

2024

Southwest Environmental Health Conference

“Onsite Wastewater an Untapped Resource”



January 31st & February 1st

Laughlin, Nevada





Arizona County Directors of Environmental Health Services Association
Cecil F. Newell, President County Supervisors Association
1905 W Washington St, Suite 100
Phoenix, AZ 85009

Welcome to the 2024 Southwest Onsite Wastewater Conference! After a few years pause due to COVID, I'm proud to announce the ACDEHSA southwest conference is back. This year's conference is in partnership with AZOWRA and we are look forward to the future of Wastewater and all that it has to offer.

We are honored to have a distinguished faculty of practitioners. They come from academia, industry and government. All have volunteered to provide you with the benefit of their experience. They are anxious to hear your questions as part of their presentations and to visit with you during breaks and at the Wednesday evening mixer.

Thank you for attending.

A handwritten signature in black ink, appearing to read 'Cecil F. Newell', written in a cursive style.

Cecil F. Newell ACDEHSA President

Welcome Friends!

After a brief hiatus, ACDEHSA and AzOWRA have teamed-up to bring you the 2024 Southwest Onsite Wastewater Conference on the Colorado River! Be ready for the opportunity to gain insight into the challenges facing our industry today, learn new ways of doing things, and see how the nature of our specialties is evolving with changing conditions and views.

We are well aware your time is valuable and have created a program that you will surely enjoy. You'll gain new insights into products and applications you'll be using daily.

Whether you are a site evaluator, designer, installer, maintenance provider, inspector, pumper, or regulator, these insights will make you more effective at your job.

There will be ample opportunities to pick the brains of top industry experts.

Enjoy yourself, make new acquaintances, renew old friendships, and take home lots of new ideas.

Thanks for joining us!

A handwritten signature in black ink, appearing to read 'David R. Bartholomew', written in a cursive style.

David R. Bartholomew AzOWRA President

2024 SOUTHWEST ENVIRONMENTAL HEALTH CONFERENCE



Pre-Conference Session

Monday January 29, 2024 (Pre-Conference Session)

NAWT Inspection Training & Certification
8:00 AM-5:00 PM

Exhibitor Set-up and Registration

Tuesday January 30, 2024

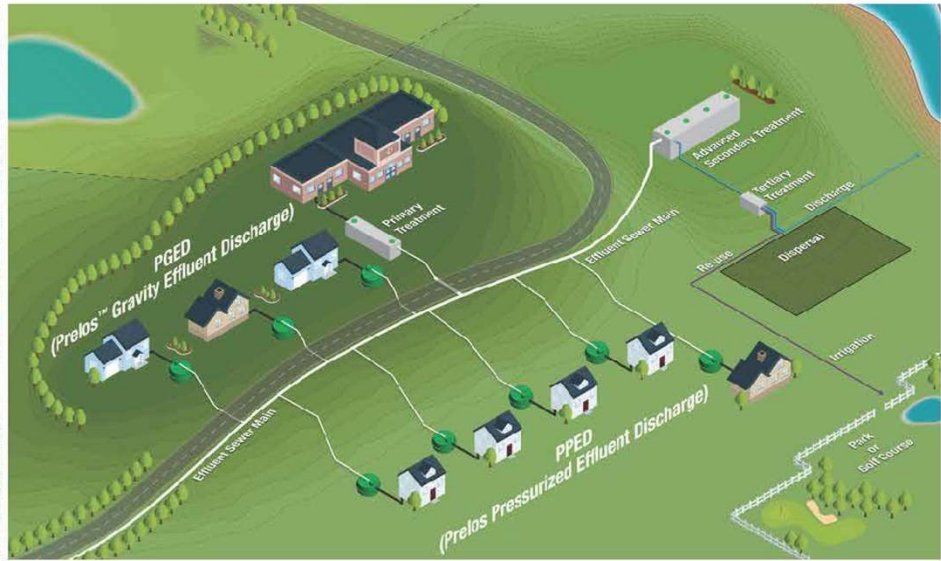
Exhibitor Set-up
4:00 PM-8:00 PM

Pre-Registration
6:00 PM-8:00 PM

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Conference Agenda

Wednesday January 31, 2024

7:00 AM-8:00 AM	Registration
8:00 AM-8:10 AM	Presidents Welcome <i>Arizona County Directors of Environmental Health Services Association</i>
8:10 AM-9:00 AM	The State of States Regarding Water Reuse <i>Keynote Speaker: Albert Robert (Bob) Rubin- Emeritus Professor Biological and Agricultural Engineering North Carolina State University</i>
9:00 AM- 9:50 AM	New Vision for OWTF Regulation in Arizona <i>Trevor Baggione, ADEQ Water Quality Division Director</i>
9:50 AM-10:20 AM	Break-visit exhibits
10:20 AM-11:10 AM	Risk Based Approaches for Onsite Water Reuse: Application to Single Family Homes <i>Jay Garland, Associate Director of Research Center for Environmental Solutions and Emergency Response Office of Research and Development United States Environmental Protection Agency</i>
11:10 AM-12:00PM	Selecting the Correct Onsite System <i>Dave Gustafson, PE</i>
12:00 PM-1:10 PM	Lunch Break and visit Exhibits
1:10 PM-2:00 PM	Microbes the Forever Contaminate <i>Charles P. Gerba, Ph.D., Professor of Microbiology at the University of Arizona</i>
2:00 PM-2:50 PM	State of Science Single Family Water Recycling Applications <i>Paula Kehoe, Director of Water Resources, San Francisco Public Utilities Commission</i>
2:50 PM-3:20 PM	Break-visit exhibits
3:20 PM-4:10 PM	Pressure Sewers <i>Mark Gross, PE</i>
4:10 PM-5:00 PM	Capstone Panel on Advancing On-site Reuse <i>Facilitator-Jake Garrett</i> <i>Panel-Trevor Baggione, Bob Rubin, Jay Garland, Chuck Gerba, Paula Kehoe</i>
5:00 PM-6:30 PM	Exhibits and Mixer

Conference Agenda

Thursday February 1, 2024

7:00 AM-8:00 AM	Registration
8:00 AM-8:50 AM	Soil Loading Rate <i>Kitt Farrell-Poe, Specialist & Professor, Interim Director of Graduate Studies, Biosystems Engineering Department, University of Arizona</i>
8:50 AM-9:40 AM	Flow equalization – A method to improve system performance and communicate maintenance needs to the owner <i>Bruce J. Lesikar, Ph.D., P.E. Consulting Engineer Columbus, Texas</i>
9:40 AM-10:10AM	Break-visit exhibits
10:10 AM-11:00AM	MOM is Always Right <i>Albert Robert (Bob) Rubin, Emeritus Professor Biological and Agricultural Engineering North Carolina State University</i>
11:00 AM-11:50 PM	Construction Inspections <i>Justin Ramsey, PE</i>
11:50 PM-1:00 PM	Lunch Break and visit Exhibits
1:00 PM-1:50 PM	Challenges of Developing Life Support Systems <i>Jay Garland, Associate Director of Research Center for Environmental Solutions and Emergency Response Office of Research and Development</i>
1:50 PM-2:20 PM	Break-visit exhibits
2:20 PM-3:10 PM	Troubleshooting and Remediating Malfunctioning Onsite Systems <i>Mark Gross, PE</i>
3:10 PM-4:00 PM	High Strength Wastewater- Addressing the challenges with design, installation, operation, and permitting <i>Bruce J. Lesikar, Ph.D., P.E. Consulting Engineer Columbus, Texas</i>
4:00 PM-4:15 PM	Conference Adjourn

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Speaker Biographies

Albert Robert (Bob) Rubin- Emeritus Professor Biological and Agricultural Engineering North Carolina State University

R. (Bob) Rubin is an emeritus professor in the Biological and Agricultural Engineering Department at North Carolina State University. He has worked on rule development efforts in several states and countries, conducted research on the performance of individual wastewater treatment systems and the impacts of these systems to receiving environments. He assisted in the development of several USEPA publications including those related to water reuse, septage and biosolids treatment and management, onsite wastewater treatment systems and management guidelines for decentralized wastewater systems. I am honored to visit with my friends from the SouthWest.

Trevor Baggione, ADEQ Water Quality Division Director

Trevor Baggione has been the Director of the Water Quality Division for the Arizona Department of Environmental Quality since 2015. As a native of Arizona and a two-time graduate of Arizona State University, with a Bachelor's in Chemical Engineering and a Master's in Business Administration, he has been advocating for Arizona's environment since 2001. Trevor is registered in Arizona as a professional engineer and is a champion of Arizona's efforts to protect and enhance human health and the environment.

Jay Garland Associate Director of Research Center for Environmental Solutions and Emergency Response Office of Research and Development

Dr. Jay L. Garland joined the EPA's Office of Research and Development in 2011. Dr. Garland received a Ph.D. in Environment Science from the University of Virginia and spent over 20 years working on NASA's efforts to develop closed, bioregenerative life support systems for extended human spaceflight. NASA recognized him for innovative technical achievements four separate times. He has worked on a range of topics, including methods for microbial community analysis, factors affecting survival of human associated pathogens, and various biological approaches for recycling wastes. Dr. Garland has completed visiting fellowships and professorships at the Institute for Environment Sciences in Japan, the University of Innsbruck in Austria, and the University of Buenos Aires in Argentina. His current efforts focus on advancing innovative approaches to water infrastructure, including decentralized water reuse, and mitigating risks associated with antimicrobial resistance in the water cycle.

Dave Gustafson, PE

Dave has been an Educator in the nationally recognized Minnesota Onsite Sewage Treatment Program for over 30 years. He has explained and septic system operation and performance thousands of learners from all over the World. He is a registered civil engineer and regularly designs, troubleshoots and gets his hands dirty in real world situations working for the Onsite Industry. His approach to education is fresh, real and practical with a little dose of humor.



Speaker Biographies

Charles “Chuck” P. Gerba, Ph.D., Professor of Microbiology at the University of Arizona

Chuck Gerba is a professor in the Departments Environmental Science, Biosystems Engineering (College of Life Sciences and Agriculture), and Community and Environmental Health (College of Public Health) at the University of Arizona. He has been an author on more than 700 articles including several books in environmental microbiology. He conducts research on the contamination and control of pathogens by foods, water, and indoor environments. He is a fellow of the American Association for the Advancement of Science, American Academy of Microbiology, and the International Water Association. He received the McKee Award for groundwater protection research from the Water Environment Federation in 1996 and the AP Black Research Award from the American Water Works Association in 1997. In 2020 he received the Water Heroes Award from the Water Environment Federation for his work on SARS-CoV-2.

Paula Kehoe, Director of Water Resources, San Francisco Public Utilities Commission

Paula Kehoe has worked with the City and County of San Francisco for over 30 years focusing on a number of environmental initiatives, including solid waste management, water pollution prevention and water resources management. Currently, she serves as the Director of Water Resources with the San Francisco Public Utilities Commission (SFPUC) and is responsible for diversifying San Francisco's water supply portfolio through the implementation of conservation, groundwater, recycled water, onsite water reuse and innovation programs. Paula spearheaded the landmark legislation allowing for the collection, treatment, and reuse of alternate water sources in buildings and districts within San Francisco which has received several state and national awards. Paula also leads the SFPUC's OneWaterSF Program which has cultivated a shift to a more integrated approach to water, wastewater, and power management. Paula chairs the National Blue Ribbon Commission for Onsite Non-potable Water Systems and serves on the Board of the WaterReuse Association.

Mark Gross PE

Mark Gross is a civil engineer with over 40 years of experience in water and wastewater projects for small communities. Dr. Gross has served as a teacher, researcher, and designer in the Civil/Environmental Engineering area. Following a career as a professor at the University of Arkansas, Dr. Gross managed the training department for an equipment manufacturer for decentralized wastewater systems providing workshops and training programs around the United States, Canada, Australia, New Zealand, and Ireland. After serving as a training manager, Dr. Gross worked with consulting engineering firms serving western Arkansas, Eastern Oklahoma, and Northern Texas. He is currently working part-time with a Washington D.C. firm on two U.S. EPA-funded projects - the Closing America's Wastewater Access Gap Initiative and the Get the Lead Out Initiative. Dr. Gross is a Registered Professional Engineer in Arkansas, Missouri, Tennessee, Oregon, and Virginia and lives half the year in Northwest Arkansas and half the year in Southwest Oregon.



Speaker Biographies

Kitt Farrell-Poe

Dr. Farrell-Poe is the head of the Department of Agricultural and Biosystems Engineering. Her work focuses on developing extension education programs in cooperation with county faculty and their clientele including county, state, and federal agency staff, local public officials, elementary and secondary teachers, farmers, and ranchers.

Bruce J. Lesikar, Ph.D., P.E. Consulting Engineer Columbus, Texas

Bruce serves as a consulting engineer for various projects related to onsite wastewater treatment systems. Bruce serves as a contract engineer for the Texas Commission on Environmental Quality in the Technical Programs Team as part of the On-Site Sewage Facilities Program. Bruce reviews non-standard OSSF designs for Texas. He also develops and delivers educational materials for the local regulatory officials.

Practitioner training is provided through presentations at short courses, conferences and meetings. All industry participants, regulators, site evaluators, designers, installers, and service professionals need effective training to enhance their knowledge for managing our water resources.

Service to the industry includes sharing knowledge about onsite wastewater treatment systems. Effective water management is critical to meeting our water needs into the future. All water sources are needed including used water. Water is not available to “waste”. Our water is available for treatment and use regardless of the source.

Justin Ramsey, PE

Mr. Ramsey has a Bachelor of Science degree in Environmental Engineering and a Master of Engineering in Civil Engineering, both from Northern Arizona University. Mr. Ramsey is a registered professional engineer in four states, including Arizona, and has designed and overseen the construction of water and wastewater treatment, conveyance, and disposal facilities throughout the southwest. Mr. Ramsey has multiple operator certifications in Water Treatment, Water Distribution, Wastewater Collection, and Wastewater Treatment Operations. Mr. Ramsey participated in the early Ad-hoc committees during the development of the Arizona Administrative Code regarding Type 4 General Permits for Arizona wastewater treatment and disposal systems. Mr. Ramsey is currently the acting Regional Project Representative for a \$44 Million Dollar water treatment plant in Colorado and has performed similar construction oversight services for local, state, and federal infrastructure projects in Arizona.

Remembering



BRYAN CHIORDI-JONES

On Christmas Eve, we lost a member of the Orenco family when Bryan Chiordi-Jones passed away suddenly. He joined Orenco in 2021 and was an account manager on the sales team, covering the southwestern United States.

We remember Bryan as a faithful husband and father, a tireless worker, and a dependable teammate. He was a salt-of-the-earth person who was quick to befriend others and who genuinely tried to improve himself on a daily basis. We miss him tremendously.

The Orenco Family



