

**AWWA Webinar Program: Lessons Learned from Surface Water and Reuse Utilities: Maximizing Contaminant Removal with Biofiltration**  
**December 1st, 2021**

**Webcast Description**

Overview:

Biofiltration treatment is extremely relevant to drinking water and reuse utilities across the United States. Significant work has been done over the last 10 years to characterize and optimize biofiltration systems. This webinar will provide new information and data for managing emerging contaminants and yielding effective treatment.

Sometimes, biofiltration systems must face operational tradeoffs to meet contaminant removal goals. This means that biofilters might need to be backwashed more frequently, monitored for specific parameters, or optimized using strategies like nutrient augmentation to encourage biological treatment that meets water quality goals. The objective of this webinar is to provide updates related to these tradeoffs and opportunities that have grown our body of knowledge.

**Learning Objectives:**

1. Apply optimization strategies from the webinar to their utility's biofilter operation.
2. Gain an understanding of emerging contaminants (both organic and inorganic) that utilities are monitoring and treating.
3. Evaluate the current state of knowledge and learn about new tools and guidance documents in production.

**Presenter Biography Information**

**Kevin Linder — Advanced Water Treatment Superintendent, Aurora Water**

Kevin has been involved with the Prairie Water Project and the Binney Water Purification Facility (BWPF) since the concept was a drawing on the back of a bar napkin, all the way through design, construction, start-up, and optimization of operation, as demonstrated by BWPF receiving the Excellence in Treatment Award from AWWA Partnership for Safe Water

**Joel Thompson — Director of Production, Fairfax Water**

Mr. Thompson is the Director of the Production Division for Fairfax Water. In this role he is responsible for the operation and Maintenance of two water treatment plants with the combined capacity of 345 mgd. Mr. Thompson came to Fairfax Water in August of 2005 after serving 20 years with the Washington Suburban Sanitary Commission most recently as Group Leader. He holds a B.S. in Engineering from the University of Maryland. He is a member of the American Water Works Association and the Water Environment Federation. He serves on the Ozone and Benchmarking committees for the American Water Works Association and is Chair of the Education Committee of the Virginia Section.

**AWWA Webinar Program: Women in Water – Inform. Influence. Impact. Webinar**  
**December 3rd, 2021**

**Webcast Description**

Overview:

AWWA is proud to promote the success stories of women who are benefiting the water industry and has highlighted these professionals in a series of events in 2021 themed as Inform. Influence. Impact. After the wide interest in the first two webinars, this last webinar concludes the series with a focus on current successes of and promising trends for female water professionals.

This conclusive women's event is devoted to all three topics of Inform. Influence. Impact. With an increasing number of well-known organizations appointing female CEOs, the trend toward women in leadership positions seems to be on the rise. In fact, there are more women running Fortune 500 businesses today than at any point in the 63-year history of the Fortune 500. Women in leadership will have a long-term positive impact in their organizations and on young professionals.

The objectives of the event are to celebrate the remarkable impact of gender diversity in water industry—including broad economic and local financial benefits, improved brand impression and satisfaction, and top-quality performance—and to encourage more women to join the workforce. Not to mention, women can be part of the workforce solution utilities need to meet growing demands for water and sanitation services and to achieve the United Nations (UN) Sustainable Development Goal 6, to “ensure availability and sustainable management of water and sanitation for all.” Attendees learn from speakers from the areas of manufacturing, regulation, education, and utility leadership. This virtual event welcomes all professionals, from students to senior professionals to their advocates.

**Webinar Learning Objectives:**

1. Learn the positive impact of gender diversity in the water industry
2. Challenge themselves to seek out and choose opportunities to leverage the power of women
3. Hear from female leaders who are making a positive difference in society and in the water industry

**Presenter Biography Information**

**Catherine (Katie) Richardson, ENV SP, PE — Waukesha Office Director Greeley and Hansen**

Ms. Katie Richardson has a unique experience having degrees in both Communications and Engineering. She has 17 years of experience; the last nine years have been working with utilities on major programs that have included significant permitting and public outreach components, as well as having compiled and collaborated on rate studies, engineering planning reports, hydraulic calculations, detailed design drawings and specifications for water and wastewater treatment process facilities and conveyance systems, and served as field technician to evaluate the construction progress for water and wastewater systems.

**Dora Chiang — Vice President, Environmental Remediation Global Technical Leader**

Dora Chiang is Vice President and global technical leader at Wood. She holds a Ph.D. in Environmental Engineering from Georgia Institute of Technology and has over 25 years of consulting experience in the areas of investigating and treating environmental pollutants. In her career of developing technical excellence, Dr. Chiang pioneers on innovative processes that unlock the potential of natural capacity to biodegrade contaminants and restore groundwater and contaminated lands. She also develops technologies to permanent remove emerging

contaminants, such as PFAS, for protection of human health and the environment. She believes in the importance of leadership, alignment, and communications of managing environmental challenges when uncertainties and scrutiny built up in the communities. She builds practices around emerging contaminants, green and sustainable remediation technologies, innovation, data management and brownfield development within the firm for a wide range of clients and projects such as municipalities, solid waste management, industries, oil & gas, Department of Defense. She is also passionate on technology transfer and is an active member and training subgroup leader for the Interstate Technology and Regulatory Council (ITRC) PFAS team.

**Agnes HyeJung Lee — Executive Vice President, Overseas Business Division PPI America, Inc.**

Mrs. Agnes Lee has worked as a creative professional with solid understanding of the advertising industry in the past. Since then, she joined the PPI America Inc. to use her creative skills to bring innovative water products to serve safe water system to the world. Through broad cultural background and extensive travel, she uses her experience to make the water industry more open to the newer innovative future.

**Michelle A. Stockness, ENV SP, PE — Vice President, Senior Civil/Environmental Engineer Barr Engineering Co.**

Michelle Stockness has 19 years of experience as an engineering consultant providing civil and environmental engineering services for public and private clients. Michelle works for Barr Engineering Co. in Minnesota and her areas of expertise include water and wastewater engineering with a sustainability emphasis. She has the unique ability to build solutions across multiple water groups including public utilities, watershed associations, private industry, nonprofit organizations, regulatory agencies, and community groups. Michelle is the Diversity and Inclusion committee chair for the Minnesota AWWA Section, serves on the association level Diversity and Member Inclusion Committee, and is on the association board as a Director at Large.

**AWWA Webinar Program: Legal and Regulatory Issues in the Water Space: An Update As 2021 Comes to a Close**

**December 10th, 2021**

**Webcast Description**

Overview:

Session 1: Emerging Contaminants: Where are we now? Where are we going?

Session 2: Biden Administration Drinking Water Update

This two-part virtual roundtable dialogue will look at key legal and regulatory issues in the water sector as 2021 comes to a close and various policy and regulatory activities of the Biden Administration begin to take shape and are promulgated. Both 90-minute sessions of this two-part program will feature moderated discussions by panels of experts from the water utility, legal, and regulatory arenas.

The first session of this two-part program will focus on emerging contaminants, with an emphasis on where are we now with these critical issues...and where are we headed. Panelist Chris Moody (AWWA) will discuss developments with emerging contaminants such as PFAS, perchlorate, 1,2,3-trichloropropane, NDMA and other nitrosamines and 1,4-dioxane. Allyn Stern

(Beveridge & Diamond) will discuss the legal and regulatory frameworks impacting how water utilities need to address the growing impacts of emerging contaminants on their operations. The second session of this two-part program panelists Eric Burneson (U.S.EPA) and Ryan Carra (Beveridge & Diamond) will focus on new and evolving Biden Administration policies and regulatory actions that are (or will) impact drinking water utilities and the water sector as a whole.

#### **Learning Objectives:**

1. Learn about current and pending legal and regulatory activities surrounding the management of emerging contaminants, and how water utilities can (and are) successfully managing these challenges.
2. Hear how and why drinking water utilities are adapting their operations to meet new and changing CERCLA, TSCA and SDWA regulations.
3. Learn about the prospects for new and/or changing regulations and policies likely to be forthcoming from the Biden Administration that can impact drinking water utility operations and the water sector as a whole.

#### **Presenter Biography Information**

##### **Allyn L. Stern, Esq — Of Counsel, Beveridge & Diamond, PC**

Allyn Stern is Of Counsel in Beveridge and Diamond's Seattle, WA office. She brings her clients over 30 years of experience at the Environmental Protection Agency, where she developed expertise in the Clean Water Act, Clean Air Act, RCRA and CERCLA. Her practice focuses on enforcement defense and compliance counseling under these statutes. Get in touch: AStern@bdlaw.com

##### **Chris Moody — Regulatory Technical Manager, AWWA**

Chris Moody is the Regulatory Technical Manager for AWWA in the Government Affairs office. He has prior experience with the design and construction of environmental engineering projects; currently, he helps manage a portfolio of drinking water issues related to the Safe Drinking Water Act including contaminants like disinfection byproducts (DBPs) and per- and polyfluoroalkyl substances (PFAS).

##### **Ryan J. Carra, Esq — Principal, Beveridge & Diamond, PC**

Ryan uses his extensive technical background to counsel clients in the chemicals, products, and energy sectors regarding environmental regulatory issues. Ryan's experience includes:

- Advising clients on Toxic Substances Control Act matters, including implementation of the 2016 reform legislation.
- Advising product manufacturers, retailers, and other clients on waste classification, chemical hazard classification, chemical notification requirements, and product materials restrictions both domestically and abroad.
- Reviewing marketing materials to ensure compliance the Federal Trade Commission's Green Guides.

##### **Eric G. Burneson — Director, Standards and Risk Management, U.S. Environmental Protection Agency**

Mr. Burneson is the Director of the Standards and Risk Management Division in the Environmental Protection Agency's Office of Ground Water and Drinking Water. He has been with EPA since 1999 identifying drinking water contaminants of concern and developing drinking water regulations to improve public health. Prior to working for EPA, Mr. Burneson worked for 10 years as a consulting engineer. He also spent two years working for the Republic of Palau's Environmental Quality Protection Board. Eric is a registered Professional Engineer, with a M.S. in Environmental Engineering from Duke University and a B.S. in Environmental and Resource Engineering from the S.U.N.Y College of Environmental Science and Forestry at Syracuse University.

## **AWWA Webinar Program: Learning from Megadisasters – Earthquake Resilience December 13<sup>th</sup>, 2021**

### **Webcast Description**

#### Overview:

It's been 10 years since the Tohoku earthquake and tsunami which led to the Fukushima Daiichi nuclear disaster. What have we learned? Have we become more resilient? In this webinar, we will share the lessons learned and how we can use better technology to minimize the impact of a large earthquake. We will learn about the changes that took place in Japan and other countries, what technology is available today to make your water system more resilient, and what leading utilities are doing to prepare for the big one. We can't stop nature, but we can do our best to minimize the environmental, economic, and social impacts caused by a large earthquake.

#### **Webinar Learning Objectives:**

1. What have we learned from the Tohoku earthquake experience?
2. What technology is available to make our water distribution system more resilient to earthquake?
3. As a utility, what can we do to better prepare for the big one?

#### **Presenter Biography Information**

##### **Masao Shibuya — Director of International Division, Training & International Department, Japan Water Works Association (JWWA)**

Masao Shibuya is Director of International Division, Training & International Department at Japan Water Works Association, members of which mainly consist of Water Utilities in Japan. He has been working for 30 years for the association. He started his career at JWWA Inspection and Certification Service Department, and moved later to the Research Department, which researches the management aspects of water utilities. His primary concern for the waterworks is the financial management of water utilities in general – in particular, the water rate.

##### **Dr. Tom O' Rourke — Thomas R. Briggs Professor of Engineering Emeritus, School of Civil and Environmental Engineering, Cornell University**

Tom O'Rourke is the Thomas R. Briggs Professor of Engineering in the School of Civil and Environmental Engineering at Cornell University. He is a member of the US National Academy of Engineering, Distinguished Member of ASCE, International Fellow of the Royal Academy of Engineering, Member of the Mexican Academy of Engineering, and a Fellow of American Association for the Advancement of

Science. He received a number of distinctions for his research and teaching, including the Stephen D. Bechtel Pipeline Engineering and Ralph B. Peck Awards from ASCE. He gave the 2009 Rankine and 2016 Terzaghi Lectures. He served as President of the Earthquake Engineering Research Institute (EERI) and as the chair or member of many professional society committees. He received the George W. Housner Medal in 2016 for contributions to earthquake engineering. He is the first recipient of the LeVal Lund Award and received the C. Martin Duke Award, both for lifeline earthquake engineering. He authored or co-authored over 410 technical publications. His research interests cover geotechnical engineering, earthquake engineering, underground construction technologies, engineering for large, geographically distributed systems, and geographic information technologies and database management. He has served on numerous government advisory boards, as well as the consulting boards or peer reviews for many projects associated with highway, rapid transit, water supply, and energy distribution systems.

**Enoch Nicholson — Senior Drinking Water Engineer & Seismic Evaluation Specialist, Jacobs**

Enoch Nicholson is a senior drinking water engineer and seismic evaluation specialist with Jacobs in Bellevue, Washington, USA. Enoch has been helping drinking water utilities provide safe and reliable water to their customers for 16 years. For the last 6 years, Enoch has completed seismic resiliency evaluations and designed seismic improvements for water systems across the Northwest United States. Enoch served as the seismic evaluation technical and risk assessment lead for the City of Bellevue Water System Seismic Vulnerability Assessment that is the subject of this webinar.

**Jennifer Henke — Senior Water Engineer, Project Manager, Jacobs**

Jennifer is a senior water engineer with Jacobs in Dallas, Texas, USA. In Jennifer's 25 years of experience in the water industry, she has been providing support to utilities for water supply, master planning, and system optimization projects to improve the level of service that utilities provide to their customers. Jennifer's experience on hydraulic analysis spans projects across the United States and Singapore. Jennifer served as the hydraulic analysis lead for the City of Bellevue Water System Seismic Vulnerability Assessment project.

**AWWA Webinar Program: 2021 Regulatory Update**

**December 15<sup>th</sup>, 2021**

**Webcast Description**

Overview:

New drinking water regulations are on the horizon for per- and poly-fluoroalkyl substances, disinfection practice, and disinfection byproducts. Both complying with revisions to the Lead and Copper Rule and accessing recent federal funding for lead service line replacement will require adequate lead service line inventories. Water systems will need to take steps to reduce the sector's cybersecurity vulnerability. The webinar speakers will summarize the latest developments on these and other developing requirements.

**Learning Objectives:**

As a result of this webinar, the attendees will be able to-

1. Allow water utility managers assess how future regulatory developments will likely affect them.

2. Allow water utility staff to plan ahead to engage EPA, states, and their own communities to move forward in interim period before new regulatory requirements take effect.

#### **Presenter Biography Information**

##### **Steve Via — Director of Federal Relations for AWWA, Washington, D.C.**

Mr. Via's primary responsibilities are two-fold. First, working with the Environmental Protection Agency (EPA) and other federal agencies on the development of policy and regulations that affect the water sector, and communicating the basis and substance of federal policy and regulations to the water sector. Mr. Via has 31 years' professional experience in environmental regulatory compliance assistance related to federal and state drinking water, wastewater, and solid / hazardous waste regulations. His work experience includes supporting communities engaged in planning, financing, and managing infrastructure improvements.

##### **Kevin Morley, PhD — Manager, Federal Relations for the American Water Works Association (AWWA)**

Kevin works closely with multiple organizations to advance the security and preparedness of the water sector. This includes supporting the development of several ANSI/AWWA standards that represent minimum best practice for water sector risk and resilience management, including cybersecurity guidance. He is a leading expert on §2013 of America's Water Infrastructure Act (AWIA) of 2018 and multiple resources that enable water system to advance their security and preparedness to all-hazards. Dr. Morley has been appointed to the President's National Infrastructure Advisory Council.

##### **Adam Carpenter — Manager of Energy and Environmental Policy at AWWA's Water Policy & Leadership, Washington, DC.**

Adam serves as an expert and advocate on a diverse set of drinking water issues including source water protection, the energy-water nexus, cyanotoxins, climate change, consumer confidence reports, and other environmental policy concerns. Along with his colleagues, he works to further AWWA's mission of supporting clean, affordable drinking water through sound application of science into policy, sensible regulation, public awareness, and building stakeholder consensus. He holds a Ph.D. in environmental science and public policy from George Mason University.

##### **Chris Moody — Regulatory Technical Manager, AWWA's Government Affairs office, Washington, D.C.**

Chris is a professional engineer with a diverse background of experience in the environmental engineering field spanning waste management, drinking water, and wastewater projects. He works on a portfolio of drinking water regulatory matters including PFAS, microbials and DBPs, manganese, and emerging contaminants like microplastic.

#### **AWWA Webinar Program: Presented by Fortinet — When, Not If: Improving Readiness and Response in Case of Cyberattack**

**January 20<sup>th</sup>, 2022**

#### **Webcast Description**

##### Overview:

New drinking water regulations are on the horizon for per- and poly-fluoroalkyl substances, disinfection practice, and disinfection byproducts. Both complying with revisions to the Lead

and Copper Rule and accessing recent federal funding for lead service line replacement will require adequate lead service line inventories. Water systems will need to take steps to reduce the sector's cybersecurity vulnerability. The webinar speakers will summarize the latest developments on these and other developing requirements.

**Learning Objectives:**

As a result of this webinar, the attendees will be able to:

1. Allow water utility managers assess how future regulatory developments will likely affect them.
2. Allow water utility staff to plan ahead to engage EPA, states, and their own communities to move forward in interim period before new regulatory requirements take effect.

**Presenter Biography Information**

**Rick Peters — Chief Information Security Officer of Operational Technology, Fortinet**

Rick brings the Fortinet OT-CI team more than 37 years of cybersecurity and global partnering experience working across foreign, domestic, and commercial industry sectors at the National Security Agency (NSA). As Fortinet's Operational Technology North American CISO, he delivers cybersecurity defense solutions and insights for the OT/ICS/SCADA critical infrastructure environments. Prior to Fortinet, Rick led development of cyber capability across Endpoint, Infrastructure, and Industrial Control System technologies at the agency. Previously, Rick also served as an executive leader supporting the Information Assurance Directorate at the NSA. Earlier in his career, he served in a broad range of leadership and Engineering roles including Chief of Staff for the NSA Cyber Task Force and a 5-year forward liaison charged with directing integration of cyber and cryptologic solutions for U.S. Air Force Europe, Ramstein AFB, Germany.

**David Espy, CISSP — National Operational Technology Practice Lead, TetraTech**

Mr. Espy is the National Operational Technology Practice Leader at Tetra Tech and has more than 26 years combined Information Technology/Operational Technology (IT/OT) experience. Although he specializes in all aspects of operational technology cybersecurity, he also has extensive experience in OT architecture design, implementation, commissioning, and SCADA Master Planning. His cybersecurity experience includes cybersecurity program development, cybersecurity policies and procedures, business continuity and disaster recovery, incident response, automation security plans, network vulnerability assessments, and Industrial Control Systems (ICS) assessments. Mr. Espy has direct hands-on design and integration experience with greenfield design build projects as well as upgrade and transition planning and execution for system upgrades projects. He has led the successful design and implementation of multiple secure SCADA server and network implementations with multiple HMI/PLC Platforms in his career. His experience in holistic integration of disparate technologies in a secure architecture enables his clients to meet regulatory requirements and industry best practices. Mr. Espy still likes to keep his "hands dirty" exploring emerging technologies and solutions in cybersecurity, networking, systems, and communications.

**Mark McKinney — Director of Cyber and Physical Security – US Infrastructure, TetraTech**

Mark serves as Director of Cyber and Physical Security for Tetra Tech's US Infrastructure Division. He is a



recognized leader in technology, cybersecurity, and risk management, with more than 36 years of experience in the design, engineering, certification and management of cybersecurity programs and systems, including active and passive measures designed to prevent unauthorized access to facilities, materials, information, equipment, and personnel. His extensive sector portfolio includes water / wastewater, energy, transportation, public safety, nuclear, defense industrial, intelligence, government and commercial. Mark advises the U.S. Senate Committee on Environment and Public Works, which drafted the America's Water Infrastructure Act (2018), on control system, network, SCADA, and physical security policy. He also advises on proposed amendments to the Clean Water Act, the Safe Drinking Water Act, the Drinking Water Infrastructure Act of 2020 and others. Mark also advises the U.S. House Committee on Homeland Security on Cybersecurity, Infrastructure Protection and Innovation, Transportation and Maritime Security on control system, SCADA, and OT security policy. Mark is an active member of the DHS-CISA National Protection and Programs Directorate, where he advises on the development and adoption of technical and security standards and regulations for critical infrastructure. Mark works with many leading standards organizations including NIST, ISC2, ISACA, the Network Management Forum and the Information Technology Association of America (ITAA). He worked with the standards working group that drafted the NIST Special Publication 800-53 that eventually became the NIST Cybersecurity Framework. Mark also helped to design and publish a reference architecture for SCADA environments that provides a blueprint for secure SCADA architectures. Mark is an Adjunct Instructor for the University of Central Florida's College of Engineering and Computer Science where he leads the Cyber Defense Certification Program. Mark is a retired U.S. Army Signals Intelligence and Force Protection Officer, where he designed and implemented controls and countermeasures to safeguard Joint Force assets against espionage, sabotage, terrorism, and damage.

**AWWA Webinar Program: PFAS: Forever Yours  
February 9<sup>th</sup>, 2022**

**Webcast Description**

Overview:

PFAS are a major public concern for drinking water and represent a major area of regulatory development. This webinar provides information on regulatory activities and how water systems should prepare for them.

During 2021, EPA pursued an active regulatory agenda for addressing PFAS. Notably EPA continued work under the Safe Drinking Water Act (SDWA) to establish drinking water regulations for PFAS through advancing health assessments for PFAS and collecting occurrence data. Beyond the SDWA, EPA has advanced several other regulatory actions for PFAS in wastewater, solid wastes, and at contaminated sites. These actions, still on the horizon, will have significant implications for water systems. This webinar will provide an in-depth discussion of these actions and how they will affect water system operations in the future.

This webinar will provide attendees with information about EPA's current regulatory agenda for PFAS and how water systems will be affected and should begin to prepare. It will also provide information about significant regulatory actions for PFAS and how water systems will be affected and should prepare.

**Learning Objectives:**

1. Describe the current outlook for PFAS drinking water standards
2. Describe EPA's monitoring plan for PFAS under the Fifth Unregulated Contaminant Monitoring Rule
3. Understand EPA's actions under the Clean Water Act and how they will broadly affect water
4. Identify the differences between the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulatory approaches
5. Characterize RCRA and CERCLA regulatory approach impacts on water systems

#### **Presenter Biography Information**

##### **Christopher Crockett, Ph.D., PE — Chief Environmental, Safety, and Sustainability Officer, Essential Utilities / Aqua America**

Christopher Crockett has over 25 years of experience in the water, stormwater, and wastewater industry. Chris is responsible for environmental compliance, safety, and sustainability covering 10 states, 1500 drinking water systems and 186 wastewater systems for Aqua America and for Peoples Natural Gas under Essential Utilities. One responsibility is leading the Essential efforts to identify and address PFAS including its laboratory that analyzes thousands of PFAS samples annually. Chris is a recognized expert on environmental issues having served on various state task forces and industry committees. Chris was formerly the Deputy Commissioner of the Philadelphia Water Department where he led many groundbreaking programs in infrastructure and water quality including is award winning sourcewater protection program, Green Cities Clean Waters, and the creation of Philly Rivercast. Chris received a BS in Civil Engineering ('93), an MS in Environmental Engineering ('95), and a PhD in Environmental Engineering ('2004), all from Drexel University. Chris is a professional licensed Civil Engineer in PA. Dr. Crockett is the winner 2019 George Warren Fuller Award by PA AWWA for distinguished service in the water supply field.

##### **Christina Alito — One Water Institute Leader, HDR**

Christina's passion for providing clean and safe drinking water through the tap led her to pursue a career in water and wastewater treatment. Christina leads HDR's One Water Institute, the applied research arm of the company, and is involved with nationwide water research projects focused on potable reuse, biofiltration, emerging contaminants, and other water technology evaluations. Her involvement in biofiltration-based Water Research Foundation studies over the past 2 years has included coordination with over 20 utilities and academic agencies nationwide, evaluation of optimization strategies, and exploration of monitoring tools for drinking water and potable reuse systems.

#### **AWWA Webinar Program: Increasing Consumer Benefits & Engagement in AMI-Based Conservation Programs**

**February 16<sup>th</sup>, 2022**

#### **Webcast Description**

##### Overview:

Come learn about the latest research and findings on advanced metering infrastructure (AMI) customer portals and best practices to help you get the most customer engagement out of your AMI portal. Find out what other utilities are doing and what the best practices are for developing an engaging AMI platform for customers.

Through a recent research project funded by AWWA's Technical and Educational Council, the Water Conservation Division Planning, Evaluation and Research Committee hired The Behaviouralist to research advanced metering infrastructure (AMI) portal customer engagement. The webinar will be a review of the results of an AWWA membership survey on AMI implementation and key case studies from our research. It will also include a high-level overview of the best practices guidebook on AMI portal development. The webinar will review potential household water savings from developing an engaging customer portal.

A challenge many utilities face is how to share the data from their AMI system with customers to encourage water conservation and changes in water use behavior. This webinar will share experiences from other utilities and the results of the recent study to help utilities develop more engaging portals for customers.

### **Learning Objectives:**

1. Understand key insights from current research on AMI customer portals.
2. Learn best practices for developing and implementing an AMI customer portal.
3. Identify strategies to increase customer use of an AMI portal.
4. Identify potential interventions to increase regular customer use of AMI portals.
5. Understand potential household water savings from developing an engaging AMI portal.

### **Presenter Biography Information**

#### **Michelle Maddaus — President, Maddaus Water Management**

Michelle is the immediate past Chair of the AWWA Planning, Evaluation and Research Committee and a Planning Advisory Committee member of the recently completed TEC Project on AMI Customer Portal Engagement. She has over 23 years of experience in water resources planning including demand forecasting and water conservation analysis.

#### **Jesper Akesson — Managing Director, The Behavioralist**

Jesper has extensive experience running randomized control trials, particularly with a focus on behavioral change. He has worked on a range of topics, from food security to trade. Jesper holds a Master of Public Affairs from Brown University and an M.Phil. in Economics from the University of Oxford.

#### **Ondrej Kacha — Behavioral Scientist, The Behavioralist**

Ondrej is a social psychologist and service designer. He specializes in social decision-making and behavior change, particularly in the domain of sustainability. Ondrej holds an M.Phil. in Psychology from the University of Cambridge.

#### **Shaina Shay — Water Resources and Conservation Specialist, Global Water Resources**

Shaina manages Global Water's conservation program and assists in water resources planning, accounting, and regulatory compliance. These efforts support the Total Water Management framework that Global Water Resources uses to promote sustainable communities in areas where growth may outpace the existing potable water supply.

## **AWWA Webinar Program: Fire Flow Testing and Assessing Distribution System Health**

**March 9<sup>th</sup>, 2022**

### **Webcast Description**

#### Overview:

Utilities face never-ending needs to maintain the ability of their distribution systems to reliably deliver water to their customers. Hydrant fire flow tests are a critical tool for assessing that ability. Applying these results to hydraulic models can help utilities make more informed decisions on how to spend limited resources.

The amount of direct data on the health of a distribution system is limited, outside of a few SCADA readings of flows and pressures at supply sources and tank levels. Hydraulic models can provide insights into available flows and pressures throughout the system. Hydrant flow tests can be used to calibrate models, thus increasing confidence in results. By comparing fire flow test results with needed fire flows, the ability of the distribution system to fight fires can be assessed. This webinar will teach attendees how to properly perform the tests, how to understand and apply the results, and how to use the results to assess pipe conditions. Attendees will also be given examples of this process with case studies.

#### **Learning Objectives:**

- Become reacquainted with the basics of hydrant testing.
- Understand the importance and requirements for a valid hydrant flow test.
- Gain knowledge on fire flow requirements and how they can be estimated.
- Develop techniques for assessing the level of service provided in distribution systems.
- Understand how the models' fire flow results can be applied to asset management.

#### **Presenter Biography Information**

##### **Lindle Willnow — Discipline Lead - Hydraulic Modeling, AECOM**

Lindle Willnow is a Hydraulics and Hydraulic Modeling Discipline Lead at AECOM. He has experience with all kinds of water models and system around the globe. He has over 34 years' experience working with distribution system models and the associated testing. He is a past chair of the Engineering Modeling Applications Committee.

##### **Matt Huang, P.E. — Associate Vice President, Carollo Engineers**

Matt is the Distribution System Modeling and Master Planning Lead for Carollo Engineers. He is a professional engineer and has over 20 years performing hydraulic models across the United States and in seven foreign countries.

##### **Saša Tomić, Ph.D., PE — Digital Water\Utility Management Services, Burns & McDonnell**

Saša is Burns & McDonnell's Digital Utility leader with over 30 years of digital water and hydraulic modeling experience. He offers a unique blend of practical, theoretical, and software skills perfected as the lead designer of modeling software, an advisor on the most challenging modeling projects, and an internationally recognized digital water authority. Saša is an active member of SWAN, AWWA, and WEF committees and serves on the Board of Advisors for Qatium and WCS Engineering.

## **AWWA Webinar Program: Financial Planning and Using ARPA and IJ Funds for a Transformative Future**

**March 16<sup>th</sup>, 2022**

### **Webcast Description**

#### Overview:

This webinar is an all-encompassing overview of what is included in the new federal infrastructure acts, policies, and plans (IIJA and ARPA); it will discuss preparation for potentially receiving funds as well as developing a strategic implementation plan for a lasting financial impact.

States and local governments are receiving unprecedented stimulus funds to help coronavirus relief and economic recovery efforts. The Infrastructure Investment and Jobs Act (IIJA) will provide more than \$550 billion in new federal funding, which includes funds for lead line replacement, chemical cleanup (including PFAS), and other important infrastructure needs across America. This, along with the American Rescue Plan Act (ARPA), provide a path for utilities to secure financial support for critical capital needs. It will take an informed analysis of needs and strategic implementation to be a community that secures a sustainable financial benefit. This webinar will review the federal funding opportunities and what they mean for utilities in terms of financial planning, key financial policies that should be reviewed in preparation, and use of federal funds to have a lasting impact on the lives of the people in their community.

Attendees will learn about unprecedented funds available for critical infrastructure needs and how to best apply them to their strategic plan. Key financial targets will be reviewed and how they work together to blend funds and other changes so that utilities can keep water rates as low as possible while moving forward strategically. Attendees will also learn about new federal policies and procedures that should be reviewed before receiving any funds; this way, utilities can be prepared to make a transformative difference for their community. Contributed capital will also be discussed and how grant funds should be recorded and recognized in the future for rate-making purposes to avoid double charging customers for installed infrastructure.

#### **Learning Objectives:**

- Recognize basic ARPA and IIJA funding opportunities
- Identify financial policies that are important in preparing for long-term financial sustainability
- Determine how key financial targets work together to create a plan that incorporates funding and potential rate changes to work toward financial goals with minimal impact on rate payers
- Recognize proper recording on grant funding and how it can affect future rate-making
- Apply concepts learned to help communicate best financial practices to decision makers

#### **Presenter Biography Information**

**Tommy Holmes — Legislative Director, American Water Works Association**

Tommy is the legislative director for AWWA. In this role, he monitors legislative developments affecting drinking water in the U.S. Congress and communicates them to members of AWWA.

**Dawn Lund — Vice-President, Utility Financial Solutions, LLC**

Dawn Lund is Vice-President of Utility Financial Solutions, LLC and has over 25 years of experience in financial analysis for utility systems. She is a consultant that provides financial assessment, cost of service studies and financial plans for Utilities throughout the country, Canada, Guam, and the Caribbean. She teaches financial planning courses and is a regularly requested speaker for associations across the country on a variety of utility financial topics.

**AWWA Webinar Program: Using AMI Data in Hydraulic Modeling  
March 23<sup>rd</sup>, 2022**

**Webcast Description**

Overview:

Advanced metering infrastructure (AMI) can provide utilities with highly detailed demand data in near-real time. In addition to benefits such as improved billing and leak detection, this data can be used to enhance hydraulic models.

In this webinar we will give an overview of the data that a typical AMI installation can provide, discuss considerations for how to convert that data into a format suitable for hydraulic modeling, and look at case studies of how AMI data is used in real-world water systems.

As digital water tools and technologies emerge, utilities have unprecedented opportunities to embrace these advances during the development and application of water distribution models; the result is greater efficiency, accuracy, and functionality. Related to this, an increasing number of water utilities are either starting or completing projects to implement advanced metering infrastructure. Using this data in hydraulic modeling increases the value of that investment and leads to better calibrated models, more accurate forecasts, and it better allows for advanced applications.

Working with AMI data can seem intimidating because of the large volume of information involved. We will demonstrate that modeling with AMI data is both feasible and incredibly valuable. The data, models, and insights that can be realized may include improved infrastructure planning and refined nonrevenue water analysis and can help bridge the gap into real-time modeling and digital twins.

**Learning Objectives:**

- Understand the data that AMI systems can contribute to hydraulic models.
- Evaluate modeling objectives to determine ideal strategies for using AMI data.
- Transform AMI data into base demands and patterns.
- Develop a strategy for applying AMI data within hydraulic models.
- Understand the improved insights gained from using AMI data.

**Presenter Biography Information**

**JOSEPH DRYER — Product Manager; Sensus, a Xylem Brand**

Joseph focuses on the application of AMI solutions to help utilities operate more efficiently, improve customer service, and conserve water. He has five years of experience at Sensus, a Xylem brand, and holds degrees in Mechanical and Civil Engineering.

**STEPHEN JACKSON — Senior Software Engineer, Bentley Systems, Inc.**

Stephen graduated from Cornell University with a bachelor's in Physics and received his master's in Civil Engineering from the University of Texas at Austin. After 10 years of engineering design work in hydrology and hydraulics, Stephen transitioned to Bentley Systems where he can focus on his love of building analytical tools. Stephen is passionate about pushing the boundaries of automated analysis to solve old problems and bring new insights.

**BEN CHENEVEY — Senior Water Engineer, Arcadis**

Ben is a senior water engineer at Arcadis, where he focuses on distribution system management and planning projects and works with a variety of utilities nationwide. Ben is currently the practice lead for water distribution system modeling within Arcadis, and he is the vice-chair for the AWWA Engineering Modeling Applications Committee.

**AWWA Webinar Program: Presented by Gray Matter - 5 Ways to Transform HMI/SCADA with Centralized, Intuitive Visualizations  
March 24<sup>th</sup>, 2022**

**Webcast Description**

Overview:

Centralized data visualizations that can be built with little to no code are critical to creating dashboards and reporting systems that can help your water/wastewater team improve operational efficiency, incident response times, and regulatory compliance.

Data visualization experts from GrayMatter and the Orlando Utilities Commission, a GrayMatter client, will discuss how ISA 101 Standards, GE Digital's latest versions of Proficy Operations Hub, iFIX, and other tools are changing the way water/wastewater operators working remotely and on site to collect, analyze, and take action on machine asset data. We will also discuss how operator input is incorporated into visualization design, third-party solution support, and how to assist operators' decision-making process.

Participants will value the high level of water/wastewater industry experience and technical expertise that our presenters bring to the table. The webinar focuses on concrete solutions that participants will be able to take back to their teams and discuss how to adapt them to their needs.

Data visualization represents a huge potential upside for facilities willing to investigate the long-term benefits. This webinar will give everyone the information they need to either use their existing HMI/SCADA systems in new ways or to begin the process of adopting centralized visualization and data dashboarding.

**Learning Objectives:**

- Reduce the time and effort required to build custom reports and visualizations
- Flatten the learning curve for new operators
- Improve communication about time-sensitive operations with managers & non-technical leaders
- Speed up reports to regulators and other compliance personnel
- Strengthen collaboration and continuous improvement via mobile and remote technology

#### **Presenter Biography Information**

##### **John Benitz — Chief Technical Officer, GrayMatter & Sr. Member of ISA**

John is the Chief Technical Officer at GrayMatter and has over 34 years of experience with engineering projects from conception through specifications, design, enclosure, QA testing FAT/SAT, training, documentation and installation support. He specializes in Process Control & Instrumentation Design SIS/SIL safety systems; HMI, PLC/DCS Programming, and SCADA Systems John is also a senior ISA member and a voting member of the ISA's HMI standards committee.

##### **James Alday — SCADA Coordinator, Orlando Utilities Commission**

James Alday is the SCADA Coordinator at the Orlando Utilities Commission. James has been with OUC for four years and has been working in the water/wastewater industry for 21 years. James is a dual class A licensed operator in drinking water/wastewater plant operation. A+, Net+, 3D printing, design.

##### **Greg Hazel — Solutions Consultant, GrayMatter**

Greg Hazel is a solutions consultant at GrayMatter. Based in Colorado, Greg is a GE-certified instructor with deep experience in GE Digital products including Operations Hub, iFIX and many others.