

Tuesday, March 5, 2019
Program Overview

Emerging Contaminants and Our Water Resources

Collaborators: Environmental Professionals Network (EPN), Water Management Association of Ohio (WMAO), Ohio Water Resources Center (OWRC), and TerrAqua (a cross-disciplinary student organization at Ohio State University and affiliate of WMAO)

Location: Nationwide & Ohio Farm Bureau 4-H Center at Ohio State.

Registration and Networking: 7:15am to 8:10am

Breakfast Keynote Address: 8:10am to 9:30am

Extended WMAO Program: 9:30am to 11:45am

Overview:

Experts are steadily finding new or previously unrecognized contaminants in our waterways and drinking water systems, yet their risk to human health and the environment are not yet fully understood. These emerging contaminants come from a variety of sources, including our everyday consumer and pharmaceutical products, such as sunscreens, soap and medicines. Some are naturally occurring, but become more problematic when excessive nutrients are loaded to surface water through human activity. There are potential environmental and health risks associated with many of these contaminants.

Please join this panel of experts—Dr. Andy Lindstrom, Ms. Sarah Lowe and Dr. Wayne Carmichael—who, along with their respective state and national agencies, are seeking to improve our understanding and management of several emerging contaminants affecting the state of Ohio.

These panelists, along with Amy Klei, the Ohio Environmental Protection Agency's Chief of the Division of Drinking and Ground Waters, will address some of the emerging biological, chemical, and particulates pollutants in our state. This EPN Breakfast program will feature an extended educational session, facilitated by the Water Management Association of Ohio, Ohio Water Resources Center, and TerrAqua that will engage these experts to discuss specific contaminants.

Cost:

Full WMAO program = \$40, includes EPN Breakfast

EPN Breakfast only = \$10

All programs free for students

Agenda:

7:15am Doors open at Ohio State 4-H Center; coffee served

7:40am Breakfast buffet served

8:10am Jeff Sharp, PhD. Director, School of Environment and Natural Resources provides welcome remarks

8:15am Craig Smith, WMAO Board President and Ohio EPA Division of Drinking and Groundwater

8:20am Ohio EPA Chief Amy Klei provides an overview of emerging contaminants in Ohio

8:45am Comments and moderated Q&A with panelists Carmichael, Lindstrom, and Lowe

9:05am Audience Q&A with full panel

9:25am EPN program concluding comments by Dr. Sharp

9:30am Break for full WMAO program participants

9:45am Biological Contaminants (Wayne Carmichael)

10:15am Chemical Contaminants (Andrew B. Lindstrom)

10:45am Break

10:50 Particulate Contaminants (Sarah Lowe)

11:20 Q&A with full panel moderated by Craig Smith

11:45 Full program concludes

[Registration Online](#)

Presenters:

- Amy Klei, Chief, Division of Drinking and Ground Waters, Ohio Environmental Protection Agency

Amy Klei is Chief of the Ohio Environmental Protection Agency's Division of Drinking and Ground Waters. She has served as Chief since March 2018 and is responsible for oversight of Division programs characterizing and protecting Ohio's ground water resources and ensuring Ohio's citizens have access to adequate supplies of safe drinking water. Amy has been with Ohio EPA since 1998, having served as Manager of the Harmful Algal Bloom Section, Lake Erie Coordinator in the Division of Surface Water, Environmental Specialist in the Source Water Assessment and Protection Program, the Division of Drinking and Ground Waters' Safe Drinking

Water Act – Clean Water Act Coordinator, and a Geologist with the Underground Injection Control Program. Amy has been with Ohio EPA since 1998 and has a B.S in Geology from Denison University and a Masters of Environmental Management in Water Resources from Duke University. Amy currently lives in Dublin, Ohio with her husband and two teenage daughters.

- Wayne. W. Carmichael, Ph.D. Professor Emeritus, Wright State University

As a Professor of Aquatic Biology/Toxicology from the Department of Biological Sciences at Wright State University, Professor Emeritus Dr. Wayne Carmichael has investigated and carried out primary research on toxin producing cyanobacteria for over 40 years. He has over 500 scientific peer reviewed papers, presentations and invited seminars on the topic. He has worked and advised on cyanobacteria and their toxins in over 25 countries and almost every state and province in North America. Projects as a Professor Emeritus focus on management and mitigation of harmful cyanobacteria in municipal and recreational water supplies. This includes serving on national and international harmful algal bloom (HAB) committees, organization of and participation in workshops and symposia plus advising on HAB issues for local, state, national and international agencies and groups. He currently he supports Aquatic Services for the Oregon Lakes Association Board of Directors and on the Clatsop County Soil and Water Conservation District Board of Directors. Dr. Carmichael earned his Ph.D. and M.Sc. degrees in Botany at the University of Alberta (Canada), and his B.S. in Botany at Oregon State University.

- Andrew B. Lindstrom, Ph.D., Research Physical Scientist, U.S. Environmental Protection Agency's National Exposure Research Laboratory.

Dr. Andrew Lindstrom has served as a Research Physical Scientist with United States Environmental Protection Agency since 1990. He held a Science Fellow position with the US Department of State through the American Embassy in Tokyo, Japan. Prior to joining the US EPA, Dr. Lindstrom was a Senior Scientist with NSI Technology Services Corporation. Dr. Lindstrom's current research focuses on analytical method development and the application of advanced mass spectrometry techniques for identifying and quantifying emerging contaminants of concern. Dr. Lindstrom received his Ph.D. in Environmental Health Sciences from The University of North Carolina at Chapel Hill, and his M.S. in Biological Sciences, Wright State University in Dayton, Ohio. He also holds a B.S. in Biology from Winona State University (Minnesota).

- Sarah Lowe, Great Lakes Regional Coordinator for the National Oceanic and Atmospheric Administration's Marine Debris Program.

Sarah Lowe is the Great Lakes Regional Coordinator for the NOAA Marine Debris Program (MDP) based in Oak Harbor, Ohio. Ms. Lowe has served as the Great Lakes Regional Coordinator

for nine years. She joined NOAA in 2009 through the Knauss Sea Grant Fellowship. Ms. Lowe worked with the NOAA Marine Debris Program to develop shoreline-monitoring protocols for marine debris. She also shared time with the NOAA Restoration Center, where she assisted in the management of Great Lakes Restoration Initiative projects, provided technical assistance on restoration techniques to regional partners, participated in Natural Resource Damage Assessment cases, and worked with Great Lakes Areas of Concern on delisting. Her current duties include working with partners around the region on marine debris projects, developing, implementing, and monitoring prevention strategies and action plans, as well as education and outreach to communities and partners. Ms. Lowe received both her M.S. and B.S. in Biology from Bowling Green State University where she studied the accumulation of heavy metals in Lake Erie sediments and mayflies.