

BIENNIAL STRATEGY REVIEW SYSTEM

Chesapeake Bay Program



Logic and Action Plan: Post Quarterly Progress Meeting

Toxics Research – 2021-22 PCB-Relevant LAP items

Red text: not addressed, still relevant?

Green text: addressed, any follow up?

Yellow highlight: need status update/partially underway – likely retain

ACTIONS – 2021-2022

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
Management Approach 1: Synthesize scientific information to make fish and shellfish safer for human consumption					
1.2	Synthesize science information on PCBs to improve understanding of fate and transport, improved source refinement methods and understanding to reduce impact on fish and associated consumption advisories.	Stay informed on progress of models in James River, Anacostia, upper Potomac, any others as they may inform adaptive management decisions/areas of focus for others in the watershed.	TCW members and academic partners conducting modeling		2021-2022
		Continue to refine methods and improve understanding of sources and fate of PCBs in the environment to inform selection of most appropriate mitigation options through briefing of various site-specific study results. Includes tracking progress and summarizing best practices for PCB track down studies. Communication of the results of a completed study to investigation PCBs in wastewater biosolids, effluent, and sanitary sewer system deposits in aging infrastructure in addition to upland stormwater sources.	State and local jurisdictions, USGS, UMBC, academic partners, CBP communications team		2021-2022
		Review literature and assess need for further study of PCBs in the environment from biosolids and dredged material land	Science partner TBD (e.g., CRC, CBP)		2021-2022

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		application, small combustion sources, and atmospheric deposition.			
		Tracking the implementation of PCB TMDLs in the watershed and associated investigations and progress to inform source identification methods and recommendations	All jurisdictions		2021-2023
		Analytical and monitoring methods for PCBs: Work towards development of a hierarchy of PCB analytical methods for desired use to promote comparison of data across the watershed for similar needs. Similarly, develop hierarchy of sampling methods for desired use (e.g., source refinement, BMP effectiveness) to promote comparison of data.	All, CBP TCW members (<i>Inventory complete, but hierarchical recommendations not complete</i>)		2021-2022
1.3	Communication of fish consumption advisories to SFGIT	Present story maps and information about fish consumption advisories due to PCBs and mercury to SFGIT for consideration in management activities.	TCW, leadership of SFGIT		2021-2022
Management Approach 2: Understand the influence of contaminants in degrading the health, and contributing to mortality, of fish and wildlife					
2.1	Assess the effects of contaminants on fish and shellfish in tidal waters	Ongoing regional focus on Anacostia River sediment contaminants effects on fish health including Mummichog/Killifish and Bullhead catfish health and mortality. This assessment will expand upon previous studies in the Anacostia that demonstrated decrease in tumor prevalence in the Anacostia River. Updates will be provided to the workgroup from the additional sampling.	FWS (Fred Pinkney)		2021-2022
Management Approach 3: Document the occurrence, concentrations, and sources of contaminants in different landscape settings					
	Better define the sources and occurrence of EDCs and other	Communicate results of studies to identify the sources and occurrence of toxic	USGS (Kelly Smalling)		2021

ACTIONS – 2021-2022

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
3.1	toxic contaminant groups in different landscape settings	contaminants contributing to degraded fish health.			
		Inform presence of select contaminants of emerging concern (including flame retardants, contemporary pesticides, and industrial by-products; and stain-resistant compounds, such as perfluorinated and phenolic compounds (PFCs) and legacy contaminants through monitoring of sediment, water, and bivalves as part of the regional Mussel Watch program (NOAA). Evaluate regional partnership between NOAA and CBP.	NOAA Oxford		2021-2022
		Communicate results of USGS inventory efforts of select toxic contaminants and ability to use data for assessment of status and trends	TCW and states, DOEE, USGS		2021
		Continue to evaluate outcomes from Anacostia River sediment investigation to improve understanding of PCBs and other contaminants of concern in urban environments.	TCW, DOEE, USGS, UMBC, FWS		2021-2022
3.3	Examine the co-occurrence of toxic contaminants with nutrients and sediments to inform co-benefit analysis (see MA 4)	Explore options to use existing databases (CBP Data Dashboard, USGS inventories, others) to spatially assess areas with nutrient and/or sediment impairments and monitoring and toxic contaminant impairments. Assess usefulness of a story map or other graphic within CB Watershed, or geographically focused areas to be determined. Goal would be to spatially identify areas with potential for co-benefit toxic contaminant reductions for consideration in 2 year milestones and for fisheries management. (This is	TCW, members SFGIT		2021-2022

ACTIONS – 2021-2022

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		consistent with CBP STAC workshop recommendations)			
Management Approach 4: Synthesize and promote science to help prioritize options for mitigation to inform policy and prevention					
4.1	Gather and summarize further information about direct and co-benefits for mitigation of toxic contaminants, and nutrient and sediment co-reductions	Inventory case studies where innovative remediation of sediments/water have occurred in the watershed and evaluate how they could be adapted or implemented for TMDL compliance.	USGS, working with academic and state partners		2021-2022
		Establishing management relevant timelines to detect regional change in stressors following BMP implementation. We will use existing models and available, water quality indicator data that are of interest to managers and stakeholders for evaluating the effectiveness of management interventions within the Bay including mercury, total PCBs, herbicides (i.e. atrazine and metolachlor), and total estrogenicity. Similar outcomes will also be evaluated for nutrients and sediments.	USGS		2021-2023
4.2	Monitor/survey efficiency of BMPs to remove toxic contaminants (mostly PCBs and other contaminants) (Consistent with CBP STAC workshop recommendations)	Bioretention efficacy and optimization for removal of toxic contaminants	UMCP		2021-2022
		Design/testing of enhanced media in stormwater control structures for degradation of toxic contaminants	UMCP		2021-2022
		Investigate impact of wet ponds (as a common, urban stormwater BMP) on PCB capture and association with land use (in coordination with other relevant CBP workgroups)	MDE and USGS		2021-2023
		“Parking lot” for other BMP science advances, for PCB and non-PCB contaminants (Inside and outside watershed); ongoing bibliography of case studies	TCW members		2021-2022