

Status of Water Reuse in the Nation, Northwest and Idaho

Abstract: This session will discuss Water Reuse in the Western United States to show that it is strong and growing from direct, indirect and de facto reuse to potable water reuse. This session will provide an overview of non-potable and potable reuse in the US, including information about the safety and reliability of both. Resources available to utilities, industries, and consultants will be highlighted and referenced. The session will discuss drivers and current status of reuse projects and that there is a growing demand for reuse and recycled water. This session will provide information on water reuse projects globally, in the Western U.S. and specific to Idaho.

Drinking Water and Wastewater Professional CEUs are available from Idaho Bureau of Occupational Licensing for this session.

Presenter: **Chas Ariss, P.E.**
Title: Wastewater Engineering Program Manager
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Professional Background: Chas Ariss is a Licensed Professional Environmental Engineer with over 30 years of professional experience in multimedia environmental science and engineering. He recently received his National Engineering Record Verification from the National Council of Examiners in Engineering and Surveying. Chas serves as the Statewide Wastewater Engineering Program Manager and Chief Engineer for the IDEQ Water Quality Division. He was also the former Engineering Manager for IDEQ's Boise Regional Office from 2000–2006. The balance of his career has been serving various positions with the USEPA Environmental Research Laboratory in Corvallis, Oregon, the Idaho National Engineering Laboratory in Idaho Falls, and working as a private engineering consultant.

His academic background includes undergraduate degrees in Agriculture, Systems Ecology, Forest Biology, and Environmental Science and Forestry through the State University of New York system and Syracuse University. He also holds a Master of Engineering degree in Civil and Environmental Engineering from Utah State University, served as a Graduate Research Fellow at the University of Idaho Institute for Resource Management, and has an Executive MBA from the Boise State University Center for Management Development. Chas has been involved with a variety of municipal and industrial recycled water projects throughout Idaho over the past 15 years and is pleased to fill the leadership role in this discipline for IDEQ on a statewide basis.

Presenter: **Kristina Westbrook**
Title: President, WaterReuse Association Pacific Northwest section of the Water Reuse Association Organization.
 And Recycled Water Program Manager of King County Wastewater Treatment Division

Professional Background: Kristina Westbrook is President, WaterReuse Association Pacific Northwest section of the Water Reuse Association Organization. Kristina Westbrook received her Bachelors of Science in Civil Engineering in 1998 from the University of Idaho and received her State of Washington

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professional engineering license in 2002. She worked 9 years for Brown and Caldwell as a wastewater treatment and water reclamation facility designer and project manager. For the last seven years she has worked for King County, first as a Recycled Water Engineer and now as King County's Recycled Water Program manager developing their recycled water system.

Presenter: **Guy Carpenter, P. E.**
Title: Vice President and Water Reuse Technical Practice Director
Organization: Carollo Engineers
Address: Phoenix AZ

Professional Background: Mr. Carpenter, Vice President, Water Reuse Technical Practice Director Carollo Engineers, is a Registered Professional Civil Engineer. He earned a BS in chemistry from Northern Arizona University. Mr. Carpenter's work history includes supervising a municipal wastewater department, serving as a municipal water resources manager and providing engineering services. He currently serves on the External Advisory Committee of the University of Arizona's Water Resources Research Center and on the Board of Directors of the International Water Reuse Association. He previously served on the Governor's Blue Ribbon Panel for Water Sustainability (2010), the Gilbert Leadership Board of Directors (2006) and the External Advisory Board of the Arizona Water Institute (2008).