



Open Discussion Breakout Session Notes

ECOS 2020 STEP Meeting: *Partnering on PFAS*

Breakout Room #1 (Moderated by Catherine McCabe, Commissioner, New Jersey Department of Environmental Protection)

Approach

Should regulators evaluate PFAS as a class instead of chemical-by-chemical? When drinking water is treated when a PFAS is found above a level of concern, will other chemicals of concern also be removed?

- The NJDEP Science Advisory Board advised NJ DEP that there is no defensible scientific basis for setting toxicity-based standards for the entire class, and that regulating some of them as a group, as some other states have done, is a science-policy decision.

How do we avoid regrettable substitutions?

- NJ had a company that used and released replacement PFAS that have been found in the environment and are believed to be toxic and bioaccumulative after they stopped using PFNA, which was phased out along with PFOA.
- Has TSCA reform given EPA enough power to be able to address new chemicals?
 - PFAS has pushed the Association of Metropolitan Water Authorities (AMWA) to look closely at TSCA. Its members are trying to get more educated on TSCA so they can get ahead of new chemicals entering drinking water. AMWA has been pushing EPA on SNURs and risk assessments, which do not consider drinking water if there are MCLs already in place.
 - There are still persistent chemicals being approved under the new TSCA.
 - Regulators cannot ignore the amount of product that is imported in products to the U.S. How quickly can EPA work on additional SNURs that will help?
 - EPA's OCSPP needs to work more closely with the OGWDW to figure out how drinking water fits better within TSCA. EPA collects a lot of information on issues and it puts a lot of reliance on the chemical companies to be "good actors"
 - How can TSCA be used as a tool to address more PFAS or similarly persistent chemicals?

- Is there a similar issue in the past where there was a large class of compounds with very low detection levels that looked bleak but that regulators have been able to make good progress on?
 - Dry cleaning solvents (perchloroethylene) were a similar issue in the past, but were measured in ppb, not ppt.
 - Flame retardants were similar and regulators were successful in stopping most use of those-- we saw declines in concentrations of fish and shellfish within 10 years. Most flame retardants were dealt with through consumer product laws. There have been concerns about regrettable substitutions but everyone is watching carefully for those.

Treatment

Experiences with treatment?

- GAC is common. Biological activated carbon and reverse osmosis address a lot more chemicals, but is more expensive.
 - GAC is probably very affordable if you do a cost-benefit analysis for PFAS beyond just the common few.
- In Orange County, CA, there is a large pilot study going on as many wells are above notification levels. The OC Water District is spearheading an effort to do a side-by-side comparison of GAC and ion exchange resins. They are testing for 7 to 12 PFAS compounds. Carbon, especially different kinds of GAC, are more successful than most people expected. The District is getting numbers down to below 2 ppt.
- NJ has found that when drinking water is treated with GAC, PFAS are removed to below the detection level, which is much lower than the NJ PFAS MCLs (13 to 14 ppt). NJ looked at cost and thought GAC was a good investment.
 - When GAC is used to address an exceedance of an MCL for a specific PFAS, other PFAS that are not regulated and other organic chemicals (identified and unidentified) are also removed to at least some extent. This is an added benefit of regulating PFAS that was included in the NJ Drinking Water Quality Institute recommendations for PFAS MCLs.
- There is a growing realization that once PFAS compounds are removed from drinking water, we need a way to treat or destroy the concentrated waste streams. SERDP and ESTCP are looking at this.
- There is a Water and Environmental Technology Center at Temple University that leads PFAS work on treatment technologies that may be of interest to participants.

Breakout Room #2 (Moderated by Ben Grumbles, ECOS Secretary-Treasurer and Secretary, Maryland Department of the Environment)

Overarching Issues

Take-away items from the meeting, including things to work on or priorities that need focus within your organization or broader nationally:

- Important to focus on understanding the risk and taking actions to begin to manage that risk, as well as improving skills to communicate that risk
 - Never undervalue communication, as it can create problems where there are none
 - Once PFAS contamination at a site is public knowledge, it is critical to implement communication plans.
- Some state efforts depend on state priorities (i.e., water, so legislative regulatory executive action focused on that media)-- important to continue to collaborate with other state agencies including health departments and local utilities

Standards

A couple of regulated party participants noted that it can be difficult for industry to decide which standards to meet when states use different studies or implement standards differently. What advice do participants have and how are states deciding which studies to use?

- ERIS and ITRC for a few years have provided information at conferences and formed groups to discuss PFAS, specially what type of information and standards states use. This led to strong state support for the establishment of a MCL and other federal actions that could provide clarity without limiting states who want to establish a different kind of standard.
- States are focused on the PFAS that are starting to pop up in analyzed samples. They might not be found in large concentrations but at some point in the near future, communities are going to ask about PFAS beyond PFOA and PFOS and what states are doing about them.
- While PFOA and PFOS are used for de facto standards, the standards are not calculated to protect the public from fish consumption. States are struggling to find appropriate bioaccumulation factors, but that is important moving forward on this issue.
- It is important for states to consult with universities and others regarding the scientific underpinnings of standards and what state regulators need to know. Until states have further information, they are going to look to some federal guidelines as de facto.

Analytical Methods/Testing and Enforcement

What analytical methods are you using and what is needed in this area?

- EPA has 20-some methods approved under the CWA for PFAS detection. Two validated standard methods for drinking water cover 29 different PFAS compounds. Method 533 is the newer one intended for shorter-chain PFAS. EPA also has a method that has been through multi-lab validation for non-potable water-- it is on the website but is not yet finalized. EPA has a CWA non-potable water method using isotope pollution and a direct injection approach. The last method is air method OTM 45-- it is still under development but will be a standard method.
- There is a lack of certified methods for media other than drinking water. SC noted that the first question it gets is how do they know or how can they trust the PFAS testing results without certified methods and standards. How do they answer questions like

that? The state is waiting for EPA to come up with a MCL or list it as a hazardous substance or tell them what to do.

- We need to be able to rely on a certain number of labs that are consistent and have better service. One participant noted that early testing of soil at a contaminated and regulated site included splitting samples and sending them to a bunch of major labs around the country, but the results were highly differential and inconsistent.

What are some challenges you have faced with regards to testing and subsequent treatment/enforcement?

- One participant discussed an investigation at a fabric mill that had been closed for years in which barrels and sheets for PFOA were found. Local farmers had applied sludge from the treatment plant over 10,000 acres, so GA had to sample the groundwater, surface water, soil, etc. They found a lot of PFAS, but cannot do anything regulatory or enforcement-wise because they are not certified methods yet, and they cannot go after responsible parties until EPA moves forward.
- It's in everything. ME is looking at PFAS in milk and has data they can share.
- One participant noted a problem with state regulators not wanting to go after certain responsible parties due to a number of factors, and enforcement can be complicated in regards to the Superfund Program, etc.
- You should trust results but always verify them. AK noted that it has historic DOD contamination and there is treatment for some other foams that DOD claimed were non-PFAS, and thus were dumped at a site. AK got a whistleblower call and wanted to test it to be sure, and sure enough it was hot. DOD was shocked by the results.
 - AK also learned that even after cleaning things three times, it's really sticky, so it could be from historic use if you still find it.

Treatment, Including Disposal/Incineration

In the absence of federal action or the identification of a responsible party, would states consider paying for a PFAS treatment technology? Under what conditions? In addition to thermal treatment, are states considering other major treatment options at this time (destructive or otherwise)?

What are participants' thoughts about disposal options, including incineration, and the need for studies on achieving PFAS destruction?

- One state noted that incineration needs upwards of 1000 degrees Celsius and five seconds of residence time, but it has not seen studies to vet this and not many incinerators can meet those standards
- EPA was conducting a thermal treatment pilot project in which AFFF-contaminated soil from AK was put on a train, then barges, and then in a monofill in OR. OR was not excited and AK did not like the carbon footprint or the cost and wanted a local solution for the problem. So AK partnered with EPA's Division of Air and an entity that had been thermally treating other hydrocarbon contaminated soils with thermal treatment systems at 1000 degrees Celsius. This resulted in 99.99 percent destruction (goal is to get to 6 9's). The treatment center is prohibited by law from getting any additional soil for this pilot project, but AK and EPA are trying to eliminate that prohibition for further testing.

EPA ORD went to AK to test with their instruments and got positive results, getting to the ten thousandths decimal point of destruction.

- NH noted that there is a similar facility in New England and they are interested in the results from AK. There is a desire to test incinerators around the country and then sometimes, when a system is ready to go, something gets in the way of being able to do the test.
- AK will share more information on the related study.

Are hot spots and problem areas near more manufacturing and groundwater sites or federal installations and other facilities with AFFF?

Breakout Room #3 (Moderated by Pat McDonnell, ECOS Vice President and Secretary, Pennsylvania Department of Environmental Protection)

Standards

What will we see in regards to water utilities and MCLs?

- Water utilities need to disclose how often they are treating and testing for PFAS. MCLs would place an affirmative obligation on utilities to test and report what they are finding at each of the water sources.
- Important for the public to have access to information about water utility testing. With MCLs, water systems would have an obligation to notify customers about exceedances and then instruct them as to what to do (i.e., boil water or discontinue use of it). The ability for individual consumers to receive reports about exceedances is an advantage of MCLs.

When it comes to setting MCLs and looking at non-drinking water sources, is there any concern that data quality is not where it should be for rule-setting?

- PA has been sampling and its drinking water methodology is relatively well-established, but there are a number of variations as to how this will be done for non-drinking water media.
- We need some federal standards around effluent, biosolids, soils, etc. if we are going to make regulatory decisions based on sampling and testing data.

Sampling

Are there certain categories that states are most interested in in understanding source apportionment?

- PA has been starting at drinking water, but assumes it will be location-dependent in terms of the vectors on which people concentrate.
- NE is concentrating on sources, but there are lots of moving parts and things to figure out.
- NC has been looking at air emission sources. There was an underground storage system in an aquifer a few years ago found to be contaminated with a specific PFAS. NC suspended the NPDES permit, which has the initial effect of reducing Gen X, but there is a continual feed of compounds entering the Cape Fear River. NC has seen AFFF in

locations coming from airports and flowing down the river. The question is what kinds of controls can we actually apply in these situations?

Prior to the establishment of CERCLA, an inventory was compiled of contamination sites across the country. Is one under development?

- EPA is working on it, and is including DOD.
- See the [EWG contamination map](#).

Food Package Labeling

Do any states require labeling of products containing PFAS that are sold or manufactured within a given state, helping consumers make more informed decisions?

- WA has food packaging legislation that goes into effect in 2021.
- AZ has food packaging legislation.
- ME has a [ban](#) on PFAS in food packaging
- The American Public Health Association has a [policy statement](#) on labeling requirements

Federal Authorities

What kind of federal authorities can we use to keep chemicals out of the environment, and are states using TSCA chemical reviews, new use rules, reporting, etc. as a way to prevent PFAS contamination in the future?

- TSCA is not a delegated program for PA, IN, NC
 - One state noted that this can cause some frustrating confidentiality issues for the PFAS program because it is not delegated to the state.
- ASDWA is holding webinars in August on SNURs.

Have any states started to require disclosure of PFAS discharges through the NPDES permitting program or through other means?

- WI is in the middle of a 30-month rulemaking process on discharge monitoring
- AZ does not have the statutory authority to add PFAS to NPDES permit requirements

For information on state authorities/legislation, see the [Safer States database](#).

AFFF and PFAS Destruction

What have participants heard about how to destroy things not designed to be destroyed?

- PA has an incineration issue and will be generating a lot of filters, etc.
- CT shares that concern and is in the process of planning an AFFF takeback program