Testimony of
Marel King, Pennsylvania Director
Chesapeake Bay Commission

House Environmental Resources & Energy Committee
June 26, 2023

Good morning. Thank you for taking the time to focus on the health of Pennsylvania's streams and rivers, and the impact to downstream waters such as the Chesapeake Bay.

My name is Marel King, and I am the Pennsylvania Director of the Chesapeake Bay Commission, a tri-state legislative commission advising the general assemblies of Maryland, Virginia and Pennsylvania on matters of Bay-wide concern.

The Commission is bicameral and bipartisan. The Chair of our Pennsylvania Delegation is Senator Scott Martin. Vice Chair is Representative Mike Sturla. Other members of the Delegation include Senator Gene Yaw, Representative Kerry Benninghoff, and Representative Carol Hill-Evans. DEP Acting Secretary Rich Negrin represents Governor Shapiro and the Citizen Member is Warren Elliott.

The Commission is the only representative of the legislative branch within the leadership of the federal-state partnership known as the Chesapeake Bay Program, which also includes the executives of the six Chesapeake watershed states and the District of Columbia as well as the U.S. EPA on behalf of the federal government (see Figure 1).

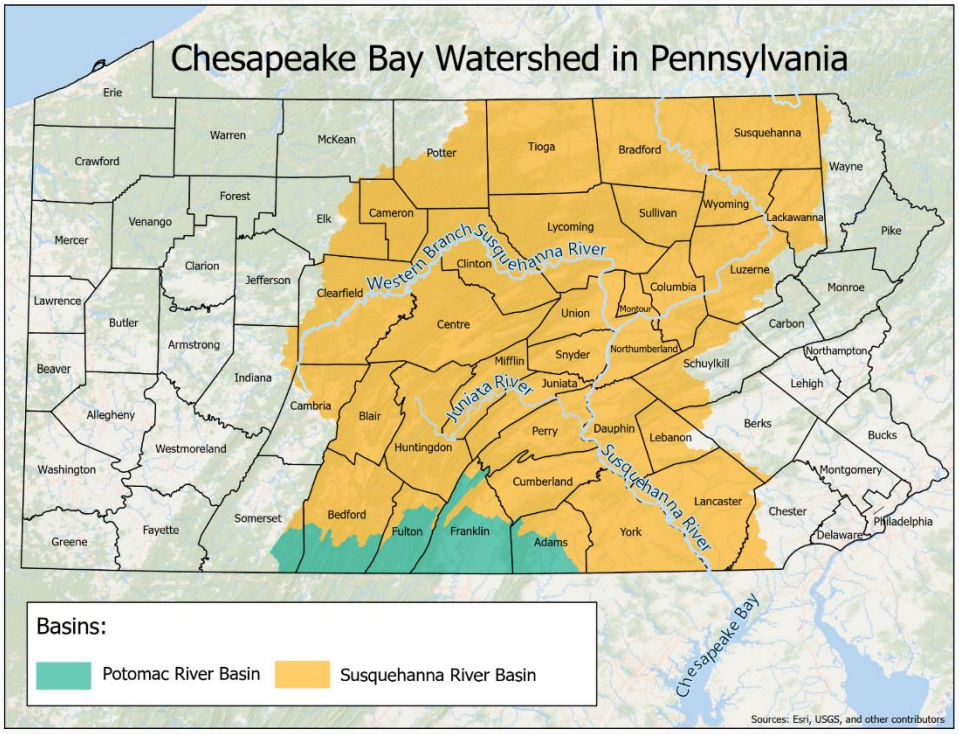
Figure 1.

The Chesapeake Bay Program is celebrating its 40th anniversary this year. In 1983, Governor Thornburgh signed the first Chesapeake Bay Agreement on behalf of Pennsylvania, joining his counterparts in pledging to "fully address the extent, complexity, and sources of pollutants entering the Bay" and recognizing "that EPA and the States share the responsibility for management decisions and resources regarding the high priority issues of the Chesapeake Bay."

Since that initial one-page document, there have been several more Bay agreements that have defined specific goals and deadlines for the living resources, water quality, stewardship, community engagement, and climate resilience necessary across the 64,000 square mile watershed. The most recent Agreement, in 2014, was signed on behalf of Pennsylvania by Governor Corbett and on behalf of the Commission by then-Pennsylvania Representative Ron Miller.

Over one-third of the entire Bay watershed is within Pennsylvania, and the watershed covers half of our Commonwealth (see Figure 2). The Susquehanna River is the Bay's largest tributary, providing half of the Bay's freshwater.

Figure 2.



The Chesapeake Bay is the nation's largest and most productive estuary, supporting more than 3,600 species of plant and animal life, including 348 species of finfish, 173 species of shellfish and 16 species of underwater grasses that provide the habitat for those fish throughout their life cycle. More than 500 million pounds of seafood are harvested from the Bay every year.

The Bay's watershed includes the most productive non-irrigated farmland in the nation and the most productive hardwood forests in the nation, and 100,000 streams and rivers. During his exploration of the Bay in the early 1600s, Captain John Smith declared that "Heaven and earth never agreed better to frame a place for man's habitation." Today, the population is over 18 million and growing. In 1983, when the first Agreement was signed, the population was less than 13 million.

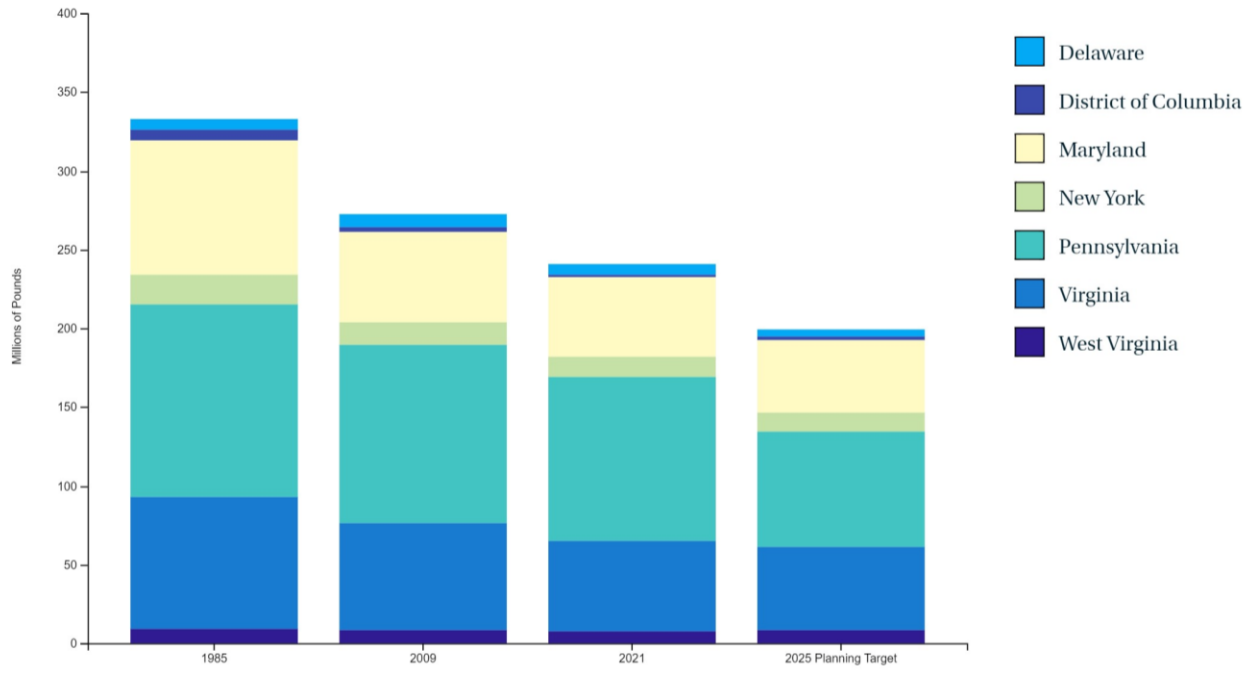
With growth and increased human activity comes increased sediment and nutrients from wastewater treatment plants, car exhaust, soil erosion, lawn and farm fertilizer, and animal manure, among others. Excess nitrogen and phosphorus promote the growth of harmful algae

that remove oxygen needed by the fish and the algae and sediment also block sunlight necessary for underwater grasses.

Despite the region's growth, actions to reduce nutrients and sediment have been meaningful (see Figure 3). Since 1985, the total nitrogen flowing each year to the Bay has been reduced by over 92 million pounds. Pennsylvania has reduced its annual nitrogen load by almost 18 million pounds. However, 41 million more pounds must be reduced to meet our nitrogen goal, including 31 million pounds from Pennsylvania.

Figure 3.

Modeled Nitrogen Loads to the Chesapeake Bay



Chesapeake Bay Program

These reduction goals, with a deadline of 2025, were established through the Bay Program partnership, and are enforceable through the Total Maximum Daily Load (TMDL) established by EPA for Chesapeake Bay in 2010, pursuant to the federal Clean Water Act.

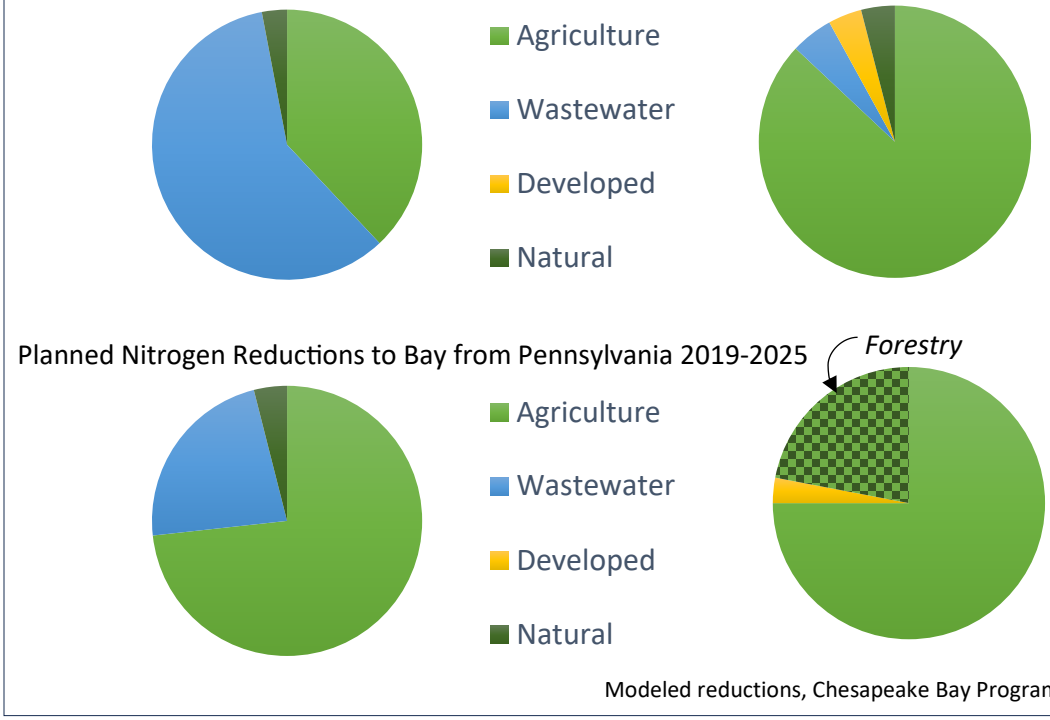
To guide implementation of the TMDL, each jurisdiction has developed its own Watershed Implementation Plan (WIP). We are now in the third phase of those WIPs, intended to get us from 2019 through 2025.

To date, reductions watershed-wide have come primarily from upgrades to wastewater treatment plants. Those plants are subject to permits under the federal Clean Water Act and significant funding sources are available for those improvements. Compared to the rest of the watershed,

Pennsylvania has a much smaller influence from wastewater. Going forward, in Pennsylvania and watershed-wide, most reductions are expected to come from agriculture (see Figure 4).

Although regulated at the state level, most farms, other than Concentrated Animal Feeding Operations (CAFOs), are not subject to federal permits. Additionally, the sheer number of farms in the watershed – 33,000 in Pennsylvania's part of the watershed alone – and diversity of those farms require intensive site-by-site planning and technical assistance for the implementation of Best Management Practices.

Figure 4.



This complexity has slowed agricultural implementation. However, this also means that there is still a lot of opportunity for additional progress, especially if robust funding and other incentives are in place. Fortunately, agricultural practices are some of the most cost-effective ways to reduce nutrient loads from the watershed. According to Pennsylvania's Phase III WIP, four groups of practices – compliance with existing agricultural regulations, soil health, grass buffers and forested buffers – will achieve half the needed reductions for only one-third of the total cost.

The cost estimate for Pennsylvania's Phase III WIP showed a funding shortfall of $324 million/year when it was calculated in 2019. Since then, Senators Yaw, Martin and Laughlin championed the establishment of a new statewide Clean Streams Fund as part of last year's budget package. Using $220 million from the Commonwealth's federal COVID relief funds, the Fund is supporting two new programs:

- $154 million to the Agricultural Conservation Assistance Program (ACAP)
- $22 million to the Clean Water Procurement (pay-for-performance) Program

and several existing programs:

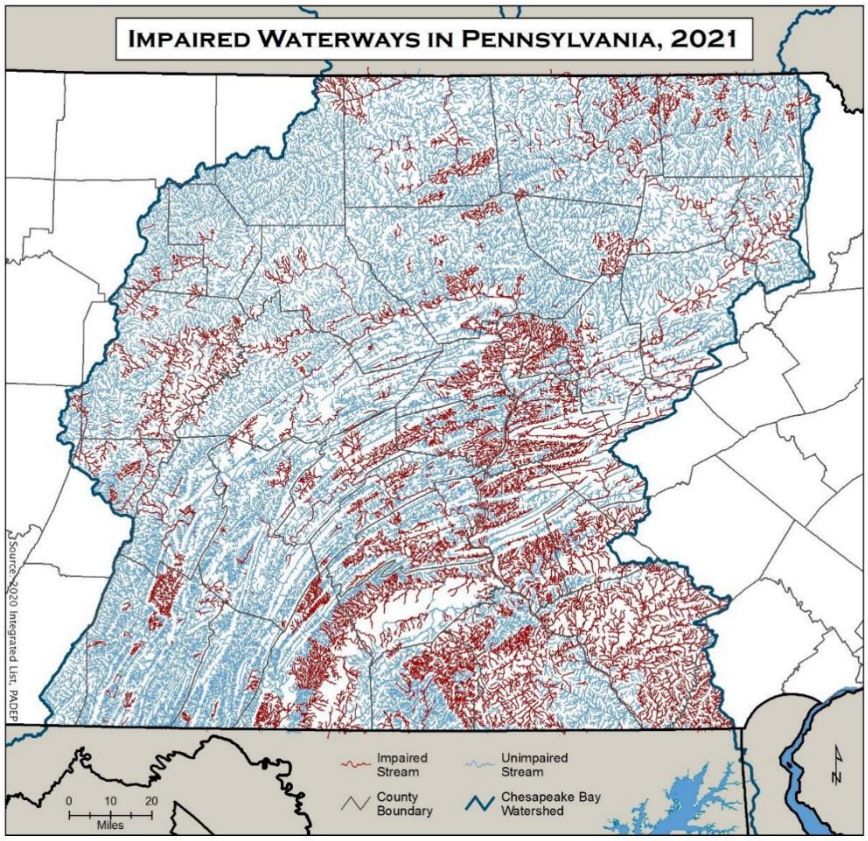
- $22 million to the Nutrient Management Fund
- $8.8 million for forest buffers and community trees
- $8.8 million for Act 167 stormwater management planning
- $4.4 million for Abandoned Mine Drainage

The Commission is also working with our Congressional delegation to improve federal Farm Bill opportunities as those programs are expected to be reauthorized this year, and to utilize the new USDA Chesapeake States' Partnerships Initiative to direct significant funding from the Inflation Reduction Act to the region, especially Pennsylvania.

Many of these programs use tools that enable us to target funds to the locations and practices that will achieve the greatest reductions for the least cost. Some of the "most effective basins" in the entire Bay watershed are in Pennsylvania, especially in the Lower Susquehanna region. Likewise, state programs like the new ACAP program are deployed through local partners such as conservation districts and allow for customization based on local need and resources.

Despite these investments and others across all jurisdictions in the watershed, the Chesapeake Executive Council acknowledged at its 2022 Annual Meeting that we will not meet our 2025 goals. Our challenge going forward is maintaining momentum with existing programs, while also considering new and innovative ways to get conservation practices on the ground.

Figure 5.



PA DEP

Key to success is making sure that any work we do "for the Bay" is meaningful to people at the local level. One-third of Pennsylvania's own rivers and streams do not meet water quality standards (see Figure 5). By improving the water quality here in Pennsylvania, we not only improve downstream waters, but we get the added benefit of improved fishing opportunities, flood control and property values locally.