Clean Water Quarterly Progress Meeting Summary
September 15, 2022

Water Quality Standards Attainment and Monitoring

Chesapeake Progress Page: https://www.chesapeakeprogress.com/clean-water/water-quality

Goal: *Water Quality*

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

Progress:

	Capacity to Monitor	Attainment of Tidal Water Quality Standards	Watershed Response to WIP 2025	Report Trend Results
Outlook	OUTLOOK OFF COURSE	OUTLOOK OFF COURSE	OUTLOOK OFF COURSE	OUTLOOK ON COURSE
Recent Progress	RECENT PROGRESS INCREASE	RECENT PROGRESS DECREASE	RECENT PROGRESS NO CHANGE	RECENT PROGRESS INCREASE

- Capacity to Monitor:
  - Lacking capacity to meet all the monitoring requirements to fully assess attainment and watershed outcomes
  - Monitoring assessment completed and some investments made
- Attainment of tidal Water Quality Standards:
  - 2017 – 2019: **33.1%** of the Chesapeake Bay and its tidal tributaries met water quality standards
  - Two recent above-average flow years (2018 – 2019) likely played a role in decrease
- Watershed Response to WIP:
  - 2011 – 2020: **mixed results**
  - Nitrogen: 37% improving, 40% degrading
  - Phosphorous: 44% improving, 23% degrading
  - Sediment: 18% improving, 46% degrading

- Report Trend Results
    - Produced Tidal, nontidal, and RIM trends and reports
    - Developed **12 Tributary Summaries**
    - Reports on factors affecting watershed trends

Success

- **Scientific**
    - Extensive analysis, reporting, publishing of water quality status & trends
    - Tributary Summaries and reports on factors affecting watershed trends
    - Successful case study with 4D water quality interpolator
    - Built database for Strategic Science and Research Framework (SSRF)
- **Fiscal**
    - Completed Monitoring Report with funding needs
    - Gained funding and additional partners to support capacity for parts of networks
- **Policy**
    - Engagement with jurisdictions on monitoring findings for policy implications

Challenges

- **Scientific**
    - Data collection capacity less than requirements identified in Monitoring Report
    - No tidal segment has been assessed for its full suite of criteria across all seasons and designated uses
    - Incorporating ecosystem services based on water quality
- **Fiscal**
    - CBP (EPA) lacks resources to fund all monitoring requirements on its own
    - Sustained funding plans with partners are not yet in place
- **Policy**
    - Limited application of monitoring results to WIP 2025 Outcome

On the Horizon

- **Scientific**
    - Developing metrics to show incremental progress towards attainment
    - Promoting new monitoring innovations and data streams
    - Continuing to understand factors affecting changes
    - Advance understanding of multiple benefits with water quality
- **Fiscal**
    - Lack of funding to sustain or enhance monitoring
    - A partnership approach is needed to address the vast scope of needs to build monitoring capacity
- **Policy**
    - Accelerating attainment of water-quality standards by expanding focus to shallow waters with living resources
    - Increase utilization of monitoring results in WIP2025 Outcome
        - Tributary Summaries

We plan to:

- Capacity to Monitor
    - Coordinate partnership meetings derived from Monitoring Report to support monitoring investment
    - Increase capacity for monitoring based on menu of recommendations

- Attainment of Tidal Water Quality Standards
    - Inform options to accelerate progress for attainment in tidal waters important for living resources
    - 4D interpolator tool development
    - New data collections put into use for assessments
- Watershed Response to WIP2025
    - Explain factors affecting watershed response to focus practices.
    - Implications for targeting practices for multiple outcomes
- Report Trend Results
    - Increase collaborations between WQSAM Outcome and WIP 2025 Outcome
    - Reporting monitoring results to inform implementation of practices and attainment

Equitable and inclusive restoration

- Continue to engage a larger breath of science providers
- Inform targeting of practices for disadvantaged communities
- Build capacity by increasing opportunities for disadvantaged communities to participate in monitoring
    - Community Science network

Filling the Gap

- Scientific support –
    - Use SSRF to guide jurisdictional grants, proposals, and strategic planning
    - Support for more in-depth analyses of attainment of standards and factors affecting trends.
- Fiscal Support –
    - Address remaining funding gaps for priority needs from the PSC Monitoring Review
    - Commit staff to attending to Monitoring Report "Kick off" meeting and subsequent discussions
- Policy support – Apply monitoring results to extend progress in WIP 2025

2025 Watershed Implementation Plans

Chesapeake Progress Page: https://www.chesapeakeprogress.com/clean-water/watershed-implementation-plans

Goal: Clean Water

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 Chesapeake Bay TMDL document.

Progress:

	Nitrogen	Phosphorus	Sediment
Outlook			
Recent progress			

- **Nitrogen & Phosphorous**
- **Sediment**

Successes:

- Two-Year Milestones and Evaluations
- Actions were completed with a clear workplan and frequent updates.
- Actions with a clearly identified responsible party were achieved
- Individual progress within Jurisdictions and organizations

Challenges:

- Overcommitted on actions
- Unclear responsible party
- Misalignment of WQGIT's time
- Verification
- Additional loads to reduce by 2025

On the Horizon:

- New or increased funding sources
- Multiple benefits
- Phase 7 model development
- Climate change conditions
- Exploring data sets

We Plan to

- Prioritize and target fewer actions
- Incorporate two-year milestones
- Improve linkage to monitoring and WQS
- Increased GIT/workgroup collaboration
- Opportunities for lessons learned
- Emerging Science/CESR

Equitable and inclusive restoration

- Use existing tools to target water quality projects in under-served areas.
- Increase collaboration within the partnership (Toxics, Stewardship GIT)
- Improve engagement with under-represented groups/areas

Fill the Gap

- We need your help
    - Develop public communications to clarify what to expect by 2025.
    - Time to adapt priorities based on the upcoming CESR report
    - Placeholder: Additional asks from WQGIT per Aug 22 meeting.

Toxic Contaminants Research:

RECENT PROGRESS **INCREASE** OUTLOOK **OFF COURSE**

Chesapeake Progress Page: https://www.chesapeakeprogress.com/clean-water/toxic-contaminants-research

Goal: Toxic Contaminants

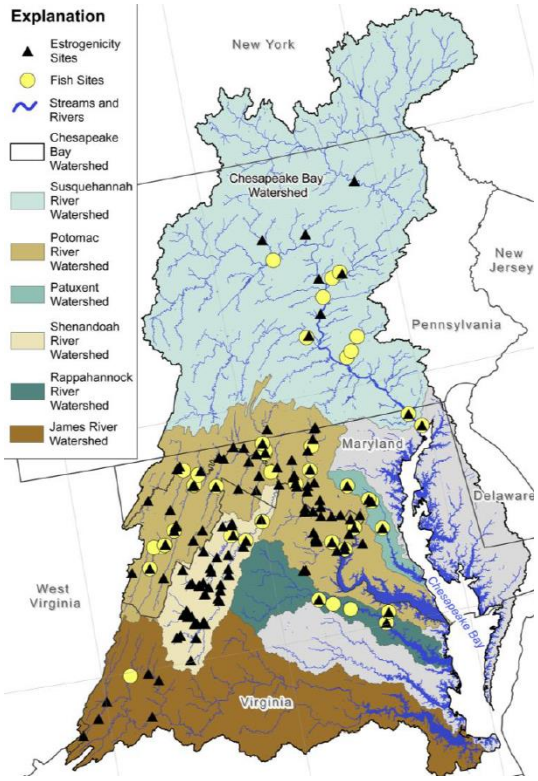
Outcome: Continually increase our understanding of the impacts of and mitigation options for toxic contaminants through research.

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.

Successes:

- Synthesize scientific information to make fish and shellfish safe for human consumption **Mercury and PCBs**
    - Updates on PCB science (best practices, source investigations)
    - PSC enhanced monitoring for PCB regional changes based on management actions
- Understand the influence of toxic contaminants in degrading the health, and contributing to mortality, of fish and wildlife.
    - Effects of endocrine disrupting compounds (EDCs) on fish conditions
    - Relationships between fish health, land use, and estrogenicity
    - Risk modeling



- Synthesize and promote science to help prioritize options for mitigation to inform policy and prevention
    - Management relevant timelines to detect BMP response
    - Wastewater (sanitary sewer) source tracking Back River

Challenges:

- Cross workgroup collaboration for actionable science
    - Interaction with SFGIT on fish consumption advisories/story maps
    - Consideration of toxic contaminants in fish habitat assessments
- Identifying appropriate method to link toxic contaminant BMP science to stakeholder tools

On the Horizon:

- Science related: PFAS studies in the watershed, microplastics risk assessment, endocrine disrupting

compound study findings

- Policy related: fish advisories for PFAS
- Fiscal related: reduction in sampling for certain contaminants (e.g., PCBs) to allow for PFAS focus, human health prioritization by jurisdictions

We Plan to

- Have a larger emphasis on PFAS across most management approaches (out of emerging issues)
- Ongoing PCB TMDL implementation progress, bring forward associated science advances.
- Microplastics risk assessment progress/inclusion of PPAT into TCW

Equitable and inclusive restoration

- Cross-collaboration partnerships
    - Baltimore Urban Waters Partnership
    - Anacostia Urban Waters Federal Partnership + Source control team
    - Reimagine Middle Branch
- Fish Consumption- PCBs, Hg, PFAS, microplastics

Fill the Gap

- Dedicate ¼-1/3 of meeting time in 2023-24 to PFAS science and coordination with members and identify how to best address STAC workshop forthcoming needs and recommendations
- Continue to transfer science and restoration management advances and evolve our working document on PCB TMDL implementation and management.
- Integrate PPAT and their efforts more within the TCW

Help is needed…

- Support for jurisdictional and federal agency participation and engagement in PFAS-focused science and coordination efforts
- Enhanced consideration by jurisdictions for reducing toxic contaminants when planning nutrient and sediment practices in 2-year milestones.
- Support exploration of the PCB monitoring and assessment as proposed in the PSC monitoring report
- Identify and support opportunities for multiple benefits of toxic contaminant reductions through collaborations with other CBP workgroups including WWT, ag, stream health and the sustainable fisheries goal team

Toxic Contaminants Policy and Prevention:

Chesapeake Progress Page: https://www.chesapeakeprogress.com/clean-water/toxic-contaminants-policy-and-prevention

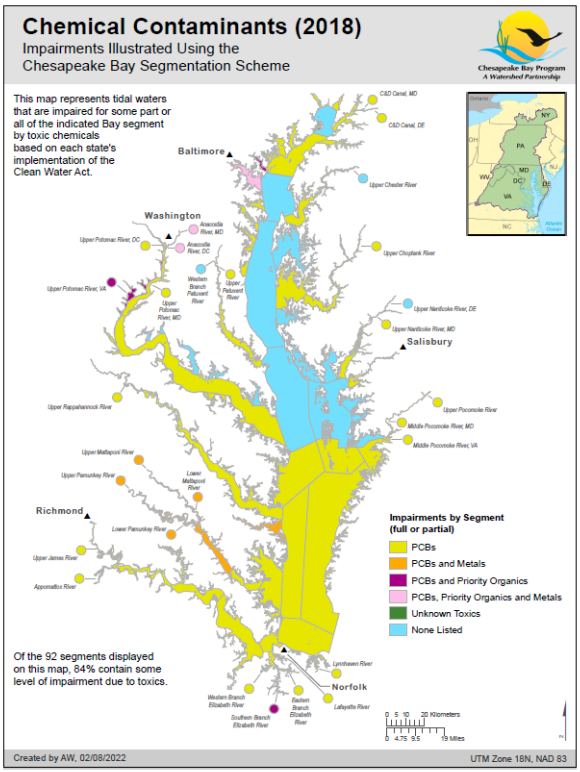
Goal: Toxic Contaminants

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.

Outlook and Recent Progress:

2018 Toxic Contaminant Indicator:

The number of impaired segments has increased from 75/92 fully or partially impaired segments in 2016 (82%) to 77/92 fully or partially impaired segments in 2018 (84%). The indicator has moved in the outcome negative direction over the last 5 biennial updates beginning with 74% in 2010.



Successes and Challenges:

- MA1 Regulatory Programs
    - Expanded the network – EPA Region 3 and meaningful engagement in 303d Vision 2.0
    - Jurisdiction monitoring (fish and other media)
    - Jurisdiction TMDL development and implementation
    - Alternative Restoration Plan Pilot
- MA2 Voluntary Removal
    - PCBs in Schools – Bay Backpack – *Safe and Efficient Lighting*
- MA3 Education and Awareness
    - Fish Consumption Advisory Infographic Users Guide
- MA4 Science
    - USGS report on PCBs fate in wastewater systems
- MA5 PCB Consortium
    - TCW jurisdiction/EPA Roundtable
    - National PCB Strategy Conference

On the Horizon:

- EPA HQ Vision 2.0
- Alternative Restoration Plan pilot project
- PCBs in biosolids data
- Track down Guidance
- Pollution Minimization Plan Guidance
- Collaboration with PCB strategists in other restoration programs

We Plan to

Knowing that PCB loading is dynamic and that there are many species of fish under consumption advisories, we plan to continue with a strategy that relies heavily on CWA TMDLs, and possibly ARPs, while complimenting that approach with voluntary programs, education and awareness building, research and pursuing a larger scale consortium.

- 303d National Vision 2.0 (V2) EPA HQ. (Vision 1.0 expires September 2022)

- Final V2 document expected September 2022. Goals in V2 are written to improve effectiveness of 303d/TMDL programs and restoration plans.

- Toxic Contaminants Workgroup Opportunities for V2 Support and Engagement
    - Long term priorities for TMDL and restoration plan development (2025 2032)
    - Assessment methods

    - Trend analysis changes in environmental quality, post TMDL monitoring.
    - How effective are the PCB TMDLs?
    - V2 TMDL Execution Goal has four focus areas DEIA, climate, Tribal engagement, capacity building.

Equitable and inclusive restoration

- PCBs generally increase as level of development/urbanization increases. Efforts to reduce PCBs in urban areas reduces risk from contaminated fish.
- DEIA is a V2 focus area for jurisdiction long term plans
- PCBs in schools effort could have DEIA focus
- Fish consumption advisory infographic roll out

Fill the Gap

- Regulatory
    - Prioritize PCB TMDLs in V2 long-term plans
    - Identifying planning gaps and needs that TCW could help fill
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    - Use existing permit controls (MS4, wastewater) to implement WLAs
    - Help push track down guidance to local governments
    - Support drafting a PCB TMDL state-of-the-Bay-watershed report
- Programmatic
    - Consider a stronger partnership consortium
    - Connect BIL resources to emerging contaminants and voluntary PCV removal
- Staffing
    - Allocate staff and financial resources to move PCB TMDLs forward
    - Expand the network of regulatory officials advancing PCB TMDLs data analyst capacity.
    - Data Analyst capacity needed for trend analysis and indicators