

WRF Webinar Program: Assessing Water Quality Monitoring Needs, Tools, Gaps, and Opportunities for Potable Water Reuse
January 24th, 2023

Webcast Description

Overview:

With the occurrence of climate change, more stringent nutrient controls for wastewater discharges, and population growth, water reuse is more important than ever before. Although potable reuse has grown considerably in recent years, some consumers are still reluctant to support it. Utilities and regulators face challenges in proving that recycled water is safe and in understanding the appropriate use of sensors to monitor plant operations and water quality. These needs encompass four distinct, but related areas: microbial contaminants, chemical contaminants, operational needs, and technology/data management and interpretation.

This webcast will present the results of the WRF project *Assessing Water Quality Monitoring Needs, Tools, Gaps, and Opportunities for Potable Water Reuse* (5079), including a database of technologies that are conventionally available or promising for the future, needs that future technologies can address, ways to select the appropriate water quality and treatment monitoring tools, and tips for optimizing the information the tools provide to ensure the quality of recycled water

Presenter Biography Information

Mark LeChevallier, PhD; Principal and Manager, Dr. Water Consulting LLC

Dr. Mark LeChevallier is the principal and manager of Dr. Water Consulting LLC, a part-time consulting business, after retiring from American Water at the beginning of 2018. Dr. LeChevallier received his Bachelor of Science and Master's degrees in Microbiology from Oregon State University, and his Ph.D. in Microbiology from Montana State University. Dr. LeChevallier has authored over 300 research papers and has received numerous awards for outstanding contributions to the science of water treatment. He currently serves on the USEPA Science Advisory Board, the Water Science & Technology Board for the National Academy of Science and was a member of the NAS *Legionella* workgroup. He is a fellow of the American Academy of Microbiology.

William C. Becker, PhD, PE, BCEE

Vice President, Hazen and Sawyer; Scholar in Residence and Co-Director of Water Reuse Program, University of Colorado, Boulder

Dr. William Becker is Vice President and the past Corporate Drinking Water Practice Leader at Hazen and Sawyer and a Scholar-in-Residence and co-director of the Water Reuse Program at the University of Colorado. Bill has consulted for some of the largest utilities in the country on a variety of water quality and treatment issues and has taught

water related classes to thousands of people including water plant operators, professional engineers, and graduate students. He has conducted pilot studies, evaluated treatment systems, and performed conceptual design for the development and optimization of water treatment systems. In addition, he served as Deputy Editor of AWWA Water Science and has directed several Water Research Foundation projects. Bill earned a PhD degree from the Johns Hopkins University, and MS and BS degrees from Clarkson University.

Fernando L. Rosario-Ortiz, PhD; Professor of Environmental Engineering University of Colorado, Boulder

Dr. Fernando L. Rosario-Ortiz is a Professor of Environmental Engineering at the University of Colorado Boulder. He also serves as the Associate Dean for Faculty at the College of Engineering and Applied Science and as Executive Editor for the journal *Environmental Science and Technology*. Dr. Rosario received his BS and MS in Chemistry from the University of Puerto Rico and the California Institute of Technology, respectively. He received his doctoral degree from UCLA in environmental science and engineering. His current research focuses on the characterization of organic matter, environmental photochemistry, and the impact of wildfires on water quality.

Benjamin Stanford, PhD; Associate Vice President Digital Consulting Services Group Hazen and Sawyer

Dr. Stanford is an Associate Vice President with Hazen and Sawyer in the Denver office where he leads the Digital Consulting Services Group, working on implementation of innovations in water, wastewater, and water reuse. Ben earned his PhD in Environmental Sciences and Engineering from UNC Chapel Hill and has conducted a range of studies across science, engineering, and public health protection. He is currently working on multiple digital strategy, data integration, and smart water network projects for utilities around the world.

Troy Walker; Senior Associate Water Reuse Practice Leader and Membrane Technology Leader Hazen and Sawyer

Troy is the corporate Water Reuse Practice Leader and Membrane Technology Leader at Hazen. He has extensive experience in the planning, design, construction, and operations management of water reuse, seawater desalination, groundwater desalination, reverse osmosis, and advanced drinking water facilities. Troy is at the forefront of adapting the hazard analysis and critical control point process for use by reuse facility operators, and has been involved in membrane and water reuse projects in multiple states including California, Arizona, Texas, Florida, and Virginia.

