

## Chesapeake Bay Program's

### Toxic Contaminants Workgroup Meeting Minutes

Wednesday, December 13<sup>th</sup>, 2023

1:00 - 3:00 PM

[December Meeting Materials](#)



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## Meeting Minutes

### 1. Introduction and Announcements:

- i. Announcement of TCW member Fred Pinkney, USFWS, retirement. Congratulations on retirement Fred!
- ii. MD Pesticide Education Network Annual [Conference](#)

### 2. Advanced Restoration Plan Presentation – Jillian Adair, EPA R3

- i. **Summary:** Jillian provided an overview of section 303(d) of the Clean Water Act, of which Advanced Restoration Plans (ARPs) are a part. Jillian went through the differences between an ARP and TMDL, the reasons a jurisdiction might implement an ARP, the elements of an ARP, current ARPs in the US, and ended with a case study of a Pilot ARP on the C&D Canal in Delaware.
- ii. [Presentation](#)
- iii. **Discussion:**

*Mark Richards:* The question I have relative to toxics is that sometimes it can take forever for those to trend downward enough such that you're meeting water quality standards to consume fish and so forth. I'm wondering what the ultimate timeline is on that, are we talking ten years, twenty, or is it open ended i.e., if there's a downward trend that's sufficient?

*Jillian Adair:* From a national ARP development perspective there is no strict timeline. I.e., "if your ARP is intended to last past thirty years its unacceptable". There aren't any limits like that. The purpose of ARPs is that they're supposed to be more immediately beneficial than TMDLs and we need to consider that. For toxics, as you said, it's a difficult scenario because it can take decades and decades. In this particular instance, in the C&D canal, at least for one of the pollutants we estimated water quality standards could be met in less than ten years, so not too bad. If another watershed points us to one hundred years, we may want to rethink that but it's really up to the state when they develop their ARP.

*John Cargill IV:* Jillian's right, some of the contaminants we did model out to be meeting standards in a relatively short period of time, but PCBs take a little bit longer and are still the risk driver in this waterbody. Something that did help us out with that is that between our 2014 and 2019 monitoring periods I saw a 50% reduction in PCB concentration in the channel catfish in the C&D canal. So clearly some actions had been taken that were having a pretty significant beneficial

effect on the system. Having that jump in the downward trend does help push us into the ARP side of things where we feel like we've got the majority of things at least identified and several of the sources under control. That helped us in saying this is the right way to go, because it wasn't a slow trend, it was a significant drop which told us we were on the right track.

*Ashley Geiger:* I'll interject that it does provide transparency to the public. It's pulling together a lot of information, trend analysis data, information about contaminated sites and where they are in the process of cleaning up, etc. There's a lot more information that's taking into account what's going on which isn't usually expressed in a TMDL document when you're developing a wasteload allocation. There's nothing wrong with natural attenuation as a means for recovery, but it's telling the story that supports why that would be an appropriate approach.

*Jillian Adair:* Our team saw the benefits of an ARP for toxics because to address toxics, a lot of programs exist already in the watershed, i.e. RCRA, air, etc. ARP can combine all that information into one document and be transparent to the public and assess the plan at a watershed level as opposed to one particular source.

*Leonard Schugam:* The first bullet point Jillian put up for the transboundary loadings; I already know based on the PCB TMDL that was developed in MD that there's a net loading to DE from MD. What does that mean in regard to the analysis you've done and the expectation that you'll attain water quality within some timeframe? Is there an expectation that those loadings need to be reduced to entail that you'll meet water quality goals?

*John Cargill IV:* We just had this conversation last week as a team, so it's interesting. I was asking the same questions too, and Ashley, you laid out the expectation the best, do you want to share your thoughts?

*Ashley Geiger:* I think it's more about establishing a working relationship and communication strategy to share across boundaries what one state is doing and how one state is monitoring and seeing the improvements but doesn't necessarily have the explanation, without having the communication to go along with it. It's also a way of sharing data and talking about the post monitoring and sharing of ideas about how to coordinate post monitoring with a neighboring state. We find that the ARP would be an effective tool to establish a communications strategy moving forward.

*Greg Allen:* Yeah, that's exactly what our concept of a PCB consortium was about. In the absence of a watershed wide TMDL and allocations of a pollutant that are shared among a partnership of jurisdictions, which we don't have in place. We don't have that communication network that really ensures that cross jurisdiction coordination is happening. We thought with the consortium idea we could get a lot of that happening without having to move to a watershed wide TMDL. To the extent that this workgroup or the Bay Program Partnership can be a help in that regard, we really want to do that because we have a lot of transboundaries throughout the watershed in our PCB TMDLs. So, keep in mind that what you're doing is aligned with the vision of this workgroup, strongly.

*John Cargill IV:* Len, from a mechanics standpoint, my question was partially along the lines of, in order to get this approved, what do we have to do? What I'm taking away from the discussions we had the other day is that we would have to prove that you and I talked, and we shared the information. We'll see where it goes after that, but I think EPA's point to DNREC was that you need to at least show that you've reached out and made the connection with the right

people. I think that's all fine and good, we should be talking, and we do, for example at forums like this. My comment was I'm sure Len would be happy to talk to me, that's not a problem. There are mechanics and there's the reality of what we're trying to do scientifically. From a mechanics standpoint, DE wants an approvable ARP to say that yes, we have taken some sort of action to make a plan to improve these waterways. Our whole conjecture all along has been that the TMDL isn't necessarily the way to do it, it's implementing things and getting sources taken care of. This [the ARP] gets us along that line and maybe we'll learn something through this first one or second one that works or doesn't work. From a documentation standpoint we would have to show EPA that we did make the effort to reach out to our neighbor and we would take it from there afterwards.

*Ashley Geiger:* [Referencing 'ARP Elements' slide from presentation] We talk about parties committed and/or additional parties needed. To us the ARP is more about who is responsible for playing a role, and what their role is in what they're doing. Yes, MD has already developed a TMDL on their side. They may be implementing that, and again, we're seeing downward trends, 50% is nothing to sneeze at. That tells a story of the activities that have occurred having an impact, and what that rate of impact is, in terms of being able to project future declines. It's also a justification for what actions are needed, and when no action is appropriate, and communicating that. In DE they have had some pilot studies of treating bottom sediments. Using this information and being able to project what are the contributing sources, how much are they contributing, there might be certain watersheds that lend themselves well to having that type of in stream sediment remediation work done when you don't have all the inputs being put in. If you've reduced the inputs, it might be time to clean up the sediments, but cleaning up the sediments while you still have input wouldn't be effective. Having a better understanding of where you are in the situation might help plan out when a tool could be appropriate.

*Leonard Schugam:* Going back to the boundary condition, you can still move forward with the ARP and you can assign a load reduction to MD and say we need a 50% reduction here?

*Ashley Geiger:* No reductions, we're not assigning wasteload allocations.

*Leonard Schugam:* I understand that, but the analysis still needs to demonstrate that you're going to meet water quality goals so there's still the identification of sources. It's not an actual allocation in that sense but you still need to demonstrate that you will attain water quality goals with the planned implementation efforts. It does come back to a number to some degree, it's just not a TMDL.

*Ashley Geiger:* The action of MD implementing its TMDL that's been developed for many years now, evidently is having a positive reduction because the trends are going down. You've already done and are carrying out those actions at the state level, so we're not asking MD to do more than share what's been done and what you're planning to do to support DE. It's about that communication and we're documenting what DE is doing so we want open communications available.

*Jillian Adair:* That analysis, that these approaches that are being done and will be done are expected to achieve water quality standards does not even correspond to the sophisticated modeling and analysis that are done as part TMDLs. The analysis within the ARP could be a simple trend analysis or an estimate of load reductions. We aren't even using a

water quality model within the ARP. We try not to get complicated enough to produce a number, a load, or a percent reduction that's needed within ARPs, it's more general.

*Leonard Schugam:* That's understood, there'll still be some quantitative aspect of the ARP but it's not a water quality model in that sense. That's the thing, obviously I'm all for TMDL alternatives. I've been doing TMDLs for so many years and there's a lot of places where a TMDL is ineffective. I feel one of those places is something like the Elk River, C&D canal, where the majority of your sources are nonpoint in addition to legacy contaminated sediments and sites still transporting PCBs into the waterbody. One other question I had about ARPs is that you can't really impose any kind of regulatory requirements on NPDES, there's nothing you could do to a Phase 1 MS4 or a wastewater discharger through the ARP, correct?

*Ashley Geiger:* You can identify that as an action, right? So, the state can say that we are going to require x, y, and z of NPDES permits that will reduce PCBs. What you're doing is saying we can issue permits with these types of requirements that will have reductions. You're not necessarily saying hey, we're developing a wasteload allocation, now NPDES permits have to be written to that wasteload allocation. You can still incorporate regulatory tools or state actions such as cleaning up a sight through RCRA or Superfund programs or any number of things. You can say these are state programs that are doing something to address point and nonpoint sources. Nothing about putting together a TMDL with a wasteload allocation is going to change that. But it's more loose in terms of the states committing to do NPDES permitting rather than the NPDES permits will be written to be consistent with the wasteload allocations and assumptions of a TMDL.

*John Cargill IV:* We do have that benefit though in some cases, in our Delaware River drainages. We have Chesapeake drainages, and we have Delaware River drainages and a lot of the things we've done related to stormwater and NPDES permitting things have been as a result of the Delaware River TMDL and some of those things. So, there is a tie to a TMDL in that regard, that have required over time some of these trackback studies and additional language in NPDES permits related to PCBs specifically. It's now stretching out into the Phase II MS4s. Those trackback studies and pollution minimization plans that are required by the PCB TMDL through DRBC, things on our Delaware side, do help us to have some of this information, gather data on the metric, or say that we do have things in permit that will help reduce loads over time. We don't have all that on the Chesapeake side so one of our actions through the ARP would be to have the discussions with our stormwater group within DNREC to apply PCB monitoring requirements to Chesapeake drainage in a similar way. Those kinds of things would be our action, i.e., to talk to that group and move things forward a little bit.

*Leonard Schugam:* In MD that's the only way we've been able to implement any kind of PCB reductions has been through the TMDL. There hasn't been any other vehicle, be it a Phase 1 MS4 trackback story or a wasteload allocation delay to a WWTP to require them to monitor and address sources. The ARP, does it have the regulatory authority to require those kinds of modifications to permits? It hasn't been done yet, correct?

*John Cargill IV:* No, I don't know that it has a regulatory authority to do it, but it points out the impairment, the causes of the impairment, and it justifies an action from somebody who does have teeth. It's not just the nonpoint sources, it's

point sources and waste sites being a big one for PCBs specifically. I'm lucky I worked in that program and know the ins and outs, and we documented many things over the last decade to help us be here. Estimating loads from waste sites with PCBs, showing the reductions from cleanup of those sites, and putting a metric to all of that has been helpful. But it's just one other avenue where we can say we don't have the authority under the ARP or my CWA program to compel cleanup at a site, but I have a good enough relationship through the WATAR program with our waste programs. We're kind of tied together in the sense that they can use the information that we collect to compel clean up through the RCRA and CERCLA clean up programs because of a release. We're finding a lot of success with that and trying to extend it to don't just clean up the PCBs to the TSCA level or the human health risk level but also consider the ecological risk. We're trying to make that reach and its being met with mixed emotions from the other side of the table, but we have data to justify it. Those are the kinds of things we're looking to do but you're right, the ARP will not provide the regulatory teeth, but it will provide the rationale for the regulatory programs that do to say this is what we're going to do about it. It's a baby step in the right direction, it's not the end all, it's not the solution, but it does help to advance the ball to the implementation side as opposed to the TMDL, come up with the load and spend all your time in court with allocations. Gillian said that the framework is really intended for us to be able to apply to other watersheds. My thought would be with the development of the framework that it's implementable in other jurisdictions. We can utilize DE to help come up with the framework and to check all the boxes of all the things we want to document that's going to make this approvable by EPA. At the end of the day though, if we can take the framework and apply it to one of your watersheds and you can develop an ARP that's approvable, that's a big tool that we can share. I think EPA has taken the same approach, of building the framework so it's not just DE specific, but ARP specific.

*Greg Allen:* Jillian, can you revisit the deliverables that we can look forward to? You mentioned there will be a final ARP and then there's a framework document resulting from this?

*Jillian Adair:* Yes, so the pilot ARP for the C&D canal will be the actual watershed plan for the C&D canal and is expected around the February, March timeframe. The ARP framework, which is an outline of an ARP for toxics that can be used in other watersheds and other states, will go through the sorts of data information that were collected, the steps that we went through when creating our own pilot ARP, essentially laying out the process to develop a different ARP. That framework is expected around July.

*Doug Austin (in chat):* Is the ARP Subject to litigation from environmental groups?

*Ashley Geiger:* No, EPA does not take any final action so there's no action before EPA in which an environmental group could sue EPA based on its action. We accept them for metric tracking of the vision and then the 303(d) program has metrics about states developing ARPs and if they say that they're going to develop an ARP we track the fact that they developed the ARP. In terms of litigation risk, yes, the state is not developing a TMDL for these waterbodies, so any environmental group could sue EPA on the state's failure to develop a TMDL. But I think that when you have an ARP, you're showing what the state is doing, and that what they are doing might be a stronger argument than the fact that they didn't develop a TMDL. Developing a TMDL is still a priority setting issue for states. States have to set their priorities

for TMDL development, you can't do every single TMDL needed in a short amount of time. The state has the inherent authority to prioritize, so where the environmental groups have a better comment is on the 303(d) list and where states are prioritizing these things. We think that ARPs can have a low priority ranking, and there's work being done. Is there litigation risk, sure, but do I think it's big, no. In no way should a state say we refuse to ever do a TMDL for this waterbody for this pollutant in the future. If they said something like that, it would be a huge litigation risk, but that's not what they're doing. They're saying we have all of this data, and we're making data driven decisions based on it, so we have a good story to tell.

**3. Behavior Change GIT Funded Project – Fish Consumption Infographics** – Steve Raabe, OpinionWorks & Amy Handen, EPA CBPO

- i. **Summary:** Steve and Amy presented a summary of project goals and background on behavior change science. Participants then were asked to provide feedback on behavior selection criteria, specific behaviors that fit well with the criteria, and highlights and key activities being conducted related to Fish Consumption Advisory outreach and communication.
- ii. [Infographic](#)
- iii. [Jamboard PDF](#)
- iv. Chesapeake Behavior Change [Website](#)
- v. **Discussion:**  
*Tom Parham (in chat):* I selected prepare fish safely since subsistence fisher folks can only catch what is available, regardless how safe. Since they are going to eat it anyway, safe preparation could be a realistic way to reduce toxic impacts.

**4. Reaching 2025 and Beyond 2025 Updates and Feedback for Toxic Contaminants** – Emily Majcher, USGS and Greg Allen, EPA CBPO

- i. **Summary:** Emily gave an overview of the background and roadmap for the CBPs Reaching/Beyond 2025 Activities. The TCW was asked for input following the presentation including on the management of toxic contaminants within the CBP and policy/research priorities that align with the Beyond 2025 small groups.
- ii. [Presentation](#)
- iii. [Jamboard PDF](#)
- iv. **Discussion:**  
*Tom Parham (in chat):* The "CESR"esque concept of using living resources as endpoints can give toxics group an opening. They understand that DO and water clarity don't control everything and to focus on key factors impacting living resource health. Might give toxics group a louder voice.

Amy Handen, EPA  
Ashley Geiger, EPA  
Bel Martinez da Matta, MDE  
Cindy Driscoll, MD DNR  
Dave Whittall, NOAA  
Doug Austin  
Emily Majcher, USGS  
Fred Pinkney, USFWS  
Greg Allen, EPA

Jillian Adair, EPA  
John Cargill IV, DNREC  
Joseph Bryan, VA DEQ  
Kofi Asante-Duah, DOEE  
Leonard Schugam, MDE  
Lis Green, MDE  
Lisa Ochsenhirt, Aqualaw  
Marel King, CBC  
Mark Dubin, UMD

Mark Richards, VA DEQ  
Nicole Shulterbrandt, DOEE  
Odette Mina, Penn State  
Sheyda Aboii, UCSF/UCB  
Sophia Grossweiler, MDE  
Steve Raabe, OpinionWorks  
Sushanth Gupta, CRC  
Tom Parham, MD DNR  
Upal Ghosh, UMBC

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### **Acronym List**

ARP: Advanced Restoration Plan  
BMP: Best Management Practice  
CAST: [Chesapeake Assessment Scenario Tool](#)  
CBF: Chesapeake Bay Foundation  
CERCLA: Comprehensive Environmental  
Response, Compensation, and Liability Act  
CRC: Chesapeake Research Consortium  
CWA: Clean Water Act  
DNREC: [DE] Department of Natural Resources  
and Environmental Control  
DOEE: [DC] Department of Energy and the  
Environment

DRBC: Delaware River Basin Commission  
EPA: [US] Environmental Protection Agency  
MDE: Maryland Department of the  
Environment  
MS4: Municipal Separate Storm Sewer System  
NPDES: National Pollutant Discharge  
Elimination System  
PCB: Polychlorinated biphenyls  
PFAS: Per- and Polyfluoroalkyl Substances  
PFOS: Perfluorooctanesulfonic Acid  
RCRA: Resource Conservation and Recovery  
Act

TMDL: Total Maximum Daily Load  
TSCA: Toxic Substances Control Act  
UMBC: University of Maryland, Baltimore  
County  
USDA: United States Department of  
Agriculture  
USGS: United States Geological Survey  
WATAR: [DNREC] Watershed Approach to  
Toxics Assessment and Restoration