring, predictive maintenance, and operational efficiency across Houston's water infrastructure. With capabilities like demand forecasting, leak detection, and water quality control, AI helps anticipate issues, reduce downtime, and	06/09/25	2:00 PM	2:20 PM	Satish	Tripathi

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MON015	Water	MON015 - Hydraulic Modeling for Elevated Levels of Planning	Water distribution modeling is a critical tool in effective planning for water utilities. Modeling discussions during this session will include advanced techniques and case studies that will provide valuable insights into optimizing water distribution systems for sustainable urban development.	06/09/25	2:00 PM	3:30 PM	Ben	Chenevey
MON019	Water	MON019 - Optimizing Corrosion Control in Distribution Systems	This session will explore the fundamental principles of optimizing corrosion control to manage the release of lead, copper, iron, and other metals into drinking water. Attendees will learn best practices for implementing and maintaining effective corrosion control, and gain insights into the latest advancements in understanding how to control and monitor for these metals.	06/09/25	2:00 PM	3:30 PM	Lauren	Wasserstrom
MON021	Water	MON021 - Optimizing Water Utility Resources: Strategies for Effective Water Utility Regionalization	Water and Wastewater utilities face incredible and increasing operating pressures and expenses. Regionalizing or Consolidating water and wastewater utility services is one of many options communities can consider leveraging economies of scale and improve water service. While an important tool, utility consolidation is also	06/09/25	2:00 PM	3:30 PM	Katie	Richardson
MON022	Water	MON022 - Anchor Institutions in Communities: The Role of Water Utilities	This session would look at what utilities can do (and are doing) to establish themselves as valuable anchor institutions in a community regardless of its size or location within the U.S. Examples would be shared by utiltiies who have moved into (or are moving into) anchor institution status in a community, the financial, legal	06/09/25	2:00 PM	3:30 PM	TBA	TBA
MON027	Water	MON027 - A Resilient Water Future: Innovative Solutions and Collaborations	The Rocky Mountain Region's arid climate necessitates innovative water treatment solutions to ensure a sustainable water supply. As the area faces water scarcity, this session will delve into planning and treatment technologies to safeguard its water resources. By emphasizing collaborative strategies, we aim to foster	06/09/25	2:00 PM	3:30 PM	Stephanie	Sansom
MON027-01	Water	What’s in Your Arsenal? Effects of Nitrate on NDMA and 1,4-dioxane Using UVAOP from the Rocky Mountain Arsenal’s Pilot Study	The Rocky Mountain Arsenal (RMA) in Colorado is on the National Priorities List for groundwater remediation with portions of the site having detectable amounts of NDMA and 1,4-dioxane. The North Boundary Containment System (NBCS) utilizes UV treatment to photolyze NDMA. In recent years, 1,4-dioxane levels have increased above the remediation goal, requiring RMA to investigate implementation of UV Advanced Oxidation Process (UVAOP). Through the years, several pilot studies evaluated the efficacy of UVAOP and showed	06/09/25	2:00 PM	2:30 PM	Tiffany	Miller
MON029	Water	MON029 - Advancing Drought Early Warning, Research, and Planning in the Water Sector	Drought can result in significant operational impacts to water utilities, from a loss of water supply to poor source water quality. Building long-term drought resilience means increasing capacity to respond to water supply threats, withstand impacts from drought, and quickly recover when droughts do occur. This session delves into innovative solutions where water utilities have been at the forefront of partnerships to modernize regional drought early warning systems, research and communicate the effects of low-flow and drought on our Nation's ecosystems, water resources, and communities, and plan for the droughts of the future.	06/09/25	2:00 PM	3:30 PM	Elizabeth	Ossowski
MON032-01	Water	Sustainable Water Supply for Data Centers: Practical Options	As demand for data center continues to grow, practical water solutions are needed. This presentation will delve into practical, integrated solutions to these challenges.	06/09/25	2:00 PM	2:30 PM	Rachel	Schwaab

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MON034	Water	MON034 - Opportunistic Pathogens in Distribution Systems	This session will focus on control of opportunistic pathogens (OPs) in drinking water distribution systems. The effects of disinfectants and assimilable organic carbon on concentrations of OPs will be discussed.	06/09/25	2:00 PM	3:30 PM	Bina	Nayak
MON034-01	Water	Get a Leg Up on Legionella – A managers guide to distribution system water quality	Water Research Foundation project #5156 resulted in a combined large 5-year dataset of 9,181 samples from 57 utilities that permits an assessment of opportunities to control Legionella pneumophila in distribution systems water. Utility managers should be knowledgeable and prepared to address and communicate issues related to Legionella in their distribution systems.	06/09/25	2:00 PM	2:30 PM	Mark	LeChevallier
MON035	Water	MON035 - Funding and Management Strategies for Building Resilient Small Systems	Building resilience in small water systems requires more than just technical expertise – it requires strategic planning, robust management practices, and effective funding mechanisms. Small systems often face budget constraints, aging infrastructure, and increasing regulatory pressures, all of which make long-term sustainability a challenge. This session will focus on practical funding and management strategies that small systems can use to build resilience, upgrade infrastructure, and ensure continuous service in the face of evolving challenges.	06/09/25	2:00 PM	5:00 PM	James	Rhoades
MON035-01	Water	Value Engineering for Small Systems, Obtaining Compliance and IIJA/BIL Funding	The presentation, Value Engineering for Small Systems, Obtaining Compliance and IIJA/BIL Funding, identifies how Value Engineering (VE) can be used in addressing the critical need for infrastructure in smaller systems, typically found in rural areas, who struggle daily with maintaining system viability. The discussion covers a) what triggered the need for a change in approach to our small clients ($1.2 trillion from the 2021 IIJA/BIL), b) how the VE approach was modified to address this need, and c) a presentation of case studies showing how the VE process led to regulatory compliance and favorable funding awards. The goal of this presentation is to give you a few ideas to better position yourself to obtain funding.	06/09/25	2:00 PM	2:30 PM	James	Rhoades
MON036	Water	MON036 - The Role of Emerging Contaminants and their Management & Mitigation in the Circular Economy	This presentation explores the concept of the circular economy in water treatment: Maximization of resource efficiency with the minimization of the generation of waste. We will examine emerging processes and technologies that align with circular economy principles while considering threats from emerging contaminants	06/09/25	2:00 PM	5:00 PM	James	Wolf
MON037	Water	MON037 - Water Community Challenges and Solutions with an International Twist	Water Communities across the globe are facing complex challenges associated with monitoring of water/sanitation services, ever-evolving governmental directives, and digital transformation of techniques. This session is designed to provide a broad range of perspectives on the various drivers that are associated with the ever-changing landscape of water policies and management across the globe.	06/09/25	2:00 PM	5:00 PM	Pooja	Chari
MON037-01	Water	Measuring the unmeasurable: monitoring sustainability of water and sanitation services in East Africa	This session will share the Sustainable Services Checklist (SSC), a tool Water For People uses in 9 countries to measure the progress on water, sanitation, and hygiene (WASH) systems strengthening and sustainability of services in order to reach Sustainable Development Goal 6. We will share cases of overcoming challenges and adapting monitoring systems to get government-buy in for scale in Rwanda and Uganda	06/09/25	2:00 PM	2:30 PM	Anna	Libey
MON006-01	Water	Developing a GIS Web App for Selection of Small Diameter Water Main Replacement Locations	Pittsburgh Water and Sewer Authority (PWSA) has issues with aging infrastructure and began a Small Diameter Water Main Replacement (SDWMR) program in 2018 to specifically address issues with its water distribution network. The program has grown to represent the replacement of an annual average of 10-12 miles of mains and will take in excess of 50 years to address existing problems. PWSA has experimented with various methods	06/09/25	2:05 PM	2:25 PM	Brent	Lahaie

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MON009-01	Water	Water Main Materials, Performance, and Assessment	This presentation discusses the water main materials used during different eras, how they degrade, and how well they perform.	06/09/25	2:05 PM	2:25 PM	Dan	Ellison
MON015-01	Water	Embracing SmartWater to Rebuild Tacoma Water's Hydraulic Model and Prepare for a Digital Twin	Tacoma Water leveraged AMI and "SmartWater" devices to rebuild its hydraulic model and prepare for a digital twin. Extended-period simulations (EPS) were built with precise localized diurnal patterns based on AMI for specific days, and successfully calibrated using over 160 recently deployed pressure monitors along with SCADA. Predicted flows from the model are now accurate enough to identify maintenance issues and assist in solving operational concerns. The model includes every customer meter for direct import of AMI meter volumes in any scenario, for rapid calibration or analysis. The presentation will provide Tacoma Water's approach to SmartWater hydraulic modeling, specific examples, challenges, lessons learned, and next steps.	06/09/25	2:05 PM	2:25 PM	Douglas	Lane
MON019-01	Water	Overview of Internal Corrosion Control in Drinking Water Distribution Systems	This presentation covers the general concepts behind internal corrosion and metals release in drinking water distribution systems with focus on lead, copper, iron, brass, and galvanic corrosion, and sets the stage for the subsequent presentations.	06/09/25	2:05 PM	2:15 PM	Philip	Brandhuber
MON019-02	Water	Water Quality Monitoring and Assessment of Internal Corrosion and Increased Metals Concentrations	The presentation emphasizes the crucial water quality (WQ) parameters that affect internal corrosion and metals concentrations. Approaches for developing a monitoring program to assess and troubleshoot corrosion-related WQ problems are discussed.	06/09/25	2:15 PM	2:25 PM	Melinda	Friedman
MON014-02	Water	Unleashing the Power of AI: A Journey Through Real-World Water Utility Transformations	Discover how Artificial Intelligence is revolutionizing the water industry. Join us for a captivating presentation exploring how AI and data management platforms are transforming water utilities, from enhancing operational efficiency to addressing aging infrastructure challenges. Through real-world case studies, we'll delve into the groundbreaking advancements that are shaping the future of water management.	06/09/25	2:20 PM	2:40 PM	Offer	Herman
MON006-02	Water	ECWA's Deep Understanding of the Hydraulic Impacts of Watermain Breaks on Customers Leads to More Cost-Effective Replacements	Advancements in AI-powered watermain break prediction tools have led to highly accurate estimates of the probability of failure (POF) of pipes. But optimizing the prioritization of pipe replacements and the determination of appropriate expenditure levels requires consequences of failure (COF) estimates to be equally well estimated. To best estimate pipe risks, maximize the cost-effectiveness of its replacement program, and	06/09/25	2:25 PM	2:45 PM	Kevin	Campanella
MON009-02	Water	Collection and Reporting Standards	This presentation discusses the sources of relevant condition assessment data and the methods to capture and store the data in a meaningful and useful fashion.	06/09/25	2:25 PM	2:45 PM	Matthew	Coleman
MON015-02	Water	Dynamic Master Planning: Leveraging Interactive Tools for Informed, Data-Driven Decision Making	Greenville Utilities Commission (GUC) has embarked on the journey to develop a dynamic Master Plan that is updated regularly and enhanced with interactive tools for informed, data-driven decision making. This presentation will introduce GUC's master planning process from data collection to Capital Improvement Plan (CIP) project development, highlighting the use of interactive tools. We will showcase tools for analyzing field data, communicating model calibration, assessing pump station condition data to support a Risk Based Assessment, prioritizing CIP projects based on multiple factors to meet system needs, and visualizing projections, system capacity analyses, and CIP projects in ArcGIS Online.	06/09/25	2:25 PM	2:45 PM	Isabella	Stubbs

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MON019-03	Water	Corrosion Control Treatment Techniques and Unintended Consequences	This presentation highlights the latest information for selecting appropriate corrosion control treatment, including WRF's recent project on Phosphate-Based Corrosion Inhibitors and Sequestrants to Meet Multiple Water Treatment Objectives.	06/09/25	2:25 PM	2:35 PM	Roger	Arnold
MON001-02	Water	More Tools in the Toolbox: Manganese Control Strategies at Houston's New 320 MGD Water Treatment Plant	The presentation will focus on treatment strategies such as biological filtration, chlorine dioxide, and ozone to control manganese naturally present in the source water, as well is in the recycle streams at the water treatment plant.	06/09/25	2:30 PM	3:00 PM	Greg	Pope
MON003-02	Water	Regulated and Unregulated DBPs in US Distribution Systems: Nationwide Occurrence, Treatment, and Cytotoxicity	This study investigates the occurrence, treatment efficacy, and cytotoxicity of DBPs in U.S. water systems. It will provide critical insights for EPA Stage 3 DBPR development and help utilities optimize disinfection while reducing DBP-related risks.	06/09/25	2:30 PM	3:00 PM	Peng	Dai
MON011-02	Water	Performance Review of two Full-Scale IX Plants for PFAS Removal from Groundwater	The presentation will include a detailed analysis of the performance of two full-scale treatment plants for the removal of PFAS from groundwater using ion-exchange (IX) resin. One plant began operation in September 2020 and has three parallel trains treating up to 6,250 gpm of groundwater, while the other plant began operation in October 2022 and has one train treating 1,200 gpm of groundwater. Each train in either plant includes two 12-ft diameter vessels configured in series and operated in alternating lead-lag positions. Two types of resins are used at the two plants. Each plant has already gone through multiple resin changeouts, and the impacts of changeouts on the efficiency of the resin will be presented and discussed.	06/09/25	2:30 PM	3:00 PM	Issam	Najm
MON027-02	Water	Diversifying Colorado's Water Portfolio: The Potential for Stormwater Capture and Use to Contribute to a Water Resilient Future	This presentation highlights findings from two projects that directly address the economic challenges associated with stormwater capture and use (SCU). The first project estimates SCU potential at the state-level and applies a framework for identifying, quantifying, and monetizing the multiple benefits of SCU in Colorado and other western states. The second project examines local level challenges and solutions, drawing on in-depth case studies from participating utilities across the country. The presentation will focus on considerations and methods for evaluating the costs and benefits of SCU and demonstrating how this information can be used to achieve key outcomes.	06/09/25	2:30 PM	3:00 PM	Shannon	Spurlock
MON032-02	Water	Data Center Cooling - No Problem We Have Recycled Water	This study will present summary of a comprehensive study which concluded that using recycled for evaporative cooling is feasible and highly attractive solution over air cooling or using potable water. The results of this study will provide an unmatched value for public agencies, data center providers/owners and water practitioners who are exploring recycled water options to create a sustainable solution for data center's cooling and other	06/09/25	2:30 PM	3:00 PM	Ufuk	Erdal

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MON034-02	Water	Assessing the mechanistic effect of disinfectants on waterborne opportunistic pathogens	Opportunistic pathogens pose a significant threat to public health, with annual burdens exceeding $1 billion. Suboptimal disinfection in drinking water systems may cause inadequate damage to the OPs, leading to potential repair. Understanding how OPs are inactivated will help reveal exposure conditions beyond which irreparable change occurs. This will be useful for optimizing disinfectant residuals to manage OPs, while avoiding unintended consequences like formation of disinfection by products.	06/09/25	2:30 PM	3:00 PM	Zia	Bukhari
MON035-02	Water	Realizing the Promise of Water Infrastructure Investment and Jobs Act Funding: Lessons and Successes	For more than a year, the Water Infrastructure Environmental Finance Centers (EFCs) across the country have been providing assistance to drinking water, wastewater and stormwater system managers - particularly small and disadvantaged systems - to connect them with federal funding to help address the challenges they are facing. These EFCs either work within a region that mirrors the Environmental Protection Agency's regions or across the nation. We will have representatives from several regional water infrastructure and/or national EFCs. This session will outline what EFCs are learning about challenges and strategies that are proving most promising for addressing these issues within regions and across regions.	06/09/25	2:30 PM	3:00 PM	Ellen	Kohler
MON037-02	Water	Navigating the Drinking Water Directive in Europe	The Recast Drinking Water Directive (DWD) is the EU's pivotal law on drinking water. One of the primary objectives is to safeguard human health by regulating the quality of water intended for human consumption. The DWD, with its updated water quality standards, will further protect human health by addressing pollutants	06/09/25	2:30 PM	3:00 PM	Jonathan	Brania
MON019-04	Water	Corrosion Control Treatment Evaluation Studies and Assessment Tools	Desktop and demonstration tools can be used to assess metals release, including to select or optimize CCT, or evaluate source water or treatment changes. An overview of available tools and how they can inform CCT decisions are discussed.	06/09/25	2:35 PM	2:45 PM	Sheldon	Masters
MON014-03	Water	Predicting Water Quality using Artificial Intelligence	Watersheds face stress from population growth, climate change, and agricultural practices, with pollutants like Total Phosphorus (TP) and Total Nitrogen (TN) affecting water quality. These pollutants drive eutrophication, algal blooms, and habitat degradation, requiring collaboration and data collection for effective management. GHD used AI to ingest, clean, and integrate diverse datasets for predictive analytics. AI techniques identified trends, predicted future water quality, and ensured model accuracy. This approach supports stakeholders in	06/09/25	2:40 PM	3:00 PM	Bhavin	Bhayani
MON006-03	Water	Water Capital Improvement Plan Strategy and Optimization in the Detroit Water and Sewerage Department	Determining the desired levels of service targets for capital improvement and the resultant annual capital reinvestment/replacement cost can appear daunting to many utilities. Since 2017, the Capital Improvement Program Management Organization (CIPMO) has taken a programmatic and collaborative approach to renew water infrastructure in Detroit. Following almost seven years of lessons learned, DWSD and CIPMO took a fresh look at the assumptions made in the early days of the program and the realities of project drivers and	06/09/25	2:45 PM	3:05 PM	Brian	Dara
MON009-03	Water	Pressure Monitoring	This presentation discusses strategies to monitor pressures within distribution systems to identify and minimize detrimental events.	06/09/25	2:45 PM	3:05 PM	Peter	Gaskamp

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MON015-03	Water	Using Hydraulic Modeling to Plan District Metered Areas (DMAs) for Water Loss Control	This presentation will describe the process of using hydraulic modeling to lay out the DMAs for four large pressure zones for San Jose Water (with between 19,400 and 42,600 service connections each) and performing a technology evaluation to select DMA flow meters. Because San Jose Water has a very large, dense water system, the goal of the system was to build the DMAs with multiple flow meters and closed valves while not	06/09/25	2:45 PM	3:05 PM	Brian	Skeens
MON019-05	Water	Desktop Corrosion Control Treatment Evaluation Studies	This presentation will walk through the steps for performing a desktop CCT evaluation, including assessing water quality data, distribution system materials, customer complaints, analogous systems, and modeling chemical treatment options.	06/09/25	2:45 PM	2:55 PM	Chris	Hill
MON019-06	Water	Bench- and Pilot-Scale Testing Approaches to Inform Corrosion Control Treatment Decisions	The latest guidance and practical tools for selecting and implementing bench- and pilot-scale testing approaches to assess corrosion control and metals release will be highlighted, with focus on lead, copper, and iron pipe materials.	06/09/25	2:55 PM	3:05 PM	Tyler	Bradley
MON001-03	Water	Always Room for Innovation - Optimizing Iron and Manganese Removal at An Existing 1.4 MGD WTP with Challenging Groundwater Quality	Iron and manganese are common constituents that can be successfully removed from groundwater, but challenging water qualities may significantly disrupt its treatment performance. The Schomberg WTP is a 1.4 MGD (5.4 ML/d) groundwater treatment facility faced with elevated levels of iron, manganese, methane, ammonia, and organics. This project examined alternative treatment technologies followed by a one-year pilot study including the testing of catalytic media. The pilot was optimized to achieve simultaneous removal of iron and manganese and explored innovative operational modes to extend filter media service life. This presentation will provide details on the technology evaluation, pilot results, and proposed plant upgrades.	06/09/25	3:00 PM	3:30 PM	Chris	Jiang
MON011-03	Water	Bringing It Home – Challenges and Successes of In-House PFAS Analysis at Greater Cincinnati Water Works (GCWW)	This presentation will go over the challenges of bringing PFAS analysis in house and the steps GCWW took to overcome the challenges. Other water utilities and contract laboratories can use this information in setting up their own PFAS analysis programs.	06/09/25	3:00 PM	3:30 PM	Alexandra	Mendlein
MON014-04	Water	AI Predictive Water Quality States for Denver Water, Your Future Water Quality Advisor or Not?	This presentation explores how AI enhances Denver Water's quality management in the North Fork of the South Platte Watershed. We present outcomes from applying AI/ML to develop an early notification system predicting how extreme events influence shifts in key water quality factors and their relation to treatment processes. This project represents a novel shift in applying AI/ML to wider system state prediction. This presentation provides 1) an understanding how extreme events impact water quality and DWTP operations; (2) the contribution of diverse data sources—water quality data, meteorological records, and extreme events — in AI systems, and (3) the status of applying AI/ML models to predict shifts in Raw Water Quality States.	06/09/25	3:00 PM	3:20 PM	Guillermo	Vizarreta Lun

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MON027-03	Water	Irrigators as friends for future water supply planning	Making friends with irrigators can be involved but important. This presentation shares findings from ongoing work with Colorado irrigators and farm producers on water allocation options in the region. Themes will explore how water utilities can collaborate with these stakeholders to inform future water supply decisions. Additionally, the research highlights the importance of incorporating agricultural perspectives early in the development of decision support tools for water supply options. Attendees will learn where and how utilities, state regulators, and regional water agencies can incorporate these views to foster more collaborative water allocation processes.	06/09/25	3:00 PM	3:30 PM	Dixie	Poteet
MON032-03	Water	A Case Study on Using Potable Reuse to Advance Development of Critical Infrastructure in the Desert Southwest	This presentation examines using potable reuse to support the Southern Nevada Supplemental Airport (SNSA) development in the Ivanpah Valley, set to begin operation in 2037. It explores reuse strategies to address water resource challenges when developing new infrastructure in a remote, desert location. Key aspects include evaluating source water availability and quality to and from airport operations, treatment processes, side streams, and regulatory issues. The goal of the study is to provide the Southern Nevada Water Authority (SNWA) with feasible potable reuse alternatives to facilitate development in the short term, and enhance water resource recovery, efficiency, and sustainability for the SNSA and surrounding areas in the long-term.	06/09/25	3:00 PM	3:30 PM	Kyleen	Marcella
MON034-03	Water	Effects of Assimilable Organic Carbon and Disinfection on Opportunistic Pathogen Concentrations in U.S. Drinking Water Systems	Drinking water samples were collected quarterly for one year from full-scale drinking water distribution systems throughout the continental U.S. and Alaska to assess the concentrations of opportunistic pathogens (OPs) including Legionella pneumophila, Mycobacterium avium complex, and Pseudomonas aeruginosa. Basic water quality parameters (pH, temperature, disinfectant concentration) were measured onsite at the time of sample collection, and assimilable organic carbon was quantified as an indicator for the water to potentially support OP	06/09/25	3:00 PM	3:30 PM	Molly	Bledsoe
MON035-03	Water	Addressing Emerging Contaminants in Small or Disadvantaged Communities	This session will share information about two new U.S. EPA grant programs: the Emerging Contaminants in Small or Disadvantaged Communities (EC-SDC) and the Small, Underserved, and Disadvantaged Communities (SUDC) programs. Participants will learn about ongoing national efforts to address emerging contaminants, including per and poly-fluoroalkyl substances (PFAS), and gain a better understanding of funding that is available	06/09/25	3:00 PM	3:30 PM	Hillarie	Ishida
MON037-03	Water	Using machine learning and quantitative microbial risk assessment to link water quality to health risk in Uganda	Providing safe water in emergencies is critical for preventing the spread of waterborne illnesses among crisis-affected populations. Humanitarian drinking water guidelines recommend water quality indicator data as proxies for microbiological safety. While these indicators are easy to measure, they do not tell the full story of water safety. Our study prototyped a novel, probabilistic model that uses machine learning to link water quality	06/09/25	3:00 PM	3:30 PM	Michael	De Santi
MON006-04	Water	Elevating Water Main Renewal: Innovation and Adoption at Denver Water	Denver Water is Colorado's oldest and largest water utility, serving 1.5 million people and managing over 3,000 miles of distribution main. The utility has implemented an advanced multi-objective optimization tool to revolutionize its main renewal planning process. This solution enables identification of optimal, small diameter water main projects by aligning them with a wide array of criteria. Adopting new and innovative tools in public	06/09/25	3:05 PM	3:25 PM	Jaclyn	Gorman
MON009-04	Water	In-line Ultrasonics	In-line Ultrasonic tools have been used for many years in the oil and gas industry for high resolution metallic pipe inspection. Recent technology advances have brought in-line ultrasonics to the water industry.	06/09/25	3:05 PM	3:25 PM	Chandler	Carpenter
MON015-04	Water	A Case Study on Energy Analysis & System Effects by Doubling High Service Pumping Utilizing Digital Twin	This is a case study on energy cost and consumption analysis & system effects by doubling the high service pumping volume utilizing digital twin with live and historical data. The system serves a large metropolitan area in Missouri with about 330,000 customers and through a network of approximately 5,000 miles of transmission and distribution main, ranging in diameter from 2-inches to 42-inches	06/09/25	3:05 PM	3:25 PM	Jian	Yang

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MON019-07	Water	Implementing Pipe Scale Analysis and Water Sampling Strategies to Evaluate Corrosion Control Treatment	This presentation will highlight water sampling strategies and techniques for pipe scale analyses to inform corrosion control treatment decisions. Strategies presented will help systems evaluate, predict, and reduce corrosion and metals release.	06/09/25	3:05 PM	3:15 PM	David	Cornwell
MON019-08	Water	Implementing and Maintaining Optimal Corrosion Control and Improving Water Quality Stability	Distribution system practices that can assist with implementing and maintaining optimal CCT and improving water quality stability will be highlighted, such as process control charts and operational strategies to reduce water age & maintain residuals.	06/09/25	3:15 PM	3:25 PM	Richard	Giani
MON001-04	Water	Innovative In-Line Aeration System for Iron Removal in Drinking Water Treatment	This presentation introduces an innovative in-line aeration system that has been successfully implemented at water treatment facilities to oxidize iron prior to multimedia filtration, as an alternative to traditional draft aerators. The system consists of a sidestream injection skid and a pipeline flash reactor (PFR). The skid uses a booster pump and venturi injector to draw in atmospheric air, which is then mixed into the mainline flow	06/09/25	3:30 PM	4:00 PM	Mike	Spillner
MON003-04	Water	Epidemiology of distribution systems: The correlation between water treatment variables and legionellosis cases	This talk will explore the relationship between water treatment characteristics, such as disinfectant type, geographic locations, and size in their relationship to legionellosis cases.	06/09/25	3:30 PM	4:00 PM	Alexis	Mraz
MON035-04	Water	Toward a resilient stance: Supporting small, failing water systems in overcoming complex challenges	California's Safe and Affordable Funding for Equity and Resilience (SAFER) Program was designed to provide resources to failing and struggling water systems across the state to help manage their systems, comply with regulations, and overcome long-standing challenges. Stantec's SAFER Team will share case studies from several small water systems in California, including implementing options for PFAS treatment alongside nitrate and uranium removal, finding regional solutions where neighboring systems struggle with similar challenges, and	06/09/25	3:30 PM	4:00 PM	Tori	Klug
MON042	Water	MON042 - Setting the Bar for Removal of Ions in Drinking Water – AWWA's New Ion Exchange Standard and Its Application	AWWA issued a new Single Use Ion Exchange Standard in the spring of 2025. This session will provide an overview of the standard and its application. The session will also describe a second Ion Exchange Standard that will cover regenerable resin systems.	06/09/25	3:30 PM	5:00 PM	Cathy	Swanson
MON047	Water	MON047 - Advancements in Pipeline Inspection and Assessment Techniques	This session covers advancements in pipeline inspection and assessment techniques and the importance of maintaining water infrastructure. These advancements offer new methods for ensuring the safety and reliability of water pipelines, ultimately benefiting communities who rely on clean water.	06/09/25	3:30 PM	5:00 PM	Jerry	Snead

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MON047-01	Water	The Data All Lives in a Yellow Submerged Thing - Corpus Christi Water inspects 101-mile Mary Rhodes Pipeline in Single Run	The Mary Rhodes Pipeline (MRP) Condition Assessment Project completed a record-breaking distance inspection utilizing the next generation of inline inspection tools and technologies previously not available. Corpus Christi Water's (CCW) 101-mile long MRP conveys over half of CCW's water from Lake Texana to its WTP and is a critical asset. Since its inception, the MRP has experienced 33 leaks/failures and due to its capacity, length, and lack of redundancy, has a high consequence of failure. As a result, CCW performed a desktop assessment of the MRP to understand potential causes of historical failures and provide recommendations for a pipeline condition assessment to help CCW understand what would be required to maintain level of service.	06/09/25	3:30 PM	4:00 PM	Jerry	Snead
MON049	Water	MON049 - Demand Disrupters: Distribution System Challenges & Opportunities	This session provides a look into large, confined area customer demands including a roundtable discussion. Case studies include impacts of data centers, wholesale contracts, & developments. Individual sessions will discuss how to estimate demand from these sources, how specific challenges were solved, how to develop planning standards, and how to operate facilities with large swings in demand.	06/09/25	3:30 PM	5:00 PM	Christopher	Keil
MON051	Water	MON051 - PFAS Treatment at Large-Scale Surface Water Treatment Plants	This session will explore factors affecting the variability of PFAS in surface water as well as the unique challenges for treating PFAS in surface water treatment plants. It will also discuss the impact of water quality on PFAS treatment and importance of optimizing TOC removal for PFAS treatment, with a focus on large-scale water treatment plants.	06/09/25	3:30 PM	5:00 PM	Alice	Fulmer
MON051-01	Water	Understanding the Factors Affecting PFAS Variability in the Potomac River Watershed (WRF Project 5269)	The Potomac River supplies drinking water to over five million people in MD, VA, WV, and DC. Since 2005, the Drinking Water Source Protection Partnership (DWSPP) has worked on source water protection, addressing risks from municipal, agricultural, and industrial sources. As utilities plan for compliance with PFAS regulations, understanding PFAS variability in source water is crucial. Ten DWSPP utilities have partnered with researchers to investigate PFAS factors in the Potomac River through a structured approach that includes sampling and analysis of PFAS and precursors. Initial findings from site selection and ongoing sampling will be shared, offering a model for other utilities seeking to understand PFAS variability in source water.	06/09/25	3:30 PM	4:00 PM	Christina	Davis
MON054	Water	MON054 - AI and Machine Learning: Transforming Water Quality and Treatment Optimization	Explore how AI and machine learning are revolutionizing water quality prediction, treatment optimization, and operational efficiency. Presentations will cover AI-driven early notification systems for water quality shifts, machine learning applications for predicting PFAS treatability, and data-driven tools optimizing filter performance at one of the largest U.S. water treatment plants. Discover innovative approaches to enhance decision-making and meet regulatory and operational challenges.	06/09/25	3:30 PM	5:00 PM	Kyle	Thompson
MON054-01	Water	From Good to GREAT: How a Strong Operations Team Can Take Their Treatment Game to the Next Level Using Optimization	Water utilities are under increasing pressure to optimize performance and control costs while maintaining high water quality standards. Louisville, CO, which operates two water treatment plants, has implemented a multi-objective tool that empowers operators to make data-driven decisions, improving operational efficiency and treatment effectiveness. This system allows operators to simulate different treatment scenarios and forecast outcomes, helping them optimize water quality and reduce costs across the entire treatment process. This presentation will explore Louisville's experience using the tool to enhance decision-making, focusing on operators' critical role in maximizing its value.	06/09/25	3:30 PM	4:00 PM	Peter	Fiske

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MON059	Water	MON059 - Lead Hot Topics	This session describes benefits from lead control measures, including corrosion control treatment at drinking water utilities and testing/remediation at schools/childcares.	06/09/25	3:30 PM	5:00 PM	Frank	Sidari
MON059-01	Water	Water Quality Double Hockey Sticks - Lead and Legionella	Lead and Legionella are concerns that are primarily associated with premise plumbing. These water quality concerns have historically been reported as separate issues. However as with many parameters in drinking water managing one parameter can result in unintended consequences to another. Since 2016, Pittsburgh Water and Sewer Authority has implemented an aggressive program to control lead in drinking water including implementation of a new corrosion control program and removal of lead service lines. Interestingly, during this same period the number of Legionnaires Disease cases reported in the county has also declined. This presentation will review data to start a conversation if there could be an association between Lead and Legionella	06/09/25	3:30 PM	4:00 PM	Frank	Sidari
MON061	Water	MON061 - Building Financial Resiliency in Water Utilities: A Path to 2050	Water 2050 is AWWA's forward-looking initiative aimed at shaping the future of water. This session focuses on building financial resiliency within water systems, a cornerstone of the initiative. Water 2050's Finance & Affordability Strategic Implementation Team (SIT) will present insights from three sub-groups working to address key financial challenges and strengthen financial stability for water utilities by 2050. Attendees will learn about upcoming resources for fostering financial resiliency, strategies to achieve full-cost pricing, and a proposed certificate program to validate rate studies.	06/09/25	3:30 PM	5:00 PM	David	LaFrance
MON062	Water	MON062 - Climate Change in the Water Sector and Its Impact on Financial Resilience, Insurability, and Credit-Investment Quality	This session would be jointly sponsored with EPA and Cadmus in connection with the second EPA report on this topic currently under development. Denver Water would take the lead in anchoring the session with participants from EPA and Cadmus (amongst others). The focus would be on the legal and financial implications to water utiltiies and related disclosure requirements.	06/09/25	3:30 PM	5:00 PM	Angela	Bricmont
MON063	Water	MON063 - Leveraging AMI for Water Conservation	With more water utilities across the country implementing Automated Metering Infrastructure (AMI), there is a tremendous opportunity to leverage the technology for other utility priorities, including water conservation and customer communication. This session provides examples of utilities looking to use their AMI systems for more than just metering for revenue recovery.	06/09/25	3:30 PM	5:00 PM	Brian	Skeens

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MON063-01	Water	Aurora Water Leverages Event Monitoring to Combat Water Loss and Enhance Utility Operations	A comprehensive event monitoring system helped Colorado utility Aurora Water to address significant water loss and improve operational efficiency.	06/09/25	3:30 PM	4:00 PM	Patrick	Williamson
MON070	Water	MON070 - Innovative Source Water Protection Approaches for Addressing Water Quality Uncertainties	This session explores the diverse challenges in water quality management and the innovative approaches employed to mitigate critical uncertainties related to the magnitude and timing of potential water quality changes. Attendees will gain insights into the next steps to better understand links between forests, climate change, and water quality in forested watersheds.	06/09/25	3:30 PM	5:00 PM	Phoebe	Aron
MON070-01	Water	Forest Ecosystem Response to Climate Change and Potential Water Quality Impacts in the NYC Watersheds	Forests cover up to 90% of the New York City water supply watersheds and are crucial for maintaining water quality. Climate change is expected to bring warmer wetter winters and hotter drier summers, leading to more frequent and/or severe extreme precipitation, droughts, fires, and pest infestations. These changes may cause shifts in forest composition that affect water quality. A literature review and modeling study assessed potential impacts on turbidity, dissolved organic carbon (DOC), nutrients, and acidity. Results suggest increased turbidity, DOC, and water temperature, especially during extreme events, with uncertainties remaining around biogeochemical nutrient cycles and long-term impacts.	06/09/25	3:30 PM	4:00 PM	Phoebe	Aron
MON074	Water	MON074 - Addressing Emerging Contaminants: Microplastics, 1,4-Dioxane & PFAS in Drinking Water Treatment	This session explores two emerging contaminants in drinking water: microplastics and 1,4-dioxane (and PFAS). Learn about the findings from a nationwide study profiling the effectiveness of treatment processes for microplastics removal, and delve into the latest research on removal of 1,4-dioxane and PFAS from drinking water.	06/09/25	3:30 PM	5:00 PM	Cayla	Cook
MON074-01	Water	Profiling Water Treatment Plants for Microplastics Removal	Water Research Foundation (WRF) Project 5185 – Fate of Microplastics in Drinking Water – was initiated to bolster understanding of the capabilities of various unit treatment processes to remove microplastic particulates. Accordingly, the research profiled 16 water treatment plants across the country, including a wide variety of commonly used processes to maximize the benefit for the water treatment community. Water quality data, operational parameters, and design criteria were also captured in an effort to establish the correlative factors the most influence microplastics removal.	06/09/25	3:30 PM	4:00 PM	Brent	Alspach

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MON075	Water	MON075 - Integrated Communications: Building Trust and Credibility through Brand Journalism, Partnerships, and Innovation	Reaching and resonating with today's audiences requires a thoughtful blend of traditional strategies and innovative approaches. This presentation will guide you through creating an integrated communications plan that drives trust and engagement. Join us to explore how an effective multi-pronged communication approach can amplify your impact and inspire lasting connections.	06/09/25	3:30 PM	5:00 PM	Channa	Newman
MON075-01	Water	Elevating Customer Connections: A Multipronged Approach	By sharing its story with the community Louisville Water Company focuses on putting tap water in the spotlight. This presentation will highlight how the integrated communications and marketing strategy Louisville Water uses to deliver its story strengthens the public's trust. Using a variety of inputs including consumer feedback, capital projects, and company initiatives, the team strategically plans outreach and content.	06/09/25	3:30 PM	4:00 PM	Channa	Newman
MON049-01	Water	Data Center Water Demands, Challenges, and Opportunities for Utilities	This presentation will allow attendees to understand the quantity of water demanded by data centers and factors that determine demand, challenges with demand seasonality and how to plan for it.	06/09/25	3:40 PM	4:00 PM	Christopher	Keil
MON061-01	Water	Resources for Financial Resiliency: An overview of upcoming resources and strategies water systems can utilize to bolster financial health resilience	An overview of upcoming resources and strategies water systems can utilize to bolster financial health resilience, regardless of size or scale.	06/09/25	3:40 PM	4:00 PM	David	LaFrance
MON001-05	Water	Two birds, One stone: Solving a Manganese & Arsenic Treatment Challenge in Lincoln, NE	Lincoln Water System's (LWS) Ashland Water Treatment Facility has observed increasing concentrations of arsenic and manganese in their groundwater supplied from the Platte River Aquifer. LWS has established aggressive yet achievable finished water treatment goals of 4.5 ppb arsenic and 10 ppb manganese, which require implementation of new treatment facilities. From 2022 to 2024, LWS undertook an extensive evaluation of oxidation, coagulation, and filtration to effectively address arsenic and manganese. This presentation will provide a comprehensive review of bench and pilot-scale evaluations and techniques used to evaluate effectiveness of alternative coagulants and polymers on As/Mn removal, impacts to filter productivity, recommendations	06/09/25	4:00 PM	4:00 PM	Ashton	Rohrich

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MON003-05	Water	Exploring relationships driving OP and DBP presence in drinking water	Utility partner data will be analyzed using modeling techniques such as correlation, regression, and principal component analysis, to identify relationships between physiochemical parameters, OP presence, and DBP formation.	06/09/25	4:00 PM	4:30 PM	Emily	Julien
MON035-05	Water	Community Engineering Corps - Supporting Sustainable Community-Driven Water & Wastewater Infrastructure Solutions Thought Equity	Community Engineering Corps - an alliance partnership between the American Water Works Association, the American Society of Civil Engineers, and Engineers Without Borders USA - works to build a future where everyone has access to the engineering resources required to live a life of opportunity. This session features an informational presentation about the Community Engineering Corps program, followed by a case study highlighting the work being done by AWWA-members via the Community Engineering Corps program to bridge the water and wastewater infrastructure gap.	06/09/25	4:00 PM	4:30 PM	Molly	Sullivan
MON042-02	Water	Positioning Practical PFAS Performance	Security Water District (SWD) is one of the first municipalities in the United States to implement full scale treatment of groundwater contaminated with PFAS compounds utilizing strong based, single-use, Ion Exchange (IX) resin. Why did SWD invest in a technology that was yet to be widely accepted on groundwater sources from the Widefield Aquifer? This presentation will explain why IX was chosen as the best option, the obstacles that became a challenge, EPA's role, and future challenges.	06/09/25	4:00 PM	4:30 PM	Brandon	Bernard
MON047-02	Water	Big Pipes, Big Data: Advances in Metallic Pipeline Condition Assessment	Explore advancements in metallic pipeline integrity management with next-generation free-swimming technology. Large-diameter pipeline owners can now avoid fully dewatering and physically entering the pipeline, making inspections safer and more water conscious. Learn about the innovations powering these cutting-edge ultrasonic inspection tools. Gain insight into how free-swimming platforms can improve inspection efficiency and how artificial intelligence accelerates the analysis of terabytes of high-resolution pipe wall condition data. Toronto Water will share their experience deploying this platform and share how they are leveraging inspection data to reduce risk, manage costs, and maintain reliability of their network.	06/09/25	4:00 PM	4:30 PM	Eric	Toffin
MON049-02	Water	Bourbon, Batteries, & Beyond: Hydraulic Modeling Identifies Needs to Meet Louisville Water's Large Wholesale Growth	This presentation discusses the challenges met and opportunities afforded by significant wholesale growth due to the operations of two major industries adjacent to Louisville Water's service area.	06/09/25	4:00 PM	4:20 PM	Christopher	Keil

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MON051-02	Water	Getting ready for PFAS treatment at large-scale surface water facilities – importance of water quality and operational evaluations	At the 155 MGD Raritan-Millstone WTP and the 80 MGD Canal Road WTP, New Jersey American Water conducted pilot testing of several types of media in gravity contactor conditions as potential full-scale PFAS treatment solutions. While a fundamental goal of the pilot testing was to determine PFAS removal performance and understand seasonal water quality change impacts on the medias, an equally important goal was to understand the broader impacts of integrating PFAS treatment into the overall plant. This presentation will share not just how the medias performed with respect to PFAS removal but also what was learned beyond PFAS performance that could help other utilities that may be embarking on their own pilot testing programs.	06/09/25	4:00 PM	4:30 PM	J. Margaret	Gray
MON054-02	Water	A Machine Learning Approach for Predicting PFAS Treatability in Drinking Water	In April 2024, EPA finalized the National Primary Drinking Water Regulations (NPDWR) for six per- and polyfluoroalkyl substances (PFAS). With the approaching compliance deadline of April 2029, utilities are looking to identify and implement feasible PFAS treatment strategies. To streamline selection of treatment approaches based on the unique needs of individual utilities, a nationwide study was performed to acquire PFAS treatability data representing diverse geographies, water quality characteristics, PFAS, and treatment facilities. Using machine learning, PFAS treatability was predicted, providing a valuable tool for narrowing the selection of treatment technologies as utilities across the nation look to address PFAS contamination.	06/09/25	4:00 PM	4:30 PM	Meredith	Feltman
MON059-02	Water	Clear Improvement: Implementing Optimized Corrosion Control Technology at Jackson, Mississippi's 110-year-old JH Fewell WTP	The Jackson, Mississippi water system experienced lead concentrations above regulatory limits in 2015, which triggered a requirement for a desk-top assessment and selection and implementation of an optimized corrosion control treatment strategy. The water system was implementing this strategy at its 110-year-old JH Fewell WTP in 2022 at the time the system was placed under the oversight and control of a federally appointed Interim Third-Party Manager. This presentation will discuss the background and the implementation of the alkalinity and pH adjustment system to meet water quality parameters for distribution system corrosion control. Details of the optimization, operator training and system water quality improvements will be shared.	06/09/25	4:00 PM	4:30 PM	Mia	Welch
MON061-02	Water	Positioning Utilities for Full-Cost Pricing: A discussion on creating environments where governing bodies and staff align to support full-cost pricing	A discussion on creating environments where governing bodies and staff align to support full-cost pricing decisions.	06/09/25	4:00 PM	4:20 PM	Jason	Mumm
MON063-02	Water	Leveraging AMI data for Golden's Waste of Water Ordinance and potential Drought Restrictions	The Golden City Council enacted a Waste of Water Ordinance to regulate permissible and prohibited water uses, aiming for greater efficiency. Due to staffing constraints, Golden is leveraging AMI technology alongside a customer-facing portal to monitor irrigation practices citywide rather than relying on patrols. Residents have access to the same software as city officials which promotes transparency and support. Golden intends to present its approach to utilizing AMI data for education and enforcement, focusing on irrigation practices and leak detection.	06/09/25	4:00 PM	4:30 PM	Kathleen	Duke

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MON070-02	Water	Climate chaos? Here's Your Algae Management Playbook	Join us for an insightful presentation addressing the urgent challenges posed by harmful algae blooms (HABs) in the context of climate change. This session will provide water utilities with essential guidance on managing HABs by focusing on source water risks, treatment vulnerability assessments, and mitigation strategies for cyanotoxins. Attendees will learn how to develop a custom action plan tailored to their specific needs, enhancing their preparedness and response capabilities based on case studies. Additionally, we will explore emerging monitoring tools that can aid in the detection and management of algae risks.	06/09/25	4:00 PM	4:30 PM	Nicole	McLellan
MON074-02	Water	A Pilot Study Comparing PFAS and 1,4-Dioxane Removal in High Recovery Membrane Systems	The Piedmont Triad Regional Water Authority (PTRWA) owns and operates the John F. Kime Water Treatment Plant (JFK WTP), a 14.7 MGD surface water plant in Randleman, NC. PTRWA surface waters contain PFOS, PFOA, and 1,4-dioxane and treatment is needed. Pilot studies were performed to evaluate PFAS and 1,4-dioxane removal at this facility and develop design criteria. Three membrane pilots are included in this study: a three-stage RO, a flow reversal RO (FRRO) pilot, and a closed-circuit RO (CCRO) pilot. This presentation discusses the pilot protocol, PFAS and 1,4-dioxane treatability, and full-scale decisions.	06/09/25	4:00 PM	4:30 PM	Samantha	Black
MON075-02	Water	The Benefits of Bundling – Using the PESO Model to Maximize Community Engagement	Session provides overview of the current media mix which blends traditional and digital channels to reach people and features real world examples from utilities on how they use news media, social media, advertising/marketing, websites, etc. to engage their communities.	06/09/25	4:00 PM	4:30 PM	Marci	Davis
MON049-03	Water	From Factors to Facets: Planning for New Developments in Broomfield Colorado	The City and County of Broomfield employs hydraulic models for their potable and reuse water systems, along with detailed standards for developers, to understand large system growth in the northeast and aid in planning for future capital improvements	06/09/25	4:20 PM	4:40 PM	Matthew	Deaver
MON061-03	Water	Certificate Program for Rate Adoption: Insights into a certificate program designed to validate rate studies and ease the rate adoption process.	Insights into a certificate program designed to validate rate studies and ease the rate adoption process.	06/09/25	4:20 PM	4:40 PM	David	LaFrance

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
MON001-06	Water	Online Monitoring Practices for Better Manganese Control in Drinking Water Production	Seasonal manganese fluctuations in surface source water cause various treatment challenges. There are many manganese mitigation techniques including pre-oxidation practices. Timely pre-oxidation coupled with continuous dissolved oxygen monitoring was implemented at two surface water plants and helped to predict manganese spikes, allowing to optimize their treatment processes. The documented case studies demonstrate the effectiveness of this approach to ensure timely interventions mitigating adverse effects of high manganese levels in the source water.	06/09/25	4:30 PM	4:30 PM	Vadim	Malkov
MON003-06	Water	Progress towards a drinking water risk trade-off assessment: Disinfection byproducts vs. opportunistic pathogens	Join us to discuss milestone achievements for a risk trade-off assessment comparing disinfection byproducts and opportunistic pathogens in drinking water. Highlights include DBP dose-response modeling and sampling-based DBP/OP exposure assessments.	06/09/25	4:30 PM	5:00 PM	Carly	Gomez
MON042-03	Water	Ion Exchange Treatment and Corrosion Control	Understanding the unintended consequences of water treatment is as crucial as contaminant removal. When using ion exchange resins, the water chemistry may change and create a corrosive environment. This talk will help water treatment professionals know when to look for these potential situations and how to mitigate. Compliance to maximum contaminant levels for PFAS, nitrate, uranium, perchlorate, chrome VI, TOC, and more is possible with ion exchange without creating corrosion potential.	06/09/25	4:30 PM	5:00 PM	Cathy	Swanson
MON047-03	Water	Bar-wrapped Pipe Assessment and Forensic Evaluation: The Next Phase of Tucson Water's Pipeline Protection Program	Nearly 25 years after establishing its industry leading Pipeline Protection Program, Tucson Water continues to innovate as it begins a new phase in the Program's history by evaluating its inventory of C303 bar-wrapped pipe (BWP). In August 2023, Tucson Water conducted a free-swimming electromagnetic inspection on 15 miles of late '60s 42-inch BWP. Reported results included broken reinforcing bars, steel cylinder loss and multiple anomalous signals. This presentation will detail challenges faced during the inspection and results from forensic tests to validate distress and investigate anomalies. This assessment puts Tucson on course for developing a reliable long-term BWP management strategy like the journey started with PCCP many years ago.	06/09/25	4:30 PM	5:00 PM	Jesus	Suarez
MON051-03	Water	How Low Can You Go? Optimizing TOC Removal for Enhanced PFAS Treatment in Miami	Miami-Dade County Water and Sewer Department (MDWASD) is the largest water utility in the south-eastern United States, serving over 2.7 million customers from water treatment plants (WTPs) capable of producing up to 350 MGD. MDWASD is evaluating PFAS treatment alternatives at each facility for compliance with the final PFAS regulations. Since performance of adsorption processes is hindered by interference from TOC, MDWASD is exploring alternatives for TOC optimization to improve feasibility given the high TOC conditions. This presentation will share results characterizing TOC reductions through various alternatives and the resulting adsorptive media PFAS treatment performance improvements of the best TOC reduction options.	06/09/25	4:30 PM	5:00 PM	Adam	Feffer

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MON054-03	Water	Scaling Up Data Driven Operations Support to Optimize Plant Efficiencies and Performance	At the North Texas Municipal Water District (NTMWD) Wylie WTP, one of the largest in the US, filter performance issues with KPIs like UFRV and terminal headloss were addressed by developing an automated Filter Operations Dashboard. This tool, integrating real-time SCADA data, along with filter surveillance information, optimizes filter performance and provides a unified performance assessment.	06/09/25	4:30 PM	5:00 PM	Erik	Vosburgh
MON059-03	Water	Improving Water Quality and Children's Health: Let's tackle lead reduction!	This presentation will share information about EPA's efforts to promote testing and remediation of lead in drinking water at schools and childcare facilities. Participants will learn about funding and resources available for communities to bring attention to this important issue that schools and childcare facilities in the United States are facing.	06/09/25	4:30 PM	5:00 PM	Hillarie	Ishida
MON063-03	Water	Unlocking AMI Data for Actionable Insights with a Customized Analytics Platform	This presentation will provide an overview of how the Jacobs AMI Data Analytics Platform was implemented at two water utilities to help them unlock actionable insights with the rollout of their AMI. These analytics are meant to go beyond what the existing utility platforms currently provide, are especially tailored to what the utility is interested in seeing on a daily basis, and is updated with new data daily. It also has the ability to import other data streams beyond the AMI data and to provide unique insights to the water utility.	06/09/25	4:30 PM	5:00 PM	Brian	Skeens
MON070-03	Water	Balancing heat resilience and water conservation in the hot and arid Las Vegas Valley Metropolitan Area	In metropolitan areas where water resources are limited and impervious surfaces abound, both heat resilience and water security are necessary to achieve sustainability and quality of life. The purpose of this study was to: 1) investigate local drivers of heat, and cooling effects of vegetation cover types, on temperatures across the hot and arid Las Vegas Valley Metropolitan Area; and 2) examine the results in the context of Colorado River water scarcity and community planning efforts (e.g., tree-planting initiatives and water-smart landscaping). Other urban populations with similar challenges must implement informed decisions given their own local and regional contexts to achieve a balance of heat resilience and water security.	06/09/25	4:30 PM	5:00 PM	Nancy	Beecher
MON074-03	Water	Eliminating I,4 Dioxane and PFAS entering Source Water	The session will feature case studies from design professionals and utility managers on how to reduce these contaminants in source water. Following a 2019 NCDEQ request, Burlington's EBWWTP and SBWWTP sampled for 1,4-dioxane and PFAS, revealing violations of the Clean Water Act. Weekly PFAS sampling began, and by May 2020, the EBWWTP's Zimpro process was shut down. A comprehensive sampling in 2021 included multiple discharge locations and identified industrial sources of PFAS. In Fall 2023, a settlement with SELC was reached due to elevated PFAS levels in effluent.	06/09/25	4:30 PM	5:00 PM	Viraj	deSilva

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MON075-03	Water	A Business Equation: How Louisville Water Links Water to Economic Development	Water is the anchor for economic development. Utilities that embrace communications often place the focus on residential customers. Louisville Water Company has that focus but has also found a strategic approach in linking water to the economy strengthens public trust and produces organic endorsements. This presentation looks at two initiatives: one that links water to the small business economy in Louisville and a second that links the value of water to Kentucky’s signature industries. The presentation will highlight the research to create the initiatives, examples of content marketing and brand journalism, and the results.	06/09/25	4:30 PM	5:00 PM	Kelley	Dearing Smit
MON061-04	Water	Interactive Feedback Session: Participants will engage in discussions to: 1.Provide feedback on barriers to full-cost pricing and survey results. 2.	Participants will engage in discussions to: 1.Provide feedback on barriers to full-cost pricing and survey results. 2.Rank criteria for the proposed certificate program, assess feasibility, and evaluate its value for gaining approval for rates.	06/09/25	4:40 PM	5:00 PM	David	LaFrance
T01	Water	T01 - Aurora: Binney Plant Educational Facility Tour	This system illustrates an innovative use of natural and technical treatment methods to recapture water from the South Platte River to enhance a supply through indirect potable reuse. Tour attendees will gain in understanding of the system’s processes used such as biological filtration, ultraviolet advanced oxidation, adsorption and finished water blending to make this urban source water indistinguishable from the mountain supply. This tour will discuss lessons learned and future plans for this high performing purification facility. Note: Closed shoes and long pants required. Climbing and decending stairs will be required.	06/10/25	7:45 AM	12:15 PM	Facility Tour	Facility Tour
T02	Water	T02 - CSU/Denver Water: Spur Campus at National Western + Denver Water Lab Educational Facility Tour	Tour the new CSU Spur, The educational anchor of the National Western Center, CSU Spur is a three-building campus that brings learning to life around important global topics of food, water, and health. The tour will also stop at the new Denver Water Lab. Denver Water moved into its new, state-of-the-art Water Quality Lab in the Hydro Building on the CSU Spur campus in early 2023. The lab replaced a smaller, outdated facility in west Denver. The utility’s water quality team conducts nearly 200,000 tests every year to ensure the water delivered to 1.5 million people every day is clean, safe and meets all state and federal water quality standards. The new facility provides room for Denver Water scientists to test three times that amount in the future.	06/10/25	8:00 AM	12:00 PM	Facility Tour	Facility Tour
T03	Water	T03 - Parker Water: Rueter-Hess Purification Facility Educational Facility Tour	The Rueter-Hess Water Purification Facility is the nation's first large-scale potable water treatment facility to use ceramic membrane filter technology. It treats a combination of local surface water, alluvial water, and water recycled from reclamation plants. In addition, the facility uses an innovative recirculating powdered activated carbon (PAC) system to efficiently remove dissolved organic carbon compounds, taste and odor compounds, disinfection byproduct precursors, and other unregulated trace organics before filtration. Note: Safety glasses will be provided. Climbing and decending stairs will be required.	06/10/25	8:15 AM	12:00 PM	Facility Tour	Facility Tour

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TUE002	Water	TUE002 - Water Treatment 101 Series	Coagulation, filtration, disinfection, residuals management, and aesthetics controls are the backbone of many water treatment systems. A focus on the basics of these technologies and their optimization provides a foundation to improve plant performance and efficiency. This series serves as a reminder of these critical system components, provides basic information for those new to the field, and a valuable refresher for those with years of experience in the industry.	06/10/25	8:30 AM	11:30 AM	Jon	Reuther
TUE003	Water	TUE003 - Chloramine Research and New Insights	These presentations explore strategies for managing chloramination. The first presentation discusses how natural organic matter (NOM) can hinder the effectiveness of orthophosphate in controlling lead release, emphasizing the need to optimize corrosion control. The second focuses on ammonia removal from groundwater, showcasing a successful biofiltration pilot study that achieved full ammonia removal and nitrate/nitrite conversion while meeting regulatory requirements for disinfection by-products. The third reviews case studies using monochloramine as a secondary disinfectant to enhance residual stability, reduce DBPs, and prevent nitrification. Together, these presentations provide insights into optimizing chloramination practices.	06/10/25	8:30 AM	10:00 AM	Nastaran	Mosavari
TUE003-01	Water	Evaluating Natural Organic Matter's Influence on Orthophosphate Corrosion Control Efficacy in Chloraminated Drinking Water Systems	Lead leaching from corrosion scales in drinking water presents a complex challenge for utility management. This study investigates the effects of natural organic matter (NOM) on lead release under varying pH conditions, both in the presence and absence of orthophosphate. It aims to determine if NOM interferes with the efficacy of orthophosphate treatment by delaying its impact and elevating stabilized lead levels. Also, it explores whether reducing NOM levels can lower the required phosphate dosage to achieve target lead levels. Bench-scale galvanic corrosion reactors are employed to assess the interactions between NOM, pH, and phosphate concentrations. The results will help shape strategies to effectively mitigate lead corrosion risks.	06/10/25	8:30 AM	9:00 AM	Nastaran	Mosavari
TUE005	Water	TUE005 - Sustainable Infrastructure Case Studies - Success Stories	This session highlights success stories and new innovations in sustainable infrastructure. Resilient NYC Partners implemented a transferrable pay-for-performance model for delivering green infrastructure, proving to be a catalyst for innovation and unique approaches. Marin Municipal Water District will share how water utilities can integrate hydropower generation projects into their existing system and discuss how California's NEM 3.0 rule has impacted the market. Nashville's MWS has made a bold commitment to upgrade their Omohundro WTP and pursue both Envision and LEED Platinum certifications, which would be the first of its kind to achieve these recognitions.	06/10/25	8:30 AM	10:00 AM	Venus	Price
TUE005-01	Water	Using a Pay-for-Performance Model to Improve Delivery of Green Infrastructure in New York City	Presentation highlights an innovative program known as Resilient NYC Partners, which is accelerating the pace and decreasing the cost of green infrastructure delivery in New York through a pay-for-performance model aimed at non-city owned properties. The authors detail the initial set up and structure of the program, review customer acquisition and project implementation strategies developed to successfully deliver the program's first cohort of built projects, and present lessons learned during initial deployment and scaling of the program. Finally, the authors compare the Resilient NYC Program to similar programs and discuss the transferability of this program to other urban environments.	06/10/25	8:30 AM	9:00 AM	Alisen	Downey

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TUE009	Water	TUE009 - Addressing Legionella in Water Distribution Systems and Customer Buildings: Learning from the Grand Rapids, MN Outbreak	Grand Rapids Public Utilities, MN successfully identified and addressed the largest Legionnaires' Disease outbreak in the U.S. in 2024 by implementing monitoring and disinfection in under 5 months. Real world perspectives will be shared from water utility operations, engineering, management, and experts who resolved the outbreak.	06/10/25	8:30 AM	11:30 AM	Chad	Seidel
TUE009-01	Water	Get a Leg up on Legionella – A Manager's Guide to Distribution System Water Quality	Provides current Legionella context by describing outcomes from WRF#5156 that produced a large 5-year dataset of 9,181 samples from 57 utilities that permits an assessment of opportunities to control Legionella pneumophila in distribution systems.	06/10/25	8:30 AM	9:00 AM	Mark	LeChevallier
TUE010	Water	TUE010 - Filter Operations	This session will cover topics regarding the operations & maintenance of filters.	06/10/25	8:30 AM	10:00 AM	Mike	Sadar
TUE010-01	Water	When Turbidity Measurements Spike – Is it Fact or Fiction?	This presentation digs into the different causes of turbidity spikes and how to quickly determine if they are positive (fact) or negative (fiction).	06/10/25	8:30 AM	9:00 AM	Mike	Sadar
TUE011	Water	TUE011 - PFAS Detection and Removal - Recent Research	These talks address the detection and removal of per- and polyfluoroalkyl substances (PFAS). The first explores thermal degradation mechanisms of PFAS adsorbed to granular activated carbon (GAC) during regeneration processes, identifying conditions that promote mineralization versus partial decomposition to harmful byproducts. The second evaluates GAC-capped filters in existing treatment plants for PFAS adsorption and particle filtration, demonstrating their potential as an interim solution for PFAS compliance. The third compares standard and emerging analytical techniques for PFAS detection, highlighting significant variability among methods.	06/10/25	8:30 AM	10:00 AM	Lauren	Edwards

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TUE011-01	Water	Thermal Destruction of Perfluoroalkyl Substances Sorbed to Granular Activated Carbon: Byproducts and Mechanisms	Water treatment facilities utilize granular activated carbon (GAC) to sequester PFAS from contaminated water, and spent GAC can be regenerated for further use in remediation through thermal treatment. Regeneration could serve as a potential route for complete mineralization of PFAS. Alternatively, PFAS or PFAS products of incomplete destruction may become gaseous and it is unclear if air pollution control devices will prevent their release. We conducted bench-scale experiments designed to observe byproducts of thermally treated PFAS and PFAS sorbed to GAC. We varied industry relevant variables such as temperature, PFAS chain length, and primary gas (air, oxygen, nitrogen).	06/10/25	8:30 AM	9:00 AM	Lauren	Edwards
TUE013	Water	TUE013 - Future-Proofing SCADA: Master Planning for Tomorrow's Water Systems	This session will explore the challenges utilities face as legacy SCADA systems become obsolete. Presentations will highlight new approaches to SCADA master planning, emphasizing the importance of proactive strategy, integration with emerging technologies, and future-proofing investments. Presenters will share best practices via case studies for implementing SCADA system upgrades, focusing on scalability, resilience, and adaptability to meet the demands of modern water infrastructure.	06/10/25	8:30 AM	10:00 AM	Michael	Gruenbaum
TUE013-01	Water	SCADA Systems Becoming Obsolete Faster Than Ever	By nature, supervisory control and data acquisition (SCADA) systems are electronic, thus they are continuously being updated and improved. Like a computer operating system, they must be upgraded regularly to work at peak efficiency, and mine operational data for optimization, to mitigate risk and increase system resiliency. None of that is possible without first centralizing and ensuring quality data.	06/10/25	8:30 AM	9:00 AM	Nicholas	Bath
TUE015	Water	TUE015 - From Lead Service Lines to Distribution Modeling: How Small Systems Are Addressing Distribution Challenge	Small water systems distribution systems have unique challenges from aging infrastructure to the presence of lead service lines, as well as difficulties in managing and optimizing distribution networks. Addressing these issues is critical for safeguarding water quality and ensuring public health. This session will focus on the strategies and tools that small systems are using to tackle distribution challenges, from lead service line replacement to the implementation of modern distribution modeling techniques.	06/10/25	8:30 AM	11:30 AM	Sarah	Buck
TUE015-01	Water	Successful Lead Remediation in Schools and Childcare: A Partnership Between RCAP Solutions and the State of New Hampshire	The presentation will include an overview of the key partnership and leveraging of both state and federal dollars to get the lead out of schools and childcare sites in New Hampshire (NH) as well as specific case studies and lessons learned. Through EPA and state funding streams and recent legislation, NH has been extremely proactive in rolling out lead sampling in schools and childcare and is working closely with RCAP Solutions, a local TA provider, to meet these new requirements which come well ahead of those outlined in LCRR/LCRI as well as use EPA funds for an array of right fit remediation solutions from fixture change outs to in line filters to the installation of bottle filling stations with lead removal filters.	06/10/25	8:30 AM	9:00 AM	Sarah	Buck

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TUE019	Water	TUE019 - Inventive Approaches to Controlling Lead in Drinking Water	These three presentations focus on innovative solutions to tackle lead contamination. The first explores using high precision isotopes to identify the source of lead in blood, improving public health responses. The second examines lead release from pipes during corrosion control treatment, using advanced x-ray microscopy to understand and mitigate the issue. The third evaluates non-invasive technologies for identifying lead and copper service lines, reducing costs and disruption while helping utilities comply with regulations. These presentations offer promising strategies for managing lead exposure.	06/10/25	8:30 AM	10:00 AM	Claire	Boronski
TUE019-01	Water	Identifying the Source of Lead in Blood	Blood lead levels (BLL) have been a health indicator for many years .There are many possible lead sources—lead paint, dust, food, toys, dinnerware, soil, and water. Often, when there is a water lead action level exceedance there is an assumption that elevated BLLs are due to the water.Over the last few years, we have been researching and reporting on the use of high precision isotopes to locate the source of lead in water and pipes.In our research we have now tested the blood of individuals and in each case, we were able to locate the source causing the elevated BLL. In this presentation we will explain the technique and how public health officials, researchers and utilities could use it	06/10/25	8:30 AM	9:00 AM	David	Cornwell
TUE022	Water	TUE022 - Strategy and Action Items to Bring a Municipal Bond Transaction to Market	This session builds off the ACE24 session with updates on how current and evolving federal, municipal, and commercial funding tools present singular and combined opportunities for utilities to finance and underwrite their infrastructure needs as funding from various Biden Administration and Congressional funding vehicles wrap up. This session could also include, as appropriate at the time of ACE25, any related proposals or actions taken by the Trump Administration and/or the 119th Congress.	06/10/25	8:30 AM	10:00 AM	Melissa	Labuda
TUE023	Water	TUE023 - Engaging the Community for Conservation	Water conservation programs are unique within a utility because they frequently serve as the public face to the community. This session will provide examples of how three utilities engaged with their communities to raise awareness and advance sustainable solutions that benefit customers and the community at large.	06/10/25	8:30 AM	10:00 AM	Steve	Snyder
TUE023-01	Water	I Water That Way - How a Parody of a Backstreet Boys Video Gave Denver Water a Global Platform to Promote Water Conservation	This is a moderated Q&A session with Denver Water employees who become known as "The Splashstreet Boys." This five-person group created a parody of the Backstreet Boys iconic video: "I Want it That Way." The video "I Water That Way" was meant to draw attention to the utility's rules for efficient outdoor irrigation. The video went viral, generating traditional and social media coverage across the United States as well as places as far away as Australia. The band members will provide insight into how the idea for the video came about, what went into making it (surprisingly little actually) and how the group and Denver Water handled being in the worldwide spotlight and further leveraged the important message of water conservation.	06/10/25	8:30 AM	9:00 AM	Steve	Snyder

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TUE034	Water	TUE034 - Disinfection Byproduct Challenges	This session focuses on innovative approaches and technologies for managing disinfection by-products (DBPs) in drinking water systems, with an emphasis on compliance, predictive modeling, and advanced treatment methods.	06/10/25	8:30 AM	10:00 AM	Christine	Owen
TUE034-01	Water	Violations of Disinfection By-Product Regulations across New York: a 10-year Assessment of Community Water Systems	This presentation is a unique analysis of regulated disinfection by-product (DBP) exceedances in New York State's community water systems (CWSs). Federal regulations require maximum contaminant level (MCL) compliance based on a locational running annual average (LRAA), with individual exceedances in CWSs frequently neglected. To create a more comprehensive understanding of how well CWSs are faring in keeping DBPs low in their systems, we instead investigate individual quarterly results of the total trihalomethanes (TTHM) and 5 haloacetic acids (HAA5) for all CWSs in New York State for the last 10 years.	06/10/25	8:30 AM	9:00 AM	Rassil	Sayess
TUE036	Water	TUE036 - Fresh Approaches to Water Rate Development and Affordability	Successful and innovative strategies for developing and communicating rate structures, affordability programs, and the value of water. The presenters will focus on different tactics, data analysis, and engagement approaches that have or can be used to achieve equitable and sustainable rate structures and funding for key programs in the face of affordability constraints or other real or perceived barriers.	06/10/25	8:30 AM	11:30 AM	Glenn	Marzluf
TUE036-01	Water	Engaging Diverse Voices: Shaping Rate Structures with Community Advisory Panels	Hillsboro recently established a 12-member Community Advisory Panel (CAP) to provide feedback on its water rate structure. The CAP was carefully recruited to represent Hillsboro's diverse community and ensure that single family residential and multi-family residential customers were included. The recruitment process resulted in a panel with members from various backgrounds, age ranges, races and ethnicities, and geographic areas across the service area. The committee met monthly from January to June 2024, offering recommendations based on their lived experiences and individual expertise. CAP recommended holding the fixed charge and creating a new low water usage tier for residential and revising peaking charges for multi-family.	06/10/25	8:30 AM	9:00 AM	Tacy	Steele
TUE038	Water	TUE038 - Catalyzing Careers in Water Through Learning and Training	How technical training turns YPs into active members in the water workforce and how that model can be implemented throughout the water sector.	06/10/25	8:30 AM	10:00 AM	Stephanie	Estabrook

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TUE038-01	Water	Empowering Change: Fully Funded Fellowships Available for Community & Climate Resilience	Connecting with and educating our communities can sometimes feel isolating, but establishing strategic partnerships offers a powerful solution. This approach can achieve sustainability and water conservation goals with minimal added costs. In this presentation, we will explore how over the past two years, the Long Beach Utilities Department has partnered with the California Climate Action Corps (CCAC) to enhance its outreach and impact.	06/10/25	8:30 AM	9:00 AM	Dani	Lima
TUE003-02	Water	Ammonia in Groundwater - to Chlorinate or not to Chlorinate? That is the Question! Technology Overview, Pilot Testing, and Design	Ammonia in groundwater is always a concern for operators, as it can interfere with vital oxidation and disinfection processes. Additionally, ammonia in distribution systems can lead to nitrification events. The Schomberg WTP is a 1.4 MGD (5.4 ML/d) groundwater treatment facility supplied by a raw water source that contains elevated iron, manganese, methane, organics, and ammonia. In this study, available technologies for ammonia removal were evaluated. The best available technology was determined to be biological filtration, so a 1-year pilot study was conducted to optimize system design and understand its limitations. Pilot study results were used to guide an innovative conceptual design of the facility and will also be presented .	06/10/25	9:00 AM	9:30 AM	Ahmed	Elhadidy
TUE005-02	Water	Finding Green Energy Within a Drinking Water Utility: A California Case Study	Water utilities can spend up to 35% of their total operational budget on energy, posing a strong reason to examine ways to reduce energy costs. While efficiency may be the first place to look, there are opportunities to generate energy from moving water. The challenge then becomes identifying hydropower projects that can be integrated into a utility's system without creating significant additional resource burdens. Utilities need to identify and evaluate energy generation projects for maximum benefits, and then effectively communicate findings to leadership and customers. Using a case study from a Northern California water utility, this presentation provides valuable lessons learned for any utility hoping to generate its own hydropower.	06/10/25	9:00 AM	9:30 AM	Elysha	Irish
TUE009-02	Water	Grand Rapids, MN Legionnaires' Disease Outbreak – Extinguishing the Largest Outbreak in the U.S. in 2024	Introducing the Grand Rapids, MN Legionnaires' Disease outbreak and the 2-pronged approach for monitoring and disinfection that extinguishing the largest outbreak in the U.S. in 2024	06/10/25	9:00 AM	9:30 AM	Julie	Kennedy
TUE010-02	Water	Elements of a Successful Fast-Tracked Filter Rehabilitation	When the decision was made to construct new filters at the K.R. Harrington WTP in Nashville, Metro Water Services required an interim solution to address performance issues associated with the existing filters. Filter upgrades were implemented with speed and precision, minimizing impacts to plant operations. This presentation will discuss the analyses that led to the selected filter improvements and the work sequence that allowed them to be constructed without compromising MWS's ability to produce water, ultimately completing construction 6 months ahead of schedule. The presentation will cover lessons learned through construction and startup and highlight improvements leading to 50% increased run times and 25% increased loading rate.	06/10/25	9:00 AM	9:30 AM	John	Zwerneman

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TUE011-02	Water	Pilot-Scale Investigation of PFAS Treatment Feasibility in GAC-Capped Drinking Water Filters	GAC caps are an economical, easy-to-install option to provide GAC adsorption capability in an existing granular media filter without the need for the construction of new structures. GAC cap as an adsorption treatment technique has certain limitations, including the use of larger mesh-size GAC and regular filter backwashes, that are less desirable for PFAS adsorption. In this pilot study, we investigated the feasibility of GAC-capped filters for particle filtration and PFAS adsorption at a surface water treatment facility in Colorado's Front Range. Results of the pilot indicate better filtration performance by GAC-capped filters than sand-anthracite filters and the potential of GAC caps as an interim measure for PFAS treatment.	06/10/25	9:00 AM	9:30 AM	Rosa	Yu
TUE013-02	Water	The Evolution of Digital Water Strategic Planning: Moving Beyond Traditional SCADA Master Plans	Water SCADA master plan development has evolved significantly in recent years. Modern planning now extends beyond basic utility asset management, integrating comprehensive digital strategies to foster innovation and efficiency. This presentation explores cutting-edge approaches and benefits of digital water strategic planning, showcasing how plans have adapted to encompass all digital aspects of a utility. Our case study of Castle Rock, Colorado, demonstrates the importance of maintaining a dynamic, adaptive SCADA master plan to keep pace with rapidly evolving technological needs in the water sector. We will examine how utilities can leverage these advanced planning methodologies to optimize operations and prepare for future challenges.	06/10/25	9:00 AM	9:30 AM	Dan	Parr
TUE015-02	Water	Met the Lead Service Line Inventory Submittal Deadline; What is Next? A Perspective From Small Utilities.	Eliminating lead service lines (LSLs) is a huge concern for many small and rural utilities. The urgency propagated by the LCRR and LCRI rules, and the funding opportunities offered by the government provided an opportunity to develop an inventory and a plan to verify and replace all LSLs from their systems in a cost-effective way within a reasonable timeline. This presentation summarizes the work done by four such utilities. The commonality of the tasks done to meet EPA's requirements helped our team to develop replicative action list that can be used by other similar utilities irrespective of their geographic locations. This presentation will describe the case studies.	06/10/25	9:00 AM	9:30 AM	Aziz	Ahmed
TUE019-02	Water	Improved Orthophosphate Lead Corrosion Control informed by Advanced Diagnostics	The EPA implemented the Lead and Copper Rule Revisions (LCRR) to mitigate lead exposure through drinking water due to its grave public health effects. Water utilities using pH and alkalinity adjustment for corrosion control treatments (CCT) will have difficulty meeting the LCRR requirements. Orthophosphate treatment at a circumneutral pH is effective at minimizing lead solubility and a lower pH result in less carcinogenic trihalomethane formation. However, transitioning from pH adjustment CCT to an optimized orthophosphate treatment at a circumneutral pH has not been previously attempted. We use correlative diffraction imaging techniques to improve our understanding of the mechanisms controlling lead release during this CCT transition.	06/10/25	9:00 AM	9:30 AM	Claire	Boronski
TUE023-02	Water	Building Community Water Resilience: How Water Efficiency Programs Revitalize Communities	Flood irrigation of residential yards in the Arizona desert can be a shocking sight for those unfamiliar with the ancient origins of Phoenix's gravity-fed canal system. However, for some Salt River Project (SRP) customers with historic water rights, this affordable irrigation method can be critical. In 2024, SRP launched a pilot initiative to support a community struggling with an aging irrigation system; however, funding construction is only one of many steps in SRP's approach to building a long-term relationship with these customers. The Community Irrigation Revitalization Initiative presents a valuable case study to explore how utilities can and should leverage partnerships to increase both water efficiency and community engagement.	06/10/25	9:00 AM	9:30 AM	Caitlin	Brogan

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TUE034-02	Water	Predicting DBP Formation With Machine Learning and Kinetics-Derived Models to Inform Compliance and Operations Decisions	The New York City Department of Environmental Protection is integrating disinfection byproduct modeling into their Operations Support Tool to plan for impacts of climate change and new regulations. The applicability of two types of DBP models – laboratory kinetics-derived models and machine learning models – was evaluated using 20 years of historical water quality and operations data. Both models were found to be accurate, and the pro's and con's of each approach will be discussed along with best practices for developing and implementing DBP prediction models for decision support.	06/10/25	9:00 AM	9:30 AM	Eric	Peterson
TUE035-02	Water	How Proactive Equity Planning Led to Successful Funding for Salt Lake City's Lead Service Line Replacement Program	This presentation will provide insight into Salt Lake City's proactive equity planning efforts and the financial capability assessment that shaped their lead service line replacement plan and supported their first ever successful SRF funding package of over $39M for their Lead Service Line Replacement Program. Additionally, this presentation will discuss the programmatic approach the City is taking to utilize these SRF funds on a variety of planning and construction activities and will outline the prioritization efforts being employed to equitably conduct this City-wide program with a dedicated focus on historically underserved neighborhoods.	06/10/25	9:00 AM	9:30 AM	Meredith	Sullivan
TUE036-02	Water	Utilizing Rate Structure Changes to Reduce Peak Demand and Delay Capital Expansion	The Del-Co Water Company operates in the Columbus region, and serves a high growth suburban area which is affluent and many homes have sprinkler systems and water lawns heavily. In the Midwest, most large utilities are experiencing per capita water use decline and have excess capacity, and Del-Co is trying to reduce outdoor water use. To avoid or delay expensive source and treatment infrastructure expansion, Del-Co has worked with Stantec to perform a cost-of-service study and to develop a new rate structure to send outdoor water use price signals. Marketing and launching the new rate structure will be a challenge as Midwesterners are not highly engaged in their water use. Can it be effective and delay the expansion projects?	06/10/25	9:00 AM	9:30 AM	Glenn	Marzluf
TUE038-02	Water	From the University Lab to Consulting: How Research Experience Can Be Applied to Your Professional Career	Recent EPA legislation will require water utilities to complete more bench- and pilot-scale testing, where engineers with research experience can apply knowledge and principles from graduate school to aid in aspects of testing, such as experimental design and data analysis. This presentation will discuss new and emerging legislation, including the new NPDWRs, and the likely increase in experimental water research to follow. Graduate school research experience will be valuable in experimental design and depth of analysis for bench- and pilot-scale work.	06/10/25	9:00 AM	9:30 AM	Samuel	Brodfuehrer
TUE003-03	Water	Monochloramine Stability and Nitrification Control in Italian Public Water Supplies Using a Novel Monochloramine Generator	The aim of this presentation is to provide attendees with information about secondary disinfection with monochloramine from two Italian public water supplies. The presentation will focus on how the correct and fine dosage of the monochloramine precursors will result in an optimal Cl to N ratio with no unreacted free ammonia and consequent limitation of the formation of nitrite and nitrate with no need of chlorine burnouts over the course of 18 months for case study #1 and five years for case study #2. Speakers from both the public water supplies and the monochloramine generator engineering design team will join the presentation to provide multi-disciplinary insights on how the results were achieved in the field.	06/10/25	9:30 AM	10:00 AM	Alberto	Comazzi

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
TUE005-03	Water	Goal: Build the Most Sustainable Water Treatment Plant in the World	The Omohundro WTP has faithfully served Nashville and Davidson County for over a hundred years. Now, Nashville's Metro Water Services (MWS) is rebuilding Omohundro for the next 100 years. In line with this long-term vision, MWS has made a bold commitment to sustainability. The facility-wide upgrade project is pursuing both Envision and LEED Platinum certifications. If successful, Omohundro would be the first water or wastewater treatment plant in the world with both certifications. To achieve these goals, the project team is leaving no stone unturned. The project will include solar power installations, low-carbon materials, diverting almost all construction waste from landfill, and rehabilitating the site into a nature preserve.	06/10/25	9:30 AM	10:00 AM	Justin	Bowling
TUE009-03	Water	Utility Operations Monitoring for Legionella and Beyond	Will describe how utility monitoring for Legionella and beyond was implemented within a month and provided actionable results to assist community members to address concerns in their buildings.	06/10/25	9:30 AM	10:00 AM	Christian	Mathews
TUE010-03	Water	Ensuring Filter Health: Best Practices for Assessment and Maintenance	Discussion focused on when and why filter assessments should be performed, as well as what to look for during an assessment to ensure good filter health and operational efficiency. This presentation will include examples of data gathered during various filter assessments, interpretation of data and the conclusions that were drawn, as well as microscopic photographs of several filter media samples to act as a visual aid showcasing media that has been compromised by brittleness or coated in inorganic materials such as calcium carbonate or ferric chloride.	06/10/25	9:30 AM	10:00 AM	Bradley	Suedbeck
TUE011-03	Water	The Art of PFAS-Destruction in Reuse: Not a One-Size-Fits-All Approach	PFAS destruction in reverse osmosis concentrate remains a critical hurdle in the adoption of membrane based PFAS treatment strategies in potable reuse applications. Hazen led a 2-month continuous pilot program investigating the electrochemical oxidation of PFAS impacted membrane concentrate on brackish groundwater in Alamogordo, NM.	06/10/25	9:30 AM	10:00 AM	Conner	Murray
TUE013-03	Water	SCADA Solutions for an Imperfect World - Modernization of Existing DCS Control System	The historic Omohundro Water Treatment Plant in Nashville, TN is undergoing a major facility transformation. The existing plant SCADA is obsolete and unable to support the process changes underway. To mitigate long-term operational and maintenance risk, it is critical to replace the aging distributed control system (DCS). Due to the need for continuous operation, a thoughtful approach to replacing the DCS in existing facilities is required. The implementation of this upgrade will provide operations and management with additional data that can be leveraged for enhanced process oversight and optimization. This presentation will discuss the strategic replacement of plant control systems and its impact on operational success.	06/10/25	9:30 AM	10:00 AM	Catherine	Shipman

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
TUE015-03	Water	Risk-Informed Strategies for Small Water Systems: Utilizing Existing Data for Proactive Pipeline Management	Quantitative risk assessment has become a fundamental tool in effective asset management for water systems. However, deploying a comprehensive risk assessment can be daunting for small utilities, which often face challenges due to limited data, resources, and technical capacity. The City of Lacombe undertook a comprehensive risk assessment initiative aimed at developing a long-term asset management plan. With limited existing data, the City implemented innovative methodologies to gather and analyze information regarding asset conditions, operational history, and failure rates. This systematic approach provided a way to quantify risks associated with water mains, enabling the utility to make data-driven decisions.	06/10/25	9:30 AM	10:00 AM	Greta	Vladeanu
TUE019-03	Water	Service Line Material Identification Without Excavation: Insights from DC Water's Pilot Study	Utilities face significant challenges in maintaining and updating their Service Line Inventory due to typical split ownership and limited historical data. Traditional methods of identifying service line materials often require invasive excavation, leading to high costs and homeowner disruptions. Utilities need a more efficient way to ascertain service line materials without the drawbacks associated with digging. DC Water's pilot study explores innovative, non-invasive technologies at over 40 properties to identify lead and copper service lines without the need for excavation. Attendees will leave with a comprehensive understanding of these emerging technologies and their potential applications in the water industry.	06/10/25	9:30 AM	10:00 AM	Javier	Locsin
TUE023-03	Water	Building Sustainable Communities Through Green Infrastructure	Sustainable Tucson’s Charitable and Faith-based Sustainability (CFS) Committee addresses the issue of sustainability and water conservation through an educational outreach program targeting a frequently overlooked audience in terms of sustainability- places of worship and charitable non-profits. Entering our third year, this presentation will highlight a food garden project that took place in 2022 on the property of a local Tucson refugee church, Kidane Mehret Eritrean Orthodox Tewahedo Church. The project yielded gardening knowledge, financial literacy, STEM and global awareness to climate issues for a select number of youths and adults in the community and was the recipient of a national award through Interfaith Power and Light.	06/10/25	9:30 AM	10:00 AM	Danielle	Corbett
TUE034-03	Water	Use of BAC for Treating HAA5 Levels in the Distribution System	Charles County is planning a new interconnecting pipeline with a neighboring utility to purchase up to 5 mgd of potable water to address increasing water demand. Water quality analysis showed that DBP concentrations are near regulatory limits at the interconnection and the County will need to reduce DBP levels. Therefore, the County is planning to include a treatment facility in the interconnecting pipeline to reduce its HAA5 and TTHM concentrations. This presentation highlights 6-months of pilot testing of biologically active carbon (BAC) to remove HAA5 and identifying ideal operating conditions of BAC.	06/10/25	9:30 AM	10:00 AM	Meric	Selbes
TUE035-04	Water	From Concept to Completion: The Great Lakes Water Authority (2014-2024)	Ten years ago, the Great Lakes Water Authority was merely a concept discussed in the City of Detroit’s bankruptcy. Ten years later, the concept has become reality and GLWA has become Michigan’s largest water provider successfully serving almost 4 million people (approximately 40% of Michigan’s population. This presentation tells the story of GLWA’s stand up from concept to completion	06/10/25	9:30 AM	10:00 AM	Bill	Wolfson

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TUE036-03	Water	Architecting a Water Rate Increase Through Industry Advocation	Water utilities provide a life sustaining service to their customers. Historically, utilities have provided this critical service while being drastically underfunded. Stricter regulations, aging infrastructure, and an increasingly competitive job market have put further financial pressures on water utilities. This presentation will examine the approach one utility took to stabilize its finances with a series of significant rate increases. The approach involved advocating for both the utility and the industry over a half decade to achieve the desired result. An increase in public trust and transparency were some of the resulting positive side effects of the process.	06/10/25	9:30 AM	10:00 AM	Todd	LaFountain
TUE038-03	Water	From Training Room to Career: Hopeworks and American Water's Path to Success	Since 2015, Hopeworks and New Jersey American Water have partnered through an innovative and collaborative workforce program. New Jersey American Water has also referred Hopeworks to American Water for a services agreement with the company to enable additional partnerships with other American Water regulated state companies. The program directly engaged, trained, and employed 100+ Hopeworks young adults on Geographic Information System (GIS) projects. Young adults that graduate from the Hopeworks program earn permanent careers with an average salary of $43,000 and a 12 month retention rate that is over 89%. As a direct result of the American Water partnership, several graduates have been hired at American Water	06/10/25	9:30 AM	10:00 AM	Paishants	Depalma
TUE009-04	Water	Implementing Disinfection in an Undisinfected Water Supply During a Legionnaires' Disease Outbreak	Will discuss how GRPU implemented disinfection as an undisinfected water supply during a Legionnaires' Disease outbreak, addressing concerns including disinfection persistence, biofilm disruption, DBPs, corrosion and more.	06/10/25	10:00 AM	10:30 AM	Alex	Mofidi
TUE015-04	Water	Resolution of Low-Pressures Through Water System Modeling for a Small Iowa Utility	Carroll, Iowa used water system modeling to leverage existing data to identify the causes of low system pressures and revised the model for design of the booster pump station and new pressure zone.	06/10/25	10:00 AM	10:30 AM	Caleb	White
TUE036-04	Water	How to Deliver Safe, Affordable Drinking Water - Lead Service Line Replacement & Income-based Water Affordability	Detroit has been the epicenter for safe, affordable drinking water. You will hear about how the Detroit Water & Sewerage Department pivoted and began collaborating with activists. Detroit has launched the city's first income-based water affordability program, the Lifeline Plan, that is serving 25,000 households while utilizing innovative gap payment mechanism to provide a low, fixed monthly bill without changing the rate structure. Further, to ensure vulnerable households have the safest, cleanest water, we are replacing lead service lines at a rapid pace. We will share how Detroit has been able to do this effort without increasing rates.	06/10/25	10:00 AM	10:30 AM	Bryan	Peckinpaugh

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TUE043	Water	TUE043 - Understanding DBPs from Chemistry to Control	The Microbial and Disinfection Byproducts Rules revisions expected in 2025 may significantly impact utilities that are already struggling with DBPs, chlorine residual or nitrification in chloraminated systems. This session will cover the chemistry behind the formation of currently unregulated species and how to evaluate & implement full-scale solutions tailored for DBP compliance.	06/10/25	10:00 AM	11:30 AM	Jihyon	Im
TUE043-01	Water	Assessing Disinfection Byproduct Formation from Reactive Intermediates Formed During Chloramine Decomposition	Recent work showed reactive nitrogen species (RNS) from chloramine decomposition were intermediates in N-nitrosodimethylamine formation. This talk will focus on RNS-mediated disinfection byproduct formation pathways in chloramine systems.	06/10/25	10:00 AM	10:30 AM	Julian	Fairey
TUE045	Water	TUE045 - Conversations around Sustainable Infrastructure Concepts	This session will focus on concepts of sustainability and resilience in the water sector and examine strategies for implementation. The US Department of Energy tasked Oak Ridge National Lab with assessing the potential for adding conduit hydropower across the US, and this session will offer insights into conduit hydropower opportunities and challenges for public water systems. City of Ashland developed a solution to maintain a reliable water supply that aligns with the broader goals of fiscal responsibility and environmental stewardship with their new Lake Superior water supply intake.	06/10/25	10:00 AM	11:30 AM	Brian	Kise
TUE045-01	Water	Beyond Buzzwords: Making Sustainable and Resilient Water Infrastructure Commonsense and Commonplace	This presentation will refocus on the definitions, concepts, and current functions of sustainability and resilience in the water sector and examine strategies to institutionalize them for infrastructure implementation.	06/10/25	10:00 AM	11:30 AM	Adam	Eaton
TUE050-01	Water	Renovation of an Aging WTP in Kennewick WA: Utility Owners Approach to Doing it Right	The City of Kennewick has been operating the Columbia WTP for decades, with its last major renovation in 2004 when it was converted to membrane filtration. Over time, equipment has become worn, concrete has cracked, and coatings have flaked off. This presentation talks about what needs to be planned and implemented to make older plants keep working, especially ones as complicated as membrane facilities.	06/10/25	10:00 AM	10:30 AM	Nathan	Kutil

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TUE051	Water	TUE051 - Developing Guidance for PFAS Treatment Pilot Testing for Permit Applications	A PFAS Piloting Guidance Manual for Permitting is being developed as part of a WITAF project for the AWWA. The intent of this guidance manual is to reduce uncertainty that is currently driving some primacy agencies to default to the most conservative approaches, particularly in consideration of the tight compliance schedule and health impacts from delayed PFAS treatment solution implementation. This document will facilitate sensible approaches that will reduce unnecessary monetary and time investments. This presentation will provide an overview of the contents of the PFAS Piloting Guidance Manual to arm the industry with permitting best practices that will reduce risk while protecting our water supplies for years to come.	06/10/25	10:00 AM	11:30 AM	Amanda	Canida
TUE051-01	Water	Developing Guidance for PFAS Treatment Pilot Testing for Permit Applications	A PFAS Piloting Guidance Manual for Permitting is being developed as part of a WITAF project for the AWWA. The intent of this guidance manual is to reduce uncertainty that is currently driving some primacy agencies to default to the most conservative approaches, particularly in consideration of the tight compliance schedule and health impacts from delayed PFAS treatment solution implementation. This document will facilitate sensible approaches that will reduce unnecessary monetary and time investments. This presentation will provide an overview of the contents of the PFAS Piloting Guidance Manual to arm the industry with permitting best practices that will reduce risk while protecting our water supplies for years to come.	06/10/25	10:00 AM	11:30 AM	Amanda	Canida
TUE053	Water	TUE053 - Data Driven Compliance: Meeting Regulations with Strategic Data Management	This session will focus on the critical role of data management in helping water utilities meet regulatory requirements such as water quality standards and lead and copper rules. Attendees will gain an understanding of how to plan for, implement, and use data management solutions to streamline compliance processes using various data sources – from SCADA to GIS to asset management. Presenters will share via case studies how to best use data management systems to enhance decision-making in the face of evolving regulatory landscapes. Attendees are encouraged to participate in a panel discussion following the presentations.	06/10/25	10:00 AM	11:30 AM	Adam	Butler
TUE053-01	Water	Building Digital Maturity: Data Management Planning and Implementation Methodologies and Use Cases – Why, What, When, and How	Organizations are facing challenges with integrating large volumes of data from various sources. There is a growing need to understand what data is available, where data sits, how data is accessed (safely and securely), who has stewardship of the data, who needs access to the data, and how much return on investment can come from data management. The objective is to review what two different utilities (Clean Water Services, Oregon and Cape Fear Public Utility Authority, North Carolina) on either end of the country are doing to solve and answer these questions.	06/10/25	10:00 AM	10:30 AM	Klint	Fletcher
TUE062	Water	TUE062 - Funding Strategies for Capital Programs	A panel presentation covering funding strategies for capital programs and that touch on rate structures, finance (Green Bonds), multi-year planning and rate forecasting, capital program prioritization, and even Customer Assistance programs.	06/10/25	10:00 AM	11:30 AM	Matthew	Brown

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TUE067	Water	TUE067 - Regulatory Perspectives Focusing On Water Quality & Water (Re)Use in the Rocky Mountain Region	This session kicks-off with a review of the collaborative effort between Denver Water, Colorado Department of Public Health and Environment (CDPHE) and the US Environmental Protection Agency (USEPA) to consider an alternative treatment approach to achieve compliance with Lead and Copper Rule. Additionally, this session will provide perspectives from two Colorado system's approach to fully utilize diverse water resources and provide addition potable water to their communities, now and into the future.	06/10/25	10:00 AM	11:30 AM	Bud	Spillman
TUE067-01	Water	Leveraging Collaboration – Denver Water and the Lead Reduction Program	This presentation will highlight the highly collaborative nature of Denver Water's Lead Reduction Program (LRP). Along with achieving key metrics, as set by the variance approved by the USEPA in 2020, the LRP's diverse and interdisciplinary program team (including Denver Water, Mott MacDonald, AECOM, and other key partners) has worked closely to reduce lead exposure from lead service lines in the community it serves. Timely communication, diverse perspectives, and sincere community engagement has been the basis of the success the LRP has achieved in the past four years.	06/10/25	10:00 AM	10:30 AM	Alexis	Woodrow
TUE070	Water	TUE070 - Financing Options for Resilient Watersheds and Water Infrastructure	The session showcases funding strategies and resilience upgrades to enhance a watershed or water system's ability to withstand, recover from, and adapt to natural and man-made hazards, including wildfire, wind, flood, drought, earthquake, and cyberattack. This session will cover recent case studies and share lessons learned on the many questions that arise in the aftermath of a disaster.	06/10/25	10:00 AM	11:30 AM	Valdis	Krumins
TUE070-01	Water	Improving Water Infrastructure Resilience with USDA Water and Environmental Programs Funding	We will describe the U.S. Department of Agriculture Water and Environmental Programs (WEP) funding available for infrastructure projects, including resilience upgrades. This presentation will discuss the WEP funding for infrastructure improvements, evaluation of different resilience improvements, and additional funding that may be available.	06/10/25	10:00 AM	10:30 AM	Valdis	Krumins
TUE074	Water	TUE074 - Chlorine Dioxide in Drinking Water - Benefits, Considerations, and Utility Experiences	This session discusses the benefits and considerations for chlorine dioxide use in drinking water, with case studies from utilities using chlorine dioxide to meet different treatment and distribution system water quality management goals. This session will help utilities evaluate the potential application of chlorine dioxide in their systems.	06/10/25	10:00 AM	11:30 AM	Ashley	Pifer

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TUE074-01	Water	When, Where, and Why to Use Chlorine Dioxide	This presentation introduces chlorine dioxide chemistry and its uses for drinking water treatment, primary disinfection, and control of opportunistic pathogens in premise plumbing.	06/10/25	10:00 AM	10:30 AM	Helene	Baribeau
TUE075	Water	TUE075 - Building a Culture of Communication: Strategies for Transparency and Engagement	Effective communication is the foundation of trust and success in addressing critical water management issues, from lead service line replacements to water reuse projects and major capital investments. This presentation explores strategies to foster a culture of communication within your organization, emphasizing transparency, accountability, and employee engagement. Learn how defining roles and responsibilities can enhance internal collaboration and ensure consistent messaging to stakeholders.	06/10/25	10:00 AM	11:30 AM	Shonnie	Cline
TUE075-01	Water	Building Trust from Within: Aurora Water's Journey to Transparent Communication and Community Confidence	Providing drinking water, wastewater collection, and stormwater management for the third largest city in Colorado, Aurora Water is engaged in numerous initiatives that are drawing public attention. These include the potential construction of a large mountain reservoir, innovative water purchases, social challenges that made national headlines, and the planned implementation of direct potable reuse. This abstract explores the critical importance of fostering strong internal communication and promoting honest conversations within and outside of water utility organizations.	06/10/25	10:00 AM	10:30 AM	Shonnie	Cline
TUE009-05	Water	The Big Picture Context for Legionella Management in US Water Systems	Will share big picture context for Legionella management, aimed at the need for utility managers, state and federal regulators, building owners, service providers and more to address pressing concerns - particularly undisinfected groundwater systems.	06/10/25	10:30 AM	11:00 AM	Chad	Seidel
TUE015-05	Water	Less Can Be More: Practical Approaches for Selecting the Right Hydraulic Model	Smaller water systems inherently face many of the same issues and challenges as larger, more complex systems and are forced to address them with a smaller capital budget. A steady-state hydraulic model and master plan can help these utilities get the answers they need while maximizing their return on investment.	06/10/25	10:30 AM	11:00 AM	Dave	Christiansen

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TUE036-05	Water	Water Affordability: A State-Wide Analysis of the Cost of Utilities and Private Wells	Within the United States, residents commonly access water through either centralized utilities or private wells. Rising costs of water treatment, including an estimated $1 trillion for infrastructure improvements, have led to rising water bills, thus threatening the ability for utility customers to afford water. Similarly, the high cost of private well drilling threatens the affordability of water for the ~15% of US residents who rely upon private wells. To the best of our knowledge, this study represents the first attempt to analyze water affordability for all residents of a state-wide study area, both centralized utility customers and private well users.	06/10/25	10:30 AM	11:00 AM	Rebecca	Etter
TUE043-02	Water	Next Generation Jar Tests for Streamlined DBP Precursor Control: An Optimization Case Study	This study at the City of Warren Water Filtration Plant (22MGD) addresses disinfection by-product formation by optimizing key parameters of the coagulation process through a novel jar testing approach coupled with granular media filtration.	06/10/25	10:30 AM	11:00 AM	Dane	Elliott
TUE045-02	Water	Conduit Hydropower: Tapping Energy from Existing Water Infrastructure	Public water supply (PWS) systems provide a critical service to municipal and industrial users. These systems move a tremendous volume of water, supplying nearly 40 billion gallons per day in the US. To maintain safe water pressures, PWS conduits require the use of pressure reducing valves. These devices can be replaced with hydropower turbines to capture renewable energy generation where the energy is otherwise dissipated. This presentation will offer insight into conduit hydropower opportunities and challenges, supported by research led by Oak Ridge National Laboratory and funded by the US Department of Energy.	06/10/25	10:30 AM	11:00 AM	Scott	DeNeale
TUE050-02	Water	Who's OMAR? An Innovative Approach to Implementing At-Risk Contract Operations in a Collaborative Manner!	Soquel Creek Water District leveraged “Operations and Maintenance At-Risk” (OMAR), an innovative contracting mechanism, for engaging third-party operations contractor to run their newly built reuse facilities. This presentation will cover the procurement approach, operator input during the design, collaboration during the startup and commissioning phase and performance guarantees during long-term operations using the OMAR approach.	06/10/25	10:30 AM	11:00 AM	Anup	Shah
TUE053-02	Water	All Hands on Deck: Utilizing Data Management Software to Track Verification of over 140K Unknown Service Lines	The LCRR requires water systems to submit an inventory of service line materials to their regulators by 10/16/24. The inventory can contain unknown service lines, but there are a variety of disincentives to having unknowns including notifying customers that their service line is unknown but may be lead. Reducing unknowns is a high priority for water systems in the future. After its records review, El Paso Water (El Paso, TX) had over 140,000 unknowns. This presentation will discuss how EPWater used a meter replacement program along with in-house staffing strategies and other methods to quickly and economically verify its unknowns. Details of how a software program was used to manage this data-intense process will also be discussed.	06/10/25	10:30 AM	11:00 AM	Ruben	Rodriguez

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TUE059-02	Water	The Past, Present, and Future of Corrosion Control: From Langelier to Phosphates and Beyond	Corrosion control in drinking water treatment was originally focused on protection of all pipes via formation of a calcium carbonate barrier film as embodied in Langelier Saturation Index theory. To meet the narrow goals of lead and copper corrosion by-product release in the 1991 LCR, this approach was largely abandoned in favor of forming protective films on lead and copper surfaces at favorable pHs, alkalinities, and phosphate concentrations. In light of the LCRI, with a path to complete lead pipe replacement at many utilities, we could once again seek more holistic solutions for improved sustainability and infrastructure protection. We present this history and new experimental results in anticipation of a post-lead pipe era.	06/10/25	10:30 AM	11:00 AM	Frank	Mazzola
TUE067-02	Water	Castle Rock Water: Shaping the Future of Potable Reuse	In 2006, Castle Rock Water (CRW) set of goal of having 75% of their water from renewable sources by 2050, identifying direct potable reuse (DPR) as a potential method to achieve their renewable goals. As CRW looked into DPR, there were no regulations set in the state of Colorado. This presentation will highlight CRW's coordination with the Colorado Department of Health and Environment (CDPHE) and their journey to completing their new Advanced Treatment Facility.	06/10/25	10:30 AM	11:00 AM	Haley	Morton
TUE070-02	Water	Elevating Colorado Water Utility Investments in Watershed Health and Wildfire Resiliency with Innovative Financing	Colorado water providers are beginning to invest in sustainable watershed health and wildfire management strategies, such as habitat restoration and prescribed fire. To support elevated investment in these nature-based solutions, WaterNow Alliance, One Water Econ, and The Water Center at Penn developed the Colorado Wildfire Resilience Financing Dashboard—a tool for water providers that evaluates the feasibility of financing watershed health practices and helps make a compelling business case for these investments. This presentation will be an interactive, real-time demonstration of the decision tool. Presenters will solicit audience participation to highlight the tool’s practical applications and user-friendly interface.	06/10/25	10:30 AM	11:00 AM	Caroline	Koch
TUE074-02	Water	Generating Chlorine Dioxide	Water utilities generate chlorine dioxide on-site using a variety of techniques. This segment discusses chlorine-chlorite, hypochlorite-acid-chlorite, acid-chlorite, and chlorate-based methods and their applicability.	06/10/25	10:30 AM	10:40 AM	Zhengkai (Za	Li
TUE075-02	Water	Mastering the Maze: Streamlining Communication in the LCRR Labyrinth	The Lead and Copper Rule Revisions (LCRR) have brought forth not only intricate technical requirements but also heightened community involvement. Navigating this landscape involves effectively communicating with customers, ensuring water quality, coordinating with internal leadership, and engaging with media and elected officials. This presentation unveils strategies to streamline communications, to support proactive and transparent messaging for LCRR programs.	06/10/25	10:30 AM	11:00 AM	Kristi	Ross

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TUE074-04	Water	Chlorine Dioxide for Manganese Oxidation	This presentation discusses chlorine dioxide use at 8- and 12-MGD surface water treatment plants, including selection and optimization of dosing, and considerations for manganese oxidation ahead of membranes.	06/10/25	10:50 AM	11:00 AM	Matt	McDougald
TUE015-06	Water	Leveraging Hydraulic Modeling in Small Utilities	Hydraulic modeling transformed engineers' and operators' way of understanding their networks. While larger utilities often have the resources to build, calibrate and use hydraulic models, the same cannot always be said for smaller utilities. What seems like the status-quo is seen as advanced or unobtainable technologies for small utilities. However, smaller utilities stand to gain significant benefits from adopting hydraulic modeling. By simulating how water systems should function under various conditions, hydraulic models offer vital insights for system operators, managers, and engineers. This presentation highlights how Douglas County, KS, leveraged hydraulic modeling to improve customer satisfaction and operational efficiency.	06/10/25	11:00 AM	11:30 AM	David	Monteiro
TUE036-06	Water	Approaches for Demonstrating the Value of Water: Cape Fear Public Utility Authority, North Carolina	This presentation demonstrates methods and results from a study that quantified the value of clean and reliable water services provided by the Cape Fear Public Utility Authority in North Carolina. It goes beyond a traditional economic impact assessment of direct spending to also examine the value of water supply reliability for households and businesses in the region and the role of CFPUA in supporting economic development. Using CFPUA as a case study, the presentation will highlight approaches for assessing the value of water in different contexts. This study was completed in early 2024.	06/10/25	11:00 AM	11:30 AM	Janet	Clements
TUE043-03	Water	There Is No One-Size-Fits-All When It Comes to DBP Management - A Review of 4 Tailored Solutions	DBP formation is influenced by many factors, presenting a variety of mitigation opportunities. As each water system is unique, comprehensive system analysis is key to identify DBP reduction strategies, providing data-based tailored solutions.	06/10/25	11:00 AM	11:30 AM	Anne	Malenfant
TUE045-03	Water	A 'Superior' Intake a Century in the Making: Designing Ashland's New Lake Superior Water Supply for a Sustainable Future	This presentation will explore the technical and regulatory challenges of designing Ashland's new Lake Superior water supply intake, highlighting how thoughtful planning and design can address the needs of historically disinvested communities. By carefully sizing and locating the new infrastructure, the project ensures that Ashland can sustainably manage its water resources for the next 130 years. The lessons learned from Ashland's experience are applicable to water providers and engineers in similar contexts, where balancing long-term sustainability with fiscal responsibility is essential.	06/10/25	11:00 AM	11:30 AM	Catharine	Richardson

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TUE050-03	Water	Public Private Partnership	Many water utilities are considering advanced reuse projects. However, due to the staff resource and experience limitations, it may not be feasible or efficient to immediately operate the advanced reuse plant. Such challenges can be solved by partnering with a private contractor operator that brings lessons learned from their experience in operating other assets to bring best in class practices and training to advance demonstration or pilot systems. In the case of the LA Hyperion and VNA partnership, VNA is responsible for the staffing and production, O&M, SOPs, asset management, sampling, reporting programs, operators training and shadowing.	06/10/25	11:00 AM	11:30 AM	Josh	Rogers
TUE053-03	Water	Data as a Service for Drinking Water Quality Management	Located on the shores of Lake Erie, Cleveland is fortunate to have an abundant supply of fresh water. However, as the shallowest and most densely populated of the Great Lakes, Lake Erie is highly impacted by human activities resulting in a variety of water quality concerns. To address these challenges, Cleveland Water has partnered with Cleveland Water Alliance (CWA), a nonprofit water technology hub, to implement an innovative approach to data-driven drinking water management. The resulting Data as a Service (DaaS) model delivers critical insights and cuts costs for the utility while accelerating water technology innovations to the benefit of the region and the world.	06/10/25	11:00 AM	11:30 AM	Max	Herzog
TUE059-03	Water	Depress pH and Still Control Lead Corrosion? Charting a Path Through an Extensive Pipe Loop Study	Mohawk Valley Water Authority (MVWA) operates a poorly buffered water system characterized by low alkalinity and hardness. A pH of 9.5 needs to be maintained throughout the distribution system for corrosion control. A first phase pipe loop study was performed to demonstrate that orthophosphate addition at 3 mg/L was the OCCT for the MVWA water system. However, high pH also results in the formation of higher TTHMs in the treated water. A second phase pipe loop study was performed by depressing the pH to 8.2. This study illustrated that lead corrosion control, as well as release of iron and manganese from pipe scales can be managed at the lower pH, while simultaneously achieving 30% reduction in TTHM concentrations.	06/10/25	11:00 AM	11:30 AM	Amlan	Ghosh
TUE067-03	Water	Water System Resiliency Chiropractice - Aligning Water Resources, Water Infrastructure, & The El Paso County, CO Water Community	El Paso County, CO continues to experience rapid population growth but water providers in the county have limited water supplies. To continue to meet the municipal needs of the growing urban landscape, El Paso County water providers must maximize the efficient use and reuse of all legally and physically available water supplies. Two Proposed Projects would leverage existing and planned infrastructure to divert physically and legally available water from Fountain Creek (a Hard, High TDS, PFOS Impacted Surface Water), treat it, and get it back to water providers through the county. To achieve these objectives, change management principals are being applied by regional leaders in order to create resiliency & lasting value across the County.	06/10/25	11:00 AM	11:30 AM	John	Kuosman
TUE070-03	Water	Rebuilding a Climate Resilient Lahaina after the Wildfires	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. Although rarely reported but essential for the recovery effort to begin is the repair of the damaged water system. The study evolved from a curious question on the viability of a dual system to the key decision on how the water system of Lahaina should be rebuilt. 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 as a single or dual water system.	06/10/25	11:00 AM	11:30 AM	Inge	Wiersema

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TUE074-05	Water	Optimizing Chlorine Dioxide Use at a Large Water Treatment Plant	Beaver Water District has used chlorine dioxide for over 12 years at three treatment plants with a total capacity of 140 MGD. This presentation discusses application strategies, chlorite control, and using chlorine dioxide as a wholesaler.	06/10/25	11:00 AM	11:10 AM	Darryl	Fendley
TUE075-03	Water	Whose Role Is It Anyway? Effective Communications with Customers and Setting Interdepartmental Roles for a Successful LCRI Program	Successfully implementing communications strategies to comply with the Lead and Copper Rule Revisions and leveraging the successes for the LCR Improvements is an ongoing goal for utilities. Effective internal staff management to optimize the execution of external facing communications and maintaining regulatory compliance and transparency is the focus. Utility experience has shown that a key component is identifying staff structure roles and understanding the value of strong internal communications to ensure a unified response to regulatory challenges. Attendees will learn about three case studies that built unique outreach tactics, resulting in new touch points with customers, including often-marginalized Environmental Justice communities.	06/10/25	11:00 AM	11:30 AM	Anissa	Rafeh
TUE074-06	Water	Using Chlorite for Nitrification Control	This presentation describes Louisville Water's research on chlorite for nitrification control and successful implementation of chlorine dioxide in their 60-MGD water treatment plant in 2023.	06/10/25	11:10 AM	11:20 AM	Eric	Zhu
TUE074-07	Water	Bench-Scale Comparison of Shelf-Stable Chlorine Dioxide, Free Chlorine, Permanganate for Drinking Water Oxidation	This presentation compares chlorine dioxide from shelf-stable solutions with chlorine and permanganate for DBP precursor, algal toxin, taste and odor compound, and manganese oxidation in bench tests on two surface waters in warm and cold seasons.	06/10/25	11:20 AM	11:30 AM	Baris	Kaymak
CRT3	Water	CRT3 - Leadership in an Era of Workforce, Economic and Infrastructure Challenges	Today's water utility navigates complex, interrelated challenges that require local solutions and informed leaders. This interactive session explores solutions for filling essential jobs, addressing aging systems, and assuring sustainable funding.	06/10/25	1:00 PM	5:00 PM	Fred	Bloetcher

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PST02-01	Water	Enhancing Large Water Meter Infrastructure	This is a current project in progress in WSSC. The presentation aims to share lessons learned during planning and implementation of such a project.	06/10/25	1:30 PM	3:00 PM	Asif	Noor
PST02-02	Water	Battle of the Brines	Presentation will describe the poly-pigging operations that assisted in restoring flow to a 10" diameter force main that had become constricted down to 1". It will discuss the obstacles that were faced, how they were overcome and the subsequent research into the source of the problem.	06/10/25	1:30 PM	3:00 PM	Nicholas	Robertson
PST02-03	Water	PRVs: Knowledge, Issues & Solutions	Pressure Reducing Valves and the internal functionality. Preventative maintenance is essential on this asset, and operations as well as maintenance is a key component to this training.	06/10/25	1:30 PM	3:00 PM	Nick	Martinez
PST02-04	Water	Transforming Water Utilities through AI-Driven Predictive Maintenance	Explore how predictive maintenance, powered by AI and ML, is transforming water utilities by tackling issues like aging infrastructure, unexpected downtime, and rising costs. This session dives into how condition monitoring predicts equipment failures, optimizes maintenance schedules, and extends asset life. Hear real-world examples of how utilities are using this technology to improve operations, reduce costs, and meet sustainability goals. Join us to explore how AI-driven predictive maintenance can help your facility run more efficiently.	06/10/25	1:30 PM	3:00 PM	Kelsey	Doughten
PST02-06	Water	Road to Performing “Valid” Hydrant Flow Tests with “Correct” Pairing and “Safer” Procedures	The City of Cincinnati has ~10,500 hydrants, which were divided into four Phases for Hydrant Flow (HF) testing. From 2021 to 2023, Greater Cincinnati Water Works (GCWW) tested hydrants in three Phases using specialized Contractors, following National Fire Protection Association (NFPA) 291 and AWWA Manual of Water Supply Practices M17 protocols. GCWW evaluated the results and methods to improve data quality in each Phase. This effort improved the pairing process by considering hydraulic proximity, pipe diameter, and location of the hydrants. Additionally, GCWW tested a Hose Monster® device, producing FF@20 data similar in accuracy to the swivel diffuser while increasing the tests' safety.	06/10/25	1:30 PM	3:00 PM	Patricio	Pinto

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PST02-07	Water	Digital Twins, the Real Time Monitoring of Water Treatment and Reclamation Processes for Car Washes	Barr Engineering Co. built a real time monitoring data pipeline for water treatment and reclamation processes for a car wash manufacturer. This enabled rapid prototyping built to water quality metrics and predictive load planning. This presentation will include the steps used to create the digital twin pipeline, the digital signal processing used, and the predictive solutions developed. Barr will also highlight its future sights on integrating the real time streams with more advanced waste water treatment software.	06/10/25	1:30 PM	3:00 PM	Carter	Hughes
PST02-08	Water	AI Developments in Water Management	There are certain aspects of the AI revolution we simply cannot ignore, and there's a lot to unpack when we consider the implications of water usage and wastewater discharge. The most pressing water challenges are already quite obvious - and across the next decade, they likely will become more severe. KETOS CEO Meena Sankaran will discuss why organizations must assess and plan for change processes that involve both methodologies and business models to help transform the way people think about water through smart water management for distribution, safety, operational efficiency and conservation on a global scale while keeping risk management and public health as a key priority.	06/10/25	1:30 PM	3:00 PM	Meena	Sankaran
PST02-09	Water	Using AI to Reduce Reuse Confusion	To successfully implement a water reuse program, utilities need to have access to both the applicable regulations and information about the quality of their source water for reuse. Large Language Models (LLMs) can assist with both these critical tasks. By leveraging this technology, utilities can streamline the process of staying informed about regulations and efficiently organize essential water quality data. Our presentation demonstrates how integrating innovative technology into problem-solving approaches can facilitate informed decision-making and compliance, showcasing a potential future that can be broadly applied in the drinking water field.	06/10/25	1:30 PM	1:30 PM	Andrew	Goldberg
PST02-10	Water	Part 1: Challenging the Process – DWSD's Journey with Progressive Design-Build	Dominion Water and Sanitation District (DWSD) has been planning for a new Water Reclamation Facility for over a decade, with the conceptual design and delivery of the plant significantly changing to meet the needs of DWSD and its customers. With an infusion of monies from the American Rescue Plan Act and the need to bring the facility on-line by 2027, DWSD in collaboration with PCL made significant changes to the delivery of the plant with a unique approach to progressive design build. This is the first installment of a 4-part presentation series chronicling the life cycle of the Chatfield Basin WRF Project and will discuss approach to permitting, funding, and public approval.	06/10/25	1:30 PM	3:00 PM	Pamela	Grover
PST02-11	Water	Synergies in St. Petersburg: Aging Pipes and Collaborative Solutions	Downtown St. Petersburg, Florida faces challenges with its aging water infrastructure. It is the oldest area of the City's water distribution system with a significant amount of 2- to 12-inch cast iron pipe, much of which dates to the early 1900s. Some of the potable water infrastructure has reached the end of its anticipated useful life and needs to be replaced. To address this challenge, the City adopted a progressive design-build approach incorporating Risk-Based and Capacity Assessment Hydraulic Modeling, to prioritize replacement of the water mains. This initiative aims to replace 75% of high-risk water lines over five years, demonstrating a strategic effort in asset management and resiliency.	06/10/25	1:30 PM	3:00 PM	Tom	Cross

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PST02-12	Water	Enhancing Hydraulic Model Calibration and Operational Insight with Multi-Hydrant Pressure Monitoring	An accurately calibrated hydraulic model is essential for identifying and sizing system improvements to enhance resilience, water age, and quality. Traditional hydrant flow tests use one flow hydrant and one observation hydrant, but this method can lead to inaccurate model calibration. By using multiple observation hydrants with pressure loggers, deeper insights into the distribution system are achieved. A case study in Alamogordo showed that this method allowed for precise identification of system issues and improved model accuracy. The presentation will discuss the benefits and methodology of this approach.	06/10/25	1:30 PM	3:00 PM	James	Kim
PST02-13	Water	Effective, Efficient, Easy: CFD Modeling to Optimize Rapid-Mix and Flow Split Design	Achieving equal flow distribution in water and wastewater design is essential for consistent treatment quality, but it's challenging to confirm during the design phase. Engineers often rely on experience, which can lead to risks and flaws during operation. To mitigate these risks, using advanced tools like Computational Fluid Dynamics (CFD) modeling is crucial. CFD helps simulate fluid flow and optimize designs by identifying areas of inefficiency and testing various configurations. A case study at Central Arkansas Water shows how CFD modeling improved flow distribution and operational efficiency, ensuring more reliable water treatment solutions.	06/10/25	1:30 PM	3:00 PM	Ki	Yeo
PST02-14	Water	Predictions Are Hard! Using Data to Forecast Drinking Water Demands	Accurate water demand projections are important but challenging. This presentation discusses some of the challenges with making useful predictions, ways of overcoming them, and a case study for a medium-sized city, with a comparison of how actual water use compared to past projections.	06/10/25	1:30 PM	3:00 PM	Colin	Ricks
PST02-15	Water	Small Town Serves Big Tech	The Town of Clarksville, VA owns and operates a 1.0 MGD water treatment plant constructed in 1952. The Town of Clarksville recently received a new customer in a data center that plans to use a peak of 700,000 gpd. This presentation will discuss how the overall reliability of the Town's water treatment plant and critical utilities were evaluated to discover potential "showstoppers" for the data center connecting to Town utilities. Five engineers from different disciplines identified and evaluated assets including the raw water pump station, water treatment plant, and aerial pipelines along the US 58 Business Bridge. The presentation will discuss how each asset's condition was evaluated and what the recommended mitigation measures were.	06/10/25	1:30 PM	3:00 PM	Drew	Arnold
PST02-16	Water	Copper? I Hardly Know Her! Addressing Copper Discharge Exceedances at the Grand Canyon	The EPA is ratcheting down copper discharge limits for wastewater treatment plants (WWTPs) to protect aquatic health. The source of copper is typically premise plumbing in the water distribution system. Many small systems are challenged to reduce copper corrosion in the water distribution system to a level that meets stringent WWTP discharge permit limits even though their distribution system meets the maximum contaminant limit for copper. This presentation will provide a wholistic approach to evaluating copper corrosion control for small systems, including a case study from the North Rim of Grand Canyon National Park. A roadmap will be presented to assist other small systems with evaluating copper corrosion control strategies.	06/10/25	1:30 PM	3:00 PM	Natalie	Brooker

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PST02-17	Water	I'm a Small, Lonesome System and I Need Repair. I Don't Have a Whole Village to Help Me, so How Can I Avoid Falling Into Despair?	The poster discusses the story behind the design and build of a portable well station that provides redundancy to a small system and allows a utility to take a pump station out of service to perform upgrades and maintenance tasks.	06/10/25	1:30 PM	3:00 PM	Anna	Kazasi
PST02-18	Water	Sleeping with SCADA – A Result of Managing Operational Needs Amid a Lack of Available Qualified Staff.	This is a presentation on my experience in the management of small water systems and the inability to hire qualified operators. Many times management and councils don't understand what operations go thought to keep systems running, and as there is an extreme exodus between the old and new joining the industry it is of huge importance that they work together to maintain our public water systems and public health. In doing so we can not forget the health of our operators that work day and night to make sure there is always quality water on tap.	06/10/25	1:30 PM	3:00 PM	Sabrina	Sims
PST02-19	Water	Applying One Water Strategies to Mitigate PFAS Risks	The water industry's approach to PFAS management is likely to change significantly over the course of the next few years in response to evolving health studies and federal regulations. Especially impactful are the drinking water MCLs, the hazardous substance designation, and new monitoring requirements in NPDES permits. Approaching PFAS holistically, by tracking movement of PFAS between different environmental media, will help to better identify sources of PFAS and the most logical place to target to break the PFAS cycle.	06/10/25	1:30 PM	3:00 PM	Gerald	Duncan
PST02-20	Water	Interconnected Present and Future Water for Central Texas	Evaluation of Central Texas entities in the corridor between Austin and San Antonio and how they are linking together water systems and regional water supplies in prosperity and need in the current fast growth environment.	06/10/25	1:30 PM	3:00 PM	Mark	Graves
PST02-21	Water	Let's Meet at the Watering Hole: Partnerships for Improving Source Water Protection Between Agriculture and Municipalities	Uniting the two largest water users in meaningful dialogue. While both sectors have differing conservation messaging and best management practices based on usage, during times of drought, they tend to point the finger at each other as the cause. How do we get past that?	06/10/25	1:30 PM	3:00 PM	Jennifer	Elms

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PST02-23	Water	Assessing Solar Technology Adoption for Climate Change Resilience: Insights from Remote Sensing	Water and energy systems are closely interdependent, even at the household level, making it critical to manage climate change impacts on electrical power systems to ensure water quality and access. Droughts and heatwaves increase wildfire risks, which can damage power lines and cause blackouts, putting households that rely on electric pumps and energy to heat water at risk. The adoption of renewable energy, especially solar technology with battery storage, helps reduce grid strain and provide backup during blackouts. Remote sensing technologies, using aerial imagery and deep learning, track rooftop solar installations and offer vital data for solar energy deployment, enhancing climate resilience in both energy and water systems.	06/10/25	1:30 PM	3:00 PM	Kenya	Creer
PST02-24	Water	Selecting GCMs For Use In Urban Hydrologic Assessments	Local rainfall and temperature patterns are expected to change in the future as the global climate changes. Scientists and engineers involved in urban water management need practical methods to choose from among the wide range of projections provided by computer models. These scientists and engineers also need methods to translate these projections to time scales that are most useful for planning and management of urban watersheds. This presentation outlines specific steps to guide these decisions and provides an example of how to apply these steps to model results and analyze measured data from a location in southeastern Pennsylvania, USA.?	06/10/25	1:30 PM	3:00 PM	Achira	Amur
PST02-25	Water	Resilient, Sustainable, Affordable Water Supply Planning under Climate Change Challenges for Utilities in Fast Growing Communities	This work provides an in-depth look at the IRP's development process, the application of scenario planning and MCDA, the strategies for adaptive management, and the CAP development process, offering insights into creating robust, long-term water resource strategies in a dynamic environment. The Integrated Resources Plan for the Elsinore Valley Municipal Water District ensures a sustainable future water supply by evaluating water demands, supply reliability, and planning with scenarios and Multi-Criteria Decision Analysis. The plan includes adaptive management and integrates a Climate Action Plan to balance water reliability with emission reduction goals.	06/10/25	1:30 PM	3:00 PM	Ghina	Yamout
PST02--26	Water	Improving Water Reuse Risk Management and Preparedness: A Meta-Analysis of Water Reuse Resilience Definitions and Measurements	Improving water reuse resilience is crucial to water quality and access, as natural and anthropogenic hazards increase in frequency and intensity. Vulnerable aspects of water reuse infrastructure and sustainable approaches to build resilience still need to be identified. To that end, we conducted a meta-analysis and categorized resilience definitions and measurements based on five properties: robustness, rapidity, redundancy, resourcefulness, and adaptability. We found a lack of water reuse-specific resilience measurements, as well as trade-offs between resilience and sustainability. This presentation discusses sustainable paths forward for building resilience in water reuse systems while improving utility risk management and preparedness.	06/10/25	1:30 PM	3:30 PM	Isabella	Cobble
TUE081	Water	TUE081 - Advanced and Conventional Treatment	This session focuses on advanced and conventional treatment plants ranging from project delivery methods to filter optimization to ozone and UV.	06/10/25	1:30 PM	4:30 PM	Matthew	Junker

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TUE081-01	Water	PAA as a Pretreatment Alternative to Free Chlorine for DBP Reduction: Full Scale Plant Trial Results	The McKeesport WTP is a 10 MGD conventional WTP, owned by the Municipal Authority of Westmoreland County (MAWC) and located in McKeesport, PA. MAWC has initiated several treatment measures to decrease levels of DBPs, but changing source water quality, namely increased TOC concentrations and higher temperatures, have been an issue recently. To combat this, MAWC is evaluating the seasonal use of peracetic acid (PAA) as a pre-oxidant in place of chlorine. PAA is a strong oxidant that exists in equilibrium with acetic acid, hydrogen peroxide, and water, and has been granted NSF 60 approval for water treatment.	06/10/25	1:30 PM	2:00 PM	Matthew	Junker
TUE083	Water	TUE083 - Fresh Perspectives on Particle Removal	These presentations explore innovative approaches to improving particle removal from drinking water. The first study focused on retrofitting dissolved air flotation (DAF) into direct filtration systems, showing significant improvements in filter runtimes, especially with DAF in filter columns. The second examined reverse osmosis (RO) membranes, highlighting their high pathogen removal efficiency and advocating for improved integrity testing to reduce redundant treatment steps. The third investigated machine learning models to predict membrane fouling, enabling more efficient cleaning schedules and reducing costs. Together, they highlight advancements in filtration technology and operational optimization.	06/10/25	1:30 PM	3:00 PM	Bilal	Abada
TUE083-01	Water	Examination of Alternative Dissolved Air Flotation (DAF) Approaches for Direct Filtration Plants	The ongoing drought and climate change urge utilities to prepare for intermittent particle loading and algal bloom events that may severely reduce filter runtimes during direct filtration. In this work, we explored various innovative approaches for retrofitting dissolved air flotation (DAF) into existing processes of a direct filtration pilot-scale facility. Pilot tests were designed to evaluate DAF retrofit under various turbidity and coagulant/flocculant conditions to offer design and operational guidelines to utilities and consultants for proper DAF incorporation into existing treatment plants.	06/10/25	1:30 PM	2:00 PM	Bilal	Abada
TUE086	Water	TUE086 - Utility Case Studies: Digital Twins of Water Distribution Systems	This session is all case studies presented by Utilities who have significant experience with the implementation and usage of Digital Twins of water distribution systems. The journey and usage of Digital Twins for Water Distribution Systems of three utilities are presented. Water Quality and operational forecasting in water distribution systems is detailed. Lessons learned during the digital journey of these utilities are covered.	06/10/25	1:30 PM	3:00 PM	Kedric	Szana
TUE086-01	Water	City of Guelph’s Journey Towards a Digital Twin	Imagine working in a water utility where at a click of an online link you have access to the whole water treatment and distribution system virtually. This is the future of smart technology integration using digital twins for water utilities. A digital twin can be described as a copy of the complicated model which can allow employees to play with the system, without being concerned about breaking something or causing harm to the water supply.	06/10/25	1:30 PM	2:00 PM	Emily	Stahl

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TUE088	Water	TUE088 - Your Old Mains Can Last Longer with Effective Rehabilitation	This session provides an overview of water main rehabilitation methods. The focus is on case studies which illustrate how utilities have used various linings, pipe bursting, cathodic protection, and other methods to extend the lives of old mains.	06/10/25	1:30 PM	4:30 PM	Dan	Ellison
TUE088-01	Water	Rehabilitation Basics	An overview of common methods, selecting a method, and supplying water during rehabilitation	06/10/25	1:30 PM	2:00 PM	Chris	Macey
TUE089	Water	TUE089 - Improving Resilience and Durability of Water Mains through Material Evaluation, Corrosion Mitigation, and Damage Mitigation Strategies	This session focused on ways to improve the resilience and durability of water mains. Various strategies will be shared, including material evaluation of failed metallic water mains, simple practices to minimize corrosion in water and wastewater facilities, and damage mitigation strategies for long-term resilience. The session emphasizes the importance of leveraging data and implementing proactive measures to ensure the long-term performance of water mains.	06/10/25	1:30 PM	3:00 PM	Celine	Hyer
TUE089-01	Water	Leveraging Data by Performing Material Evaluation on Failed Metallic Water Mains	Metallic pipe failures occur due to a variety of factors related to the pipe material and its environment. These factors can lead to pipes requiring replacement before the fulfillment of their life expectancy. However, with adequate information, better life expectancies can be determined, or additional site-specific measures can be implemented.	06/10/25	1:30 PM	2:00 PM	Blen	Jimma
TUE090-01	Water	Life's Little Instruction Book for Operating PFAS Water Treatment Facilities	As engineers, utilities, and contractors work to construct PFAS treatment facilities, it’s becoming evident that some operational aspects aren’t well documented. This paper presents firsthand instruction book for lessons learned through operating bench, pilot, and full-scale ground and surface water PFAS treatment facilities, based on input from utility operators in CA, CO, MN, IL, and MA, designers from Stantec Inc., and researchers from Johns Hopkins University. Many lessons learned pertain to residuals and waste management and handling of PFAS. .Lessons outlined here provide essential insights for designing, commissioning, and operating PFAS treatment systems in way that is operator friendly and adaptable.	06/10/25	1:30 PM	2:00 PM	Ryan	Capelle

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TUE091	Water	TUE091 - PFAS in Residuals and PFAS Destruction	As our industry continues to meet the challenge of separating PFAS from drinking water. PFAS separated from drinking water will end up in water treatment residuals, increasing treatment complexity. Additionally, we will discuss multiple destruction technologies.	06/10/25	1:30 PM	4:30 PM	Brock	Emerson
TUE091-01	Water	The Elephant in the Room: A Canadian Perspective on PFAS Destruction for PFAS-Laden Residuals at Drinking Water Treatment Plants	While PFAS removal technologies are relatively mature, PFAS destructive technologies are comparatively less developed. The sector is challenged with simultaneously requiring action to mitigate associated health risks while facing uncertainty regarding how to manage PFAS-laden water treatment residuals. This presentation reviews a 'state of the industry' study completed in partnership with Canada's federal regulator, Health Canada, and discusses the market-readiness, benefits, and limitations of 9 different PFAS destruction technologies. The presentation also provides an outlook on areas for future growth to mitigate short-term and long-term implementation risks.	06/10/25	1:30 PM	2:00 PM	Robbie	Venis
TUE093	Water	TUE093 - Informed Decision-Making based on Robust Water Supply Models and Tools	A variety of raw water supply models and tools will be presented in this session and their resultant forecasts can provide decision-makers with the information needed to proactively manage water supply sources to satisfy an often complex mix of competing objectives. This session will present recent case studies from several regions of the country to demonstrate how the value of collaborative modeling can enhance water supply reliability during extreme conditions, address critical environmental needs, and improve day-to-day operation of raw water supplies.	06/10/25	1:30 PM	4:30 PM	Zach	Stein
TUE093-01	Water	Building Water Supply Resiliency in Arizona – A Long-Term Planning Overview From the Salt River Project	This presentation will highlight the Salt River Project's efforts to maintain the resiliency of Arizona's largest in-state sources of drinking water. With uncertainty in the amount of Colorado water available to Arizona due to climate change and ongoing basin negotiations, SRP strives to use the best data and resources available to protect the supplies it manages in the Salt and Verde rivers, as well as groundwater sources. An overview of SRP's ongoing planning efforts will be given, including supply augmentation projects and other projects intended to increase the flexibility of operations to mitigate drought risk, as well as some detail on the analytical tools being leveraged to help inform decision making.	06/10/25	1:30 PM	2:00 PM	Tim	Skarupa
TUE094	Water	TUE094 - Digital Solutions for Water Loss Management	This session explores how three utilities are using digital solutions to bring together water usage data streams to manage operations more efficiently. Water loss occurs from several sources and digital solutions are being implemented to create awareness for utility personnel. Digital integration allows for previously reactive measures related to water loss being addressed in more real time.	06/10/25	1:30 PM	3:00 PM	Elizabeth	Loughnane

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TUE094-01	Water	Proactive Water Main Break and Leak Response through Optimized Sensor Placement with High-Fidelity Digital Twin	Water main breaks pose risks like property damage, water loss, and environmental hazards. Traditional detection methods delay responses, increasing costs. A high-fidelity digital twin (DT) is a proactive solution, creating a real-time digital replica of the water distribution network. Optimized sensor placement, through machine learning, data analytics, and hydraulic models, targets leak-prone areas like aging pipes. The DT integrates a Digital Thread for data visualization, Deep Machine Learning Models for near real-time updates, Hydraulic Simulations for real-time recalibration, and High-Performance Evolutionary Optimization for leak localization. This system allows water utilities to reduce water loss, lower costs, prevent contamination.	06/10/25	1:30 PM	2:00 PM	Alireza	Parhami
TUE099	Water	TUE099 - Lead Service Line Inventory Experiences	This session will cover inventory considerations for lead and non-lead service lines, including emerging technologies, communications, and water sampling.	06/10/25	1:30 PM	4:30 PM	My	Vu
TUE099-01	Water	Evaluating Alternative Methods for Service Line Materials Identification: Is there a Magic “Lead” Bullet?	All water systems will be required to submit and maintain SL inventories following October 16, 2024. Initial inventories are expected to contain many “unknowns” which must be identified in accordance with the upcoming LCRI. Partial excavation (i.e., potholing) is often thought of as the industry gold standard method, but is costly, slow, and prone to error. As a result, many systems are looking for more affordable and accurate methods. This presentation will summarize revelations on emerging identification technologies. Related pilot testing experiences of San Antonio Water System (SAWS) will be shared. Lastly, a protocol for water utilities to follow when evaluating and requesting alternative SL identification approaches will be proposed.	06/10/25	1:30 PM	2:00 PM	Christian	Lytle
TUE101	Water	TUE101 - Future-Ready Water: Collaborate, Innovate, Transform	Engage in an interactive journey to explore key themes of water sustainability, from circular resource management to equitable technologies. This workshop is designed to educate, inspire, and empower participants to shape the Water 2050 vision collaboratively.	06/10/25	1:30 PM	3:00 PM	Joseph	Jacangelo
TUE101-01	Water	Introduction to Water 2050 and the Innovation and Circular Water Economy SIT	A brief introduction and then True/False Quiz using Mentimeter to create a fast-paced quiz with 10 true/false questions about Water 2050.	06/10/25	1:30 PM	1:52 PM	Nicole	Holloway

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
TUE102	Water	TUE102 - Strategies For A Resilient Colorado River	This session builds off the ACE24 session on this topic with updates on current agreements, regulatory, and related legal actions impacting the Colorado River. Discussion will include financial and legal updates on Colorado River Basin land use, compensated conservation and related economic considerations, water reuse, and the future of Colorado River water supplies. lies.	06/10/25	1:30 PM	3:00 PM	Blaine	Dwyer
TUE103	Water	TUE103 - Tackling Outdoor Water Use	Managing outdoor water use is one of the more challenging tasks for water utilities because it involves changing mindsets on how landscapes can be designed and managed. This session will feature examples of how utilities are working with residential and non-residential customers to get them to make changes to their outdoor landscapes with the goal of preserving water resources.	06/10/25	1:30 PM	3:00 PM	Liesel	Hans
TUE103-01	Water	Green Spaces, Great Savings: Tackling Water Use in Commercial Landscapes	Communities across the southwest and beyond are working toward commitments to reduce non-functional turf by 30 percent. Water conservation in large-scale landscapes, such as commercial properties and institutions, represents both great opportunity and challenges. The Alliance for Water Efficiency partnered with over 20 communities to evaluate the effectiveness of landscape transformation and irrigation efficiency programs. Attendees will learn about water savings, policy and program options, insights from customers and contractors, with insights to inform future landscape programs and policy decisions for water-scarce regions.	06/10/25	1:30 PM	2:00 PM	Liesel	Hans
TUE109	Water	TUE109 - Securing the Longevity of Small Water Systems: Strategies for Sustainability and Resilience	Small water systems face increasing pressure to provide reliable, high-quality water to their communities while grappling with limited financial resources, aging infrastructure, and the growing impacts of climate change. Ensuring the long-term sustainability and resilience of these systems requires forward-thinking strategies and innovative solutions. This session will explore key approaches for enhancing the longevity of small water systems, focusing on sustainability, resilience, and operational efficiency.	06/10/25	1:30 PM	4:30 PM	Scott	Baker
TUE109-01	Water	Growing and Aging Gracefully: A Small Private System’s Journey	The Charlotte Harbor Water (CHWA) is a not-for-profit private water utility in Southwest Florida. CHWA supplies approximately 450,000 gallons of potable water daily to around 5,300 customers. This presentation describes how CHWA is meeting challenges stemming from aging infrastructure, rapid urban development, residential growth, and demand surges. CHWA’s $150M capital improvement plan (CIP) strategically focused on three key areas – treatment, storage, and transmission. Utility owners, operators, and engineers will benefit from this session by hearing how a multi-faceted CIP was created and implemented to avoid costly and painful problems.	06/10/25	1:30 PM	2:00 PM	Scott	Baker

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TUE114-01	Water	Optimizing Pretreatment Polymers at Denver Water's New Northwater Treatment Facility	Denver Water's Moffat Treatment Plant has reliably provided the Denver metro area with clean drinking water for the last 80 years and is now closing in on retirement. To replace Moffat, the organization built a new treatment plant at Denver Water's Ralston Reservoir site, called Northwater Treatment Plant (NTP). NTP commissioning began in March 2024 and quickly indicated that pretreatment optimization efforts were needed to meet internal goals at maximum plant flow rates, such as settled water turbidity less than 1 NTU and filter run times greater than 100 hours. A new flocculant aid polymer was selected for full-scale trial at NTP beginning in October 2024.	06/10/25	1:30 PM	2:00 PM	Corinne	Bertoia
TUE101-02	Water	Circular Water Economy	1. Provide an overview and introduction to CWE. 2. Offer context of how CWE relates to One Water (Could also be included in introduction). 3. Offer brief examples/case studies of CWE already being implemented. 4. Further educate and engage participants in the concept of reusing water resources and promoting sustainable practices through a lightening round of Fact or Fiction. Using Mentimeter, display statements rapidly, and participants vote ""Fact"" or ""Fiction"" using phones. Discuss the answers briefly to keep the pace up.	06/10/25	1:52 PM	2:14 PM	Nicole	Holloway
T04	Water	T04 - Great Divide Brewery: Arapahoe St. Plant Tour Educational Facility Tour	Water consumption and conservation is a big topic in the beer industry. Visit Denver's Great Divide Brewery's brand new production facility and see how they tackle obstacles in water conservation and sustainability. Ages 21+ ID required and will be verified prior to boarding the bus. *Includes a $20 tasting fee per person	06/10/25	2:00 PM	5:00 PM	Facility Tour	Facility Tour
TUE081-02	Water	FilterMAP – The Road to Optimized Filter Performance	Austin Water (AW) has bolstered its monitoring and assessment of filter performance at its water treatment plants (WTPs) with the Filter Monitoring and Assessment Program (FilterMAP), an innovative data-driven approach for evaluating filter performance. This presentation provides a framework that utilities can implement to monitor, troubleshoot, and optimize their filters. It also includes examples from Austin Water's experience with implementation of the FilterMAP.	06/10/25	2:00 PM	2:30 PM	Joseph	Grano
TUE083-02	Water	Establishing Pathogen LRVs using Marker-Based RO Integrity Testing	Our study investigates whether ionic indicators can be used to develop a direct integrity testing method for RO membranes. S Study features include using MS2 bacteriophage, sulfate, and strontium to compare rejection performance at the Wichita Falls WTP; the first study of its kind to research this topic using a full-scale RO system. This is an updated presentation with complete and final data, including results with aged, new, and impaired membrane data, and a draft basis to use chemical surrogates as a means of RO direct integrity testing.	06/10/25	2:00 PM	2:30 PM	Eric	Kong

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TUE086-02	Water	Colorado Springs Utilities' Path Towards Continuous Water Quality Modeling	Colorado Springs Utilities (Utilities) has developed a near-real-time SCADA-connected digital twin of the finished water distribution system. Improvements to upgrade the functionality of the FWDS digital twin are underway by Utilities. To that end, an investigation of current technologies and development of a vision for the digital twin was conducted. This presentation will present: 1) a summary of the current condition of Utilities' digital twin, 2) Utilities' evaluation of distribution system digital twin software, and 3) the long-term vision for the digital twin at Utilities. This presentation will provide timely information for the utility industry as it seeks to maximize the benefits of digital twins.	06/10/25	2:00 PM	2:30 PM	Rennosuke	Hankawa
TUE088-02	Water	Using Pipe Bursting as a Primary Method of Main Replacement	Case studies will be presented in which utilities have employed pipebursting as a primary method of main replacement	06/10/25	2:00 PM	2:30 PM	George	Mallakis
TUE089-02	Water	Minimize Corrosion in Your Water and Wastewater Facilities with These Simple Practices, Presented with Case Studies	The presentation addresses three case studies from three water utilities across the U.S. Each case study showcases the simple mistakes in design or operation that resulted in severe corrosion damage and loss of service. The water utility's approach to mitigate the corrosion issues and prevent future problems is also discussed. The work is co-presented by HDR and San Diego County Water Authority.	06/10/25	2:00 PM	2:30 PM	Mike	Knowles
TUE090-02	Water	Optimization of Sludge Managements Through Effective Operation Methods and Engineering Design	Many utilities nationwide encounter challenges in managing and disposing large volumes of sludge produced. This work presents the proactive actions the City of Waterbury is taking through proper operations methods an innovated engineering design to improve sludge management, production, handling, and disposal while maintenance effective operations and high-water quality standard.	06/10/25	2:00 PM	2:30 PM	Veronica	Llaneza
TUE091-02	Water	PFAS Concentration Using Ozone Foam Fractionation & Regenerable Ion Exchange, Enabling Onsite Destruction at Drinking Water Plants	With EPA's new and forthcoming regulations (MCLs, CERCLA, RCRA), drinking water plants need viable solutions to reduce the financial and liability burdens on their ratepayers. Electro-oxidation (EO) offers a proven onsite water treatment approach to PFAS destruction. For cost-effective onsite PFAS destruction, these chemicals must be concentrated in the smallest volume possible to minimize EO capital costs and optimize energy consumption. Two concentration techniques: ozone foam fractionation (FF) and regenerable ion exchange (RIX) have been piloted at drinking water plants. This talk will outline the performance of these two approaches, charting a path to affordable, fully-integrated PFAS treatment featuring onsite destruction.	06/10/25	2:00 PM	2:30 PM	Zia	Klocke

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TUE093-02	Water	Innovative Forecast-Informed Reservoir Operations at Lake Mendocino Improve Water Management in California's Russian River Basin	This presentation describes modernized reservoir operations at Lake Mendocino (CA), outlines the engineering analyses undertaken in their development, provides examples of the water management benefits that may be achieved, and highlights improved water supply management realized at Lake Mendocino in recent years because of FIRO strategies.	06/10/25	2:00 PM	2:30 PM	Michael	Konieczki
TUE094-02	Water	Data at Your Fingertips: Empowering Water Agencies to Effectively Manage Supply and Demand	Participants in the session will learn how to utilize simple, but effective dashboarding tools to aggregate and synthesize water supply and demand data to improve the evaluation of reliability and availability of water supplies, and to make more informed planning operational decisions.	06/10/25	2:00 PM	2:30 PM	Susan	Xie
TUE099-02	Water	Completing LCRR Service Line Inventory: Journey of a California Utility with No Lead Service Line	The Lead and Copper Rule Revisions (LCRR) require public water systems to inventory both utility- and customer-owned service lines, posing challenges for utilities with fragmented records. This presentation highlights the Long Beach Utilities Department's (LBUD) successful completion of its comprehensive inventory for ~90,000 service lines. Using field verifications, predictive modeling, and Esri's Lead Service Line Inventory Solution, LBUD confirmed no lead service lines (LSLs), achieving non-lead designation status. Attendees will learn LBUD's approach, key findings, and lessons learned during its journey to complete the LCRR service line inventory.	06/10/25	2:00 PM	2:30 PM	My	Vu
TUE103-02	Water	Landscapes for Living: One Southern California Water Agency's Unique Take on Outdoor Water Use Efficiency Program Offerings	Attendees will learn about Eastern Municipal Water District's "Landscapes for Living" residential outdoor water use efficiency program. The program design began in 2020 and had to quickly pivot during a time of uncertainty. Since its initial roll out in 2021, the program has adapted and grown to better serve residential customers. And as EMWD looks to the future, it is working on expanding this program to include a selection of offerings for the outdoor water use of the commercial, industrial and institutional sectors as well.	06/10/25	2:00 PM	2:30 PM	Jennifer	Shimmin
TUE109-02	Water	Leadership in Crisis: Rebuilding Trust and Infrastructure at Castle Pines North	Castle Pines North Metro District (CPN) faced a "day zero" crisis in late 2021, marked by failing assets, lack of information, and leadership breakdown. Operating a 5 MGD direct filtration water treatment plant (WTP) for 10,000 residents in Colorado, CPN had to upgrade critical assets during a six-month shutdown, compounded by the loss of its sole operator and pandemic-related supply chain issues. The CPN Manager swiftly assembled a response team to rehabilitate the plant. This team worked for six months, replacing pumps, chemical feed systems, and a MCC, ensuring the WTP was operational by May 2022. Post-crisis, CPN developed a staffing plan, completed critical CIP, established transparent public communication, and increased WTP capacity.	06/10/25	2:00 PM	2:30 PM	Nathan	Travis

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TUE114-02	Water	Emulsion Polymer Out, Dry Polymer In Metro Vancouver's Largest Water Treatment Plant gets a Make Over	The Seymour Capilano Filtration Plant (SCFP) is a high-rate direct filtration plant designed to treat 476 MGD. Since its start-up in 2010, the SCFP has been feeding oil-based emulsion non-ionic filter aid polymer (FAP) and washwater recovery (WWR) polymer ahead of the filtration and washwater residuals processes, respectively. These chemicals are critical to the plant operations. In the last eight years benefits to using dry instead of emulsion polymer were identified, including better storage shelf life, less degradation during transit, and less impact on residuals treatment and recycling. This presentation will showcase the conversion from emulsion to dry polymer including bench- and pilot-scale testing.	06/10/25	2:00 PM	2:30 PM	Ana Cristina	Fonseca
TUE101-03	Water	Technology for Equity & Sustainability	1. Provide an overview and introduction to Technology for E&S. 2. Share the problem statement, draft actionable solutions, and any additional relevant supporting information. 3. Then foster audience participation to prioritize actionable solutions for technology-driven equity and sustainability. Using Mentimeter, provide a list of solutions for technology-driven equity and sustainability to prioritize on a scale of 1 – 5 for probability for success and/or 1 – 5 for potential for positive impact. [NOTE, definitions may need to be provided for both probability for success and potential for positive impact to ensure consistency in data gathered.	06/10/25	2:14 PM	2:36 PM	Gigi	Karmous-Edv
TUE081-03	Water	Optimizing Ozone Treatment for Taste and Odor Control While Expanding to 120MGD	This presentation presents the story of the ozone treatment design approach for a water treatment plant (WTP) expansion from 86MGD to 120MGD. The WTP has historically experienced taste and odor challenges associated with algae growth the source water and terminal reservoirs. Existing facility operation constrained ozone doses well below the design capacity of the ozone system, posing risks of breakthrough of taste and odor compounds. Bench-scale and full-scale testing was performed to optimize ozone performance while expanding capacity to 120MGD.	06/10/25	2:30 PM	3:00 PM	Roger	Arnold
TUE083-03	Water	A Machine Learning Approach for Prediction of the Change in Transmembrane Pressure of Ultrafiltration Membranes	Graduate research conducted by Isabel Medeiros of UNH, advised by Dr. James Malley (UNH) and Irina Zaikina (PWNT) using both pilot and full-scale drinking water data from the PWN-Heemskerk facility. This work is focused on exploring the application of machine learning methods including Random Forest and Recurrent Neural Network Long Short-Term Memory to predict how transmembrane pressure increases as a function of key water quality and operational parameters. A successful model would optimize the backwashing frequency and cleaning in place processes that are currently conducted based on facility operators' expertise, reducing the operation and maintenance costs for the full-scale facility.	06/10/25	2:30 PM	3:00 PM	Isabel	Medeiros
TUE086-03	Water	Development of Real-Time Water Age and Chlorine Residual Simulation Tool in a Regional Water Agency's Distribution System	Metropolitan Water District of Southern California (Metropolitan) is utilizing its hydraulic model to develop a real-time tool to simulate water age as well as chlorine residual within its distribution system. The presentation will provide background about Metropolitan's hydraulic model, describe the project approach, give an overview of the architecture of the live model solution (e.g., how boundary conditions and demands are connected to the hydraulic model), and how model simulation results are presented in a user-friendly interface and utilized to make operational adjustments.	06/10/25	2:30 PM	3:00 PM	Brian	Brenhaug

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TUE088-03	Water	Denver Water's Approach to Water Main Renewal	For decades, Denver has used a variety of methods for water main renewal, including lining and replacement. This presentation discusses how specific choices are made.	06/10/25	2:30 PM	3:00 PM	Jeremy	Ross
TUE089-03	Water	How to Mitigate Damage to Water Transmission Mains For Long-Term Resilience	Pipeline owners face competing priorities for infrastructure assessment, rehabilitation and replacement. The reality of finite budgets and availability for pipeline shutdowns can result in limited opportunity to enact capital projects. Preventing damage to buried pipelines can extend asset life and reduce the need for capital projects. Examples and case studies from hundreds of miles of pipeline assessment will include managing operating pressure, eliminating pressure transients, slowing corrosion, and limiting contractor strikes.	06/10/25	2:30 PM	3:00 PM	Chandler	Carpenter
TUE090-03	Water	Developing a Clearwell Inspection Program via Remote Operated Vehicle	This presentation will describe how a utility developed an inspection program for their clearwells using a Remote Operated Vehicle (ROV) to proactively plan maintenance activities.	06/10/25	2:30 PM	3:00 PM	Jeff	Navarrete
TUE091-03	Water	Strategic Management of PFAS Residuals: GAC Scenario	The issue of PFAS residuals management in drinking water treatment applications remains a significant unresolved problem, with an unsettled array of multiple interconnected regulatory actions presenting logistical, economic, and possibly legal challenges, including impacts from both CERCLA and RCRA. As a result of these complex and potentially expensive challenges, it is critical for utilities to understand the risks and costs associated with PFAS residuals management, capturing these in a strategic plan. This presentation will examine these costs and risks for the scenario of PFAS treatment with GAC, which is expected to be the most widely implement technology for compliance with the NPDWR.	06/10/25	2:30 PM	3:00 PM	Brent	Alspach
TUE093-03	Water	Down to the Wire: Using Stochastic Modeling and Climate Science to Manage Emergency Supplies	The Palo Pinto County Municipal Water District No. 1 operates Lake Palo Pinto. In 2014, storage levels reached critical levels with less than 90 days of supply remaining. This presentation details how the District made data driven decisions using stochastic modeling techniques and near-term climate projections in implementing emergency supply infrastructure to save millions of dollars.	06/10/25	2:30 PM	3:00 PM	Zach	Stein

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TUE094-03	Water	Leveraging Data Warehousing for Enhanced Detection of Water Loss in Distribution Systems	This paper will unveil the creation of a cutting-edge, cloud-centric Near-Real-Time Data Warehouse that integrates daily SCADA, AMI, leak detection, plant operations, and more. Leveraging advanced analytics, water balance techniques, continuity models, and AI, it revolutionizes the way Santa Clarita Valley Water identifies and mitigates pressure zone water loss.	06/10/25	2:30 PM	3:00 PM	Cris	Perez
TUE099-03	Water	Navigating Hurdles in Predictive Modeling and Field Investigation Efforts for Birmingham's Lead Service Line Inventory	This presentation will highlight best practices and lessons learned from Birmingham Water Works Board's journey in developing a Lead and Copper Rule Revisions (LCRR) compliant lead service line inventory (LSLI). The session will focus on key strategies for navigating predictive modeling, regulatory approvals, and field investigations to meet the LCRR compliance requirements. Attendees will gain insights into using AI-driven models to address unknown service lines, processing historical data, and adapting to evolving regulatory requirements. This presentation will provide practical guidance for utilities, regulators, and consultants working to reduce unknowns in LSLI and ensure compliance with Lead and Copper Rule Improvements.	06/10/25	2:30 PM	3:00 PM	Philip	King
TUE103-03	Water	The Next Frontier of CII Outdoor Water Use Efficiency - Reducing Non-Functional Turf in Response to AB-1572	In response to the passage of AB-1572, Long Beach Utilities has collaborated with various city departments, non-profit organizations, and community-based groups to convert non-functional turf into climate-resilient gardens. By fostering interdepartmental collaboration and breaking down operational silos, we aim to make substantial strides in both environmental stewardship and water conservation. This presentation will delve into our collaborative agreements with local NGOs and citywide departments related to AB-1572, the methodology behind on-site AB-1572 inspections, how we scaled our Lawn to Garden Program and Native Plant Parkway Program for the CII sector, and metrics of participation in our CII turf rebate program.	06/10/25	2:30 PM	3:00 PM	Dani	Lima
TUE109-03	Water	Small Water Systems and Complex Decisions – How One Utility Planned for Future Resiliency through Regulatory Uncertainty	Lynnfield Center Water District (LCWD) in Massachusetts serves approximately 8,500 customers with four groundwater pumping stations, often struggling to meet the demands of the system with all water sources in service, leaving no redundancy or resiliency. At the same time, discolored water from manganese is an ongoing issue from one source. Through comprehensive planning, LCWD generated a Capital Program with a new water treatment plant and interconnection, addressing both quality and quantity for long-term water system resiliency. But, what happens to the best laid plans when PFAS comes along?	06/10/25	2:30 PM	3:00 PM	Maddison	Vidal
TUE114-03	Water	A Study of Fluidized Bed Clarification Under Suboptimal Flocculation Conditions	Floc blanket clarifiers, also known as fluidized bed clarifiers (FBCs), provide an added barrier for the removal micron-sized pathogens and primary particles by using concentrated influent turbidity for particle capture. While the various factors impacting floc blanket performance have been studied empirically, a mechanistic model describing the physics governing fluidization and clarification has not been developed. Moreover, the relationship between floc blanket performance and the quality of the upstream flocculation process is not well understood. A floc blanket formed under adverse flocculation will be examined to better understand this relationship, which will allow for more optimal design and operation of floc blanket clarifiers.	06/10/25	2:30 PM	3:00 PM	Andrew	Pennock

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TUE081-04	Water	Monitoring the Dynamic Water Quality of UV AOP Systems	The addition of sodium hypochlorite upstream of UV/chlorine AOP systems treating RO permeate results in a dynamic water quality that presents a unique challenge with regards to the measurement of a UVT and free chlorine residual that is representative of that entering the UV reactor. For UV/Chlorine and UV/hydrogen peroxide AOPs the combined processes of photolysis, advanced oxidation and breakpoint chlorination reactions result in a continuous increase in UVT as water flows through the UV reactor. If not properly accounted for, this instability can result in situations where the system is providing a level of treatment that is significantly different from what is indicated by the online measurements and UV AOP control algorithms.	06/10/25	3:00 PM	3:30 PM	Bryan	Townsend
TUE088-04	Water	EBMUD's Pipeline Rebuild Program	This presentation discusses how a large utility has expanded its program, using innovation to obtain efficiency and maintain quality	06/10/25	3:00 PM	3:30 PM	David	Katzev
TUE090-04	Water	Adapting to Flux: Managing Water Treatment Residuals in a Dynamic Decision-Making Environment	The City of Dallas operates the Elm Fork Water Treatment Plant (EFWTP), a 310 MGD facility in Carrollton, TX, which historically managed residuals removal as a capital project, with removal occurring every 3 to 4 years. In 2021, the city transitioned residuals disposal to an operational responsibility, incorporating it into the plant's daily processes. This shift introduced challenges such as redefining staff roles, managing operational budgets, and ensuring regulatory compliance. Successfully managing this multi-million-dollar dewatering contract now requires a comprehensive approach across planning, procurement, and execution, balancing financial limitations with environmental and operational goals.	06/10/25	3:00 PM	3:30 PM	Guadalupe	Bailey
TUE091-04	Water	PFAS Destruction: A Discussion of Emerging Technologies Aimed at Destroying Fluorinated Organics	With the maximum contaminant limits (MCLs) and interim guidance on destruction and disposal of PFAS released by the EPA in April 2024, there is an increased need for responsible and effective residuals management when treating drinking water for PFAS. The objective of this discussion is to identify several PFAS destruction technologies and provide an overview of previous and ongoing projects that focus on demonstrating the destruction removal efficiency (DRE) and economic viability of the technologies. The technologies to be highlighted include supercritical water oxidation (SCWO), hydrothermal alkaline treatment (HALT), and sonolysis.	06/10/25	3:00 PM	3:30 PM	Lauren	March
TUE093-04	Water	Integrating Collaborative Water Supply Modeling to Support Utility Planning and Operations	This presentation outlines the development and benefits of an integrated water supply model for Loudoun Water. Loudoun Water invested in an OASIS model, a mass balance model that simulates their water system, and committed to long-term modeling collaboration with consultant support. The presentation highlights how collaboration refined the model and supported planning and operations and showcases two use cases: converting retired quarries into reservoirs to meet demand and evaluating regulatory scenarios for water withdrawals. The presentation demonstrates the value of collaborative modeling in enhancing water supply reliability and operability and navigating permitting challenges, serving as a blueprint for other utilities.	06/10/25	3:00 PM	3:30 PM	Madison	Miro

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TUE099-04	Water	Physical Inspection Methods for Water Service Line Identification with No Excavation	The LCRR/LCRI requires water systems to identify service line materials. However, excavating buried pipes is expensive and disruptive to customers. Instead, water systems are inspecting inside meter boxes, surveying customers, recording during routine activities, and conducting other noninvasive methods. This presentation reviews actual service line investigation programs and best practices from water systems across the US using methods without new excavation.	06/10/25	3:00 PM	3:30 PM	Kristin	Epstein
TUE109-04	Water	Small Florida town making great strides in planning	This presentation will highlight how the Town of Dundee, Florida is utilizing hydraulic modeling to plan for population growth while supporting economic growth. It will also touch on the value of modeling for a small town of 5,000 residents.	06/10/25	3:00 PM	3:30 PM	Parsa	Pezeshk
TUE123	Water	TUE123 - Creative Applications of Adsorption and Advanced Oxidation Treatment	In Minnesota, a pilot study evaluated advanced oxidation processes (AOP) and biological filtration to address seasonal taste and odor (T&O) events and elevated disinfection byproducts (DBPs). The findings led to a facility upgrade incorporating these technologies. The second presentation explores GAC adsorption of preformed DBPs, highlighting the effects of competition and background organic matter. The third presentation focuses on radium removal through a new pressure filtration system utilizing on-site hydrous manganese oxide (HMO) generation. Collectively, these studies underscore the role of advanced treatment technologies and tailored solutions for enhancing water quality and regulatory compliance.	06/10/25	3:00 PM	4:30 PM	Nadia	Jorgenson
TUE123-01	Water	Unlocking Effective T&O Removal and DBP Mitigation: Key Findings from AOP & Biofiltration Pilot Study	The City of St. Cloud, MN, operates a 24 MGD lime-softening water treatment facility that faces seasonal taste and odor (T&O) issues and elevated trihalomethanes (TTHMs). A 12-month comprehensive pilot study evaluated advanced oxidation processes (AOP) and biological filtration to mitigate these challenges. Results showed effective T&O and DBP reduction using ozone, peroxone, and UV-AOP. Biological filtration further enhanced treatment. This study's findings led to major upgrades at the facility in 2024. This paper will present the key findings from the pilot study and full-scale performance results.	06/10/25	3:00 PM	3:30 PM	Qigang	Chang
TUE125	Water	TUE125 - Creative Solutions in Sustainable Infrastructure	The NYC Department of Environmental Protection used adaptive strategies for collaboration and consistent communication for their public onsite green infrastructure projects at local schools and housing authority sites. ISI will review the EPA’s EUM and illustrate how Envision parallels the EUM’s Ten Attributes and Five Keys as applied to capital projects. The cement and concrete industry have developed a Roadmap outlining the opportunities and actions to reach carbon neutrality without sacrificing long-term performance.	06/10/25	3:00 PM	4:30 PM	Christine	Kirby

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TUE125-01	Water	Collaboration and Creativity: Delivering Onsite Green Infrastructure Projects at Schools and Public Housing Sites in New York City	Improving stormwater management in New York City is a critical concern due to the prevalence of combined sewer systems and aged drainage infrastructure. The New York City Department of Environmental Protection (DEP) aimed to alleviate the strain on their drainage systems during heavy rainfall events through a robust green infrastructure program. This presentation describes how public onsite green infrastructure was implemented at various public schools and housing sites around the Brooklyn and Queens boroughs in New York City.	06/10/25	3:00 PM	3:30 PM	Amanda	Retta
TUE129	Water	TUE129 - Operational Tools for Maintaining the Distribution System	This session will cover topics regarding the Distribution System Operations & Maintenance, Main Breaks, Transients and DBP Management	06/10/25	3:00 PM	4:30 PM	Sepideh	Yazdekhasti
TUE129-01	Water	Las Vegas Doubles Down and Wins Big: How LVVWD Reduced Line Breaks by 30%	After a series of repeat main breaks and pressure spikes, one Las Vegas Valley Water District (LVVWD) engineer had a hunch: by mitigating pressure transients, might it be possible to significantly reduce pipe failures? Comparing pressure transient data collected over several years showed that this hunch was an effective break reduction strategy: High-resolution pressure monitoring has completely changed the way LVVWD operates their water distribution network, resulting in a 30% reduction in breaks. This presentation will detail how monitoring dynamic network changes over sub-second time intervals allowed LVVWD staff to reduce breaks and achieve efficiencies across their valve and pumping operations.	06/10/25	3:00 PM	3:30 PM	Nicole	Kaiser
TUE134	Water	TUE134 - Lessons Learned in Making The Most of Artificial Intelligence	This session series explores lessons learned in effectively implementing AI within the water sector, highlighting key strategies and examples. The sessions emphasize best practices, ethical considerations, and practical solutions for leveraging AI to across procurement, data management and cybersecurity.	06/10/25	3:00 PM	4:30 PM	Rowan	Hannan
TUE138	Water	TUE138 - Owner’s Toolkit and Strategies for Project Delivery Success	This session is focused on the Owner’s perspective in project delivery. Attendees will learn from Owner’s on the trends and challenges they are facing, lessons learned in planning and commissioning	06/10/25	3:00 PM	4:30 PM	Darlene	Helm

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TUE138-01	Water	Facing the Future: Agency Trends in Project Delivery	Upgrading and expanding aging water infrastructure presents ongoing challenges for project design and construction. Systematic changes are being experienced that are influencing how capital water projects are being completed. Most root causes for the trending changes are identified in publications such as the AWWA "Water2050" series and "State of the Water Industry" reports, but what's not always clear is how systematic changes are impacting infrastructure project scope, schedule, and fee at the individual project level. This presentation provides an overview of perspectives on the challenges, project impacts, and solutions for three trending topics: Labor and Staffing; Complexity; and Uncertainty.	06/10/25	3:00 PM	3:30 PM	Jonathan	Tull
TUE141	Water	TUE141 - Community Engagement & Empowerment: A Path to 2050	Water 2050 is a collaborative initiative to envision the future of water and chart a course for future success and sustainability. As part of this initiative, we strive to deepen our understanding of communities' water needs and strengthen public trust in water services providers through education, community engagement in water policy, and create a culture where everyone has a personal connection to – and shared responsibility for – our water future. This session will focus on conversation with members of Water 2050's Equity, Access, and Community Engagement Strategic Implementation Team, discussing intention, baseline understanding of current state of consumer water knowledge, and resources that are in development. Following a brief fireside chat, participants	06/10/25	3:00 PM	4:30 PM	Nancy	Sullivan
TUE142	Water	TUE142 - Checking In On PFAS: A Mid-2025 Update on PFAS Related MDL Litigation	This session builds off the ACE24 session and covers updates on the MDL, state MCLs, evolving outcomes and settlements, likely future paths for MDL litigation, and how utilities are receiving and handling settlement funds.	06/10/25	3:00 PM	4:30 PM	Ashley	Campbell
TUE143	Water	TUE143 - Water Conservation Programs	Water utilities have considerable latitude to develop conservation programs that meet their goals. This session provides an overview AWWA's voluntary standard outlining the elements of a good program and provides examples of how conservation programs can be designed to reach specific types of customers within their service areas.	06/10/25	3:00 PM	4:30 PM	Peter	Mayer
TUE143-01	Water	G480-20 Water Conservation Standard – A Colorado Utility Works with National Nonprofit to Evaluate Compliance	This presentation will review the G480-20 standard, the Alliance for Water Efficiency's leaderboard and Aurora Water's exemplary water efficiency program. The presentation will explain the benefits of the voluntary standard and the voluntary leaderboard and how it has been of value to Aurora Water to participate in this effort.	06/10/25	3:00 PM	3:30 PM	Peter	Mayer

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TUE144-01	Water	Tortoise and the Hare: Perseverance to Outpace Rising Water Loss	This presentation is the story of a mid-size water utility with high pressures and aged infrastructure in a never-ending race against water loss. As of 2021, the Asheville NRW program enters its 10th year, and there have been many twists and turns. Water loss is on the rise, after hitting a historic low in 2017. Despite a proactive leakage management program, new leakage continues to rise faster than the mitigative efforts can contain it. Our case study will be helpful for other utilities who already have a NRW program in place, but have encountered challenges and setbacks. We will present the lessons we are learning as highlighted above, as well as how we are measuring our progress beyond the total water loss measured.	06/10/25	3:00 PM	3:30 PM	Will	Jernigan
TUE154	Water	TUE154 - Taste & Odor Monitoring and Treatment	This session will discuss monitoring methods and treatment technologies for T&O compounds.	06/10/25	3:00 PM	4:30 PM	Lauren	Weinrich
TUE154-01	Water	Cracking the Code: Tackling Taste and Odor Issues in Marston Forebay	Marston Forebay has long faced seasonal taste and odor (T&O) challenges impacting WTP operations. In 2024, a study was initiated to investigate T&O challenges to identify root causes. Data collected in 2024 provided new insights into T&O events, guided follow-up monitoring, and informed management adjustments. Preliminary results confirmed that metabolite production is occurring in the Forebay. Given the low algal densities, low nutrients, and absence of macrophytes, it is likely that algae and cyanobacteria are being grazed upon by carp. The grazing pressure was determined to be a key driver to T&O events. This presentation highlights data trends, findings, and source water management approaches to address long-standing T&O issues.	06/10/25	3:00 PM	3:30 PM	Elizabeth	Crafton
TUE158	Water	TUE158 - Preserving Programs to Elevate Underrepresented Voices in Water	This session will include reflective and potentially challenging conversations about the prevalence of diversity, equity, and inclusion in the workforce that lead to conversations about the ways in which it could be enhanced. The presenters will identify and engage in discussions about strategies that can elevate certain voices in the Water Resources industry that historically have not been well represented.	06/10/25	3:00 PM	4:30 PM	Kellie	Watson
TUE158-01	Water	Water Workforce Diversity: Is DEI in Danger?	Instituting a diversity, equity and inclusion program is extremely important. We must address policies and practices that contribute to disparities in areas, such as economic and workforce outcomes. We must look for ways to move us toward eliminating disproportionate outcomes and their negative impacts on the most vulnerable communities. As diversity, equity and inclusion initiatives and programs are implemented, they are now facing legal challenges. There are legal cases all over the country that are now questioning the impact and ways that diversity, equity, and inclusion are introduced and acted upon. This will address how to continue your diversity, equity, and inclusion journey in this changing legal landscape.	06/10/25	3:00 PM	3:30 PM	Kellie	Watson

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TUE134-02	Water	Beyond the Buzz: Harnessing AI for Water Professionals – Practical Insights and Responsible Integration	This session explores how AI is transforming water management by automating repetitive tasks, boosting productivity, and supporting workplace accommodations. We will address key concerns like data privacy, bias, and human oversight, equipping attendees with strategies for responsible AI integration. This presentation is ideal for those seeking to understand AI's real-world applications and how it can complement existing workflows, and for those looking to ease concerns about AI by gaining a deeper understanding of the technology's applications.	06/10/25	3:18 PM	3:36 PM	Rowan	Hannan
TUE081-05	Water	Progressive Design-Build Delivery Model Yields Innovative Design of Advanced Water Treatment Plant	The innovative benefits realized in the design and development of Los Angeles' largest potable reuse advanced water treatment facility through utilization of the progressive design-build delivery model will be reviewed. Testing infrastructure that was constructed and operated to assist with design development, as well as critical constructability input will also be discussed.	06/10/25	3:30 PM	4:00 PM	Larry	Schimmoller
TUE088-05	Water	Lesson's Learned in Keeping Customers on Your Side	An LADWP program completed up to 1 million feet of lining per year. This presentation will discuss how funding and support for the program was sustained, despite the inevitable public inconveniences and huge costs.	06/10/25	3:30 PM	4:00 PM	Dan	Ellison
TUE090-05	Water	Asset Maintenance Optimization in Miami-Dade County Water Treatment Plants	The purpose of this presentation is to walk the attendee through a progressive approach to developing or improving upon, a maintenance and reliability program. Whether your organization has a formalized asset management plan or not, many of the foundational elements align with ISO 55000 Asset Management Standards. The goal is to provide an understanding of the foundational elements of a maintenance and reliability program and to determine the best place to begin an improvement initiative. Having pieces of several of these elements, Miami-Dade Water and Sewer Department (Florida) is focused on improving their maintenance and reliability program and will be discussing their goals and the importance of embarking on this journey.	06/10/25	3:30 PM	4:00 PM	Steven	Hutchings
TUE091-05	Water	Electrochemical Oxidation for PFAS Destruction in Water Treatment: Lessons Learned from the Field to Inform Treatment Train Models	Per- and polyfluoroalkyl substances (PFAS) are leading environmental contaminants affecting communities and industries around the world, including in drinking and wastewater. DE-FLUORO, a unique PFAS treatment system, has been developed to destroy regulated and unregulated PFAS compounds in waters through electrochemical oxidation with no waste disposal or regeneration required. DE-FLUORO can be integrated and coupled with existing treatment trains or utilized as a stand-alone technology to undertake PFAS treatment and destruction onsite. The abstract demonstrates the effectiveness of DE-FLUORO to treat a variety of PFAS impacted waters following separation and concentration to provide a cost effective PFAS treatment solution.	06/10/25	3:30 PM	4:00 PM	Gavin	Scherer

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TUE093-05	Water	Modeling Water Security Strategies Under Changing Climate for Nevada Irrigation District	The Nevada Irrigation District (NID) is proactively addressing the community's long-term water needs through its Plan for Water (PFW), a collaborative initiative designed to assess NID's current and future water supply and demand. To support this effort, three numerical models were developed to simulate NID's water delivery system: a physically based hydrological model, a demand model, and a reservoir operations model. This project produced an invaluable set of long-range decision tools that can be applied, at any time, to guide NIDs water management on how to mitigate risks to water supply.	06/10/25	3:30 PM	4:00 PM	Hamideh	Habibi
TUE099-05	Water	Transforming Public Health: Greeley's Communications Campaign Enhances Lead Protection Awareness and Engagement	The EPA's Lead and Copper Rule Revisions (LCRR) and upcoming Lead and Copper Rule Improvements (LCRI) require water systems to change how they engage with customers. The City of Greeley's Lead Protection Program focuses on proactive community engagement and transparent communication, using plain language to ensure access and equity for all water customers. This presentation will describe how the city's Lead Protection Program improves customer confidence, participation, and well-being. This proactive approach works to mitigate public health risks and strengthen the community's trust in the local government's commitment to long-term water quality improvements.	06/10/25	3:30 PM	4:00 PM	Michaela	Jackson
TUE109-05	Water	Future-Proofing Small Water Systems: Strategic Master Planning for Growth and Regulatory Change	The Town of Maynard operates a small water system with three treatment plants, managed by limited staff and budget. Historically, the Town has addressed water system challenges reactively with short-term fixes that may not keep pace with increasing development, changing regulations, and declining water quality. To strategically address these issues, a 50-year Master Plan was created. This plan includes an alternatives analysis to determine the best approach to meet future demands and address water quality concerns including disinfection by-products, PFAS, and aesthetic issues. Alternative supplies, including connecting to a wholesale water supplier, and treatment upgrades for existing facilities were evaluated.	06/10/25	3:30 PM	4:00 PM	Katie	Chamberlain
TUE123-02	Water	The Impact of Direct Competition on GAC Adsorption of Preformed Disinfection Byproducts for Potable Water Reuse	Direct competition, as well as fouling by background organic matter, for GAC adsorption sites may occur between DBPs under variable initial concentrations and varying TOC concentrations. Chlorination of wastewater effluent is a common practice and the adsorption of preformed DBPs is not well understood, particularly under wastewater reuse conditions when a range of regulated and unregulated DBPs, both weakly- and strongly-adsorbing, are present at varying initial concentrations. Thus, the impact of initial DBP concentrations, DBP mixtures, TOC concentrations, and empty bed contact time were evaluated using constant diffusivity rapid-small scale column tests.	06/10/25	3:30 PM	4:00 PM	Nadia	Jorgenson
TUE125-02	Water	Envision Sustainable Infrastructure Framework Guides Planning & Design to Support Outcomes Aligned with EUM's Ten Attributes	The EPA has evolved EUM over more than 15 years to increasingly aid water and wastewater utilities in improving organization-wide performance. Concurrently, Envision has been embraced by over 200 municipalities and water agencies to plan, design, construct, and prepare to operate and maintain more sustainable, resilient, and equitable water infrastructure. Considering facility sustainability early advances sustainable operations and supports outcomes outlined in EUM's Ten Attributes and aligns with the Five Keys to Management Success. This presentation provides an Envision overview illustrates how Envision parallels the Ten Attributes and Five Keys, as applied to planning	06/10/25	3:30 PM	4:00 PM	Anthony	Kane

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TUE129-02	Water	Under Pressure: Protecting Dallas' 84-inch White Rock North Transmission Main from Surge Events	Water surge events can cause catastrophic damage to equipment and pipelines. Operators must take care to minimize surge events and respond rapidly when damage occurs. Air release valves can be a cost-effective strategy for protecting against surge in water transmission mains, but they come with their own challenges.	06/10/25	3:30 PM	4:00 PM	James	McQuery
TUE138-02	Water	Successfully Navigating Planning and Commissioning Challenges for a $1.6B Water System	The $1.6B Bois d'Arc Lake program recently completed commissioning and began supplying water to North Texas. This paper focuses on the collaborative effort required to attain the necessary regulatory approvals and how advanced planning among stakeholders led to a highly successful commissioning of the system in spite of numerous challenges.	06/10/25	3:30 PM	4:00 PM	Aliza	Caraballo
TUE143-02	Water	Equitable Access to Water Efficiency: Challenges and Solutions for Mobile Home Residents	This in-depth session explores water efficiency in mobile home parks, a sector often overlooked in conservation efforts. This session will showcase the outcomes of a unique project conducted by the Alliance for Water Efficiency in partnership with communities in Colorado to provide no-cost services to residents—conducting water audits, replacing inefficient fixtures, repairing leaks, and offering education. We'll dive into groundbreaking research on potential water savings, submetering costs, and addressing equity issues in metering and billing. Attendees will learn key lessons on working with this underserved community and discover insights that could inform future policies and utility strategies for mobile home parks.	06/10/25	3:30 PM	4:00 PM	Liesel	Hans
TUE144-02-C	Water	Montreal's Potable Water Network Optimization Project	The Montreal metropolitan area produces and transports drinking water for a population of 2 million people spread across 16 cities on the island of Montreal. Twenty years ago, the water loss rate was 40%. In order to improve its performance, a drinking water network optimization project was initiated in 2012. This project, which is a first phase of optimization, ends in 2026. This presentation focuses on the results of this project.	06/10/25	3:30 PM	4:00 PM	Jean	Lamarre
TUE154-02	Water	Taste and Odor: The City of Bloomington Utilities Approach to (Hopefully) Mitigate an Unsavory Seasonal Event	The taste and odor compounds geosmin and methylisoborneol (MIB) have been a growing issue and treatment headache for the City of Bloomington Utilities Monroe Water Treatment Plant. Increasing warm weather patterns, paired with longer dry spells have amplified the taste and odor compounds which have become a seasonal sore spot for our drinking water utility. This presentation aims to show our approach and research into potential solutions to solve or mitigate these two compounds, which have been historically difficult to control in a conventional water treatment plant in high concentrations.	06/10/25	3:30 PM	4:00 PM	Justin	Meschter

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TUE158-02	Water	Water Sector DE&I - Driving Meaningful Change Together	As utilities re-evaluate organizational health, diversity, equity, and inclusion (DE&I) become essential. Water Research Foundation Project #5186 advances DE&I by tailoring strategies to the unique needs of water utilities. This presentation will highlight some of the actionable insights along with a case study a partner utility.	06/10/25	3:30 PM	4:00 PM	Tiffany	Torres
TUE134-03	Water	AI Software Procurement: Prerequisites, Conceptualization, and Vendor Evaluation for Water Utilities	Artificial intelligence (AI) is gaining traction in the water industry quicker than many would have expected. Whether an organization's journey into AI starts with an interest in optimizing operations or a push from the board, organizations often uncover many challenges when trying to get started. This presentation will demystify AI software procurement for water utility leaders – from understanding the prerequisites for deployment to evaluating vendors and ensuring long-term value for water industry specific applications of AI.	06/10/25	3:36 PM	3:54 PM	Joberto	Lee
TUE134-04	Water	Building Resilient Utilities with AI and Machine Learning: The Crucial Role of Data Management and Cybersecurity	As utilities face growing challenges such as aging infrastructure, climate change, and stricter regulations, the adoption of artificial intelligence (AI) and machine learning (ML) has become vital to driving operational efficiency, reducing risks, and enhancing preparedness. This two-part presentation will show how 1) AI/ML applications—such as predictive maintenance, process optimization, energy management, quality control, and fault detection—are reshaping the water utility industry and 2) how cybersecurity is an important dependency for the successful operation of these solutions.	06/10/25	3:54 PM	4:12 PM	James	Schultz
TUE081-06	Water	Coal & Coconut Carbon (GAC) Arsenic Leaching Study	Coal and Coconut raw material based Granular Activated Carbons (GAC) have become widely used throughout the industry, and coal carbons are currently one of the leading media used for PFAS removal. When designing a treatment plant, there are many considerations for permit approvals, and impacts on the water quality after adding GAC treatment is one of them. It has been found that coal-based carbons run the risk of producing high levels of arsenic concentrations during the backwash and initial start-up of the GAC media. In this session, we will first go over what are the possible causes of high arsenic concentration levels and why it would defer from one manufacturer to another.	06/10/25	4:00 PM	4:30 PM	Sara	Maloney
TUE088-06	Water	What's New in Water Main Rehabilitation	A high-tech method of rehabilitation will be discussed, involving carbon fiber and spray-applied resin (i.e., "Manufactured-in-Place Composite Pipe")	06/10/25	4:00 PM	4:30 PM	Anthony	Lane

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TUE090-06	Water	Stretching Energy Management Goals Through Flexible Operations of Desalination Facilities	This presentation presents ongoing collaborative research between Colorado State University, the Water Replenishment District, Salt River Project, Electric Power Research Institute, and National Renewable Energy Laboratory on the feasibility and opportunities of flexible water treatment operations in reverse osmosis desalination plants in coordination with energy management goals and electric grid integration. The presentation will summarize the key takeaways for defining, measuring, and evaluating grid-flexible desalination systems in the scenarios of Demand Response Participation, Load Shifting and Load Shedding, Energy Storage, and Flexible Process Scheduling coinciding with renewable energy demands.	06/10/25	4:00 PM	4:30 PM	Joshua	Rodriguez
TUE091-06	Water	Fate of PFAS during full-scale thermal reactivation of granular activated carbon	Granular activated carbon (GAC) is the most widely used and well-established treatment technology for the removal of PFAS contaminants from drinking water and wastewater. After the GAC has reached the end of its useful service life, it can be thermally reactivated. A thorough program of testing was carried out at two full-scale facilities during the reactivation of a load of spent GAC known to contain adsorbed PFAS. This presentation will go over the process of reactivation and the testing results from each facility.	06/10/25	4:00 PM	4:30 PM	Adam	Redding
TUE093-06	Water	Climate Change Projections and Adaptation Strategies for the Pequannock Watershed	Freshwater abundance has long been a hallmark of the Northeastern United States, yet concerns about water availability are growing for many utilities in the region due to the impacts of climate change. The Pequannock Watershed, a critical 35,000-acre natural resource owned by the City of Newark, NJ, is especially vulnerable to these shifts. In this project, climate change models were used to project localized climate swings for the Pequannock Watershed, allowing for proactive management of water sources and the development of more sustainable diversion procedures across multiple reservoirs.	06/10/25	4:00 PM	4:30 PM	Skylar	Reed-McMill
TUE099-06	Water	Random Daytime, Fully Flushed and Composite Approaches: Lead Sampling Norms of the Future?	After decades of LCR sampling, the fixed volume first draw sample is the industry standard and has become the “go to” sample to answer all lead drinking water questions. Treatment effectiveness-based regulatory sampling has challenges and is inappropriate to answer many questions including those associated with exposure. This presentation will discuss three alternative lead drinking water sampling methods (random daytime, fully flushed, and manual composite sampling) that address exposure and other questions while still considering treatment effectiveness. Lead levels in the different water samples collected from homes with and without lead service lines, and in communities with and without effective corrosion control will be compared.	06/10/25	4:00 PM	4:30 PM	Darren	Lytle
TUE109-06	Water	Integrated Master Planning Resulting in Innovative Solutions for System Reliability and Maintaining Cost for Customers	Master planning is evolving. Our clients want holistic plans that incorporate capital cost estimates, schedule implications, and funding sources. Pendleton, Oregon needed to consider effective ASR well operation, a summer irrigation water recycling program, additional anticipated capacity, and reasonable rates for consumers. As a leader in integrated master planning, Pendleton’s experience can help other utilities make informed decisions for public infrastructure investments and support long-term returns on private investments in the community.	06/10/25	4:00 PM	4:30 PM	Ann	Quenzer

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TUE123-03	Water	Residual No Longer – A Digital Tool to Assess the Dynamic Operations of Residuals Handling Systems	Given the highly dynamic inflow and operating conditions of a water treatment plant residuals handling system, developing a mass balance to quantify limitations and understand system needs presents a challenge. This challenge was addressed during the design of the Water Filtration Facility Expansion for the City of Sanford, NC by developing a digital tool using Python to simulate the residuals handling system. The interactive tool mirrored realistic operating decisions and enabled the design team to rapidly simulate and evaluate a myriad of current conditions and future scenarios to aid in the design process.	06/10/25	4:00 PM	4:30 PM	Karyn	Saunders
TUE125-03	Water	Using Voluntary Guidelines to Advance on the Road to Carbon Neutrality	Cement is the first ingredient in the concrete infrastructure that provides the foundation for the nation's built environment. With construction demands projected to increase, we have a once-in-a-generation opportunity to set a global example on building sustainably, utilizing new approaches, and advocating for updated technology. The cement and concrete industry have developed a Roadmap outlining the opportunities and actions to reach carbon neutrality across the entire value chain. This presentation will detail an approach that leverages relationships at each link of the value chain, demonstrating to the world that this industry can address climate change with ambition and audacity.	06/10/25	4:00 PM	4:30 PM	Lindsey	Geiger
TUE129-03	Water	Predictive Modeling for Disinfection Byproduct Management: Enhancing Water Quality and Regulatory Compliance in Water Distribution	Compliance with EPA regulations under the Safe Drinking Water Act is crucial for public health, particularly in controlling harmful Disinfection Byproducts (DBPs). The City of Baltimore's monthly DBP monitoring revealed several sites with elevated levels, prompting the need for a more advanced management approach. The City recognized the value of a predictive model to forecast future DBP concentrations using historical data.	06/10/25	4:00 PM	4:30 PM	Sepideh	Yazdekhasti
TUE138-03	Water	Integrating O&M Staff into Project Execution and Cross-Project Construction Planning	Traditionally the need for new water supply infrastructure was identified during planning, engineers performed design, and contractors constructed the new facilities. Focus was on the project, with little focus on operations and maintenance. The trend toward greater involvement of operations and maintenance staff in planning, design, and construction of new water infrastructure has opened opportunities for better executed projects but also imposes challenges for operations and maintenance staff. This presentation explores approaches and lessons learned from the City of Santa Cruz Water Department, as they successfully integrate operations and maintenance staff into project execution and cross-project planning.	06/10/25	4:00 PM	4:30 PM	Donald	Champenois
TUE143-03	Water	Desire to Action: Water Conservation Support Programs That Get the Job Done!	Water conservation is challenging for residential and commercial customers, requiring resources, or mechanical and operational knowledge that many lack. Even simple tasks such as programming irrigation controllers or adjusting toilet float valves can be overwhelming without a basic level of technical knowledge. Commercial properties are the same: from cooling towers, irrigation systems, and complex systems inside, few facilities have the knowledge to achieve and maintain optimal water use. Recognizing this gap, Spokane has developed a comprehensive suite of conservation support and rebate programs to assist residential and commercial customers. This presentation will overview the programs, their impact, and case studies.	06/10/25	4:00 PM	4:30 PM	Will	Rettig

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TUE144-03	Water	Miami Dade Water and Sewer Department NRW reduction Efforts and Results	Miami Dade water and Sewer is a large Water/Wastewater utility serving a population of 2.3 million. Over the last several years, the utility has implemented a series of initiatives to address its non-revenue water results in several fronts, covering real and apparent losses. These initiatives have resulted in quantifiable results, serving as a measure of their effectiveness.	06/10/25	4:00 PM	4:30 PM	Francisco	Martinez
TUE154-03	Water	Effective T&O Control with Source-to-Plant Approaches for Monitoring and Treatment	Drinking water systems that rely on lakes and reservoirs which are vulnerable to algal blooms frequently experience T&O issues and subsequent customer complaints. This presentation will discuss case studies that successfully implemented techniques for monitoring and control of T&O compounds both in source water systems and at treatment plants. The presentation will emphasize the importance of a multi-barrier approach towards T&O control when source control methods are paired with treatment optimization at the plant.	06/10/25	4:00 PM	4:30 PM	Susheera	Pochiraju
TUE158-03	Water	Building an Interdisciplinary Water Cohort that Elevates Historically Underrepresented Voices in Water Resources	This would be a panel discussion with a member of the water fellow program faculty, leading a discussion with water fellows from each cohort (listed below) and the experiences that the fellows have had while being part of the 2024-25 cohort and how they benefited from the program as well as their thoughts on the future of the water workforce and education.	06/10/25	4:00 PM	4:30 PM	Daniel	Dominguez
TUE134-05	Water	Technology Initiatives in the AI Era – Keys to Success for Your Organization	As the water infrastructure sector continues to face unprecedented challenges, including climate change, workforce challenges, population growth, and aging systems, the integration of artificial intelligence (AI) presents transformative opportunities. This presentation explores innovative technology initiatives, including those that leverage AI, to enhance operational efficiency, improve decision-making, and build a technology-enabled staff within organizations.	06/10/25	4:12 PM	4:30 PM	Mitchell	Dabling
T05	Water	T05 - Denver Water: Northwater Plant Educational Facility Tour	Denver Water's Northwater Treatment Plant opened for operations in the spring of 2024. It can treat up to 75 million gallons of water per day, with the ability to expand its capacity as future water demands increase. Sustainability is at the forefront of many design aspects of Northwater. The location of the plant – in a valley adjacent to the water source, Ralston Reservoir – allows the plant to leverage influent pressure to produce energy. Using a 427-kilowatt (kW) Francis hydro turbine within the Headworks building, the Northwater Plant will generate up to 2,660 megawatt hours per year, becoming a net energy producer on an annualized basis with a resulting annual offset of 1,485 tons of carbon dioxide. The facility is also uniquely equipped for the impacts of climate change, with treatment capabilities able to deal with source water impacted by wildfires and	06/11/25	8:00 AM	11:30 AM	Facility Tour	Facility Tour

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T06	Water	T06 - Metro Water Recover: North Plant Educational Facility Tour	Tours are an additional cost and require pre-registration. Tour is limited to 28 attendees. Metro Water Recovery's Northern Treatment Plant (NTP) began operating in Brighton, CO in late 2016. As one of the most advanced systems in the country, the NTP's phased design provides flexibility to expand as the region grows and currently has the capacity to treat approximately 28 million gallons of wastewater per day. Along with a close-up view of the process areas, attendees will walk along the pedestrian path to see where the clean water is discharged to the South Platte River. Closed-toed shoes are required along the tour route. Attendees should dress for the weather on the day of the tour. While attendees will be shuttled along the route in Metro	06/11/25	8:15 AM	11:30 AM	Facility Tour	Facility Tour
T07	Water	T07 - Thornton Water: Water Supply and Thornton Treatment Plant Educational Facility Tour	The City of Thornton has a complex and diverse raw water supply network that diverts water from rivers and streams through ditch canals to an interconnected series of storage reservoirs. This tour will take a look at the varying infrastructure used to convey water to and through Thornton's water supply system including a stop at a diversion structure and a tour along the interconnected reservoir system and pump-back facility. From the storage reservoirs water is sent to one of two treatment plants. The Thornton Water Treatment Plant, the city's newest 20MGD ozone-biofiltration treatment plant will be the final stop of the tour. Participants will be guided through the facilities treatment processes including source water blending; flocculation/sedimentation; ozone AOP; biofiltration; and disinfection. Note: Closed shoes and long pants required. Safety glasses will be	06/11/25	8:15 AM	12:30 PM	Facility Tour	Facility Tour
WED001-01	Water	Decisions, Decisions – Selecting an RO Treatment Strategy for Emerging Contaminants at PTRWA	While RO membranes present an excellent technology for emerging contaminant treatment, significant risks are present: high capital and operational costs, generation of a waste (concentrate) stream, and potential for regulations on residual streams. This presentation presents a case study on how a drinking water utility made a selection for RO and concentrate stream treatment to handle PFAS and 1,4-dioxane present in their raw water source.	06/11/25	8:30 AM	9:00 AM	Katie	Walker
WED011-01	Water	Be First, Be Right: PFAS Community Chats	In 2018, OWASA began monitoring PFAS in our drinking water sources and found elevated levels in our largest raw water source- Cane Creek Reservoir. Some PFAS compounds were found to be an order of magnitude higher than the EPA's proposed MCLs. In 2023, OWASA's PFAS Community Communications Plan was approved by its Board of Directors.This plan includes a series of "PFAS Community Chats" designed to inform and engage our community around PFAS in drinking water. This presentation will include our secrets to success, our observations and experiences, and our lessons learned in planning and executing this chat series to encourage more utilities to take this open approach to talking about PFAS with their communities.	06/11/25	8:30 AM	9:00 AM	Katie	Hall
WED014	Water	WED014 - Digital Water Treatment Solutions	This session showcases digital solutions implemented throughout various steps of the water and wastewater treatment process. The speakers will dive into how digitization of processes was key in driving efficiency and maintaining security while leveraging real-time data. If you are looking for opportunities to implement digital water solutions into your treatment processes, this session will offer insights into navigating that journey.	06/11/25	8:30 AM	10:00 AM	Elizabeth	Loughnane

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WED014-01	Water	Harnessing Digital Twin Technology for Optimized Wastewater Treatment: Reducing Costs, Emissions, and Enhancing Process Efficiency	In response to the increasing environmental challenges, process inefficiencies, and ongoing staff shortages faced by utilities, digital twin technology offers a transformative solution. This presentation will unveil the latest advancements in our new digital twin product, designed to drive process optimization, reduce environmental impact, and address operational gaps. Through real-world pilot results, we will demonstrate how this innovative tool, integrated with our data management solution, is helping utilities achieve sustainable, efficient, and reliable operations.	06/11/25	8:30 AM	8:52 AM	Kassia	Skolski
WED019	Water	WED019 - Hot Topic Session on Lead Service Line Replacement Programs	Identify and focus on the issues of the lead and copper rule associated with private property and replacing service laterals. The presenters will discuss funding strategies or programs they have developed to address these service laterals and what measure or steps they have taken to increase customer participation in these programs.	06/11/25	8:30 AM	10:00 AM	Kevin	Kappers
WED019-01	Water	Not In My Front Yard: How the LCRR Takes Water Utilities onto Customer's Private Property	The title, "Not in My Front Yard," encapsulates the common sentiment associated with infrastructure projects, which now extends to water utilities' initiatives as they enter residential spaces to comply with the LCRR and eventually, the LCRI. As the City of Englewood progressed toward construction, they embraced a multifaceted approach to engagement, encompassing updates to the municipal code, leveraging social media platforms, organizing public meetings, and personally responding to individual customers aiming to not only facilitate public education but also to foster trust in the utility's initiatives.	06/11/25	8:30 AM	9:00 AM	Jasmine	Gamboa
WED021	Water	WED021 - Real-Time-Monitoring: Leveraging Today's Technology to Advance our Systems	This session will highlight current advancements in technology that support the integration of real-time monitoring into utility operations. Speakers will also address operational needs that future real-time monitoring technologies will need to address to further integration. Participants will get perspectives from real-time monitoring technologists, utility practitioners, consultants, and public communications specialists. The session will start with perspectives from the panel (10 min each), this will be followed by Q&A session with the audience (30 min). If possible, a real-time survey will be administered to the audience regarding their thoughts on advancing real-time monitoring. Survey results will be displayed before the Q&A or at the end of	06/11/25	8:30 AM	10:00 AM	TBA	TBA
WED022	Water	WED022 - Artificial Intelligence: Trends Within and Outside The Water Sector	This session would look at the financial, legal, and management aspects of AI and how it is changing the game in the water sector. Case studies would present how water utilities are using and managing AI, the financial and legal challenges encountered, and possibly include the perspective(s) from AI companies and how they are supporting AI products/implementation and water utilities	06/11/25	8:30 AM	10:00 AM	John	Nolte

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WED023	Water	WED023 - Turf Transformation in Colorado: Water Leaders Redefining Landscapes and Conservation	Join water leaders from Colorado that are paving the way to reduce outdoor water demand and promote sustainable landscapes through turf replacement. Panelists will discuss innovative policies, community- driven initiatives, funding strategies, case studies, and more, that support landscape transformation across the state, positioning Colorado as a leader in water conservation and efficiency.	06/11/25	8:30 AM	10:00 AM	Victoria	Arling
WED023-01	Water	Turf Transformation in Colorado: Water Leaders Redefining Landscapes and Conservation	The Department of Local Affairs (DOLA): Sharing insights about their new model land use codes, with a focus on landscaping standards.	06/11/25	8:30 AM	10:00 AM	Victoria	Arling
WED024	Water	WED024 - Water Loss Control Plan Implementation	Controlling water loss from distribution systems is an on-going challenge for water utilities. Hear from utilities that are taking on the challenge and making real progress in controlling real losses.	06/11/25	8:30 AM	10:00 AM	Robert	Eisenrich
WED024-01	Water	AGS's Journey in Implementing a Performance-Based Agreement with Digital Solutions to Reduce Non-Revenue Water	This article presents AGS’s journey to reduce non-revenue water (NRW) in RAJA, Constanta - Romania, through an innovative performance-based agreement (PBA). The PBA model has allowed for a well strategized path, with clear actions and targets where investments, operational decisions, and digital technologies are planned and prioritized with shared risks between both players. The RAJA/AGS synergy aims to be an example for water utilities that aspire for efficiency in reducing NRW while making a successful digital transition.	06/11/25	8:30 AM	10:00 AM	Joana	Cassidy
WED027	Water	WED027 - Industry Leading Treatment Strategies on the Front Range	The Front Range of Colorado is continuing to experience high sustained growth stressing aging utility infrastructure that is also confronted with new regulatory challenges. Colorado utilities are tackling these treatment challenges head on through innovation, leveraging existing assets, and building big for a sustainable future. Attendees at this session will learn of Colorado's newest 75 mgd treatment plant that integrates the latest tools for operations efficiency, alternative disinfection strategies at a 100 year old facility, and testing of novel media for optimizing PFAS removal.	06/11/25	8:30 AM	10:00 AM	Hilary	Feier

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WED027-01	Water	Denver Water's 75 MGD Northwater Treatment Plant: Challenges and Successes from Year One	This presentation describes lessons learned from operating Denver Water's new 75 MGD Northwater Treatment Plant, discusses the transition from construction and startup to operation, and presents plans for future optimization. These lessons will be applicable to a wide range of water treatment plant projects, from new construction and existing plant modifications to optimization studies.	06/11/25	8:30 AM	9:00 AM	Hilary	Feier
WED030	Water	WED030 - Advances in Water Resources Planning - A Teaser from the M50 Update	Explore the latest water resources planning and management approaches designed to meet the needs, goals and outcomes for the 21st Century as presented in the M50 manual update. This facilitated panel of water leaders will provide guidance on advancing the water resources approaches outlined in the M50 manual and use recent case studies to demonstrate how these approaches achieve the end goals of equity, resilience, and One Water thereby improving the prospects of sustainable access to water for all users.	06/11/25	8:30 AM	11:30 AM	Josh	Weiss
WED030-01	Water	Advances in Water Resources Planning - A Teaser from the M50 Update	This session will highlight water resources planning and management approaches with needs, goals, and outcomes for the 21st century, as presented in the M50 manual update. Specifically, it will showcase the advances in water resources planning from project drivers to the end goals of equity, resiliency, and One Water aimed at improving the prospects for sustainable access to water for all.	06/11/25	8:30 AM	11:30 AM	Jessica	Fritsche
WED031	Water	WED031 - Small Systems Approach to Water Supply Challenges	When it comes to securing a reliable, safe, and sustainable water supply, small systems are faced with limited resources, fluctuating water demands, and potential contamination risks, these systems need creative, tailored solutions to ensure the long-term health of their communities. This session will explore the unique water supply challenges faced by small systems and provide practical strategies for overcoming these hurdles.	06/11/25	8:30 AM	10:00 AM	Michael	Sanders
WED031-01	Water	Wayland's PFAS Woes and Wins: Small Water System Seeks Emergency and Long-term Alternative Water Supplies	The MWRA water supply for Metro Boston has flowed through Wayland, MA for over 120 years. Today, Wayland hosts parts of all three water supply conduits but lacks an interconnection. Due to PFAS contamination, the town evaluated alternative supplies, including PFAS treatment, new interconnections, and hybrid approaches. The Town selected, designed, and constructed an emergency connection to the MWRA's Hultman Aqueduct to ensure water supply security during the design, permitting, and construction of a long-term supply. Wayland is now designing a long-term water supply connection to the MWRA's MetroWest Water Supply Tunnel and Hultman Aqueduct, including a one-mile transmission main, two miles of distribution upgrades, and a pump station	06/11/25	8:30 AM	9:00 AM	Michael	Sanders

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WED031-02	Water	Promoting Small System Sustainability with the Oklahoma LRSP Program	The presentation will describe Oklahoma's Long Range Sustainability Plan (LRSP) Program, from its beginnings as a cooperative program created by an alliance of state environmental agencies and technical assistance providers to its current status as a state-wide honor and indicator of a public water and/or wastewater system that has committed to excellence in operations and has excelled in all aspects of sustainability.	06/11/25	8:30 AM	9:00 AM	Brandon	Bowman
WED034	Water	WED034 - HABS and Cyanotoxins Monitoring and Treatment	This session will discuss monitoring methods and treatment technologies for algae, cyanobacteria, and cyanotoxins.	06/11/25	8:30 AM	10:00 AM	Susheera	Pochiraju
WED034-01	Water	Close Call, Safe Outcome: Proactive Strategies for Mitigating Harmful Algae Blooms in River Ecosystems	In the summer of 2024, a cyanotoxin producing, harmful algal bloom occurred on the upper Mississippi River, which is a source of supply for four water treatment plants in Iowa and Illinois. Proactive source water monitoring revealed increasing cyanotoxins in this historically low-risk drinking water supply. This presentation will share insights into the value of utilizing crisis response teams for source water contamination events, benefits of cyanotoxin management plans, and novel data from the bloom event.	06/11/25	8:30 AM	10:00 AM	Lauren	Weinrich
WED014-02	Water	Predicting Water Treatment Processes for Extreme Weather Events Using a Deep Learning Model	This study addresses the challenges faced by water treatment plants due to the increasing frequency of extreme weather events linked to climate change, necessitating a shift from manual operations to automated systems. We present a deep learning model designed to predict key operational parameters under normal and extreme conditions. Utilizing a hybrid deep learning architecture, the model analyzed real-time data from a water treatment plant in South Korea. The results showed strong predictive capabilities, enhancing operational responsiveness and resource optimization, thereby highlighting the potential of deep learning to transform water treatment process management in a changing climate.	06/11/25	8:52 AM	9:14 AM	Mi Hyun	Park
WED001-02	Water	Case Study: Competitively Bidding Submerged Membrane Filtration Retrofits via Design	Historically it has been difficult to competitively bid submerged filtration membranes retrofits because the membrane supplier is integral to providing the complete membrane system. However, as the membrane industry continues to develop "me-too" submerged membrane products, there is a new opportunity for utilities to design system upgrades independently from the original system suppliers to enable a competitive membrane bidding process. This presentation will provide examples from two case studies where this approach has been executed at full scale. The resulting benefits from this modified approach include project cost savings, capacity expansion, enhancements in membrane performance and improvement in operability.	06/11/25	9:00 AM	9:30 AM	lee	portillo

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WED011-02	Water	Calming the Storm: Clear PFAS Communication for Scared Water Customers and Systems	Effective communication about Per- and Polyfluoroalkyl Substances (PFAS) in water systems is crucial for public health and regulatory compliance. This abstract explores current strategies, challenges, and future directions in PFAS communication within water management contexts	06/11/25	9:00 AM	9:30 AM	Swaroop	Puchalapalli
WED013-02	Water	Adapting to the Flow: Rethinking CIP Planning Amidst Declining Water Demands	Conservation measures have reshaped water demand patterns, influenced infrastructure investments, and guided long-term planning strategies. Eastern Municipal Water District (EMWD) in California has been at the forefront of implementing water conservation measures to address the state's persistent water scarcity challenges. The significant impacts of these conservation efforts on water supply management and capital improvement program (CIP) planning within the district will be discussed.	06/11/25	9:00 AM	9:30 AM	Brenda	Estrada
WED019-02	Water	Increasing Customer Participation in the Lead Service Line Replacement Program	Greater Cincinnati Water Works has been replacing private lead service lines through the lead service line replacement program since 2018. Participation is voluntary in the program, which has changed from a cost-sharing model to fully utility funded. Despite the move to be fully funded, the program had seen only a slight improvement in participation. However, recent changes to the outreach process have brought significant increases in participation. This presentation will go through the outreach process that has resulted in over 80% participation in a voluntary program.	06/11/25	9:00 AM	9:30 AM	Kevin	Kappers
WED024-02	Water	See an End to NRW Loss with Data-Backed Leak Detection	Imagine running a marathon with no clear indication of the finish line. This scenario best describes the situation several utilities are facing by only indicating non-revenue water (NRW) values through annual audits. The Village of Skokie (Illinois), upon recognizing the potential for improvement in its water loss management, proactively shifted its program approach and incorporated near real-time water loss tracking and improved leak detection scheduling and coverage areas into its strategy. Coupling leak detection with monitoring has yielded enormous results, including a projected 250-million-gallon reduction in purchased water for 2024.	06/11/25	9:00 AM	9:30 AM	Robert	Eisenrich
WED027-02	Water	Revitalizing a Century-Old Chlorine Contact Basin: Modernizing the Disinfection Approach for a 200 MGD Water Treatment Plant	This presentation explores Denver Water's strategic initiative to modernize a century-old disinfection system at the 200 MGD Marston Treatment Plant. Attendees will learn about the evaluation process used to compare disinfection alternatives, including UV, sodium hypochlorite, and chlorine dioxide. The session will highlight strategies to overcome site-specific constraints such as constrained footprint, congested yard piping, and adjacent residential neighborhoods, all while maintaining full treatment capacity through high-demand season. By sharing lessons learned and insights into the decision-making process, this presentation offers valuable guidance for professionals involved in water treatment infrastructure upgrades.	06/11/25	9:00 AM	9:30 AM	Lars	Ellingson

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WED033-02	Water	Acknowledging the Extent of De Facto Reuse in US Surface Waters: Are PFAS the Tipping Point? Lessons from WRF 5082 and UCMR5	This presentation summarizes findings from WRF 5082, which provided a comprehensive discussion of PFAS source identification and mitigation strategies for utilities across the one water spectrum. One major conclusion was that PFAS would be much more widespread in surface waters than assumed by prior evaluations – including those underlying the development of MCLs - due to the pervasive impacts of de facto reuse. The predictions made by WRF 5082 are now being corroborated by UCMR5 data, which not only confirm the previously unexpected widespread presence of PFAS in surface waters but support the de facto reuse connection because the most prevalent PFAS detected in UCMR5 data are the same as those most prevalent in wastewater effluents	06/11/25	9:00 AM	9:30 AM	Eva	Steinle-Darlir
WED034-02	Water	Austin Water's Cyanotoxin Monitoring and Response Plan: Proactive, Prepared, and Proven to Protect Public Health	Cyanotoxins have been detected in the City of Austin's source waters for it its three water treatment plants. Austin Water developed the Cyanotoxin Monitoring and Response Plan to adhere to EPA Health Advisory Levels for cyanotoxins and safeguard the health of the City of Austin's residents. During the summer and fall of 2023 and 2024, Austin Water (AW) implemented the Response Plan at its three water treatment plants. AW will share its approach to implementing the Response Plan, including lessons learned from elevated source water detections, bench scale testing, and modifications to the Response Plan to optimize future responses.	06/11/25	9:00 AM	9:30 AM	William	Bailey
WED014-03	Water	Boosting Efficiency at Westminster's 15 MGD Drinking Water Facility with Collaborative Digital Solutions	The City of Westminster is designing a new 15 MGD drinking water facility, leveraging advanced digital technologies to streamline project delivery, enhance collaboration, and strengthen design coordination. This involves working with four consulting firms across different regions and time zones, using effective communication tools. Central to this is BIM, which has accelerated the project timeline and improved quality control. The facility will treat water from Standley Lake using biofilters and ozone, replacing the aging Semper facility. The presentation will showcase how BIM has helped adapt the design to optimize costs and minimize delays, the benefits of digital innovation, and collaboration in large-scale projects.	06/11/25	9:14 AM	9:36 AM	Khyati	Shodhan
WED001-03	Water	How to Plan for a Groundwater Desalter When You Have Little Space and Limited Information	This talk presents the planning approach for a desalter project that has little space and limited data.	06/11/25	9:30 AM	10:00 AM	Zita	Yu
WED011-03	Water	Engaging Underserved Populations in Program Development	The City of Greeley Water Conservation team is committed to improving services for low-income residents by introducing two new programs in 2024: Local Initiative Landscaping and Conservation (LILAC) and Flush and Flow, both shaped by community feedback. Discover how Greeley is addressing barriers to create equitable water efficiency improvements and foster stronger engagement across diverse neighborhoods.	06/11/25	9:30 AM	10:00 AM	Margarita	Padilla

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WED013-03	Water	Innovative Decision-Support Tool for Climate-Resilient Water Infrastructure: Optimizing Investments for Utility Managers	As climate change intensifies extreme weather events such as floods, droughts, and wildfires, water utilities face increasing challenges managing stormwater, wastewater, and drinking water services. These impacts, combined with aging infrastructure and limited resources, make it difficult for utilities to prioritize and justify climate adaptation solutions (CAS). This project introduces an innovative decision-support tool that allows utility managers to assess and optimize CAS investments through a holistic, cost-benefit approach. The tool's unique design integrates climate risk data, real-time operational needs, and community input to model the cumulative benefits of multiple CAS portfolios. Piloted with four diverse utilities in Chester,	06/11/25	9:30 AM	10:00 AM	Lisa	O'Fiesh
WED019-03	Water	The Evolution of a LSLR Program – The Pittsburgh Water Success Story	Born of a lead action level exceedance crisis in 2016, the Pittsburgh Water and Sewer Authority's (PWSA) Lead Service Line Replacement (LSLR) Program has evolved significantly from the early days of replacing only public-side LSLs. The program has progressed over the years as PWSA works to remove all, both public- and private-side, residential LSLs by the end of 2027. At over 11,500 public and 8,300 private LSLRs removed to date, PWSA has a wealth of experience to share with other utilities.	06/11/25	9:30 AM	10:00 AM	Shannon	Connell
WED024-03	Water	A Tale of Two Cities - How Transatlantic Partnerships are Helping Communities Reduce Water Loss	The goal of this presentation is to demonstrate how transatlantic collaboration has helped build stronger water use efficiency, leak detection programs, and reduced water loss. There will be three speakers discussing the findings from a fact-finding delegation to Denmark relating to water use efficiency. The speakers will be a representative from the Water Technology Alliance of Denmark, a speaker from the City of Folsom, and a speaker from a Danish utility. Each speaker will give their perspective on "Water Use Efficiency as a Way of Life"; their current status, the challenges they've experienced establishing their programs and the results they have seen, and/or what they are expecting to see in the future.	06/11/25	9:30 AM	10:00 AM	Todd	Eising
WED027-03	Water	Operational Challenges and Lessons Learned from Pilot-testing Novel Media in a Treated Surface Water	In this work, the operational challenges associated with piloting novel media for PFAS removal in a treated surface water will be explored. The PFAS pilot was installed in Englewood, CO on a treated combined filter effluent. The performance of two well established media, one granular activated carbon and one anion exchange resin, were compared against two novel media - a surfactant modified clay and a cyclodextrin adsorbent. The two novel media were evaluated for their ability to remove PFAS, pre-treatment needs, and operational requirements. This is one of the first pilot-studies to employ these media for surface water treatment and the lessons learned from operation will be discussed.	06/11/25	9:30 AM	10:00 AM	Caitlin	Glover
WED031-03	Water	History and Development of the Western Area Water Supply Project	Tami Madsen, Executive Director of the Western Area Water Supply Authority (WAWSA) and Cory Chorne, PE, Program Manager with Advanced Engineering and Environmental Services, LLC, will discuss the development, history, and status of the WAWSA. WAWSA owns, operates, and manages the WAWSP, a regional water supply project that serves a 5,000 square mile service area in the Bakken region of North Dakota. WAWSA was created in 2011 to construct a regional water delivery system to provide water for the rapidly growing population, which doubled between 2009 and 2012 and tripled by 2015. In addition, WAWSA developed a Private-Public-Partnership to sell excess water supply to the energy industry to aid with financing the project.	06/11/25	9:30 AM	10:00 AM	Cory	Chorne

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WED033-03	Water	Water Reuse Treatment Plant (WrTP) Model Development	An initial step in overcoming technical barriers to water reuse implementation is to develop critical constituent removal models to understand individual treatment process capacities. In addition, an understanding of the performance potential of different treatment process trains and associated costs is then needed to allow a comprehensive technical evaluation of their implementation potential for water reuse. This work strives to provide an initial assessment and a comprehensive user-friendly tool for utilities, consultants and regional planning agencies to assist in their path to advance water reuse in their community.	06/11/25	9:30 AM	10:00 AM	R. Scott	Summers
WED034-03	Water	Using Flow Imaging Microscopy to Build Phytoplankton & HABs Community Composition Profiles Impacting Water Supplies	This presentation will highlight the impact that common phytoplankton and cyanobacteria have of producing water quality issues at a drinking water facility as well as their monitoring program of said microorganisms. It will discuss the importance of identification of common and harmful phytoplankton, the different water quality issues they can cause along with the impact those problems can have on the plant's production of drinking water and customer faith in receiving safe drinking water.	06/11/25	9:30 AM	10:00 AM	Katharine	McNaught
WED014-04	Water	Enhancing Operational Visibility with Real-Time Data to your Digital Twin Solution while Securely Maintaining your SCADA System	Participants will learn from water/ wastewater operators about Digital Twin-supporting technologies that can physically protect air-gapped operational data networks (SCADA and ICS) while allowing real-time data out to business decision support systems on the corporate network, thereby enhancing operational visibility.	06/11/25	9:36 AM	10:00 AM	Christian	Hager
WED013-04	Water	Climate Change Resilience Assessment and Adaptation Framework, Case Study for the Elgin Area and Lake Huron Water Supply Systems	This presentation provides utility managers with options for assessing risk and resilience associated with potential climate change hazards to their water system based on scenarios with tailored timeframes and available models. Arcadis supported two regional water supply systems/utilities with developing a holistic and quantitative Climate Change Resilience Assessment and Adaptation Framework methodology based on integration and evaluation of international and national standards, including the AWWA/ANSI J100 standard. This framework can be applied at the infrastructure, system-wide, and organizational level. You will learn about development of this framework and to conduct an assessment and adaptation strategy over time.	06/11/25	10:00 AM	10:30 AM	Corie	Rockett Sapp
WED033-04	Water	Developing a Nimble Treatability Investigation Program from the Ground Up	The City of Boise's (COB's) Recycled Water Program (RWP) was established to preserve local water by protecting the Boise River, bolstering the local groundwater supply, and creating resiliency against the impacts of climate change. They developed a complex water quality sampling plan involving analysis of over 700 different analytes and selected a suite of potential future uses to define treatment objectives. The audience will learn about how to construct and execute a "living" test plan to develop the information needed to answer the technical data needed to inform decision making and treatment requirements when developing a new water source.	06/11/25	10:00 AM	10:30 AM	Erin	Mackey

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WED041	Water	WED041 - PFAS Design and Implementation	This section will provide practical solutions for the design and implementation of PFAS Treatment	06/11/25	10:00 AM	11:30 AM	Kyle	Frakes
WED041-01	Water	Achieving Quality Upgrades in Advance: Design Guidelines and Aqua PA's Journey to PFAS Compliance	In April 2024, the EPA released a new MCL targeting PFAS. To achieve compliance, Aqua Pennsylvania has a significant task in analyzing treatment needs and planning capital projects for dozens of facilities. Implementation is being managed as a program which includes multiple design consultants, permitting jurisdictions, and operational districts. Unified design guidance will provide consistency across the breadth of sites and range of requirements. This presentation will describe the challenges Aqua PA faces in providing improvements to its water infrastructure, and how design standards were selected and developed. The objective is to demonstrate the benefits of standardized design guidelines, and share lessons learned from this effort.	06/11/25	10:00 AM	10:30 AM	Alex	Wohlgemuth
WED043-01	Water	A Pilot Testing Journey with Granular Ferric Hydroxide: Arsenic Reduction in ASR Water for Potable Use	Orange County Utilities (OCU) operates a potable ASR well system that is permitted for injecting 2 MGD of potable water into the Lower Floridan Aquifer. OCU has observed arsenic mobilization within their ASR system resulting in elevated arsenic levels in the recovered water exceeding EPA's maximum contaminant level. Therefore, OCU decided to pilot test a granular ferric hydroxide (GFH) media for arsenic removal. This presentation will review the GFH media's ability to remove arsenic during the pilot study, pretreatment operations for iron removal, logistical challenges for pilot source water and disposal, lessons learned from conducting and troubleshooting the pilot, and preliminary conclusions for full-scale design.	06/11/25	10:00 AM	10:30 AM	Maria	Arenas
WED051	Water	WED051 - Pilot Testing for PFAS - Multiple Considerations | WSRD 8	These presentations focus on pilot testing for PFAS removal from surface water sources. The first is a large-scale study in New Jersey that evaluates various technologies, including GAC, AIX, and low-pressure RO. The second is a North Carolina study exploring GAC and ion exchange, while tackling challenges like PAC interference and breakthrough prediction through PFAS spiking and modeling. The third covers parallel pilot tests and rapid small-scale column testing to assess GAC, anion exchange resins, and novel sorbents for PFAS removal in a new regional facility in North Carolina. These studies aim to identify effective, sustainable PFAS treatment solutions for surface water treatment plants while considering cost and operational factors.	06/11/25	10:00 AM	11:30 AM	Joe	Nattress
WED051-01	Water	Surface Water PFAS Pilot Testing – Performance and Lessons Learned from Operating the Largest PFAS Pilot in North America	Veolia North America embarked on the largest PFAS pilot test program for surface water treatment in North America in 2023. Technologies tested included GAC, AIX, Novel Media and Sequential treatment trains. Additionally, Low-Pressure Reverse Osmosis (LPRO) operation and treatment of LPRO concentrate were conducted. The pilot is being run for 1 year and will conclude in early 2025. This presentation will discuss the specific challenges on pilot testing on post-filtration water at a surface water treatment plant, and overall outcomes from the testing program that will drive technology implementation at the existing 188-mgd WTP.	06/11/25	10:00 AM	10:30 AM	Joe	Nattress

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED058	Water	WED058 - Capital Project Delivery: Projects with a Twist | ECD 8	This session highlights three projects that may seem typical but each have a unique twist in the project delivery. Attendees will learn how progressive design-build can drive a schedule at a U.S. Air Force Base's water treatment plant, lessons learned in converting an ongoing project to a different delivery method, and some options that can be incorporated into design-bid-build.	06/11/25	10:00 AM	11:30 AM	Trooper	Smith
WED058-01	Water	Zero to Mach 2.5 in 13 Months: Design Build for the Mountain Home AFB WTP	A fast-paced design build project for a greenfield 3.5-MGD WTP at the Mountain Home Air Force Base in Idaho was awarded in May 2024 with groundbreaking in September of the same year. The WTP design consists of raw water storage and pumping, dissolved air flotation, multi-media filtration, GAC, and UV and chlorine disinfection to treat high-algae, moderate-turbidity raw water. Schedule limitations required the project team to think outside the box on design development and project roles. This presentation will discuss challenges and keys to success for fast-paced design-build projects.	06/11/25	10:00 AM	10:30 AM	Christi	Meyn
WED062	Water	WED062 - Net- Zero Carbon and Why These Matter to Water Utilities	This session would provide examples of why NZC matters to water utilities, the first steps necessary toward reducing carbon emissions and increasing resiliency, and the management and financial aspects of undertaking same. Discussion would include cost reductions to utility operations, case studies of what some utiltiies are doing to achieve NZC, and what has (and has not) worked from a management perspective.	06/11/25	10:00 AM	11:30 AM	Kate	Taft
WED064	Water	WED064 - Water Loss Auditing	To improve water loss from distribution systems, you first have to know what you are losing and then track metrics to assess your progress in reducing losses. This session includes examples on how efforts in Colorado and California are focusing utility attention on measuring water loss and tracking progress. A third example shows how a utility in Florida is using satellites to complement on-the-ground technology to find leaks for treated and reclaimed distribution systems.	06/11/25	10:00 AM	11:30 AM	Drew	Blackwell
WED064-01	Water	Reaching the Summit: Colorado's Statewide Water Loss Program Ascends its Third Phase	Every water system faces the challenge of water loss control. The Colorado Water Loss Initiative helps guide Colorado water utilities to build their water loss program by establishing a baseline of water audit data and advanced validation practices to better inform how to properly invest in their water loss intervention strategies.	06/11/25	10:00 AM	10:30 AM	Drew	Blackwell

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED069	Water	WED069 - Blue - Green Strategies for Climate-Adaptive Cities	"This session explores transformative initiatives associated with building climate-resilient, multi-benefit projects that integrate “grey” (streets/sidewalks), “green” (landscaping/biodiversity), and “blue” (stormwater/water quality) infrastructure strategies to respond to climate change impacts and build resilient infrastructure and communities. Recent case studies in New York City and Los Angeles will be presented that are designed to fortify urban environments against climate-related challenges. From flood planning to green infrastructure to cloudburst resiliency, this session delves into innovative approaches, partnerships, and community-focused solutions reshaping how cities respond to stormwater-related threats."	06/11/25	10:00 AM	11:30 AM	Tess	Sprague
WED069-01	Water	Combining Grey, Green, and Blue Infrastructure Together for Climate-Resilient Transportation Networks in Vulnerable Communities	Climate change impacts are an increasing threat to urban infrastructure and are expected to disproportionately affect vulnerable communities. The Los Angeles City’s Department of Public Works Bureau of Street Services (StreetsLA) is collaborating with partner agencies and the community to apply a One Infrastructure approach to proactively plan safe, sustainable, and equitable streets that prioritize the needs and character of each community.	06/11/25	10:00 AM	11:30 AM	Tess	Sprague
WED074	Water	WED074 - Managing Distribution System Residuals and Nitrification	This session explores strategies for optimizing distribution system residuals, introduces a new rapid method for measuring ammonia in water, and examines risk factors and tools for managing nitrification and chloramine stability.	06/11/25	10:00 AM	11:30 AM	Meg	Roberts
WED074-01	Water	Mix it Up: Distribution System Residual Optimization and Management	Loudoun Water is located in Northern Virginia just outside the Washington DC metropolitan area. With extensive system capacity being installed in undeveloped areas, Loudoun battled water age, high water temperatures, and low system demands creating a challenge to sustain sufficient chlorine residuals in two newly integrated water storage tanks and rising nitrification in far ends of the distribution system. A newly discovered Residual Control System would be piloted and eventually adopted making nitrification a thing of the past. This presentation will highlight installation and operational challenges along with lessons learned providing a potential solution for attendees experiencing similar challenges within their water systems.	06/11/25	10:00 AM	10:30 AM	Brandon	Isenhart
WED075	Water	WED075 - The Long View of Strategic Planning in Three Utilities	Strategic planning is a core concept and function of utilities. However, that function needs to be customized to fit each utility’s needs. This session will identify how to do that with some practical examples and interesting approaches employed by utilities in their planning process.	06/11/25	10:00 AM	11:30 AM	Paul	Matthews

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WED075-01	Water	Tailoring a Strategic Planning Framework to Fit Your Utility's Needs	Tualatin Valley Water District (District) recently refreshed its mission, vision, and values to better reflect its evolving role as a regional water provider. As a natural progression, the District launched the Strategic Planning Framework project to align its strategic planning process with the newly defined vision. The final outcome was a well-balanced framework that maintained the strengths of the District's existing process, supplemented by tools and insights from the EUM model. This presentation details how utilities can design a framework tailored to their specific needs, using the EUM model and other resources to streamline and improve outcomes.	06/11/25	10:00 AM	10:30 AM	Paul	Matthews
WED078	Water	WED078 - Catalyzing Careers in Water Through Learning and Training	From internships to overall workforce development and hiring: highlights why having trained YPs in-house impact projects.	06/11/25	10:00 AM	11:30 AM	Stephanie	Estabrook
WED078-01	Water	Establishing an Effective Approach to Providing Impactful Experiences for the Next Generation of Water Industry Professionals	Fostering the next generation of young professionals in the water industry will be crucial for overcoming workforce challenges. Two of the most impactful experiences for a young professional are internships and involvement in mentorship programs. Both opportunities are common for companies and businesses to offer due to their benefit in attracting new talent and reinforcing the interest of existing employees. Although a company may provide these opportunities, it can be difficult to navigate whether the opportunity is providing the maximum benefit to those involved in the experience. Ultimately, how can internships and mentorship programs positively impact the young professional while also providing value to the company and water industry?	06/11/25	10:00 AM	10:30 AM	Nicole	Martindale
WED079	Water	WED079 - Bridging Water Education and Community Development	Education is a foundation on which public and community understanding can be built. These presenters will highlight the techniques they have taken to enhance the understanding within their communities and customers about various aspects of water utilities and services, including their economic impacts and environmental benefits.	06/11/25	10:00 AM	11:30 AM	Logan	Fesenmair
WED079-01	Water	Building and Sustaining Support for Proactive Pipeline Management: Strategies for Effective Communication	This session brings together water utility leaders to explore the challenges and strategies for building and maintaining support for proactive pipeline management. Attendees will gain practical insights into developing a compelling business case, quantifying ROI, and effectively communicating program results to stakeholders.	06/11/25	10:00 AM	11:00 AM	Logan	Fesenmair

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WED999	Water	TBD - ACE25 Sustainability Journey - a panel session with AWWA	This panel session will delve into the journey of sustainability for ACE, focusing on the strategic planning and implementation of sustainable practices. The session aims to provide attendees with insights, innovative strategies, and our real-world examples of how we have integrated sustainability into aspects of ACE event planning and execution.	06/11/25	10:00 AM	11:30 AM	Lindsey	Richeaux
PST03-01	Water	Aid Africa: Empowering Ugandan Communities through Sustainable Water Solutions	With a Starbucks located on every major corner across the U.S. and many other countries, an alarming 2.2 billion people in the world still lack access to clean water. Aid Africa takes a more intentional and wholistic approach to project sustainability to ensure success in bringing clean water to communities in Northern Uganda by factoring in resiliency and local context throughout each project. This presentation will address the key considerations in sustainable design, how Aid Africa has successfully implemented approaches to addressing this global water need, and how these approaches can impact our way of thinking about designs locally and across the globe.	06/11/25	10:30 AM	12:00 PM	Katy	Corkill
PST03-02	Water	Show Me the Money! A Water Agency's Experience with PFAS Funding	The Water Replenishment District of Southern California (WRD) is the largest groundwater agency in California, managing and protecting two of the most heavily utilized groundwater basins in the United States. These basins supply drinking water for over 4 million residents in 43 cities within southern Los Angeles County. PFAS have been detected in multiple drinking water wells above Maximum Contaminant Levels. To assist water purveyors with remediating their wells, WRD established a $61 million grant program for the design and construction of wellhead treatment systems, and prepared and submitted applications for Federal and State funding. This presentation provides an overview of our experience with funding for PFAS remediation projects.	06/11/25	10:30 AM	12:00 PM	Phuong	Watson
PST03-03	Water	Addressing PFAS Rule Compliance at a Surface Water Treatment Plant	An in-depth planning strategy for treating PFAS in surface water plant will be presented. While the EPA has estimated that less than 10% of systems will be affected, the actual number may be much higher. According to current UCMR5 data, approximately 15% of water systems have had at least one quarterly measurement above the standard. It is anticipated that many of these systems will only slightly exceed the standards, requiring a reduction of less than 50% from the influent levels. Surface water treatment plants facing these challenges must carefully select appropriate treatment solutions. The author's experience assisting a water system in South Carolina will provide valuable insights that can guide utilities in similar circumstances.	06/11/25	10:30 AM	12:00 PM	Zaid	Chowdhury
PST03-04	Water	HALT 101 for PFAS Destruction: Industry Perspectives and Emerging Frontiers of Hydrothermal Alkaline Treatment	PFAS treatment and destruction in complex water and solid matrices is an increasing area of research. This presentation will provide a brief overview of PFAS concentration and separation technologies followed by a focused discussion on the efficacy and feasibility of HALT for PFAS treatment. Data and findings will be presented for HALT treatment in liquid matrices including drinking water, firefighting foam, and concentrate streams like foam fractionate and ion exchange still bottoms as well as in PFAS contaminated solids such as soils, biosolids, and spent adsorbent media. The latest research on increasing HALT efficacy will be reviewed and discussion of cost and challenges to implementation will be summarized.	06/11/25	10:30 AM	12:00 PM	Anderson	Ellis

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PST03-05	Water	Two Rigs are Better Than One - Distinct Approaches to Evaluate Orthophosphate for Lead Corrosion Control	This presentation describes an innovative, multifaceted pipe loop study to evaluate optimal corrosion control treatment and proactively reduce lead release to drinking water. The study combines an on-site pipe loop designed to evaluate the impacts of orthophosphate with an off-site lab-scale pipe loop intended to evaluate the stability of pre-existing Pb(IV) scales in lead service lines. In addition, sequential sampling and scale analysis of harvested lead service lines was performed to bolster the pipe loop study. The methodology and results will help other utilities optimize corrosion control treatment and effectively implement a pipe loop study.	06/11/25	10:30 AM	12:00 PM	Roger	Arnold
PST03-07	Water	Operating Distribution Systems in the Age of Reuse: Corrosion Control Guidance for Arizona's AWP Program	Recent legislative changes in Arizona permitting DPR have created a need for updated guidance for advanced water purification systems, including on distribution system corrosion control. The introduction of DPR product water leads to potential water quality shifts in distribution systems, as both RO and non-RO treatment trains create distinct but important considerations for product water corrosivity. The extent of RO treatment along with the selected post-conditioning processes are important for system-level corrosion control. Distribution system operation with DPR requires characterizing existing and proposed conditions, evaluating water quality shifts, selecting control measures, and providing for long-term monitoring.	06/11/25	10:30 AM	12:00 PM	Michael	Adelman
PST03-08	Water	From Pilot to Pioneer: A Small Town's Solution to a Big Radionuclide Issue using Hydrous Manganese Oxide	Cheraw's Water Treatment Facility has been operating under an Enforcement Order since 2009, which addresses compliance with the MCL for combined radium-226 and -228. Like many groundwater sources in southeastern Colorado, Cheraw's wells have high levels of naturally occurring radionuclides. In 2023, Cheraw installed the first Hydrous Manganese Oxide on-site generation system in Colorado and has been able to reliably remove radium below the MCL. This presentation will cover bench and demonstration-scale testing, technical challenges during design and construction, unique funding and operational challenges faced by small and rural water systems, and additional considerations for potential consolidation with nearby water systems.	06/11/25	10:30 AM	12:00 PM	Jacqueline	Wong
PST03-10	Water	The Benjamin Button Effect: The Curious Case of Distribution System Water Age and Why It Matters	Water age is the time it takes for water to travel from the treatment facility to any point in the distribution system. With dynamic hydraulic models, water age data is now routinely developed during master planning studies, but interpreting the data can be confusing - how old is too old? This is a cause of routine confusion. This presentation focuses on developing system-specific water age targets. Case studies will illustrate key points. The presenter, an author on the revised M68 manual, has extensive experience in water quality modeling and troubleshooting.	06/11/25	10:30 AM	12:00 PM	Simon	Horsley
PST03-11	Water	Placement is Everything: Addressing Bromide, Algae, and Design Challenges by Implementing Pre-Ozone at the 90 mgd QCWTP	The Quail Creek Water Treatment Plant needs to expand capacity from 60 mgd (gross) to 90 mgd (net) to meet growing demand, as well as add ozone to mitigate the effects of climate variability and to increase process resilience. Innovative solutions included re-rating existing processes, adding new capacity within the existing footprint with stacked DAF (dissolved air flotation over filters) and inserting ozone into the hydraulic profile. Most importantly, planning and design evaluated how raw water characteristics drive the placement of ozone within the plant (pre- vs intermediate) for algae and cyanotoxin treatment, and how dose management can be used to control bromate formation.	06/11/25	10:30 AM	12:00 PM	Jeremy	Williams

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PST03-12	Water	Viable Technologies for Removing Lithium From Drinking Water	As of July 2024, 22% of the 6,517 Public Water Systems reporting data under UCMR5 have at least one entry point into the distribution system with an average lithium concentration above the USEPA Health Reference Level of 10 ug/L. There is no data in the drinking water treatment literature on lithium removal technologies, but there is a large body of work on lithium removal from saline water due to the high demand of lithium-ion batteries for electric vehicles. An ongoing study jointly funded by the Water Research Foundation and AWWA is looking at documenting the state of knowledge on lithium treatment technologies and collecting preliminary data on their performance.	06/11/25	10:30 AM	12:00 PM	Issam	Najm
PST03-13	Water	Nature Meets Water Reuse Engineering: Expanding TRWD's Water Supply with the largest Constructed Wetlands in North Texas	As an alternative source of raw water, Tarrant Regional Water District is designing and permitting the Cedar Creek Wetlands system. This new water supply will increase TRWD's annual water supply, including drought resiliency, by diverting the effluent dominated Trinity River water through a constructed wetlands and discharging to the existing Cedar Creek reservoir. This presentation will discuss three main topics: the purpose and benefit of constructed wetlands, including TRWD's experience using their George W. Shannon Wetlands located at Richland Chambers Reservoir; TRWD's efforts and lessons learned over the past ten years in planning for the project; and technical considerations for moving water through the wetlands system.	06/11/25	10:30 AM	12:00 PM	David	Schroeder
PST03-14	Water	An Adaptive Management Framework for Accounting for Climate Change and Multiple Objectives in Water Infrastructure Design	This presentation introduces a practical approach for designing and managing water infrastructure based on future climate and accounts for multiple river basin objectives from stakeholders. The approach is a hybrid approach that applies the updated flood frequency methodology for accounting for climate change and an adaptive management framework for managing uncertainty and multiple basin objectives. The adaptive management approach allows for regular review and refinement of the application of climate data and adjustments to basin objectives, thereby reducing uncertainty within the data needed for decision-making.	06/11/25	10:30 AM	12:00 PM	Kenneth	Hunu
PST03-15	Water	Climate Change: The Trio of Tricky Problems	The water industry is facing many challenges that are impacting how we maintain and operate our systems. In addition to aging infrastructure, a retiring workforce, increasing regulations, and limited resources, we are also facing the impacts of Climate Change. Climate change is presenting our industry with what I like to call the Trio of Tricky Problems. This presentation will discuss how climate change is resulting in Too much water, Not enough water, and Dirty water. Examples of how we are addressing these challenges will be shared.	06/11/25	10:30 AM	12:00 PM	Christa	Campbell
PST03-16	Water	Optimizing Corrosion Control Strategies for Changing Water Supplies in Sarasota County, FL.	A Corrosion Control Treatment Study was conducted to evaluate Sarasota County's current corrosion inhibitor dosing strategy given the expected drinking water supply changes in 2027. The study includes a desktop evaluation and a demonstration study (coupon testing). Results and methodology of this study will be helpful for other utilities that anticipate a change in distribution system supplies/blends in the future, and utilities interested in optimizing their current corrosion control practices.	06/11/25	10:30 AM	12:00 PM	Melina	Bautista

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PST03-18	Water	Harnessing the Power of SCADA at Plants with UV Disinfection	Denver Water has a new treatment plant that is utilizing UV disinfection. This requires more complex reporting with far more data analysis than their existing plants which simply report minimum chlorine residual. Denver Water worked with CDPHE to simplify the reporting process for calculating log inactivation for a treatment plant that has both UV and chlorine disinfection.	06/11/25	10:30 AM	12:00 PM	Jennifer	Gelmini
WED013-05	Water	What FEMA's National Flood Insurance Program (NFIP) & Federal Flood Risk Management Standard (FFRMS) Mean for Water Utilities	Flood protection standards for critical and essential facilities such as water infrastructure are crucial to a community's resilience. Many existing utility-critical facilities are situated within regulated floodplains, posing significant challenges such as vulnerable equipment placement, service disruptions, and complicated post-disaster recovery. Our presentation highlights key opportunities for water utility capital improvement plans, flood control projects, GIS mapping, and hazard mitigation plan action items. We will demonstrate how critical facility functionality is integral to community resilience and attendees will understand the importance of flood protection standards as it relates to their existing and future water systems.	06/11/25	10:30 AM	11:00 AM	Michael	Bomar
WED033-05	Water	Coagulation for Non-membrane Water Reuse: Carbon and Trace Metal Removal	Wastewater reuse will be a critical strategy to adapt to climate change. For non-membrane reuse processes, coagulation may be an essential pre-treatment to meet low dissolved organic carbon (DOC) targets. Jar testing over 20 diverse secondary wastewater effluents with alum demonstrates both the effectiveness of coagulation for non-membrane reuse and the power of fluorescence for predicting coagulation performance. This work challenges the transferability of specific absorbance (SUVA) to predict DOC removal from surface waters to wastewater and proposes that fluorescence metrics could be better monitoring surrogates. Analysis showed effective removal of toxic heavy metals below detection limits.	06/11/25	10:30 AM	11:00 AM	Emma	Wilder
WED041-02	Water	Differentiating Fluoropolymer Coatings from PFAS: A Case for Low Concern in Water Infrastructure Protection	Fluoropolymer coatings, a specialized subset of PFAS, are essential in industrial applications, particularly for protecting water infrastructure from corrosion and wear. This presentation explores why fluoropolymer coatings are classified as PFAS of low concern, focusing on their minimal environmental and health risks compared to PFOA and PFOS. The session will discuss the distinction between fully fluorinated backbone fluoropolymers and side-chain fluoropolymers, highlighting their differing environmental behaviors. It will also address the need for a targeted regulatory framework that ensures the continued safe use of fluoropolymer coatings in critical infrastructure.	06/11/25	10:30 AM	11:00 AM	Kyle	Frakes
WED043-02	Water	Evaluation of RCF Technology for Hexavalent Chromium (Cr6) Removal in Drinking Water	Approximately 500 sites across California are affected by the 10 ppb MCL for Cr6. Results from two demonstrations of an innovative technology that uses an electrolytic process to generate a stannous reagent onsite and on-demand will be presented. During the demonstrations, the technology consistently reduced influent Cr6 to non-detectable levels and proved effective in removing Cr6 contamination from drinking water. These findings provide valuable insights for addressing Cr6 contamination challenges and ensuring compliance with the MCL, while supporting RCF with on-site generated stannous for Cr6 removal.	06/11/25	10:30 AM	11:00 AM	Vladimir	Dozortsev

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WED051-02	Water	Catch-22: Operating a PFAS Pilot while Minimizing PFAS and MIB in Water Delivered to Customers	OWASA first detected PFAS in their raw and finished water supplies in 2018 with average raw water PFOA and PFOS of 62 ppt and 83 ppt, respectively. In May 2024, OWASA embarked on a pilot study to evaluate the performance of alternative PFAS treatment strategies with a key consideration of eliminating PAC from their treatment process. Catch-22: How do you effectively evaluate PFAS treatment strategies while minimizing the concentration of PFAS and MIB in water delivered to customers? This paper will present full-scale operational modifications to eliminate the influence of PAC feed on GAC performance, pilot design considerations to reintroduce PFAS in the pilot feed, and novel modeling techniques to expedite breakthrough evaluations.	06/11/25	10:30 AM	11:00 AM	Karen	Dietze
WED051-03	Water	Phone a Friend: Piloting and RSSCT for a Greenfield Water Plant in North Carolina	The Cape Fear River Basin, known to have higher PFAS levels, has challenged regional facilities to provide increased removal in the NC Triangle Region. The Western Intake Partnership (WIP) took a practical, multi-pronged approach to test PFAS removal for a 30-mgd greenfield WTP sourced from the basin. A 10-month pilot was conducted at a facility neighboring the proposed intake. RSSCTs were run in parallel to estimate the effects of raw water location, PAC addition, and different coagulants on PFAS media lifespan. The 10-month pilot was used to assess seasonal variations, as well as operational considerations such as anion exchange biofouling control. The study optimization, logistics, results, and proposed design will be reviewed.	06/11/25	10:30 AM	11:00 AM	Kara	DeGroote
WED058-02	Water	On-Ramping a CMAR: Converting an Ongoing Program at a Water Treatment Plant over to CMAR	This talk will discuss how DWU's journey toward converting the WQI program, which had been delivered using DBB, over to CMAR, and will discuss challenges encountered when on-ramping them to program in mid-construction.	06/11/25	10:30 AM	11:00 AM	Gabriel	Trejo
WED064-02	Water	Preparing for California's Water Loss Standards: Lessons from Eight Years of Validated Water Audits	The California Department of Water Resources has accrued and published one of the largest water loss audit datasets in the country, which contains over 3,000 unique validated water loss audits submitted from 2017 to 2024. E Source has analyzed this dataset to provide insight on water loss performance indicators at the statewide level and among utilities with similar system characteristics, and gauge utilities' progress towards compliance with the SWRCB's water loss standards. E Source will highlight changes in water loss performance indicators from 2017 to 2024 to assess statewide variability in water audit data and readiness for compliance with the SWRCB water loss standards.	06/11/25	10:30 AM	11:00 AM	Madeline	Gorchels
WED069-02	Water	New York City Housing Authority Cloudburst Infrastructure Design: Adapting Urban Amenities to Manage Extreme Rainfall	New York City Housing Authority, nation's largest affordable housing, is pushing design boundaries in building reinforcements, storm surge protection, and cloudburst infrastructure for climate resiliency. At the NYCHA campuses, WSP is leading a team designing cost-effective blue-green infrastructure, relying on detain, absorb, store, transfer strategies. The affordable housing setting requires the integration of blue-green infrastructure with open space planning and design at the forefront to improve the lives of residents and mitigate flooding while providing overall resilience for the surrounding neighborhood.	06/11/25	10:30 AM	11:00 AM	Pinar	Balci

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WED074-02	Water	An Update on a New Rapid Method for Measuring Free and Total Ammonia in Water	The authors developed a non-proprietary analytical method for measuring total and free ammonia in water in the presence or absence of chloramine. The method relies on the addition of two simple and non-proprietary chemicals as pretreatment before the sample is analyzed with a standard total chlorine analyzer. The result is then used to calculate the total and free ammonia concentrations. The method is the subject of a Water Research Foundation Tailored Collaboration project led by East Bay Municipal Utility District and five other municipal water agencies. The method is being evaluated for both manual and online analytical approaches to be used for proper chloramine boosting in water distribution systems.	06/11/25	10:30 AM	11:00 AM	Issam	Najm
WED075-02	Water	Taking a Long View for Better Strategic and Operational Planning: CAW's 2050 Strategic Plan	Using long view tactics in strategic planning, utilities can address near-term operational challenges, align with longer-term challenges (e.g., regulations, master planning), and foster new solutions to emerging challenges. Traditional strategic planning often uses a five-year planning horizon with limited consideration to slower cycle market trends and solutions. This approach can emphasize near-term needs over positioning for long-term strategic opportunities. It can also promote incremental thinking while stifling new ideas that represent a larger change to business as usual. This presentation will explore various tactics to leverage long view thinking to improve the value of the strategic planning process and enhance plan resilience.	06/11/25	10:30 AM	11:00 AM	Katelyn	Skornia
WED078-02	Water	Keep Up the Flow: Focus on Recruiting and Hiring Water Workers	The convergence of aging infrastructure and a wave of retiring employees presents a unique challenge for utility managers and engineers. Building a sustainable water workforce requires a tailored approach to attracting and retaining the next generation of water employees. This presentation will evaluate this multifaceted issue, provide effective strategies for recruiting young talent, and showcase the benefits of investing in all areas of the future water workforce.	06/11/25	10:30 AM	11:00 AM	Abigail	Hall
WED078-03	Water	Know Thyself: Building Institutional Knowledge and Delivering Quality Planning with In-House Water Distribution System Planning	Colorado Springs Utilities recently completed a finished water distribution system plan (master plan) entirely in-house. This presentation summarizes the lessons learned from this project. It will present the original justifications for this project, a discussion of the methodology, and the challenges and benefits observed by the project team. The key takeaways are that internal system planning: 1) builds substantial institutional knowledge, 2) requires dedicated staff and expertise, and 3) provides flexibility at the expense of time. This presentation will be useful to the decision-making at other water providers considering or interested in internal system planning.	06/11/25	10:30 AM	11:00 AM	Rennosuke	Hankawa
WED079-02	Water	Elevating Water Education: The Aquacademy Initiative	Valley County Water District's Aquacademy is an innovative, community-based initiative designed to elevate water education and stewardship among students within their community. Presentation attendees will learn how to bridge the gap between knowledge and action, offering resources tailored to instill water-wise habits in your own community. Learn how classes, tours, and events will inch you closer to a community that values, conserves, and celebrates its most precious resource—water.	06/11/25	10:30 AM	11:00 AM	Jose	Martinez

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WED013-06	Water	The Santa Clarita Valley Water Agency Water Resilience Initiative	The Santa Clarita Valley Water Agency (SCV Water) is a public water agency that serves a population of 275,000 through 74,000 retail water connections across 195 square miles. The mission of SCV Water is to provide responsible water stewardship to ensure the Santa Clarita Valley has reliable supplies of high-quality water at a reasonable cost. SCV Water supplements local groundwater supplies with State Water Project water from northern California. As climate change continues to bring unprecedented droughts to the State of California, SCV Water has been working to plan for a resilient and sustainable water future.	06/11/25	11:00 AM	11:30 AM	Najwa	Pitois
WED033-06	Water	Identifying and Selecting Chemicals for Monitoring and Control at DPR Applications	The growing scarcity of freshwater resources, coupled with the ongoing urbanization pressures, prompted many communities consider treated wastewater as a source. Some states have enacted direct potable reuse (DPR) regulations and others are in the process. One of the primary challenges associated with implementing DPR is determining the appropriate prioritization and control of the numerous chemicals present in wastewater, especially those that may pose health risks but are not currently regulated under the Safe Drinking Water Act (SDWA). DPR regulations aim at identifying and prioritizing chemicals for monitoring and treatment. The presentation will offer an overview of the approach developed for Arizona's DPR regulations.	06/11/25	11:00 AM	11:30 AM	Zaid	Chowdhury
WED041-03	Water	Rapid Deployment of Drinking Water Treatment for Per- and Polyfluoroalkyl Substances (PFAS) at Alameda County Water District	In September 2024, Alameda County Water District completed the construction and commissioning of a 6 million gallon per day ion exchange PFAS treatment facility using an expedited delivery schedule in response to the California PFAS Notification Levels and United States Environmental Protection Agency Maximum Contaminant Levels. The presentation will delve into key strategies for swift decision making, methods implemented to expedite project delivery, challenges from design, construction, and commissioning, and lessons learned from this expedited project.	06/11/25	11:00 AM	11:30 AM	Kerri	Smyth
WED043-03	Water	Reduction Coagulation Filtration Pilot Testing to Inform Full-scale Design for Hexavalent Chromium Compliance	Reduction coagulation filtration (RCF) is an accepted compliance option for California's upcoming hexavalent chromium [Cr(VI)] regulation. This presentation summarizes a 12-week pilot study completed to evaluate centralized RCF treatment of three of Cr(VI) impacted groundwater production wells. The study's primary drivers were to verify and optimize process performance for Cr(VI) removal, while best managing filter backwash residuals. Optimization opportunities included chemical dose and reaction times, filter media design, hydraulic loading rates, as well as backwash residuals management. The results of this study were then incorporated into ongoing full-scale design decisions.	06/11/25	11:00 AM	11:30 AM	Brittany	Gregory
WED058-03	Water	Collaborative Procurement with Design-Bid-Build Delivery - Integrated Pipeline Project Section 19 Long Tunnels	Abstract describes a project that utilized collaborative procurement within a Design-Bid-Build delivery. Project includes construction of large diameter pipeline and five tunnel crossings. This presentation will discuss project conditions, constructability reviews, the collaborative CSP procurement, and risk management for this interesting project. Status of construction to date will be addressed with respect to these points.	06/11/25	11:00 AM	11:30 AM	Matthew	Gaughan

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WED064-03	Water	Taming Real Water Loss with a Technology Trifecta	Texarkana Water Utilities serves nearly 30,000 connections across 2 states. Recent changes in source water ownership made reducing real water loss a top priority. The utility used a performance contract to fund real and apparent water loss improvement measures. To quickly locate leaks in a service area that runs for 60 miles from east to west and 34 miles from north to south, the utility used 2 scans of L-Band synthetic aperture radar from a satellite. The utility also permanently installed leak noise loggers across residential zones and uses correlating leak noise loggers with cellular radios in commercial zones. This presentation will present the results of the different approaches to real water reduction and gage their effectiveness.	06/11/25	11:00 AM	11:30 AM	Craig	Hannah
WED069-03	Water	Working with Water: Envisioning a Citywide Bluebelt Program	This presentation will provide a history of New York City DEP's Bluebelt Program, an innovative approach to stormwater management by working with natural and engineered water features to store, convey, filter and attenuate flows, and how this program plays a role in New York City's response to climate change and resiliency.	06/11/25	11:00 AM	11:30 AM	Sangamithra	Iyer
WED074-03	Water	Nitrification Non-Sense: Risk Factors, Case Studies, and Practical Tools for Assessing Nitrification and Chloramine Stability	Chloramine decay in water systems is driven by nitrification (biologically-mediated decay) and chloramine disproportionation (chemically-mediated decay). Both processes occur in all chloraminated systems and can challenge water safety if unchecked. This presentation will discuss risk factors, discuss these in context of two case studies from medium-sized utilities, and practical tools like data visualization, jar testing, and USEPA's (free) chloramine decay model. The presenter, an author on the revised M68 nitrification chapter, will review strategies for identifying and mitigating both biological and chemical chloramine decay.	06/11/25	11:00 AM	11:30 AM	Simon	Horsley
WED075-03	Water	New York City Sewer Atlas & Utility Planning	In 2023, DEP shifted to using hydraulic modeling for drainage planning. From this, DEP has launched the Sewer Atlas, a multi-phase program starting with a criticality analysis of the sewer network and evaluating performance at various levels; ultimately providing a dynamic geospatial tool for municipal engineers to facilitate more effective capital planning. The Sewer Atlas supports master drainage planning and the integration of programs – including flow monitoring and smart sewers. This presentation will focus on the Sewer Atlas, its goals and objectives, and initiatives that are facilitated by this effort. Attendees will learn more about DEP's latest approach to drainage and capital planning, and the City's roadmap to mitigate flooding.	06/11/25	11:00 AM	11:30 AM	Steve	Carrea
WED079-03	Water	Water Education in Action: Aurora Water's Environmental Education and Outreach Program	For more than 25 years, Aurora Water has provided water education and outreach programs for the community in many forms. Providing water education programs on all levels from preschoolers to adults not only creates a community that is knowledgeable about water and values water, but acts on that knowledge to change behaviors and make water smart choices. For many of Aurora Water's programs to be successful – whether they be new water projects, incentives, regulations or attracting a future water workforce – a water literate public that values water as a natural resource is fundamental. Learn about these award winning, engaging and innovative programs and how they support the Colorado Statewide Water Education Action Plan.	06/11/25	11:00 AM	11:30 AM	Natalie	Brower-Kirto

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T08	Water	T08 - Denver Zoo: Water Reuse Educational Facility Tour	Attendees will tour the Denver Zoo Conservation Alliance to learn about recycled water and water reuse systems. On this tour, you'll hear from Zoo employees about the ongoing expansion of the recycled water irrigation system. Additionally, you'll hear from Zoo employees about the newest life-support systems (LSS) at Denver Zoo. Denver Zoo has utilized life-support systems for the past thirty-years, resulting in a reduction in water consumption as well as benefiting the animals in our care. Tour attendees will learn how the needs of the animals inform the unique requirements of Denver Zoo's newest life-support systems. Note: Closed-toe shoes that are comfortable for walking.	06/11/25	12:30 PM	4:30 PM	Facility Tour	Facility Tour
WED086	Water	WED086 - Rising Above: Elevating Infrastructure Planning with Asset Management to Create a Master Plan	As cities age, many utilities capital programs have changed focus to the replacement of aging infrastructure. Replacement planning is now one of the most important components of a comprehensive plan. This session will discuss how asset management and master planning can work together to create a comprehensive planning process.	06/11/25	1:30 PM	3:00 PM	Lisa	Lattu
WED086-01	Water	The Integration of Asset Management and Master Planning	The nexus between asset management plans and master planning, as a vital component of a comprehensive plan. An overview of how asset management contributes to the comprehensive planning process.	06/11/25	1:30 PM	1:45 PM	Matt	Huang
WED088	Water	WED088 - Innovative Approaches for Treatment Plant Rehabilitation and Upgrade	This session will discuss innovative approaches for upgrading water treatment plants. The session covers multiple unit processes including ozone, DAF and dual media filtration.	06/11/25	1:30 PM	4:30 PM	Matt	Ridens
WED088-01	Water	Floating and Filtering in the Same Structure: How Stacked DAF/Filtration Maximized Quail Creek WTP Site to Expand to 90 MGD	As demands in Utah's Washington County Water Conservancy District increase, the Quail Creek Water Treatment Plant faced the challenge of increasing its treatment capacity from 60 to 90 million gallons per day (mgd). The existing 20 mgd flocculation and sedimentation basin was identified as a bottleneck, prompting a detailed evaluation of potential alternatives to replace this process. This presentation will highlight the evaluation process, cost savings, site impacts, and design details for 30 mgd of a unique stacked dissolved air flotation and filtration process, in a single structure, to be built within the existing floc/sed footprint.	06/11/25	1:30 PM	2:00 PM	Matt	Ridens

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WED089	Water	WED089 - Advances in Pipeline Rehabilitation	This session focuses on innovations in both the research and application of rehabilitation methods for water mains and other pressure pipelines.	06/11/25	1:30 PM	4:30 PM	David	Katzev
WED089-01	Water	C623 Design Appendix: A Blueprint for CIPP Lining of Pressurized Pipelines	This presentation provides an overview of the design appendix which will supplement AWWA C623. This addendum to the CIPP water main rehabilitation standard is currently in development and provides a detailed approach to cured-in-place pipe (CIPP) design as a Class III or IV system for pressure pipe applications.	06/11/25	1:30 PM	2:00 PM	David	Kozman
WED090	Water	WED090 - Distribution System O&M - Thinking Outside the Box	This session will cover topics regarding the Distribution System Operations & Maintenance, including Adopting Valves, disappearing system storage and sizing service Zones for energy reduction	06/11/25	1:30 PM	3:00 PM	Arnaldo	Colon Maldo
WED090-01	Water	The Secrets to Adopting Valves	Valves are often overlooked, yet they are essential components that regulate pressure, control flow, and ensure efficient operation. At WRO, we have embraced a proactive approach by "adopting" key valves across our system, creating a comprehensive maintenance program to ensure their longevity and optimal performance. Neglecting a valve, like neglecting a pet, comes with consequences. A valve that isn't well-maintained could malfunction, causing imbalances in water pressure, damaging infrastructure, or interrupting service. Proper care, however, ensures that the valve not only functions correctly but also serve as a valuable measurement station.	06/11/25	1:30 PM	2:00 PM	Arnaldo	Colon Maldo
WED091	Water	WED091 - Tackling PFAS As A Small System	Per- and Polyfluoroalkyl Substances (PFAS) pose a growing challenge to drinking water safety, particularly for small water systems with limited resources. This session will explore the unique obstacles faced by small systems in managing PFAS contamination and provide actionable insights on available treatment technologies, regulations and funding opportunities.	06/11/25	1:30 PM	4:30 PM	Stephanie	Elliott

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WED091-01	Water	Navigating PFAS Challenges: Cost-Effective Treatment Approaches for Rural and Mid-Sized Utilities	PFAS is a huge concern for many small to mid-sized utilities in the country. The urgency propagated by the promulgation of the PFAS Rule, and the funding opportunities offered by the federal and state governments, forcing these utilities to take action and "Do Something" to address their PFAS issues. This presentation summarizes the work done by two such utilities who proactively started strategizing to manage their PFAS issues. The projects they undertook, provided pathways to understand the issue in their systems, identify technical alternatives to remedy the issues, know the cost implications and prepare funding arrangements (loans / grants). This process is replicable; will help other similar utilities to manage PFAS.	06/11/25	1:30 PM	2:00 PM	Aziz	Ahmed
WED093	Water	WED093 - Beyond the CMMS: Tools to Leverage the Mountain of Data	This session will introduce various tools which consume CMMS data, which help in daily business decisions, including visualization, decision support, and predictive analytics tools. As the mountain of CMMS data mounts with increasing volumes of work orders and inspections, analysis with spreadsheets becomes prohibitively burdensome. This session will explore ways to automate the process.	06/11/25	1:30 PM	3:00 PM	Jennifer	Suttles
WED093-01	Water	Use of predictive analytics and CMMS data to support distribution pipe renewal and reduce break rate	STPUD will present case study on using predictive analytics, consuming CMMS data, to select and prioritize break rates using predictive analytics.	06/11/25	1:30 PM	1:52 PM	Jim	Kelly
WED102	Water	WED102 - The Perspectives of the Ratings Agencies on the Water Sector	This 90 minute session will reprise the moderated conversations between the three ratings agencies (S&P Global, Moody's, Fitch) held during previous ACE meetings.	06/11/25	1:30 PM	3:00 PM	Tracy	Mehan
WED104	Water	WED104 - SMART Water Loss Technology	New technology, AI, and Machine Learning are helping water utilities monitor and manage water loss. This session has three examples to show how these new SMART approaches are helping to tackle water loss.	06/11/25	1:30 PM	3:00 PM	Gyeong Sun	Kim

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WED104-01	Water	Using Pressure Data to Determine Event Localization	The presentation will cover the methodology behind using a hydraulic model using pipe, hydrant and valve data, a pre-constructed time matrix, and pressure sensors can help determine how a hydraulic event is detected and propagates through a water distribution system creating a heat map of affected areas.	06/11/25	1:30 PM	2:00 PM	KAREN	SIU
WED106	Water	WED106 - Cyber Security and the Circular Economy	Cyber Security and the Circular Economy – The integration of cybersecurity into the circular economy is vital in ensuring the transition toward circular practices in Industry 4.0. This presentation addresses the relationship between cybersecurity and the circular economy from economic, social, and environmental perspectives: Cybersecurity plays a significant role in enhancing process control and reducing uncertainty in industrial decision-making.	06/11/25	1:30 PM	4:30 PM	Kevin	Morley
WED111	Water	WED111 - Novel Approaches for Building One Water Frameworks	Starting with one of the most common One Water concepts, this session will then expand the One Water conversation to be more holistic and identify the potential methods or frameworks that utilities can use to guide them in planning and implementing a One Water approach that meets the current and future objectives of their utility reflecting its unique circumstances.	06/11/25	1:30 PM	3:00 PM	Kyle	Hamilton
WED111-01	Water	Purple Pipe to Potable: A Case Study	Utilities throughout the state are at a decision point regarding the application of their recycled water: purple pipe or potable? The Los Angeles Department of Water & Power is navigating the balance between NPR and IPR in the course of delivering the Groundwater Replenishment Project with consultant Jacobs.	06/11/25	1:30 PM	2:00 PM	Kyle	Hamilton
WED114	Water	WED114 - Effective Treatment Strategies and Key Challenges for Small Water Systems	Small water systems are met with a set of challenges when it comes to providing safe, clean drinking water to their communities. From limited budgets and staffing to the complexities of treatment technology and regulatory compliance, managing water quality in these systems requires innovative, cost-effective solutions.	06/11/25	1:30 PM	4:30 PM	Nicholai	Kristel

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WED114-01	Water	Small System Challenges and Strategies for Removing Natural Organics	The meaning of “high organics” means something different to all water professionals. Small communities in Northern Alberta struggle with “high organic” laden source waters with levels ranging from 15 to 40 mg/L of dissolved organic carbon (DOC). As expected, these high organics cause concerns about colour, taste, odour, disinfection residuals, and disinfectant by-products (DBP). These organic-laden waters are challenging for those with the resources of a large municipality, let alone those with small systems.	06/11/25	1:30 PM	2:00 PM	Nicholai	Kristel
WED115	Water	WED115 - Power Up Your Impact: Connecting Through Creativity and Storytelling	Building support for infrastructure projects and budget priorities requires more than data—it demands impactful messaging that resonates with the audience. This presentation provides actionable strategies for crafting creative, audience-focused communications that engages elected officials, decision-makers, and the public.	06/11/25	1:30 PM	3:00 PM	Toni	Martin
WED115-01	Water	Are You Listening? Effective Communication with Elected Bodies is a Pathway to Success	In this presentation, we will discuss the importance of communication with elected officials for your project delivery success. We will discuss the significance of effective communication regarding infrastructure and budgetary concerns when dealing with elected officials, explore the common challenges that hinder individuals from effectively conveying infrastructure-related issues to decision-makers, and uncover some techniques for identifying and presenting critical information to elected bodies.	06/11/25	1:30 PM	2:00 PM	Toni	Martin
WED116	Water	WED116 - Digital Tools to Elevate Water Utility Customer Experience	Improving customer experiences is a top priority for many utility systems. This session will focus on areas that certain utilities are leaning into that are intended to enhance the customer experience. From first call resolution, to increasing engagement with customer portals, to revamping the utility billing process to cloud-based solutions, this session will identify a range of options that can be explored to improve engagement of customers and efficiency.	06/11/25	1:30 PM	3:00 PM	Drew	Beckwith
WED117	Water	WED117 - One Water Projects Across the World	To achieve sustainability, the One Water concept must be a part of water management strategy to ensure effective and efficient use of water resources to protect public health and the environment, and at the same time support economic activities and growth. Drinking water, wastewater, stormwater, reused water, and other forms of water are all part of the global hydrologic cycle and they are intricately linked. This session explore such linkages through the One Water concept to allow us to better manage our most vital resource.	06/11/25	1:30 PM	4:30 PM	Carlo	Galicia

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WED117-01	Water	SBR for the home: a potential for innovation in wastewater treatment in the Philippines	This study describes a small scale modular sequencing batch reactor design for the home in the Philippines, with the goal of treating water onsite, with the design accompanied with technical, legislative and economic analyses	06/11/25	1:30 PM	2:00 PM	Carlo	Galicia
WED119	Water	WED119 - Navigating Current Workforce Challenges	Given the understanding of continued and continued labor shortages, this session will focus on strategies to address workforce needs from a geographic and innovation perspective. Moreover, this session will identify some thinking relative to knowledge transfer approaches that can help utilities keep continuity of operations and efficiency/effectiveness as many more experienced staff exit the workforce.	06/11/25	1:30 PM	3:00 PM	Stephanie	Corso
WED119-01	Water	Water Utilities Unite: Global Collaboration to Address Workforce Needs	The Water Tower and Sydney Water conducted three parallel design sprints with utility staff to identify and prototype solutions to address utility challenges in recruiting, retaining, and upskilling the fit-for-future workforce. This presentation will provide participants with insight into the data collected including the top challenges experienced by skilled trade staff, college-track staff and utility leadership as well as solutions developed by the participants to address these key challenges. A new candidate employee experience will be revealed that integrates the ideas from the first-hand perspectives of the utility participants.	06/11/25	1:30 PM	2:00 PM	Joanna	Brunner
WED086-02	Water	An Asset Management-Focused CIP Plan	The focus of Mesa Water’s CIP Update is the integration of condition assessment into CIP planning with traditional hydraulic and water supply planning. The plan also developed a roadmap for the asset management system to work with existing CMMS.	06/11/25	1:45 PM	2:00 PM	Karyn	Igar
WED093-02	Water	City of Houston builds dashboards to make key asset information available to all	The presentation will highlight the process taken from the initial CMMS configuration to the development of the utilized data pipeline and showcase example report dashboards developed using Microsoft PowerBI.	06/11/25	1:52 PM	2:14 PM	Andy	Burton

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WED086-03	Water	Holistic Distribution Planning: Leveraging your Hydraulic Model to Plan for Asset Replacement	Leveraging hydraulic models to assess pressure zone performance and master plan the pipeline distribution system by identifying pipeline replacement sizes and upgrades to meet customer level of service under future demand and fire flow scenarios.	06/11/25	2:00 PM	2:15 PM	Sandra	Mulhauser
WED088-02	Water	Three Facilities, Two Phases - Commissioning Houston's First Ozone Disinfection System	This presentation will explore the experience of a young professional on the Houston Waterworks Commissioning Team. It will include the challenges of commissioning ozone equipment over two phases, across three facilities, and the unique barriers encountered in each phase.	06/11/25	2:00 PM	2:30 PM	Lander	Kennedy
WED089-02	Water	EPA-Compliant Solutions: Replacing Asbestos Cement Pipes Using Close Tolerance Pipe Slurrification	Close Tolerance Pipe Slurrification (CTPS) technology was approved by the EPA on June 10, 2019, as a compliant method for rehabilitating Asbestos Cement (AC) pipes. This innovative technique provides municipalities with an alternative to traditional open-cut methods, which are often disruptive and costly. CTPS allows for efficient remediation of aging AC pipes while minimizing public disruption and environmental risks associated with asbestos exposure. By offering a safer and more effective approach, CTPS equips agencies, owners, and engineers with a valuable tool to address the challenges of aging infrastructure as AC pipes reach the end of their design life.	06/11/25	2:00 PM	2:30 PM	Brian	Goad
WED090-02	Water	Thinking Further Inside the Box – Right Sizing a Service Zone when Replacing a Booster Station for a 75% Reduction in Energy Use.	The City of Minneapolis WTDS' Southwest Pump Station (SWPS) is scheduled for replacement. During preliminary design, we found that by relocating the SWPS, the pressure zone area could be reduced by 85%. This case study emphasizes the importance of thinking "outside" the box and thoroughly exploring ideas before replacing assets. Long term energy savings with minimal changes to customer level of service can be achieved through thoughtful planning and analysis.	06/11/25	2:00 PM	2:30 PM	Christopher	Larson
WED091-02	Water	Small Town, Big Plans: Pursuing PFAS Upgrades to Enhance a Water Supply through Pilot Testing	This study focuses on one of the first pilot studies in the State of Virginia for per- and polyfluoroalkyl substances (PFAS) in the Town of Purcellville, which highlights PFAS treatment applications for small water systems. This work assessed how PFAS treatment media perform in the context of small groundwater systems including: intermittent plant operation (i.e., nightly well shutdowns), pre-chlorination, and the impact of dual-media filters for iron and manganese pretreatment before PFAS treatment. The findings from this pilot study are important to better understand PFAS treatment options that can feasibly combat the unique challenges Small Systems overcome to provide safe drinking water in light of recent PFAS regulatory changes.	06/11/25	2:00 PM	2:30 PM	Donald	Ryan

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WED104-02	Water	Case Studies: Water Leaks Detection through Industrial IoT and Machine Learning Technologies in South Korea and Vietnam	This study introduces an AI-based water leak detection system aimed at enhancing accuracy and response time. The objective is to develop a robust, real-time monitoring system utilizing machine learning. Over 100,000 leak sounds were collected to train the AI, and the system was tested in Wanju, South Korea, and Phan Thiet City, Vietnam. Fifteen pressure sensors were installed, allowing untrained locals in Vietnam to detect leaks after brief training. Results showed the system identified ten leaks in Wanju and eight in Vietnam, achieving a 20% reduction in water loss and saving approximately 188,000 cubic meters annually. These findings suggest the AI system can significantly improve water management and effectively utilize local manpower.	06/11/25	2:00 PM	2:30 PM	Gyeong Sun	Kim
WED111-02	Water	A How-to Guide for One Water Action in Your City	A One Water approach is a flexible, long-term strategy for comprehensively managing drinking water, reclaimed water, wastewater, and stormwater. It considers all water sources within a community to maximize environmental and community benefits, connecting all elements of the water cycle. This integrated approach aims to meet goals for water quantity, quality, equity, and resilience, allowing coordinated actions that benefit the community. Examples from a One Water Plan development, from defining One Water at the city management level to implementation strategies, as well as insights shared from One Water Planning (WRF 5175), will serve as a diverse analog for cities seeking to plan for their future water supplies with a One Water lens.	06/11/25	2:00 PM	2:30 PM	Paula Jo	Lemonds
WED114-02	Water	Guidance on Practical and Affordable Manganese Treatment for Small Drinking Water Systems	In August 2024, US EPA's Office of Research and Development awarded a two-year research contract to a research team led by Cornwell Engineering Group to evaluate Manganese treatment capital and operational costs, treatment performance, and residuals handling/disposal, targeting water systems serving less than 10,000 population. The project team will provide technical assistance for demonstrated innovative, affordable, and easily operated/maintained manganese treatment technologies. The work will produce a simplified tool for helping small utilities select economical Mn treatment and a Regulators' Guide highlighting key guidance. This is an update of progress and request for added participation.	06/11/25	2:00 PM	2:30 PM	Everett	Skipper
WED115-02	Water	Beyond the Town Hall PowerPoint: How To Conduct Effective Engagement To Build Understanding and Support For Your Project	Is your idea of conducting community engagement doing a PowerPoint presentation on a Tuesday night to a small group of the usual suspects in your service area? If so, you aren't just missing a chance to engage with the majority of your service area, you are missing a major chance to build trust and relationships. This presentation takes you from PowerPoint to power participation. Through case study examples and proven methodologies from the International Association of Public Participation, you will learn how to create, then successfully facilitate, effective and meaningful engagement techniques that don't just build awareness for your work, but also build understanding, trust, and value for the service you provide.	06/11/25	2:00 PM	2:30 PM	Samantha	Villegas
WED116-02	Water	Motivating Customers to Sign Up for Your Portal	Westminster, Colorado launched an online portal allowing customers to view their AMI-based hourly water use, pay bills, receive leak alerts, and more. After the first nine months, staff wanted more customers using the portal and conducted a randomized control trial experiment to test which outreach was most effective: postcards or emails; and messages about leak alerts, ease of bill payment, or viewing water use. Come learn what worked best so you can get more customers into your portal!	06/11/25	2:00 PM	2:30 PM	Drew	Beckwith

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WED119-02	Water	People Power: Navigating the Human Side of Innovation	Utility innovators discuss the crucial human side of progress in today's fast-paced, competitive landscape. Three trailblazers share experiences and tools that maintain project momentum, boost staff motivation, and secure leadership support for new technologies. Learn how balancing people skills with innovation drives success in the evolving utility sector.	06/11/25	2:00 PM	2:30 PM	Stephanie	Corso
WED093-03	Water	Decision Tree Functionality Using CMMS Data Automates Project Development	In this presentation, a utility in Texas will discuss the use of a cloud digital solution to integrate different data sources such as GIS, CMMS, and CCTV to develop a risk analysis and rehabilitation plan for their sewer assets.	06/11/25	2:14 PM	2:36 PM	Martha	Nunez
WED086-04	Water	CIP Synergy	Incorporating Tulsa’s mature asset management program with their 10-year comprehensive plan.	06/11/25	2:15 PM	2:30 PM	Joan M.	Gausvik
WED086-05	Water	2 for 1; Doing More by Planning Ahead	Combining lift station condition assessment with rehabilitation/replacement planning to increase capacity/ resilience of facilities.	06/11/25	2:30 PM	2:45 PM	Ellen	Musallam
WED088-03	Water	Physical Modeling to the Rescue; Addressing the Design Challenges of a 50 MGD Expansion of Eagle Mountain WTP in Fort Worth, TX	This presentation discusses challenges related to the design of a 500,000 gallon hydraulic break tank that serves as a storage reservoir for 3 filter backwash pumps as well as 6 Ultrafiltration (UF) membrane feed pumps in an extremely tight space as part of a 50-MGD expansion at Eagle Mountain Water Treatment Plant in Fort Worth, TX. The presentation also covers how those challenges were addressed with creative design ideas for the current and future scenarios, and a physical model study to meet the Hydraulic Institute acceptance criteria for pump intake. Vibration concerns and requirements for a dynamic vibration analysis will also be discussed.	06/11/25	2:30 PM	3:00 PM	Chetan	Soni

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WED089-03	Water	Air Quality Monitoring and Testing During CIPP Installation for Water Mains: A DC Water Case Study	DC Water rehabilitated century-old cast iron water mains using Cured-In-Place Pipe (CIPP) with a non-styrene-based epoxy resin. In response to a resolution by local elected officials following a recent sewer main rehabilitation project, the Department of Energy and Environment (DOEE) mandated that DC Water submit an Air Quality Monitoring and Testing Plan (AQMP). Partnering with the Water Research Foundation (WRF), DC Water aimed to research VOC emissions during CIPP. The University of Texas at Arlington implemented the AQMP, focusing on safety and emissions. VOCs were monitored and analyzed. The final report will guide future practices and provide valuable data for utilities nationwide.	06/11/25	2:30 PM	3:00 PM	Burak	Kaynak
WED090-03	Water	Poof! 23 Million Gallons of Treated Water Storage Instantly Evaporated	When the City of Greeley, Colorado suddenly lost 23 million gallons of storage following a regulatory inspection, alternatives were desperately needed to solve the problem. The city ultimately came up with a solution that optimized its existing system and delayed significant capital expenditures to replace the lost storage by 10-15 years.	06/11/25	2:30 PM	3:00 PM	Jim	Paulson
WED091-03	Water	Navigating PFAS in a Small Community	The presentation will provide a case study of how a small system in south-eastern Pennsylvania overcame the daunting challenge of addressing elevated PFAS levels in its community water system while under a consent order and public scrutiny through successful parternships with engineering experts, regulators, and funding agencies.	06/11/25	2:30 PM	3:00 PM	Michael	Brown
WED104-03	Water	Beyond the Band-Aid: Analyzing Risks for Enhanced Leak Detection at the City of Toledo, OH	Aging infrastructure, budget restraints, and labor shortages pose significant challenges for utilities like Toledo in managing water main replacement and minimizing Non-Revenue Water. While industry standards recommend replacing 1% of water mains each year, a $462 billion funding shortfall renders this goal unrealistic with $2.6 billion spent annually on repairs as a stopgap. Toledo took a smarter approach by looking Beyond the Band-Aid and recognized leakage recovery as a viable option to fund replacement. By implementing AI-driven predictive risk analysis to evaluate pipe condition, Toledo adopted an intelligent leakage recovery strategy deploying acoustic sensors in high-risk areas, optimizing water main replacements and reducing losses.	06/11/25	2:30 PM	3:00 PM	Emma	Quail
WED1111-03	Water	Embracing the One Water Framework to Build Resilient Utilities	The purpose of this presentation is to help utilities and cities understand how the One Water Framework (OWF) can be utilized to either start or progress on their One Water journey and become a utility of the future. The presentation will first describe the development and structure of the OWF. Next, the application of the OWF will be illustrated using a variety of One Water case studies. Lastly, the case studies' lessons learned are shared to give the audience practical steps to make their One Water vision a reality.	06/11/25	2:30 PM	3:00 PM	Inge	Wiersema

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WED114-03	Water	Overcoming Small System Challenges: Lessons Learned from Consolidated Management of Nitrate Treatment in California	Nitrate contamination is a critical, expensive water quality concern for many small water systems, further complicated by technical knowledge and capacity gaps to implement and operate advanced treatment systems, as well as the burden of high operational costs. To reduce funding hurdles and test the viability of consolidated management of nitrate treatment, the State of California allocated funding through Proposition 50 to implement and operate strong base anion exchange systems at economically disadvantaged nitrate impacted small water systems. The project evolved through funding changes, cost and bidding challenges of the pandemic, and many other hurdles and has reached its	06/11/25	2:30 PM	3:00 PM	Nathan	MacArthur
WED115-03	Water	Tapping into Graphic Design Basics and How to Create More Effective Public Communication Deliverables	Graphic design is so simple, that's why it is so complicated. Luckily, there is a repeatable process and creative strategists that can help your team tap into the answers that are foundational when communicating to the public about water projects. Attendees will learn when to work with creative problem solvers and how their collaborative process helps reduce public misunderstanding by creating audience targeted, vision-driven, easy-to-understand public-facing communications. This session will also focus on the dos and don'ts of graphic design for utilities and offer up resources for those that don't have budget or creative staff to help build public communication deliverables.	06/11/25	2:30 PM	3:00 PM	Tara	Bettale
WED116-03	Water	Transforming Utility Billing: Meridian Metropolitan District's Cloud-Based Future	Join us for an insightful presentation on the future of utility billing at the Meridian Metropolitan District (MMD). Ken Lykens, Meridian's General Manager, and Marie King, Associate at Hazen and Sawyer, will explore MMD's ambitious project to transition to a fully integrated, cloud-based utility billing system. Learn about MMD's vision for a more efficient, customer-centric solution, cost savings, comprehensive system requirements, implementation roadmap, lessons learned, and benefits realized. A must-attend for utility professionals and tech providers looking to enhance billing and customer service in a growing community.	06/11/25	2:30 PM	3:00 PM	Marie M	King
WED119-03	Water	Surviving the Silver Tsunami	The Great Retirement Wave is a reality for utilities, and it's not going away any time soon. Seattle Public Utilities will describe tools it's built in the hope of improving workforce development: recruiting, professional growth, and succession planning. Race and Social Justice elements are also part of the toolbox we're using, and we'll share data on how we're doing in this challenging time for utilities.	06/11/25	2:30 PM	3:00 PM	Alex	Chen
WED088-04	Water	Filter Overhaul at a Massive Scale – Rehabilitation and Automation of the 214+ MGD Alexander Orr Jr. Water Treatment Plant	The presentation details a large-scale rehabilitation effort for Miami Dade County (Florida) Water and Sewer Department. The project includes the replacement of all filter internals for over 214 mgd worth of treatment (32 filter boxes) and the addition of air scour blowers and piping. The project also includes the complete automation of the filters, with actuator replacement, new control consoles, and all supporting infrastructure. Topics such as equipment alternatives, detailed maintenance of plant operations (MOPO) planning, and modern filter control strategies are discussed to give attendees insight into how to carry out similar large and complex projects.	06/11/25	3:00 PM	3:30 PM	Wesley	Oehmig

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED089-04	Water	Advances in SIPP Linings that allows for Same Day Return to Service	Aging pressurized sewer force mains and potable water mains are now leaking, failing, and in need of renovation or replacement. Replacement is very costly and disruptive. The main method to renovate pressure pipelines has been the installation of a reinforced Cured-In-Place-Pipe (CIPP) liner. This presentation will present recent advances in Spray-In-Place-Pipe (SIPP) lining technologies developed to renovate pressure pipelines that allow for a faster return to service (hours compared to days), at significanly lower construction cost and the reduced need for the construction of a temporary bypass system.	06/11/25	3:00 PM	3:30 PM	Mark	Knight
WED091-04	Water	Evaluating How Small Utilities in Colorado Can Best Comply with The New PFAS Regulations	This presentation discusses the unique challenges small groundwater utilities in Colorado are facing when navigating the new PFAS MCLs. Many such utilities have PFAS concentrations that are close to, or just above the newly adopted regulatory limits. Two case studies will be presented that summarize their approach to sampling, data interpretation, and the different treatment alternatives considered.	06/11/25	3:00 PM	3:30 PM	Talia	Assi
WED114-04	Water	GAC Is Not Just for PFAS - Meeting Both Short-Term & Long-Term DBP Compliance with GAC	This presentation will step through a small, rural town's journey to maintain DBP compliance, first with short-term mitigation through replacement of the anthracite media in the existing filters with GAC and then with a more sustainable long-term solution of post-filter GAC adsorption. Their lessons learned on implementing these solutions and the steps taken to minimize the financial burden on the community will be reviewed.	06/11/25	3:00 PM	3:30 PM	Jihyon	Im
WED126	Water	WED126 - Hands-On Physical Condition Assessment of Facility Assets with Exercises Using Actual Utility Condition Assessment Frameworks	This session will provide exercises using basic and advanced physical condition assessment frameworks so participants can experience the pros and cons of each. Attendees will be given photos of different types of assets to rate their condition. Pros and cons of the frameworks and how the condition data is used to make asset decisions will be covered.	06/11/25	3:00 PM	4:30 PM	Kevin	Campanella
WED126-01	Water	Intro to Physical Condition Assessment and AWWU Case Study	Introduce the premise of physical condition assessment in the context of overall asset health assessment, provide an example of a complex condition assessment framework, and facilitate attendees through the assessment of assets using that framework.	06/11/25	3:00 PM	3:30 PM	Kevin	Campanella

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED130-01	Water	You Wouldn’t Drive Your Truck with a Faulty “Check Oil” Gauge, so Why Operate a Pump w/out a KPI Dashboard that Tells You Whazz-up	This presentation will describe the limitations of traditional asset management likelihood of failure (LOF) accuracy and outline the importance of integrating the energy management strategies into the asset management protocol to evaluate the remaining useful life of critical electro-mechanical equipment, which is accomplished by Kimley-Horn's tried and true Xak-PakTM for field wire to water efficiency testing audits. For permanent pumping installations, Kimley-Horn incorporates real-time pump performance and troubleshooting dashboarding into the control and monitoring platform with their Pump Doc Tool	06/11/25	3:00 PM	3:30 PM	Eric	Dole
WED132	Water	WED132 - Understanding Risk Communication and PFAS: What We Know and What Remains Unexplored	A panel of expert researchers and practitioners in risk communication will present an overview of existing communication tools, tactics, templates, and current resources and research surrounding PFAS risk communication. The discussion will cover themes such as managing uncertainty, affective responses, and beliefs about personal risk. Additionally, the panel will engage the audience to examine challenges faced in communicating about PFAS and identify further tools, resources, and research needed to enhance communication strategies regarding this pressing environmental issue. Please schedule last day of conference	06/11/25	3:00 PM	4:30 PM	TBA	TBA
WED134	Water	WED134 - AI in Action: Enhancing Work with Intelligent Solutions	This session features an engaging panel of young professionals who will discuss how AI is reshaping the workday and boosting efficiency to transformatively impact daily workflows. Following this, a presentation will delve into how AI was used to compile and understand young professionals' insights on the AWWA's Water 2050 initiative and the future of water management. Don't miss this opportunity to learn how young professionals are using AI and innovative thinking to shape the future of work	06/11/25	3:00 PM	4:30 PM	Stephanie	Estabrook
WED144	Water	WED144 - Leak Detection Technology Case Studies	While many utilities may focus on detecting leaks in distribution systems, transmission lines are not immune to water loss. This session features two examples of approaches to evaluating transmission lines for leakage. A third example describes how CCTV coupled with AI can be used to assess pipe for potential leaks within pressurized water mains.	06/11/25	3:00 PM	4:30 PM	TBA	TBA
WED144-01	Water	Transmission Pipes are not the Sleeping Giants We Might Think: Considerations for Proactive Transmission Pipe Leak Monitoring.	The perception that ‘Transmission pipes don’t leak’, is commonplace. These ‘sleeping giants’ are often overlooked or deferred for review based on fewer linear miles and lower break rates. While true, this logic does not capture the high consequence of failure, and broad potential for missed leaks on large diameter pipes. This paper will offer factors that Utilities should consider when assessing and monitoring critical transmission pipes. It will dive into a specific district example of using a permanent transmission pipe leak monitoring (TPLM) system in New Jersey. Finally, this example will offer insight on how a fixed solution can offer valuable supervision on a critical pipe, and add capacity to a utility’s operations.	06/11/25	3:00 PM	4:30 PM	George W	Smidhum Jr

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED148	Water	WED148 - Asset Management in the Rockies	Learn how Rocky Mountain utilities are identifying regional challenges and planning for the future. Topics include sustainable approaches for on-site carbon generation, rehabilitation of pipes in challenging terrain and identify novel water sources in the region's arid climate.	06/11/25	3:00 PM	4:30 PM	Brent	Tippey
WED148-01	Water	On-site GAC Reactivation for Communities in Colorado and Across the US	As GAC has been increasing in adoption for drinking water facilities to address multiple contaminants, concern has been growing about the economics and availability of raw material to meet industry needs. In response, more communities have been evaluating the feasibility of on-site GAC reactivation at local, utility-lead locations. In some cases, adjacent communities are looking at the prospects of banding together to offset capital investment and labor needs. This presentation will highlight results of multiple feasibility investigations from diverse communities in different geographies across the US including Aurora Colorado.	06/11/25	3:00 PM	3:30 PM	Brent	Tippey
WED088-05	Water	Setting the Stage for the New West Parish Filters Water Treatment Plant	The presentation will focus on the planning and design efforts made to modify existing facilities in order to prepare the site of the existing West Parish Filters Water Treatment Plant for a major construction project, a new 65-mgd WTP. The goals of these efforts include minimization of risk to the existing facilities, maintenance of water supply to existing customers and facilitating the construction of the new facility while minimizing impacts to existing operations.	06/11/25	3:30 PM	4:00 PM	Marc	Morin
WED089-05	Water	Catastrophic Failure, Condition Assessment, Rehabilitation, and Long-term Protection of a 36-inch Concrete Cylinder Pipeline	Catastrophic failure, condition assessment, rehabilitation, and long-term protection of a 36-inch concrete cylinder pipeline with installation of an impressed current cathodic protection system.	06/11/25	3:30 PM	4:00 PM	Greg	Jones
WED091-05	Water	Programmatic Approach to PFAS Treatment for Small-Scale Systems	Small systems are disproportionately impacted by the PFAS regulation. This presentation details how a utility is tackling their PFAS challenges by implementing a programmatic approach to deployment of small-scale treatment systems at 209 impacted sites. One system has been implemented to-date, with approximately 10 more planned for commissioning by the end of 2024 and the rest in a phased approach through 2028. In addition to programmatic benefits for expedited schedule and reduced costs, piloting performance of various AIX resins and a novel media product will be shared. The novel product tested can be regenerated for non-potable reuse, reducing disposal risks with forthcoming regulations, and is less susceptible to inorganic fouling than	06/11/25	3:30 PM	4:00 PM	Sean	Lammerts

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED114-05	Water	Cost-Effective Solutions for High-Quality Membrane Filtration in Small-Scale Systems Amid Rising Construction Costs	The Public Utility District No. 1 of Skamania County (District) serves 3,000 people the City of Carson, WA. This presentation will focus on funding limitations for small systems, operational considerations for small system operators, and the design of cost-effective membrane systems for small systems.	06/11/25	3:30 PM	4:00 PM	Brian	Rowbotham
WED130-02	Water	The Importance of Electrical System Maintenance	This presentation will educate the audience on the criticality of performing scheduled and routine maintenance on their electrical system. Electrical equipment commonly encountered throughout the Water and Wastewater industry will be the focus of the presentation. Recommended maintenance intervals, maintenance/testing activities, electrical distribution system modeling, and critical failure prevention using advanced instrumentation and diagnostics will be examined.	06/11/25	3:30 PM	4:00 PM	Adam	Wahler
WED144-02	Water	Leak Detection on Large Diameter Transmission Mains	There are many options for finding leaks on water distribution mains. Large diameter transmission mains typically operate at low to medium pressure and have very few access points for monitoring therefore pinpointing leaks is more difficult. Hydrophones were installed on a 7.5 km 24 inch pipe at intervals of up to 1/3rd mile. Two leaks were found in the first 4 days of operation. This presentation will show how the use of extremely sensitive hydrophones can detect acoustic signatures of leaks and other in-pipe disturbances on large diameter transmission mains where there are large distances between sensor points.	06/11/25	3:30 PM	4:00 PM	Paul	Gagliardo
WED148-02	Water	Under Pressure: Trenchless Rehabilitation of Raw Water Supply Pipelines in the Rocky Mountain Region	An overview of the various trenchless technologies available for rehabilitation of raw water supply pipeline applications is presented, with focus on methodologies that are best suited for difficult to access locations commonly encountered in mountainous regions of the Rocky Mountain West. System design considerations, installation procedures, and advantages of using a trenchless approach for raw water and pressure pipeline rehabilitation projects will be covered. Emerging trends and innovations that are occurring within the pressure pipeline rehabilitation sector will also be discussed, with example projects in the Rocky Mountain region highlighted where trenchless methods have been successfully used for raw water pipeline rehabilitation.	06/11/25	3:30 PM	4:00 PM	Jeff	Maier
WED088-06	Water	Operations and Maintenance Focused Design for Resilient Treatment Facilities	A valuable session for utility operators, management, and consulting engineers, alike, this presentation will explore the importance of operation staff input in design, the need for detailed O&M manuals presented during equipment/facility startup, and the need to consider long-term maintenance, repair, and replacement strategies from the onset of design.	06/11/25	4:00 PM	4:30 PM	Jonathan	Williams

Code	For Oregon Only - Water or WW	Session Title	Details	Day for Session	Start Time	End Time	Speaker 1 First Name	Speaker 1 Last Name
WED089-06	Water	Service life testing of trenchless rehabilitation technologies under external loading	This presentation will focus on the mechanical performance and structural integrity of pipelines rehabilitated using trenchless technology. Full-scale testing was conducted on 12-inch diameter steel and cast iron specimens, simulating real-world stress conditions such as traffic loads, temperature fluctuations, and excavation-induced deformations. Both axial and bending loads were applied to assess the resilience of the CIPP system at critical stress points like circumferential cracks and joints. The presentation will provide valuable insights into material behavior, repair design, and future applications for trenchless pipeline repair technologies.	06/11/25	4:00 PM	4:30 PM	Sina	G. Senji
WED091-06	Water	POU Treatment Strategies to Assist Disadvantaged and Underserved Homeowners with Removal of PFAS from Drinking Water	As the PFAS issue continues to evolve, Small Public Water Supplies should stay up to date on the drinking treatment technologies that are available for use in homes or buildings, and the use limitations of these devices. Disadvantaged and underserved communities are the most vulnerable and least equipped to address adverse human health effects of PFAS in drinking water. This session will explore the in-home treatment technologies that are available, and funding programs to assist Small Systems with implementation.	06/11/25	4:00 PM	4:30 PM	Eric	Yeggy
WED114-06	Water	Bridging the Gap: POU/POE Devices and the Human Right to Water in California	Achieving California’s human right to water resolution is going to require a set of short- and long-term strategies including Point-of-Use/Point-of Entry (POU/POE) devices. POU/POE devices used by public water systems (PWS) in California for the purpose of complying with drinking water standards must be independently certified. Currently, the certified POU/POE devices in the market do not meet California's water quality objectives for 1,2,3-TCP, hexavalent chromium, uranium, and high levels of nitrate. To bridge this gap, this study evaluated service connections of small water systems and domestic wells that could potentially benefit from implementation of POU/POE devices to address contamination issues.	06/11/25	4:00 PM	4:30 PM	Yamrot	Amha
WED130-03	Water	My Brand-New Pumps-Shake, Rattle and Roll	Specifying and implementing nationally recognized standard for installing rotating equipment will result in less headaches and issues during startup and long-term problems for the operation and maintenance personnel. This presentation will expand on the correct way to install pumping equipment pursuant to current industry standards as well as present the old practices of seasoned engineers and contractors and the issues they cause.	06/11/25	4:00 PM	4:30 PM	John	Koch
WED144-03	Water	CCTV of Pressurized Water Mains? Why This Is Now an Important Tool in the Water Industry Water Loss Toolbox!	Water utilities have not traditionally seen the value of televising pressurized water mains. Until now. While most industry professionals agree that closed-circuit television (CCTV) cameras can’t ‘see’ leaks, water utilities are combining CCTV cameras with new technology able to automatically identify leak locations and estimate flow rates, replacing less accurate acoustic sensors? The result: a dramatic reduction in the digging of dry holes, a more complete assessment of full length pipes to dramatically improve water loss management. The secret is not using CCTV cameras for continuous recording. Instead, using new technology to know where to STOP the camera so AI can confirm water particulates exiting the pipe.	06/11/25	4:00 PM	4:30 PM	Chuck	Hansen

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WED148-03	Water	Building Resilience: How Loveland Transformed Stormwater Management through Data-Driven Innovation	the City of Loveland, Colorado, was severely impacted by catastrophic floods, exposing critical vulnerabilities in its stormwater infrastructure. This session will explore how the city transformed its stormwater management practices through data-driven decision-making and advanced technology integration. Attendees will gain insights into the process of enhancing stormwater inspection workflows, improving asset management, and leveraging GIS for better infrastructure planning and maintenance. The session will showcase the real-world impact of these efforts, including improved public safety, environmental protection, and operational efficiency.	06/11/25	4:00 PM	4:30 PM	Mark	Grabowski

Speaker 1 Title	Speaker 1 Company
Project Manager, Water Infra. & Climate	
Director of USC's ReWater Center	University of Southern California
	Pacific Institute
Assistant Professor	Texas State University
Global Director, Water	Arcadis
Engineering Manager	North Texas Municipal Water

Speaker 1 Title	Speaker 1 Company
Condition Assessment Regional	Black & Veatch
Senior Vice President	Arcadis
Director, Engineering and Technical	DC Water
Senior Professional	HDR
	Carollo Engineers
	American Water Works Associati
Professor	Florida Central Universi
	Water Research Foundati

Speaker 1 Title	Speaker 1 Company
Professor	Florida Central University
CEO	American Water Works
Vice President	Hazen and Sawyer
Director of Water and Reuse	Hazen and Sawyer
	Michigan State University
Associate Professor	Tulane University
Staff Professional	Water Research Foundati

Speaker 1 Title	Speaker 1 Company
Senior Vice President	Arcadis
Condition Assessment Regional Practice Lead	Black & Veatch
	Water Research Foundation
Northwest Drinking Water Leader	Brown and Caldwell
Global Director, Water	Arcadis
	City of Houston

Speaker 1 Title	Speaker 1 Company
Senior Water Engineer	Arcadis
	Jacobs
Engineering Manage	Parker Water & Sanitatio
	Tetra Tech
Project Manager, Water Infra. & Climate Adaptation	Ramboll

Speaker 1 Title	Speaker 1 Company
	Pinellas County Utilities
NA	Dr. Water Consulting
Senior Technical Manager	
Senior Technical Manager	Alfred Benesch & Company
	Core & Main
Project Engineer	Woodard & Curran
	Water For People
Project Manager	Pittsburgh Water and

Speaker 1 Title	Speaker 1 Company
Senior Professional Associate	HDR
	Tacoma Public Utilities
President	Confluence Engineering Group, Inc.
VP Sale and Marketing	IOSight
National Asset Management	Burgess & Niple, Inc.
Senior Project Manager	City of Toronto
	Freese and Nichols, Inc.

Speaker 1 Title	Speaker 1 Company
Senior Associate	Hazen and Sawyer
Postdoctoral Fellow	Clemson University
President	WQTS, inc.
	Pacific Institute
Water Reuse Global Practice	Black and Veatch

Speaker 1 Title	Speaker 1 Company
	American Water Company
Director of Applied Research and Programs	The Water Center at Penn
Principal Engineer	UL Solutions
	GHD
Assistant Manager of Planning	Detroit Water and Sewerage
Senior Project Manager	WaterOne

Speaker 1 Title	Speaker 1 Company
Global Principal	Jacobs
Manager - Scientific & Regulatory Affairs; Bureau	Philadelphia Water Department
	AECOM
Chemist	Greater Cincinnati Water Works
AI-Water Research Assistant	BlueGreen Decisions Lab, Colorado State University

Speaker 1 Title	Speaker 1 Company
Graduate Student	Colorado State University
	Stantec
	University of Minnesota
Program Analyst	Environmental Protection
	York University
Senior Engineering Specialis	Denver Water
Condition Assessment Engineer	Black & Veatch
Engineering Manager	American Water Works Compan

Speaker 1 Title	Speaker 1 Company
Discipline leader, Corrosion Control	CDM Smith
	Mazzei Injector Company, LLC
Assistant Professor	The College of New Jersey
Environmental Engineer	Stantec Consulting Services, Inc.
Business Development and Sales	Ecolab, Purolite Resins
Associate Vice President	

Speaker 1 Title	Speaker 1 Company
Associate Vice President	HDR Engineering
Senior Tehcnical Engineer	Louisville Water Company
	Water Research Foundati
	Lawrence Berkeley National Lab

Speaker 1 Title	Speaker 1 Company
Chief Environmental Compliance and Ethics officer	
Chief Environmental Compliance and Ethics officer	Pittsburgh Water & Sewer Authority
CEO	American Water Works Association
	Denver Water
Global Principal	Jacobs

Speaker 1 Title	Speaker 1 Company
Senior Principal Scientist	Hazen and Sawyer
Senior Principal Scientist	Hazen and Sawyer
	Carollo Engineers
Vice President & Director of Applied Researc	Arcadis

Speaker 1 Title	Speaker 1 Company
Director, Communications and Community Relations	Louisville Water
Director, Communications and Community Relations	Louisville Water
Senior Tehcnical Engineer	
CEO	American Water Works Association

Speaker 1 Title	Speaker 1 Company
Research Assistant	Michigan State University
	American Water Works Association
Operations Manager	Security Water District
Global Product Manager - Metallic Pipelines	Xylem
Senior Tehcnical Engineer	Louisville Water Company

Speaker 1 Title	Speaker 1 Company
	Mott MacDonald
PFAS Task Force Lead	Ardurra
	Jacobs
	FCS GROUP
	City of Golden PW / WTP

Speaker 1 Title	Speaker 1 Company
Regional Water Sector Leader	Stantec
	HDR
Communications Practice Leader	Jacobs
Deputy Director of Community Development - Enginee	City and County of Broomfield CO
	American Water Works Association

Speaker 1 Title	Speaker 1 Company
Principal Applications Specialist	Hach
	Michigan State University
Business Development and Sales	Ecolab, Purolite Resins
Water Administrator	City of Tucson Water
	Black & Veatch

Speaker 1 Title	Speaker 1 Company
	Hazen and Sawyer
Program Analyst	Environmental Protection Agency
Global Principal	Jacobs
Dr.	Southern Nevada Water Authority

Speaker 1 Title	Speaker 1 Company
Vice President, Communications and Marketing	Louisville Water
	American Water Works Association
Facility To	Facility To
Facility To	Facility To
Facility To	Facility To

Speaker 1 Title	Speaker 1 Company
Ph.D. Candidate	University of Waterloo
Ph.D. Candidate	University of Waterloo
Water Resources Leader	Lockwood Andrews & Newnam, Inc.

Speaker 1 Title	Speaker 1 Company
President	Corona Environmental Consulting, LLC
NA	Dr. Water Consulting
Principle of Research and Development	Tintometer Inc.
Principle of Research and Development	Tintometer Inc.
Graduate Research Assistant	University of Nevada, Reno

Speaker 1 Title	Speaker 1 Company
Graduate Research Assistant	University of Nevada, Reno
	West Yost
	Stanley Consultants Inc.
New Project Director	RCAP Solutions
New Project Director	RCAP Solutions

Speaker 1 Title	Speaker 1 Company
	University of Colorado Boulder
Executive Communications Specialist	Denver Water
Executive Communications Specialist	Denver Water

Speaker 1 Title	Speaker 1 Company
Director of Water and Reuse Innovation	Hazen and Sawyer
Research Support Specialist	New York State Water Resources Institute
General Manager/CEO	Del-Co Water Company

Speaker 1 Title	Speaker 1 Company
Water Resources Analyst	Long Beach Utilities Department
Engineering Manager	Marin Municipal Water District
General Manager	Grand Rapids Public Utilities
	Carollo Engineers, Inc.

Speaker 1 Title	Speaker 1 Company
Vice President and Chief Engineer	CHA
	University of Colorado Boulder
Water Planning Analyst	Salt River Project

Speaker 1 Title	Speaker 1 Company
	Hazen and Sawyer
	Jacobs
General Manager/CEO	Del-Co Water Company
	Sanipur

Speaker 1 Title	Speaker 1 Company
Water Process Engineer	Corona Environmental Consulting, LLC
Regional Technical Specialist (Drinking Water)	Jacobs Engineering OMFS
	Carollo Engineers

Speaker 1 Title	Speaker 1 Company
Environmental EIT	CDM Smith
Committee Chair	Sustainable Tucson
Associate	Hazen and Sawyer
Deputy Chief Executive Officer	Great Lakes Water Authority

Speaker 1 Title	Speaker 1 Company
	City of Springfield - CWLP
	Hopeworks
Water Process Engineer	Confluence Engineering Group
Senior Project Engineer	JEO Consulting Group
Public Affairs Director	Detroit Water & Sewerage Department

Speaker 1 Title	Speaker 1 Company
Principal Environmental Engineer	CDM Smith
Associate Professor	University of Arkansas
	U.S. Pipe & Foundry Company
Senior Project Manager - Resiliency Lead	Ardurra
	HDR

Speaker 1 Title	Speaker 1 Company
National Digital Water Lead	Hazen and Sawyer
	DC Water

Speaker 1 Title	Speaker 1 Company
Senior Environmental Engineer	USDA Rural Development
Senior Environmental Engineer	USDA Rural Development
Director, Water/ Wastewater	Halff

Speaker 1 Title	Speaker 1 Company
Senior Specialist	California State Water Resources Control Board, Division
	Aurora Water
	Aurora Water
President	Corona Environmental Consulting, LLC
W/WW Master Planning Engineer	Freese and Nichols, Inc.

Speaker 1 Title	Speaker 1 Company
PhD Student	Auburn University
Graduate Research Associate	Ohio State University
	Oak Ridge National Laboratory
Sr. Director, VP	Brown and Caldwell
	El Paso Water

Speaker 1 Title	Speaker 1 Company
Graduate Research Assistant / PhD Student	Virginia Tech
	Burns & McDonnell
Water Policy Director	WaterNow Alliance
Dr.	International Dioxcide, An ERCO Worldwide Compan
Strategic Communications Manager	HDR

Speaker 1 Title	Speaker 1 Company
General Manager	Opelika Water Board
Director of Customer Success	Qatium
CEO/Founder	One Water Econ
Senior Project Manager/Principal	CDM Smith
Office Director	TYLin Greeley and Hansen Water Solutions

Speaker 1 Title	Speaker 1 Company
Cost Structurer/ Business Development	Veolia Water Technologies & Solutions
Deputy Director of Programs and Partnerships	Cleveland Water Alliance
	Corona Environmental Consulting
Water and Wastewater Practice Leader	Merrick and Company
Vice President	Carollo Engineers

Speaker 1 Title	Speaker 1 Company
Engineering Manager	Beaver Water District
Communications Manager	Hazen and Sawyer
Manager - Water Research & Development	Louisville Water Company
Environmental Engineer/Project Technical Lead	CDM Smith
Professor	Florida Central University

Speaker 1 Title	Speaker 1 Company
	WSSC
	Kimley-Horn
National Sales Manager	Soval
Product Marketing Manager	AssetWatch
Senior Engineer at Asset Management	Greater Cincinnati Water Works

Speaker 1 Title	Speaker 1 Company
	Barr Engineering
CEO	KETOS
	Brown and Caldwell
Engineering Programs Manager	Dominion Water and Sanitation District

Speaker 1 Title	Speaker 1 Company
Water Resources Engineer	CDM Smith
	Hazen and Sawyer
	Brown & Caldwell
	Dewberry
	HDR

Speaker 1 Title	Speaker 1 Company
	Virginia/ Maryland American Water
Water Systems Manager	City of McCall, Idaho
Process Engineer	Brown and Caldwell
Water Technology Lead	STV
Senior Project Manager	Odyssey Engineering Group

Speaker 1 Title	Speaker 1 Company
	DCSE
	Villanova University
	CDM Smith
	University Of Colorado Boulder
Public Relations Specialist	The Municipal Authority of Westmoreland County

Speaker 1 Title	Speaker 1 Company
Public Relations Specialist	The Municipal Authority of Westmoreland County
Postdoctoral Researcher	Southern Nevada Water Authority
Postdoctoral Researcher	Southern Nevada Water Authority

Speaker 1 Title	Speaker 1 Company
Senior Professional Associate	HDR
Technical Practice Leader for Condition Assessm	AECOM
Senior Vice President	Arcadis
	WSSC Water

Speaker 1 Title	Speaker 1 Company
	Intuitech
	AECOM
Water Resources Engineer	HDR
	Aqua America

Speaker 1 Title	Speaker 1 Company
	DC Water
Civil Engineering Associate	Long Beach Utilities Department (LBUD)
	Hazen and Sawyer
	Beaver Water District

Speaker 1 Title	Speaker 1 Company
Director of Programs	Alliance for Water Efficiency
Director of Programs	Alliance for Water Efficiency

Speaker 1 Title	Speaker 1 Company
	Denver Water
	Beaver Water District
Facility Tc	Facility Tc
	Austin Water
Process Engineer	Freese and Nichols

Speaker 1 Title	Speaker 1 Company
Engineer	Colorado Springs Utilities
	TT Technologies, Inc.
Regional Process Engineer	Jacobs
Product Manager - PFAS Solutions	Ovivo

Speaker 1 Title	Speaker 1 Company
	HDR
Water Resources Engineer	EKI Environment and Water, Inc.
Civil Engineering Associate	Long Beach Utilities Department (LBUD)
District Manager	Castle Pines North Metropolitan District

Speaker 1 Title	Speaker 1 Company
Process Engineer	Stantec
Senior Associate	Hazen and Sawyer
Student	UNH
	Metropolitan Water District of Southern Californi

Speaker 1 Title	Speaker 1 Company
Director of Engineering - Projects	Denver Water
	Black and Veatch
Associate Civil Engineer	San Diego Public Utilities Depart. - San Diego, CA
Vice President & Director of Applied Research	Arcadis
Water Resources Engineer	HDR

Speaker 1 Title	Speaker 1 Company
Water Resources Analyst	Long Beach Utilities Department
Project Engineer	CDM Smith
	NJIT

Speaker 1 Title	Speaker 1 Company
	Black & Veatch
Manager of PIpeline Construction	East Bay Municipal Utility District
	City of Dallas Water Utilties
	Hazen and Sawyer

Speaker 1 Title	Speaker 1 Company
Project Technical Leader	CDM Smith
Project Engineer IV	CHA Consulting, Inc.
	University of Colorado-Boulder
	Lockwood Andrews & Newnam, Inc.

Speaker 1 Title	Speaker 1 Company
Project Manager	Tetra Tech
Senior Decision Scientist	Xylem
Water Resources Scientist	Albuquerque Bernalillo Water Utility Authority
Deputy Water Services Director	Phoenix Water Services Dept.

Speaker 1 Title	Speaker 1 Company
Senior Civil Engineer	Las Vegas Valley Water District
Sr Manager - Section Services	American Water Works Association
Principal	Water Demand Management, LLC (dba WaterDM)
Principal	Water Demand Management, LLC (dba WaterDM)

Speaker 1 Title	Speaker 1 Company
Chief Operations Officer	Cavanaugh
Principal Scientist	American Water
Director of Water Quality Protection and Restorati	Hazen
General Counsel and Legal Director	Louisville Metropolitan Sewer District
General Counsel and Legal Director	Louisville Metropolitan Sewer District

Speaker 1 Title	Speaker 1 Company
Water Resources Scientist	Albuquerque Bernalillo Water Utility Authority
Global Principal for Water Reuse	Jacobs
Senior Professional Associate	HDR
Senior Associate	Hazen and Sawyer
	AECOM

Speaker 1 Title	Speaker 1 Company
	WEST Consultants
	City of Greeley
	Stantec Consulting Services, Inc.
	University of Colorado-Boulder
President & CEO	Institute for Sustainable Infrastructure (ISI)

Speaker 1 Title	Speaker 1 Company
Engineering Manager	North Texas Municipal Water
Director of Programs	Alliance for Water Efficiency
Division Manager	ville de Montréal
Water Quality Coordinator	City of Bloomington

Speaker 1 Title	Speaker 1 Company
Utility Management Consultant	Brown and Caldwell
Innovation Manager	Enterprise Automation, A Tetra Tech Company
Principal Consultant	Black & Veatch
	AqueoUS Vets
Business Development Manager	SippTech

Speaker 1 Title	Speaker 1 Company
PhD Graduate Research Assistant	Colorado State University
Technical Director	Calgon Carbon Corporation
Watershed Superintendent	City of Newark, NJ
Principal Engineer	Consor

Speaker 1 Title	Speaker 1 Company
Principal Engineer	Hazen and Sawyer
	Portland Cement Association
Senior Decision Scientist	Xylem
Water Program Management	HDR Engineering
Water Efficiency Specialist	City of Spokane Water Department

Speaker 1 Title	Speaker 1 Company
Assistant Director	Miami Dade Water and Sewer
	Hazen and Sawyer
	Colorado Water Center
	HDR
Facility Tc	Facility Tc

Speaker 1 Title	Speaker 1 Company
Facility Tc	Facility Tc
Facility Tc	Facility Tc
PUBLIC INFORMATION OFFICER	OWASA
	Aqua America

Speaker 1 Title	Speaker 1 Company
Marketing Events Manager	Aquatic Informatics
Lead Program Manager	Greater Cincinnati Water Works
	Denver Water

Speaker 1 Title	Speaker 1 Company
IOT Director	McKim & Creed
	AGS Water Solutions
Water Engineer	Jacobs

Speaker 1 Title	Speaker 1 Company
Water Engineer	Jacobs
Director of Water Resources Innovations	Hazen and Sawyer
	fritsche
Senior Project Engineer	Kleinfelder
Senior Project Engineer	Kleinfelder

Speaker 1 Title	Speaker 1 Company
State Programs Director	ORWA
	Hazen and Sawyer
Principal Scientist	American Water
	Dongguk University
	Black & Veatch

Speaker 1 Title	Speaker 1 Company
National Director for Water Quality and PFAS	STV
Engineering Manager I	West Yost
Lead Program Manager	Greater Cincinnati Water Works
IOT Director	McKim & Creed
Senior Water Treatment Engineer & Project Manage	Denver Water

Speaker 1 Title	Speaker 1 Company
	Carollo Engineers
Process Engineer	Austin Water
Environmental Engineer	CDM Smith
	Jacobs
Water Efficiancey Resource	City of Greeley

Speaker 1 Title	Speaker 1 Company
Green Cities Analyst	Corvias Infrastructure Solutions
Project Engineer	Pittsburgh Water & Sewer Authority
Utility Manager	City of Folsom
Program Manager	Advanced Engineering and Environmental Services, I

Speaker 1 Title	Speaker 1 Company
Laboratory Technician	Passaic Valley Water Commission
Vice President, Sales & Business Development	Fend Incorporated
Principal Management Consultant	Arcadis
Managing Engineer	Brown and Caldwell

Speaker 1 Title	Speaker 1 Company
Research & Development	Tnemec Company, Inc.
	Brown and Caldwell
	Tetra Tech
Drinking Water Discipline Leader	CDM Smith
Drinking Water Discipline Leader	CDM Smith

Speaker 1 Title	Speaker 1 Company
	Jacobs Engineering
	Denver Water
Director of Water Efficiency	Cavanaugh
Director of Water Efficiency	Cavanaugh

Speaker 1 Title	Speaker 1 Company
Climate & Resilience Lead	Brown and Caldwell
Climate & Resilience Lead	Brown and Caldwell
	Hazen and Sawyer
Manager of Distribution Ops and Cross Connections	Loudoun Water
Chief Executive Officer	Tualatin Valley Water District

Speaker 1 Title	Speaker 1 Company
Chief Executive Officer	Tualatin Valley Water District
	HDR
Manager, Strategy	Xylem
Manager, Strategy	Xylem

Speaker 1 Title	Speaker 1 Company
Senior Manager - Event Tech & Engagement	American Water Works Association
Civil Analyst	Kimley-Horn
	Garver
	Colorado School of Mines

Speaker 1 Title	Speaker 1 Company
Senior Associate	Hazen and Sawyer
	Stantec
Project Engineer	JVA
North American Drinking Water Quality Leader	Stantec Consulting Ltd

Speaker 1 Title	Speaker 1 Company
President	WQTS, inc.
	Tarrant Regional Water District
	Atkinsrealis
Global Water Industry Director	Esri
Staff Professional	Carollo Engineers, Inc.

Speaker 1 Title	Speaker 1 Company
Southwest Water Sector Lead	Stantec
Vice President	Tetra Tech
Graduate Research Assistant	University of Colorado Boulder
Research & Development	Tnemec Company, Inc.
Sr. Product Manager	AMS

Speaker 1 Title	Speaker 1 Company
Drinking Water Solutions Leader	Black & Veatch
Environmental Engineer	CDM Smith
Principal Water Engineer	Arcadis
Senior Data Analyst	E Source Companies LLC
	WSP USA Corp

Speaker 1 Title	Speaker 1 Company
President	WQTS, inc.
Management Consultant	Arcadis U.S. Inc.
Project Engineer	Garver
Engineer	Colorado Springs Utilities
General Manager	Valley County Water District

Speaker 1 Title	Speaker 1 Company
	SCV Water
	Garver
Associate Engineer	Alameda County Water District
Engineering Manager	Plus Six Engineering, LLC

Speaker 1 Title	Speaker 1 Company
Eng. Mgr.-Water Team	Johnson Controls, Inc.
Chief, Bluebelts and Urban Stormwater Planning	New York City Department of Environmental Protecti
North American Drinking Water Quality Leader	Stantec Consulting Ltd
	NYC Dept. of Environmental Protection
Manager of Water Education and Employee Engage	Aurora Water

Speaker 1 Title	Speaker 1 Company
Facility Tc	Facility Tc
Associate Vice President	Carollo Engineers
Senior Associate	Hazen and Sawyer
Senior Associate	Hazen and Sawyer

Speaker 1 Title	Speaker 1 Company
Manager of PIpeline Construction	East Bay Municipal Utility District
Sr. Project Engineer	Hammer Head Trenchless Equipment
Executive Advisor	Puerto Rico Aqueduct Authority (PRASA)
Executive Advisor	Puerto Rico Aqueduct Authority (PRASA)

Speaker 1 Title	Speaker 1 Company
Vice President & Chief Engineer	CHA Company
Principal Mgt Consultant/AVP	Carollo Engineers
GIS Specialist, GISP	South Taho PUD
Deputy Executive Director	AWWA
Assistant Professor	California State University, Bakersfield

Speaker 1 Title	Speaker 1 Company
	IHYDRANT/MCWANE INC
	AWWA
Mechanical Engineer	Jacobs
Mechanical Engineer	Jacobs
Process Engineer	Associated Engineering

Speaker 1 Title	Speaker 1 Company
Process Engineer	Associated Engineering
Marketing Manager	Withers Ravenel
Marketing Manager	Withers Ravenel
Sr. Water Resources Specialist	City of Westminster Utilities
	Cebu Institute of Technology - University

Speaker 1 Title	Speaker 1 Company
	Cebu Institute of Technology - University
Chief of Staff	Isle, Inc
Senior Civil Engineer	Mesa Water District
Senior Asset Management Engineer	Carollo Engineers

Speaker 1 Title	Speaker 1 Company
Associate Civil Engineer	East Bay Municipal Utility District
	CDM Smith
	Azuria Water Solutions
Professional Engineer	City of Minneapolis
Environmental Scientist	Stantec

Speaker 1 Title	Speaker 1 Company
Assistant Professor	California State University, Bakersfield
	HDR
Principal Investigator, Sr. Vice President	Cornwell Engineering Group, Inc
	Raftelis
Sr. Water Resources Specialist	City of Westminster Utilities

Speaker 1 Title	Speaker 1 Company
Chief of Staff	Isle, Inc
Project Manager	Autodesk
Asset Manager	City of Tulsa
Operations Technical Support Manager	North Texas Municipal Water District

Speaker 1 Title	Speaker 1 Company
	DC Water
Civil Engineer IV	City of Greeley
Vice President	Gannett Fleming
Business Development Manager	Ferguson Waterworks
Vice President	Carollo Engineers

Speaker 1 Title	Speaker 1 Company
Water Process Engineer	Corona Environmental Consulting
	HDR, Inc.
Associate	Hazen and Sawyer
Director, Drinking Water and Utility O&M	Seattle Public Utilities
Project Manager	HDR

Speaker 1 Title	Speaker 1 Company
Professor	University of Waterloo
	Jacobs
Principal Environmental Engineer	CDM Smith
National Asset Management Leader	Burgess & Niple, Inc.
National Asset Management Leader	Burgess & Niple, Inc.

Speaker 1 Title	Speaker 1 Company
Water and Energy Practice Builder	Kimley Horn and Associates
Project Manager Operations	New Jersey American Water

Speaker 1 Title	Speaker 1 Company
Vice President	HDR
Vice President	HDR
Senior Associate/Operations Manager	Hazen and Sawyer
Engineer	Helix Water District
Director - Emerging Contaminants	Black & Veatch

Speaker 1 Title	Speaker 1 Company
Process Mechanical Engineer	Stantec, Inc.
Electrical Practice Leader	AE2S
	Gagliacqua Consulting
Associate Vice President	Dewberry Engineers, Inc.
	Garver

Speaker 1 Title	Speaker 1 Company
	University of Colorado Boulder
Technical Affairs Director	Water Quality Association
Senior Project Manager	HDR Engineering Inc.
Chairman & CEO	Electro Scan Inc.

Speaker 1 Title	Speaker 1 Company
	ITpipes