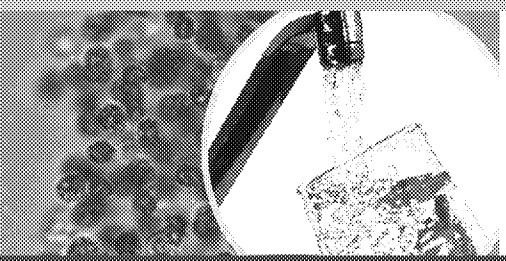
EPA

Small Systems Monthly Webinar Series

The U.S. Environmental Protection Agency's Office of Research and Development and Office of Water invite you to a **free webinar**



Treatment Technologies for Removing Chemicals of Concern

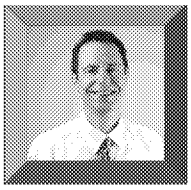
A certificate for one continuing education contact hour will be offered for this webinar

February 26, 2019 from 2:00 to 3:00 pm ET **Optional Q&A session from 3:00 to 3:30 pm ET**

Treatment for Contaminants of Emerging Concern: Per-and Polyfluoroalkyl Substances (PFAS), Cyanotoxins, and Perchlorate

This presentation will discuss treatment for three contaminants of emerging concern—PFAS, cyanotoxins, and perchlorate—with an emphasis on determining cost-effective solutions for small systems. Specifically, how contaminant properties influence treatment effectiveness, operational complexity, cost, and residual stream handling will be discussed. Also, novel technologies will be discussed using anaerobic biofiltration of nitrate as an example, and a demonstration on the impact of system size to capital and operating costs will be shown. For each technology and contaminant, how to avoid unintended consequences, such as increase water corrosivity or residual handling problems, will be covered.

Presented by **Thomas F. Speth, Ph.D., P.E.**



Tom is a professional engineer with EPA's Office of Research and Development (ORD) and has worked in the field of water treatment research at EPA for over 30 years. He served as a Branch Chief and then as a Division Director for ORD's National Risk Management Research Laboratory (NRMRL) from 2005 to 2015, worked on detail with EPA's Office of Ground Water and Drinking Water as a senior engineering adviser assigned to the Flint Enforcement Team from 2015-2016, and is currently NRMRL's Acting Associate Director for Science where he is leading efforts on PFAS and lead. Tom has a Ph.D. in Environmental Engineering from the University of Cincinnati, an M.S in Civil/Environmental Engineering, a B.S. in Chemical Engineering from Michigan Technological University, and is currently the Chair of the American Water Works Association's Water Science and Research Division.

Treatment Approaches for 1,4-Dioxane in Reuse and Groundwater

By statute, California has established Notification Levels for some chemicals seen in both wastewater and groundwater that do not currently have Maximum Contaminant Levels, including 1,4-dioxane. To achieve 1,4-dioxane reduction below the Notification Level of 1 ppb, California regulations require full advanced treatment for groundwater injection and surface water augmentation projects, which includes reverse osmosis treatment and advanced oxidation processes. This presentation will cover the role that 1,4-dioxane plays in both drinking water and potable reuse in California. A drinking water example of a groundwater treatment process will also be covered.

Presented by **Brian Bernados, P.E.**

Brian is a technical specialist with California EPA's State Water Resources Control Board, Division of Drinking Water, where is has worked for the past 26 years. He is responsible for reviewing recycled water, water reuse via groundwater recharge, surface water augmentation, direct potable reuse feasibility, and alternative technology acceptance, advanced technology, RO/AOP, UV disinfection, direct reuse, seawater deal, and water treatment additives/components. Brian is a Registered Civil Engineer and a Grade T5 Water Treatment Operator in the State of California. He has an M.S. in Civil Engineering from San Diego State University and a B.S. in Civil Engineering from the University of Pittsburgh.

Registration: https://register.gotowebinar.com/register/4114974339580474114

Who should attend?

State primacy agencies, Tribes, community planners, technical assistance providers, academia, and water systems interested in issues facing community water systems and solutions to help solve them.

Looking for more webinars?

This webinar is part of EPA's Monthly Small Systems Webinar Series: *Challenges and Treatment Solutions for Small Drinking Water Systems*. A webinar will be held each month in 2018.

epa.gov/water-research/small-systems-monthly-webinar-series