Responding to the PSC Request to Improve the CBP Monitoring Networks: Interaction with the Toxic Contaminant WG

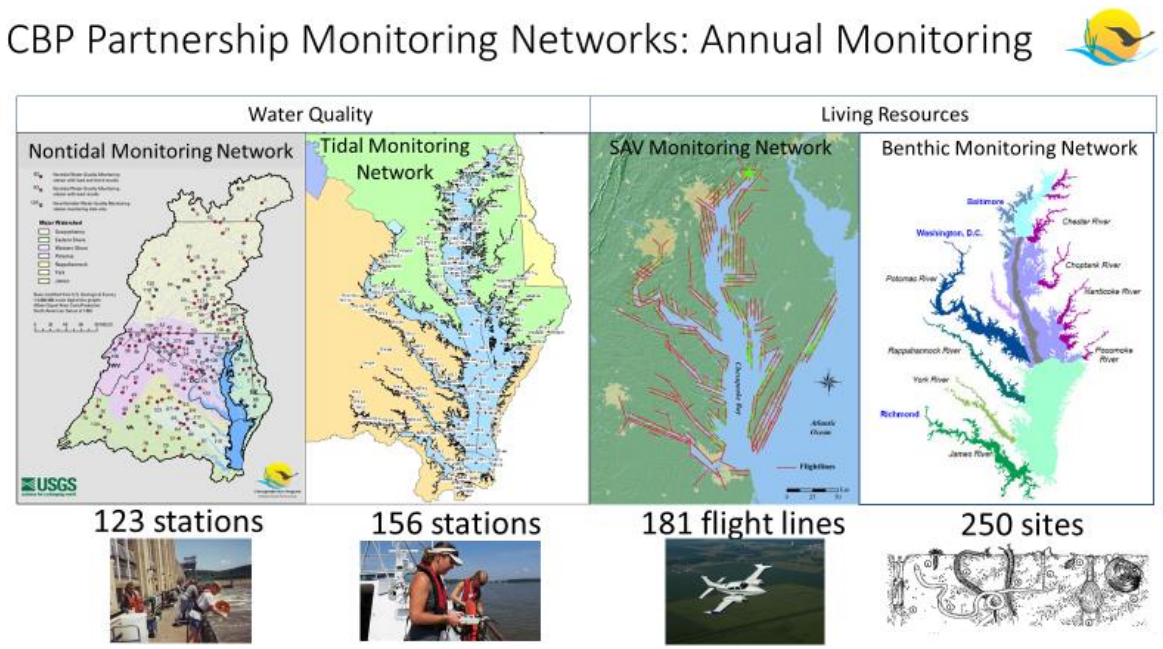
Scott Phillips and Emily Majcher,
July 14, 2021

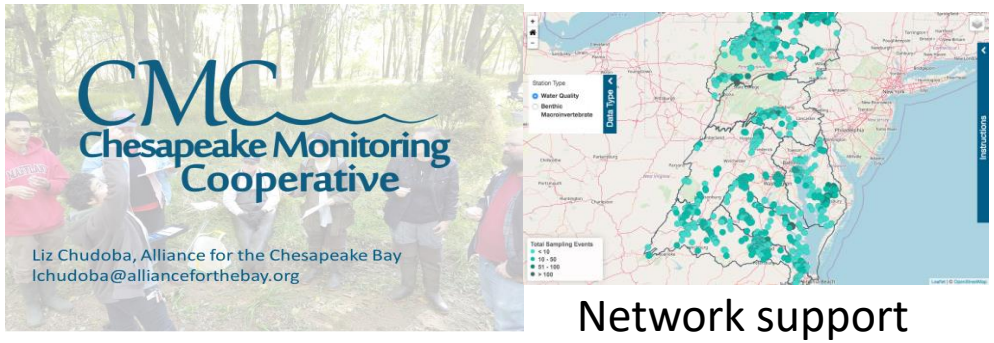
Follow-up from Peter Tango

June, 2021

Reminder
March 2021: Monitoring Presentation to the Principal Staff Committee

- Lee McDonnell provided monitoring presentation on March 2
- Help them better understand CBP budget and funding for monitoring
- *CBP Monitoring Networks*:
  - Tidal water quality
  - Nontidal nutrients and sediment
  - SAV
  - Tidal Benthic organisms
  - Citizen Monitoring
- Current Funding:
  - CBP $5M and partners >$7M





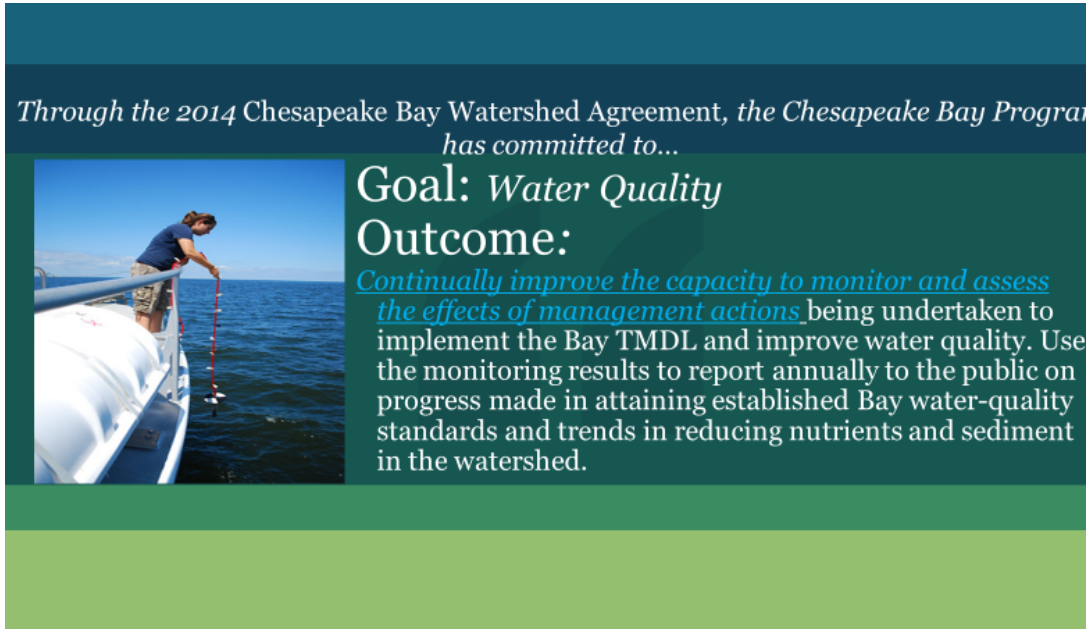
Network support

PSC request:

- In response to the status report, PSC requested information be provided on what is needed to improve the CBP monitoring networks, including:
  - (1) an overview of current status and threats to the networks, and
  - (2) what is needed to address the monitoring networks capacity shortfalls.

Opportunities and Benefits of the PSC request

- Over a decade since the last CBP monitoring evaluation
- Address CBP Outcome: Standards Attainment and Monitoring Outcome
- Address selected monitoring needs of other CBP outcomes
- Consider new technologies and innovation
- Identify priority improvements and fill gaps



Process

9 months start to finish

(April-Dec)

-Questions for existing networks.

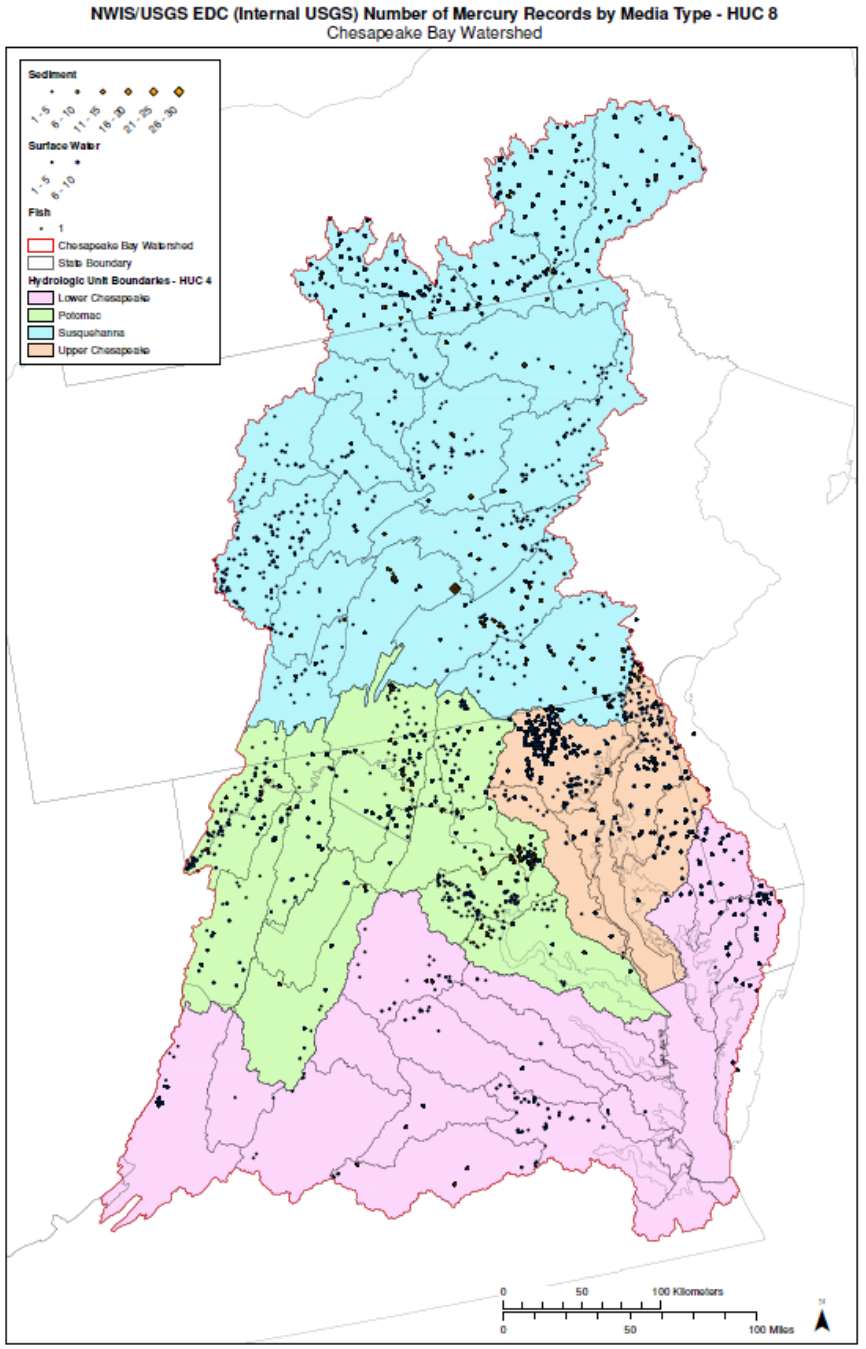
-Issues for new potential monitoring

Provide a short synthesis to address the questions/issues, vision going forward.

Issues for New Monitoring

- Overall: Status and Trends
  - Status: help target places for mitigation
  - Trends: access if mitigation reducing contaminants

- Needs and priorities for new monitoring
- Monitoring objectives
- Network design considerations
- Existing monitoring
- Remaining gaps
- Options to address gaps



Introduction to the Toxic Contaminant Inventory

Emily Majcher, Trevor Needham, Andy Sekellick, Caitlyn Dugan, Ellie Foss

USGS MD-DE-DC Water Science Center

Some Guiding Principles for TCW

A monitoring network for a wide range of contaminants would be extremely difficult and costly, so we need to prioritize the contaminants to be addressed.

The monitoring objectives need to be specific to help focus types of monitoring that is proposed.

We need to take advantage of ongoing monitoring as a foundation for a network.

Issues for New Monitoring

- Overall: Status and Trends
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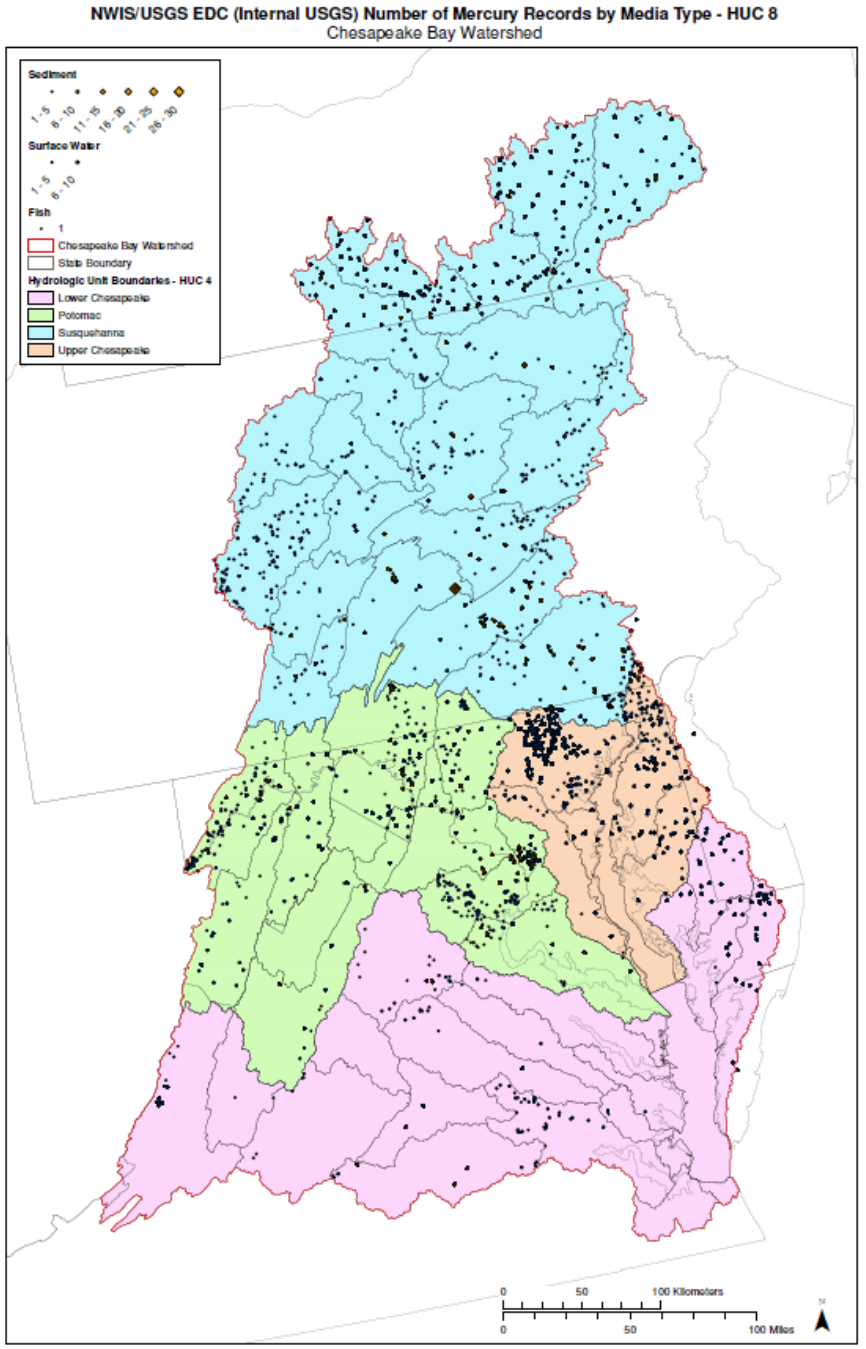

Monitoring needs and priorities

- The Chesapeake Contaminants report (2013):
  - PCBs and mercury had widespread extent and severity
  - Pesticides and PAHs: Widespread extent, localized severity
  - Less definitive information on the widespread extent and severity of other contaminant groups.

- Outcomes in Watershed Agreement: Policy & Prevention; Research
  - PCBs were included both in the P&P outcome and research outcome. Mercury was included in the Research outcome.
  - P&P: ""reduce and prevent the effects of toxic contaminants **below levels that harm aquatic systems and humans**"; "to reduce the amount and effects **of PCBs** in the Bay and watershed".
  - Research "further characterize the occurrence, concentrations, sources and effects of **mercury**, **polychlorinated biphenyls (PCBs)** and **other contaminants of emerging and widespread concern**"

- TCW Feedback: What are relative priorities for (1) PCBs, (2) mercury, and contaminants of (3) emerging and (4) widespread concern

Monitoring Objectives

- ***For contaminant groups, there could be more specific monitoring objectives.***
- ***PCBs:*** Determine if programs are reducing the amount and effects of PCBs below levels that harm aquatic systems (fish) and humans (fish consumption)
- ***Mercury:*** Determine if air-emission programs are reducing the amount and effects of mercury below levels that harm aquatic systems (fish) and (fish consumption)
- ***Contaminants of emerging and widespread concern***
  - Widespread: Extent and changes in pesticides: BMP implementation and effects
  - Emerging: Extent and effects of PFAS and microplastics

- <u>TCW Feedback</u>: Your feedback on monitoring objectives

Next Steps for TCW

- June: Overview by P. Tango
- July: Priorities and Objectives; Existing Data (Inventory)
- Sept: Design considerations; current monitoring
- Oct-Nov: gaps and options
- 2-page summary with supporting materials ready by Dec