

**AWWA Webinar Program: Leading Research in the Field of Potable Reuse Research**  
**Wednesday, April 14, 2021**

**Webcast Description**

Overview:

The quality and quantity of conventional water supplies are increasingly affected by population growth, urbanization, prolonged and severe droughts, and climate change. With increased pressure on water systems, a diversified portfolio of sources is required to meet future water demands, ensure public health, and provide economic and environmental sustainability. One viable approach to address existing and anticipated water shortages is to implement water reuse. This webinar will cover leading research in the field of potable reuse.

This webinar will cover leading research in the field of potable reuse, including PFAS in potable reuse, wastewater-based epidemiology for COVID-19 surveillance and implications for potable reuse, and pathogen removal in a recycled water program. Based on prolonged, severe droughts and other factors making water supplies increasingly scarce, there is a clear need to more effectively use our resources to provide reliable, high-quality potable water. This webinar will provide insight into leading research in the field of potable reuse.

**Learning Objectives:**

1. Gain knowledge about PFAS in potable reuse
2. Understand the implications of wastewater-based epidemiology for COVID-19 surveillance on potable reuse
3. Understand the importance of pathogen removal for a recycled water program

**Presenter Biography Information**

**Dr. Eva Steinle-Darling, PhD** — Carollo Engineers, Inc

Dr. Eva directs Carollo's Water Reuse Technical Practice, supporting research, planning, feasibility studies, and design projects across the US and internationally. Her doctoral work at Stanford University focused on the removal of CECs and PFAS in potable reuse applications. She has authored well over 100 publications on reuse-related topics and supported the development of sustainable regulatory approaches for potable reuse in a number of states, including Arizona, Texas, Colorado, and Florida, as well as the World Health Organization

**Bradley Schmitz, PhD** — Loudoun Water

Bradley is an Environmental Scientist at Loudoun Water in Northern Virginia. He received his Ph.D. in Environmental Microbiology from the University of Arizona and previously held two postdoc positions at the National University of Singapore and Johns Hopkins University. During his time in academia, Bradley's research focused on the intersection between water and public health. His research background focuses on viruses in non-potable and potable reuse schemes. In his current role at Loudoun Water, Bradley is working to increase the organizations involvement in research and exploring potential water reuse opportunities.

**Paul Rochelle, PhD** — Metropolitan Water District of Southern California

Paul manages the Microbiology Unit in the Water Quality Section at the Metropolitan Water District of Southern California. His responsibilities include compliance with drinking water monitoring regulations, oversight of microbiological issues relating to water reuse, reservoir management, invasive species, and emergency response. He has led research projects and authored many publications in environmental and water quality microbiology, including pathogen detection and infectivity assays.

## **AWWA Webinar Program: Mobile Membrane Systems Used for Humanitarian Aid and Military Operations**

**Wednesday, April 21, 2021**

### **Webcast Description**

#### Overview:

This session will bring together experts with experience designing/operating mobile water treatment units that leverage membrane treatment processes. While many municipal water treatment plants employ processes optimized by substantial raw water quality data and extensive pilot testing, mobile water treatment systems must be designed to rapidly treat water from a wide range of sources, regardless of the contamination level. Often, the operators of mobile systems do not have access to extensive analytical capability to assess whether the produced water is free from biological and chemical contamination or the time to send samples back to the lab for extensive water quality testing. In these situations, the operator/public health officials must rely on a “multiple barrier approach” where the treatment system is designed with redundancy by providing total treatment efficacy using a combination of processes such as membrane pretreatment (MF/UF), reverse osmosis (RO), and disinfection. They rely on process parameters that can be easily field verified by real-time monitoring such as: pressure integrity, TDS rejection, and chlorine residual. These redundant measures ultimately provide water that is safe to drink. During this session, representatives from academia, the US Army, the US Army Corps of Engineers, and the US Bureau of Reclamation will present the science and application of their mobile systems by reviewing examples where their membrane systems have been used in the field during emergency response, site remediation, and a mobile approach to achieving high recovery desalination that is powered by renewable energy.

This webinar will provide the learner with a wider perspective of the treatment applications addressed by mobile membrane treatment units. Case studies presented during the webinar will include the US Bureau of Reclamation’s Expeditionary Unit Water Purifier (used during Hurricane Katrina); the US Army Corps of Engineers’ Decontamination Effluent Treatment System (including use for PFAS treatment); the US Army’s Lightweight Water Purifier (emergency use treatment device for the soldier); and The University of Texas El Paso’s Center for Inland Desalination Systems’ mobile high-recovery renewable-powered desalination drinking and irrigation water system that has been deployed in Tegucigalpa, Honduras.

## Learning Objectives:

1. Understand the operational challenges and opportunity associated with mobile membrane system management
2. Evaluate membrane technology appropriate for different mobile use scenarios
3. Plan for use of mobile membrane systems during emergency response or special contaminant remediation scenarios
4. Connect with experienced practitioners with experience operating mobile membrane systems
5. Conduct verification testing of pilot or full-scale systems to validate membrane units

## Presenter Biography Information

### **Saied Delagah** — U.S. Bureau of Reclamation

Saied Delagah is a Research Engineer at the Bureau of Reclamation having graduated from the University of Colorado with an MS in Environmental Engineering and a B.S. in Chemical Engineering. He also has an M.S. in Technology Commercialization from UT Austin. He has been in the field of Water Treatment for 18 years and has worked in various R&D capacities, along with program management of the desal grant program. He also has been involved in technology transfer and prize competitions having led the Desal Prize and the More Water Less Concentrate Prize for Reclamation. He is also a Country Technical Representative to Middle East Desalination Research Center.

### **Malynda Cappelle, MBA, Ph.D.** — University of Texas El Paso's Center for Inland Desalination Systems

Dr. Cappelle has twenty years of experience focused on water and energy, primarily focused on water treatment technology and how to make use of it to address water and energy security, environmental quality, and climate change issues. Her career has spanned several areas including water conservation, industrial water treatment, and research and development.

Malynda has a BS and MS in Chemical Engineering, and a MBA and PhD in Civil Engineering from The University of Texas at El Paso (UTEP). At UTEP, Malynda's research has been focused on high recovery desalination processes and improving the economic and environmental performance of water treatment processes.

### **Jeremy Walker, Ph.D.** — U.S. Army

Dr. Walker holds a BS in Civil Engineering from the University of South Florida, a MS in Environmental Health from the University of Michigan, and PhD in Civil Engineering from Wayne State University. He has over 25 years of experience as a project engineer and manager at the U.S. Army's CCDC Ground Vehicle Systems Center (formerly TARDEC) where he has worked on a number of water treatment systems to support the soldier and conducted fundamental research in membrane treatment processes.

### **Victor Medina, PhD, PE** — U.S. Army Corps of Engineers, Research & Development Center

Dr. Medina holds a B.S. in Geology/Earth Science from the University of California Los Angeles and MS and PhD degrees in Environmental Engineering from the University of Southern California. He has over 20 years of research experience and is currently Leader of the Water & Environmental Security Engineering Team that works on a number of research projects that

address environmental concerns of the Army, Corps of Engineers and Department of Defense. Dr. Medina has authored over 60 peer reviewed publications on topics ranging from graphene oxide membranes to mobile water treatment systems to hazardous waste remediation.

**AWWA Webinar Program: Exploring Manganese Management: Plant and Distribution Systems Research**  
**Wednesday, May 5th, 2020**

**Webcast Description**

Overview:

This webinar will present an overview of past, present and future manganese treatment research. It will also explore research focusing on the behavior of manganese in the distribution system. The webinar will offer innovative solutions underlying manganese issues for public water systems. Existing treatment is well understood, so the main goals of the webinar are to update the current issues surrounding manganese management, and to provide potential solutions to manganese issues that have not been previously well understood.

In the event of future drinking water regulatory determinations regarding manganese, what new guidance and opportunities can be explored by water systems for innovative source water treatment and system management to improve the water quality.

Manganese occurs to varying degrees in virtually all drinking water distribution systems, even those with low or non-detect manganese loading, and can present several risks to utilities and customers. Presentations will discuss the phenomenon of manganese accumulation and release, and summarize the industry's current understanding of manganese release mechanisms, and strategies that utilities can use to treat, monitor, and mitigate manganese in their systems.

**Learning Objectives:**

1. Understand risks and challenges posed by manganese and how routine system operations can impact manganese stability and release.
2. Understand monitoring and mitigation strategies that utilities can pursue for their system.
3. Access existing research related to manganese that has been sponsored by The Water Research Foundation and other research collaborators.
4. Learn about a new oxidant approach to manganese treatment

**Presenter Biography Information**

**Phil Brandhuber, Ph.D** — Brandhuber Water Quality & Treatment

Philip Brandhuber specializes in drinking water quality and treatment. His work has focused on the behavior of inorganic contaminants in drinking water, including the management of lead, copper, arsenic, chromium, manganese, and perchlorate. Phil received his PhD from the University of Colorado Boulder, and has been the principal or co-principal investigator for ten

drinking water related research projects sponsored by the Water Research Foundation (WRF) and other agencies. He was Principal Investigator for the WRF projects, Guidance for the Treatment of Manganese and Legacy of Manganese Accumulation in Water Systems. He is the current chair of the American Water Works Association (AWWA) Manganese Subcommittee. Phil has 20 years' experience as a consultant, working for McGuire Environmental and HDR Engineering. He is currently president of his own firm, Brandhuber Water Quality & Treatment LLC

**Jonathan Cuppett** — Water Research Foundation

Jonathan Cuppett has been a Research Program Manager at The Water Foundation since 2009. Jonathan is responsible for planning and managing the Foundation's research portfolio related to inorganic contaminants including lead and copper corrosion. He has a B.S from Penn State and a M.S. from Virginia Tech in Environmental Science and Engineering.

**Andrew Hill, PE** — Confluence Engineering Group LLC

Andrew is a Senior Project Manager at Confluence Engineering Group. His work is focused on solving complex treatment and distribution system water quality issues. Andrew's particular areas of interest include the treatment and behavior of inorganic contaminants including manganese, as well as applied research related to fate, transport, and mitigation of legacy deposits in water distribution systems.

**Joseph Goodwill, Ph.D** — University of Rhode Island

Joe Goodwill is an Assistant Professor in the Civil and Environmental Engineering Department in the College of Engineering at the University of Rhode Island. In this appointment he executes research in physical-chemical processes and also teaches classes focused on water treatment, and environmental analytical techniques. His Ph.D. and M.S. degrees in Civil Engineering are from the UMass Amherst. He also holds a B.S. in Civil Engineering from Lafayette College. Prior to entering academia, Joe was a Project Engineer for Black & Veatch

**AWWA Webinar Program: Low-Cost Pipe Condition Assessment with Hydrant Testing  
Wednesday, May 12, 2021**

**Webcast Description**

Overview:

This webinar covers using information collected from hydrant flow tests to assess the condition of water mains. The goal of the webinar is to develop an appreciation of how useful simple hydrant tests can be as part of an overall asset management program in which decisions are made regarding capital expenditures on main replacement or rehabilitation. Topics include testing basics, processing results, and applying the results to the distribution system. Testing basics covers selecting test locations, explaining the differences between standard hydrant tests and C-factor tests, discussing how data is collected, and providing an understanding of errors in the data. Processing results covers friction loss basics, calculating C-factors, and using hydrant test results to calibrate models. Applying the results covers applying calculated C-factors to

similar pipes, identifying hydraulically deficient pipes, and including these results in an overall asset management program. Webinar presenters feature seasoned veterans of many hydrant tests who have also worked with hydraulic models and asset management programs on systems of all sizes.

This webinar will cover:

- Testing basics
- Sources of error
- Pipe friction
- Calculating pipe roughness
- Model calibration
- Assessing system health

#### **Learning Objectives:**

1. Select where to test hydrants and prepare maps of test locations
2. Have the confidence to conduct a hydrant test or C-factor test and understand and minimize errors
3. Calculate pipe roughness based on test results and use hydrant test results to calibrate models
4. Extrapolate roughness's to other system pipes
5. Assess overall system hydraulic strength

#### **Presenter Biography Information**

##### **Lindle Willnow, PE** — Technical Leader IIIAECOM

Lindle helps coordinate hydraulic modeling activities at AECOM and conducts modeling studies of water distribution systems, treatment plants, and hydraulic transients. He is a 30+ year member of AWWA and NEWWA and has served as chair of the Engineering Modeling Applications Committee.

##### **Thomas Walski, Ph.D., P.E., F. EWRI** — Product Manager Bentley Systems

Tom has been involved with hydrant flow and pipe roughness testing since the 1980s. He is senior product manager for Bentley Systems. He has several hundred papers and conference presentations and is a trustee of the Distribution and Plant Operation Division

##### **Ben Chenevey, PE** — Distribution Systems Management & Planning Practice Lead Arcadis

Ben is a senior water engineer in the intelligent water group at Arcadis, where he is the practice lead for water distribution system modeling. In support of modeling projects nationwide, he has also lead numerous distribution testing efforts including pressure surveys and hydrant flow tests. Ben is currently the vice-chair for the AWWA Engineering Modeling Applications Committee.

**AWWA Webinar Program: Talking About the Unknown: How to Communicate on Emerging Issues and Contaminants Without Regulations**  
**Wednesday, May 19, 2021**

**Webcast Description:**

Overview:

The goal of this presentation is to share and consider different perspectives on how to communicate about subjects that concern customers but about which many factors remain unknown. The presentation provides examples of how utilities have communicated about drinking water topics of emerging concern or regarding unregulated substances. Examples include utility communications about cyanotoxins in jurisdictions where no maximum contaminant levels are in place and about per- and polyfluoroalkyl substances (PFAS) where no regulations are in force, but lots of media and potential misinformation are in play around the topic. Talking About the Unknown also offers a general overview of communication strategies to handle unknown and emerging topics as well as COVID-19 or other unprecedented incidents. Within these discussions, the presenters will provide insight into communication strategies, communication partners, and lessons learned about what has worked well in the past.

Learners will be able to pull from other utility's experiences about how to communicate to their customers, key stakeholders, and elected officials when regulations are not available to guide the discussion or unprecedented events are occurring in their location. Lessons learned from past experiences can illustrate good practices for dealing with misinformation about contaminants of emerging concern and provide examples of helpful communication partners and practices. Available resources to support utility communications will also be highlighted in the webinar.

**Learning Objectives:**

1. Communicate effectively about contaminants of emerging concern
2. Collaborate with other entities and stakeholders around communication
3. Review the available resources on communication strategies
4. Engage effectively with customers on hard-to-communicate topics

Manage customer expectations around water quality

**Presenter Biography Information**

**Kelley Dearing-Smith** — Louisville Water Company

Kelley Dearing Smith is vice president of communications and marketing at Louisville Water Company. Kelley oversees Louisville Water's content marketing and branding, internal and external communications, public affairs, economic development work and Water Works Museum. Kelley has worked at Louisville Water for 21 years and has authored a book on the company's history and oversaw the development of the Water Works Museum at Louisville

Water's original 1860 pumping station.

**Lacey Goers-Priest** — City of Salem, Oregon

Lacey Goers-Priest is the Water Quality Supervisor for the City of Salem, Oregon. She oversees drinking water compliance including backflow prevention, regulatory compliance sampling, and watershed monitoring and compliance. During 2016-2017, Lacey served as Chair of the Pacific Northwest Section of the American Water Works Association

**Sarah Page, PhD** — Utah Division of Drinking Water

Sarah Page is currently the Water Treatment Specialist for the State of Utah, managing PFAS, HABs, potable reuse, and vulnerable source programs for the Division of Drinking Water. She has a PhD in Chemistry from the University of Minnesota and was formerly the Drinking Water Quality Manager for the City of Ann Arbor, where she led the city's PFAS research, response, and outreach initiatives.

**AWWA Webinar Program: Cyanotoxins: Why better monitoring is better for business  
Thursday, May 20, 2021**

**Webcast Description:**

Overview:

Harmful algal blooms in freshwater systems are becoming increasingly common and present critical threats to drinking water systems and the Water Professionals who manage them. Join to hear how leading drinking water systems are monitoring algal toxins, meeting water safety and quality requirements with confidence, and allowing their staff to focus on their core work instead of worrying about algae threats.

We will look at why monitoring cyanotoxins from harmful algal blooms matter to public drinking water systems. By exploring the issue in detail, attendees will more clearly understand the problem they are facing, alternative solutions to the issue, and how to utilize new technologies to mitigate negative outcomes.

**This webinar will address the following key challenges:**

- Increasing prevalence of cyanotoxins within freshwater systems nationwide
- Need to quickly and reliably determine whether algal blooms are toxic
- Lack of knowledge around mitigation strategies and treatment options

**Key takeaways:**

1. Learn new ways to improve surface water monitoring, plant operations, and water quality.
2. Identify opportunities for improvement based on the experience of colleagues and industry
3. experts using new testing capabilities now available.



4. Understand how to utilize new technologies to meet water safety and quality requirements

#### Presenter Biography Information

**Sarah Bickman, Ph.D.** — Senior Scientist, Product Manager LightDeck Diagnostics

Sarah Bickman is a senior scientist and the product manager of the water and food division at LightDeck Diagnostics. She has been at LightDeck for 8 years and has contributed to all aspects of the development of the system including assay development, engineering, and improvements for manufacturability. Prior to working at LightDeck, Dr Bickman worked in lasers and optics at Vescent Photonics and the National Institutes of Standards and Technology. She received her PhD in atomic physics from Yale University and her BA from Amherst College in both physics and anthropology.

**Carlos Williams** — Applications Development Manager Hach

Carlos Williams is an Applications Development Manager at Hach and has 17 years' experience with analytical chemistry in online monitoring and laboratory settings. He built some of Hach's first online classes to teach operators and analysts about drinking water, wastewater and industrial analysis and has had the privilege of spending the last 15 years with Hach traveling globally to both lecture on water analysis, and assist treatment facilities in analyzing data, and understanding and improving their processes. He is a certified water professional in the State of Colorado.

**Timothy Davis, Ph.D.** — Patrick L. & Debra (Scheetz) Ryan Endowed Professor Department of Biological Sciences, Bowling Green State University

Dr. Timothy Davis has spent the last 12 years studying the ecology of harmful algal blooms (HABs). Dr. Davis completed his Bachelor's of Science at Southampton College of Long Island University in 2004. He then moved to Stony Brook University where he conducted his dissertation research focusing on understanding the environmental drivers of HABs in the several lakes throughout the northeast USA including Lake Erie and Lake Champlain. After he completed his dissertation in 2009, Dr. Davis moved to Brisbane, Australia to continue his work at the Australian Rivers Institute. In 2012, Dr. Davis moved to the Canadian Center for Inland Waters in Burlington, Ontario where he investigated the water quality and harmful algal bloom issues in lower Laurentian Great Lakes and Lake Winnipeg. Following that position, Dr. Davis worked for NOAA Great Lakes Environmental Research Laboratory (GLERL) in Ann Arbor, MI. from 2014 – 2017, he lead GLERL's HAB monitoring and research program which supports critical HAB forecasting products. In August 2017, he joined the faculty of Bowling Green State University. Dr. Davis is the co-Chair of the National HAB Committee and is a member of the US EPA's Board of Scientific Counselors - Safe and Sustainable Water Resources sub-committee.

**AWWA Webinar Program: Making Actionable Decisions on Infrastructure Design Based on Climate Change Projections**  
**Thursday, May 26, 2021**

**Webcast Description:**

Overview:

Utilities are becoming more knowledgeable about the steps required to assess vulnerability to climate change. They still need, however, examples and information to help them move from vulnerability assessment to decisions on infrastructure design that are driven by the vulnerability assessment results. Currently, examples are limited of water agencies that have made real and meaningful design decisions or changed work practices specifically driven by the need to increase climate change resilience. Our webinar provides such examples.

This webinar presents case studies of water agencies that have taken practical action related to infrastructure design, driven by climate change adaptation. While climate change vulnerability assessments for utilities have become more common, examples of changes in design and other work practices to account for those study findings are rare. The webinar presents elements of climate change planning that tend to be sources of uncertainty and to limit action on design. It also introduces three case studies of water agencies that have taken the steps to change processes, practices, codes, and/or standards for infrastructure design and personnel health and safety. Preceding the case studies will be a problem statement presentation that gives the attendees an opportunity to reference their own experience while offering examples to follow and available resources.

**Learning Objectives:**

1. Apply lessons learned from other water agencies in the process of modifying infrastructure design to account for climate change
2. Evaluate results of their sustainability assessments for elements that can support actionable decisions on design
3. Access information related to water agencies that have aligned design to address climate change vulnerability
4. Identify climate change uncertainty areas to which design decisions may be more sensitive

**Presenter Biography Information**

**Kavita Heyn** – Climate Resiliency Planning Program Manager, Portland Water Bureau Vice Chair, WUCA

Kavita is an expert in adaptive water supply planning and climate change and Leads the Portland Water Bureau's climate resiliency and adaptation efforts in addition to serving as the Vice Chair of the Water Utility Climate Alliance.

**Enrique Lopezcalva** – Global Technologist Water Resources & Resilience Jacobs

Enrique has 24 years of experience in water resources & climate change planning. Enrique leads

projects and tasks with sustainability and resilience outcomes and is an expert in vulnerability and risk analysis and climate resilience. Enrique is the Chair of AWWA's Climate Change Committee

**Dennis J. Stanford, P.E., ENV SP** – Deputy Director Department of Environmental Protection, City of New York

Dennis J. Stanford, P.E. is the Deputy Director of In-House Design Engineering Services for NYC Department of Environmental Protection's Bureau of Engineering Design and Construction which manages the agency's \$20 Billion capital improvement program. He has worked in the water and waste water sector for 16 years with a focus on embedding the social, economic and environmental values into municipal project delivery.

**Laurens van der Tak, PE, D.WRE** – Director of Water Resilience –Americas Jacobs

Laurens has over 30 years of experience in water resources and resilience. He's a recognized expert in climate change and resilience planning and has held climate change practice-related leadership positions at Jacobs and AWWA. He's Jacobs' Water Resilience Director for the Americas. He is AWWA's Water Resources Sustainability Division Chair and Past Chair of AWWA's Climate Change Committee

**Keely Brooks** – Climate Change Policy Analyst Southern Nevada Water Authority

Keely Brooks is the Climate Change Policy Analyst for the Southern Nevada Water Authority (SNWA). She manages and coordinates the climate science, policy, and adaptation efforts at the organization. Her expertise includes climate change, paleoclimatology, geology and climate adaptation in the Southwest U.S. Keely is the former Chair for the Water Utility Climate Alliance, an organization comprised of twelve of the nation's largest water providers, formed to provide leadership and to collaborate on climate change issues affecting the country's water agencies. She is a co-author of the Southwest Chapter of the 2018 U.S. National Climate Assessment Report

## **AWWA Webinar Program: New AWWA Water Audit Software v6: Advancing State -of-the-Art KPIs to Propel Water Loss Performance**

**Wednesday, June 2, 2021**

### **Webcast Description:**

#### Overview:

The new AWWA Free Water Audit Software (FWAS) v6.0 brings a major advancement in the best practice of annual water auditing to guide and inform cost-effective water loss management. The two most significant enhancements—Interactive Data Grading and the Fighter Jet Dashboard—provide information to water utility managers, consultants, regulators, and other stakeholders that are improvement-oriented. Gone are the days of a single metric with no context. Fueled by research and development by the AWWA Water Loss Control Committee, the new Fighter Jet Dashboard puts the annual audit key performance indicators (KPIs) in meaningful terms, reflecting validity, volume, and value, and contextualizes those results against

North American benchmarks. Further, the KPIs can be contextualized against custom targets for the water utility.

Users of the FWAS v6.0 will now be equipped with information and vocabulary for communicating water system performance to all stakeholders—technical and nontechnical—and for developing specific action planning for improvements in uncertainty, loss reductions, and revenue recovery.

**Learning Objectives:**

1. communicate water loss performance to technical and nontechnical stakeholders
2. benchmark against other North American water systems
3. understand the new FWAS Fighter Jet Dashboard

**Presenter Biography Information**

**Will Jernigan, P.E.CFO** – Director of Water Efficiency Cavanaugh

Will Jernigan, PE is the Director of Water Efficiency with Cavanaugh, and has worked with over 1,200 water systems across North America where he is recognized as a leader in the water loss industry. Will chairs the AWWA Water Loss Software Subcommittee and the AWWA North American Water Loss Conference. He was also appointed as the US expert to an international task force developing the ISO Water Loss Standards. Will was Co-Principle Investigator for Water Research Foundation in 2016 and updated in 2020 which formally codified Level 1 water audit validation methodology.

**David Sayers** – Manager Black & Veatch

David has over 20 years of experience in advancing the development of water system auditing and water loss control. He is an active member of the national AWWA Water Loss Control Committee and is a key member of the development team for the AWWA Free Water Audit Software and Audit Compiler tool. David led the development and implementation of a regulatory water audit reporting program at the Delaware River Basin Commission utilizing AWWA methods and tools, and now helps clients across North America improve efficiency and sustainability through the management and reduction of water loss.

**Kate Gasner** – Vice President Water Systems Optimization

Kate Gasner is Vice President at WSO working on water loss management projects throughout California and the US. Kate specializes in all aspects of water loss work, from the preparation of a standard AWWA water audit and component analysis of real losses, to meter testing, flow and pressure data collection and analysis, detailed billing data analysis, and leakage modeling. Kate is a long-standing member of the AWWA Water Loss Control Committee and is a member of the development group within the Software Subcommittee. Kate is also a member of the California Water Loss Control Committee and the California Water Audit Validator Certificate Committee.

## **AWWA Webinar Program: How Digital Solutions Can Help Ensure Water Quality from Source to Tap Thursday, June 3, 2021**

### **Webcast Description:**

#### Overview:

As municipalities continue to grow in comfort with technology, this webinar will illuminate the digital workflow throughout a DW plant. Our team of presenters will explore how digital solutions can help with compliance, data management, and process control throughout a drinking water system, including source water, in-plant treatment, and distribution monitoring.

Quickly advancing analytical technologies and machine learning can feel overwhelming for water professionals, which is why this webinar will detail how you can safely optimize your entire system and be prepared for unexpected challenges through leveraging digital technology.

#### **Key Takeaways:**

- Learn how to optimize your water systems from source to tap through digital solutions
- Stay in compliance with changing regulations, such as the Lead and Copper Rule revision
- Leverage data management efficiently and effectively

#### **This webinar will address the following challenges:**

1. Utilizing multiple data sources
2. Manual data entry is time consuming and prone to typos and errors
3. Understanding your data to make it actionable - turning data into knowledge
4. Balancing your water chemistry to achieve good corrosion control to remain in compliance with the lead and copper rule and its revisions

### **Presenter Biography Information**

#### **Pam Moss** – Application Development Manager Hach / AQI

Pam Moss has been with the company since August of 2008. She has served in several roles during her nine years with Hach as the Regional Sales Manager for the Carolinas, Project Sales Manager for the Southeast, Technical Sales Specialist for the Southeast, and now as an ADM for the East Coast. Pam holds BS in Biology from Furman University in Greenville, SC and a MA in Biology from Appalachian State University in Boone, NC. Pam served as the Executive Director of the NC AWWA-WEA from 2000 thru 2008. Previous to that, she was the Administrator of the NC Waterworks Operators Association for 2 years. In the 1990's, she worked for Aqua Tech Environmental Labs as the NC Business / Facilities Manager & Southeast.

#### **Carlos Williams** – Application Development Manager Hach

Carlos Williams is an Applications Development Manager at Hach and has 17 years' experience with analytical chemistry in online monitoring and laboratory settings. He built some of Hach's

first online classes to teach operators and analysts about drinking water, wastewater and industrial analysis and has had the privilege of spending the last 15 years with Hach traveling globally to both lecture on water analysis, and assist treatment facilities in analyzing data, and understanding and improving their processes. He is a certified water professional in the State of Colorado.

## **AWWA Webinar Program: Advancement of Water Quality Initiatives Through Monitoring, Analytics and Mitigation**

**Tuesday, June 8, 2021**

### **Webcast Description:**

#### Overview:

Water utilities across North America must deliver clean, quality water to customers while optimizing operational efficiency and minimizing non-revenue water loss. All too often, utilities need an enhanced flushing program to address areas with inadequate levels of disinfectant residuals or areas that generate customer complaints related to taste, color, or odor. The challenge is how to deploy a safe and effective flushing program.

This webinar will discuss the common types of water quality issues in the distribution network and help utilities identify the current challenges they are facing within their system. Attendees will learn the advantages of advanced flushing solutions compared to routine hydrant flushing, the potential adverse effects of hydrant flushing, and how to identify conditions that require more advanced flushing solutions. Attendees will also learn how to build a flushing device strategy based on local community needs and installation site requirements. The webinar will explore the next state of automatic flushing and how the future will bring a more connected world of smart flushing systems.

Participants will gain an understanding of how simple it is to develop an automated flushing program that is tailored to their local needs and installation site requirements. They will also gain value from the webinar by learning about real world examples from utilities who have benefited from implementing automated flushing programs in order to improve performance and water quality conditions.

#### **Learning Objectives:**

1. Evaluate the consequences of reduced building occupancy on building water quality
2. Analyze different approaches to addressing stagnation associated with efforts to reduce the spread of COVID-19
3. Understand the importance of having a building water management plan

### **Biography Information**

**Tim Ruhl** – Product Line Leader, Mueller

**Harold Mosely** – Product Brand Manager, Hydro-Guard

Mr. Mosley's primary responsibilities include management of all operations including

development of annual strategic marketing and sales plans: corporate communications; marketing; collateral design; new business development; management of customer care initiatives; management of the organization's internal salesforce and its independent representative network; and management of the manufacturing processes for all products manufactured by Environmental Enhancement and Technologies USA including the revolutionary Hydro-Guard® S.M.A.R.T. Automatic Flushing Systems and Safety Guard® BOSS line of bacteriological sampling stations.

**Chris Stanton** – Utility Compliance Superintendent, City of Plano, TX

**AWWA Webinar Program: Incorporating Diversity, Equity, and Inclusion into Your Workforce Development Strategy**  
**Wednesday, June 9th, 2021**

**Webcast Description:**

Overview:

It's common knowledge in the water industry that our workforce is aging. Yet that's just the beginning. Our workforce is not just aging—it's changing. It's changing because our industry is changing. Our processes are becoming more technologically advanced. We're collecting more data. The communities we serve are becoming more diverse. At the same time, we're competing with other industries for top talent and, at some levels, may struggle with retention. In this time of changes, our workforce development strategies need to be continuously updated as we search for nontraditional candidates to fill our ranks. In this webinar, we explore how principles of Diversity, Equity, and Inclusion (DE&I) can enhance these strategies and produce tangible results. The seminar consists of three parts: two presentations and a panel discussion with the presenters.

Incorporating diversity into the workforce efforts of a utility has to be intentional. The panelists will present how their utilities have been able to develop specific initiatives and best practices that can be adopted by other organizations. We have an aging and changing workforce, so we need to be innovative in our approach to attracting and retaining both traditional and nontraditional candidates. Participants will learn how they too can enhance their workforce development programs with principles of DE&I.

**Learning Objectives:**

1. Engage in courageous conversations around incorporating diversity, equity, and inclusion in workforce development.
2. Evaluate the effectiveness of re-entry programs for attracting nontraditional staff in water utilities.

**Presenter Biography Information**

**Lisa Stone** – Chief People and Inclusion Officer, EVPDC Water

Lisa Stone is the Chief People and Inclusion Officer and Executive Vice President of People and Talent, where she is accountable for developing and executing the People and Inclusion strategy for DC Water. Lisa has over 20 years of leadership experience in Human Resources, specializing in: human capital change management strategy, leadership development, and diversity & inclusion. Prior to joining DC Water, Lisa worked at HSBC, AOL Time Warner, and Freddie Mac. Lisa facilitates several diversity leadership trainings for a variety of organizations including: The National Society of Black Engineers (NSBE), The National Association of Black Accountants (NABA), The American Society for Training and Development (ASTD), As well as several nonprofit organizations: Suited for Change and Northern Virginia Family Services. Lisa enjoys scuba diving and world traveling. Her latest trips: Australia, New Zealand, Ghana, Colombia, and Russia. Her favorite quote is: "Congratulations! Today is your day. You're off to Great Places! You're off and away!" -Dr. Seuss

**H. Bernard Franks** – General Manager Clayton County Water Authority

CCWA's General Manager H. Bernard Franks has a passion for the water industry and he is home grown in the Clayton County community. He was promoted to General Manager in June 2018 with more than 24 years of experience at the Authority where he worked his way up the ranks. Franks started working at CCWA in 1996 as a Water Service Mechanic Trainee. He took advantage of every opportunity to grow and now holds a Water Distribution System Operator License, Wastewater Collection System Operator License, Backflow Testing License, Backflow Proctor Certification, and he attended the University of North Carolina for Utility Management and over 10 years in the Theocratic Ministry School. Franks is President-Elect of the Georgia Association of Water Professionals (GAWP) Board of Directors and active in the American Water Works Association (AWWA), Georgia Rural Water Association (GRWA) and Georgia Utility Contractors Association (GUCA). Franks also serves as Past Chair of the Clayton County Chamber of Commerce Board. He prides himself on being a Servant Leader and he remains a Clayton County resident living in Jonesboro with his wife Lenora of 30 years and his three sons. (Bernard, Cameron & Joshua)

**Erich J Pacheco** – Equity and Policy Manager Portland Water Bureau

Erich Pacheco (he/him) is originally from Venezuela and serves as Equity and Policy Manager at the Portland Water Bureau, the largest water utility in Oregon. He leads a team that focuses on eliminating disparity in services, policies, practices, and resource allocations to produce measurable and equitable outcomes for staff and community members. Prior to joining the Portland Water Bureau, Erich worked as Director of Global Ocean Governance and Policy at Conservation International (CI), where he was responsible for advancing participatory and data informed decision-making in ocean and coastal management at local and national scales around the world. And, he worked on sustainable food security initiatives in West Africa with farmer cooperatives, first as a Peace Corps Volunteer in Guinea and later as a technical coordinator for a USAID program in Mali. Erich earned a master's degree in environmental policy and management from the Middlebury Institute of International Studies at Monterey, and



his undergraduate degree in economics and international relations from the University of California, Davis. In his free time, he enjoys hiking and camping with his wife, two kids, and dog.

**AWWA Webinar Program: Developing Lead Service Line Inventories – Minimizing Regrets  
Wednesday, June 30, 2021**

**Webcast Description:**

Overview:

Community water systems of all sizes will be preparing lead service line inventories in order to comply with the Revised Lead and Copper Rule. Those inventories must be defensible to regulators and the public and useful to the system as it complies with other LCR requirements. The task is not easy and systems need to start now if they have not already done so in order to meet anticipated regulatory time frames. But, EPA is reviewing the LCR and there is the prospect of either EPA or states setting performance criteria after water systems are already well underway developing their inventories. This webinar focuses on key steps water systems can take to make progress developing their inventory in the midst of the current regulatory uncertainty.

**Learning Objectives:**

1. Take steps to prepare lead service line inventory in order to comply with the Revised Lead and Copper Rule.
2. Take current uncertainty in regulatory requirements into account in planning and budgeting lead service line inventory development.

**Presenter Biography Information**

**Kira Smith** – Environmental Engineer, U.S. EPA

**Michael Goldberg** – Environmental Engineer; U.S. EPA

**Karen Casteloes** – Water Quality Engineer; Arcadis

**Jeff Freeman** – Chief Executive Officer; Engineering Enterprises