QUARTERLY PROGRESS MEETING – August 2020 Chesapeake Bay Program



2025 WIP Outcome

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Through the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...



Goal: Reduce pollutants to achieve the water quality necessary to support the aquatic living resources of the Bay and its tributaries and protect human health.

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.



How You Can Help



Progress

 Many actions are progressing nicely or have been completed

Challenges

• Technical assistance with implementation

Needs

- Identify specific technical assistance, particularly in the agricultural sector.
- Prioritize actions for next two-year work plan



Learn

What have we learned in the last two years?



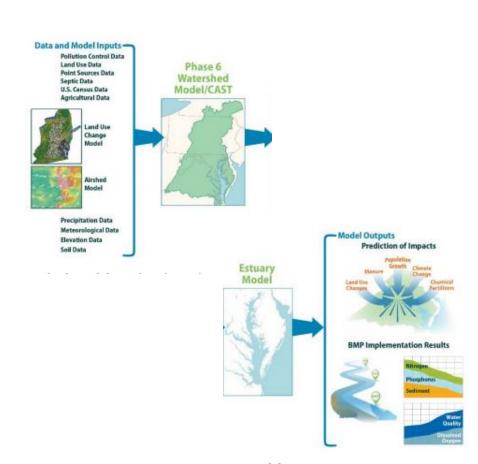
Successes and Challenges

Success

•Substantial amounts of technical and modeling analyses completed to date to support planning and implementation efforts

Challenge/Opportunity for improvement

•Further collaboration needed to better understand changes to levels of effort to meet water quality goals





Successes and Challenges

Resources

Need additional capacity, resources, and assistance to accelerate implementation, particularly in the agricultural sector

Research

Need additional research to address partnership priorities such as co-benefits, ecosystem services, and climate-resilient BMPs

COVID

Presents uncertainty to future implementation efforts to attain water quality goals



What is our Expected and Actual Progress?

- On track to achieve sediment targets
- Further implementation is needed to achieve nitrogen and phosphorus targets by 2025

		Nitrogen	
	Reduction Achieved	Reduction Required	Percent Progress
	2009-2019	by Bay TMDL	Toward 2025 Goals
Jurisdiction	(M lbs/year)	(M lbs/year)	(70% = on track)
PA	2.82	39.73	7%
MD	5.59	11.78	47%
VA	9.56	14.96	64%
WV	-0.04	-0.19	100%
DE	0.15	2.30	6%
DC	0.71	0.34	100%
NY	0.55	2.89	19%
AllJurisdictions	19.34	71.80	27%
		- ·	
		Phosphorus	
	Reduction Achieved	Reduction Required	Percent Progress
	2009-2019	by Bay TMDL	Toward 2025 Goals
Jurisdiction	(M lbs/year)	(M lbs/year)	(70% = on track)
PA	0.551	1.556	35%
MD	0.260	0.474	55%
VA	0.864	1.402	62%
WV	0.180	0.198	91%
DE	0.015	0.024	65%
DC	0.007	-0.058	100%
NY	0.108	0.152	71%
AllJurisdictions	1.986	3.747	53%
		Sediment	
	Reduction Achieved	Reduction Required	Percent Progress
	2009-2019	by Bay TMDL	Toward 2025 Goals
Jurisdiction	(M lbs/year)	(M lbs/year)	(70% = on track)
PA	400	1,138	35%
MD	-30	-680	100%
VA	158	-315	100%
WV	33	-11	100%
DE	19	24	80%
DC	7	2	100%
NY	14	166	8%
AllJurisdictions	601	324	100%

On the Horizon

- Adjusting implementation efforts to account for COVID-19
- Addressing climate change and Conowingo Dam
- Incorporating DEIJ into our work
- Understanding behavioral change related to implementation
- Addressing BMP verification issues and concerns
- Explore needs to accelerate implementation, particularly in the agricultural sector



Adapt

How does all of this impact our work?



Prioritize and narrow our list of actions for the 2020-2021 logic and action plan

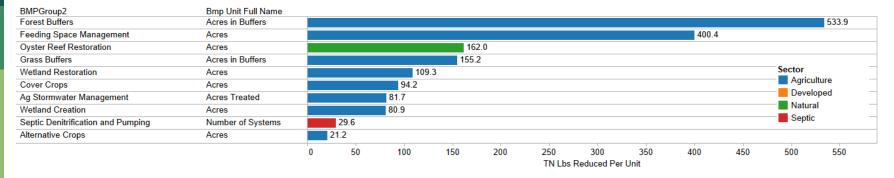
Focus on actions that move us substantially closer to 2025 goals

ACTIONS – 2018-2019								
Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline			
Management Approach 1:: WIPs, and Two-Year Milestones to reach attainment of target loads to reduce N, P, and sediment provided in the Chesapeake Bay TMDL.								
1.1	Support the development and implementation of Phase III WIPs.	Draft and final Phase III WIPs	Jurisdictions, WQGIT and source sector workgroups, EPA, CBPO, STAR, Habitat GIT, co- benefit GITs	Chesapeake Bay Watershed and jurisdictions	Draft Phase III WIPs due April 12, 2019 and final Phase III WIPs due August 9, 2019			
	Support development and	Final 2020-2021 milestones and final status report on 2018-2019 milestones	Jurisdictions, WQGIT and source sector	Chesapeake Bay Watershed and	Jan 2020			

Based on what we learned, we plan to ...

•Work more closely across the GITs and workgroups (e.g., forestry workgroup) to leverage resources and create opportunities to achieve water quality goals and attain added benefits







Help

How can the Management Board lead the Program to adapt?



Assistance with prioritizing list of actions for 2020-2021 logic and action plan

- Implement WIPs: technical and funding assistance in agricultural sector
- ➤ Implement the Conowingo WIP
- ➤ Incorporate co-benefits (climate resiliency) into BMPs
- ➤ Include new data into decision support tools (e.g., updated land cover)
- Release tool to support restoration planning & implementation
- Apply social science & behavioral change to enhance restoration efforts
- ➤ Address BMP verification concerns and potentially revise Framework
- Incorporate DEIJ into work plan



Criteria to help prioritize actions. Does the action...

- Address a priority identified by the partnership during the next two-year period?
- Result in a benefit that is applicable to more than one jurisdiction?
- Support/accelerate implementation to achieve water quality goals?
 - On-the-ground N and cost effectiveness



Identify specific assistance to accelerate implementation, particularly in the agricultural sector

- Additional staff, increased funding, finer-scale decision support tools? Perhaps use data collected from jurisdictions on tools and actions the partnership could take to accelerate implementation.
- What will help implement BMPs that are more effective to reduce nitrogen loads in the Ag sector and where?



BMPGroup2

Forest Buffers

Grass Buffers

Cover Crops

Feeding Space Management

Ag Stormwater Management

Septic Denitrification and Pumping

Oyster Reef Restoration

Wetland Restoration

Wetland Creation

Alternative Crops

Bmp Unit Full Name

Acres in Buffers

Acres Treated

Number of Systems

Acres

Acres in Buffers

Acres

Acres

Acres

Acres

Optimizing
nitrogen and cost
effectiveness in
the correct
landscape setting
to get closer to N
targets

Bmp Unit Full Name BMPGroup2 Off Stream Watering without Fencing Acres Manure Transport Dry Tons Urban Forest Planting Acres \$16 Alternative Crops Acres Denitrifying Ditch Bioreactors Acres Treated Urban Nutrient Mangement Acres \$32 Tree Planting Acres \$36 Forest Harvesting Practices \$39 Acres Urban Forest Buffers \$45 Acres in Buffers Wetland Restoration \$47 Acres Irrigation Water Capture Reuse Acres \$55 Conservation Plans Acres \$58 \$68 Urban Tree Planting Acres \$73 Ag Stormwater Management Acres Treated \$74 Water Control Structures Acres Forest Buffers Acres in Buffers \$93 Wetland Creation Acres \$94 Oyster Reef Restoration Acres \$138 Land Retirement Acres \$153 Grass Buffers Acres in Buffers \$173 Crop Irrigation Management Acres \$178 Animal Waste Mangement Systems **Animal Units** \$189 Manure Incorporation Acres \$238 Poultry Litter Amendments Animal Units \$306 Feeding Space Management Acres \$331 Most effective BMPs for TN reduction

162.0

200

300

TN Lbs Reduced Per Unit

155.2

150

109.3

94.2

81.7

80.9

100

29.6

21.2

533.9

550

Agriculture

Developed

Natural

Septic

400.4

Most cost effective BMPs for TN reduction

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Discussion