

*Through the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...*

**Goal:** Toxic Contaminants

**Outcome:** Continually increase our understanding of the impacts of and mitigation options for toxic contaminants through **research**.



## What is our Outlook and Recent Progress?

- Outcome



- Recent progress

- Further characterize the occurrence, concentrations, sources and effects of mercury, polychlorinated biphenyls (PCBs) and other contaminants of emerging and widespread concern.
- Identify which best management practices might provide best benefit, or multiple benefits of reducing nutrient and sediment pollution as well as toxic contaminants in waterways.



RECENT PROGRESS  
**INCREASE**



## Based on what we learned, we plan to ...

- Emphasize PFAS across most management approaches (out of emerging issues)
- Promote ongoing PCB TMDL implementation progress, bring forward associated science advances
- Promote microplastics risk assessment progress/~~inclusion of PPAT into TCW~~



## Help is Needed...

- Support for jurisdictional and federal agency participation and engagement in PFAS-focused science and coordination efforts
  - *Capacity to address forthcoming needs and recommendations from the STAC workshop report*
  - *With adequate notice, make appropriate staff available to engage in quarterly TCW PFAS discussions*



## Help is Needed...

- Enhanced consideration for reducing toxic contaminants when planning nutrient and sediment practices
- *Identify and facilitate opportunities for collaborations with other CBP workgroups including WWT, ag, stream health and the sustainable fisheries goal team*



## Help is Needed...

- Support opportunities to advance PCB enhanced monitoring and assessment as proposed in the PSC monitoring report by allowing staff to contribute to this effort
  - *Feasibility\**
  - *Funding*
  - *Implementation*

# Ongoing/In Progress/New Science Needs

- Assess effects of toxic contaminants on fish and shellfish in tidal waters (Research outcome)

Engaged resources

- Tracking studies and outcomes that examine the decline in tumor prevalence in the Anacostia River
- Tracking study and outcome of the yellow perch condition in urban areas
- Inform results and outcomes of studies designed to address temporal and spatial changes in fish health in mixed use watersheds in the freshwater portion of the Watershed

Needed description (please remove reference to fish consumption advisors, that is not relevant to this need)

- New: Impacts of PFAS on health of fish and shellfish (individual and mixtures of importance)
- New: Guidance for PFAS sampling and analysis methods to support fish health studies and how it differs from sampling design for fish consumption studies (bioconcentration and biomagnification, plasma/blood)

Status of the resource

- Full resources
- Partial resources
- No resources

# Ongoing/In Progress/New Science Needs

- Document occurrence, concentrations, and sources of legacy and widespread contaminants in different landscape settings (Research outcome)

## Engaged Resources

- Tracking of results and outcomes of studies examining occurrence and concentrations of PFAS in wastewater effluent, streams receiving wastewater (USGS)
- Tracking of results and outcomes of studies examining occurrence and concentrations of PCBs and PFAS in wet pond drainages categorized by land use (USGS)
- Ongoing inventory of PFAS sampling efforts in the watershed that includes sampling and analysis methods leading to a mixture of the most common PFAS from common sources. (STAC Workshop)

## Needed Descriptions

- New: Utilize DRBC databases of 1668 (congener-based) PCB data and PCB-era and current land use to develop a statistical model to identify patterns in PCBs related to current and/or former land use categories.
- New: Utilize USGS data release (Banks and others, 2022 [Priority Toxic Contaminant Metadata Inventory and Associated Total Polychlorinated Biphenyls Concentration Data - ScienceBase-Catalog](#)) to assess retrospective statistical trends in PCBs in fish tissue in 3 basins of the Chesapeake Bay watershed; lower Susequehanna, James, and Potomac.

Status of the resource

- Full resources
- Partial resources
- No resources





## PFAS FOCUS

- *Focused technical meetings within TCW framework*
- Quarterly – suggested February, May, August, November 2023
- Generalized technical topics using a similar framework at each meeting