DATE: 19 December 2023

TO: Clean Water B2025 Small Group

FROM: Emily Majcher, USGS, Vice-Chair Toxic Contaminant Workgroup and Research Outcome Lead; Greg Allen, USEPA CBPO Chair Toxic Contaminant Workgroup and Policy and Prevention Outcome Lead

CC: Ken Hyer, USGS, Steering Committee Member Beyond 2025

SUBJECT: Toxic Contaminant Goals and Outcomes Feedback for Beyond 2025 Consideration

Per the email request from Lee McDonnell on 8 December 2023, this memo provides a summary of feedback regarding the Toxics Contaminant Goal and Research and Policy and Prevention outcomes in the 2014 Watershed Agreement to be shared with the Beyond 2025 Clean Water small group and Beyond 2025 Steering Committee (via Ken Hyer, USGS).

There is cross-cutting relevance of toxic contaminants in all Beyond 2025 small groups, but currently it is our impression that pollutants other than nitrogen and phosphorus are not explicitly being considered. Further, with the lack of any toxic contaminant subject matter experts in the Clean Water small group, toxic contaminants may not be adequately considered within the identified topics. Given environmental impacts of per- and polyfluoroalkyl substances (PFAS) in both agricultural and urban landscapes, the wide extent of polychlorinated biphenyls (PCB) impairments and PCB total maximum daily loads (TMDLs) in the watershed, the Partnership focus on environmental justice, and thinking about the people at risk of consuming contaminated fish in our watershed, we believe that toxic contaminants should be considered a top priority by the Partnership Beyond 2025.

We appreciate the opportunity to reflect on our goal and outcomes, outline some challenges (both technical and structural), and open a dialog about opportunities going forward in the Beyond 2025 process.

Technical Challenges Related to Toxic Contaminants:

- Lack of watershed-wide toxic contaminants monitoring programs limits the potential for meaningful assessment (e.g., trends) of water quality and living resource improvement at scales relevant to Chesapeake Bay Program (CBP) interests. Compilations of data collected from other disparate programs for this purpose have been unsuccessful.
- Despite the desire to consider co-benefits for toxic contaminants in combination with the watershed-wide nutrient/sediment TMDL management actions, there is limited science to support removal efficiency estimates in common best management practices (BMPs). This limitation combined with the lack of monitoring noted above prevents the inclusion of contaminants like PCBs in tools such as the Chesapeake Assessment and Scenario Tool (CAST).
- The initial effort published in 2012 that shaped the approach to toxics ChesBayToxics_finaldraft_11513b.pdf (d18lev1ok5leia.cloudfront.net) is more than a decade old and is out of date. The partnership could benefit from a revisit and update to guide establishment future toxic contaminant priorities.

- The large scope and interdisciplinary nature of the toxic contaminants topic hinders technical information transfer to other workgroups or Goal Implementation Teams (GITs) including agriculture, wastewater, urban stormwater, stream health.
- There is a lack of capacity to create coordinated, Bay-wide standards of practice that can be applied across the CB watershed from pilot and individual study findings and demonstrations such as mitigation options.

Structural and Operational Challenges Related to Toxic Contaminants:

- Within the CBP, the same potential for influence on watershed-wide progress on contaminant reduction exists for many toxics as it does for nutrients. There are toxic contaminant specific water quality standards, assessments of attainment, identification and listings of impairments, local TMDLs and monitoring of conditions. However, the absence of a coordinated and consistent approach to any toxic contaminants Bay-wide results in hurdles to assess environmental and human health effects.
- TCW is nested under the Water Quality Goal Implementation Team (WQGIT). The lack of watershed-wide, quantitative mandates (e.g., Partnership agreements on PCB load allocations) as compared to other WQ criteria with mandates (e.g., nutrients) limits overall progress and makes collaboration with other GITs/workgroups with quantitative mandates challenging.
- Many Watershed Agreement goals and outcomes (e.g., stream health, nutrient water quality, healthy schools, etc.) have a strong association with toxic contaminants issues. The lack of prioritization in other topical workgroups prevents coordination and collaboration across GITs and workgroups despite the cross-relevance.
- Despite intense interest and a call for leadership in PFAS coordination among our partners, the lack of a Management Board response or action on the 2023 PFAS STAC science recommendations is hindering advances in responding to the recommendations.

Primary Opportunities to Address Challenges:

- Redirect efforts to focus research on targeted, prioritized topics and science needs as outlined by workgroup sponsored STAC reports:
    - Integrating Science and Developing Approaches to Inform Management for Contaminants of Concern in Agricultural and Urban Settings (final_stac-report_contaminants-of-concern.pdf (d18lev1ok5leia.cloudfront.net))
    - Improving Understanding and Coordination of Science Activities for PFAS in the Chesapeake Bay Watershed - FINAL_STAC-PFAS-Report.pdf (d18lev1ok5leia.cloudfront.net)
- Enhance monitoring of PCBs and PFAS for specific objectives not currently addressed under other regulatory programs at scales relevant to CBP interests (ES: tcw_pcb_monitoring_paper_executive_summary_final_dec_201.pdf (d18lev1ok5leia.cloudfront.net), and summary paper: tcw_pcb_monitoring_discussion_paper_dec_20_final1.pdf (d18lev1ok5leia.cloudfront.net))
- Build capacity within and outside of the partnership to address broad, priority science and monitoring needs as described in the reports linked above.
- Expand the Partnership's role in cross-jurisdictional coordination on interstate pollutant loads of toxic contaminants (e.g., PCBs). For example, continue to facilitate and promote learning from

the Alternative Restoration Plan (ARP) pilot project in the CB watershed, by identifying and facilitating opportunities to implement elsewhere.

- Continue TCW national leadership in partnership with other ecoregion restoration programs (e.g., Columbia River, Puget Sound, San Francisco Bay, Great Lakes, Delaware River Basin, NY/NJ Harbor, New Bedford Harbor) to encourage technical knowledge transfer and lessons learned from restoration efforts where higher priority is given to toxic contaminant reduction.
- Promote and lead efforts with the most potential to reduce PCBs outside of regulatory programs. For example, advance efforts to reduce PCBs in building materials on land developed before the PCB ban (built before 1980), with an emphasis on schools, in the watershed.