March 28, 2024

OESAC CEU Committee
PO Box 577
Canby, OR 97013-0577

Dear members of the CEU Committee:

Please consider this request for your approval of the U.S. Environmental Protection Agency (US EPA) Winter 2024 Webcasts for 0.4 CEU's.

DATE	US EPA Winter 2024 Webcasts	CEU's: 0.4
1/31/24	Development and Application of Harmful Algal Blooms (HABs) Forecasting Science	0.1
2/27/24	Lead Service Line Inventory Guidance	0.1
2/29/24	Veterans in the Water Workforce Webinar	0.1
3/26/24	Small Drinking Water Systems Webinar: Harmful Algal Blooms	0.1

Thank you in advance for your consideration.

Respectfully,

Brooke Gardner
Portland Water Bureau
brooke.e.gardner@portlandoregon.gov

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

Please contact us for translation or interpretation, or for accommodations for people with disabilities.
More information · Más información · Thêm thông tin · 欲了解更多信 · Дополнительная информация
Mai multe informații · Подробиці · Macluumaad dheeri ah · अधिक सूचना · Tichikin Poraus
portlandoregon.gov/water/access · 503-823-7432 (TTY: 503-823-6868, Relay: 711)

EPA Webinar Program: Development and Application of Harmful Algal Blooms (HABs) Forecasting Science
January 31, 2024

Webcast Description
<u>Overview:</u>

1. Forecasting Freshwater Cyanobacterial HABs for Sentinel-3 Satellite Resolved U.S. Lakes and Reservoirs

    Because cyanoHABs are a concern for health throughout the United States, there is a need for a large-scale prediction model. To address this need, we used a Bayesian model to estimate the probability of a cyanobacterial bloom occurring in a given week. Specifically, we used an Integrated Nested Laplace Approximation (INLA) model because it provided a complex and computationally efficient forecasting model that can work with missing data and irregular lake sampling. The INLA model used cyanobacteria presence data derived from Sentinel-3 Ocean Land Color Instrument along with environmental predictor variables from 2016 to 2022 in satellite resolvable lakes across CONUS. This model was applied to forecast World Health Organization recreation Alert Level 1 exceedance >12 μg L−1 chlorophyll-a with cyanobacteria dominance for 2192 satellite resolved lakes in the United States. The prediction results were compared to independent previous cyanobacteria presence satellite imagery to provide performance statistics.

2. OW's Vision for Operationalizing Nationwide HABs Forecast

    The CyAN near-real-time cyanobacterial biomass tool is a foundation of the EPA National HAB Program and is used by state, tribal, and other partners across the U.S. as a key part of their HAB monitoring programs. The expansion of this tool to provide forecasting information could be transformative for many of these partners as it may enable their monitoring teams to better anticipate blooms to provide more accurate advice to the public. This talk will discuss our plans on how the forecasting information will be operationalized and served through existing HAB data platforms.

Presenter Biography Information

Blake Schaeffer, Ph.D. (EPA Office of Research and Development)

Blake earned his Ph.D. in marine, earth and atmospheric science from North Carolina State University studying harmful algal bloom ecology. Blake is currently with the Office of Research and Development, Center for Environmental Measurement and Modeling in Durham, North Carolina. His research focus is on the applied use of satellite remote sensing technology to monitor water quality in coasts, estuaries, lakes, and reservoirs. His research niche is the development of applications for water quality monitoring and assessment.

Michael Paul, Ph.D. (EPA Office of Water)

Mike is an aquatic ecologist in the EPA Office of Water, Office of Science and Technology, Health and Ecological Criteria Division in Washington D.C. He has more than 30 years of experience in the research and management of aquatic ecosystems. His work has focused on the ecology of freshwater ecosystems, including 20 years of experience in water quality criteria development across the nation. He now leads the EPA National HAB Program and works on nutrient criteria and biocriteria. He received his B.A. in biology from Colgate University, an M.Sc. in zoology and a Ph.D. in ecology, both from the University of Georgia.

Moderator: Anne Rea, Ph.D. (EPA Office of Research and Development)

Anne is a Senior Science Advisor in the Center for Public Health and Environmental Assessment within the EPA Office of Research and Development in Durham, North Carolina. She leads the integration of cross-cutting research related to nitrogen and associated co-pollutants within EPA and with other federal, state, and NGO partners. She has worked with EPA's former Ecosystem Services Research Program, the Office of Air Quality Planning and Standards, and the Office of Air's Ecological Risk Program. Anne earned her doctorate in environmental health sciences from the University of Michigan's School of Public Health.

EPA Webinar Program: Lead Service Line Inventory Guidance
February 27, 2024

Webcast Description
<u>Overview:</u>

Developing a lead service line (LSL) inventory and identifying the location of LSLs is the first step for beginning LSL replacement and protecting public health. The purpose of

this presentation is to walk through the EPA's Guidance for Developing and Maintaining a Service Line Inventory. The guidance provides support for the service line inventory requirements according to the 2021 Lead and Copper Rule Revisions, referred to as LCRR.

Presenter Biography Information

Melanie Bolden, EPA Office of Water

Melanie is a biologist in EPA's Office of Ground Water and Drinking Water where she works on the implementation of the Lead and Copper Rule. She holds an MPH from SUNY- Albany, a B.S. in biology from the University of Arkansas and served in Peace Corps Mozambique (2013-2015). Melanie is also currently a doctoral student in environmental health at Johns Hopkins University's Bloomberg School of Public Health.

Holly Young, EPA Office of Water

Holly is a physical scientist in EPA's Office of Ground Water and Drinking Water where she works the on implementation of the Lead and Copper Rule. She holds an M.S. in geography from Virginia Tech, and a B.S. in geology and an MBA from the University of Kentucky.

EPA Webinar Program: Veterans in the Water Workforce Webinar
February 29, 2024

Webcast Description
Overview:

As part of EPA's commitment to helping build a diverse and sustainable water workforce, today's veterans can provide a very important set of skills as well as benefit from a range of programs designed to help them build a meaningful career in water. Please join us on February 29th to hear from organizations that are reaching out to and training these veterans so they can play a key role in protecting our nation's critical water infrastructure.

Presenter Biography Information

 Moderator – *Jim Horne, U.S. EPA*

 Freddy Armijo, Project Manager and Physical Security Officer, City Riverside (CA) Public Utilities Water Division

 Don Jones, Water/Wastewater Technology Program Coordinator, Cuyamaca College

 Steven Garner, Certification Manager, California-Nevada Section, AWWA U.S. Department of Veterans Affairs Presenter TBD

EPA Webinar Program: Small Drinking Water Systems Webinar: Harmful Algal Blooms
March 26, 2024

Webcast Description
<u>Overview:</u>

1. Establishing an Algal Toxin Rule and Regulatory Program in Rhode Island, an Informal Case Study

   As the severity and impact of Harmful Algal Blooms (HABs) increasingly pose risk to human health, one frequent topic of discussion is when and/or how to adopt regulations accordingly, and in what capacity. The numerous factors that require consideration – agency jurisdiction, criteria thresholds, balancing bloom/toxin prioritization, the need for programmatic support, etc. – can be challenging barriers to address without the established federal counterparts that are in place for many other drinking water rules and programs. In 2019, Rhode Island was one of the earliest states to establish a HAB/cyanotoxin rule in the state public drinking water regulations, which also required the development of surrounding program infrastructure.

   This presentation will serve as a brief, small-scale case study of a state-level Algal Toxin program from its inception onward, including topics such as an overview of the rule's regulatory language, toxin selection and health limits, implementation, challenges, and other resources/information.

Presenter Biography Information

Shannon Harrower-Nakama, Rhode Island Department of Health
Shannon is an environmental scientist with the Rhode Island Department of Health's Center for Drinking Water Quality. She currently serves as the center's Source Water Protection Program lead and manages the Algal Toxin Rule under the state's public water system regulations. Part of her role has been to implement the Algal Toxin Rule from the point it was first incorporated in 2019. and establish the Rule's program from the ground up. She also worked to develop strong collaborative partnerships with other agencies, such as Rhode Island's Department of Environmental Management's surface water monitoring and protection programs, which have been integral to the program's success.

Heath Mash, EPA Office of Research and Development
Heath is a chemist with EPA's Office of Research and Development, Center for Environmental Solutions and Emergency Response, where he specializes in analytical chemistry with regards to drinking water treatment. In addition to cyanobacterial toxins work, his work has included estrogenic and androgenic compounds and disinfection byproduct studies.

Toby Sanan, EPA Office of Research and Development
Toby is a research chemist with EPA's Office of Research and Development, Center for Environmental Solutions and Emergency Response, where he has been working in the area of analytical method development for over ten years. Presently his research is focused on detecting and quantifying contaminants of emerging concern, including PFAS and cyanobacterial toxins, using mass spectrometric techniques including high resolution and non-targeted methods. He is leading the EPA's effort to develop a total oxidizable precursor assay method for helping to fill the mass gap in PFAS measurement and is also involved in work related to the study of harmful cyanobacteria and their associated toxins.