Toxic Contaminants Workgroup (TCW)
Jamboard Summary and Detailed Notes for PCB TMDLs Roundtable 03.09.2022

On March 9, 2022, Toxic Contaminant Workgroup hosted a PCB Roundtable update meeting to inform status of PCB TMDL development and implementation in the Chesapeake Bay watershed. This document is a working synthesis of topics discussed. Detailed notes from the meeting are also included for your information and comment.

Synthesis of Roundtable

CB watershed jurisdictions with existing TMDLs were created in the pre-2017 ("consent decree era") of TMDL approval by EPA. EPA TMDL Vision 2.0 focus will include how we can improve to meet expectations and be better poised for litigation. Alternate restoration plan (ARP) approach will be part of this new Vision 2.0, to allow for faster implementation. DE is working with EPA Region 3 on a pilot application of ARP in St. Jones Watershed (DRB, not CB). (This will be the first toxic contaminant ARP in Region 3).

There are variations in strategies amongst the Bay jurisdictions and nearby watersheds for PCB TMDL Implementation and compliance. MD has focused on MS4s and source trackdown, whereas DE (DRBC) initially focused on PMP/permitted facilities (but new water quality standards are proposed for Stage 2 PCB TMDL). VA plans more of a hybrid approach with a focus on PMP plans and permitted facilities, while acknowledging the role MS4s have to play. DC's strategy is similar to MD, but a large portion of TMDL is tied to the Anacostia Sediment project remedial strategies (contaminated sediment site undergoing CERCLA-like process).

Many guidance documents are on the horizon for release, including 2 related to source trackdown (MD and VA). DE (DRBC) and VA have PMP guidance released or soon to be released. EPA TMDL Vision 2.0 will be released in September 2022. A review of these documents once released and noting similarities, differences could be helpful in 2023-2024. In addition, most jurisdiction 2022 IR (303d listings) will be up to date by summer 2022 according to EPA and should allow for updates to PCB story map by TCW.

TMDL Development: In Maryland, the Conowingo pool/Lower Susequehanna TMDL is under development and expected to be submitted for EPA approval in fall 2022. In VA, tidal James, Upper James TMDL development are underway, with very high numbers of WLA assigned to permittees in the tidal James. Into the future, VA will be working on Rappahannock and York Rivers.

New advances in TMDL programs: DOEE is advancing microcatchment models to allow for better ways to target BMPs and monitor at a smaller scale allowing for mapping to HUC16 scale. MDE is advancing a subwatershed screening approach to allow for targeting of specific stream segments. DE WATAR program is conducting trend analysis (back to 2012) PCBs in fish tissue. Updates from jurisdictions on these advancements would be of interest to the TCW in 2023-24.

Current progress in TMDL implementation is centered in urban areas near DC (including upstream MD counties) and Baltimore. These areas are consistent with our recommendations for enhanced monitoring to PSC submitted at the end of calendar year 2021.

In an effort to identify sources not identified during TMDL development and to further refine sources already known, Maryland, DC, and Virginia all are focused on desktop and field trackdown approaches. MD and VA have forthcoming guidance for these activities, with VA specific to industrial and municipal approaches to sampling.

DRBC reports a 76 percent reduction in PCBs due to Stage 1 PCB TMDL implementation (PMP focused).

Several Bay jurisdictions fulfilled their requirements in the consent decree era of priority PCB areas in 2011. Very few additional TMDLs have been approved since that time. There are a number of legal actions related to PCB TMDLs in the watershed including the vacatur of 2003 TMDL approvals in DC. Changes to these TMDLs are currently being drafted by DOEE and MDE. The TMDL in the Gunpowder and Bird rivers was legally challenged in 2020 for not assigning a load allocation to the bottom sediment. There is currently no resolution to move the stalemate forward and negotiations are ongoing.

Some questioning arose about ARP and its ability to address legacy contamination. Implementation plan will highlight current reduction strategy, data collection gaps and updates to permits that may be needed. Not clear if the attainment target in ARP is fish tissue or human health (water column) targets. Ongoing updates on the ARP process is of interest to TCW, particularly how it compares to a more traditional TMDL approach.

Chesapeake Watershed PCB TMDLs Roundtable Themes, Strategies, and Major Takeaways

Detailed notes:

- Pre-2017 TMDLs // TMDL Vision 2.0 (aka Post-2017 TMDLs (improved)) How can we improve to meet expectations etc., poised for litigation
- One post-2017 vision 2.0 item - Alternate restoration plan - instead of focusing on load pie, focus shifts to what is being done/could be done to make progress. Very little guidance currently, but an effort is underway to develop ARP with DNREC that addresses a 303d impairment for PCBs as a pilot application in the St. Jones watershed (DRB).
- Alternative Restoration Plans - guidance from EPA available; straight to implementation; identify COCs and go to identifying PCB sources; first toxic ARP; EPA's Long-Term Guidance on Alternative Restoration Plans. https://www.epa.gov/sites/default/files/2015-10/documents/2016-ir-memo-and-cover-memo-8_13_2015.pdf
- ARP has all same components of TMDL but streamlines the implementation step. More rapid actions, [liken to voluntary cleanup in the cleanup world?] Stays in category 5. Va hesitant to use ARP approach because of PCB persistence and change is long-term.
- Outside of watershed: DRBC Delaware River/Bay Stage 2 PCB TMDL; change to WQS for PCBs all zones 16 pg/L tidal; draft will go to states then public review; DelPCB model is built from WASP 5.12; model has been refined and updated and will be used in Stage 2; PMPs to track down specific facility reductions; qtly co-regulators meeting; 1668a required; Info on DRBC's DELPCB model can be found at https://www.nj.gov/drbc/programs/quality/models.html. Note: This water quality target is less than those specified in many MD TMDLs.
- Info on DRBC's PMPs is found at https://www.nj.gov/drbc/programs/quality/pmp.html

- MDE: 31 PCB TMDLs; 10 will require strategies. Assigns to Phase 1 MS4 permits. TMDL plans required, source trackdown monitoring plans will be required (Guidance is forthcoming)
- MDE: Source Trackdown guidance - how to move forward with implementation? Source tracking efforts are needed to identify discrete land sources not identified in TMDL development. Consists of desktop analysis, subwatershed focus, risk scoring, monitoring (adaptive),
- Non-regulated sources can play a considerable portion of load (as seen in Lewis Creek, VA)
- VA - PMP plans and focus - permitted facilities, MS4s have concerns about what happens ifa source is identified Watching MD progress related to MS4 strategy.
- VA observed most coming from permitted facilities - but hesitation to monitor until TMDL in place.

Development of "new" PCB TMDLs and associated advancements (e.g. modeling, TMDL development field studies, desktop efforts)

Detailed Notes:

- DRBC: new water quality standards across all zones in Delaware River at 16 picograms / ml in water column driving stage 2 PCB TMDL implementation.

Commented [MH1]: Much lower than the MD target water concentration

Commented [MEH2R1]: Confirmed: Delaware River Basin Commission | Polychlorinated Biphenyls (PCBs) (nj.gov)

- DE's WATAR program started in 2012 with data collection that supports trending analysis and decrease in PCBs (and other PBTs) in fish tissue.
- DOEE: Micro catchment models - come up with better ways to target BMPs to understand/monitor at smaller scale. Map up to HUC16 scale, planning purposes
- MDE: Conowingo Pool/Lower Susquehanna under development (VIMS). to be submitted fall 2022
- MD: Subwatershed screening via scoring system based on desktop analysis in next five years. 1668 or equivalent congener method. Trying to bracket stream segments for further testing. MD looking for alternative ways / methodology for testing outfalls in suspect segments. For example, phase 2 effort in Sawmill Creek, AA County.
- VDEQ: TMDL development (grab samples to develop site specific) - riverine, reservoir , other
- Tidal James, (300+ permits assigned a WLA!), upper James moving more quickly
- Rappahannock and York - future in VA

Targeted areas of focus for PCB TMDL progress (e.g. Phase 1 MS4s, geographic areas, etc.)

Detailed Notes:

- DC: Focus on Anacostia sediment, PCBs, also PAHs and other metals
- DE looking at NPDES and MS4 permits, but also looking at waste sites (nonpoint sources). St. Jones watershed as pilot ARP.
- Lower Beaverdam creek (PG, DOEE) ; investigations have led to source trackdown efforts (Scrap facility, Penssry Drive area)
- Baltimore Harbor (AA, Balt city, county)), Back River (Balt City and Co), Patuxent (plan), Lower Beaverdam Creek (Anacostia, PG)

Ongoing source track down activities – what does that entail (field, desktop, both)?

Detailed Notes:

- DC/Dev -- What additional sources were not part of TMDL development. Strategies working w/ collaboratively with MDE.
- MD: Extensive guidance for trackback in MD. (see slides) - both desktop and field
- VA: PCB Track down and sampling plans for industrial and municipal approaches - VA Guidance coming this year.
- Delaware River: PMPs in Stage 1 achieved 76% PCB reduction. PMP will be used as basis for Stage 2. Using 1668A.

Commented [MEH3]: Does DRBC attribute this to source tracking? Is this addressed in PMP guidance?

Sampling and analytical methods and why selected (e.g. passive or grab sampling, 1668, 8082; are you planning to transition to EPA 1628)?

Details about sampling approaches were captured in the PCB monitoring inventory conducted in 2021 and are summarized in attached tables.

- Most are recommending 1668 (or similar congener method)

Other Important Discussion Points

Detailed notes:

- DC DOEE TMDL Approvals in 2003, challenged in 2019 (2009?), lawsuit vacated but permits could be written until updated TMDLs. MDE and DOEE jointly writing changes. Heptachlor-epoxide, pest, PAHs, metals. July 2021 public notice for updates. Vacatur expires in March 2022.
- MD Lawsuit in Region: MD PCB TMDLs, July 2020 EPA 2016 approval Gunpowder and Bird Rivers. Riverkeepers, no load allocation assigned to bottom sediment. EPA believes TMDLs are adequate for various reasons. Currently stalemate
- Attainment: Fish tissue but not HH, water column not met, but fish coming into attainment
- Pilot of addressing legacy contaminants using ARP: WATAR program supports this approach, implementation plan will highlight how currently reducing, data collection gaps, permits that may need updates/
- DNREC: (Cargill) St. Jones Watershed: Legacy contaminants tracking improvement over time, establish for plan formation, makes sense, documentable, reduction goals - monitoring plans to track achieving goals. NPDES, MS4, waste sites
- EPA R3: States fulfilled requirements TMDL developments 2011. Consent decree era focus on areas of priority few new TMDLs into 2017. Vision for the 303d program can be found at https://www.epa.gov/tmdl/new-vision-implementing-cwa-section-303d-impaired-waters-program-responsibilities
- EPA R3: Long term vision post consent decree, 2016-2022 timeframe. Reflected in story map, planned for development. Vision 2.0 under development, working with states and release end of FY. Launch long-term planning efforts.

Possible areas of CBP Partnership collaboration through TCW or other means (for consideration in updates to Policy and Prevention and Research strategies and logic and action plans):

- PCB impairment listings and TMDL status (continued updates to story map)
- PCB TMDL Strategy 2.0 (Promotion of strategy, TCW as forum for EPA to present, field questions)
- Extracting lessons learned from DE and other US watersheds and annual update from jurisdictions – April 2023
- Tracking ARP pilot in DE
- Modeling – finer scale (DC)
- Climate implications (e.g. increased stormwater flow?)
- Techniques and best practices for trackdown studies (Promotion of state guidance, comparison – identify similarities and differences)
- Geographically specific collaboration – highlights of current collaborations such as Lower Beaverdam creek
- Best practices for PMPs (promotion of state guidance)

Commented [MH4]: DOEE: Does this include PCBs? Not clear

Commented [MH5]: I think this was a question from Len, but cannot recall context. Not sure if asking about attainment wrt ARP?