Toxic Contaminants Workgroup

Wednesday, April 8th, 2026
1:00 – 2:30 PM

Visit the meeting webpage for meeting materials and additional information.

Purpose: This is the monthly meeting of the Toxic Contaminants Workgroup (TCW). Main agenda items included presentations on long-term trends of PCBs in fish in Maryland and the impact of land use on PCB contamination in stormwater systems.

Minutes

I. Welcome and Announcements

Lead: Tony Timpano, TCW Co-Chair and Keith Bollt, TCW Coordinator

Tony gave an overview of today's agenda. Keith shared announcements, including PPAT's meeting on April 9th and two upcoming conference opportunities linked in the agenda.

Decisions:

1. TCW members approved the March 2026 TCW Meeting Minutes.

II. Using Long-Term Trends of PCBs in Fish Caught in Maryland Waters to Assess the Effectiveness of Management Actions

Lead: Dr. Upal Ghosh, UMBC

This study examined historical datasets of fish PCB concentrations across 323 monitoring stations in Maryland over 3 decades to evaluate spatio-temporal trends in PCBs in fish, identify priority watersheds and assess remediation effectiveness. Dr. Ghosh highlighted watershed-scale spatial trends across Maryland and 35-year temporal trends that showed indication of recovery in some areas but not in others. Dr. Ghosh also highlighted specific work to develop a new method of passive sampling in the Anacostia River, source tracking in Sawmill Creek and source tracking in the Back River.

Materials: Presentation, Paper

Discussion:

- John Cargill, DNREC asked if the comparison of fish to National Priority List (NPL) sites encompassed state-lead sites or only federal.

    - Nathalie Lombard, UMBC responded these were all federal sites from the NPL.
    - John noted the track backs that were shown at the end where you are going up into the watershed will point you in the right direction.
    - Dr. Ghosh added that they are working with John and DNREC to take some of these approaches for source tracking in Delaware as well.
- John Cargill asked how they estimated recovery time.
    - Dr. Ghosh responded they took the trendline to the intersection of the red-dashed line. This can be done in a more robust way with fate and transport, but this was just trendlining.
- Keith Bollt asked if they have any advice or guidance for people working on management site delineation (e.g. TSCA, NPL) based on what they've seen.
    - Dr. Ghosh responded his primary suggestion is to follow where the data leads you. He noted the NPL correlation in the presentation should be taken with a grain of salt. Many of those are under a lot of scrutiny and oversight to prevent them from getting bigger. A lot of what they were seeing in Maryland is not necessarily Superfund sites but sites where PCBs were used and are acting as secondary sources (e.g. the Back River with major Wastewater Treatment Plant source).
- Katie Davis, EPA asked about the likely sources of PCBs for Lower Beaverdam Creek, noting her previous work on Beltsville Agricultural Research Center (BARC) as a Superfund site.
    - Dr. Ghosh responded that for Lower Beaverdam Creek, one of the entities that's very likely causing PCB release is a metal recycling facility and there is ongoing work with MDE and EPA to define and contain that. There is another potential industrial activity source upstream still under investigation.
- Tom Parham, MD DNR (in chat): Great presentation! I understand these are based on consumption advisories, do you know at what level PCBs impact reproductive success of striped bass, white perch and channel cats?
    - Dr. Ghosh responded there are a lot of papers looking at that. Fred Pinkney, formerly US FWS was actively looking at fish health from PCBs and PAHs.
- Emily Majcher, USGS asked whether they found that these rivers corresponded to the locations where TMDLs exist for PCBs. Are there any rivers slated for natural recovery that are not showing a trend?
    - Dr. Ghosh responded that the TMDLs are based on studies that go back many years and there are new tools and new methods of measurement and things may have changed in the field, so he would not be surprised if some of what we are seeing is different from what the TMDL expectations were.
    - Len Schugam, MDE added that the scale/groupings of this study differ from when they have the impairment listings for TMDLs so we can't compare all. However, for groupings that match like the Chester/Sassafras they have seen a couple delistings within there and this study shows a deeper attenuation rate. So, some of what they are seeing with impairment listings does correspond with the attenuation rates that this study has established.

III. Land Use Effects on PCB Contamination in Stormwater Systems

Lead: Dr. Birthe Kjellerup, UMD

This study looked at the impact of land development (based on both land use categories and land development era) on PCB contamination to identify potential sources of stormwater PCBs and provide information and guidance on PCBs presence (and removal) in stormwater. Across sampling sites in Anne Arundel County, there was a wide range of PCB concentrations and variation between different land uses. Higher concentrations for industrial, residential, and energy sites were generally found. Dr. Kjellerup also highlighted specific work to investigate PCBs in road paint and the impact of stormwater management BMPs like street sweeping, catchment basin cleanouts and biodegradation in soil media to reduce PCB mass.

Materials: Presentation, Fact Sheet

Discussion:

- Tony Timpano asked about current vs. legacy vs. lagged sources and whether much of the heterogeneity of PCBs found in the study could be linked to large rain events.
    - Dr. Kjellerup responded that there was no data on terrestrial sites related to this, but noted that one case from data on the Blue Plains Wastewater Treatment Plant in DC showed that the hypothesis that large rain events would cause overflows and contribute to PCBs in the outlet was not found to be as impactful. It is more the day-to-day contributions of PCBs from across the landscape.
    - Dr. Ghosh added that Nathalie Lombard is currently working on a CBT project to develop a passive sediment sampler to determine the sediment-associated load transported during storms. They're not really seeing concentrations being diluted during high flow events. The total load is still high then. This is hard to capture, but tools are being developed to better determine that.
- Len Schugam, MDE asked whether PCB-11, which is a di-homolog and thus isn't often seen accumulating in fish tissue, has other pathways or toxicity concern for aquatic life and human health.
    - Dr. Kjellerup responded there is not so much toxicity, but it does contribute to total PCB mass so it is important to consider for TMDLs.
    - Keith Bollt asked whether PCB-11 has no toxicity concern or is just lower than others.
    - Dr. Kjellerup clarified that PCB-11 is not nontoxic, but it's not one of the most toxic. However, if you have a high enough mass even with a small toxic equivalency factor, then it adds up.

IV. Wrap-Up

Lead: Tony Timpano, Keith Bollt and Petra Baldwin - TCW Leadership

Keith shared brief updates on the status of CBP structure, governance and management strategies development. The agenda item "Discussion: Refining TCW's Scope and Metrics" was postponed to the next TCW meeting for time.

V. **Adjourn**

Next Meeting: May 13, 2026

Attendees:

Tony Timpano, VADEQ (TCW Co-Chair)
Keith Bollt, EPA CBPO (TCW Coordinator)
Petra Baldwin, CRC (TCW Staffer)
Upal Ghosh, UMBC
Nathalie Lombard, UMBC
Birthe Kjellerup, UMD
John Cargill, DNREC
Sakinat Ahmad, DNREC
Len Schugam, MDE
Josh Lookenbill, PADEP
Tish Robertson, VADEQ
Nick Murray, WVDEP
Maggie Woodward, CBC
Sushanth Gupta, MWCOG
Katie Davis, EPA
Carys Mitchelmore, UMCES
Emily Majcher, USGS
Carol Howe, USGS
Sam Miller, USGS
Kofi Asante, DC DOEE
Tom Parham, MD DNR
Anthony Cario, VADEQ
Max Wheeler, VADEQ
Kelly Somers, EPA R3
Erin Sonnenburg, CRC
Suzanne Trevena, EPA R3
John Healey, EPA
Ellen Egan, AquaLaw