



## TOXIC CONTAMINANTS POLICY AND PREVENTION NOVEMBER 2024 SRS QUARTERLY REVIEW

### LOOKING BACK: LEARNING FROM THE LAST TWO YEARS

#### Celebrate Our Accomplishments & Best Practices

1. Since your last QPM, what key successes would you like to highlight to the Management Board?
  - ✓ The jurisdictions continue to make progress with [PCB TMDL development](#) and with management actions under existing PCB TMDLs.
  - ✓ The Toxic Contaminants Workgroup (TCW) partnered with Washington Department of Ecology and the University of Washington to sponsor symposia where Bay jurisdiction TMDL leads heard about and shared best practices in PCB reduction programs.
  - ✓ A toxic contaminants-centered Advance Restoration Plan (ARP) Pilot Project was completed on Delaware's portion of the C&D Canal. Results include a framework document that will inform the possible use of ARPs in other areas impaired by toxic contaminants.
  - ✓ The PCB cleanup at the Lockheed Martin facility located in Middle River, Maryland.

#### Evaluate Our Progress

2. Are we, as a partnership, making progress at a rate that is necessary to achieve this outcome? Would you define our outlook as on course, off course, uncertain, or completed? Upon what basis are you forecasting this outlook?

**Toxic Contaminants Policy and Prevention  
Outcome**

 RECENT PROGRESS  
**NO CHANGE**  
Updated September 2024

 OUTLOOK  
**OFF COURSE**  
Updated September 2024



#### Recent Progress: No Change

According to data submitted by Delaware, Maryland, Virginia and the District of Columbia to the U.S. Environmental Protection Agency in 2022, 78% of the Chesapeake Bay's tidal segments were partially or fully impaired by toxic contaminants, the same as in 2020. Since 2010, the listings of impaired waters under Section 303(d) of the Clean Water Act used in this indicator have shown an increase in the observation of toxic contaminant impairments except for 2020's short-term decrease. This improvement may be due to decreased loads of contaminants as a result of best management practices or remedial activities in the ecosystem, or it may be due to the breakdown of the pollutants over time. However, the observation of impairments has remained the same in the 2022 data, rather than continuing 2020's decrease.

## Outlook: Off Course

The Toxic Contaminants Policy and Prevention Outcome is off course. This outcome remains far from the Toxic Contaminants Goal of observing no impairments by toxic contaminants. Between 2010 and 2018, each biennial update showed a higher number of tidal segments in the Chesapeake Bay that are listed as fully or partially impaired due to toxic contaminants, and while that number decreased in 2020, the decreasing trend has not continued. Also, the 2020 data set was the first to include some assessment of per- and polyfluoroalkyl substances (PFAS) with the first jurisdiction identification of a PFAS-related impairment. Given PFAS's status as a pollutant of emerging concern and new health advisory limits that will likely trigger fish consumption advisories, jurisdictions' reporting of PFAS impairment is expected to increase in the next few cycles.

### 3. How would you summarize your recent progress toward achieving your outcome (since your last QPM)? Would you characterize this progress as an increase, decrease, no change, or completed?

The number of impaired segments has not changed since 2020 - 72 fully or partially impaired segments (78.3%). Therefore, we characterize the recent progress as no change and this outcome is still classified as off-course.

## Management Approach 1: Regulatory Programs

### EPA Region 3

#### 1) TMDL Review and Approvals

District of Columbia/Pennsylvania/West Virginia

- FY2023-24 – No PCB TMDLs approved

Delaware

- FY2023-24 – PCB ARP for C&D Canal finalized

Maryland

- FY2023-24 – No PCB TMDLs/ARPs were approved. Work began for PCB TMDLs for 3 assessment units Conowingo Reservoir, Tidal Lower Susquehanna River, and Middle River.
- Final approved TMDLs are maintained on MDE's website at:  
<https://mde.maryland.gov/programs/water/tmdl/approvedfinaltmdls/pages/index.aspx>

Virginia

- FY2023-24 – PCB TMDLs for Mountain Run approved. The approval was recently shared. Many other PCB TMDLs were under development within the Bay.
- Final approved TMDLs are maintained on VADEQ's website (using a search tool) at:  
<https://www.deq.virginia.gov/our-programs/water/water-quality/tmdl-development/approved-tmdls>

- 2) The EPA Region 3 Land, Chemicals and Redevelopment Division partnered with the Maryland Department of the Environment to oversee the PCB cleanup at the Lockheed Martin facility located in Middle River, Maryland. The Middle River facility, which is adjacent to Dark Head Cove, is considered to be a major contributor of PCBs in the Bay. The remedial actions are complete and annual reports are submitted. All PCB sediment remedies in Dark Head Cove were completed and approved as of May 2023. The land side remedy Construction Completion Report was approved in December 2022.

## Jurisdictions

- 1) Work plan action: Continue jurisdictional monitoring for PCB occurrence to assess need for new local TMDLs and progress related to reducing PCB loads.
  - a. Virginia
    - TMDL source investigation studies including monitoring and low-level water column samples for PCB fish consumption impairments in the Rappahannock and York Rivers. Field studies planned and implemented have been completed. The first round of PCB monitoring has been completed in the York/Rappahannock tidal watersheds; a second round that is more targeted at source areas needs to be designed and implemented; these waters have not been prioritized for the FY 2025-2026 list of TMDL Commitments to EPA as the second round of monitoring has been delayed.
  - b. District of Columbia
    - In FY 2020, DDOEE entered into an MOU with US Fish and Wildlife Service to conduct a fish tissue study. It was completed in 2023.
  - c. Delaware
    - Collected up-to-date toxics data on surface water, surface sediment and biota within the Delaware portion of the Chesapeake Bay drainage with results to be incorporated a summary report. The summary report was completed at the end of 2022.
    - Created priority list for sources in need of cleanup and restoration with results to be incorporated into a summary report. The summary report was completed at the end of 2022.
    - Routine fish tissue sampling was conducted in most of Delaware’s Chesapeake Drainages in 2023, and included monitoring for PCBs, dioxins/furans, PAHs, methylmercury, chlorinated pesticides, and PFAS. DNREC is evaluating the distribution of elevated concentrations of PCBs in Blue Catfish that are migrating into Delaware waters from locations outside of its jurisdiction. The recently collected data will represent the first comprehensive assessment of PFAS in fish tissue in Delaware’s Chesapeake Drainages.
    - DNREC will be conducting fish tissue sampling in the C&D Canal (another of Delaware’s Chesapeake Drainages) in the Fall of 2024. The data will be incorporated into trend assessments and an Advanced Restoration Plan for the watershed that was completed with assistance from Region 3 of USEPA in 2024. The effort with Region 3 also resulted in a draft ARP Framework that is intended to be edited by the TCW in the future to make it more applicable to other jurisdictions within the Chesapeake Bay Partnership.
  
- 2) Work plan action: Determine whether the jurisdictions compile existing PCB outfall monitoring data for NPDES dischargers and assist with development of systems to compile all available information from governmental and academic organizations. This inventory will help determine whether there is a need for additional monitoring requirements to support TMDL.
  - a. Pennsylvania
    - Reasonable potential analysis during permit reviews should include PCBs, but is focused on industrial permits and major sewage facilities. The results of the analysis resulted in monitoring and report requirements and/or effluent limitations for permitted activities.

## Lessons Learned

4. If the outlook is off course, what has been the most critical influencing factor or gap that needs to be addressed to accelerate progress?

**Scale** – The Broad geographic distribution of PCBs and the variety of sources and pathways for PCBs entering the watershed necessitate a wide-range of very different management responses (e.g., primary sources such as electrical equipment, secondary sources such as wastewater treatment by-products, and pathways such as stormwater runoff contaminated by air deposition or contaminated industrial sites)

**Stakeholder Mindset** – Given competing demands with other known and emerging contaminants, the political will to modify regulatory programs and/or create voluntary programs. A contributing factor is the belief that there are not new loadings of PCBs but rather that it is a legacy issue involving only contaminated bottom sediments. TCW works to shift that paradigm by acknowledging that there are ongoing sources of PCBs (i.e., PCBs are not static “legacy” contaminants). There is limited collaboration and coordination among the science and management communities at a scale that is commensurate with the extent of PCB impairments and TMDLs. New concerns and resource demands related to emerging contaminants such as per/polyfluoroalkyl substances (PFAS).

**Knowledge of Sources and Best Management Practices to Apply** - Knowledge gaps on relative sizes of PCB sources and most effective best management practices

**Cost** – The high cost of testing and remedies: in-stream sediment remediation; wastewater PCB source trackdown studies; electrical equipment replacements; stormwater controls; contaminated site remediation

5. Consider and reflect on the actions you intended to take during the past cycle. For action that have not begun, or which have encountered a serious barrier, what is preventing us from taking action? Are these actions still needed?

Progress was limited on the PCB Consortium Management Approach. TCW did conduct PCB TMDL status jurisdiction round-robins at TCW meetings and TCW organized cross-program symposia with other watershed restoration programs that are remediating PCBs. These activities were in the spirit of the consortium concept; however, no explicit actions were completed regarding the formation of a consortium.

A substantial impediment was the onset of PFAS concerns, which captured both federal and state resources in work needed to understand PFAS occurrence in the watershed. The TCW is proposing to redirect capacity that might have been directed to exploring the consortium concept to a replacement management approach that is focused on supporting local governments in areas including PCB TMDLs.

6. What have we learned over the past two years that we’ll need to consider in the coming two years?

CBP has learned more about the efficacy of BMPs that reduce PCB loading and TCW brings forward relevant research to inform the jurisdictions on the latest understanding of management actions to efficiently reduce PCB loading e.g., Birthe Venø Kjellerup, Ph.D., Professor University of Maryland at College Park, [Influence of land use on PCB concentrations](#) (paraphrased) TCW has provided space for members to share progress and lessons learned on tracking sources of PCBs. Source tracking is a high priority action in TMDL implementation and TCW has learned that some local governments are in need of support in the technical aspects of PCB source identification.

## ASSESSING OUR EFFORTS AND GAPS

### Factors

7. Summarize here any newly identified influencing factors, and why they were added to your Management Strategy. If any factors have been deleted, are they the result of our actions, and what have we learned as a result?

TCW proposes no changes to the factors influencing outcome attainment.

8. Prioritize and summarize here the factors best tackled as a Partnership (or GIT/workgroup), that have the greatest impact to achieve our outcome.

TCW developed a management strategy that focuses on gaps in management activities that, if filled, would accelerate progress on development and implementation of PCB TMDLs.

### Gaps

9. For the highest priority gaps, what is getting in the way of addressing them or what gaps continue to exist despite the current efforts to address them?

EPA and the Chesapeake watershed jurisdictions are making substantial progress to address PCB contamination in fish and other ecosystem biota. Progress is limited by the complex nature of identifying and remediating sources, the cost of PCB analyses, and competing demands of known and emerging contaminants including PFAS.

## FOCUSING ON THE NEXT TWO YEARS

### Actions And Needed Support

10. Describe any scientific, environmental, fiscal, or policy-related developments that have already or may influence your work over the next two years.

The largest scientific, environmental, fiscal, or policy-related development is the onset of concern regarding PFAS. Over the last two years, the need to characterize PFAS in fish tissue has required the states to focus on PFAS analyses in lieu of PCB analyses. Continued diversion of resources to deal with PFAS concerns will hinge on regulatory actions and human health criteria in development by EPA. For example, human health criteria to be issued by EPA may impact water quality standards and the scale of impairments to be listed on jurisdiction 303(d) impairment lists.

11. Based on these developments and the learning discussed in the previous sections, summarize any new actions you are planning to address these gaps over the next two years.

#### **Management Approach 1: Regulatory Programs**

EPA Region 3

- 1) TMDL Review and Approvals
  - a. District of Columbia/Pennsylvania/West Virginia
    - FY2025-26 – No PCB TMDLs planned
  - b. Delaware
    - FY2025-26 – No TMDLs/ARPs planned for in the Bay
  - c. Maryland
    - FY2025-26 – Work on the PCB TMDLs for 3 assessment units Conowingo Reservoir, Tidal Lower Susquehanna River, and Middle River above PCB TMDLs is anticipated to be completed by end of FY2026.
  - d. Virginia
    - FY2025-26 - PCB TMDLs covering more than 180 assessment units (AUs) are planned. The AUs fall within the Chesapeake Bay and fall within the James River, Maury River and Jackson River effort or the Tidal James River and Elizabeth River efforts. More information about these efforts is on-line.
    - Information about PCB TMDLs under development is available at: <https://www.deq.virginia.gov/our-programs/water/water-quality/tmdl-development/approved-tmdls>

## Jurisdictions

- 1) Work plan action: Continue jurisdictional monitoring for PCB occurrence to assess need for new local TMDLs and progress related to reducing PCB loads.
  - a. Pennsylvania
    - Continue statewide monitoring for PCBs in fish at approximately 100 sites. Not all in Susquehanna drainage.
  - b. Virginia
    - TMDL source investigation studies including monitoring and low-level water column samples for PCB fish consumption impairments in the Rappahannock and York Rivers. A second round of PCB monitoring that is more targeted at source areas needs to be designed and implemented; these waters have not been prioritized for the FY 2025-2026 list of TMDL Commitments to EPA as the second round of monitoring has been delayed.
    - Estuarine probabilistic monitoring in small tidal tributaries and embayments of the Chesapeake Bay which includes a list of 21 PCB congeners in sediment. This effort occurs annually.
    - Monitor all main stem tributaries to Bay listed as impaired. Fish PCB monitoring used on an as needed basis to monitor status. All Virginia river basins are monitored on a three-year rotational basis including non-Bay river basins.
    - TMDL source investigation studies including monitoring and low-level water column samples for PCB fish consumption impairments in the Rappahannock and York Rivers. A second round of PCB monitoring that is more targeted at source areas needs to be designed and implemented; these waters have not been prioritized for the FY 2025-2026 list of TMDL Commitments to EPA as the second round of monitoring has been delayed.
  - c. District of Columbia
    - Conduct fish tissue study. In FY 2025, DOEE plans to enter into an MOU with US Fish and Wildlife Service to conduct a fish tissue study. The project is expected to be completed in FY 2026.

- d. West Virginia
    - Approximately every five years, West Virginia performs a statewide fish tissue assessment to inform both fish consumption advisory and 303(d) listing processes. Mercury and PCBs will be analyzed.
- 2) Work plan action: Continue local TMDL implementation utilizing to the extent possible the outputs of this strategy including data compilations, results of Enhanced monitoring, guidance documents and local-level input.
- a. Virginia
    - Potomac River PCB implementation includes point sources and MS4s. Point sources that exceed WLAs will submit PMPs. Several Individual permits and Stormwater Industrial permits have been identified as requiring PMPs and are at different stages of implementation. MS4s have submitted Action Plans. In-progress.
    - Tidal James and Elizabeth rivers' point sources that have not screened effluent using the low-level method will be required to do so. Facilities that have screened their effluent and exceeded their WLA will be required to submit PMPs. Additional point source monitoring will occur once the tidal James River PCB TMDL is in place; PMPs will be required at applicable facilities. The TMDL has been delayed due to current PCB TMDL development efforts in the Upper James River watershed as well as limited staff capacity.
  - b. District of Columbia
    - Implement stormwater BMPs and green infrastructure to meet TMDL IP's first set of 5-year milestones. DDOEE is continuously working to implement and document BMPs to meet the required targets of the MS4 permit.
- 3) Work plan action: Determine whether the jurisdictions compile existing PCB outfall monitoring data for NPDES dischargers and assist with development of systems to compile all available information from governmental and academic organizations. This inventory will help determine whether there is a need for additional monitoring requirements to support TMDL.
- a. Virginia
    - Virginia has an Access Database used to store PCB data obtained from a wide array of matrices (sediment, water, effluent, etc.). The database structure, obtained from DRBC, was designed specific to storing data analyzed and reported using method 1668 including 209 PCB congeners (aka DRBC protocol). Virginia continues to use the Access Database although it is planned to be incorporated into DEQ's enterprise database (CEDS - Comprehensive Environmental Data System). This may now be delayed for two years or more based on other IT priorities. Regardless, all data continues to be uploaded and stored in this database. Internal discussions are occurring between DEQ's IT Department and the Watershed Programs but relative to the needs of the NPDES Program, the data base is low priority.

## Management Approach 2: Education and Awareness

Work Plan Action: Develop PMP guidance document for the control and reduction of PCBs in NPDES regulated stormwater and wastewater including an inventory of stormwater BMP options. This document would provide guidance to all Bay jurisdictions in implementing PCB load reductions established for dischargers through local TMDL development while recognizing the need for flexibility in PMP design. Develop guidance for unregulated

sources of PCBs for use in developing implementation plans under TMDLs. Virginia - In-Progress Contingent upon completion of VA DEQ's work to evaluate and assess cross jurisdiction applicability. Importance of document is recognized within DEQ as it has become a component of the Agency's Strategic Plan.

The Virginia Permitting Program is an integral component of this effort. Recently there has been significant turnover and due to the need for educating new staff, the process has slowed down. Guidance for use in developing implementation plans under TMDLs for unregulated sources of PCBs is not occurring in Virginia.

12. Have you identified new needs, or have previously unmet needs, that are beyond the ability of your group to meet and, therefore, you need the assistance of the Management Board to achieve?

No. TCW only requests that the jurisdictions and EPA Region 3 continue current momentum on developing and implementing PCB TMDLs and use the TMDL structure to help the TCW identify needs.

13. What steps are you continuing, or can you take, to ensure your actions and work will be equitably distributed and focused in geographic areas and communities that have been underserved in the past?

PCB presence generally increases as level of development/urbanization increases, which is also where there is a greater density of underserved populations. Efforts to reduce PCBs in urban areas reduces risk from contaminated fish to diverse populations.

TCW projects including PCBs-in-Schools efforts and the ongoing Fish Consumption Advisory infographic project are considering integration of DEIJ focus.