BIENNIAL STRATEGY REVIEW SYSTEM
Chesapeake Bay Program

Narrative Analysis

TOXIC CONTAMINANTS POLICY AND PREVENTION
AUGUST 2022 SRS QUARTERLY REVIEW

The narrative analysis summarizes the findings of the logic and action plan and serves as the bridge between the logic and action plan and the quarterly progress meeting presentation.

1. Examine your red/yellow/green analysis of your management actions. What lessons have you learned over the past two years of implementation?

The Toxic Contaminants Policy and Prevention management strategy has employed five management approaches over the past two years. A brief description of what was accomplished and what was learned:

1. Regulatory Programs – Leveraging Clean Water Act Total Maximum Daily Loads (TMDLs) remains the major strategic element. The polychlorinated biphenyls (PCB) story map shows widespread impairments and active TMDL programs in the jurisdictions. Some areas listed as impaired for PCBs have no TMDLs active or planned. Implementation of management actions under established TMDLs is limited. Jurisdictions follow unique paths in designing and implementing PCB TMDLs including modeling tools. EPA is working with Chesapeake watershed jurisdictions on a long-term strategy for PCB TMDLs referred to as Vision 2.0. (draft 9/2022). Vision 2.0 will initiate a process for the jurisdictions to establish new two-year priorities. There will be a pilot project to test application of the Clean Water Act's Alternative Restoration Plan (ARP) approach (remains in Category 5). The pilot ARP will inform a new guidance document, which will provide a framework that can be used for PCB-oriented ARPs.

The jurisdictions continue PCB monitoring including fish tissue. No synthesis of that data is available.

2. Voluntary Programs – A GIT Funding report on the feasibility of reducing the amount of PCBs still in service (electrical equipment, caulks, paints) across the watershed concluded that a greater mass exists in fluorescent light ballasts (FLBs) than in electrical transformers. This led to a strategy shift to focus on the controlled removal of FLBs in schools and in collaboration with the sustainable schools outcome. The TCW and Healthy Schools team completed a Bay Backpack activity module titled Safe and Efficient Lighting, which provided informational resources on how to properly manage FLB disposal. TCW has learned that there can be other PCB sources in schools and buildings built before 1980 including caulk, paint and floor adhesives. TCW is benchmarking other jurisdictions in the US including Vermont who is implementing an extensive school testing program.

3. Education and Awareness – TCW completed the User Guide for the fish consumption advisory infographic. There is a need to develop and rollout a strategy for using the infographic for signage and in centers where women of child bearing age get their health and nutrition counseling.

4. Science and Research – GIT Funding report on the effect on PCB releases following upgrade of wastewater treatment plants concluded that PCBs are reduced through upgrades; however, PCBs are not destroyed but rather partition to the biosolids. Recent analyses of the fate of PCBs in wastewater systems including a USGS report from the Back River Md plant suggest that substantial quantities of PCBs partition to biosolids and that retrofitting components of wastewater conveyance systems is an effective means of reducing the amount of PCBs delivered to wastewater treatment plants. These reports raise questions about the disposal of biosolids and the potential for cycling PCBs back into the environment.

There is a need for coordinated finer-scale modeling at the micro-catchment level.

5. PCB Consortium – Partners requested that analysis of the feasibility of a cooperative inter-jurisdiction PCB consortium be delayed until after WIP III. Subsequently staff time has not allowed this assessment to begin in great detail; however TCW did conduct a roundtable at a TCW meeting. During the roundtable, the jurisdictions and EPA Region 3. The Toxic Contaminants Workgroup (TCW) believes this approach has substantial potential benefits and intends to pursue it in the coming planning cycle.

No new factors influencing achievement of this outcome have been identified.

2. Regardless of how successful your short-term progress has been over the past two years, indicate whether we are making progress at a rate that is necessary to achieve the outcome you are working toward. The example graph below illustrates this concept.

- The toxic contaminants indicator maintained by CBP has shown a trend of increasing extent of impairments as established by the watershed jurisdictions. In the last update, the percent of tidal water segments with full or partial overlay of a toxic contaminant impairment went up from 82% (2016) to 84% (2018) based on the jurisdictions' 2018 Integrated Assessment Report.
- There is no completed analysis of the availability and adequacy of fish tissue data to establish a trend in either direction regarding the concentration of PCBs in fish tissue.

3. What scientific, fiscal and policy-related developments will influence your work over the next two years?

- Scientific – Partitioning PCBs to biosolids, which are land applied.
- Fiscal –
    - BIL funding for emerging contaminants
    - Settlement of a class-action lawsuit against Bayer (Monsanto) Corp. Some of the settlement funds will be directed to localities in the Chesapeake watershed including Baltimore Back River and DC Potomac/Anacostia.
- Policy - 303d National Vision 2.0 (V2) EPA HQ. (Vision 1.0 expires September 2022)
    - Final V2 document expected September 2022. Goals in V2 are written to improve effectiveness of 303d/TMDL programs and restoration plans.
    - Will require identification of assessment methods being used by jurisdictions for monitoring for emerging contaminants and using those methods to complete assessments. What support and research are needed? May use BIL funding for emerging contaminants assessments.
    - Trend analysis is part of V2's focus on jurisdiction program effectiveness, looking at changes in environmental quality, post-TMDL monitoring. Are the PCB TMDLs effective?

- Long term priorities for TMDL and restoration plan development (2025-2032) will be due by April 2024. What information will be needed? What obstacles can we predict and help fill prior to 2024 due date?
- V2 TMDL Execution Goal has four focus areas – DEIA, climate, Tribal engagement, capacity building. How are communities provided an opportunity to be involved during planning?

4. Based on your response to the questions above, how will your work change over the next two years?

- Knowing that PCB loading is dynamic and that there are many species of fish under consumption advisories, we plan to continue with a strategy that relies heavily on CWA TMDLs and possibly ARPs while complimenting that approach with voluntary programs, education and awareness building, research and pursuing a larger scale consortium. TCW does not envision adding new major elements but rather to work within the existing management approaches. All proposed activities for the coming planning cycle fit within the existing management approaches.

5. What, if any, actions can the Management Board take to help ensure success in achieving your outcome?

- Allocate staff and financial resources to move PCB TMDLs forward
- Continue to enhance the network of regulatory officials to advance PCB TMDLs
- Use existing permit controls (MS4, wastewater) to implement WLAs
- Help push PCB Track Down Guidance to local governments
- Support drafting a PCB TMDL state-of-the-Bay-watershed report
- Consider a stronger partnership-based PCB consortium
- Connect BIL resources to voluntary PCB removal