AWWA ACE21 - All Virtual
Session Titles, Descriptions, Learning Objective, Speaker Biographies

Virtual Session #	Session Title	Session Length/ CEUs applied for	Session Description	Session Learning Objectives	Session Poll Questions - to be administered every 15 minutes!	Speakers - Name and Company	Speaker Bio 1	Speaker Bio 2	Speaker Bio 3
VS1_10	Cost-Effective Pipe Retrofits for Smaller Systems	1 hour & 15 min (0.1 CEU)	Smaller utilities can't always afford to do what the big guys can but the problems are much the same. Aging infrastructure requires all systems to know the ins and outs of pipe replacement for their systems. This session takes a look at pipe contamination in older distribution systems and ideas for cost-effective pipe retrofit solutions.	1. Understand the potential pathogen growth in existing PVC pipe 2. Identify ways to protect or modifify PVC piping systems to reduce hazards in distribution systems 3. Learn how HDPE can be a cost-effective retrofit for an aging system	1. Does your distribution system use plastic pipe? 2. Is it common for distribution systems to experience biogrowth of viable bacteria? 3. How old are the oldest pipes in your network?	Hatem Fadel, MISR Higher Institute For Engineering and Technology Glenn Reynolds, Water Solutions Inc	Fadel is a consultant Engineer, lecturer at the civil engineering department of Misr higher institute for engineering and technology, and managing director of Urban Studies & Design Center (consultant office) in Egypt. He holds a Ph.D. in surface water treatment by the fabric capillary action and MSc in iron and manganese removal by using slow sand filtration. He has 15 years' experience in potable water, wastewater collection, and treatment. His	Glenn Reynolds has worked in 14 countries over three decades designing and operating water systems treating ocean, radioactive, hot volcanic vent, lake, stream and groundwater supplies. His specialities include: pumps, desalination, distribution systems, small water filtration plant plant design and wells. Glenn has a degree in Applied Physics and is a trainer and educator with more than 3,000 attendees. He is a California certified operator, cross	n/a
VS2_17	Managing Smaller Systems Like a PRO!	1 hour (0.1 CEU)	The majority of US water systems are small, serving populations of 10,000 or fewer. Can technology such as cloud-based systems and platforms lead to more efficient utility management? Is there a better mousetrap for small system management tasks such as billing and community relations? Our experts say yes! Learn how cloud-based systems, automated reporting and remote data collection and proactive community outreach can reduce the the burdens on small system management.	1. Identify ways to leverage platforms, software, and systems for more productive utility management. 2. Create ways for effective customer outreach and engaging stakeholders. 3. Learn how to more effectively handle customer billing	1. Can systems benefit from IOT operations? 2. Do stakeholders understand the value of services a utility provides? 3. Is it important to perform customer billng on a regular basis?	Mauritz Botha, Xio, Inc Darcy Burke, Watermark Associates Glenn Barnes, RCAP	missing Botha	Darcy Burke is the President and Chief Executive Officer of Watermark Associates, a comprehensive business consulting firm. She also serves as Vice President of Elsinore Valley Municipal Water District. Prior to leading Watermark, she was the Director of Public Affairs for the Municipal Water District of Orange County (MWDOC). Ms. Burke received her Bachelors Degree from Mount St. Mary's University, Los Angeles, in International Economics & Marketing as well as	Glenn Barnes joined RCAP in 2020 to help communities build financial and managerial capacity. Since 2006, Glenn has provided workshops, webinars, and technical assistance to water systems on a range of finance topics and has provided subject matter expertise to several leading water organizations. Glenn's work has focused on the needs of small town and Tribal water systems as well as non-community water systems across the country. Glenn also
VS3_20	Prolonging the Useful Life of Distribution Valves	45 min 0.1 CEU)	The best method of emergency management is to eliminate the need for it. Proactive O&M programs, such as valve maintenance programs, help utilities prioritize needs, plan rehab activities and avoid emergency situations. The importance of an O&M program for vertical assets is underscored in this session. Industry and utility professionals show how to use available tools, programs, and asset management approaches to maintain those crucial assets.	1. Understand the benefits of a valve maintenance program 2. Distinguish components of a successful valve maintenance program. 3. Know the importance of level of service goals and the role of valve programs in meeting these goals 4. Understand the importance of a valve program in a utility's capital improvement program.	1. Should flushing programs include additional data collection to update existing databases? 2. Is level of service important to a utility? 3. Are monetary consequence of valves significant and comparable to monetary consequences for pipes?	Will Schaetzke, Woodard & Curran Craig Daly, Xylem Inc.	Will is a licensed professional engineer in water resources in the State of Massachusetts. He graduated from the University of Massachusetts College of Engineering with a B.S. in Civil and Environmental Engineering. For over 6 years, Will has been designing and administering water distribution related construction, assessment and maintenance projects on public and private water systems. Woodard & Curran has offices across the U.S., but Will currently works out of	Over the past 20+ years Craig has worked for both Public Utilities and Consulting Companies where he has performed a variety of tasks related to the development and management of water, waste water and storm water infrastructure. Currently, he works for Xylem as a Subject Matter Expert. His main areas of expertise are pipeline condition assessment, risk analytics, and risk based planning. Currently he is working to develop analytical methods where	n/a
VS3_24	Affordable Water Treatment for Smaller Systems	1 hour (0.1 CEU)	Small public water systems are often faced with bringing impaired water sources to drinking water standards. Available water sources and financial resources re limited, which limits available mitigation strategies. This session provides three examples of how utilities found cost effective measures for groundwater treatment of contaminants including iron, radium, ammonia, manganese and arsenic.	1. Understand the value of pilot testing and the data it generates for choosing full scale treatment options. 2. Learn the role of package plants for treating groundwater contaminants. 3. Learn the treatment options for manganese and why sequestration was unsuccessful 4. Learn potential solutions to consider when faced with arsenic in groundwater, including design considerations, applicability, and	1. Is biological oxidation effective for removing iron and manganese? 2. Can consumption of drinking water containing high enough concentrations of Mn may lead to adverse health effects? 3. Is combining high arsenic groundwater with low-arsenic water an effective means for for arsenic reduction in groundwaters?	Lee Odell, Odell Engineering, LLC Michaela Bogosh, CDM Smith Somnath Chilukuri, Freese & Nichols, Inc.	Lee has a wide range of experience managing projects in water resources, water quality and treatment, water reuse design and facilities planning. One of the hallmarks of his career has been helping utilities find innovative and unique ways of addressing their specific problems. Mr. Odell has 31 years of experience as an engineering consultant and 4 years of experience as a water treatment plant operator and operations supervisor.	Michaela Bogosh is a Project Manager with ten years of experience in drinking water treatment and water quality. Most recently, Michaela has managed projects in the Northeast, helping clients address treatment of complex contaminants such as PFAS in their groundwater supplies. Michaela received her B.S. and M.S. in Civil Engineering from the University of New Hampshire.	missing Chilukuri
VS4_16	Advanced Metering Infrastructure	45 min (0.1 CEU)	Advanced Metering Infrastructure represents an investment in information technology for the water industry that can be leveraged to not only support specific Meter-to-Cash needs, but to support broader initiatives like Intelligent Water and Smart City. With limited capital dollars, utilities are challenged to make wise investment decisions. This session will walk through sample AMI implementations including experiences with available sensor technologies and networks.	1. Identify how information technology can improve business operations amd customer service. 2. Understand how advanced metering infrastrcuture is a foundational component of intelligent water. 3. Illustrate the role of AMI in water loss detection.	1. Can AMI be used to connect with sensors outside of the AMI network? 2. Can AMI be integrated with SCADA information?	Janis Lusco, Arcadis U.S., Inc. Jason Wen, City of Lakewood	Ms. Lusco serves as Arcadis' North American Lead for AMI and Smart Cities and brings extensive experience with technologies supporting smart utility / smart city initiatives, utility operations, engineering, and customer service units such as AMI, GIS, Outage Management and Work Management solutions. Her 25 plus years' experience covers water, electric and gas utility types. She has held director level roles at a large utility and senior program manager and	Dr. Jason Wen currently serves as Director of Water Resources in City of Lakewood, California. He is California registered Professional Engineer, and has both State of California Grade 5 Water Treatment and Water Distribution certificates. He has more than 30 years of experience in water resources, water treatment and environmental management. His previous working experiences include in California State Drinking Water Program and consulting	n/a

Total Applying for:	0.5 CEUs
	0.5 CECs
	5 TCH
	5 TUs
	5 PDHs