CHESAPEAKE BAY PROGRAM UPDATES

Looking Ahead to 2025

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CBPC Meeting
May 13, 2022

To Be Discussed

- 2025 TMDL Deadline: Where Are We
  - Modeling Data
  - Monitoring Data
- Conowingo WIP / Climate Change
- Insights for Future COG Policy

Progress in Achieving the TMDL

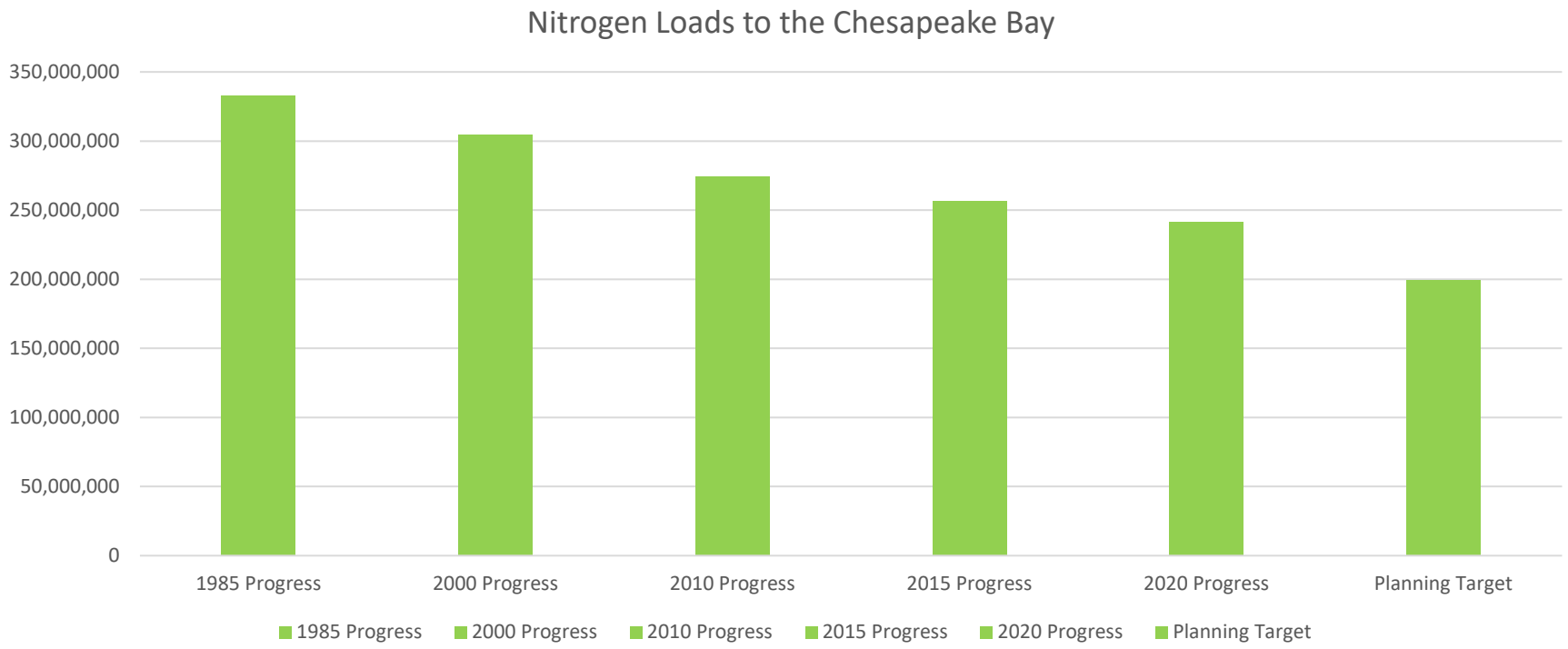
Monitoring Data

- Shows progress, but deep water remains out of compliance with water quality standards because of hypoxia
- Increased focus on shallow water also likely to show non-attainment in various places

Modelling Data

- Bay Partners overall will not meet 2025 planning targets because of PA gap
- Climate change, Conowingo, etc., have made targets harder to achieve

What Does Modeling Tell Us



Data from 2019 CAST

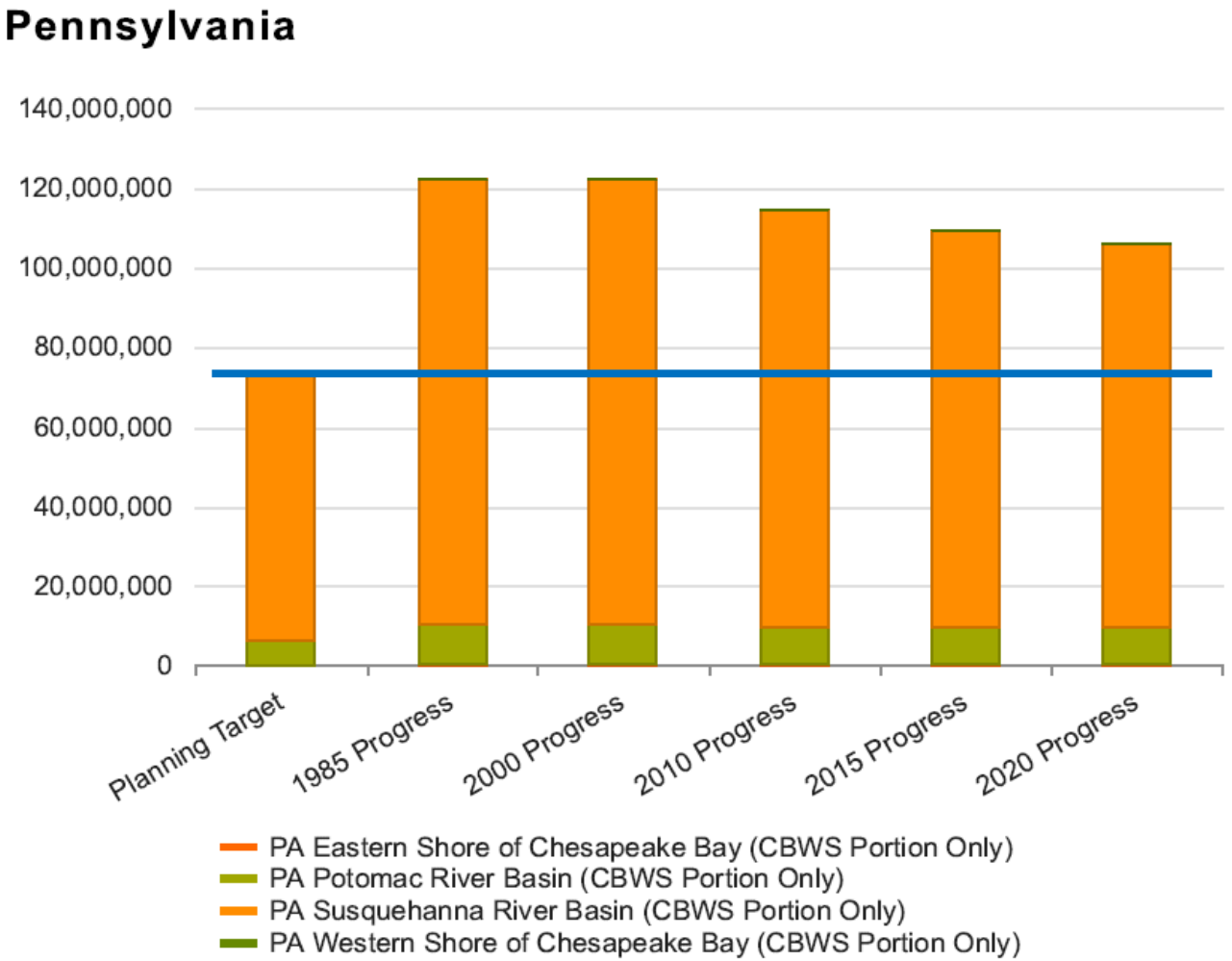
Still a 42.5-million-pound gap between 2020 and the Planning Target

PA Progress in Nitrogen Reduction

Difference between 2020 Progress and WIP 3 target = 32.5 million pounds

Not counting Conowingo.

- About 90 % of Conowingo WIP load of 6 million pounds comes from PA



Data from 2019 CAST

The Problem is Agriculture

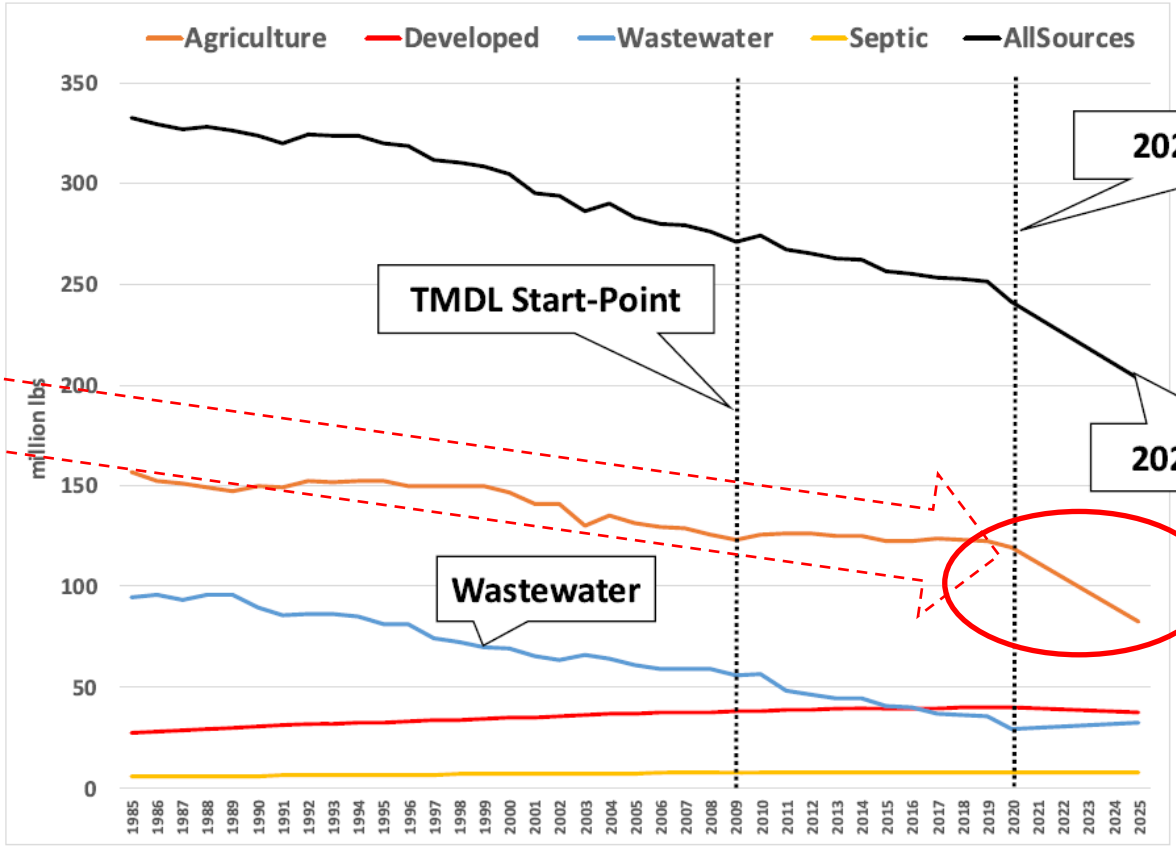
Recent *Bay Journal* quote:

"At midnight Dec. 31, 2025, the Chesapeake Bay region will probably miss its third cleanup goal in 25 years, by a wide margin. The primary reason for this failure is the region's collective inability to find successful ways to reduce nutrient-laden runoff from agricultural land. After three decades of effort, farmland remains the largest source of nutrients entering the Bay. And, according to recent estimates from the Chesapeake Bay Program computer models, it's not clear that state and federal programs have been able to move the needle at all."

Why the 2025 WIP Goal is Unattainable

CBW Nitrogen Loads Delivered to CB

Achieving WIP implementation goals primarily dependent on unprecedented rate of reduction from ag sector



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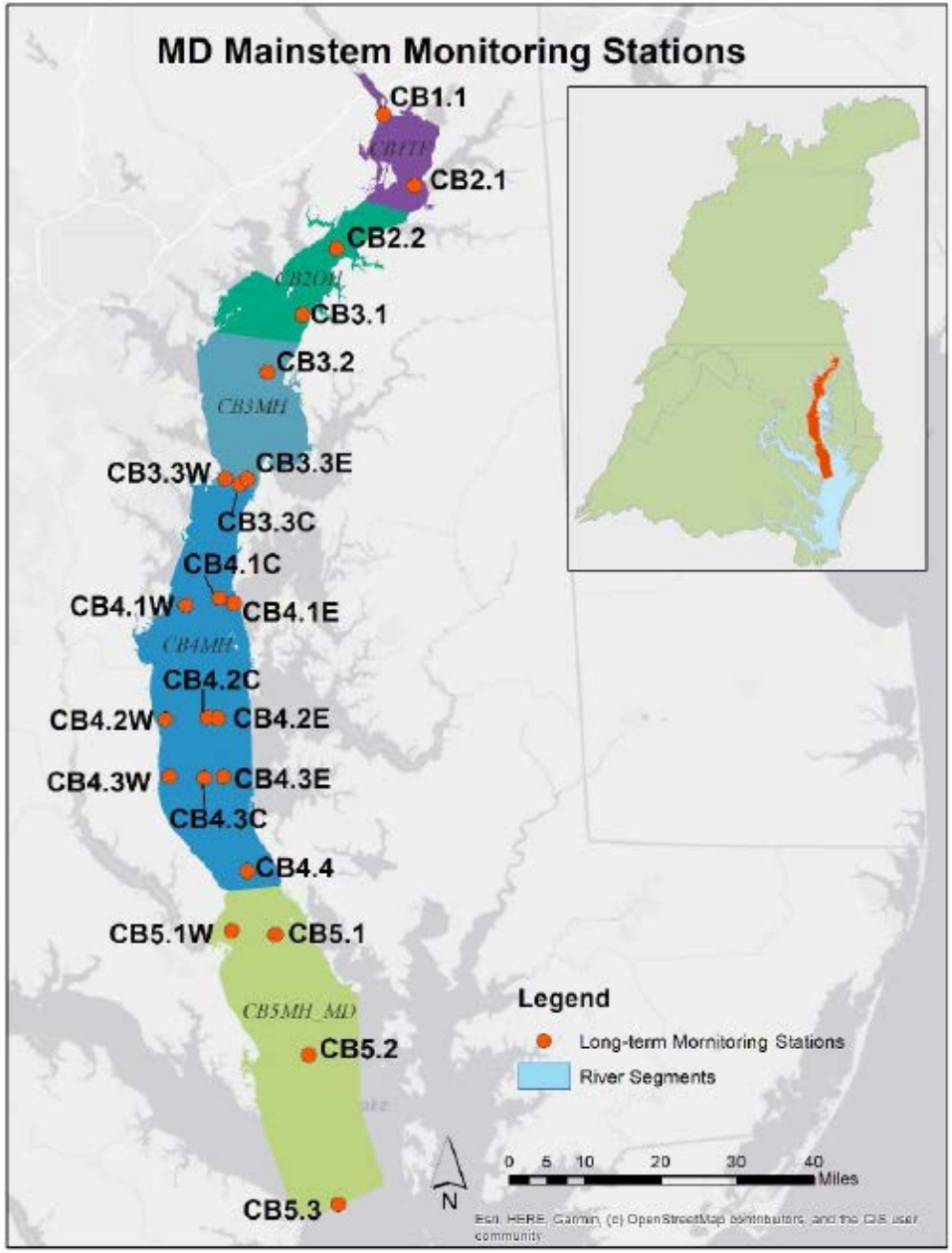
What Does Monitoring Tell Us

For assessing compliance with water quality standards, the main part of the upper Bay is divided into 5 segments: CB1 – 5.

Individual monitoring stations are indicated in each segment.



Bay Waters Classification

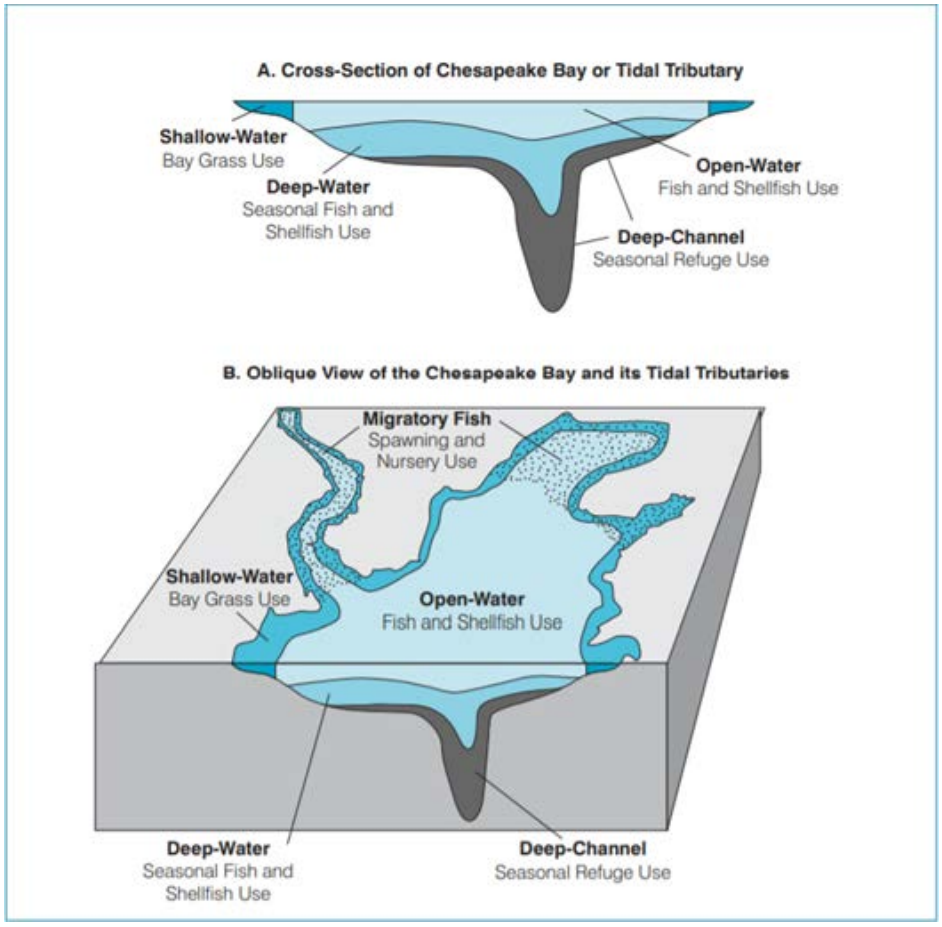
For TMDL purposes:

Open Water comprises all surface waters down to about 10 - 15 meters – except shallow water habitat.

- overlays the **Deep Water** and **Deep Channel** habitats

Shallow Water is the habitat at the edge of the Bay or its tidal tributaries

- no more than 2 meters in depth
- smallest component by share of total volume, but where much of the SAV and other living resources reside



Mainstem Monitoring (green is good)

Open Water Segments

Time Period	CB1TF	CB2OH	CB3MH	CB4MH	CB5MH_MD
1985-1987					
1986-1988					
1987-1989					
1988-1990					
1989-1991					
1990-1992					
1991-1993					
1992-1994					
1993-1995					
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2009-2011					
2010-2012					
2011-2013					
2012-2014					
2013-2015					
2014-2016					
2015-2017					
2016-2018					

Deep Water Segments

Time Period	Deep Water			Deep Channel		
	CB3MH	CB4MH	CB5MH_MD	CB3MH	CB4MH	CB5MH_MD
1985-1987						
1986-1988						
1987-1989						
1988-1990						
1989-1991						
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1991-1993						
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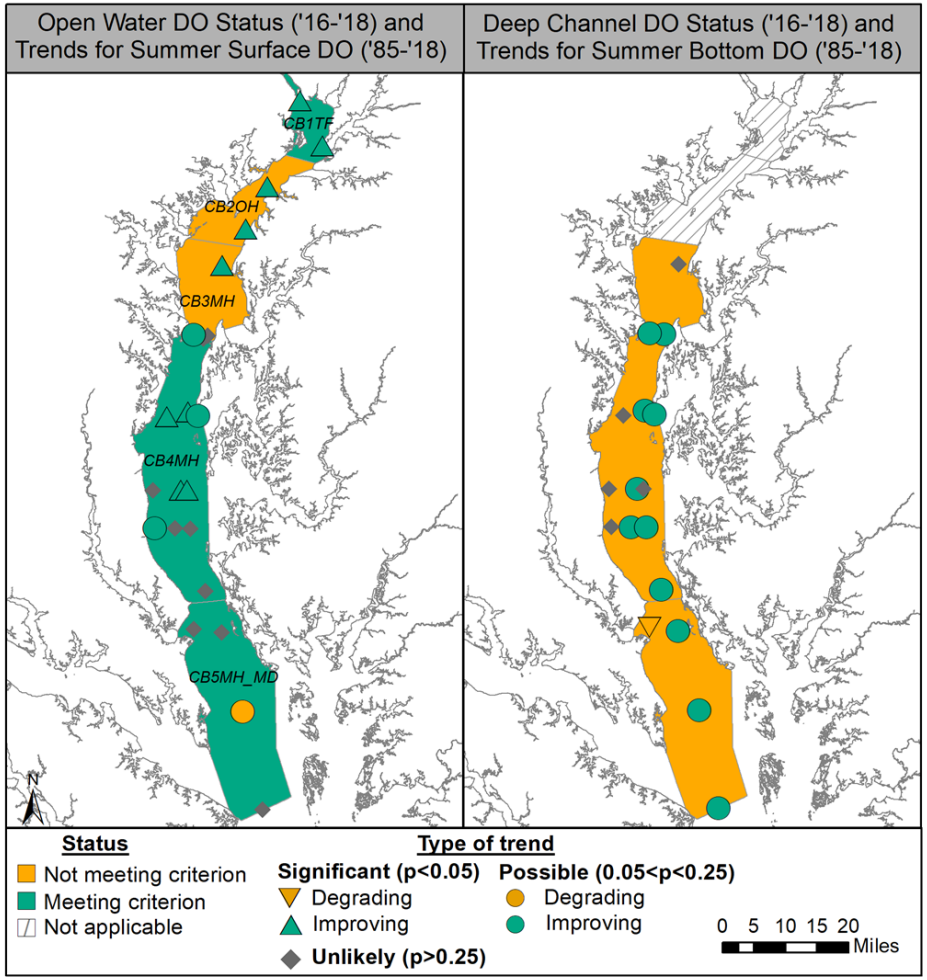
2011-2013						
2012-2014						
2013-2015						
2014-2016						
2015-2017						
2016-2018						

Segments shown in green are in attainment

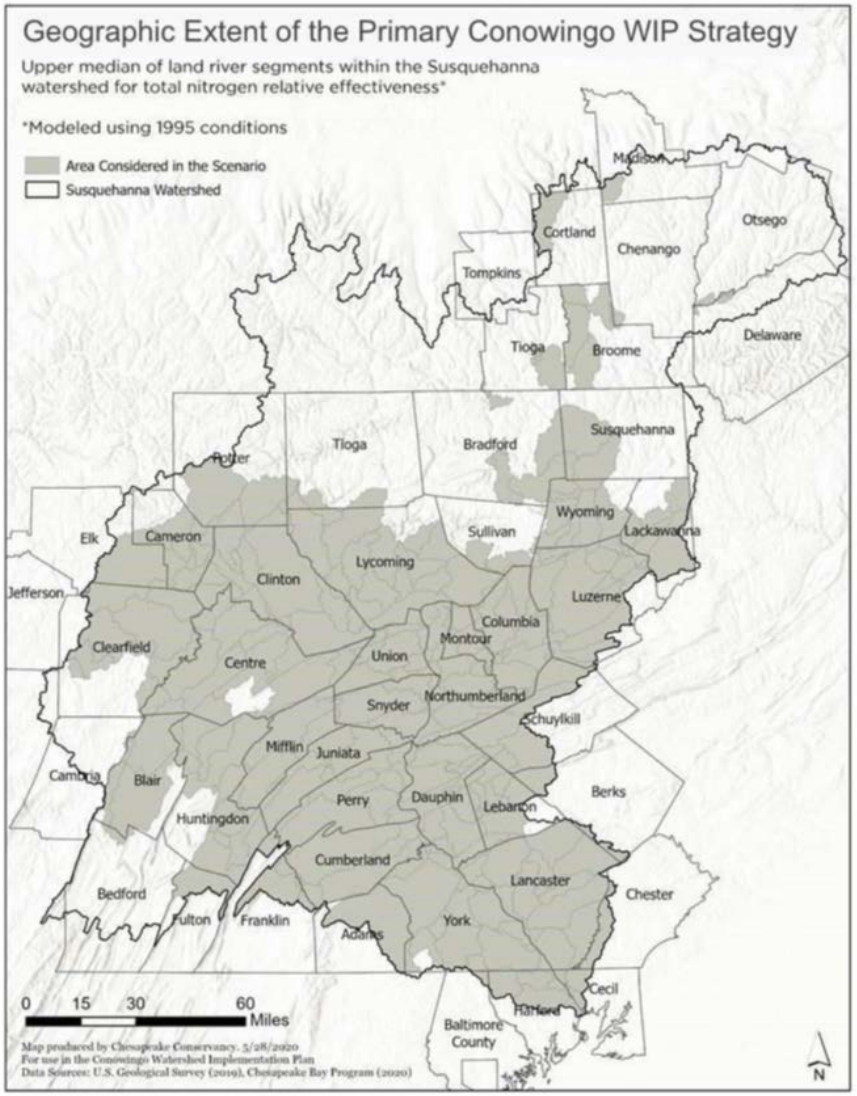
What Does Monitoring Tell Us

Long-term improving trends in segments that are not meeting the criteria a promising development



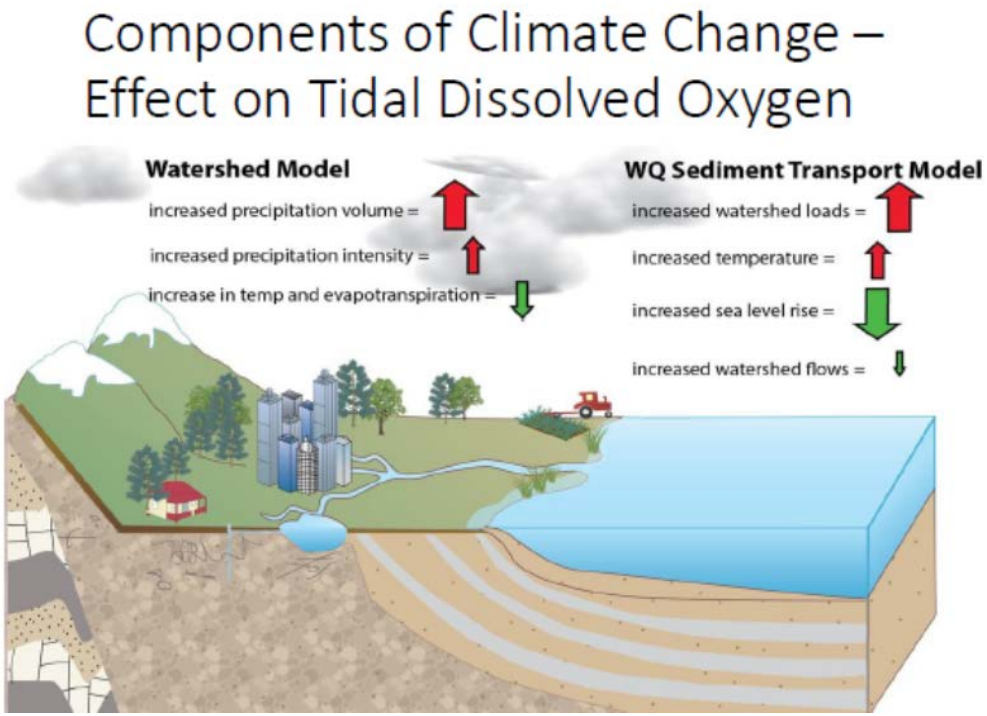
Conowingo WIP Status

- Plan to offset the extra nutrient loads from dynamic equilibrium was produced in July 2021
- Conowingo WIP Steering Committee unable to agree on funding strategy
- EPA has threatened to, but not followed through on, re-distributing these loads to all Bay states



Climate Change Makes TMDL Goals Harder to Achieve

- Analysis of 2025 conditions for climate change led to 5-million-pound increase in N load reduction responsibility
- Analysis of 2035 conditions (by 2027) expected to lead to additional N reduction responsibility



Climate Change Driving Increase in Pollution

Insights for Current COG Policy

Addressing shortfalls

- Bay Partners will not achieve 2025 TMDL reduction goals (PA/Ag Sector gap)
- Conowingo WIP, climate change and model upgrades have made the gap even larger
- EPA reluctant to re-assign loads to other parties

Impact of current litigation - ?

Current COG policy

- Under Equity principle – don't reassign PA loads to other states
- Support more funding for PA ag sector to help close the gap

Increased Federal $ for Bay Program

- Under the new federal infrastructure bill, Bay Program slated to receive additional $47.6 million/year over 5 years

- COG supported more funding for “most effective basins” approach (February letter)

- Recent EPA announcement of $55 million in federal infrastructure money
  - $40 million for National Fish and Wildlife Foundation’s Chesapeake Stewardship Fund an
  - $15 million on Most Effective Basins
    - See EPA Announces $40 Million from Infrastructure Law for Chesapeake Bay Restoration | US EPA

Insights for Future COG Policy

Post -2025

- Reductions to meet TMDL goals to continue long past 2025
  - 2035 climate change adjustment will require additional reductions from all Partners
- Modeling uncertainties call into question use of one set of numbers to evaluate TMDL compliance
- Increased emphasis on modeling shallow waters likely to lead to further reduction requirements for “local” TMDLs
- Need to preserve wastewater capacity for growth

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