CBP Goal Implementation Team
Water Quality Goal Implementation Team
Toxic Contaminants Workgroup
Meeting Summary

Date: Thursday, July 20, 2017
Time: 1:00 PM – 3:00 PM
Location: Conference Call, NPS Small Conference Room
Call-in: 866-704-1637 **Code:** 269490
Adobe Connect Link: https://epawebconferencing.acms.com/tcw/
Calendar Page: http://www.chesapeakebay.net/what/event/toxic_contaminants_workgroup_conference_call_july_2017

Agenda Item and Desired Outcome	Time	Background Docs, Notes, and Action Items
1. Welcome, introductions, relevant news and announcements • August 3: Baltimore Urban Waters Partnership Toxic Contaminants workshop. • July 31-Aug 1: Climate adaptation workshop • Last call for comments on Fish Consumption Advisory draft graphic—by COB Friday July 21. • Scott Phillips: Endocrine disruptor study in Chesapeake Bay update: finishing up field work. We will need a good communication plan when results are reported to TCW in next 12-18 months	1:00	Documents: • Climate Adaptation workshop draft agenda • Toxics and TMDLs workshop: Interested participants should contact Bob Shedlock ASAP • Climate adaptation workshop: interested parties should contact Michelle Williams and Greg Allen ASAP • Reminder: Comments on fish consumption advisory graphic due Friday July 21
2. **PCBs in Fish Tissue Briefing**—Trevor Needham, PhD Candidate (UMBC), Dr. Upal Ghosh (UMBC) Trevor briefed the workgroup on research presented at SETAC on the results of historical trends analyses of PCB body burdens in fish in the Chesapeake Bay.	1:10	Documents: • Presentation: Historical PCB Trends, Fish Body Burdens in the Chesapeake Bay.

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3. **EJ Screen Tool Presentation and Demo**—Michael Blair, TetraTech; Reggie Parrish, Diversity Workgroup Coordinator and Darius Stanton, Diversity Workgroup Staffer Discussion of the draft Environmental Justice screening tool developed for the Chesapeake Bay watershed.	2:00	
4. Goal Team Funding needs The workgroup will discuss priorities for goal team funding projects and review the timeline for submitting proposals.	2:30	Documents: • Draft forms for suggested projects so far: ○ Voluntary Phase-out feasibility study ○ Atmospheric deposition of PCBs estimation **Action/Decision**: The TCW will submit both the feasibility study and the atmospheric deposition study proposals to the WQGIT for consideration. Greg Allen, Michelle Williams, Fred Pinkey, and Chris French will follow up offline to finalize the two presented GIT funding proposals before presenting to the WQGIT.
Adjourn	3:00	

Call Participants:

Greg Allen, EPA CBPO

Scott Phillips, USGS
Michelle Williams, CRC
George Onyullo, DOEE
Fred Pinkney, FWS
Mark Richards, VA DEQ
Thomas Barron, PA DEP
Darius Stanton, CRC, Diversity Workgroup staffer
Amy Williams, PA DEP
Reggie Parrish, EPA CBPO, Diversity Workgroup Coordinator
Micka Peck, EPA
Upal Ghosh, UMBC
Trevor Needham, UMBC
Michael Blair, Tetra Tech
Carin Bisland, CBPO Partnership Program Lead

Meeting Minutes:

PCBs in Fish Tissue—Trevor Needham, UMBC

- Greg asked if there was only one composite sample in 2010
  - Needham: Samplers started backing off striped bass after 2010, so sampling is more sporadic after that year.
  - Allen: The advisory was relaxed after 2010 as well, so I'm wondering if these meet the threshold for advisories because that was relaxed.
- Allen: Land uses associated with impervious surfaces are highly associated with body burdens for white perch, so that spatial distribution seems right.
- Needham: We have also been tracking PCB fate in the Back River WWTP. We took effluent PCB levels, and rand the bioaccumulation model.
- Tom Barron: What about the 90 g/day that's unaccounted for? Could you look for likely congeners that could be left over from dechlorination?
  - Needham: There might be dechlorination in the anaerobic digesters. We looked for congener 92, and common dechlorination products. We found the same pattern in Baltimore, Back River, and Susquehanna River WWTP effluents, so it's likely but we'd need more sampling to confirm.
- Needham: Other ongoing sources of PCBs are being discovered all the time.
- Allen: How did samplers discover PCBs in the sludge in your example?

- Needham: They screened in the lab, but the concentrations found are lower than 50 ppm so it was allowed to be disposed in a landfill.
- Needham: Increased cancer risk is based on sampled body burdens of fish. The Eastern Shore is the only area of study where 1 meal of fish per month falls below the risk threshold of 1 per 100,000 cases. Crabs meet the risk threshold, as long as you don't eat the mustard.
- Greg opened the floor to questions.
- Mark Richards: This research helps support the evidence that more effort is needed, since natural attenuation isn't keeping up with ongoing pollution.
  - Needham: Most sampling is for more highly chlorinated PCBs in the Aerochlor mixes, but sampling shows higher concentrations of less chlorinated PCBs. Not all screening methods will show the real levels of PCBs in a sample.
  - Needham: We have some evidence that PCBs are coming from widely diffused sources into the WWTPs we studied—Baltimore for instance. We broke down the mass balance, and we could see where PCBs were lost at different points in the plant. But, I was limited in where I was allowed to place my sampler. These are ENR plants, and what's remarkable is that they are removing upwards of 97% of the PCBs coming into the plant despite not being specifically designed for PCB removal.
  - Allen: But, we don't know where those PCBs go when they are removed along with biosolids—often are re-applied to land as fertilizer.
  - Needham: Yes, but some plants don't fully clean out their tanks, they just skim off the top. It would be interesting to take cores of some of the built-up material in those tanks and analyze for PCBs. We did sample some biosolids and find that they contained 1600-1700 ug/kg. All biosolids produced in the Back River plant end up in land application—mostly in citrus groves in Florida as pelletized fertilizer.
  - Richards: That highlights the disconnect between these programs, and why it's so hard to meet WQ standards when the same thresholds aren't applied to land.
- Scott Phillips: How widely is this information being communicated? You might consider contacting the Bay Journal with your research.
- Needham: The data is in ACWAMS. I am trying to publish this research as papers and collaborate with Joel Baker to tell the story about the long term trends in the Bay.
  - Allen: We also need to communicate this issue and raise awareness that it's still going on and is not a historical problem.

EJ Screen tool—Michael Blair, TetraTech

- Darius Stanton: EJ Screen is a national mapping tool to overlay environmental concerns with social issues to create indexes. We wanted to start with 3 pilot groups to create a watershed specific EJ Screen tool.
- Michael Blair: Working through variety of topics in the watershed. Extending and focusing on Chesapeake Bay, looking at Toxics as one of the focus areas. We want to make it so that a nontechnical user can use it to answer some important

questions. Feedback: We really need to integrate the nontechnical components of this, so we'd combine the analysis tools in a way that can easily be collected and interpreted. We have a lot of data sources we're looking at, so it needs to be cleaned and formatted as well. There are pre-loaded queries that show intersects between various social data and environmental data, for nontechnical audiences.

- Stanton: Can you elaborate on the query tool for the context of NGOs and state agencies?
- Blair: We want to build in the ability to have different agencies looking at their own focus so the conversation is consistent between all the groups.
- Parrish: We talked about idea of impairments: Toxics would rather focus on PCBs than HG, but simply a layer for impaired waters broadens the scope a lot.
- Phillips: I think having the broader view, as TCW has responsibility for all toxics, not just PCBs.
- Darius asked if there can be highlighted hotspots, areas of concern
- Phillips: HG also contributes to fish consumption advisories
- Parrish: What would be the data layer for that?
- Phillips: If you had a separate layer for waters impaired by HG, or for fish consumption advisories
- Allen: HG tends to cause impairments in freshwater parts of the watershed. We also have an air deposition database that might be helpful. We would also be interested in PAH's, contaminants that don't trigger impairment listings, but they do cause environmental and health risks where they accumulate.
- Allen: Can anyone propose a management question that pulls in toxic contaminants and EJ as a trial for the system? What questions might this tool be helpful to answer?
- Phillips: Maybe ex: where do populations depend on local fish for a high component of diet and are they close to these hotspots in the tool?
    - Allen: We don't have consumption data in this tool, so we'd have to bring that in or use a proxy to answer that question.
- Richards: There is some fish catch data that can be integrated into the system, so that might be a valuable addition. We would want this coverage to be inclusive of the entire watershed, however.
- Blair: So that data exists but it's not consistent, right?
- Richards: It is being collected in some areas but inconsistent.
- Stanton: There are spots in the national tool where data is unavailable, so we could pull that in for spotty data.
- Bisland: You could pull in some kind of vulnerability layer so you could see most at-risk populations?
- Parrish: That gets into a similar idea
- Needham: Is there a layer that would show superfund sites in the watershed? That would be valuable information to have.
- Blair: That would be great to include, thank you.
- Allen: There are also parallel datasets, like RECRA that could be pulled in as well.

- Allen: We might be interested in where there are linguistic challenges for communicating FCAs for PCBs. Can we overlay PCB impairments and linguistic challenges? That would be a good question to address.
- Blair: Yes, we can do that.
- Phillips: What does the term Linguistically Isolated mean? Do we have the info on what the primary language is?
- Blair: There is that information in the raw data—that has info that goes further than just giving percentiles than just aggregated numbers. That is important, and I made a note that that would be important to include—not only that they are isolated, but what languages are or are not being spoken. We want to be able to extend the standardized data to answer those kinds of deeper questions and help agencies focus efforts.
- Phillips: Thanks, I appreciate that.
- Greg Allen asked about next steps for the tool
    - Blair: We are continuing to add data and work on making it accessible and useable for not only TCW but the other WGs we're working with.
    - Parrish: From DWG, intended use is community level, so we want to make sure that this is of use to them. We want to get this back out to the communities themselves, ultimately.
    - Allen We would like to get some more input on real management questions that our partners are interested in getting answered so we can plan out the tool to be most effective at addressing those challenges.
    - Phillips: We should get some input from LGAC as well.

GIT Funding Proposals:

- Allen: We have two drafted ideas to talk about: feasibility study and atmospheric PCB study.

Feasibility Study for Phase-out of PCB-Containing Equipment—Fred Pinkney, FWS

- Fred Pinkney: Washington State Department of Ecology has a chemical action plan for PCBs that is very comprehensive. The Great Lakes program also has a plan for awareness building and education, especially in schools—that could be low hanging fruit for us to target.
- Allen: Page 14 of the WA report has a list of sources from different materials.
- Needham: Some of that caulk is as high as 50% PCBs. Malibu, CA has a law suit for several teachers in the high school that died of cancer—suspected PCB contaminated caulk.
- Allen: Justification for a voluntary program is that a regulatory strategy needs to be enhanced, or that this is the preferred pathway for addressing the PCBs that are major sources of fish contamination.
- Pinkney: We could also justify as a public health need, and there may be an EJ track here as well, since these caulks are more prevalent in older schools, which might be more common in lower income communities. If we say that removing PCBs from environment is beneficial to human health and environment.
- Bisland: GIT funding proposals get bumped up with more outcomes. We have a sustainable schools outcome, so maybe we could focus on feasibility of phase out in schools to get a stronger focus. Another incentive would have

to be in place for folks to participate in a voluntary program. I wonder if this is part of what might be discussed for a sustainable school achievement. We might want to get in touch with the environmental literacy workgroup to talk about that.

- Allen: We could narrow the focus to make sure the project is really robust. It certainly would be visible and of interest if we started with schools.
- Needham: You might also want to ID labs that will be able to screen samples, since most of these concentrations and exposure risks are unknown. For example, when you put in a garden you should have your soil tested, etc. It's hard to know one caulk from another and that's not recorded in maintenance records, so you would need extensive testing.
- Allen: So it sounds like we'd want to narrow this down to schools
- Pinkney: And maybe public buildings as well.
- Bisland: You're looking at feasibility of phase out, and you might get more buy in from schools for a voluntary program than for other public buildings.
- Richards: IF we focus on schools, how does that get to consumption advisories and TMDLs? How would removing caulking impact implementation of TMDLs?
- Needham: There are examples of caulk being used in storm pipes to seal concrete seams, so it's not associated with schools but there are outdoor uses and sources.
- Pinkney: Maybe states already have surveys that might show schools at the right vintage for us to focus on. I would want to know if there's a robust dataset across the watershed, we could go with a broader focus. IF we have to collect that data ourselves then the scope should be narrower.

Atmospheric deposition study—Greg Allen, EPA CBPO

- Allen: Chris French brought this up, the need to develop a more robust and contemporary dataset for atmospheric deposition in the Bay. We are running out of time, so we might have to work on this offline. We would have to know that this project would get us significantly closer to filling this gap.
- Richards: The budget is the downside, but perhaps a smaller scale project would also be useful.
- Allen: Mark, take a look at this over the next few days and we'll schedule another call in the next few days to work on this. When we come up to the WQGIT we want to be able to show that these are useful and important projects.
- Allen: We can put both projects forward, but we need to decide which takes priority,
- Phillips: This maybe should come up next year, but we could also do a project on developing relative risk for PCBs in the watershed too. It's in our workplan but we haven't done much to address it.

Action: A follow up call next week will be scheduled to finalize the proposals before presenting to the WQGIT.

Adjourned