***THIS MEETING IS BEING RECORDED***

**CBP Water Quality Goal Implementation Team**
**Toxic Contaminants Workgroup**
**Meeting Agenda**

**Date:** *Wednesday, October 12, 2022*
**Time:** 1:00 - 3:00 PM
**Location:** Conference Call (remote only)
**Calendar Page:** Link.

Meeting Information*

**Meeting link:** https://umces.webex.com/umces/j.php?MTID=m93545cbfc3169ddb8ea692d62a1ead9a

**Meeting number:** 260 060 2763

**Password:** #toxics2022

*OR*

**Phone:** 1-408-418-9388 United States Toll

**Access code:** 260 060 2763

**Please join by either computer audio or phone, not both. Viewing the webinar in the desktop app is recommended over the web browser. If experiencing bandwidth issues, turning off video when not speaking is recommended.*

| Agenda Item and Desired Outcome | Time | Background Docs, Notes, and Action Items |
|---|---|---|
| **1. Introductions and Announcements**<br>• FY2022 GIT Funding Update<br>▪ WQGIT selected their priority project<br>▪ The GIT Scoring meeting was held on October 7th<br>• EPA National Contaminants in Fish Forum (free and virtual): Registration Link \| Submit an Abstract by 11.02.2022 Link \| More Info Link | 1:00 | • Update the PCB Story Map<br>• TCW will be added to an upcoming AgWG agenda to present on TCs in Ag watersheds.<br>• TCW will receive near final SRS materials for Policy and Prevention and Research Outcomes for review at the end of the month (coincides w/ public comment period) |
| **2. Development and Application of a Predictive Framework for Evaluating Remedial Actions for PCB-Impacted Water Bodies –** Mandar Bokare, formerly UMBC (co-authors: Upal Ghosh, UMBC, Dev Murali, DOEE, and Fred Pinkney, USFWS)<br><br>This talk will present the development of a predictive framework that combines measurements of freely dissolved PCBs with a fate-transport model and a | 1:10 | • Presentation |

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|---|---|---|
| mechanistic food-web bioaccumulation model. The model can then be applied for evaluating effectiveness of remedial actions on PCB uptake in the aquatic food-web. | | |
| **3. Overview of MD's Guidance for Developing Local PCB TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs) –** Len Schugam, MDE<br><br>Len Schugam will provide an overview of MDE's newly released Guidance for Developing Local PCB TMDL Stormwater Wasteload Allocation WIPs. | 2:10 | • PCB_TMDL_Implementation_Guidance_SW-WLA_08302022.pdf (maryland.gov) |
| **4. SRS Update** – Greg Allen, EPA- CBPO, and Emily Majcher, USGS<br><br>Greg and Emily will provide an update on the SRS process for TCW's two outcome, Policy and Prevention and Research. | 2:45 | • Management Board Quarterly Progress Meeting - September 2022 (chesapeakebay.net) |
| **Wrap Up and Adjourn** | 3:00 | ***Next meeting:* November 9, 2022** |

**Summary of Actions and Decisions**

**Action:** the TCW leadership will distribute the Policy and Prevention Outcome and Research Outcome Strategic Review System (SRS) materials to the TCW membership for review when the go for public comment.

**Meeting Minutes**

1. **Introduction and Announcements:**
   a. *GIT Funding:*
      i. *TCW has two proposed projects (PCB Symposium and PPAT Microplastics in YOY striped bass) in the mix and the final scores are due EOD today. Next week, we will have a good idea of where the projects landed in terms of selection.*
   b. *EPA Fish Forum:*
      i. *The EPA Fish Forum will occur on February 28th over four days (not consecutively). Sign up for the Fish and Shellfish Program Newsletter from the EPA (run by Sharon Fey).*
   c. *Other: none at this time*

2. **Development and Application of a Predictive Framework for Evaluating Remedial Actions for PCB-Impacted Water Bodies –** Mandar Bokare, formerly UMBC (co-authors: Upal Ghosh, UMBC, Dev Murali, DOEE, and Fred Pinkney, USFWS)

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a. **Discussion:**

i. *Doug Austin:* when you place the air sampler for beaver dam creek, where did you decide to put that?
ii. *Mandar Bokare:* the water sample was placed next to an existing USGS station. That also decided where the air sampler went as well. There is an LBC facility near there and that was the safest place to put (not disturbed by the community, etc.).
iii. *Greg Allen:* the samplers are placed in the river and how do you go to the gauging data to a result for mass to liquid concentration?
iv. *Mandar Bokare:* there are different solid PE to liquid congeners that are published in different sources. We use these sources and correct them for our location. We can back out what the liquid concentration is from these coefficients. There is also a nonequilibrium correction that needs to be performed. We measure the congeners before and after deployment and that helps us understand the rate of uptake. The rate of uptake in a fast sample, the congeners are depleted faster and vice versa.
v. *Upal Gosh:* a simple way to think about is that the passive sample gives you an accurate measurement of degraded value during the deployment.
vi. *Greg Allen:* at an upcoming meeting, I would like to talk about lower beaver dam creek. It would be nice to bring any information we have on that to help above and beyond what is already happening. We were recently asked about ways to expand the Bay Monitoring effort. We put out an idea and this work could be helpful. To put it in a nutshell, there is a lot going in the Anacostia (ex.) and we hope that will result in the net flow of PCBs out of the river, to the Potomac and into the Bay. If there was a way for us to monitor at the mouth or bottom of the Anacostia River to measure whether upstream work is having an affect downstream. At some point we will get back to this to see if it feasible. I think some of this work, and passive sampling, would be part of this design. Why 86 congeners?
vii. *Mandar Bokare:* we use the 8082 methods. It doesn't cover the full set, but it does cover 80% of the congeners.
viii. *Greg Allen:* does that get you to PPT?
ix. *Mandar Bokare:* we can get up to PPB for sure and PPT for individual congeners.
x. *Greg Allen:* what else do we need learn about air deposition is a follow up question we should consider. Remediating the sediment won't get us there unless the surface water concentrations are also coming down.
xi. *Mandar Bokare:* within the western Lake Erie food system, if you have a system where cold water and surface water are the same, if you reduce flux, then the surface concentration will go down. If that doesn't happen, then you need to focus on surface water concentration too. I can't say that for the Anacostia because the paper hasn't been published yet. If you have a lake where there is no other inputs coming in, then the reduction in PCBs will impact fish and water. If you have other inputs coming in, then reductions won't make the same level of impact.
xii. *Emily Majcher:* Following up on some of the air results, in the conceptual model, there was a small amount that was being deposited to surface water, was that based on another Anacostia measurement? Did you see a similar flux change in the air system?
xiii. *Mandar:* the air deposition came from other papers published a while ago which looked at the depositional flux and we used that same flux and extrapolated it. There are no recent measurements, but do we have the samples for rainwater?
xiv. *Upal Gosh:* we should have those first sets of data soon. the graphic Mandar showed was of the gas phase of PCBs into the air. We don't have recent data, so we wanted to close that little unknown, but we are getting it this year.
xv. *Doug Austin:* did you do a congener profile for air?
xvi. *Mandar:* we have a profile, generally they are lighter (less chlorine).
xvii. *Leonard Schugam:* LBC is doing work to develop a site map and starting a cleanup process.

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3. **Overview of MD's Guidance for Developing Local PCB TMDL (Total Maximum Daily Load) Stormwater Wasteload Allocation (SW-WLA) Watershed Implementation Plans (WIPs) –** Len Schugam, MDE
    a. **Summary:** This only applies to a handful of counties. Typically, those counties are historically more urbanized and industrialized (Ann Arundel County, Prince Georges, Baltimore, etc.). Beyond the implementation guidance itself, there is a requirement in the MS4 Permits that requires source trackdown monitoring. The objective is that they will do source trackdown investigations and they will identify sources that will allow MDE to come in and clean up. Normally, when an MS4 is assigned a wastewater reduction, they need to demonstrate they can meet those allocation reductions. PCBs are little different. We didn't think some of this would be applicable because we don't have a strong understand of PCB removal efficiencies and there is more limited data. The Source Trackdown methodology will include a PCB source assessment, a subwatershed prioritization strategy, and a multi-phase source trackdown investigation.
    b. **Discussion:**
        i. *George Onyullo:* PCBs can be very tricky especially when you combine it with the current MS4 set up. Part of the challenge is how do you even begin to draw a hydrological framework where monitoring can be conducted. Other than relying on topography or topology, you still have the underlying pipe network, which also conveys PCBs even though it isn't accounted for. The first step is for MS4 to integrate the pipe network for monitoring to be meaningful. The other challenge is that even though good data is generated from studies like Mandar's very few of us look at this data. In terms of low hanging fruit, a way has to be found to integrate the passive sampling data set with the monitoring data set.
        ii. *Leonard Schugam:* a lot of pipe networks are antiquated. We do have requirements within the MS4 permit that they need to map the pipe network. Obviously, there are gaps. We will need to work together to interpret results. Simply doing a watershed treatment model doesn't cut it. We don't want to throw BMPs across the board and hope they capture PCBs because that won't allow us to meet our goals of decreasing PCBs in fish tissue. This process can inform other jurisdictions, but everyone is going to do something different.
        iii. *Mark Richards:* I look forward to reading through this. As I look to develop TMDLs around VA, MS4 permits are part of the problem. It would be really interesting to see how some of these MS4s shake our related to trackdown work. I always get the comment that MS4 stormwater is a component and who will be responsible. Even exploring that within the different programmatic areas, we don't have a good answer at this point. To get CERCLA involved can be pretty challenging.
        iv. *Leonard Schugam:* those are exactly the questions we got for our MS4s. There are still things that can be done from a BMP implementation standpoint. You are right about the connection- how do you get CERCLA on board? In LBC, they are doing their own site assessment.
        v. *Trevor Needham:* land remediation goal is around 25 ppm that is significantly higher than Baltimore Harbor sediment.
        vi. *Leonard Schugam:* when Mandar was talking about the passive air sampler, I believe that it is downstream of the scrape recycling facility.
        vii. *Doug Austin:* I am also interested in the gradient towards rural areas.
        viii. *Leonard Schugam:* looking at rural areas with little development you would hope to see less contaminants
        ix. *Emily Majcher:* the sediment goal in the TMDLs is based on meeting fish criteria, which is 6.9 ng/g (ppb)
        x. *Upal Gosh:* On that last comment about air sampling close to a land source, I think it can be potentially used to sniff out open land sources.
        xi. *Greg Allen:* has any attempt been made to illustrate what is laid out here (decision matrix etc.)?
        xii. *Leonard Schugam:* we have not done that yet.

xiii. *Greg Allen:* maybe that is something we could help with. Regarding George Onyullo' s comments, all the MS4s are at different stages. Is there a place or document that details what stage each one is at?
xiv. *George Onyullo:* at DOEE, we've been looking at the district size and think about how trackdown would be implemented. One of the things that has come up, how do we set up trackdown at the scale at which implementation is done?
xv. *Greg Allen:* that is a good example and with the other points made here there are some gaps that maybe we can work together to address.
xvi. *Trevor Needham:* EPA has staff that will help format data into this common database: https://www.waterqualitydata.us/. This could be leveraged more.

4. **SRS Update** – Greg Allen, EPA- CBPO, and Emily Majcher, USGS
   a. **Summary:**
      i. **Policy and Prevention:** our fisheries goal team is pushing strategies to consume blue catfish. We are going to work with the Fish GIT about this to make sure there are controls in place so that the older fish are not being eaten. We also discussed our targeted work with the PSLG and developing a factsheet to share with our partners/ jurisdictions.
      ii. **Outreach:** we asked for support for participation and engagement on PFAS coordination and engagement efforts (specifically around quarterly discussions). Particularly for PFAS, our regular person might not be the best for this. The MB agreed to handle that request. We need to identify with MB if the agency or jurisdiction is adequately represented. We also asked about multiple benefits and discussing reducing toxic contaminants in other efforts. We asked if the MB would facilitate this between other groups. We will work with WQGIT, Habitat Git, and Fisheries GIT, to reduce TCs. We had a third ask for PCB monitoring and that will be addressed tomorrow as a follow up at the MB meeting.
      iii. Final LAPs are due at the end of the month. Those will be distributed when they go for public comment.
      iv. **Action:** the TCW leadership will distribute the Policy and Prevention Outcome and Research Outcome Strategic Review System (SRS) materials to the TCW membership for review when the go for public comment.

**Call Participants**

Hilary Swartwood, CRC
Greg Allen, EPA
Mandar Bokare, AECOM (UMBC for presentation)
Emily Majcher, USGS
Doug Austin, SEE- EPA
Mark Richards, VA DEQ
Marel King, CBC
Tom Parham, MDNR
Leonard Schugam, MDE
John Cargill, DNREC
Dave Whitall, NOAA
Andrew Psoras, Contractor at USGS

Lisa Ochsenhirt, AquaLaw
Upal Gosh, UMBC
George Onyullo, DOEE
Trevor Needham, USGS