ERIE COUNTY WATER AUTHORITY

INTEROFFICE MEMORANDUM

May 30, 2025

To: Terrence D. McCracken, Secretary to the Authority

From: Michael J. Quinn, PE, Director of Distribution

Subject: Request to Attend 2025 AWWA Water Infrastructure Conference in Orlando, FL

The AWWA Water Infrastructure Conference is scheduled for September 14 – 17, 2025 in Orlando, FL. The programs will cover a variety of infrastructure issues and solutions, including infrastructure asset management, capital improvements planning, strategies to manage existing infrastructure, and financing capital projects.

These conferences will also provide an opportunity to meet with various utilities management and engineering representatives and consultants and to obtain information on the new water utility management processes.

I am requesting Board Authorization to travel to the above-referenced conference for: Michael J. Quinn, PE, Director of Distribution and Marc A. Bellacose, Distribution Engineer.

Budget Information:

Unit 2502 – 2025 O&M Budget Item 12 – Travel
Unit 2502 – 2025 O&M Budget Item 37 - Training

MJQ:jmf
Attachments

ERIE COUNTY WATER AUTHORITY
AUTHORIZATION FORM
For Approval/Execution of Board Meeting Documents

Document Name: _____ **Project No.:** _____

Description: Travel/Training 2025 AWWA Water Infrastructure Conference in Orlando, FL

Item Description:

Choose one: Travel Request

Other: _____

Action Requested:

Choose one: Board Approval

Other: _____

Approvals Required:

APPROVED AS TO CONTENT:

☐	Chief Financial Officer		Date:	
☑	Chief Operating Officer		Date:	6/2/2025
☐	Claims Rep. – Risk Manager		Date:	
☐	Comptroller		Date:	
☐	Director of Administration		Date:	
☑	Director of Distribution		Date:	5/30/2025
☐	Director of Human Resources		Date:	
☐	Director of IT		Date:	
☐	Director of Production		Date:	
☐	Director of Water Quality		Date:	
☑	Executive Engineer		Date:	6/2/2025
☐	General Counsel (Legal)		Date:	
☐	Other: _____		Date:	

APPROVED FOR BOARD RESOLUTION:

Secretary to the Authority _____ Date: 6/2/2025

Remarks: _____

Resolution Date: _____ **Item No:** _____

TRAVEL REQUEST

Date: 5/29/2025

Employee Name	Job Title	Department
Michael Quinn	Director of Distribution	Engineering
Marc Bellacose	Distribution Engineer	Engineering

Destination: AWWA Water Infrastructure Conference - Orlando, FL

Is this training needed to meet professional licensing requirements? Yes (PE and Operators)

Description of training or business, and reasons and benefits of attendance:

Conference subject matter related to distribution and transmission system asset management, capital improvement planning, funding strategies, utility management and administration

Dates of Travel

From: 9/14/2025 To: 9/17/2025 Total number of business days: 3

Estimated Cost

Transportation $ 700 Hotel Accommodations $ 1,400 Meals $ 250

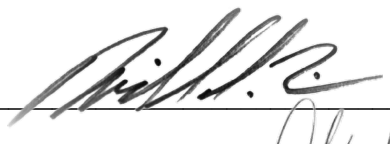
TOTAL ESTIMATED COST $ 2,350 **W/ REGISTRATION FEE $** 3,710

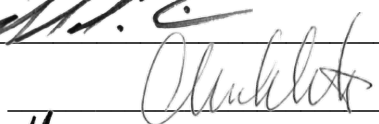
Balance in the training budget prior to this trip $ 2,500

Unit Number 2502 Primary Number 401000 G/L Number 921212

Comments (i.e. spouse traveling, preferences):

Approvals

Department Head  Date 5/29/2025

Chief Operating Officer  Date 5/29/2025

Secretary  Date 5/29/25

Rev. 06/23

TRAINING REQUEST

Date: 5/29/2025

Employee Name	Job Title	Department
Michael Quinn	Director of Distribution	Engineering
Marc Bellacose	Distribution Engineer	Engineering

Dates of Training

From: 9/14/2025 To: 9/17/2025 Total number of business days: 3

Training requests which require overnight accommodations must be accompanied by a Travel Request form.

Training Information

Title of Course(s) AWWA Water Infrastructure Conference

Description Conference featuring sessions on distributution system improvements planning, asset management, new technologies, investment stratagies, etc.

Is this course needed to meet continuing education or contact hour requirements? Yes
How many credit hours will you receive? 10-15
How many credits (per year) required for your license? 12
How many credits do you have year-to-date? 15
Are there 2 or more people attending this seminar? yes
Are there concurrent sessions? yes
Why is there a need for 2 or more people to attend this seminar? Multiple concurrent sessions of interest

Estimated Cost

Registration Fee $1,360 Mileage & Tolls $

TOTAL ESTIMATED COST $ 1,360

Balance in the training budget prior to this trip $ 2,500

Unit Number 2502 Primary Number 401000 G/L Number 921237

Approvals

Department Head Date 5/29/2025

Chief Operating Officer Date 5/29/2025

Secretary Date 5/29/25

Track

- Asset Management Programs and Practices
- Data, AI, and Automation
- Design to Delivery
- Pre Conference Workshop
- Utility Risk & Resilience
- Vision, Value, and Investment

Event Type

- Alternate Presentations
- Educational Sessions
- Plenary Session
- Pre-Conference Workshop

Sunday, September 14, 2025

PCW02 - Adding Utility Benchmarking to Your Continuous Performance Improvement Toolbox

Moderator(s): Frank Roth

Event Type: Pre-Conference Workshop

Event Track: Pre Conference Workshop

08:00 AM - 12:00 PM EDT | Sun

OVERVIEW: **Pre-Conference Workshops are an additional cost and require pre-registration.**

This workshop shows utilities how to use benchmarking data from AWWA's Utility Benchmarking Survey (UBS) to improve performance. Using results from UBS, utilities can focus their efforts on areas with gaps and set improvement targets. This workshop will educate attendees on how to utilize the UBS data as a part of their continuous performance improvement process.

PRESENTATIONS:

PCW01 - Planting the Seed Seeds of Success - Application AWWA's M37 Manual- Best Practices for Coagulation, Clarification and Filtration

Moderator(s): John Civardi

Event Type: Pre-Conference Workshop

Event Track: Pre Conference Workshop

09:00 AM - 05:00 PM EDT | Sun

OVERVIEW: **Pre-Conference Workshops are an additional cost and require pre-registration.**

AWWA's 4th edition of M37 Coagulation, Clarification, and Filtration in Water Treatment will be published in 2025. This manual provided the most recent body of knowledge for optimizing these systems. This session will provide utilities, regulators and engineers tools satisfy regulatory and economic constraints in the context of changes in source water quality.

PRESENTATIONS:

Monday, September 15, 2025

OGSOpening General Session

Moderator(s):

Event Type: Plenary Session

Event Track: Plenary Session

08:30 AM - 10:00 AM EDT | Mon

OVERVIEW:

PRESENTATIONS:

MON02 - Key Enablers for Effective Asset Management Programs: Technology and People

Moderator(s): Celine Hyer

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

10:30 AM - 12:00 PM EDT | Mon

OVERVIEW: Successful implementation of Asset Management Programs typically includes answering the five core questions about asset inventory, service levels, risk mitigation and funding needs. There are key enablers required for program success including leveraging technology and having people that are supportive of the program and accept changing the way business is done. Join presenters for a look into the key enablers of a successful asset management program.

PRESENTATIONS:

10:30 AM EDT

Using Prosci Tools for AM Implementation

This presentation will describe the Prosci Risk Assessment,that considers the size and scope of the change in the context of the organization, and what level of change activities are needed. Case studies will be discussed.

Speaker(s): Margaret Gadzic, *Arcadis*

10:53 AM EDT

Using CMMS for Risk Assessments and Capital Planning at TRWD

TRWD has successfully configured Maximo CMMS to schedule annual condition and risk assessment and capture the results using mobile devices. Power BI Dashboards transform the collected data to make decisions on capital project needs.

Speaker(s): Rachel Crawley, *TRWD*

11:15 AM EDT

Options for Effective AM Organizational Structures Case Study

Various organizational structures can be used for asset management including centralized or decentralized models. Selecting the right model should include a review of where the key activities are currently located, the organizational culture, and

Speaker(s): Felicia James, *Carollo*

11:38 AM EDT

Successfully leveraging IT system for Asset Management success

Middlesex Water Company has successfully implemented IT system to assist with overall asset management and will present their lessons learned and successes.

Speaker(s): TBD TBD, *Middlesex Water Company*

MON03 - Water Collaborative: Is your Utility Ready for the Future of Project Delivery: Key Drivers for Collaborative Delivery Success

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

10:30 AM - 12:00 PM EDT | Mon

OVERVIEW: Collaborative delivery is the fastest growing form of project delivery in the water sector, growing at a rate of 10% annually. Projected to be the project delivery mechanism for more than 65% of water projects in the next 5 years, collaborative delivery plays an important role in building water's future. This session covers key outcomes from the Water Collaborative Delivery Association's research into utility readiness factors driving project success, and describes utility challenges, faced at various levels of collaborative delivery adoption, that highlight how readiness gaps can be effectively assessed and addressed. The session ends with an interactive panel discussion, providing session participants the opportunity to engage with panelists and provide feedback about their readiness for the future of project delivery and learn how they can prepare to deliver better projects, together.

PRESENTATIONS:

MON04 - AWWA DC Office - Administration Priorities/Cyber Legislation

Moderator(s):

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

10:30 AM - 12:00 PM EDT | Mon

OVERVIEW:

PRESENTATIONS:

MON05 - Enhancing Resilience: Integrating Risk Management and Emergency Response

Moderator(s):

Event Type: Educational Sessions

Event Track: Utility Risk & Resilience

01:30 PM - 03:00 PM EDT | Mon

OVERVIEW: Attendees will explores resilience and risk management through an examination of impacts on water, the imporatnace of learning from failures during emergency exercises and the benefits of integrating WARN into risk assessments and emergency response plans. DIscover practical approaoches to strengthening emergency frameworks.

PRESENTATIONS:

01:30 PM EDT

Panel Discussion: Wildfires and Water Supply

Preparing water supply systems to combat wildfires has become an increasingly important issue. We've brought together some individuals with a broad range of experience on this topic to share their lessons learned.

Speaker(s): Thomas Walski, *Bentley Systems, Inc.*

02:00 PM EDT

Fail During an Exercise, Not Real Life

Why your utility should conduct emergency and disaster exercises is simple: you don't want to fail in real life. The public health, safety, and political consequences are too risky. Water utilities are following a trend of becoming more involved in conducting or participating in emergency or disaster training exercises. Some states even have regulations requiring utilities to conduct annual exercises to test emergency or contingency plans, hazards, and scenarios. This presentation offers suggestions on how to prepare, design, and conduct emergency training exercises.

Speaker(s): Sarah Moore, *Arcadis*

02:30 PM EDT

Integrating WARN in Risk and Resilience Assessment & Emergency Response Plans

In this session, EPA will discuss AWIA Section 2013 / SDWA Section 1433 requirements and deadlines and then provide examples of how utilities can utilize local mutual aid networks such as WARNs and incorporate these networks into their RRAs and ERPs.

Speaker(s): Karen Edwards-Lindsey, *USEPA Office of Water*

MON06 - Practical AI for Improving Utility Operations and Infrastructure

Moderator(s): James Cooper

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

01:30 PM - 03:00 PM EDT | Mon

OVERVIEW: As artificial intelligence fuels a shift from reactive to proactive strategies in the water sector, utilties need practical insights into how AI can deliver smarter decision-making, improved reliability, and long-term cost savings. Jois us to learn more on AI-powered tools for system-wide transformation, the use of knowledge twins to enhance asset management, and predictive modeling techniques to optimize water main management in the field.

PRESENTATIONS:

01:30 PM EDT

AI for Water: Harnessing Artificial Intelligence to Transform the Water Industry

This presentation will provide a detailed synthesis of the ideas submitted during a global innovation challenge, where ideas were gathered to document how AI can be used to advance the water sector. The ideas are categorized into key themes and identifying trends that reflect the evolving role of AI in water. It will also contextualize these ideas by presenting an overview of how AI is currently being applied across the sector, with examples.

Speaker(s): James Cooper, *Arcadis*

02:00 PM EDT

Transforming Water Sector Operations and Asset Management with An AI-Powered Knowledge Twin

Knowledge Twin is a Generative AI Digital Knowledge Companion transforming operations in the water and wastewater sector. It captures and retains institutional knowledge, providing real-time guidance, troubleshooting, and insights for maintenance, incident response, and asset management. Key features include conversational interaction, continuous learning, and integration with work systems. By streamlining processes and eliminating manual tasks, Knowledge Twin enhances decision-making and empowers teams with seamless access to critical information, creating a more efficient and adaptable workforce.

Speaker(s): Amitsur Preis, *TeamSolve*

02:30 PM EDT

From Reactive to Proactive: Using Predictive Modeling for Water Main Management in Mobile AL

With limited time and budget, and no governing capital plan, the Mobile Area Water and Sewer System (MAWSS) needed a proactive approach to assessing risk in their small diameter water mains. Learn how MAWSS moved from reactive to proactive water main management by utilizing an AI-driven predictive modeling solution to assess risk and consequence of failure and enable simple scenario and asset planning. In this talk, water systems across the country will learn how predictive modeling can enhance and simplify a water main risk assessment to enable water administrators to more easily and affordably take a proactive approach to water main risk management.

Speaker(s): Elana Fox, *BlueConduit*

MON07 - Integrating Resilience, Data and Proactive Strategies into Asset Management Practices

Moderator(s): Kevin Slaven

Event Type: Educational Sessions

Event Track: Asset Management Programs and Practices

01:30 PM - 03:00 PM EDT | Mon

OVERVIEW: Utilities are advancing asset management practices by integrating resilience planning, data analytics, and proactive strategies. In this session, attendees will gain practical insights into building adaptive, forward-thinking asset management programs that address both current challenges and future risks.

PRESENTATIONS:

01:30 PM EDT

Integrating Asset Management and Resilience For Coastal Flood Protection

Communities across the U.S. are faced with meeting multiple regulatory requirements while dealing with perennial budget struggles and interdepartmental issues. Thus, identifying and choosing the most cost-effective approach for managing risk can be a struggle. Utilities have begun to integrate the resilience principals into a risk-based asset management (RBAM) approach for prioritizing capital investments and managing risk. This presentation will discuss how the City of Virginia Beach Department of Public Works (DPW) is incorporating resilience into their asset management program and flood protection program (FPP). In November 2021, Virginia Beach voters overwhelmingly supported a resiliency package for flood protection.

Speaker(s): Kevin Slaven, *Arcadis*

02:00 PM EDT

Pro-Active Knowledge-Based RCCP Pipe Asset Management Program

Pro-Active Knowledge-Based PCCP Pipe Asset Management Program

The Tarrant Regional Water District (TRWD) operates over 260 miles of PCCP pipe serving water to more than 30 wholesale customers in the Fort Worth, Texas area spanning 11 counties and over 2 million persons. They experienced several catastrophic failures of vintage 1970's PCCP pipe and decided to develop a pro-active knowledge based approach to inspect and replace degraded pipe in an efficient manner. This effort has successfully reduced the number of failures to zero.

Speaker(s): Paul Gagliardo, *Gagliacqua Consulting*

02:30 PM EDT

The Evolution of Asset Management and Data Analytics at Polk County

Polk County, Florida, leverages the Lucity CMMS system and Power BI to enhance infrastructure maintenance planning through data analytics. This presentation highlights how integrating maintenance data with AWWA standards and benchmarking improves decision-making, resource allocation, and performance monitoring. Key topics include building data pipelines, developing analytics, and creating intuitive dashboards. Attendees will gain insights into overcoming data management challenges, engaging stakeholders, and demonstrating the value of maintenance analytics to scale initiatives and achieve organizational goals.

Speaker(s): Timothy Collazuol, *Black & Veatch*

MON08 - Designing Water Distribution Systems

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

01:30 PM - 03:00 PM EDT | Mon

OVERVIEW: This session focuses on defining and achieving performance benchmarks that not only drive effective long-term distribution system planning but also align system design, operation, and renewal strategies with utility-specific performance objectives. Topics covered include establishing appropriate level of service goals in master planning, evaluating system capacity through hydrant flow testing, and determining the optimum design life for water pipelines.

PRESENTATIONS:

01:30 PM EDT

Determining the Right Performance Criteria and Level of Service Goals for your Water Distribution System Master Plan

Our presentation describes how water utilities can establish system performance criteria and level of services goals that are customized for their water distribution system master planning efforts and that will help optimize capital project expenditures over the system planning horizon. Charlotte Water, NC is used as a case study.

Speaker(s): Kevin Laptos, *Black & Veatch Corporation*

02:00 PM EDT

How Many Hydrants can you Operate at Once?

As you open more hydrants to fight a fire, the total flow increases but the flow from each hydrant decreases due to a drop in pressure as the hydrants compete to use the capacity of the distribuion system. This presentation discusses how hydrants work together (and sometimes don't) during a fire.

Speaker(s): Thomas Walski, *Bentley Systems, Inc.*

02:30 PM EDT

Optimum Design Life for Water Pipelines

Designing water pipelines for a 50-year life has long been a standard practice, and while some pipes don't last 50 years, many others continue to serve their function well beyond that. A life-cycle cost analysis (LCCA) approach is effective in identifying and selecting the most suitable balance of capital and maintenance spending. This presentation will elaborate further on the concept of the LCCA based optimum design. Parameters play a role in LCCA during design, materials selection, construction, and O&M during the service life will be discussed. Attendees will acquire a robust understanding of LCCA and establishing an optimum design life for a water pipeline.

Speaker(s): Firat Sever, *CDM Smith*

MON09 - Navigating Financial Challenges and Opportunities for Water and Wastewater Projects

Moderator(s):

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

01:30 PM - 03:00 PM EDT | Mon

OVERVIEW: This session will delve into the financial challenges and opportunities faced by water utilities, particularly in the aftermath of disasters. It will cover the pitfalls that can lead to significant losses of FEMA dollars, explore the evolving landscape of infrastructure funding, and highlight how WIFIA financing can expedite water reuse projects.

PRESENTATIONS:

01:30 PM EDT

Public Assistance Nightmares: How Water Works Lose Millions of FEMA Dollars After a Disaster

Water and wastewater systems are frequent fliers for disaster damage. Recovering the cost of disaster damage is a complex undertaking, and frequently water agencies lose millions of dollars because they either do not know, or do not follow the sometimes byzantine Federal regulations. But BEFORE, DURING, and AFTER the disaster, there are things that can be done to ensure that the agency receives the maximum of Federal funding available. This presentation will explore these available options, and illustrate with actual FEMA case histories how good intentions can end up going very badly.

Speaker(s): Michael Martinet, *The Martinet Group, LLC*

02:00 PM EDT

The Future of Infrastructure Funding

The renewal, replacement, and protection of aging water and wastewater infrastructure is the number one issue facing our industry. At the root of this challenge is the ability (or inability) of systems to provide sufficient funding for these needed infrastructure improvements that can withstand the conditions of tomorrow. Federal funding has become available through many new programs, however, there is still an element of future funding that will have to be met at the local level. This presentation will focus on funding options for water and sewer utilities.

Speaker(s): Robert Ryall, *Arcadis*

02:30 PM EDT

How WIFIA Financing Helps Communities Accelerate Water Reuse Projects

In this session, we will provide an overview of the Water Infrastructure Finance and Innovation Act (WIFIA) program and explain the program's eligibilities, priorities, and benefits. We will also provide case studies highlighting how the WIFIA program has helped implement water reuse projects across the country.

Speaker(s): Dallas Shattuck, *USEPA Office of Water*

MON10 - Optimizing WARN Strategies for Effective Emergency Response

Moderator(s):

Event Type: Educational Sessions

Event Track: Utility Risk & Resilience

03:30 PM - 05:00 PM EDT | Mon

OVERVIEW: This session looks into the critical role of mutual aid networks in enhancing emergency response capabilities. Presenters will explore the need for efficient coordination and resource allocation, the importance of real-time data sharing, and valuable insights into challenges and successes of mutual aid operations during Hurricane Helene, presented by NYWaterWARN.

PRESENTATIONS:

03:30 PM EDT

WARN Mutual Aid – Role of the Staging Manager

This presentation will share the author's experience with logistics and staging during national and regional emergency events. Using available references and materials from the Environmental Protection Agency (EPA), Federal Emergency Management Administration (FEMA), U.S. Army Corps of Engineers (USACE), and others, utilities can prepare in advance for receiving assistance during catastrophic natural and man-made disasters.

Speaker(s): Eric Hatcher, *AECOM*

04:00 PM EDT

Accelerating Emergency Response: Real-Time Data Sharing for WARN Mutual Aid

During emergencies like hurricanes, water and wastewater utilities must act quickly to repair infrastructure and restore service. Parts, materials, and equipment are often the first resources

needed, but supply chain delays make mutual aid crucial. This presentation introduces the AURSI platform, a proven tool used by utilities for over 20 years, offering immense potential to enhance WARN activations. AURSI connects WARN members within and across state networks, streamlining mutual aid by reducing guesswork and expediting resource sharing.
Speaker(s): Glenn Oliver, *H2bid, Inc*

04:30 PM EDT

NCWaterWarn Hurricane Helene Lessons Learned

The presentation will will give a summary of the after action report and lessons learned by NCWaterWARN before, during and after Hurricane Helene.
Speaker(s): Craig Malone, *Cape Fear Public Utility Authority*

MON11 - Hydraulic Modeling for Real-World Results

Moderator(s):

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

03:30 PM - 05:00 PM EDT | Mon

OVERVIEW: Learn how mirroring real-world operations through advanced hydraulic modeling provides insights to enhance system performance and responsiveness. This session looks into how District Metering Areas (DMAs), fire flow analysis and valve data integration is being applied to tackle key operational challenges in water distribution systems.

PRESENTATIONS:

03:30 PM EDT

District Metered Area Planning Using Hydraulic Modeling for Water Loss Control

This presentation will describe the process of using hydraulic modeling to lay out the DMAs for four large pressure zones for San Jose Water (with between 19,400 and 42,600 service connections each) and performing a technology evaluation to select DMA flow meters. Because San Jose Water has a very large, dense water system, the goal of the system was to build the DMAs with multiple flow meters and closed valves while not compromising hydraulics such as fire flow availability and water quality at dead ends. The ultimate goal was to create DMAs that San Jose Water can use to help prioritize their water loss control activities in the future.
Speaker(s): Brian Skeens, *Jacobs*

04:00 PM EDT

Efficient Fire Flow Analysis Method for Water Distribution Systems

Water distribution systems must ensure adequate fire flow capacity. This study explores fire flow analysis methods using hydraulic modeling (EPANET) to assess system resilience. A new EPANET Toolkit function enables system-wide fire flow evaluation, simulating scenarios for individual or multiple nodes. Key outcomes include determining if fire flow demands can be met while maintaining pressure. The computationally intensive analysis is streamlined for efficiency, offering insights for system planning and emergency response.
Speaker(s): Hyoungmin Woo, *USEPA*

04:30 PM EDT

The Virtual-Reality Transition: Incorporating Valves into a Hydraulic Model to Represent Real World Operations

It is critical to depict valves in a hydraulic model to represent real world operations. Different model valve settings can be utilized to represent a variety of valve types and operations in the field. To properly model any valve, it is important to understand set points and operations to replicate during the calibration process, existing and future analyses, and CIP development. The proper modeling of a valve enables full system understanding, allowing for confidence in design/planning decisions and seamless project execution. This presentation will detail common valve types and associated valves settings in a hydraulic water model and illustrate how these decisions directly impact project applications via project examples.
Speaker(s): Geneva Caponi, *Black and Veatch*

MON12 - Optimizing Water Distribution Systems

Moderator(s):

Event Type: Educational Sessions

Event Track: Asset Management Programs and Practices

03:30 PM - 05:00 PM EDT | Mon

OVERVIEW: This session features real-world approaches to improving utility asset management through practical, technology-driven maintenance strategies. Attendees will learn how three utilities successfully released seized valves without full replacements, how modern technologies are transforming water storage inspections, and how Las Vegas Valley Water District is integrating optimization into long-term renewal planning.

PRESENTATIONS:

03:30 PM EDT

Case Study: Releasing Seized Valves without Replacement in 3 Utilities

This Case Study will detail the process used to release and exercise seized valves in three water distribution systems, including the methodology and level of effort required. It will also compare traditional high-torque and vibrational low-torque technologies, citing the pros and cons of each and the relative costs versus repair or replacement.

Speaker(s): Randy Lusk, *M.E. Simpson Company, Inc.*

04:00 PM EDT

Using Current Technologies to Improve Water Storage Inspections and Utility Asset Management

Greater Cincinnati Water Works (GCWW) has 17 steel tanks and 12 concrete reservoirs in its water distribution system. Their internal condition was assessed using a remotely operated vehicle that generated high-resolution images and videos, while the exterior was inspected using high-resolution photography and a drone to generate three-dimensional models. The inspection reports included the condition of the coating, sanitary, safety, operational, and structural condition of the storages. The use of these technologies allowed GCWW to have better visual data to focus on maintenance, cleaning, and repairs in the inspected storages, and for the asset management processes of the distribution system.

Speaker(s): Patricio Pinto, *Greater Cincinnati Water Works*

04:30 PM EDT

The Future is Now: Las Vegas Valley Water District's experience integrating optimization into renewal planning

Selecting the best candidate pipes for replacement is challenging. Simply addressing age or risk alone leads to a confetti map of priorities - and costly, inefficient, inconsistent replacement efforts. Renewal plan creation and prioritization is traditionally a time consuming, manual process. Introducing an optimization tool can help utilities create plans which address more system risk with less cost. By using package prioritization software which employs machine learning algorithms, the Las Vegas Valley Water District (LVVWD) has been applying an optimization approach to their efforts in evaluating and prioritizing their mains renewal work with notable results.

Speaker(s): Alexandra Webb, *Optimatics - a SUEZ Company*

MON13 - Planning and Delivering Major Water Supply Projects

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

03:30 PM - 05:00 PM EDT | Mon

OVERVIEW: Explore how utilities are tackling the challenges of long-term water supply through ambitious infrastructure projects and data-driven planning. This session offers valuable insights into balancing engineering, planning, and conservation to meet future water needs with confidence.

PRESENTATIONS:

03:30 PM EDT

Implementing a New $1.446 Billion Lake Michigan Water System for the Grand Prairie Water Commission to serve over 250,000 people

In 2024, six communities in the southwest suburbs of Chicago officially formed the Grand Prairie Water Commission (GPWC) to provide a sustainable and reliable water supply to meet water needs and support continued development in their communities. Creating a new Lake Michigan water system to allow GPWC member communities to switch from groundwater to Lake Michigan water from the City of Chicago, is an exciting and large undertaking. The planning, design and construction of the new system is being implemented through a $1.446 billion Alternative Water Source Program that began with alternative water source studies in 2018, is breaking ground on the first construction in 2025 and is planned for delivery of water to GPWC Members by May 2030.

Speaker(s): Theresa O'Grady, *Crawford Murphy & Tilly*

04:00 PM EDT

Lake Ouachita Lake Tap & Intake Project

Lake Ouachita Lake Tap & Intake Project, Hot Springs, AR

Speaker(s): Matt Dunn, *Crist Engineers, Inc.*

04:30 PM EDT

Improving accuracy of demand projections using statistical analysis, development mapping, and local water conservation measures

The City of Pflugerville, TX last updated their Water Master Plan (WMP) in 2020. Since then, inflationary effects and changes in population dynamics have caused the City to reevaluate the sizing and prioritization of its infrastructure investments and implement water conservation measures. With its current WMP update, the City is utilizing advanced statistical analysis, development phasing plans, and data on local water conservation measures to more accurately project future demands and right-size its infrastructure.

Speaker(s): Yushi Yasuda, *Garver*

MON14 - Impact of Infrastructure Projects on Communities

Moderator(s):

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

03:30 PM - 05:00 PM EDT | Mon

OVERVIEW: This session is designed to provide water utility professionals with cutting-edge strategies for improving system resilience and community health. It will highlight the importance of collaboration between water purveyors and fire services, the benefits of hydraulic modeling for community connections, and the role of technology in ensuring precision, impact, and equity in addressing lead contamination.

PRESENTATIONS:

03:30 PM EDT

Water Purveyor & Fire Service Collaboration: Water System Resilience for the WIN

Utilizing water to protect the health and safety of our communities is simple in theory, yet one of the most complex service deliveries in today's built environment. Fortunately, Water Purveyors and the Fire Service have a proven track record of addressing this tall challenge throughout all stages of community planning, infrastructure maintenance, as well as emergency response. Reinforcing and expanding our collaboration will be key to WIN in the 21st century: Work together - Innovate - Next level sustainability

Speaker(s): Vince Anderson, *City of Redlands*

04:00 PM EDT

The Power of Proximity: Using Hydraulic Modeling to Connect Communities

Hydraulic modeling plays a crucial role in the planning of urban infrastructure and are a useful tool to analyze distribution systems under a variety of conditions. To mitigate potential risks, it can be used to predict the impacts of emergency scenarios and to develop mitigation strategies. For neighboring utilities, the construction of an emergency connection between the two systems could be a viable option to prepare for an emergency. For a more accurate understanding of the impacts of these connections the hydraulic models for each utility can be combined to determine ability to convey flow between the two systems and any existing deficiencies on both sides of the connection.

Speaker(s): Bryana Barber-Drapal, *Garver*

04:30 PM EDT

Precision, Impact, and Equity: The Role of Technology in Combating Lead Contamination

Lead contamination remains a public health threat, impacting marginalized communities with outdated plumbing systems. Electro Scan's SWORDFISH technology offers a sustainable, minimally invasive solution for accurately detecting lead pipes, significantly reducing time, cost, and disruption. This innovation supports environmental justice by ensuring more equitable access to safe drinking water.

Speaker(s): Nicole Salazar, *Electro Scan Inc*

Tuesday, September 16, 2025

TUE01 - Building Climate Resilience

Moderator(s):

Event Type: Educational Sessions

Event Track: Utility Risk & Resilience

08:30 AM - 10:00 AM EDT | Tue

OVERVIEW: This session focuses on innovative strategies to enhance climate resilience within the water sector through engineeirng and design practices, comprehensive planning, and commuinty engagement initiatives designed to strengthen communities against extreme weather events. Learn more about Tampa Bay's Water Forces initiave and Pittsburghc GreenUp program and how these approaches can be applied to bolster climate resilience in your community.

PRESENTATIONS:

08:30 AM EDT

Climate Resilient Engineering Design Guidance for the Water Sector

The Water Utility Climate Alliance (WUCA), a coalition of 12 of the nation's largest water providers, has launched this initiative in collaboration with Brown & Caldwell and The Portland Bureau of Environmental Services. This project involves the development of practical design strategies for a set of water utility project types to increase the resilience of drinking water, wastewater, and stormwater infrastructure. The guidance will provide detailed best practices and strategies for protecting critical water utility infrastructure from various climate hazards. The project will culminate in a user-friendly, cross-referenced design guidance document to support widespread adoption by water utilities across the U.S.

Speaker(s): Ashley Ebrahimi, *Philadelphia Water Department*

09:00 AM EDT

Water Forces – Strengthening Tampa's Communities and Economy for Extreme Weather

This presentation builds on the 2022 TBRPC Dutch Dialogue design charrettes, for which a group of national and international experts convened and prepared high-level plans by taking an all-water approach. Through global and national best practices in innovative planning and engineering, the presentation will reflect on the 2024 hurricane season and discuss pathways to increase resilience at various scales and waterfront typologies. What can the Tampa Bay region learn from the Dutch as it relates to integrated and sustainable water management, which also reflects on the 2024 EU flood disaster.

Speaker(s): Ryan Blaida, *Arcadis*

09:30 AM EDT

Rain Reclaim: Crafting a Joint Program for Green Stormwater Infrastructure on Vacant Lots in Pittsburgh

Many cities face challenges associated with combined sewer overflows and localized flooding, exacerbated by increased annual rainfall and more frequent extreme weather events under due to changing climates. In this presentation, WaterNow Alliance will share learnings from their work developing a new green stormwater infrastructure (GSI) program in partnership with the City of Pittsburgh and Pittsburgh Water, siting GSI on Pittsburgh's vacant lots to generate benefits for local communities and address stormwater management needs using an abundant public resource – vacant land.

Speaker(s): Emerson O'Donnell, *WaterNow Alliance*

TUE02 - A Digital Future - AI and Analytics

Moderator(s): Kedric Szana

Event Type: Alternate Presentations

Event Track: Data, AI, and Automation

08:30 AM - 10:00 AM EDT | Tue

OVERVIEW: Join us as we explore how artificial intelligence and digital transformation are reshaping the way water utilities manage data, operations, and workforce dynamics. Attendees will learn how AI can elevate data analytics, support collaborative human-machine workflows, and drive the development of integrated digital water systems using platforms like OASIS. Presenters will offer actionable insights to adapt, innovate an dthrive in a digital environment.

PRESENTATIONS:

08:30 AM EDT

Utilizing AI to Enhance Data Analytics in a Technologically advancing world

In a world where technology seems to advance almost daily, why wouldn't the underground infrastructure industry use this to its advantage? Discover how the industry manages rapidly deteriorating systems using technological advancements such as AI and Automatic Defect

Recognition.
Speaker(s): Samantha Pierce, *SewerAI*

09:00 AM EDT

"AI and the Future of Work: Thriving in the Age of Collaboration"

The rise of AI is transforming the way we work, challenging traditional roles, and opening up unprecedented opportunities for innovation and productivity. But how can leaders and teams integrate AI into their workflows effectively without losing the human touch? In this session, Sharon Gai will explore the profound ways AI will reshape the workplace over the next decade, from redefining roles and responsibilities to fostering collaboration between humans and machines. She will take you to the Alibaba offices in Hangzhou, China where she witnessed the smooth transition from human workers to AI agents. Attendees will gain actionable strategies to harness AI as a partner, not a replacement, ensuring their organizations stay agile, competitive,
Speaker(s): Sharon Gai, *Culture Fluid LLC / Ex-Alibaba*

09:30 AM EDT

Developing Digital Water Systems using OASISs - How Water and Wastewater Agencies are Applying Digital Transformation Strategies

OASISs (Open Architecture Structure for Integrating Software systems) is a cloud-based framework designed to unify data, simplify integration, and enhance scalability. It is not a software application. It is a structure, process, and method for creating customized data warehouses and connected data pipelines in the cloud. Digital Water Systems (DWS) are the result of applying OASISs. Designing and constructing a DWS provides water and wastewater utilities the ability to better leverage information to help make informed data-driven business decisions, and thereby reduce CAPEX and OPEX. Enterprise database management techniques as well as example dynamic dashboards will be illustrated for three water agencies.
Speaker(s): Shawn Dent, *Carollo Engineers, Inc.*

TUE03 - Maintenance Strategies For Aging Infrastructure

Moderator(s):

Event Type: Educational Sessions

Event Track: Asset Management Programs and Practices

08:30 AM - 10:00 AM EDT | Tue

OVERVIEW: Presenters explore innovative approaches to maintaining water and wastewater infrastructure through inspection, rehabilitation, and cleaning technologies. Attendees will gain practical knowledge of tools and strategies to extend asset life.

PRESENTATIONS:

08:30 AM EDT

"Chasing a Rat Through the Sewers" Enhancing Wastewater Maintenance: The Impact of Implementing an Acoustical Inspection Program

Irving has successfully integrated acoustic wastewater inspection technology into its maintenance program, resulting in significant improvements in efficiency and effectiveness. By leveraging this innovative approach, the city has been able to identify pipe defects, optimize the wastewater preventative maintenance program, and contribute to a significant reduction in SSOs.
Speaker(s): Ashley Waits, *City of Irving*

09:00 AM EDT

Media Filter Rehabilitation – Three Distinct Instances in Three Years

Filtration is the 'heart' of any water treatment process, and efforts to keep it 'healthy' are crucial for maximizing plant capacity. The City of Fort Smith operates two drinking water facilities, with a combined finished flow of roughly 40 MGD, providing water services to approximately 150,000 customers within and outside the city limits. This presentation covers three distinct media filter rehabilitation projects undertaken at these two facilities in recent years by the Utility Staff.
Speaker(s): Rahul Thukral, *City of Fort Smith*

09:30 AM EDT

Power Wash Drones for External Cleaning of Water and Wastewater Infrastructure

Cleaning the exterior of water and wastewater assets with Power Washing drones saves money and is safer, easier, and less disruptive than traditional Power Washing methods. Cleaning elevated water towers has been documented to add 3 to 5 years to the life of the coating, extending the time between coating jobs and thus saving money. Owners and operators of water and wastewater assets should be onboarding this new technology, claiming economic and safety gains.
Speaker(s): Robert Dahlstrom, *Apellix Power Wash Drones*

TUE04 - Modern CIP Delivery: Strategies for Success

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

08:30 AM - 10:00 AM EDT | Tue

OVERVIEW: Presenters will focus on innovative approaches to capital improvement project (CIP) delivery, showcasing how utilities can leverage alternative delivery methods, third-party expertise, and modern program management to meet funding, schedule, and performance goals. This session highlights real-world examples of design-build, CMAR, and programmatic strategies that optimize results while navigating the complexities of large-scale infrastructure projects.

PRESENTATIONS:

08:30 AM EDT

The Advantages of Third-Party Construction Management and Inspection Services as Part of Your Design-Build Project

This presentation will discuss the advantages of having a third party construction engineering and inspection firm for alternative delivery projects in the public sector. The discussion will be focused on lessons learned from two of the largest utility projects in the City of Fort Lauderdale and will touch specific topics as detailed plan reviews process, constructability reviews, around the clock construction management and inspection and fast tracking of the projects to ensure compliance with the regulatory agencies.

Speaker(s): Jose Custodio, *Arcadis US, Inc.*

09:00 AM EDT

CMAR Innovation: Fred Hervey WRP -Post-Packaging of Improvements Meets Funding Goals

This presentation will focus on El Paso Water's Construction Manager at Risk Project at its Fred Hervey Water Reclamation Plant. Faced with multiple improvement projects at one facility, El Paso Water looked for delivery methods that would reduce the utility's effort and streamline design and construction. This collaboration allowed El Paso Water to combine four design teams/design contracts into one CMAR construction contract with three construction packages.

Speaker(s): Tina Hanson, *Garver*, Olivia Fontaine Doucet

09:30 AM EDT

Overcoming CIP Delivery Challenges with Modern Program Management

Utilities and municipalities are grappling with significant financial, workforce, and asset management hurdles in maintaining and upgrading vital infrastructure. This presentation showcases innovative program management strategies to successfully deliver capital improvement plans (CIPs) and implement robust asset management practices.

Speaker(s): Melissa Pomales, *Arcadis U.S.,, Inc.*

TUE05 - Bringing Diversity, Equity, Inclusion, Belonging, and Justice to Infrastructure Planning: Asset Management to Community Engagement

Moderator(s): Chelsea Boozer, Aidan Cecchetti

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

08:30 AM - 10:00 AM EDT | Tue

OVERVIEW: There are many ways that water infrastructure planning intersects with diversity, equity, inclusion, and belonging and environmental justice. Effective community involvement and engagement is essential throughout the planning, design, construction, and maintenance of water infrastructure to ensure delivery of safe drinking water. This session will include case studies and a panel discussion to explore how consultants, engineers, water resource managers, and utilities can work together to ensure DEIB and EJ are effectively considered throughout the water infrastructure planning process.

PRESENTATIONS:

08:30 AM EDT

Equity in Infrastructure Planning at Denver Water

In this case study, Denver Water will discuss their efforts to incorporate equity into infrastructure planning.

Speaker(s): Alan Salazar, *Denver Water*

09:00 AM EDT

Integrating JEDI into Infrastructure Planning at WSSC Water

To resolve disparities in investments, we need to be able to see them. In this case study, WSSC Water will discuss their efforts to consider JEDI, which is central to WSSC's core mission, during infrastructure planning.

Speaker(s): Kishia Powell, *WSSC Water*

09:30 AM EDT

Case Study on Infrastructure Planning at Philadelphia Water Department

In this case study, Philadelphia Water will discuss how they've applied an equity lens toinfrastructure investment.

Speaker(s): Jessica Brooks, *Philadelphia Water Department*

TUE06 - Effective Strategies for Water Utility Emergency Management

Moderator(s):

Event Type: Alternate Presentations

Event Track: Utility Risk & Resilience

01:30 PM - 03:00 PM EDT | Tue

OVERVIEW: How do utilities respond to a contamination shutdown? Respond to floods? Attendees will examine lessons learned through three case studies for insights and explore practical emergency management strategies in the water sector.

PRESENTATIONS:

01:30 PM EDT

Critical Hours, Crucial Decisions: A Case Study in Restoring Water After a Contamination Shutdown

The City of Grand Prairie, Texas, overcame a water contamination emergency caused by firefighting foam and restored safe drinking water to approximately 60,000 residents. This session explores response strategies, regulatory coordination and lessons for managing unexpected contamination events, emphasizing rapid remediation planning, data-driven decision-making and interagency collaboration.

Speaker(s): Alec Propst, *Freese and Nichols, Inc.*

02:00 PM EDT

Incident Management for Utilities: A Story of Support and Collaboration

In response to the aftermath of Tropical Storm Helene, staff from DC Water's Incident Management Team were deployed to assist the Asheville Water Resources Department with their recovery efforts. This is a story of support and collaboration with a sister utility in a time of need.

Speaker(s): Gregory Vernon, *DC Water*

02:30 PM EDT

Lessons Learned: NYC Flood Protection Systems Emergency Response Plan

This presentation will inform attendees about the processes and lessons learned to compile Emergency Response Plans (ERP) for several New York City (NYC) Flood Protection Systems (FPS). The team worked with over 40 NYC and State departments and private sector partners to identify emergency operations needed to deploy and protect several sections of the Manhattan shoreline from rising sea-levels, storm surge flooding during hurricanes and nor'easters, and facilitates drainage and water conveyance. We will highlight two of the most complex sections, totaling 4 miles in length. We will review lessons learned from coordinating emergency operations and one of the most complex construction projects ever undertaken in NYC history.

Speaker(s): Sarah Moore, *Arcadis*

TUE07 - Digital Technology for Identification of Lead Service Lines

Moderator(s):

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

01:30 PM - 03:00 PM EDT | Tue

OVERVIEW: This session showcases innovative technologies and data-driven strategies for accelerating lead service line identification. The use of field-deployable sensors, predictive modeling, machine learning, and GIS tools to streamline inventory development and decision-making, water professionals and experiencing enhanced accuracy, efficiency and regulatory readiness in lead service line management.

PRESENTATIONS:

01:30 PM EDT

Accelerating Lead Service Line and Fixture Identification with Field-Deployable Sensors

The revised Lead and Copper Rule Improvements (LCRI) require utilities to identify lead service lines and monitor water quality to safeguard public health. With states still refining guidance on acceptable identification methods and a significant funding gap identified by AWWA, utilities face mounting challenges in achieving compliance efficiently. This presentation explores a cost-effective alternative to traditional approaches, reducing unnecessary potholing and excavation while supporting compliance with LCRI mandates.

Speaker(s): Nicholas Halverson, *e-sens*

02:00 PM EDT

Advancing Lead Service Line Management with Predictive Modeling and Machine Learning

As lead contamination in water systems becomes a growing concern, this presentation introduces a dual-model framework that combines predictive modeling and machine learning to assess and manage risks associated with lead service lines (LSLs). By integrating diverse data sources, the framework estimates lead proportions in block groups and classifies individual service lines as "Lead" or "Non-Lead." Using predictive and classification models, along with interactive dashboards, the approach enables decision-makers to prioritize interventions and allocate resources effectively. This scalable framework provides a data-driven solution for safer water systems and improved public health.

Speaker(s): Manal Alduraibi, *Ardurra*

02:30 PM EDT

Capitalizing on GIS & Predictive Tools for LSLI Inventory in Wildwood

Learn how a growing city in Florida took advantage of the latest tools and technologies to establish their Lead Service Line Inventory for successful submission, all material designated. Florida was one of the states that allowed predictive technologies for completion of the lead service line inventory. A predictive model was trained to forecast unknown main material with high confidence, which helped establish some of the service line materials. Areas of the city were prioritized for field verification using a risk-based framework. GIS field maps were developed to collect remaining unknown materials. The LSLI project resulted in a complete water distribution asset inventory.

Speaker(s): Gini Connolly, *Halff*

TUE08 - Asset Management Jam Session

Moderator(s): Celine Hyer

Event Type: Alternate Presentations

Event Track: Asset Management Programs and Practices

01:30 PM - 03:00 PM EDT | Tue

OVERVIEW: This session will be hosted by the officers and subcommittee chairs of the AWWA Asset Management Committee, who will update the audience on Committee activities. The Committee will introduce asset management "hot topics" for consideration and allow the audience to ask questions and lead the discussion about those topics. Committee members will be present to lead discussions.

PRESENTATIONS:

01:30 PM EDT

Overview of Maintenance and Reliability Activities

Discussion of current Subcommittee work and introduction of hot topics

Speaker(s): Tammy Whipple, *AMCL*

01:52 PM EDT

Overview of LOS Subcommittee

Discussion of current Subcommittee work and introduction of hot topics

Speaker(s): Erin McLachlan Sanchez , *SRT Consultants*

02:16 PM EDT

Overview of AM Technology Committee

Discussion of current Subcommittee work and introduction of hot topics
Speaker(s): Felicia James, *Carollo*

02:38 PM EDT
Overview of AM Committee/Subcommittees and AM Level of Progress Survey
Discussion of current Subcommittees work, level of progress survey and introduction of hot topics
Speaker(s): Celine Hyer, *Arcadis*

TUE09 - Global Perspectives on Durable and Sustainable Water Infrastructure

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

01:30 PM - 03:00 PM EDT | Tue

OVERVIEW: Discover how utilities around the world are designing for longevity and resilience through advanced materials and integrated planning. Presenters will discuss enhancing concrete tank durability with crystallized and corrosion-resistant agents, strategies behind the successful delivery of Dubai's recycled water infrastructure, and a comprehensive approach to water resource management in Abu Dhabi.

PRESENTATIONS:

01:30 PM EDT
Enhancing the Durability of Large Concrete Water Tanks with Crystallized Materials and Corrosion-Resistance Agents
The objective of this project is conducted to study and analyze the methods for improving, repairing, and constructing the large scale water storage tanks of Metropolitan Waterworks Authority (MWA). That can be ensure that the water storage tanks can operate efficiently, withstand environmental conditions, and comply with engineering standards.
Speaker(s): nichakul chunsawang, *Metropolitan Waterworks Authority*

02:00 PM EDT
Dubai Recycled Water Infrastructure Strategies for Successful Project Delivery and Long-Term Sustainability
Mitigation strategies including risk management frameworks, technological innovations, and adaptive planning approaches to enhance project delivery and ensure long-term sustainability in Dubai's recycled water infrastructure sector.
Speaker(s): Krishnan Kavitha, *Dubai Municipality*

02:30 PM EDT
Integrated Planning of Water Resources and Management for the Emirate of Abu Dhabi
The Integrated Planning of Water Resources and Management initiative by the Emirates Water and Electricity Company in Abu Dhabi addresses urgent water security challenges posed by rapid population growth, climate change, and over-reliance on groundwater resources by agriculture. As the Emirate of Abu Dhabi grapples with groundwater depletion and rising salinity levels, this initiative offers a comprehensive, adaptive framework for the sustainable management of all water sources, including desalinated, recycled and groundwater. The innovative approach is outlined, which leverages the GoldSim modelling platform to assess multiple thematic pathways for balancing water demand across agriculture, municipal, industrial, and commercial sectors.
Speaker(s): Amir Hedjripour, *GHD*

TUE10 - Financial Strategies and Community Solutions for Sustainable Water Infrastructure

Moderator(s):

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

01:30 PM - 03:00 PM EDT | Tue

OVERVIEW: This session will focus on the financial and operational challenges faced by small utility systems as they grow and age. It will cover modern funding strategies employed by state agencies and highlight the role

as they grow and age. It will cover modern funding strategies employed by state agencies and highlight the role of community-driven engineering solutions in promoting sustainable and equitable water and wastewater infrastructure.

PRESENTATIONS:

01:30 PM EDT

Growing and Aging Gracefully: A Small Utility System's Journey and It's Financial Impacts

The Charlotte Harbor Water (CHWA) is a not-for-profit private water utility in Southwest Florida. CHWA supplies approximately 450,000 gallons of potable water daily to around 5,300 customers. This presentation describes how CHWA is meeting challenges stemming from aging infrastructure, residential growth, and demand surges. Utility owners, operators, and engineers will benefit from this session by hearing how a $150M CIP was created and is being implemented through public funding by USDA Rural Development Department which supplied both grants and long term (40-year) loans.

Speaker(s): Daniel Nelson, *Tetra Tech, Inc.*

02:00 PM EDT

Funding Water Projects in the Modern Day: A State Agency's Multifaceted Approach to Funding

The Arizona Water Settlements Act ("AWSA") passed in 2004 and New Mexico gained $102 million to benefit water utilization projects within the Southwest portion of the state. Various funded projects include water reuse, infrastructure updates including new meters, ditch improvements, diversion improvements, and many more. These projects, many of them built a decade ago, have hit new crossroads. The new AWSA Program, working together with irrigators, farmers, ranchers, soil & water conservation districts, municipalities, mutual domestics, non-profits, the forestry service, native peoples, and other water users in the region, will stand up a program to fund and implement water utilization solutions to address the needs of the region.

Speaker(s): Maya Clifford, *NMISC*

02:30 PM EDT

Community Engineering Corps - Supporting Sustainable Community-Driven Water & Wastewater Infrastructure Solutions Through Equity

The United States is currently facing a water access gap, where underserved communities are left without working plumbing or access to safe drinking water. The path for these communities to improve their infrastructure is not easy and often not feasible financially. Community Engineering Corps works to build a future where everyone has access to the engineering resources required to live a life of opportunity. This session features an informational presentation about the Community Engineering Corps program, followed by a case study highlighting the work being done by AWWA-members via Community Engineering Corps to bridge the water and sanitation infrastructure gap.

Speaker(s): Heather Mullen, *American Water Works Association*

TUE11 - Strategic Risk Management and Resilience in Water Infrastructure

Moderator(s):

Event Type: Educational Sessions

Event Track: Utility Risk & Resilience

03:30 PM - 05:00 PM EDT | Tue

OVERVIEW: Explore strategies for enhancing risk management including Enterprise Risk Management (ERM), the importance of cybersecurity audits in the adoption of AI technologies and building a compelling business case that drives support for proactive investments.

PRESENTATIONS:

03:30 PM EDT

Leveraging Enterprise Risk Management (ERM) for Enhanced Risk Reduction

By integrating ERM into your operational framework, utilities can move beyond reactive measures to create a resilient and adaptive organization. This presentation will provide practical insights and strategies utility professionals, illustrating how a robust ERM framework can enhance risk reduction efforts and fortify operational resilience in the face of evolving threats.

Speaker(s): Corinne Ketchum, *Arcadis*

04:00 PM EDT

Cybersecurity Audit Assurance for AI Adoption in Water and Wastewater Infrastructure

The presentation will discuss the nuances of Cybersecurity compliance for water and wastewater facilities and focus on the Cyber-AI integrations that would facilitate compliances that are required for this segment as they become AI adopters. We will outline the guidelines that will influence the assessment criteria and standards that are followed to ensure state and federal compliances for the water and wastewater infrastructure planning and maintenance. We will also zero in on the support

water and wastewater infrastructure planning and maintenance? We will also zero in on the support mechanisms such as Cognitive Digital Twin Technology that enhance the Assessment and Compliance processes we recommend. Using our state and federal background in Cyber-Assessment, our use-case references will demonstrate the application of technology cont

Speaker(s): carlton harris, *End To End Enterprise Solutions*

04:30 PM EDT

The Business Case for Resilience: Driving Sustained Support for Proactive Investment through Impactful Outcomes and Engagement

Through expert presentations and dynamic panel discussions, utility leaders from diverse backgrounds will share proven approaches to developing compelling business cases, fostering organizational alignment, engaging communities, and maintaining funding for proactive programs that prevent failures and optimize decision-making

Speaker(s): Chris M. Collier, *DC Water* , Alexandra F. Wells, PE , *Passaic Valley Water Commission* , Jim Geisbush, Ph.D., P.E., BC.PLW, F.ASCE, *Central Arizona Project (CAP)*, Logan Fesenmair, *Xylem*

TUE12 - Strengthening Water Security through Cyber Resilience and Zero Trust Strategies

Moderator(s):

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

03:30 PM - 05:00 PM EDT | Tue

OVERVIEW: As cyber and physical threats to water infrastructure grow, this session highlights the critical role of management and technology in securing essential systems. Case studies will explore workforce leadership in infrastructure protection, practical strategies for aligning IT and OT systems during SCADA upgrades, and the implementation of Zero Trust architectures in water facilities.

PRESENTATIONS:

03:30 PM EDT

Management's Role in Fortifying Water Security: Critical Infrastructure Workforce Case Study

Less than 1% of the OT workforce had verified OT cyber skills nationwide in 2024 and even fewer IT professionals had verified OT competencies necessary for OT networks decision making. It falls on Managers in organizations responsible for critical infrastructure to prepare their workforce for cybersecurity threats in their physical operations and improve this number. In this case study, we'll cover how Florida has increased this number to 20% as a result of a focused effort to Fortify Florida's OT cyber competencies statewide and in particular in sectors such as water distribution. Data from 47 Florida counties, 9 critical infrastructure sectors, and from 109 utility worker assessments will be shared.

Speaker(s): Elizabeth Jacobs, *Automation Strategy & Performance*

04:00 PM EDT

Strategies & Tactics for Resolving IT/OT Collisions in IT/OT Cybersecurity Convergence: A Case Study for SCADA System Upgrades

In today's rapidly evolving technological landscape, the convergence of Information Technology (IT) & Operational Technology (OT) poses significant challenges for organizations, particularly in cybersecurity. This session delves into the strategies & tactics for resolving disparities between IT & OT teams during a large-scale SCADA system upgrade at the Dekalb County Department of Watershed Management (DWM). We will explore how to navigate the responsibility clashes & align both teams for successful IT/OT cybersecurity integration.

Speaker(s): Kevin Montague, *Dekalb County Department of Watershed Management*

04:30 PM EDT

The Importance of Implementing Zero Trust Architectures in Water Facilities

In this session, learn how Zero Trust as a tool interacts with deeply embedded systems like an HMI for operations, or a PLC for support. Learn how to manage the vendors in a way that is simple for them, secure for you. Let's explore how to leverage Zero Trust in a deployable model and implement a network access strategy that protects public water facilities, local governments, and their most valuable assets and infrastructure - all without compromising on a user's ability to connect.

Speaker(s): Drew Armstrong, *Agilicus*

TUE13 - Pipeline Assessment and Management

Moderator(s):

Event Type: Educational Sessions

Event Track: Asset Management Programs and Practices

03:30 PM - 05:00 PM EDT | Tue

OVERVIEW: This session brings together emerging techniques in pipeline condition assessment and service life forecasting to support smarter asset management decisions. Presentations will cover a statistical approach to estimating the remaining service life of water mains, advanced field methods for identifying flow restrictions in distribution systems, and key updates to AWWA M77 that reflect the latest in condition assessment.

PRESENTATIONS:

03:30 PM EDT

A statistical approach to remaining service life of watermains – a case study

This paper presents a case study of estimating the remaining service life (RSL) of ductile iron pipelines in the PUB network, in Singapore. A statistical RSL estimator was proposed as a function of pipe wall degradation, which was measured using acoustic condition assessment technology for 60km of pipelines. The results are compared against historical break records collected during the last 14 years. The paper discusses how this tool could be applied for efficient allocation of capital investment.

Speaker(s): Valentin Burtea, *Mueller Water Products*

04:00 PM EDT

Advanced Techniques in Distribution System Field Assessments for Flow Restriction Analysis

Advanced Techniques in Distribution System Field Assessments for Flow Restriction Analysis

Speaker(s): Murlio Bustani, *City of Charlotte*

04:30 PM EDT

Innovations in Pipeline Management: Exploring AWWA M77's New Chapters

Condition assessment technologies evolve every year and can change current practices in the industry. This special topic sessions covers overall updates to the AWWA M77 – Condition Assessment of Water Mains and presentations from the four newly chapters.

Speaker(s): Scott Jauch, *Black & Veatch Corporation*

TUE14 - Tools and Techniques for Smarter CIP Execution and System Design

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

03:30 PM - 05:00 PM EDT | Tue

OVERVIEW: Learn how utilities are turning capital improvement plans into successful, actionable projects with the help of smart management strategies and technical modeling. Presenters will highlight practical tools and approaches that help utilities streamline capital improvement planning and project execution, while also addressing technical challenges like transient pressures in system design.

PRESENTATIONS:

03:30 PM EDT

Transient Modeling to Assist in Sprinkler System Design and Analysis

Sprinkler systems are a part of many building water systems. Water supply to these systems must meet not only flow but pressure requirements. Hydraulic models can be used to determine efficient supply and pressures for building sprinkler systems. The sudden demand change associated with the use of sprinklers creates potential transient or surge pressures. This presentation illustrates, with two different case studies, how hydraulic models can be used to address sprinkler system needs and pressure transients.

Speaker(s): Crystal Broadbent, *Hazen and Sawyer*

04:00 PM EDT

CIP Management Made SIMPLE: Gainesville Regional Utilities Case Study

This presentation will follow the journey of Gainesville Regional Utilities, Water and Wastewater Divisions, through the development and implementation of their "System of Information for the Management of Projects, Logistics, and Economics" – codenamed SIMPLE. They undertook the development of a low-code model-driven solution to utilize as an organizational tool to improve the management and delivery of their Capital Improvement Program (CIP)

management and delivery of their Capital Improvement Program (CIP).
Speaker(s): Casey Hellriegel, *Arcadis*

04:30 PM EDT

From Ideas to Implementation: Transforming Capital Improvement Plans into Detailed Designs

The Project 7 Water Authority's (P7WA) Water Supply Resiliency Program involves the development of a complex system of infrastructure improvements including a new 8 MGD surface water softening plant and 12 miles of raw and finished water transmission main to serve several retail water providers in the water-restricted western range of Colorado. This presentation covers the planning process involved in developing this much-needed regional supply, including finished water line sizing, impacts of design changes on hydraulic model predictions, and a transient analysis used to identify surge mitigation measures. The presentation will demonstrate value provided to the design effort by increasingly sophisticated analysis.
Speaker(s): Doug Ashworth, *Garver*

TUE15 - Young Professionals on Local Challenges

Moderator(s):

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

03:30 PM - 05:00 PM EDT | Tue

OVERVIEW:

PRESENTATIONS:

Wednesday, September 17, 2025

WED01 - WARN Chairs

Moderator(s): Kevin Morley

Event Type: Educational Sessions

Event Track: Utility Risk & Resilience

08:30 AM - 10:00 AM EDT | Wed

OVERVIEW:

PRESENTATIONS:

WED02 - Modeling for Water Quality Improvements

Moderator(s): Ben Chenevey

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

08:30 AM - 10:00 AM EDT | Wed

OVERVIEW: Join us for cutting-edge approaches to how tools are reshaping water system performance and public health protection. Presentations will cover advanced techniques for identifying and mitigating contaminants, predictive modeling for disinfection residuals, and holistic strategies that combine water quality and pressure data.

PRESENTATIONS:

08:30 AM EDT

Modern Solutions to Age-Old Problems: Detecting and Mitigating Water Contaminants

The U.S. has clean drinking water, but aging infrastructure and lead-based materials in older buildings pose contamination risks. Contaminants like lead, copper, and lithium threaten public

health, with lead linked to cardiovascular issues, copper to kidney damage, and lithium to thyroid dysfunction. Over half the population consumes water exceeding safe lead levels. This presentation examines risks from aging systems and the unintended consequences of practices like boiling water, which can worsen contamination. It highlights case studies, advanced detection technologies, and home testing kits while offering practical strategies to mitigate risks and improve water quality.
Speaker(s): Mehrooz Zamanzadeh

09:00 AM EDT

Tanking Disinfection Residuals? There's a Model for that!

As temperatures rise across North Texas, so do concerns over water quality. Long retention times, warmer water, and lagging water usage all lead to lower disinfectant residuals and the increased likelihood of nitrification within a water distribution system. The City of Plano performed a water quality evaluation to identify areas of concern and evaluate potential solutions to address water quality concerns in the system. This presentation summarizes the review of historical water quality data and the development of a hydraulic model to evaluate existing issues and potential operational and capital improvement alternatives to increase disinfection residuals and reduce the potential for nitrification in the system.
Speaker(s): Cullen Carlson, *Freese and Nichols, Inc.*

09:30 AM EDT

A Holistic Data-Driven Approach to Water Quality and Pressure Management

This presentation will take a look at a holistic approach to how data derived from various technologies can be used to maintain water quality, improve pressure management, reduce leaks, and advance decisions related to leak detection. Together, we will explore the many advantages of utilizing a variety of technologies in combination with one another to assess risk, track trends, mitigate less than desirable conditions, and reduce operational expenses through proactive approaches.
Speaker(s): Harold Mosley, *Mueller Water Products*

WED03 - Hands-On Facility Asset Condition Assessment

Moderator(s): Kevin Campanella

Event Type: Educational Sessions

Event Track: Asset Management Programs and Practices

08:30 AM - 10:00 AM EDT | Wed

OVERVIEW: This interactive session will guide participants through hands-on exercises using both basic and advanced physical condition assessment frameworks. Attendees will evaluate different asset types and, using live polling software, collaboratively rate their condition. The session will explore the strengths and limitations of each framework—not only in performing assessments, but also in how the resulting data supports informed asset management decisions, helping utilities determine the right fit for their organization.

PRESENTATIONS:

08:30 AM EDT

Introduction to Physical Facility Condition Assessment

Introduce the basics of physical condition assessment (PCA) of facility assets, including typical frameworks, how PCA fits with other forms of condition assessment, how often assets should be assessed, and the purposes for doing so..
Speaker(s): Kevin Campanella, *Burgess & Niple, Inc.*

08:53 AM EDT

Sammamish Plateau Water Condition Assessment Framework and Exercise

Jason will share a simple 1-10 scoring Condition Assessment Framework and explain the scoring methodology. Participants will then be given a set of diverse asset photos to score using that framework. Pros and cons will be discussed.
Speaker(s): Jason Warren, *Burgess & Niple, Inc.*

09:16 AM EDT

MSDGC Condition Assessment Framework and Exercise

Kevin will share a more complex Condition Assessment Framework and explain the scoring methodology. Participants will then be given the same set of diverse asset photos to score using the new framework. Pros and cons will be discussed.
Speaker(s): Kevin Campanella, *Burgess & Niple, Inc.*

09:38 AM EDT

How to Use Condition Data to Better Inform Capital and O&M Investments

Jason will share how condition data can inform capital and O&M investments (depending on the framework used). He will show asset remaining useful life is calculated and how RUL can be adjusted based on criticality to develop a CIP

adjusted based on criticality to develop a CIP.
Speaker(s): Jason Warren, *Burgess & Niple, Inc.*

WED04 - Resilient by Design: Strengthening Water Systems Through Planning, Rehabilitation, and Risk Management

Moderator(s):

Event Type: Educational Sessions

Event Track: Design to Delivery

08:30 AM - 10:00 AM EDT | Wed

OVERVIEW: Explore how utilities are enhancing system resilience by integrating regulatory compliance, security, and continuous improvement into long-term planning. This session emphasizes the importance of resilience and preparedness in water utility operations through a combination of proactive planning, infrastructure rehabilitation, and integrated risk management.

PRESENTATIONS:

08:30 AM EDT

Building Resilient Water Systems: Integrating Compliance, Security, and Continuous Improvement

Water and wastewater utilities face critical challenges in maintaining operational resilience amidst evolving physical and cyber threats. This presentation aims to introduce a Lean Six Sigma-based Plan-Do-Check-Act (PDCA) cycle tailored to meet compliance with key regulatory frameworks, optimize resource allocation, and ensure preparedness for emergency scenarios.
Speaker(s): Vicki White, *SDZ Enterprise LLC*

09:00 AM EDT

Pennsylvania American Water - Raw Water Main Rehabilitation

Installed in 1943, the 9,100-foot Cast Iron Raw Water Main is a major transmission line in Pennsylvania American Water Company's Coatesville System which serves customers in Chester and Lancaster Counties, PA. Constructed of two segments, the first is 16-inch cast iron pipe, measuring 4,650 linear feet, and the second is 12-inch cast iron pipe, measuring 4,450 linear feet. The pipeline transfers raw water from the Hibernia Pump Station's intake on the West Branch of Brandywine Creek to the Rock Run Reservoir, to supplement and replenish the reservoir's raw water supply being treated at the Rock Run Water Treatment Plant before entering the distribution system.
Speaker(s): Ahmed Hassan, *J. Fletcher Creamer & Son, Inc.*

WED05 - Enterprise Resilience an Approach to Effective Utility Management

Moderator(s): Frank Roth

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

08:30 AM - 10:00 AM EDT | Wed

OVERVIEW:

PRESENTATIONS:

WED06 - WARN Chairs

Moderator(s):

Event Type: Educational Sessions

Event Track: Utility Risk & Resilience

10:30 AM - 12:00 PM EDT | Wed

OVERVIEW:

PRESENTATIONS:

WED07 - Water Loss Control in the Digital Age

Moderator(s):

Event Type: Educational Sessions

Event Track: Data, AI, and Automation

10:30 AM - 12:00 PM EDT | Wed

OVERVIEW: Explore innovative strategies and tools for reducing water loss across various systems and property types. Attendees will gain insights from a comparative analysis of modern leak detection methods, Florida's statewide investment in water loss control training, and a novel dual-sensor approach tailored for multi-family properties. This session highlights scalable, cost-effective solutions that blend data, technology, and hands-on support to tackle non-revenue water.

PRESENTATIONS:

10:30 AM EDT

Benchmarking Leak Detection in the Digital Age: A Comparative Analysis of Methods

Utilities have many reasons to proactively search for leaks. These range from purely financial to meeting regulatory mandates. There are many solutions to choose from. This presentation will discuss the options currently available to utilities, where they are best suited, and their pros and cons.

Speaker(s): Paul Gagliardo, *Gagliacqua Consulting*

11:00 AM EDT

The Florida Water Loss Program: Florida Doubles Down on Water Loss Training & Technical Assistance in Phase 2

Water Loss Control is crucial for managing water resources in the U.S., addressing challenges like increasing demand, declining groundwater, and aging infrastructure. The AWWA's M36 methodology helps utilities conduct accurate water audits, improving water loss performance and financial benefits. The Florida Water Loss Technical Assistance Pilot Program demonstrated the effectiveness of the M36 methodology, leading to the expansion of the program to a second phase. Implementing these best practices saves water, reduces the need for new supplies, and saves money and resources for utilities.

Speaker(s): Andrew Blackwell, *Cavanaugh*

11:30 AM EDT

Cost-Effective Leak Detection and Localization in Multi-Family Properties Using a Dual-Sensor Approach

This presentation shares results from a pilot funded by the Innovative Conservation Program (ICP) with support from the Metropolitan Water District of Southern California and SoCalGas. The study tested a dual-sensor approach using mainline water monitors and toilet sensors to address leak detection challenges in multi-family properties. Deployed across 44 buildings and 857 units, the solution reduced leaks from 22% to 2.16% of total usage. Attendees will gain insights into the methodology, results, and scalability of this cost-effective water conservation approach.

Speaker(s): Charles Fayal, *NOWi Sensors LLC*

WED08 - Trenchless Technology: Minimizing Surface Disruption

Moderator(s):

Event Type: Educational Sessions

Event Track: Asset Management Programs and Practices

10:30 AM - 12:00 PM EDT | Wed

OVERVIEW: Join presenters as they share insights and techniques on trenchless solutions for minimizing disruption, managing risk, and improving efficiency in complex pipeline projects.

PRESENTATIONS:

10:30 AM EDT

Emergency CIPP Repair of PCCP Process Piping at Wastewater Treatment Facility

The paper describes the fast-track evaluation, design, and rehabilitation of four critical prestressed concrete cylinder pipes (PCCP) under emergency conditions at a 30 MGD wastewater treatment plant. The South Essex Sewerage District (SESD) in Salem, MA was confronted by an unwanted scenario where two of their four 60-in. and 66-in. PCCP pipes were severely distressed causing a sinkhole to form in the road above one of the pipes and untreated sewerage to leak into an adjacent building. The other two PCCP pipes could not be inspected due to access restrictions and their conditions were assumed to be the same. The plant was kept operational while fast-tracked CIPP repairs were undertaken.

Speaker(s): Mark Webb, *AECOM*

11:00 AM EDT

Pilot Testing in Chatsworth, Georgia: Introducing Mueller's new trenchless inspection and repair platform.

Join us to learn about a new product from Mueller called Scout. Scout is an innovative robotic system that inspects and repairs water pipelines internally, eliminating the need for disruptive and costly excavations. It enters through fire hydrants, navigates the pipes to detect leaks, and deploys a specialized stint to seal defects from within. This technology offers utilities a cost-effective, non-invasive solution to reduce water loss, enhance infrastructure reliability, and improve service continuity. This presentation will provide an introduction to Scout, give a summary of how it works and its limitations and will discuss a recent pilot performed in Chatsworth, Georgia.

Speaker(s): David Johnston, *Mueller Water Products*

11:30 AM EDT

Digging Deep Beneath Bullfrog Creek: Lessons Learned from a 48" Diameter Steel Water Transmission Main Installation by HDD for Hillsborough County, FL

WED09 - Navigating Complexity of Project Design and Delivery

Moderator(s): Olivia Fontaine Doucet

Event Type: Educational Sessions

Event Track: Design to Delivery

10:30 AM - 12:00 PM EDT | Wed

OVERVIEW: This session explores how water utilities can successfully deliver complex infrastructure projects and navigate major organizational transitions through strategic planning, collaboration, and innovation. From installing critical pipelines in fully developed corridors to becoming an independent utility and managing large-scale projects across sensitive areas, these presentations offer actionable insights for overcoming technical and institutional challenges.

PRESENTATIONS:

10:30 AM EDT

Installing a New Artery, in a Built-Out Arterial: The Rome Pipeline

The Rome Pipeline, in Las Vegas, Nevada, consists of 7,370 LF of 36-in and 48-in 150 psi mortar lined and coated tape wrapped steel pipe (MLTCP), and had to be installed into an already "built out" 75-80 foot wide right of way arterial street. Project challenges included a "size-on-size" 42-in "wet tap"; performing a "bore and jack" underneath an existing 120-in x 72-in concrete storm drain box culvert; relocating 1,400 LF of 4-in natural gas main; coordinating with the connecting and adjacent Rome Reservoir project, and community outreach. The design and construction were a great success and will provide a reliable water system to the rapidly growing community for many years.

Speaker(s): Greg Burst, *HDR*

11:00 AM EDT

Hitchhiker's guide to becoming a standalone water utility and saving $0.5 million in the process

Ector County Utility District had relied on the City of Odessa to maintain their water system since 1976. The ECUD system could not support additional growth without significant infrastructure upgrades It was decided that ECUD should become a standalone water utility and maintain their own infrastructure. ECUD Secured a loan from the Texas Water Development Board to put critical infrastructure in place to establish themselves as a stand along public water system. Construction included the following: 4MG Ground Storage Tank, 20 MGD High Service Pump Station, 1.0 and 1.5 MG Elevated Storage Tanks, 80,000 LF of WL ranging from 16-34". Throughout the process of this project ECUD ended up completing construction over $0.5 million under budget.

Speaker(s): Jack Earney, *Kimley-Horn & Associates Inc.*

11:30 AM EDT

Bridging the Bay - Using Collaborative Communication for Project Success

Working close with FDOT and the City of Tampa Water Department to coordinate water main relocations for FDOT's TB Next Westshore Interchange project.

Speaker(s): ADRIELL Shrikissoon, *Freese and Nichols*

WED10 - Balancing Resiliency and Growth in Water Infrastructure Planning

Moderator(s):

Event Type: Educational Sessions

Event Track: Vision, Value, and Investment

10:30 AM - 12:00 PM EDT | Wed

OVERVIEW: This session will address the challenges of balancing system resiliency with long-term planning in the face of natural disasters and rapid growth. It will showcase Galveston's use of modeling and master planning, discuss strategies for analyzing water supply alternatives, and explore approaches to infrastructure planning under conditions of rapid growth and uncertain supply.

PRESENTATIONS:

10:30 AM EDT

Holidays and Hurricanes: How Galveston Leveraged Modeling and Master Planning to Balance System Resiliency with Long-Term Planning

Galveston utilized water modeling, operational support, and field condition assessments to develop the 2024 Galveston Water Master Plan. This presentation will discuss the collaborative approach and data-driven decision making that resulted in the reallocation of over $12M to higher impact projects that will improve system resiliency and ease of operations.

Speaker(s): Amy Byland, *Freese and Nichols, Inc*

11:00 AM EDT

Cutting the Gordian Knot of Water Supply Alternatives Analysis

Marin Water applied several innovative approaches for systems modeling and evaluation of water supply alternatives to address future drought risk. This presentation will describe modeling tools and methods leveraged by Marin Water to evaluate supply options that are challenging to compare on an “apples to apples” basis. Topics will include technical aspects of the modeling as well as the development of appropriate evaluation metrics to facilitate robust community engagement and decision making as Marin Water navigates investment in long-term water supply improvements.

Speaker(s): Lucy Croy, *Marin Municipal Water District*

11:30 AM EDT

Water infrastructure planning when growth is rapid and supply is uncertain

In areas of Central Texas, development is on track to outpace existing water supply and future water supply is often uncertain. Hydraulic models are a key tool for developing a plan to address growth. However, they are often developed and then put on the shelf only to be dusted off when the next planning cycle comes around. This presentation outlines an approach to infrastructure planning when there are multiple options for long-term water supply and follows the evolution of two hydraulic models from use in creating a capital improvements plan to continual update for development requests. This approach allows utilities to make informed decisions while staying nimble in the face of rapid growth and uncertain supply.

Speaker(s): Michelle Dutt