

Draft Research/Science Topics for States' Visit to EPA Cincinnati

January 3, 2018

- Request state representatives choose top 4-5 topics that are of most use and relevance to their state's science priorities and needs. We will use your input to develop a final meeting agenda.
- Identify a state agency representative (initial suggestions are in parentheses; volunteers welcome) to tee up issue for the science topic sessions, and if possible, give examples from their state's experiences -- to be followed by a short ORD research presentation and discussion.

PFAS (Michigan?)

Drinking Water Research (Indiana?)

- Lead Service Line Corrosion and Pipe Scale Analysis
- Patent and CRADA for Lead Tap Sampling Device
- Lead in Drinking Water—Sampling and Modeling (pipe loop and home plumbing system)

Harmful Algal Blooms (Ohio?)

- Treatment technologies
- Risk assessment

Recreational Waters Research (Wisconsin?)

- Pathogens
- Microbial source tracking and analytical methods issues
- UV disinfection technology
- Beach forecasting

Land Remediation and Contaminated Sites (Minnesota?)

- Superfund Technical Support Centers (engineering and groundwater)
- Great Lakes Area of Concern – Technical support for contaminated waterways
- Remediation technologies/research for contaminated sites and groundwater

Materials and Waste Management Research (landfill performance data, landfill fires)

- Land reuse and redevelopment in Duluth

Responding to Environmental Emergencies (terrorism, industrial accidents, natural disasters)

- Responding to water system contamination incidents
 - o Water system modeling tools to improve security and resilience
 - o Full scale cleanup testing at the EPA's Water Security Test Bed
- Responding to wide area contamination
 - o Decontamination approaches to return areas to service quickly
 - o Managing wastes – tools to manage debris, hazardous waste, wastewater
- Resources to characterize contaminated water systems and wide areas – innovative sampling approaches and analysis tools

Air Sensor Technology/Citizen Science

Input received in response to initial call for agenda topics:

Michigan DEQ

Kirby Shane, Laboratory Director

1. Are there any funding resources that EPA can provide or point state laboratories to for 1) new or emerging contaminants such as PFAS, or 2) laboratories to move to LIMS capabilities that can interface with EPA's Compliance Monitoring Data Portal and SDWIS?

Commented [GA1]: We don't have funding resources for this, and the question on the LIMS interface with the portal may be an OECA or OW question?

Wisconsin DNR

Bill Phelps, Hydrogeologist, Bureau of Drinking Water & Groundwater

1. Microbial Source Tracking. In Wisconsin we've been dealing quite a bit with animal waste management issues and associated groundwater contamination. We've developed some MST tools but would be very interested in what the lab is doing related to this.
2. New bacteriologic/microbial molecular analytical techniques. We've funded some research that's used polymerase chain reaction (PCR) methods as a diagnostic tool for bacterial and viral genomic material found in water supply wells. This research has raised a number of questions here related to interpretation of molecular method results. Any information you might be able to provide on topics such as new techniques for environmental microb testing, limit of detection issues associated with both analysis and sample collection, and/or molecular microbial viability type testing methods would likely be very useful to us.
3. Issues associated with lab analytical limits (LODs, LOQs, MDLs, etc.). We're currently in the process of potentially revising some of our lab analytical limit definitions and have been discussing how this might affect our current compliance determination procedures. Anything you might be able to present on analytical limitation issues and how limits might affect lab results interpretation/compliance determinations would be useful.
4. New and emerging contaminants and analytical techniques. We periodically establish state groundwater quality protection standards for new substances found, or likely to be present, in state groundwater. Information on how the lab is involved with selection and analysis of new potential contaminants (like URCMR substances) would be of interest.

Commented [GA2]: Is this emerging contaminant question currently re: PFAS? This also may be a OW question.

Commented [SC3]: We can provide information on how ORD interacts with OW on the UCMR.