AWWA Webinar Program: Examining the Importance of Corrosion Control Research
July 14ᵗʰ, 2021

Webcast Description

Overview:
Modifying your corrosion control treatment can present even more challenges than selecting an initial corrosion control strategy. Understanding the challenges systems face when adapting their current corrosion control strategies in order to comply with the EPA's revised Lead and Copper Rule requires careful consideration and planning. In this webinar, utility personnel will describe their experiences implementing and modifying corrosion control treatment.

Presenter Biography Information

Faith Wydra — Senior Manager, Water Quality and Environmental Compliance Pittsburgh Water and Sewer Authority

Craig McGonagill — Engineering Senior Specialist Denver Water
Craig McGonagill has been working in the public utility sector since 2007. In 2014 he joined Denver Water and has worked in a variety of water quality roles. Currently he is an engineering senior specialist with the Start-Up, Commissioning, and Optimization team. He was involved in the design and implementation of Denver Water's customer lead sampling program and has played serval support roles in what has become Denver Water's Lead Reduction Program

AWWA Webinar Program: Sponsored by Innovyze: Digital Transformation in the Water Sector
July 20ᵗʰ, 2021

Webcast Description

Overview:
In virtually every industry, massive investments are being made in digital transformation with the goals of streamlining and accelerating product/service delivery, dramatically increasing customer and business intelligence, and creating new opportunities to improve outcomes and grow revenues. For the complex water industry, where much of the infrastructure is underground and the variables affecting service delivery can change with the weather (literally), adoption of advanced digital technologies poses unique challenges.

Water utility executives and government leaders are now asking whether the promises of digital transformation can be achieved in a highly regulated environment with massive legacy infrastructure? Are solutions affordable, implementations manageable, and results sustainable given the limited budgets and plethora of demands on water infrastructure, delivery, sanitation, and emergency response departments?

In this panel session, experts from technology, regulatory, and utility sectors will discuss the current water challenges driving the need for digital transformation in water. They will address barriers impeding transformation, and what other utilities and commercial industries have done to lead the

way. The panel will consider the realistic costs, benefits, and timelines utilities should expect for their digital transformation initiatives, as well as the consequences of maintaining status quo.

This webinar addresses:

- How is technology helping to avoid or better prepare for weather-related emergencies? Where is innovation still needed?
- Where should technology investments rank relative to other infrastructure, climate, and sustainability needs?
- How is the regulatory landscape helping or hurting progress in digital transformation for water?
- How is cloud technology opening new strategic opportunities for utilities?
- What examples in the public or commercial sectors can water utilities follow to shift their management paradigm to the cloud?

Viewers will understand:

1. the current challenges to adopting digital technology and strategies that can make room for new technologies,
2. the potential impacts of a future without investing in digital transformation technology,
3. the strategic opportunities created by cloud technologies.

Presenter Biography Information

Colby T. Manwaring, P.E. — Chief Executive Officer, Innovyze
Colby Manwaring is the Chief Executive Officer of Innovyze, the leading global provider of smart water analytics software solutions. Colby is responsible for the company's strategic vision and leads the development and growth of Innovyze's global software technology portfolio. With advanced degrees in civil and environmental engineering as well as business administration, Colby is a licensed Professional Engineer and an experienced software company executive. Having lived and worked in the USA, Australia, Spain, and the UK, Colby has a broad understanding of the global water and wastewater industry and the software technology required to elevate professional practice worldwide. Over the course of his career prior to leading Innovyze, he held senior positions as software developer, product manager, consultant & trainer, sales & marketing executive, and commercial manager within the engineering software industry. He has worked with water/wastewater utilities, government agencies, and engineering organizations worldwide to create solutions to empower thousands of engineers to competitively plan, manage, design, protect, operate, and sustain highly efficient and reliable infrastructure systems. Colby holds a BS in Civil and Environmental Engineering, with a Spanish Minor and International Emphasis from Brigham Young University, a MS in Civil and Environmental Engineering from Brigham Young University, with a Minor of Engineering Business Administration from the Brigham Young University Marriott School of Management.

Yvonne W. Forrest — Director, Houston Public Works
As Director of Houston Water, Ms. Forrest is responsible for the operation and maintenance of City of Houston's regional water and wastewater utility systems. She also oversees Regulatory

Compliance, Infrastructure Planning and Operations/Program Support. Houston is the fourth largest city in the United States and City's public water and wastewater system is one of the largest utilities within the United States. She manages a staff of over 1700 with an annual capital and operations and maintenance budget of over $657 million. The Drinking Water Operations branch is responsible for three surface water purification plants, 100 groundwater pumping stations, over 7,000 miles of water mains, 59,000 fire hydrants and 159,000 valves. The Wastewater Operations branch is responsible for 39 waste treatment plants, over 370 lift stations, 127,000 manholes and 6,100 miles of gravity and force mains.

Prior to her career in public service, Ms. Forrest spent 15 years, as an Engineer, in the private sector developing processes to ensure compliance with environmental regulations, permits and corporate standards. She holds a Bachelor of Science in Chemical Engineering from University of South Carolina.

Patrick Keaney — Worldwide Head of Development, AWS
Patrick Keaney is the worldwide head of business development for AWS Water, a new vertical focused on bringing cloud technologies and services to the water market. Prior to joining AWS Patrick was a global executive for 23 years with Arcadis, a global engineering firm focused on water and environmental sustainability and resilience. His focus at AWS is to align internal AWS and partner teams to help solve critical water issues such as ageing infrastructure, non-revenue water and the public's understanding of the value of water. He is working with AWS to deliver solutions such as predictive equipment condition assessments (Monitron), digital twins and other AIML and IoT tools to water utilities and customers.

Carol Browner — Senior Counselor, Sustainability Practice, Albright Stonebridge Group
Carol M. Browner brings nearly four decades of experience advising on environmental and energy policies affecting global energy, environmental, public health, and business matters. She provides counsel to industry leaders in the energy, transportation, and consumer product sectors on regulatory matters, environmental impact issues, corporate sustainability approaches, and strategic partnership development to advance clean energy, ESG, and other business priorities. Carol served as Assistant to President Barack Obama and Director of the White House Office of Energy and Climate Change Policy, where she oversaw the coordination of environmental, energy, climate, transport, and related policy across the U.S. federal government. During her tenure, the White House secured the largest investment ever in clean energy and established the national car policy that included both new automobile fuel efficiency standards and first ever greenhouse gas reduction standards. Carol is the longest serving Administrator of the Environmental Protection Agency. As Administrator, she adopted the most stringent air pollution standards in U.S. history; set the first fine particle clean air standard; and spearheaded the reauthorization of the Safe Drinking Water Act as well as the Food Quality Protection Act. Carol was known for working with both environmentalists and industry to set science-based public health protections while providing businesses important flexibilities in how to meet those standards. She worked across the agency to ensure a focus on protecting vulnerable populations and promote environmental equity.

Additionally, Carol serves on a number of boards of directors advising on environmental and energy issues, including as Chair of the Board of the League of Conservation Voters, as Chair of the Sustainability Committee of the Board of Directors for Bunge Limited, and as a Board Member of Innovyze.

Carol is a member of the Bar of Florida. District of Columbia bar application pending; supervised by principals of the firm.

AWWA Webinar Program: Western U.S. Drought Webinar Series: Updated U.S. Drought Portal Provides Comprehensive User Information
July 29th, 2020

Webcast Description
Overview:
Drought can imperil both the quantity and quality of the water supplied by utilities to the public. Early warning systems are vital for the water utility sector in strengthening its resilience to drought. NIDIS will introduce attendees to the comprehensive drought data and tools available on the U.S. Drought Portal.

The U.S. Drought Portal (Drought.gov), focuses on tools and resources to help water professionals better plan for and mitigate the impacts of drought. In January 2021, NOAA's National Integrated Drought Information System (NIDIS) partnered with the National Centers for Environmental Information to launch the redesigned Drought.gov: a one-stop shop for data, decision-support products, resources, and information on drought, including economic impact data and drought conditions and forecasts down to the city, county, and watershed levels.

Join the experts in a town hall demonstration to learn what's new in the recently updated U.S. Drought Portal.

Learning Objectives:

1. Know resources available for becoming a more resilient utility
2. Understanding the importance of water shortage planning
3. Know where to find drought data and how to use it

Presenter Biography Information
Kelsey Satelino — Digital Communications Coordinator NOAA/National Integrated Drought Information System (NIDIS) University of Colorado Boulder Cooperative Institute for Research in Environmental Sciences (CIRES)
Kelsey Satalino is the Digital Communications Coordinator for the National Integrated Drought Information System (NIDIS). Before joining NIDIS, Kelsey helped guide digital marketing strategy and website user experience as an assistant marketing manager at Boston Market. In her previous work as a government communications contractor, she provided digital communications, writing, editing, and web content management support to several U.S. Department of Energy program offices.

Steve Ansari — U.S. Drought Portal Program Manager National Centers for Environmental Information

Steve Ansari is the U.S. Drought Portal Program Manager at NCEI in Asheville, North Carolina. Working for NOAA since 2002, Steve has a background in a variety of GIS, data management, and visualization activities, including drought, radar, satellite, and severe weather datasets. He is also the primary author of the NOAA Weather and Climate Toolkit software application.

Meredith Muth, PhD — NOAA

Meredith Muth is a NIDIS regional drought information coordinator and is currently coordinating the Southeast Drought Early Warning System (DEWS). She has over 11 years of experience working with both interagency and international partners on improving the delivery of NOAA's weather, water, and climate information. Meredith has a Ph.D. in environmental science.

AWWA Webinar Program: Bypass Pumping & Digital Solutions
August 19ᵗʰ, 2021

Webcast Description

Overview:

Utilities have long leveraged technology to understand the performance of permanent assets. With the advancement of digitalization and IoT, this approach is now expanding to include temporary bypass pumping equipment in an effort to best manage assets and deliver a high level of service to the community.

The purpose of this webinar is to help water utility professionals, superintendents, plant managers, and operations and maintenance personnel get an overview of critical challenges facing water utilities then and now, including the progression of bypass pumping applications over the years - from manned pump watch and remote monitoring solutions to future innovations of asset management and optimization.

The webinar will culminate with a discussion about how utilities can expand digital solutions from a specific asset to a network-wide approach to unlock additional value. Upon conclusion of the webinar, attendees will be able to identify current barriers to digital transformation at their facilities and various solutions available to them using real-world examples. By attending this webinar, participants will also be able to develop a framework for expanded future operations through integrated digital solutions.

Presenter Biography Information

Pete Snow — Training Manager, Xylem Rental Solutions
Darrin Ruiz — Engineered Solutions Supervisor, Xylem Rental Solutions
Joe Felix — Sales, Xylem Rental Solutions
Kevin Flis — Client Solutions Manager, Xylem Digital Solutions

AWWA Webinar Program: Western U.S. Drought Webinar Series: Exceptional Drought and Historic Extremes in the U.S. West
August 24ᵗʰ, 2021

Webcast Description:

<u>Overview:</u>
The western United States is in an exceptional drought. Many of the traditional drought indicators, such as precipitation and temperatures, hit historic extremes over the past year, including a year without a monsoon in the southwest and record low soil moisture leading into winter.

With a national audience in mind, this webinar will provide an overview of the unique climate of the western United States and how the last year-and-a-half has been different from the norm across this region. This story will be told from the perspective of a few of the scientists and data providers who will also highlight where to find the data used in their narrative. These may include tools such as the Evaporative Demand Drought Indicator, River forecast center forecast products, the Climate Engine, Soil Moisture, Wildfire related tools and/or Snow Drought.

Presenter Biography Information

Daniel McEvoy, PhD —**Regional Climatologist Desert Research Institute, Reno, Nevada**
Dr. McEvoy is a researcher with the Western Regional Climate Center and Desert Research Institute. He works on hydroclimatolgy research and data applications in the western US with a focus on drought monitoring, climate-wildfire connections, and subseasonal-to-seasonal prediction.

Mike Hobbins, PhD — **Senior Research Scientist University of Colorado-Cooperative Institute for Research in Environmental Sciences (CIRES)**
Mike Hobbins is a native Australian, raised in East Africa (Kenya) and the UK. He received his Bachelors in Civil Engineering from the University of Leeds in the UK (1989), and then his M.S. (2000) and Ph.D. (2004) from Colorado State University, both in Hydrologic Science and Engineering. Mike did a post-doc at the Australian National University in Canberra, and then returned to the US (2009), where he took a position at the NWS-Colorado Basin River Forecast Center in Salt Lake City, UT. He returned to Colorado (2012) to work at the NOAA-Physical Sciences Laboratory in Boulder, where he is employed by CIRES as a Senior Research Scientist.

Julie Koeberle — Hydrologist USDA-Natural Resources Conservation Service-National Water and Climate Center (USDA-NRCS-NWCC)
Julie has a B.S in Atmospheric Sciences from UNCA and a M.S. in Watershed Science from CSU. She started her career with the NWS in Seattle as a Meteorologist in 2004 and in 2006 she began with the NRCS Snow Survey in Idaho as a hydrologist. She is currently a forecast hydrologist with the National Water and Climate Center, part of the Snow Survey and Water Supply Forecasting Program, located in Portland Oregon

Paul Miller, PhD — Service Coordination Hydrologist NOAA – Colorado Basin River Forecast Center
Paul Miller is the Service Coordination Hydrologist at the CBRFC, where he has been for almost 9 years. Prior to joining the CBRFC, he worked for Reclamation in the Boulder Canyon Operations Office for approximately 7 years. He received his Ph.D. in Civil and Environmental Engineering from the University of Nevada Las Vegas, where he studied the impacts of climate change to the

Colorado River Basin, in part, through the use of CBRFC hydrologic models and projected temperature and precipitation datasets.

Mike Crimmins, PhD — Professor and Extension Specialist University of Arizona
Mike Crimmins is on the faculty of the Department of Environmental Science at the University of Arizona and is an Extension Specialist in Climate Science for Arizona Cooperative Extension. He has been in this role for 15 years working with ranchers, farmers, and natural resource managers across Arizona to integrate climate information in their planning and decision making and assisting them in developing strategies to adapt to a changing climate

AWWA Webinar Program: An Eye to the Future: Examining Long-term Drought and Climate Change August 31st, 2021

Webcast Description:

Overview:
How well does the current drought in the western U.S. compare with historical drought in the region? How well does it compare to what long-range climate models tell us the region may experience? This webinar will highlight recent research that examines long-term trends and future climate change projections of drought in the region and put the current drought, and the current 2-decades of low precipitation, into a historical and future context.

Presenter Biography Information

Andrew Hoell, PhD. — Research Meteorologist NOAA Physical Sciences Laboratory
Dr. Andrew Hoell is a research meteorologist at the NOAA Physical Sciences Laboratory. He focuses on the predictability and prediction of weather and climate extremes related to water and food security across the globe.

Isla Simpson, PhD — Scientist 2 Climate and Global Dynamics Laboratory, National Center for Atmospheric Research
Isla obtained her PhD from Imperial College London in 2009 and followed this with postdoc positions at the University of Toronto and Lamont-Doherty Earth Observatory of Columbia University. Since 2015 she has worked within the Climate Analysis Section at the National Center for Atmospheric Research on atmospheric and climate dynamics and climate model evaluation and development.

AWWA Webinar Program: Planning Ahead for the Changes in Lead and Copper Rule Sampling September 8th, 2021

Webcast Description:

Overview:
Community water systems of all sizes will be taking a number of steps to prepare to comply with the Revised Lead and Copper Rule. The Revised LCR includes several different types of sample collection beyond what is required by the current rule. Importantly, Tier 1 sample sites (i.e., homes lead service lines) will require "fifth-liter" samples. The new requirements will also

require re-thinking current compliance sample sites, as well as, developing sample protocols for follow-up samples at sample sites with lead levels above 15 µg/L and homes where there have been lead service line replacements. Monitoring in schools is also a feature of the rule revisions. This webinar focuses on key steps water systems can take now in preparation for compliance with the rule requirements in 2024.

Learning Objectives:

1. Take steps to prepare for changes in sampling requirements 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

Roger Arnold – Associate Hazen and Sawyer
Roger Arnold is an Associate with Hazen and Sawyer and serves as a subject matter expert in corrosion control and Lead and Copper Rule compliance. Mr. Arnold has over 10 years of experience in planning and design of water supply, treatment, and conveyance projects and specializes in corrosion control. Mr. Arnold has worked with utilities across the country on corrosion control projects, including compliance sampling and investigative sampling projects. Mr. Arnold holds a B.S. in Civil Engineering and a M.S. in Environmental Engineering from Virginia Tech.

Renée Lanza, PE – Woodard and Curran
Renee Lanza is a Project Manager in the Drinking Water Practice at Woodard & Curran, based out of Andover, Massachusetts. She has 9 years of experience with planning, design, and construction of water treatment and distribution system capital projects, including planning and remediation focused on lead in schools. Renee is Vice-Chair of the AWWA Water Treatment Facility Design & Construction Committee, and a member of the AWWA Capital Project Delivery and Young Professionals Committees.

AWWA Webinar Program: Webinar from Electro Scan: Machine-Intelligent Non-Acoustic Leak Detection
September 21st, 2021

Webcast Description:
Overview:
Electro Scan's breakthrough leak detection technology – already being adopted by leading American & British water companies – represents the first machine-intelligent non-acoustic solution with test results not dependent on customer usage, flow velocities, groundwater, pipe material, pressure, and street noise. Accurate leak locations to the nearest inch and severities expressed in Gallons per Minute (GPM), explains its 2021 Leak Detection Solution of the Year Award (IoT Breakthrough) and 2021 Product of the Year Award (Environment + Energy).

For years, global water utilities have battled the lack of precise leak locations, inability to determine leak severities in industry accepted metrics like GPM, and numerous false-positive readings from acoustic data loggers, correlators, listening sticks and sensors. Often resulting in finding low quality leaks or digging dry holes, water utilities have been further hampered by audio disturbances caused by street noises, pipe sounds made from customer usage, high groundwater levels or surrounding water plumes that muffle or silence leak vibrations, dampening effects from newer composite pipe & repair materials, flow patterns, and variable pressure readings. Just some of the reasons why we don't use acoustics to certify new pipes or repairs as leak-free.

If the COVID pandemic has taught water utilities anything, it has been that doing the same thing over and over and expecting different results, does not work; especially given continued drought conditions, climate change, and global warming. The purpose of this webinar will be to:

- Re-set how leaks can be more accurately found and expressed in GPM to support CAPEX decisions and long-term pipeline reliability & sustainability.
- Instead of listening (acoustically), seeing (visually), or smelling (helium tracing), attendees will learn how machine-intelligent technology can automatically measure the size of holes, by combining Ohms' Law, plus Torricelli's Law.

Participants will appreciate hearing from one of the pioneers of modern-day utility enterprise asset management, Chuck Hansen, who sold his namesake software company he founded in 1980 and sold in 2007. Never far from the water & sewer business, Hansen was challenged by long-time friend and colleague, Ken Kerri, PhD, PE, to find a better way to assess pressurized water pipes and gravity sewer mains, especially after Trenchless repairs and relining. Establishing Electro Scan (UK) Ltd. in 2014, participants will get first-hand knowledge of how British regulators have challenged mostly private equity-backed water utilities to balance consistent high levels of capital investment with increasing environmental, governance, and stewardship standards on behalf of British ratepayers.

Presenter Biography Information

Chuck Hansen – Founder & Chairman, Electro Scan
Chuck Hansen is a Multi-Patent Holder with +40 Years Sewer & Water Asset Management, working with over 2,000 utilities, worldwide. AWWA Water Main Committee

Charles Wilmut, PE – Senior Advisor, Electro Scan Inc
Charles has spent +50 Years in Civil Engineering, including pipe condition assessment and evaluations. He is the Former SVP at Burgess & Niple, and former Founder of GSW Engineers.

Brad Weston – Managing Director, Electro Scan (UK) Ltd
Brad has 10 Years of Field Inspection experience, including +3,000 Sahara & Untethered Acoustic Ball insertions. He is a member of British Water and Future Water Association.

AWWA Webinar Program: Get Ready, Get Set – It's Time to change AGAIN
September 22nd, 2021

Overview:
If the last year has shown us anything, is that change is inevitable. In order to thrive in an increasingly unpredictable world, we need to develop better responses to change and perhaps learn to embrace it. As many organizations prepare to transition employees back into the workplace, now is the time to develop your Re-Entry Strategy.

During Covid we had no choice but to pivot and adapt to change quickly in order to meet the needs of the communities we serve. It was necessary to quickly procure PPE, create odd/even scheduling to reduce the number of staff working in close proximity, create new policies to ensure the safety and wellbeing of your employees and so much more. Many employees embraced and adjusted to working from home while also assisting their children with virtual learning. In fact, many thrived working from home and welcomed more time at home with no commutes and may not be ready to return back to the office.

How are you preparing your workforce to return back to work? Regardless of whether they come back fulltime or on a hybrid schedule, it is CHANGE. So what is you Re-Entry Strategy? Just telling everyone to come back to work may not be the most effective way.

In this webinar you will learn the four stages of transition to better lead your staff through the change and develop an effective Re-Entry Strategy. You will also learn how to manage resistance and create a communication plan that will get your employees on board and productive faster.

Learning Objectives:

1. Learn the four stages of change
2. Guide employees through the four stages of change
3. Develop an effective Re-Entry Strategy
4. Create a change communication strategy

Presenter Biography Information
Margie Hamner, CPTD, ADD – Starfish Consulting, LLC
Margie Hamner, CEO & Founder of Starfish Consulting, is an experienced and respected human resource professional, instructor, and executive coach with 25+ years of experience in private and public sector organizations. For the past 12 years she has worked in the water and wastewater industry as the Human Resources and Organizational Development Manager for the Prince William County Service Authority and as an independent consultant on the east coast. Her in depth knowledge and experience in the industry allows her to draw on real world situations, and her teaching style is interactive, practical, and fun.

Maurita Graves – Fairfax Water

Maurita Graves is an accomplished Human Resources professional with over 20 years' experience. She has experience working in corporate, government, and non-profit organizations. She is skilled in Leadership and Organizational Development, Workforce and Career Development, and Talent Acquisition and Retention. She has been employed with Fairfax Water for 12 years.