Water Quality Quarterly Progress Meeting Summary
May 10, 2018

Toxics Contaminants Policy and Prevention

Outcome: Continually improve practices and controls that reduce and prevent the effects of toxic contaminants below levels that harm aquatic systems and humans. Build on existing programs to reduce the amount and effects of PCBs in the Bay and watershed. Use research findings to evaluate the implementation of additional policies, programs and practices for other contaminants that need to be further reduced or eliminated.

PCB Facts:

- >1 million tons produced
- US largest producer
- 40% still in use
- PCBs continue to load into the Chesapeake Bay watershed
- Stormwater, wastewater and atmospheric deposition
- Some inadvertent production is possible
- Legacy and new inputs!

Challenges:

- Toxic Contaminants Workgroup is not a sufficient platform to achieve the level of coordination and support needed to advance PCB TMDLs
- Low investment -- slows progress
- High cost of PCB analysis limits availability of low-detection data needed to track sources
- Broad geographic extent and distribution of PCBs
- Political will to modify regulatory programs and/or create voluntary programs
- High cost of remedies and testing
- Variety of sources and pathways for PCBs entering the environment that necessitate a wide-range of different management responses
- Knowledge gaps on relative sizes of PCB sources
- Need to shift paradigm to acknowledge that there are ongoing sources of PCBs not static “legacy” contaminants

Management Board Ask:

- Support to investigate feasibility of PCB consortium
    - New factor identified: Need for a larger-scale forum to connect science and management and advance interstate collaboration and implementation of PCB TMDLs
    - New management approach requested: PCB Consortium
- Progress on the co-benefits between toxic contaminants, nutrients, and sediment

Toxic Contaminants Research

Outcome: Continually increase our understanding of the impacts and mitigation options for toxic contaminants. Develop a research agenda and further characterize the occurrence, concentrations, sources and effects of mercury, PCBs and other contaminants of emerging and widespread concern. In addition, identify which best management practices might provide multiple benefits of reducing nutrient and sediment pollution as well as toxic contaminants in waterways.

Toxic Contaminants:

- Threats to human health
- Degrade fish and wildlife

Challenges:

- Assessing individual groups of chemicals, or their associated mixtures, is extremely difficult
- Lack of consistent information (both spatial and temporal) on the occurrence and concentrations of toxic contaminants. Some of this is due to the high cost of generating new data on toxic contaminants.
- There are few laboratories that have the capabilities to conduct analysis for all of the contaminant groups.
- Resource constraints.
- Different monitoring and analytical approaches that limit comparability of information.
- Limited knowledge to assess importance and implications of emerging issues.

Concept for Determining Highest Priorities for Research to Increase Understanding Impacts and Mitigation Options for Toxic Contaminants (Color codes are examples)

Contaminant Groups	Occurrence	Concentrations	Sources	Effects
PCBs				
Dioxins/Furans				
PAHs				
Petroleum Hydrocarbons				
Pesticides				
Bio. Hormones				
Pharms.				
HPCP				
PBDEs				
Metals				
Mixtures				

Uncertainty
Small
Large

Priorities for an agenda to increase certainty?

Management Board Ask:

- Develop actions for Co-benefits: Next steps on co-benefits for 12 outcomes.
    - More focus in revised work plans of each outcome
    - List specific actions to be taken
    - Identify geographic areas to focus efforts
- More emphasis on contaminants in source sectors: Nutrients, sediment, and toxic contaminants
- Mercury: Options to see if plans to reduce air emissions are working
    - Trend analysis to see if decreasing
    - Synthesis on amount in watershed
    - Implications

Riparian Forest Buffers

Outcome: Restore 900 miles per year of riparian forest buffer and conserve existing buffers until at least 70 percent of riparian areas throughout the watershed are forested.

Challenges:

- Riparian areas have competing uses, RFBs difficult to sell and specialists are required. BUT NRCS has other farm programs to administer, and doesn't give priority to CREP contracts. Multiple management approaches need to move together in unison; thus, the emphasis on Leadership and Coordination
- Buffers remain at record lows--increasing acreage is very doable but lacks strong, high-level leadership and focused implementation.
- Progress is impeded by the intractable nature of bureaucracy and reluctance to change and commit to a practice/process
- Disconnect between practitioners delivering technical assistance and the funding providers.
- Staff turnover, low numbers of TSPs
- Competing programs for critical riparian area

What has worked:

- When the landowner is asked and educated
- When there is additional $ incentive
- When there is outside assistance to maintain the buffer
- These steps have shown near perfect enrollment success

Management Board Ask:

- Elevate Buffer Needs through Policy/Leadership
    - MB/PSC involvement: All Hands!
    - Have top WQ person join with RFB lead in each state
    - Find stable funding/plan to keep RFB trained staff
    - Develop State Programs to RFBs on non-Ag lands (i.e., suburbia, other non-CREP) using state funding, 319, SRF, etc.
    - Revisit State Task Force Reports
    - Meet regularly with State Con
    - State CREP programs/policy should reflect WIP Phase 3 needs
- Focus on Improved Implementation
    - Create fully-functioning local teams everywhere needed
    - Integrate RFB upfront - part of whole farm planning
        - Address farm flow issues that create buffer by-pass
    - Increase TSPs through SWCDs and trusted farm consultants (e.g., TU, Red Barn, CBF, ACB) …akin to *Boots on the Ground*
    - Make It Easy-- provide comprehensive services to farmers (sign-up, maintenance, etc.)
    - Notch up conservation of RFBs
- Align timing for Verification – with re-enrollment visits

2017 & 2025 Watershed Implementation Plans

2017 Outcome: By 2017, have practices and controls in place that are expected to achieve 60 percent of the nutrient and sediment pollution load reductions necessary to achieve applicable water quality standards compared to 2009 levels.

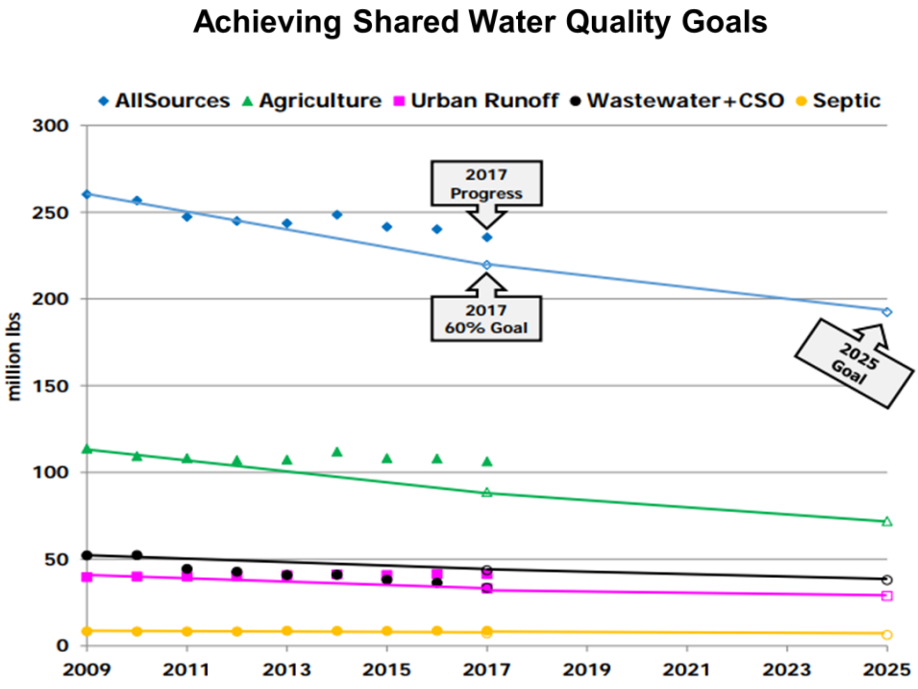
2025 Outcome: By 2025, have all practices and controls installed to achieve the Bay's dissolved oxygen, water clarity/submerged aquatic vegetation and chlorophyll-a standards as articulated in the Bay TMDL document.

Challenges:

- Identifying sufficient funding mechanisms to support implementation efforts
- Developing an approach to account for changed conditions due to climate change and Conowingo Dam infill.
- BMP verification program development and documentation of progress
- Refinements to the Phase 6 suite of modeling tools and subsequent Phase III WIP planning targets impact on levels of implementation efforts needed moving forward

We would like to have Management Board support on:

- Retiring the 2017 WIP outcome and focus our efforts on 2025
- Seeking additional financial resources for implementation from each jurisdiction, every federal partner and innovative sources
- Focusing next two year workplan on Phase III WIP development and Partnership driven commitments stemming from the mid-point assessment

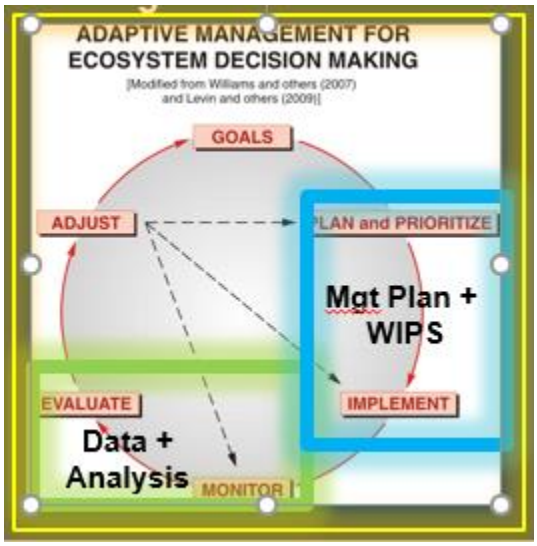


Water Quality Standards Attainment and Monitoring Outcome

Outcome: Continually improve the capacity to monitor and assess the effects of management actions being taken to implement the TMDL and improve water quality. Use the monitoring results to report annually to the public on progress made in attaining established water quality standards and trends in reducing nutrients and sediment in the watershed.

Challenges:

- Monitoring capacity: *Inflation, retiring aging infrastructure, partner loss and lack of monitoring-specific State match availability are eroding our program* to the threshold of limiting monitoring program maintenance under a level funding status in the next 3 years.
- Water quality standards attainment: Inflation, retiring aging infrastructure, partner loss and lack of monitoring-specific State match availability are eroding our program to the threshold of limiting monitoring program maintenance under a level funding status in the next 3 years.
- Analysis need: Understanding the relationship between monitoring load trends with model projections for N,P and Sediment



Management Board Ask:

- Accept and promote the Citizen science and nontraditional partner MOU that support enhanced data assessments
    - Improved capacity leads to:
        - **improved accuracy** of WQS attainment assessments,
        - **reduced uncertainty** about status and progress
        - **earlier detection of change** in response to management actions
        - **better management targeting** of limited resources.
- Charge STAR with further analyses for understanding comparisons of observed and expected trends in water quality in the bay and watershed.
    - Enhanced data use and analyses leads to:
        - **improved accuracy** of WQS attainment assessments
        - **reduced uncertainty** about progress
        - **earlier detection of change** in response to management actions
        - **better management targeting** of limited resources
        - **combat inflation** with cross GIT outcome support