PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

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March 28, 2025

OESAC CEU Committee
PO Box 577
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Dear members of the CEU Committee:

Please consider this request for your approval of Portland Water Bureau's Winter 2025 Webcasts for 0.3 CEU's.

DATE	Portland Water Bureau Winter 2025 Webcasts	CEU's: 0.3
2/25/25	EPA Webinar: Emergency Response: Drinking Water Supply Planning and Treatment Technology Deployment	0.1
2/27/25	WRF Webinar: Autonomous in situ Monitoring of Harmful Algal Blooms	0.1
3/25/25	EPA Webinar: Disinfection Byproducts: Inorganic Chloramines	0.1

Thank you in advance for your consideration.

Respectfully,

Brooke E. Gardner

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Enclosures:
1. Letter of request to review
2. PWB Webcast Summaries and Speaker Bios

PWB Winter 2025 Webinar Summaries and Presenter Biographies

EPA Webinar: Emergency Response: Drinking Water Supply Planning and Treatment Technology Deployment

February 25, 2025

Overview:

1. *Planning for an Emergency Drinking Water Supply*

During an incident that disrupts the availability of drinking water on a large-scale or regional basis, clarity in the roles and responsibilities of those involved with locating, securing, and delivering an emergency drinking water supply (EDWS) will be critical. An EDWS is alternate drinking water supply (e.g., bottled/bulk water) provided to residents when a community's drinking water utility can no longer treat and/or distribute water. Provision of an EDWS involves the development of an emergency drinking water plan by a local water utility and also involves the collaboration and partnership between various levels of local government. This presentation will discuss how small drinking water utilities can develop an EDWS plan and coordinate with other local partners to provide emergency drinking water when there is a disaster.

Presenter: **Jessica Habashy, EPA Office of Water**

Jessica has been an environmental engineer with EPA's Office Water, Office of Ground Water Drinking Water for five years. She is on the Planning, Response, Recovery team to help utilities with disaster preparation, planning, and relief. Prior to joining the EPA, Jessica worked on global water and wastewater infrastructure and education through international development and disaster relief.

2. *Portable Treatment System to Provide Drinking Water During Emergencies*

Following an emergency event, communities need access to clean water for drinking, cooking, cleaning, and medical triage. EPA researchers partnered with the nonprofit organization, WaterStep, to develop a modular, mobile water treatment system known as Water on Wheels– Emergency Mobile Water Treatment System (WOW Cart). This presentation will discuss this inexpensive and versatile water treatment system that's about the size of a shopping cart. It is configured with multiple treatment technologies and is equipped with alternative power sources. The system is easy to operate and can be deployed to critical infrastructure ahead of oncoming natural events to build resiliency.

Presenter: **James Goodrich, EPA Office of Research and Development**

Jim is a senior science advisor with EPA's Office of Research and Development, Center for Environmental Solutions and Emergency Response. During his career, Jim has managed large multidisciplinary research programs relative to water infrastructure protection, small community drinking water and wastewater needs, watershed protection and restoration, source water spill modeling, and international drinking water treatment technology demonstrations. He is currently responsible for development and evaluation of innovative emergency water treatment

technology systems, adaptation of river spill models, stormwater infrastructure mitigation tools, and full-scale evaluations of drinking water infrastructure decontamination approaches.

Water Research Foundation Webinar: Autonomous in situ Monitoring of Harmful Algal Blooms

February 27, 2025

Overview:

Harmful algal blooms (HABs) damage aquatic ecosystems, threaten water supplies, impose economic costs, and are increasing in frequency and intensity due to climate change. Effective monitoring of HABs is important for mitigating their impact on public health and the economy and for developing approaches that minimize the occurrence and/or severity of HABs. While affordable approaches for HAB monitoring exist, they still require a certain level of user expertise and involvement and are limited in monitoring scope.

Thus, there is a critical need for a HAB monitoring device that includes the following features:

- Autonomously identify and count all relevant phytoplankton species in surface water.
- Accessible and easy to employ.
- Low cost and scalable.

The Water Research Foundation (WRF) project 5154, ***Autonomous in situ Monitoring of Harmful Algal Blooms***, worked to address this problem by developing the Autonomous Real-Time Microbial Scope (ARTiMiS) device for in situ and low-cost monitoring of HABs.

This webcast will provide an overview of project 5154. The presenter will describe the development of a training dataset for algal species of relevance and the steps they took to optimize their machine learning approach to identify and quantify algal species. Using the real-time data on algal density and taxonomic composition, the presenter will describe how utilities can use this information to proactively implement measures to mitigate harmful blooms.

Presenter Biography:

Ameet Pinto, PhD, Environmental Engineer and Carlton S. Wilder Associate Professor
Civil and Environmental Engineering Georgia Institute of Technology

Dr. Ameet Pinto is an Environmental Engineer and Carlton S. Wilder Associate Professor in Civil and Environmental Engineering at Georgia Institute of Technology (Georgia Tech). Ameet is a Chemical Engineer from the Institute of Chemical Technology (University of Mumbai) with post-graduate degrees in Environmental Engineering from the University of Alaska (2005) and Virginia Tech, USA (2009). Before joining Georgia Tech in 2021, he was an Assistant Professor at Northeastern University (2016-2021) and Lecturer/Senior Lecturer (2012-2015) at the University of Glasgow. Ameet's research focuses on microbial ecosystems at the interface of infrastructure and public/environmental health with a focus on the engineered water cycle. The overall research goal is to characterize and manipulate microbial communities to (1) protect and improve public and environmental health and (2) improve functional reliability and economic

feasibility of water infrastructure. To do this, his research group develops and applies state-of-the-art microbial molecular and sensing tools and modelling approaches to monitor and manage the microbiology of the engineered water cycle. Ameet also serves as the Editor for Water Research (the premier journal for the engineering, science, and technology for water quality management) and as the Secretary of the Microbial Ecology and Water Engineering (MEWE) Specialist Group of the International Water Association.

EPA Webinar: Disinfection Byproducts: Inorganic Chloramines

March 25, 2025

Overview:

Advancing the Story of Inorganic Chloramine Decomposition and Identifying Chloronitramide Anion. This presentation will discuss research that has expanded our knowledge of inorganic chloramine decomposition chemistry. It will provide an updated understanding of 1) dichloramine decomposition and a revised pathway for N-nitrosodimethylamine (NDMA) formation in chloraminated drinking water; 2) how chloronitramide anion is a result of inherent chloramine instability; therefore, an external precursor chemical is not required for chloronitramide anion formation. The presentation will also discuss how chloronitramide anion was detected in 40 samples from 10 chloraminated drinking water systems in the United States, but not from ultrapure water or water treated without chlorine.

This work summarizes results from three recently published research articles: one in Science and two in Environmental Science & Technology.

Presenter Biographies:

Dave Wahman, Ph.D., EPA Office of Research and Development

David G. Wahman is a registered Professional Engineer with over 30 years of experience. He holds a B.S. in civil engineering from Rose-Hulman Institute of Technology, an MSE in environmental and water resources engineering and a Ph.D. in civil engineering from the University of Texas at Austin, followed by a post-doctoral fellowship at EPA before accepting a permanent position as a research environmental engineer. His research interests include disinfectant water chemistry, distribution system water quality, applying modeling and developing applications to understand drinking water treatment and distribution system issues, and per- and polyfluoroalkyl substances (PFAS).

Julian Fairey, Ph.D., University of Arkansas

Julian Fairey is an associate professor in the Department of Civil Engineering at the University of Arkansas. He holds an undergraduate degree from the University of Alberta and an M.S. and a Ph.D. from the University of Texas at Austin, all in civil and environmental engineering. His lab group aims to develop strategies to identify and curb disinfection byproducts in drinking water, sampling devices for PFAS quantitation at trace levels, and fluorescence sensor systems for early detection of nitrification in drinking water distribution systems.