

US EPA/PWB Webinar Program: US EPA: Disinfection Byproducts Control
Tuesday, March 30, 2021

Webcast Summary:

Overview:

Presentation 1—Web-Based Applications to Simulate Disinfectant Water Chemistry: Development and Practical Uses. Web-based applications (WBAs) are developed to provide kinetic simulations of inorganic chloramine chemistry as well as the equilibrium chemistry between free chlorine, cyanuric acid, and chlorinated cyanurates. The WBAs serve as learning tools for drinking water operators, engineers, researchers, and students by providing an interactive environment to explore and understand these water chemistry scenarios. This presentation will discuss WBA development and their practical application. (Presentation by David Wahman, EPA's ORD)

Presentation 2—Practical Approaches to Assess Distribution System Influent Water Quality: Implications for Residual Maintenance and Disinfection Byproduct Formation. Whether water is coming directly from a drinking water treatment plant or through a metered connection to a consecutive system, water utilities can assess the stability of disinfectant residual and corresponding potential for disinfection byproduct formation. A distribution system influent hold study is a straightforward and cost-effective way to evaluate changes in bulk water quality over time. Combined with a WBA to simulate inorganic chloramine chemistry, a hold study may also be used to assess chloramine demand. This presentation will introduce the hold study procedure, including use of a WBA to assess chloramine demand, and various case studies.

Presenter Biography Information

David G. Wahman, Ph.D.

Dave is a research environmental engineer with EPA's Office of Research and Development, Center for Environmental Solutions and Emergency Response. His research interests include disinfectant chemistry, disinfectant biofilm penetration, and distribution system water quality issues, including nitrification. He is a registered professional engineer with over 25 years of experience. Dave holds a B.S. in civil engineering from Rose-Hulman Institute of Technology and an M.S.E. in environmental and water resources engineering and a Ph.D. in civil engineering from The University of Texas at Austin.

Matthew Alexander

Matt is an engineer with EPA's Office of Water, Office of Groundwater and Drinking Water. As a member of the Agency's Area-Wide Optimization Program (AWOP), he supports the development and demonstration of various optimization approaches and provides technical assistance related to disinfection and distribution system water quality, with particular emphasis on maintaining disinfectant residual, reducing DBP formation, and storage tank operations. Matt is a registered professional engineer in Ohio, has over 12 years of experience in drinking water,

and is a member of the American Water Works Association. He holds a B.S. in civil engineering and an M.S. in environmental engineering from the University of Cincinnati.