

**Testimony to the Senate Agriculture and Rural Affairs Committee and
the Senate Environmental Resources and Energy Committee
Joint Hearing on the Chesapeake Bay and Local Water Quality**

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Chairman Vogel, Chairwoman Schwank, Chairman Yaw, Chairman Yudichak and distinguished members of the Senate Agriculture and Rural Affairs Committee and the Senate Environmental Resources and Energy Committee, thank you for the opportunity to present the details of our Pennsylvania-centric approach to restore local water quality in Pennsylvania, and by virtue of that, the Chesapeake Bay.

Introduction

As a result of the federal consent decree in 2010, the United States Environmental Protection Agency (EPA) established a Total Maximum Daily Load (TMDL) for the Bay. Implementation of this TMDL requires Pennsylvania to develop plans to meet specific target reductions in nitrogen, phosphorus and sediment loads in phases. Pennsylvania's Phase 2 Watershed Implementation Plan contains interim targets for these reductions to be achieved in 2017. We are not on schedule to meet these goals for 2017 and the commonwealth continues to face immense challenges to improving water quality.

Our approach is about local water quality – no matter where you are located in the commonwealth – and it's about doing the right thing. Regardless of the 2017 and 2025 federal deadlines, we have an obligation in Pennsylvania to the Clean Streams Law, which was established well before the EPA established deadlines for Pennsylvania under the TMDL.

As a state, we realize there is more work to do; however, it is important to recognize the progress that Pennsylvania has made up to this point. Over the past 30 years, Pennsylvania has invested more than \$4 billion, mainly in wastewater system upgrades through various loan and grant programs, toward Chesapeake Bay restoration efforts. The results show that phosphorous has

decreased by 25 percent; nitrogen by 6 percent; and sediment by nearly 15 percent. The majority of these reductions have come from increased treatment of the discharges of nutrients from wastewater treatment plants.

With 33,600 of Pennsylvania's active farms located in the Chesapeake Bay watershed, achieving our water quality improvement goals will be no easy task, and any solution – state or federal – must balance the commonwealth's interests in improving local water quality and maintaining a vibrant agricultural sector, with limited state and federal resources. Many are concerned about the health of our local waters, including our farmers, who rely on our land and water to grow food. Agriculture is ready to be part of the solution.

Water Quality Trends in the Chesapeake Bay

Pennsylvania continues to make strides towards protecting and improving local water quality. The Chesapeake Bay Program (CBP) tracks [pollution loads and trends](#) as it marks progress towards improving the health of the Bay. In a recent press release, EPA announced nitrogen, phosphorus and sediment loads to the Bay were below the long-term average in 2015, according to data from the CBP and the U.S. Geological Survey (USGS). Between 2014 and 2015, nitrogen loads fell 25 percent, phosphorus loads fell 44 percent and sediment loads fell 59 percent. Below-average loads are considered to be positive because reductions in nitrogen, phosphorus and sediment pollution can improve water quality.

In addition, the University of Maryland's Center for Environmental Science recently gave the Bay its third-highest health score in three decades, noting progress in several areas, and monitoring from the U.S. Geological Survey indicates that the per-acre nutrient and sediment loads are declining at a majority of the monitoring stations across the five Chesapeake Bay states. This good news is a reflection of progress in a variety of sectors, including agriculture. The practices farmers use and the strategies and plans they have put in place are truly making a difference, but more work needs to be done.

Water Quality Challenges

Despite our investments and efforts to date, Pennsylvania did not meet its 2015 reduction targets, nor will we meet all of our 2017 reduction targets. We are on track for meeting our phosphorous reduction goals, but we are not on track to meet nitrogen and sediment goals from agriculture and urban stormwater.

There are several reasons why Pennsylvania has been falling short on water quality and Bay goals. First, resources have been inadequate to the immense scale of the challenge. In addition to the substantial federal cost share dollars we receive each year from the Natural Resource Conservation Service (NRCS) and EPA, we recently had to report to the Chesapeake Bay Program the amount of funding we have expended in the past three years towards restoration efforts. Including staff time and other resources needed to implement on the ground implementation projects, we have expended a little over \$180 million in state funding in these efforts over the past three years. Funding for state fiscal year FY16 was a little over \$40 million. Unfortunately, this amount of funding is not sufficient to implement the amount of best management practices (BMPs) needed to meet the TMDL nutrient and sediment reduction goals.

Second, the data used to measure current Chesapeake Bay pollution reduction efforts for agricultural and urban stormwater pollutant sources is fundamentally inadequate. The Chesapeake Bay model relies overwhelmingly on data on the installation of BMPs where a portion of the cost was shared by federal or state government. Non-cost shared BMPs are not counted.

Third, inspection and compliance verification activities related to agricultural and urban stormwater sources have largely been missing. The Bay watershed in Pennsylvania is home to more than 33,600 farms. EPA recommends that Pennsylvania inspect 10 percent of those farms annually. In 2014, the Pennsylvania Department of Environmental Protection (DEP) conducted a total of 592 inspections, which equates to an inspection rate of 1.8 percent.

The Bay watershed in Pennsylvania has approximately 350 communities with small regulated Municipal Separate Storm Sewer Systems (MS4s) according to the 2010 Census. These communities are either covered under a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges, or may qualify for and receive a waiver from the permit requirement. DEP conducts inspections of MS4s at intervals of at least once every five years and has achieved this inspection rate the past three years.

Commonwealth Strategy to Improve Water Quality

While Pennsylvania has made strides toward improving local water quality, it needed to change its approach for the Chesapeake Bay. Working with a number of external partners and stakeholders, in January 2016, Governor Wolf unveiled a comprehensive, Pennsylvania-centric strategy aimed at improving local water quality in this commonwealth – and with that, the Chesapeake Bay. The strategy represents a reasonable, incremental, and balanced approach to improving local water quality by reducing nitrogen and sediment loads in Pennsylvania waterways that will ultimately restore the water quality of the Chesapeake Bay. The strategy relies on a mix of technical and financial assistance, technology, improved data gathering and recordkeeping, improved program coordination and capacity and, when needed, compliance and enforcement measures.

The strategy also recognizes two key, co-equal goals for success: clean water and viable farms. Our farmers have long recognized the important link between healthy soils, sustainable farming practices, and water quality. When we have healthy, viable farms, we have healthy, viable watersheds. You can't have one without the other.

We would like to provide an update on two areas in particular as it relates to our strategy: the role of conservation districts in the inspection and compliance efforts, and our efforts to quantify undocumented best management practices.

The Role of Conservation Districts

In order to help get the commonwealth back on track to meet the mandated reduction goals, 10 percent of Pennsylvania farms in the Bay watershed will be inspected annually to ensure that they have written plans for manure or nutrient management and erosion control. These mandated reduction goals, paired with our collective challenge of both state and federal diminishing resources, especially on the human capital side, has made the task of 10 percent farm inspections difficult, and has required us to think broadly about conservation service delivery. It has forced a conversation about agricultural compliance and about how to best deliver and implement plans.

Our preferred approach to the challenge of ensuring base-level compliance on 10 percent of farms in the Bay watershed is to use our county conservation districts. Conservation districts are trusted, local partners with well-established relationships with farmers across Pennsylvania. With approximately 33,600 farms in the Bay watershed alone, we needed to think broadly and follow an approach that we feel is in accordance with the historical practice of conservation districts. Historically, conservation district staff have had a role in compliance inspections under Pennsylvania's Chapter 83 Nutrient Management and Chapter 102 Erosion and Sedimentation regulatory programs for decades. In particular, the Nutrient Management program's annual compliance inspection of farms by a conservation district staff person, with follow up enforcement action (if necessary) by the State Conservation Commission, is a model for this strategy.

Conservation districts in 28 Pennsylvania counties in the Bay watershed have applied successfully to conduct farm inspections aimed at reducing agricultural runoff into local streams and rivers and ultimately, the Bay. As a result, these districts will continue to receive funding to support bay technician staff from DEP. Nine conservation districts declined to participate. The remaining three counties in the Bay watershed have only a small number of farms within the watershed. As such, they have not received funding for a Bay technician. Farms in the Bay watershed in these twelve counties will be covered by DEP or EPA personnel.

The participating conservation districts will be inspecting 50 farms per each full-time staffer funded in each county. The districts started these inspections in early October. DEP regional staff started inspections in the end of August of farms in some of the counties that chose not to participate. The initial compliance inspection focus will be on ensuring that farmers have Manure Management or Nutrient Management Plans and Erosion and Sedimentation Plans – requirements that have been in law for over three decades.

We would like to reiterate our commitment to working with the conservation districts to accomplish Pennsylvania’s comprehensive strategies to clean up the Bay. The 66 districts across the commonwealth are a critical first line of engagement with our farming community. We acknowledge the positive contribution that districts have made and recognize the challenges that they, like many in public service, face in carrying out their charge.

Quantifying Undocumented Best Management Practices

Our plans to locate, quantify and verify previously undocumented BMPs represent a new and unprecedented partnership with the agriculture industry and the academic community. We want Pennsylvania farmers to obtain maximum credit – both publicly and in the Bay model - for the good work they are doing. Therefore, a survey funded by DEP was developed in late 2015 by the Pennsylvania State University in collaboration with many partners, including DEP, the Department of Agriculture, the Pennsylvania Farm Bureau, PennAg Industries, Professional Dairy Managers of Pennsylvania, Pennsylvania Farmers Union, the Pennsylvania Association for Sustainable Agriculture, the Pennsylvania State Conservation Commission, and the Pennsylvania Association of Conservation Districts.

The purpose of the survey was to inventory conservation practices implemented by farmers across the Chesapeake Bay watershed. We know that Pennsylvania farmers have done much to improve water quality and soil health, yet many of the practices that farmers have implemented are not accounted for in tracking progress toward priority water quality goals. This is especially true where farmers have implemented practices on their own initiative, using their own means to

do so. The survey inventoried these practices by providing a mechanism to capture and report voluntary conservation practices.

The survey was launched online in January 2016, and was subsequently mailed to approximately 20,000 farmers. Approximately 6,780 completed surveys were returned, a response rate of 35%. The Penn State Survey Research Center received all surveys and processed all data. Ten percent of survey returns were randomly selected for on-farm follow-up visits in order to analyze the accuracy of the data and develop a statistical analysis of the surveys returned.

Penn State Extension staff conducted the farm visits in August, and all visits have now been completed. The research team is now in the process of entering and analyzing farm visit data so that statistical analysis can be completed. A final report will be given to DEP for submission to the Chesapeake Bay Program by the end of October. We look forward to reviewing the data analysis once complete, and hope to confirm a high level of conservation stewardship already occurring on farms across Pennsylvania.

While we have been successful, we also know that we must continue our hard work in order to meet our continuing goals.

Public and Private Sector Partnerships

On October 4, Governor Wolf attended the Chesapeake Bay Executive Council meeting and joined with federal colleagues in announcing a new partnership between Pennsylvania, EPA, and USDA that will increase both federal and state financial resources to assist Pennsylvania in meeting its 2025 nutrient and sediment reduction commitments. Pennsylvania will provide \$12 million in additional funding to improve local water quality, while the federal government has committed more than \$16 million.

The joint strategy will accelerate nutrient and sediment reductions by implementing agricultural conservation practices that reduce nutrients on farms in priority areas, providing more technical assistance to help farmers implement agricultural conservation practices that are proved to

reduce nutrients, and leveraging innovative private sector partnerships, private capital, and markets to magnify the benefits of these investments.

Leveraging innovative private sector partnerships are more important than ever. Another example of the power of partnerships unfolded recently as the Pennsylvania Department of Agriculture was awarded more than \$632,000 under the National Fish and Wildlife Foundation's Innovative Nutrient and Sediment Reduction grant to support farmers' local water quality improvement work in southern Lancaster County. The department partnered with 16 other organizations from the public, private, and non-profit sector to leverage an additional \$909,000 in matching funds, meaning that more than \$1.5 million will be directed to improving the health of Pennsylvania's rivers and streams. The unique aspect of this project is the connection it will demonstrate between conservation, herd health, and farm profitability. The project will give farmers in the targeted watersheds a suite of tools, or adaptive toolbox to be able to do the things that not only achieves a baseline level of compliance, but that are also best for their operation.

Moving Forward

It is time to start planning the next steps towards 2025 and the Phase 3 Chesapeake Bay Watershed Implementation Plan. The Chesapeake Bay Program Midpoint Assessment is underway. Some early findings from the Chesapeake Bay Program Midpoint Assessment indicate that:

- Pennsylvania is still responsible for 69% of the remaining basin-wide nitrogen load reductions
- Agriculture will likely be responsible for as much, if not more, than 80% of those reductions
- A minimum of an additional \$80 million per year in cost share monies will be needed if we are to be successful.

We need to start now to plan for the development; and, more importantly, the implementation of the Phase 3 Watershed Implementation Plan. This plan will delineate how Pennsylvania will

meet the new planning targets now being developed and must address the expectations that EPA is now defining.

The Bay Phase 3 Watershed Implementation Plan has to be finalized by the end of December 2018 and implemented by 2025. We need to create a timeline today and in subsequent forums with these deadlines in mind. The priorities we set today and going forward for the action plans and set of initiatives has to be driven with these legal requirements in mind. We need to start focusing in on those essential key actions that we must accomplish collectively in order to ensure success in the restoration of local water quality and ultimately the Chesapeake Bay.

To get us started, we would like to offer the following framework:

1. Let's not fall back to "more of the same." For 30 years, we have been relying on such activities as training, outreach and technical assistance. Let's build on the concepts in the Restoration Strategy announced by Governor Wolf, take the lessons learned from the implementation of this strategy and build upon them. Training, outreach and technical assistance all are key components, but it is time to stop devoting resources only to these activities, unless they can be directly linked to on-the-ground accelerated implementation of practices that lead to actual reductions and water quality improvement. These voluntary approaches need to be combined with compliance and enforcement where necessary.
2. We need to continue to develop and deploy effective targeting in high-priority areas that support community-based and locally-led approaches to conservation.
3. Of course, funding is key. Innovative new incentive programs and funding opportunities, combined with effectively utilize existing funding sources is essential.

Conclusion

Moving forward, our obligations to water quality – locally and in the Chesapeake Bay – will not go away and can't be ignored. We all have a role in the health of our waterways, and agriculture is a key part of the solution.

The nutrient and sediment loading from what we refer to as point sources such as our wastewater treatment plants can be pinpointed, measured and treated to a specific level defined in what we call a National Pollutant Discharge Elimination System, or NPDES, permit. These treatment systems have all expended a significant amount of effort and funding in the form of grants and loans to meet these limits. They have done their share, and the water quality of our local streams and the Chesapeake Bay is better because of the work they have done.

We must now turn our attention to nonpoint source pollution. This pollution comes from stormwater runoff from the agriculture and urban stormwater sectors. As a result, the nutrient and sediment loadings from these sectors does not come from a single point, but is dispersed across the landscape, making measuring and controlling these loadings much more difficult. We have practices to control and mitigate this pollution, but it is going to take all of us working together to get enough of these measures in the right places to make a measurable difference. The representatives of these sectors have high standards for conservation, with deep roots in a culture of stewardship. They want to be the solution for clean water, and do not condone poor managers who are causing water quality problems. We need to continue to recognize those who are doing a good job complying with our state and federal rules and regulations for their high conservation standards, especially given the multiple and competing expectations of the 21st century - job creators, food providers, economic drivers, and environmental stewardship. We must also take appropriate enforcement action, where necessary, against those with less than this high ethical standard.

We must continue to develop and deploy effective targeting in high-priority areas, integrate ecosystem management into water quality strategies, support community-based and locally led approaches to conservation, collaboratively seek new funding opportunities, and engage all

stakeholders – federal, state, local, public, private, non-profit – in our approach to local water quality.

Local water quality in Pennsylvania is a shared responsibility, and we believe that collaboration, partnerships, commitment, and resources are the key to the success of the effort. If every farmer, community and citizen does their part, we will restore and safeguard local water quality in Pennsylvania, and help to restore the quality of the Chesapeake Bay.

Thank you for the opportunity to provide testimony.