

Legislative Budget and Finance Committee

**Update of Cost Estimates for an Alternative Approach to
Meeting Pennsylvania's Chesapeake Bay Nutrient
Reduction Targets**

Report Presentation by Philip Durgin
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Good morning. I am here today to present an update of a report we released in 2013 entitled *A Cost Effective Alternative Approach to Meeting PA's Chesapeake Bay Nutrient Reduction Targets*. The update was requested because of steps taken by EPA and the Pennsylvania Department of Environmental Resources with regard to implementing a 3:1 uncertainty, or sometimes called a safety, ratio for tradable credits generated by agricultural best management practices, or BMPs.

The idea behind our 2013 report was to assess the potential savings that could be achieved if Pennsylvania's nutrient credit trading program was restructured and expanded to facilitate the generation of nutrient credits through the use of advanced technologies to process manure at large dairy and chicken operations within Pennsylvania's Chesapeake Bay watershed.

Our 2013 report estimated that achieving the required 2025 nitrogen reductions for agriculture and urban stormwater using standard BMPs will cost about \$1.8 billion annually (from 2011 levels). We estimated achieving these same levels

using existing advanced technology processes would cost only about \$255 million, which is a savings of over 80 percent.

It is difficult to estimate with any degree of accuracy the impact of the 3:1 uncertainty ratio that DEP agreed to implement beginning in 2016. In essence, under the uncertainty ratio, 3 pounds of nitrogen reductions generated through an agricultural BMP would only equate to 1 pound of a nitrogen reduction credit. DEP agreed to this ratio in response to EPA's concerns over the structure of Pennsylvania's credit trading program and various other factors that can reduce the effectiveness of agricultural BMPs. A key exception is for advanced technologies, such as those discussed in our 2013 report, where reductions can be accurately measured and verified. In these cases, no additional adjustment is necessary (i.e., the 1:1 ratio still applies).

Applying the 3:1 trading ratio to all the nitrogen reductions that agriculture is required to achieve by 2025 results in a potential cost of \$6.5 billion, compared to a cost of about \$340 million for those same level of reductions to be achieved through the use of advanced technologies that are still allowed to use a 1:1 ratio and that are currently being applied in some large dairy and chicken operations.

However, implementing such a program would require a major restructuring of the current approach to Pennsylvania's Bay Watershed Improvement Plan (WIP),

and it is difficult to see how a program as outlined in this report would work unless the Commonwealth as a whole accepted responsibility for the reductions, rather than allocating them to specific industries or sectors, which is the current approach. It would also require the approval of the EPA which, I think it is fair to say, has historically been unenthusiastic about these kinds of trading programs, in part due to their concern over the potential impact of such programs on local streams, which may already have regulated pollution limits.

That said, it's also true that the current approach, at least as it pertains to agriculture and urban stormwater, has not been particularly effective, and Pennsylvania is lagging well behind in achieving its required reductions. So while there are significant challenges to the approach outlined in our report, the current approach also faces significant challenges.

Thank you.