AWWA Webinar Program: Mindful Water Management-- Water & Land Use Planning
July 20, 2022

Webcast Description
Overview:

Mindful water and land use planning requires innovation and thoughtful strategy. This webinar will explore the nexus between water and land use planning, and spotlight innovative water conservation and water reuse techniques.

Climate variability, rapid population growth, and aging infrastructure are driving communities to consider more collaborative and sustainable efforts to preserve water supplies. Mindful water and land use planning requires innovation and thoughtful strategy—involving a wide variety of diverse stakeholders. This webinar will explore the nexus between water and land use planning, and spotlight innovative water conservation and water reuse techniques. Join us to learn more about planning thriving urban environments with water efficiency and sustainability in mind.

Water scarcity is a challenge that many utilities are forecasting in their planning windows. Learn how sustainable urban water management is evolving and how sustainable planning strategies can improve resiliency. This webinar aims to inspire water resources professionals to plan and design projects with mindfulness and thoughtful strategy.

Communities are placing increasingly higher value on sustainability. Thoughtful and collaborative planning and design are crucial for project success and longevity. This webinar will explore how collaborative water and land use planning strategies can improve resiliency. Solutions that enable water sensitive design in high-density development areas will be discussed, and participants will learn about innovative water management strategies and the benefits of water recycling.

Learning Objectives:

- Learn how sustainable urban water management is evolving.
- Gain insight on how land use and climate trends impact water supply and demands.
- Learn how collaborative water and land use planning strategies can improve resiliency.
- Evaluate the costs and benefits of water recycling with facts and figures from a real development project.
- Receive an overview of the range of land use planning tools and strategies that are available to local governments.

Presenter Biography Information

Dr. Sybil Sharvelle; Professor, Colorado State University
Dr. Sybil Sharvelle is a Professor in the Civil and Environmental Engineering Department at Colorado State University and directs the Urban Water Center. She has led projects funded by the Water Research Foundation, USEPA and National Science Foundation to advance one water

solutions. Dr. Sharvelle is the developer of the Integrated Urban Water Model that enables assessment of water conservation and reuse strategies under uncertain future conditions

Suhail Rahman; MD & CEO, CoEvolve Estates
Suhail Rahman is an engineer with an MS from University of Newcastle Upon Tyne. He has completed his business leadership program from IIM Bangalore. He believes in giving back to nature in whatever way possible and is very passionate about sustainable practices. Suhail also heads the Sustainable Development Committee for CREDAI YOUTH WING (Confederation of Real Estate Developers' Associations of India) at the National Level. He is also involved in influencing policy decisions pertaining to Pollution control norms in the state of Karnataka

Robert Hobbins; Program Manager, Sonoran Institute
Robert joined the Sonoran Institute in May 2022 and serves as the Program Manager for the Institute's Growing Water Smart program. Since 2016, Robert has been leading and supporting numerous climate resilience projects across the US, Caribbean, and Latin America to strengthen community adaptive and transformative capacities to build climate resilience. Robert holds a PhD in Sustainability and a MS in Community Resources and Development – Sustainable Communities from Arizona State University.

AWWA Webinar Program: Utility Perspectives on Digital Twins
July 27th, 2022

Webcast Description
Overview:

The AWWA Digital Twin Committee prepared this webinar focused on utility perspectives. It includes an overview of digital twins, a real-time water distribution system digital twin, a facility energy optimization digital twin, and a desalination water treatment digital twin.

AWWA's new Digital Twins Committee was formed in 2021 and has rapidly grown to become a powerhouse of technical experts guiding the water industry in education and clarity on the topic. The committee has prepared this webinar focused on sharing various utility perspectives on digital twins. This webinar will begin with a brief overview of digital twins and the work completed by the Digital Twin Committee, followed by multiple presentations on digital twins within utilities. These presentations include a real-time hydraulic and water quality distribution system digital twin, a facility energy optimization digital twin, and a desalination water treatment digital twin.

An AWWA survey was conducted that identified education and case studies as the greatest need for digital twins. This webinar provides both a brief summary of the work by the committee, including the definition of a digital twin, and multiple case studies covering a variety of topics, including energy, treatment, and distribution.

The concept of digital twins is one of the most popular interests currently in the water sector. The aim of AWWA's new Digital Twin Committee is to demystify the term, educate AWWA membership on the

purpose, value, and need for digital twins. This webinar is critically important in that it provides a variety of example case studies.

Learning Objectives:

- Learn the purposes and value of implementing digital twins in the water sector.
- Define a digital twin.
- Understand how one utility is using a real-time digital twin as a decision support tool.
- Identify opportunities for energy optimization through a digital twin utility case study.
- Learn how a digital twin can manage and optimize water treatment process operations

Presenter Biography Information

James (Jim) P. Cooper; Global Director, Water Optimization, Arcadis
Jim serves as the Global Director for Water Optimization with 18 years experience at Arcadis. He is the Vice-Chair of the AWWA Engineering & Construction Division, and Chair of the AWWA Digital Twins Committee with a background in engineering, planning, utility operations, intelligent water, and artificial intelligence

Alan Cranford; Manager - Water Treatment Plant, Murfreesboro Water Resources Department
Alan is the plant manager at the Stones River Water Treatment Plant in Murfreesboro, Tennessee and has held this position for over nineteen (19) years. Alan's experience includes over 30 years in plant management as well as experience in distribution and collection systems, and wastewater treatment. Alan is a certified Class IV Professional Operator (PO), a Grade IV Water Treatment in Alabama and Tennessee, and Grade II Distribution and Collection System Operator in the State of Tennessee.

John Norton Jr., PhD., PE; Director of Energy, Research, and Innovation, Great Lakes Water Authority
Dr. John Norton is Director of Energy, Research, and Innovation for GLWA, a combined water/wastewater utility in Southeast Michigan. GLWA treats more than 40% of the water, and 30% of the wastewater, for the state of Michigan. Norton leads GLWA's research efforts to understand, extend, and enhance its linear and process infrastructure and directs projects ranging from source water monitoring and distribution system water quality, through to energy extraction from biosolids.

AWWA Webinar Program: Theory and Practical Application of Desktop Condition Assessment for Distribution Systems
August 10th, 2022

Webcast Description
Overview:
New techniques for desktop condition assessment of small-diameter water mains (up to 16 inches) have

been emerging over the past few years that incorporate advanced statistical analysis, machine learning algorithms, and artificial intelligence to predict current and future main conditions. This webinar will provide an overview of advanced desktop condition assessment and will demonstrate successful case studies, including outcomes and lessons learned using various approaches and software packages.

Advanced desktop analyses, when done correctly, can provide valuable insights to target field condition assessment work. They also support risk-based renewal planning and long-term funding projections as part of an overall asset management program, at a very reasonable cost level. This webinar will provide an overview of advanced desktop condition assessment and will demonstrate successful case studies, including outcomes and lessons learned using various approaches and software packages.

Many utilities struggle with understanding the condition of their smaller-diameter water mains, making effective plans, and replacing mains in an efficient and prioritized way. Field condition assessment methods are generally costly in comparison to just replacing these smaller mains, and many mains are probably being replaced well before the actual end of their useful life. Applying advanced desktop analysis for small diameter main condition is a cost-effective solution that supports improved decision-making for capital expenditures.

Utility members of the AWWA Water Main Condition Assessment Committee are very interested in learning more about:
(1) prioritization tools to rank water mains for either assessment or replacement and
(2) artificial intelligence and machine learning tools that use break rate history and other data to predict future condition of smaller-diameter mains and help utilities better plan and budget for water main replacement and renewal programs.
This webinar will provide information that utility professionals can immediately use to set the direction of their utility's long-term renewal planning and budget forecasting to support a replacement and renewal program for their small-diameter mains.

Learning Objectives:

- Understand the concepts and options for advanced desktop condition assessment
- Learn what data sets are typically needed to apply this approach
- Prepare to apply new inputs into project prioritization, including artificial intelligence and equity-based insight
- Leverage lessons learned from case studies of successful desktop condition assessments

Presenter Biography Information

Celine Hyer; Water Conveyance Practice Leader, Arcadis
What is a Water Main Desktop Assessment & Why Do I Need One?
Ms. Hyer is the National Water Conveyance Practice Leader for Arcadis US and is located in Tampa Florida. She has a B.S. in Chemical Engineering and an M.S. in Engineering Management from Florida Institute of Technology. Celine has 32 years of experience in Engineering with 22 years that are directly related to advanced asset management. Celine serves as the Vice Chair of

the AWWA Asset Management Committee, the Chair of the ASCE UESI Asset Management Division, and is a member of the ASCE Committee on America's Infrastructure.

Chris Macey; Global and Americas Technical Practice Leader, Condition Assessment and Rehabilitation, AECOM?

The Theory Behind Statistical Models: Using Data Intelligently

Mr. Macey is AECOM's Global and Americas Technical Practice Leader for Condition Assessment and Rehabilitation. He is located
in Winnipeg, MB, Canada and has 44 years of experience in the assessment and rehabilitation of linear infrastructure. Chris has considerable expertise in material deterioration mechanisms associated with water pipelines and was elected to the NASTT Hall of Fame in 2019 for his lifelong work in condition assessment and rehabilitation.

George Demosthenous; CEO, VODA.ai

Is Condition Assessment of the Future Powered by AI?

George Demosthenous is the CEO of VODA.ai, an award-winning artificial intelligence company focused on risk modeling. George co-founded VODA.ai in 2017 to help utilities leverage their data to assess risk and make infrastructure decisions quicker and with improved accuracy. Prior to VODA.ai, George worked at a public company, helping utilities manage their assets and lower NRW. George is Harvard educated and based in Boston, MA.

David Totman; Innovyze Thought Leader Strategy, Autodesk

Project Prioritization through Effective Condition Assessment and Risk Modeling

David Totman leads the Innovyze Thought Leader Strategy for Autodesk, providing strategic direction for full water infrastructure systems management across the Autodesk portfolio and represents Autodesk on the US Water Alliance Council. He has been in the water industry for over 40 years and is a member of AWWA and ASCE. Having served as 2019 President of the ASCE Utility
Engineering and Surveying Institute (UESI), he now helps guide the ASCE Committee on Sustainability and represents ASCE as a Voting Member of the US TAG to ISO 55000. Mr. Totman has been accepted into the Asset Leadership Network as a Senior Fellow.

AWWA Webinar Program: Innovative Thinking: Using Public-Private Partnerships in developing affordability programs

August 17th, 2022

Webcast Description

Overview:

In this webinar, we will cover what utilities have done using outside partnerships in developing new affordability programs to extend customer assistance. We will cover evaluating organizations, internally selling the concept, partnering, security, roadblocks, and overall customer benefits. In the post-COVID age, utilities have had to think beyond just conducting collection programs as usual when considering the best methods of working with customers in resolving outstanding debt. Federal and state options for funding provided some relief to customers, yet customer debt still remained.

We will discuss what several utilities have done in using private, foundation, and nonprofit partnerships in developing new affordability programs to extend the reach of their assistance. We will speak about how utilities evaluated organizations, how they sold the idea of these types of new partnerships internally, and how they partnered with these types of organizations. We'll discuss data exchange and how security is managed, what roadblocks utilities encountered and how they overcame them, and how their customers have been able to reap the benefits.

This webinar is critical for utilities who want to extend the reach of their programs to bring down customer debt and avoid further expensive shutoffs, bad publicity, and help their customer base. This webinar will cover working with private and nonprofit organizations to help customers get the financial assistance they need without directly affecting the utility's budget. This will also help avoid the common pitfalls of partnership, such as committing to programs that use too many utility resources without enough direct benefit to the utility.

A challenge for utilities is increasing customer debt due to the pandemic and avoiding shutoffs through limited programs that utilities can provide outside of legislatively or regulatory-approved offers. Using private or nonprofit partnerships allows utility customers to be referred to agencies that can provide greater flexibility in approving customer funding and paying down customer debt.
Utilities can adopt these practices and start engaging with outside agencies to identify ones that they could partner with and/or refer customers to, and develop referral protocols that will allow for the groups to work well together without either group using too many resources.

Learning Objectives:

- How utilities can evaluate qualified organizations
- Internally selling the idea
- Different types of partnerships
- Data exchange and security
- What roadblocks utilities encountered and how they addressed them

Presenter Biography Information

Moderated by Maria DeChellis; Founder, Executive Director, AccessH2O
Maria DeChellis is a 22-year veteran of the utility industry and is founder and executive director of AccessH2O, a nonprofit formed to provide financial assistance to vulnerable individuals at risk of water shut-off. A former public works chief for the City of Baltimore, Maria is also Senior Director at Oracle, specializing in solutions for municipal and public utilities and working on policy for water affordability and equity. She is a Division Trustee to the Management and Leadership Division of the American Water Works Association and is a Certified Project Manager and Certified Change Management Professional.

Heidi Hackett; Utility Finance Manager, City of Durham – Department of Water Management

Heidi Hackett is currently the Utility Finance Manager with the City of Durham North Carolina, Department of Water Management.
Water Management provides safe clean drinking water and sanitary sewer services to over 95,000 customers and around 250, 000 residents and businesses. Heidi is an accomplished finance and customer service professional, with more than 30 years of diverse experience. She previously served as the Finance and Customer Service Director for the Town of Hillsborough North Carolina and as the Finance and Customer Service Manager for Orange Water and Sewer Authority in Chapel Hill North Carolina. She is passionate about helping others and volunteers on several boards and committees. Heidi graduated from Bentley University with a BS in Management and completed her Masters of Business Administration at the University of Phoenix. Additionally, she is a
Certified Local Government Finance Officer.

Tarja Nummela; Customer Service Manager, City of Tempe
Tarja Nummela is the Customer Service Manager with the City of Tempe. She has her BS in Marketing and MBA in International Business. Tarja has over 25 years of Water Utility experience. She currently manages the Customer Service Division; responsible for Utility Billing, City Cashiers, and Meter Reading. Her experience includes multiple system implementations of CIS, IVR/IWR, Meter Reading Systems including Tempe's recent AMI installation, and other utility related projects. She has been a speaker on change management, customer engagement, and AMI project experience for AZ Water Annual Conference, UMC, CS Week and Itron Utility Week. Tarja is a member of the Customer Service Subcommittee of the American Water Works Association and AZ Water Customer Service Committee

AWWA Webinar Program: Managing Iron and Manganese in Small Systems – New Insights on an Old Problem
August 24th, 2022

Webcast Description

Overview:

This webinar discusses the health risks and problems resulting from iron and manganese in water systems, especially in small systems. It also covers removal technologies and solutions, the impacts of iron and manganese on distribution systems, and monitoring system performance.

The purpose of this webinar is to inform small systems about recent approaches to managing iron and manganese in water. Specifically, the webinar will identify the causes and consequences of iron and manganese present in water, health risks, and effects. It will also provide an overview of the common removal methods of iron and manganese applicable to small systems, including limitations, advantages for each technology, solutions to operational problems, and nonconventional treatment processes using low-cost technologies. The webinar will be divided into three presentations. "The Challenge of Iron and Manganese for Small Systems" will discuss the chemistry of iron and manganese. "Small or Large, Fundamental Principles Control Manganese Treatment Performance" will provide an overview of

options for removal of manganese from drinking water sources. Impacts of co-occurring contaminants, as well as other treatment objectives are included. The third presentation is “Low-Cost and Simplest Technologies for Iron and Manganese.”

The importance of groundwater has increased as a vital source of water in many rural areas, and drought conditions are making this water source increasingly appealing to urban water systems as well. Groundwaters, however, often contain iron and manganese, which can create operational challenges. Health risks due to long-term high exposure to manganese include manganism (an irreversible, slow-onset neurotoxic disease), as well as liver, pancreatic, and heart dysfunction and failure. In addition to causing other problems, metal oxides can accumulate in distribution systems, reduce pipe diameter, and damage home devices. Therefore, removal of iron and manganese is necessary. However, conventional techniques may require high capital and operational costs in addition to skillful labor.

This webinar helps utilities recognize the problems resulting from the presence of iron and manganese in water systems, especially in small systems. It also provides guidance on solving these problems and monitoring system performance.

Learning Objectives:

- Better understand the challenges of iron and manganese, health effects, and the regulatory landscape that pertains to these contaminants.
- Adapt suitable technologies for removing iron and manganese from water.
- Recognize iron and manganese problems in water treatment and distribution systems.
- Eliminate or limit operational problems in small systems.

Presenter Biography Information

Philip Brandhuber, PhD; Brandhuber Water Quality & Treatment LLC

Dr. Philip Brandhuber is owner of Brandhuber Water Quality & Treatment (BWQ&T), a private consulting firm focused on drinking water issues. He has over 25 years experience in the drinking water field. Prior to forming BWQ&T, he was a Senior Professional Associate and HDR Fellow at HDR Inc. where he served as HDR's national expert in the treatment of inorganic contaminants in drinking water. He has managed or participated in more than 75 projects involving the treatment of natural and anthropogenic contaminants in drinking water. Dr Brandhuber served as Principal Investigator for six research projects sponsored by Water Research Foundation. In addition, he has served in advisory capacity for several state health departments, the US Environmental Protection Agency, Health Canada and the World Health Organization. He is currently the Chair of the American Water Works Association (AWWA) Inorganics Committee and Manganese Subcommittee as well as past Chair of the Emerging Water Quality Issues Committee.

John Tobiason, PhD; Head of the Department of Civil and Environmental Engineering, University of Massachusetts Amherst

John E. Tobiason is Professor and Department Head of Civil and Environmental Engineering at the University of Massachusetts at Amherst where he has been a member of the faculty since 1987. He earned his BS in Civil Engineering from the University of New Hampshire (1976) and

MS in Environmental Engineering from the University of North Carolina at Chapel Hill (1979). He then worked as a consulting engineer from 1979 to 1983 and earned his PhD in Environmental Engineering from the Johns Hopkins University (1987). Dr. Tobiason has over 40 years of research, teaching and consulting experience in environmental engineering, mostly related to drinking water supply, treatment, and distribution, with a focus on coagulation, oxidation, dissolved air flotation, media and membrane filtration, and other physicochemical processes for drinking water treatment. Dr. Tobiason is a past President of the Association of Environmental Engineering and Science Professors (AEESP) and past Chair of the AWWA Water Science Research Division Board of Trustees. He is a past member of the Journal Editorial Board for the Journal American Water Works Association. Dr. Tobiason is a registered Professional Engineer (NH) and is a Board Certified Environmental Engineer by the American Academy of Environmental Engineers and Scientists (AAEES). In 2019 he was honored with the AEESP Charles R. O'Melia Distinguished Educator Award and the UMass College of Engineering Outstanding Teacher Award. Dr. Tobiason became a Fellow of AEESP in 2020 and he received the Gorden Maskew Fair Award in 2021 from AAEES. He currently serves on the AAEES Board of Trustees as liaison with AWWA.

Hatem Fadel, PhD; Associate Professor, Misr Higher Institute for Engineering & Technology
Dr. Fadel is a consultant Engineer. He has 15 years of experience in water and wastewater. His research has focused on the new low-cost technologies and small systems. He is the current chair of the AWWA Small Systems Continuing Education committee

AWWA Webinar Program: National Water Pipeline Database (PIPEiD) – Better Data and Models for Improved Asset Management
September 21st, 2022

Webcast Description
Overview**:**

PIPEiD, a national water pipeline database, will help water utilities of all sizes more effectively manage water pipeline infrastructure systems for performance, resilience, and sustainability. This work was conducted on behalf of the United States Bureau of Reclamation under congressional direction to collect high-quality field performance data of water pipelines of different materials and diameters, including cast iron and ductile iron, prestressed concrete cylinder pipe, reinforced concrete, steel, thermoplastic, and others.

Topics to be covered:
1. Data Structure and Database Management for Asset Management
2. Descriptive, Correlation, and Survival/Weibull Curve Analysis for Asset Management
3. Performance, Risk, and Life Cycle Economic Analysis for Advanced Asset Management

The webinar is useful for water utilities of all sizes, consultants, pipe associations, researchers, and technology providers.

Learning Objectives:

1. Understand water pipeline failure mode and mechanisms.
2. Understand water pipeline data collection and compilation.
3. Understand water pipeline performance analysis and management.
4. Understand water pipeline risk analysis and management.
5. Understand water pipeline life-cycle economic analysis.

Presenter Biography Information

Sunil K. Sinha; Professor & Director, Virginia Tech

Dr. Sunil Sinha is a Professor & Director of Sustainable Water Infrastructure Management Center at Virginia Tech. His research and educational activities are related to advanced asset management with Big Data Analytics and Artificial Intelligence Applications.

Anmol Vishwakarma; Doctoral Student, Virginia Tech

Anmol is a Ph.D. student at Virginia Tech working on understanding the risks of failure of water pipeline infrastructure systems. He has been working on the PIPEiD project for the last 5 years. Most of his work has revolved around the development of failure, risk, and economic prediction models to help utilities prioritize pipes and strategize their renewal programs. He hopes to help water utilities make better decisions and manage water infrastructure systems more sustainably.

AWWA Webinar Program: Presented by Mueller – Leak Monitoring: More than Just "Nice to Have"
September 27th, 2022

Webcast Description

Overview**:**

Water loss poses a threat to communities across the globe. Between aging infrastructure, climate change, and a multitude of other factors, water utilities face numerous challenges to protect their buried assets and the water they manage. This webinar will explore new technological solutions to those threats – that can help utilities protect the earth's most valuable resource.

This webinar is for anyone who wants to gain a better understanding of leak monitoring technology – from the algorithms and design behind it, to how it can tackle the challenge of today, and tomorrow.

Participants will learn about solutions that will help utilities manage assets proactively, optimize budgets, and address increasingly important environmental concerns.

Learning Objectives:

- Learn why leak monitoring technology is more than just a "nice to have."
- Learn the benefits of leak monitoring technology, beyond reducing NRW.
- Learn how other utilities are addressing today's challenges of aging infrastructure and climate change with leak monitoring technology.

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Presenter Biography Information

Corey Keefer; North American Sales Manager, Mueller Water Products
Corey Keefer is the North American Sales Manager, Water Management Solutions at Mueller Water Products. With a focus on technology sales, he supports utilities with leak monitoring, condition assessment, pressure management, and water quality solutions. Corey has an associate's in mechanical engineering and bachelor of science in business and managerial economics from Lasell University.

Asha Budhlall; Manager – Field Services, Mueller Water Products
Asha Budhlall, P. Eng has over ten years of experience working within the water pipe assessment industry working for Echologics. She has succeeded in a field, project management and team management capacity while handling critical water pipe leak detection and condition assessment projects for both distribution and transmission mains. At Echologics, Asha manages a team of highly skilled Field Technicians and Project Managers who install and maintain multi-million-dollar permanent leak detection projects at multiple locations across North America. Asha also provides technical guidance for proposals and reports for Echologics' clients, and she supplies continuous feedback for future Echologics' product development.

AWWA Webinar Program: Utility Cyber Defense: How to Engineer a Better Approach
September 28th, 2022

Webcast Description
Overview:

This webinar will present an emerging methodology to improve control system cybersecurity through an operations and engineering approach. Attendees will learn best practices to build cyber–physical resilience to better ensure delivery of critical functions and to protect staff and the public.

Utilities must consider how their SCADA and physical asset systems are resilient by design in the face of cyber incidents. The escalation of control- system-based cyber-incidents, coupled with the natural evolution of engineering practices that have removed cyber–physical protections from our water and wastewater systems, has created a widespread risk to utilities' physical assets and to people.

Developed by Idaho National Laboratory, consequence-driven, cyber-informed engineering (CCE) is a methodology specifically designed to improve the cyber–physical resilience of critical infrastructure systems. In 2020, West Yost was the first licensee of CCE. Since then, West Yost staff have worked with utilities to conduct CCE-related training, assessments, emergency preparedness exercises, and engineering design improvements. West Yost staff are also developing sector-specific CCE guidance to be published through AWWA. This guidance is expected to become the de facto standard for building and maintaining cyber–physical resilience in the water sector.

For some time now, it has generally been understood that cybersecurity is everyone's responsibility, but that has been generally constrained to cyber hygiene efforts like not clicking on links that result in phishing attacks. CCE's goal is to change how organizations understand and manage their strategic cyber risks through changing the way engineers, operators, and senior management understand and mitigate cyber risks for their most critical systems and processes. Cyber risks are not always solved with cyber solutions; some, including those that have the greatest consequences, may be solved with better engineering and operations. This presentation will present both engineering and operations solutions that the presenters have observed in the field. We propose to emphasize the importance of control system cybersecurity during Cybersecurity Month 2022 (October).

Attendees will develop a high-level understanding of the CCE methodology and how they will be able to apply this engineering and operations-based cyber risk management tool within their utilities. This webinar will include an assessment and subsequent development and implementation of engineered protective measures.

Many utilities have under-invested in control system cybersecurity. In addition, many common traditional IT cybersecurity practices don't apply well within a control system. At the same time, control system cybersecurity expertise is rare and expensive to retain. Attendees will develop a high-level understanding of CCE and how they will be able to apply this engineering-and operations-based cyber risk management tool within their utilities. This will include an assessment and subsequent development and implementation of engineered protective measures.

Learning Objectives:

- Understand the objective of the CCE methodology.
- Identify the four phases of a CCE assessment.
- Identify cyber–physical engineering best practices to implement at their utility.
- Understand the importance of cyber–physical resilience.

Presenter Biography Information

Andrew Ohrt, PE; Resilience Practice Area Lead – West Yost Associates
Andrew is the Resilience Practice Area Lead for West Yost Associates based in Duluth, MN. He has led the development of American Water Works Association projects to update Water Sector cybersecurity resources since 2019. He currently leads West Yost's partnership with Idaho National Laboratory to bring Consequence-driven, Cyber-informed Engineering to the water/wastewater sector.

Linda Warren; Risk and Resilience Specialist, Launch! Consulting, Inc.
Linda is the CEO of Launch! Consulting, and has been assisting Utilities with all things resilient since 2001. She is a Risk and Resilience Specialist and recent chair of the AWWA Emergency Preparedness and Security Committee. She works with cyber specialists to facilitate cybersecurity assessments.

Dr. Kenneth Crowther; Product Security Leader, Xylem
Dr. Kenneth Crowther is a product security leader at Xylem working with product teams to design and build security into technology and solutions. Dr. Crowther also teaches Risk Management at the University of Virginia and Georgetown University. Xylem is a water technology company committed to "solving water" by creating innovative and smart technology solutions to meet the world's water, wastewater and energy needs.

AWWA Webinar Program: Presented by SL Environmental Law Group -- Implications of US EPA'S PFAS Health Advisories: Action Steps for Impacted Water Suppliers
September 29th, 2022

Webcast Description
Overview:
Join Rob Bilott, Attorney at Taft Law, whose story was chronicled in the feature film Dark Waters, and Ken Sansone, Attorney at SL Environmental Law Group for a discussion on how impending regulations will impact water suppliers all across the country, and strategies for shifting costs to manufacturers. We will also hear from Alan LeBlanc, with CDM Smith, discussing leading treatment techniques, along with Adan Ortega, discussing the importance of proper communication when addressing concerns in water quality. This presentation will shed light on current PFAS regulations, including the recently published Strategic Roadmap from the EPA, and will cover how other water utilities have successfully held polluters responsible.

PFAS contamination and the cost of cleanup is a nation-wide problem that water suppliers are facing. Understanding how a water system may be held legally responsible for water quality as new state and federal regulations are published, what legal options are available, and ultimately who should pay for clean water are critical topics for systems of all size. This webinar will answer questions, break down strategies and share valuable insights using experts in the field.

Learning Objectives:

- Learn the story behind the motion picture, Dark Waters, and how Rob Bilott paved the way for PFAS litigation in America.
- Learn about the EPA PFAS Roadmap and how upcoming regulations will affect your water utility and city.
- Learn how water providers and municipalities have successfully held polluters accountable for water contamination and recovered the necessary funding for cleanup.

Presenter Biography Information

Rob Bilott; Partner, Taft Stettinius & Hollister LLP
A seasoned and internationally-recognized litigator, advocate, and author, Rob represents a diverse range of clients on a wide variety of matters involving federal, state, and local environmental laws. For more than 30 years, he has handled environmental issues of regulatory compliance, permitting, and

corporate/real estate transactions, as well as all aspects of litigation arising from such issues, from administrative hearings to multi-party, complex multi-district litigation, mass torts, and class actions. Rob's story is chronicled in his book, "Exposure: Poisoned Water, Corporate Greed, and One Lawyer's Twenty-Year Battle against DuPont," and is the inspiration for the feature film, "Dark Waters" and documentary, "The Devil We Know.

Ken Sansone; Partner, SL Environmental Law Group
Ken is a partner at SL Environmental who exclusively represents municipalities, water districts, and other water suppliers in environmental contamination cases. Ken has more than two decades of experience in handling sophisticated civil and criminal litigation at both the trial and appellate level in state and federal court. Before joining SL, Ken was an assistant attorney general for the State of New Hampshire. He is currently representing more than 80 water systems across the country in cases against 3M and DuPont over PFAS contamination.

Alan G. LeBlanc, P.E., BCEE Senior Vice President and Drinking Water Treatment Discipline Leader, CDM Smith
Mr. LeBlanc is a Senior Vice President and Drinking Water Treatment Discipline Leader with CDM Smith. He has 28 years of experience in the planning and implementation of drinking water treatment projects across the United States. Al has led PFAS study, design and construction projects for twenty-five drinking water supply facilities across the United States. Mr. LeBlanc received his Bachelor of Science degree in Civil Engineering from Northeastern University in Boston, a Master of Engineering degree from Colorado State University, and is a registered Professional Engineer in ten states. He is a married father of 21- and 19-year old sons