Agenda

A PFAS Primer *B. Yates*
- PFAS nomenclature and chemistry
- Sources of PFAS in the environment
- Fate and transport of PFAS in the environment
- Health effects of PFAS
- Current PFAS regulations in the United States
- Current and emerging technologies for PFAS treatment

Treating PFAS in Groundwater, Surface Water and Water Supplies: Research/Case Study *P. R. Jaffé*
- Defluorination of PFOA and PFOS by the Feammox
  - Bacterium Acidimicrobium sp. Strain A6
  - Perfluorinated compounds have been dubbed "forever chemicals"
- Biodegradable
- Novel findings
  - Perfluorinated compounds such as PFOA and PFOS can be defluorinated under anaerobic conditions by a novel Acidimicrobium sp. Strain A6.

PFAS in Water: Groundwater and Surface Water *R. Gwinn*
- Identifying and managing PFAS in groundwater
- Drinking water standards

Currently Applied Water Treatment Alternatives: Limitations and Opportunities *R. Gwinn*
- GAC, IX and RO – Where does that leave PFAS?
- At the edge of application: oxidation, plasma, sonolysis
- The commercial leading edge: adsorption, chemical oxidation, membrane filtration sonochemical treatment

The Effect of State PFAS Regulations on Industry and How Industry is Responding *J. Cuthbertson*
- Regulatory drivers
- Insights on how these regulations may affect industrial facilities, and how industry is responding

Important Aspects of Risk Analysis for Emerging Contaminants *F. Ramacciotti*
- Risk assessment, why emerging contaminants are less of an issue
- Risk management, where emerging contaminants become more challenging
- Risk communication/stakeholder involvement, how modes of information exchange challenges communication for environmental issues

PFAS and Other Persistent Environmental Contaminants
Live, Interactive Webinar - Monday, November 23, 2020

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Learning Objectives

You'll be able to:

Identify sources of per- and polyfluoroalkyl substances (PFAS) in the environment.

Learn about the fate and transport of PFAS in the environment.

Review the health effects of environmental exposure to PFAS.

Review current federal regulation of PFAS, and explore the effect of state PFAS regulations on industry.

Discuss PFAS in groundwater, and explore treatment alternatives.

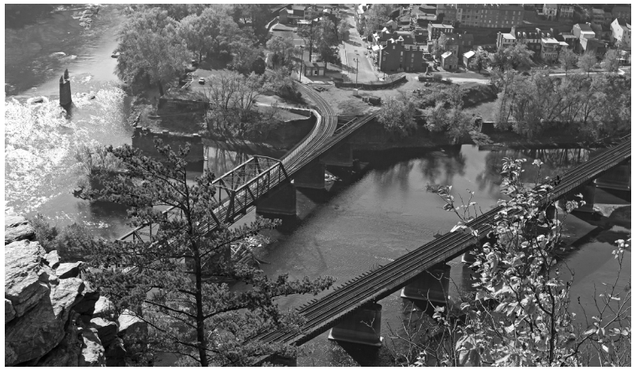
Assess and manage risk from emerging environmental contaminants.

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PFAS and Other Persistent Environmental Contaminants

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Explore sources of PFAS in the environment.

Examine an actual PFAS in groundwater case study

Discuss current water treatment applications

Learn about the effects of PFAS regulations on industry

Analyze risk assessment for emerging contaminants

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Faculty

Brian Yates *PE, Burgess & Niple, Ohio Office*

Drawing on his experience as an environmental engineer with a background in per- and polyfluoroalkyl (PFAS) treatment and remediation research, Mr. Yates designs innovative solutions to address existing and anticipated PFAS-related regulations. In addition to leading industrial and domestic wastewater treatment and evaluation projects, he actively advocates for clients on compliance issues. Through numerous journal publications and presentations at seminars and conferences across the US, he has helped shape discussions around PFAS-related issues including fate and transport, health implications, and treatment technologies.

Professor Peter Jaffé *Princeton University, Princeton, NJ*

Professor Jaffé's research interests relate to the physical, chemical, and biological processes that govern the transport and transformation of pollutants in the environment and their application toward the remediation of contaminated systems. Areas of current emphasis include laboratory and field experiments as well as mathematical simulations of biogeochemical processes in porous media, such as: (1) understanding the mechanism as well as environmental distribution of the Feammox process (ammonium oxidation under iron reducing conditions); (2) Applications of the Feammox process for ammonium removal in engineered systems and for the cometabolical degradation of recalcitrant organics such as PFAS; (2) biogeochemically mediated dynamics of trace metals, metalloids, and radioisotopes in sediments, wetland soils, and groundwater; (4) nitrogen processing in urban settings coupled to urban hydrology; and (5) design of novel biological waste treatment processes.

Rosa Gwinn *Americas PFAS Lead at AECOM, Washington D.C. Metro Area*

Dr. Gwinn has provided technical and project management expertise to private and government clients for over 25 years. Her focus has primarily been on the characterization and remediation of environmental contamination including chlorinated solvents, explosives, and metals. Dr. Gwinn's specialty focus areas range from bioremediation to applying statistics to environmental questions relating to risk, distribution, and trends. She developed an incremental sampling methodology to characterize the level of munitions constituents in stream sediments. Dr. Gwinn has successfully managed federal and commercial projects in values ranging from $10K to $20M, and is a certified project manager.

John Cuthbertson *AECOM's North America Industrial PFAS Lead, Grand Rapids, Michigan*

Mr. Cuthbertson is an associate vice president with AECOM and has over 29 years of environmental consulting experience supporting primarily industrial clients. His primary focus during the past six years has been PFAS, and during this time has managed and supported over 80 projects across North America involving various PFAS constituents. He is experienced in analytical testing and methodologies, PFAS fate and transport, assessment and investigation, and treatment technologies. Mr. Cuthbertson has worked seamlessly with clients' management and legal executives to develop internal PFAS programs/policies and strategies, has led and directed clients' national PFAS programs, and has assisted with addressing risk management issues.

Francis C. Ramacciotti *GHD's US Risk Assessment Lead, North Wales, Pennsylvania*

Mr. Ramacciotti is an associate, project director, and senior risk assessor of GHD with over 20 years of experience in human health risk assessment. He approaches and uses risk assessment/evaluation as a tool to inform and guide site characterization, remediation, communication, and completion of remedial activities (as appropriate) to ensure protection of human health and the environment. Mr. Ramacciott uses risk-based principles under RCRA, CERCLA, and state cleanup programs to ensure collecting data of sufficient quality and quantity to perform a risk assessment that can be used to balance the risks, benefits, and trade-offs associated with competing remedial alternatives, while also being able to communicate the decisions. He has contributed to Interstate Technology and Regulatory Council's (ITRC's) technical guidance documents on Risk Communication Toolkit, RISK-3 (section lead), TPHRisk-1 (section lead and trainer), 1,4-dioxane (section lead), and the Soil Background and Risk teams. Mr. Ramacciotti is also an adjunct professor, teaching Principles of Risk Assessment (BS-472) at USciences in Philadelphia, Pennsylvania.

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- Wed., Nov. 11, 2020 | 7:30 am - 3:30 pm CDT

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- Mon., Nov. 16, 2020 | 8:30 am - 4:30 pm CST

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