QUARTERLY PROGRESS MEETING – July 2020
Chesapeake Bay Program

Toxic Contaminant Research Outcome

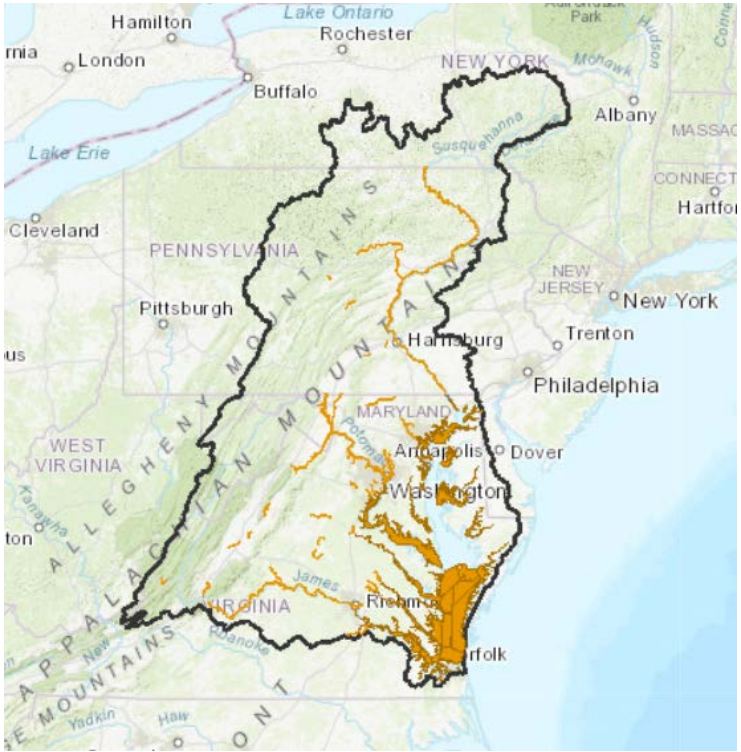
Presented by Emily Majcher, USGS

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

Goal: Ensure that the Bay and its rivers are free of effects of toxic contaminants on living resources and human health

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

How You Can Help



- Making fair progress, but sometimes hard to gain traction for toxic contaminants;
- <u>Need for effort</u>:
  - Consideration of toxic contaminants in Ph 3 WIPs and 2-year milestones
  - Input on next steps for mercury
  - Coordinated plans for PFAS

L

Learn

What have we learned in the last two years?

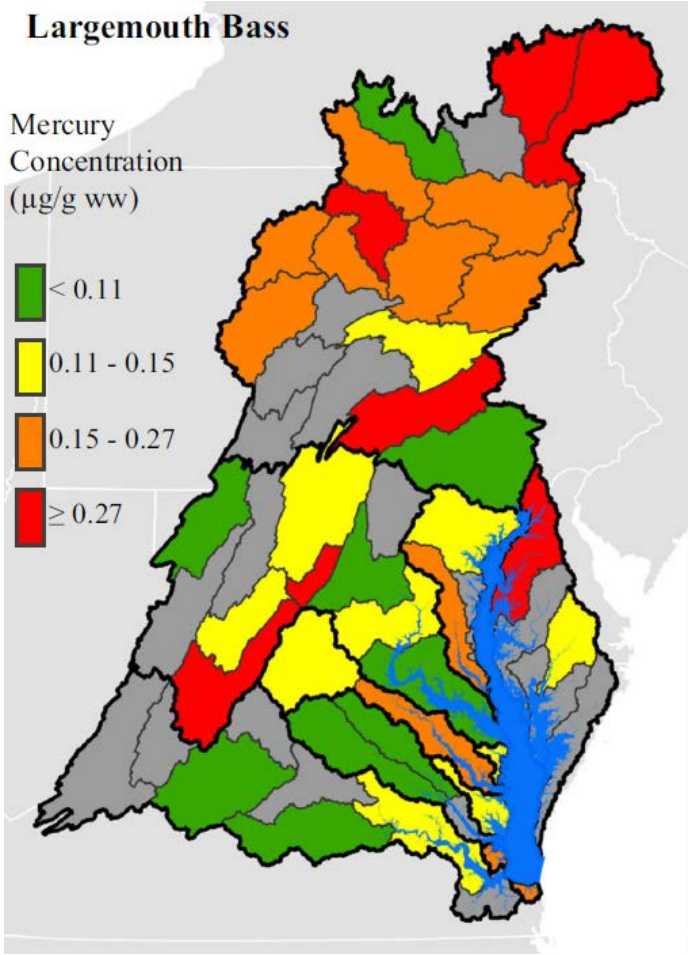
Successes and Challenges

- MA1: Supply information to make fish and shellfish safe for human consumption - **Mercury**
  - Success: Mercury story map and white paper
  - Success: Mercury prevalence in freshwater fish (studies and outcomes)
  - Challenge: Inventorying data in various media in all CB partner states to assess status and trends

Success

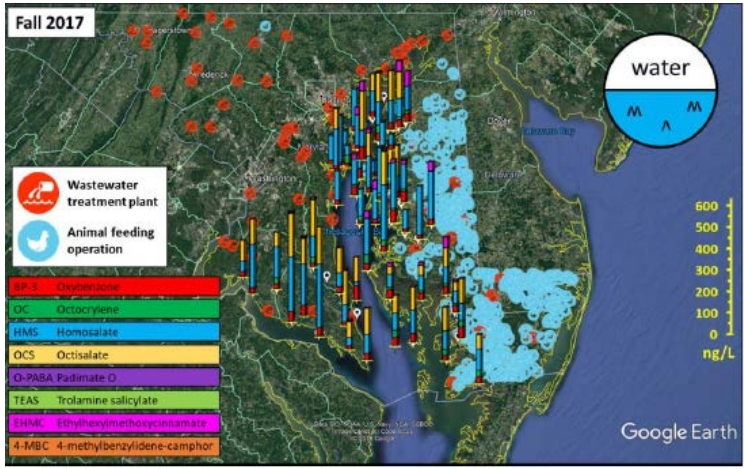
Mercury in freshwater fish

- Willacker and others, 2020 publications
  - First of its kind watershed-wide assessment
  - More than 1/3-1/2 concentrations posed risk to fish, birds, humans
  - **Some mischaracterization in the media translation – did not assess rockfish in tidal waters and their safety for consumption, only non-tidal waters were considered**



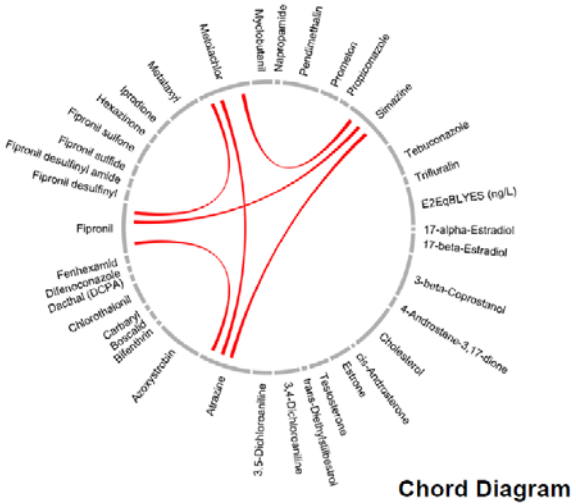
Successes and Challenges

- MA2: Understanding the influence of contaminants in degrading the health, and contributing to mortality, of fish and wildlife
  - Success: Contaminants in fish in urban areas, oysters in Chesapeake Bay
  - Challenge: Connection with state wildlife agencies



Successes and Challenges

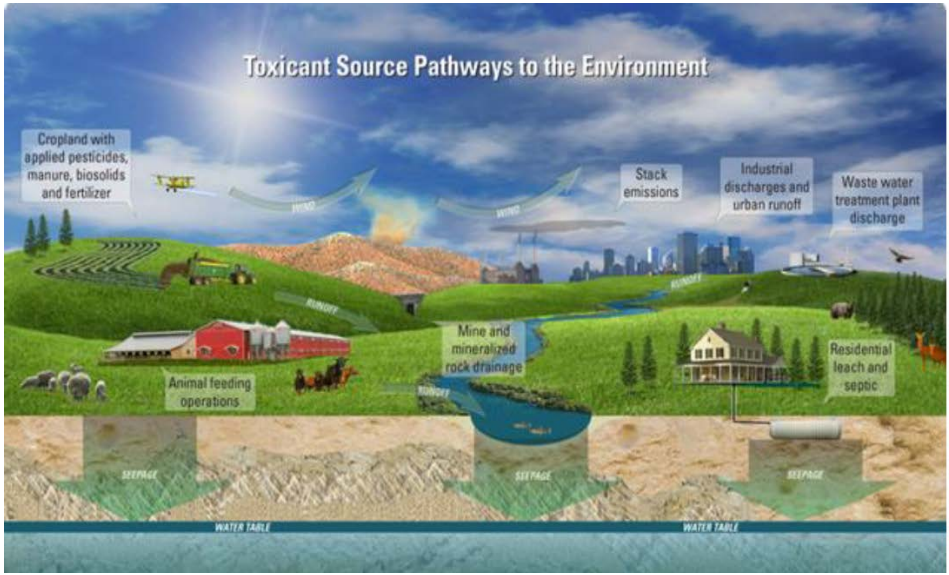
- MA3: Document the occurrence, concentrations, and sources of contaminants in different landscape settings
  - Success: (C0-)occurrence of pesticides, hormones, other organic contaminants in rivers of CB
  - Challenge: Inventorying and assessing co-occurrence of toxic contaminants with nutrients and sediment



Chord Diagram

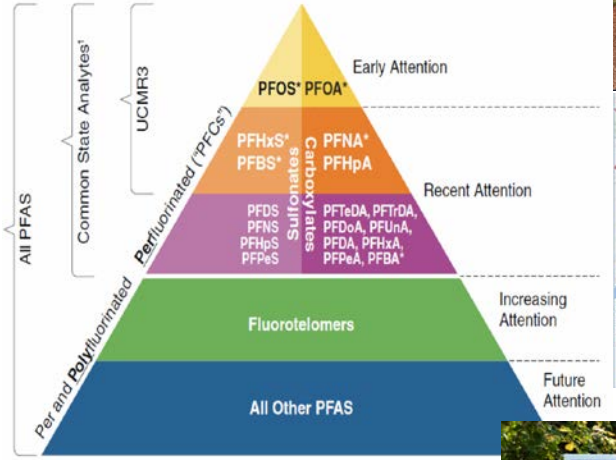
Successes and Challenges

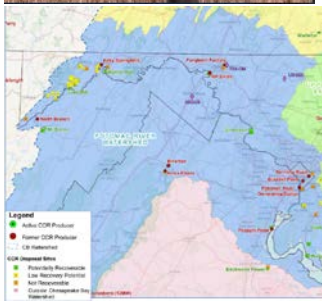
- MA4: Science to help prioritize options for mitigation to inform policy and prevention
  - Success: Progress on understanding removal of contaminants in BMPs through STAC workshop and report
  - Challenge: Interacting with other workgroups



Successes and Challenges

- MA5: Gather information on issues of emerging concern
  - Success: Microplastics workshop planning and execution
  - Success: Knowledge transfer – 6 emerging issues, prioritization
  - Challenge: Too many emerging issues





What is our Expected and Actual Progress?

- Further characterize the occurrence, concentrations, sources and effects of mercury, PCBs and other contaminants– **Good**
- Identify which BMPs might provide multiple benefits of reducing nutrient and sediment pollution as well as toxic contaminants - **Fair**

On the Horizon

- Science: PFAS status, mercury/EDC follow on, microplastics toxicity
- Policy: PFAS thresholds, microplastics regulations/Action team
- Fiscal: COVID-19 impacts

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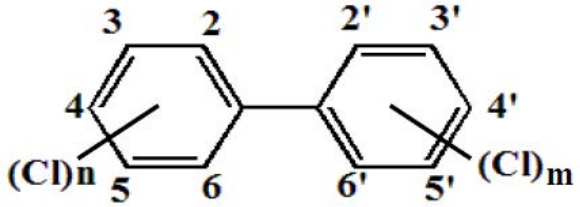
Adapt

How does all of this impact our work?

Based on what we learned, we plan to …

- MA1: Mercury+PCBs – Opportunity for integrated monitoring
- MA2: PFAS- Nature and extent of in watershed surface waters and fish to better assess resource impacts
- MA3: Status/occurrence of toxic contaminants in wastewater and streams in urban areas



Based on what we learned, we plan to …

- **MA4:** GIT funding proposal to explore approaches to including toxic contaminants in CB decision tools
- **MA5:** Support the microplastics action team, expand focus on PFAS to better understand resource impacts

Help

How can the Management Board lead the Program to adapt?

Help Needed

Policy: Encourage jurisdictions and federal agencies to consider toxic contaminants in N, P, sediment management actions in Phase 3 WIPs (co-benefit or negative impacts) and two-year milestones

Science:

- Mercury: input on next steps for science given management approaches
- PFAS: Commitment from jurisdictions to support a more coordinated science approach

Discussion