Chesapeake Bay TMDL: What It Has Accomplished and Why It Won't Be Achieved by 2025

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CoastWise PARTNERS

Holly Greening & Rich Batiuk

We'll work for (good) food!

Who We Are

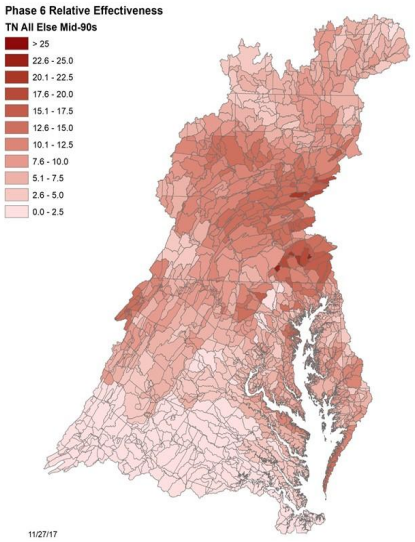
Rich Batiuk, retired from U.S. EPA Chesapeake Bay Program Office. Instrumental in designing Chesapeake Bay's extensive cooperative approach to meeting Bay targets.

Holly Greening, retired from Tampa Bay Estuary Program. Facilitated Tampa Bay's successful nutrient management and seagrass recovery strategy.

OFFERING VOLUNTEER ASSISTANCE WITH...

- GOAL-SETTING
- ESTABLISHING CRITERIA
- TECHNICAL ADVICE
- MONITORING DESIGN
- WORKSHOP PARTICIPATION
- PEER REVIEWS

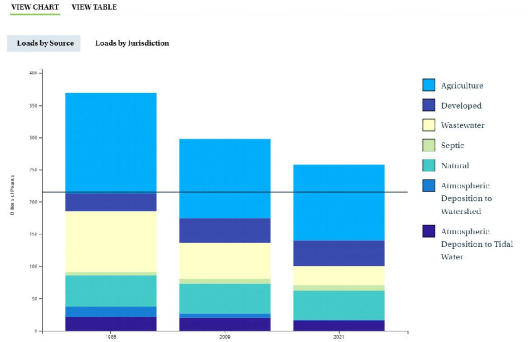
What Did the Chesapeake Bay TMDL Do for the CBP Partnership?



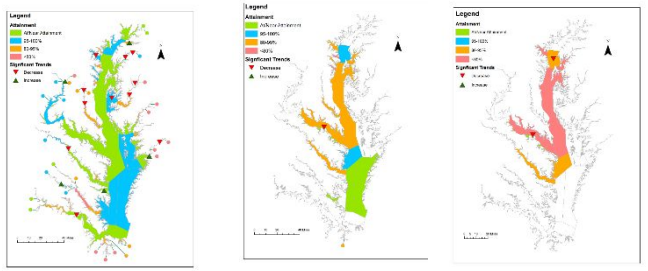
It established the scientific and policy basis for connecting nutrient and sediment loads throughout the watershed with Chesapeake Bay water quality responses

It institutionalized Watershed Implementation Plans as the programmatic mechanisms for seeking unprecedented levels of pollution load reduction and preventions

It put in place the first in the nation accounting system directly connected to implementation of a multi-jurisdictional watershed-based TMDL



It provided quantitative endpoints for success in terms of levels of required treatment upgrades and practice implementation, in-stream load reductions and tidal water quality and living resource (SAV) restoration



How was the Chesapeake Bay TMDL Developed?

Through Shared Decision Making

- 99.9% of all the literally thousands of decisions that went into development of the TMDL were made by the CBP partnership—EPA's only stand-alone decisions were related to New York's allocation accounting for decreased population in their watershed since 1985

Through Extensive Public Meetings and Forums

- During 2009-2010, the CBP and EPA sponsored over 400 public meetings, webinars and forums focused on the Bay TMDL, with many located across the six states and the District

Through In-depth Scientific Peer Reviews

- STAC oversaw independent scientific peer reviews of major elements of the Bay TMDL including the Bay water quality criteria, the full suite of Bay, watershed and airshed models and approaches to analyzing trends in water quality

Through Engagement of the Entire CBP Management Structure

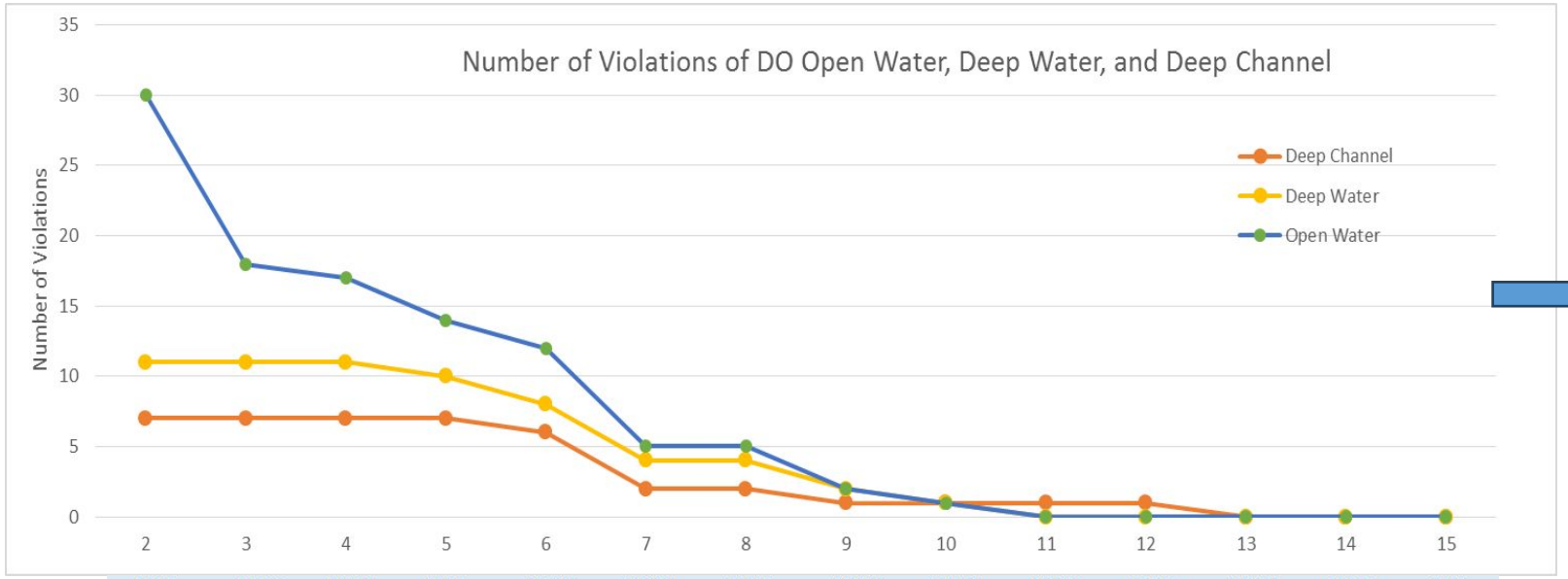
- Day to day decision making was shared across much of the CBP Management Structure, from technical workgroups up through the Principals' Staff Committee from 2007 through 2010

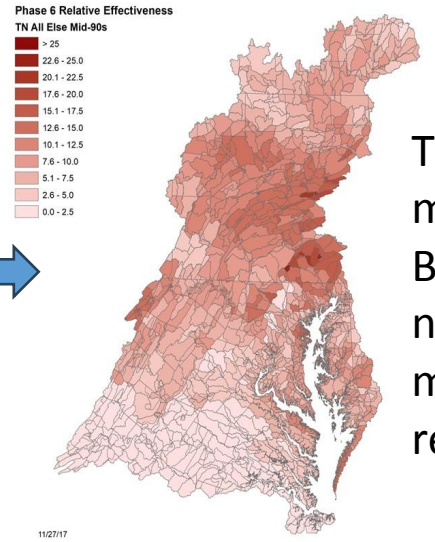
How was the Chesapeake Bay TMDL Developed?

Through an Extensive Public Review Process

- 60 day public comment period
- Total comment letters: 14,360
- Number of unique comments to which responses were written: almost 4,000
- Number of pages in the response to public comments document: 3,074
- Administrative record included more than 300 documents, reports and letters
- Documented over 400 meetings and forums at which Bay TMDL was discussed during 2009-2010

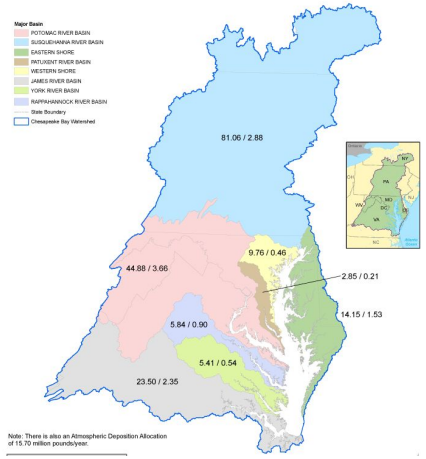
How the Chesapeake Bay TMDL Allocations Were Developed



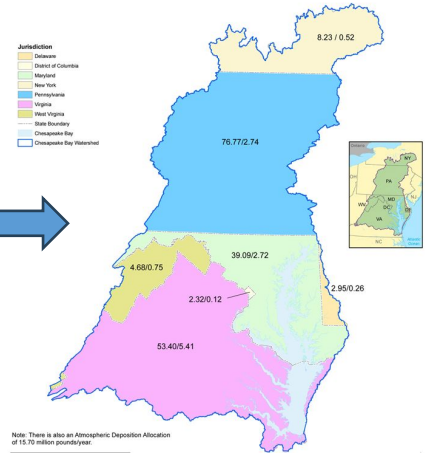


Those who loads most influence Bay water quality need to make the most load reductions

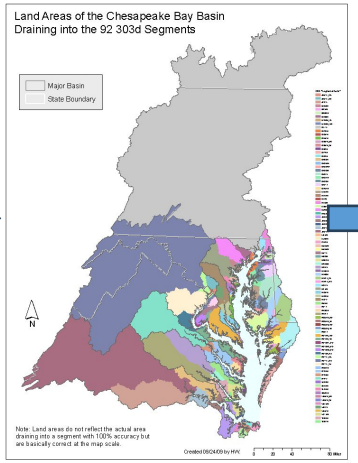
Allocations by Major Basin



Allocations by Jurisdiction



Allocations by CBP Segment



WLAs and LAs for 92 CBP Segment Watersheds

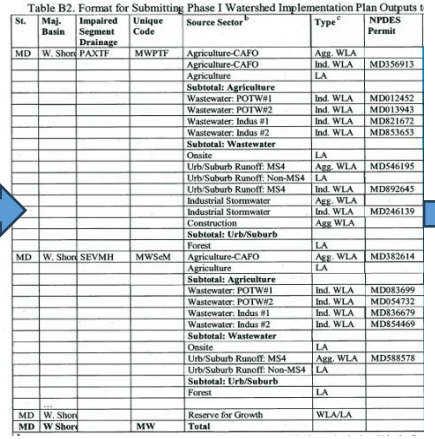
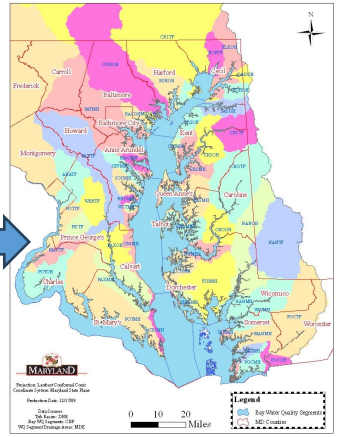


Table B2. Format for Submitting Phase I Watershed Implementation Plan Outputs t

St.	Maj. Basin	Impaired Segment Drainage	Unique Code	Source Sector[b]	Type[c]	NPDES Permit
MD	W. Shore	PAXTF	MWPTF	Agriculture-CAFO	Agg. WLA	
				Agriculture-CAFO	Ind. WLA	MD356913
				Agriculture	LA	
				Subtotal: Agriculture		
				Wastewater: POTW#1	Ind. WLA	MD012452
				Wastewater: POTW#2	Ind. WLA	MD013943
				Wastewater: Indus #1	Ind. WLA	MD821672
				Wastewater: Indus #2	Ind. WLA	MD853653
				Subtotal: Wastewater		
				Onsite	LA	
				Urb/Suburb Runoff: MS4	Agg. WLA	MD546195
				Urb/Suburb Runoff: Non-MS4	LA	
				Urb/Suburb Runoff: MS4	Ind. WLA	MD892645
				Industrial Stormwater	Agg. WLA	
				Industrial Stormwater	Ind. WLA	MD246139
				Construction	Agg WLA	
				Subtotal: Urb/Suburb		
				Forest	LA	
MD	W. Shore	SEVMH	MWSeM	Agriculture-CAFO	Agg. WLA	MD382614
				Agriculture	LA	
				Subtotal: Agriculture		
				Wastewater: POTW#1	Ind. WLA	MD083699
				Wastewater: POTW#2	Ind. WLA	MD054732
				Wastewater: Indus #1	Ind. WLA	MD836679
				Wastewater: Indus #2	Ind. WLA	MD854469
				Subtotal: Wastewater		
				Onsite	LA	
				Urb/Suburb Runoff: MS4	Agg. WLA	MD588578
				Urb/Suburb Runoff: Non-MS4	LA	
				Subtotal: Urb/Suburb		
				Forest	LA	
MD	W. Shore			Reserve for Growth	WLA/LA	
MD	W Shore		MW	Total		

Allocations by County



Strengths of the Chesapeake Bay TMDL

- It was developed through a truly collaborative, consensus decision making-based process
- The resultant allocations were 90% science-based and 10% senior policy decisions
- Took full advantage of 25 years of monitoring data, six generations of Chesapeake Bay models and decades of Chesapeake Bay and watershed scientific findings
- Transparent process for development of the Bay TMDL ensured engagement of a wide array of stakeholders not involved directly with the CBP partnership
- Included development of tiered Watershed Implementation Plans which ultimately took the Bay TMDL allocations down to a county or equivalent level
- Factored in an accountability system developed by the partners and back-stopped by EPA

Strengths of the Chesapeake Bay TMDL

- Led to truly unprecedented investments in upgrading hundreds of wastewater treatment facilities across all six states and the District of Columbia

- Significant reductions in the wastewater loads of nitrogen and phosphorus delivered to Chesapeake Bay tidal waters and levels of treatment technologies once thought to be “beyond the limits of technology”

- Led to putting into place the infrastructure for tracking practice implementation across all source sectors

- Independent validation of whether actions across the watershed and the airshed were, indeed, resulting in measurable reductions in nutrient and sediment pollutant loads and positive changes in water quality

Weaknesses of the Chesapeake Bay TMDL

Given **the Chesapeake Bay TMDL was developed in such a way that was completely different from the than more then 50,000 TMDLs** approved by the EPA, I can't find "fault" with or "weaknesses" within the Bay TMDL itself.

The fact that the Bay TMDL **included the institutional mechanisms for implementation**—the jurisdictional Watershed Implementation Plans with 2017 midpoint targets and the 2025 deadline for practices in place to achieve each jurisdiction's own allocations as well as a truly unprecedented accountability system.

The weaknesses were not within the Bay TMDL itself, but in its implementation and complete lack of carrying through on the promise of a different approach to ensuring accountability by those involved in its implementation.

Challenges of Implementation of the Chesapeake Bay TMDL

- Put an ever increasing **focus of the partners on water quality at the expense of the other goals** within the 2014 Chesapeake Bay Watershed Agreement

- **EPA completely failed** to follow through on its written commitments **to back-stop the accountability framework** agreed to with the seven jurisdictions with its documented federal consequences

- **State, federal and local policy makers failed to step up and make the increasingly difficult decisions** to put in place nitrogen, phosphorus and sediment load reduction policies, legislation, funding, programs and regulations necessary to go well beyond what was required under the Clean Water Act, the Clean Air Act, and the Farm Bill

- **The partners failed to learn** from decades of implementation experiences and the resultant responses (or lack thereof) within the watershed, tidal waters and in human behavior **and adapt policies, programs and funding accordingly**

Challenges of Implementation of the Chesapeake Bay TMDL (Con't)

- **Climate change** has placed even more challenges to implementation of the jurisdictions' Watershed Implementation Plans then we could have even dreamed up back in 2010

- The CBP partners set high expectations for how to effectively deal with the 'extra loads' due to **Conowingo Dam reaching dynamic equilibrium** with regards to trapping nutrients and sediments behind the dam but then did not achieve those expectations

Rich Batiuk

Retired, Associate Director for Science, Analysis and Implementation

U.S. EPA Chesapeake Bay Program Office (1985-July 2018)

Co-Founder of CoastWise Partners (Aug 2018-Present)

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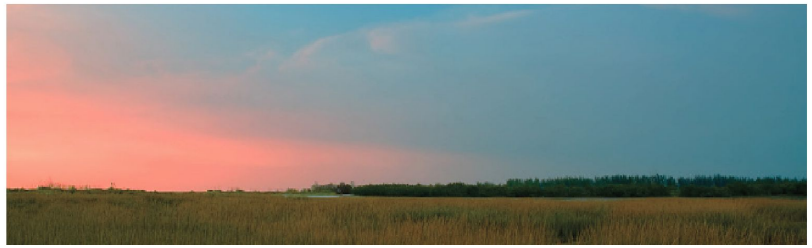

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