

Report Highlights

A Cost Effective Alternative Approach to Meeting Pennsylvania's Chesapeake Bay Nutrient Reduction Targets

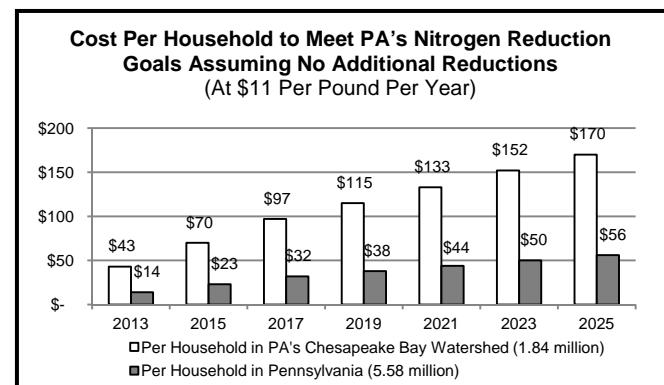
Act 2012-87, the Fiscal Code, included a provision requiring the Legislative Budget and Finance Committee to conduct a study of an alternative approach for how the Commonwealth can meet nutrient reduction planning targets contained in the Chesapeake Bay watershed implementation plan (WIP).

We found:

- **By 2025, PA is required to reduce nitrogen delivered to the Chesapeake Bay by 30 percent over 2011 levels.** As called for under the current WIP, most of these reductions (about 70%) are to come from agriculture. PA is also required to reduce phosphorus delivered to the bay by 25% and sediment by 23%.
- **Although good progress has been made by wastewater facilities, less progress has been made by agriculture and urban stormwater.** Public wastewater facilities are near, or have already achieved, their 2017 reduction targets. The EPA has, however, expressed concerns over the agriculture and urban stormwater sectors, and a recent analysis suggests that the nitrogen targets set for agriculture, in particular, will not be met under the current plan.
- **It is unclear what will happen if PA fails to meet its nutrient reduction targets.** EPA has indicated it might impose additional reductions on wastewater treatment plants as a way to compensate for the failure to achieve targets in other sectors.
- **A competitive RFP program such as outlined in the fiscal code could help achieve PA's nitrogen reduction targets.** Under a competitive RFP (Request for Proposal) program, the PA Dept. of Environmental Protection would determine how many additional pounds of nitrogen need to be removed to achieve PA's reduction targets. DEP would also develop a formula for scoring the proposals they receive. The cost per pound of nitrogen removed would be the formula's starting point, but consideration should also be given to other environmental and economic factors, such as reducing phosphorous in local streams. PENNVEST would then enter into long-term contacts to purchase credits from sellers, but payments would not be made until the credits are achieved and verified. DEP would

periodically revise the credits to be purchased based on the success of existing WIP efforts.

- **A competitive RFP program could lower overall compliance costs by 80% or more for nonpoint source agriculture and urban stormwater.** We estimate achieving the required nitrogen reductions for nonpoint source agriculture and urban runoff through best management practices (BMPs) will cost about \$628 million in 2015 and about \$1.77 billion in 2025. We estimate a competitive RFP program could achieve these same levels of reductions at a cost of about \$110 million in 2015 and \$255 million in 2025.
- **The cost of a competitive RFP program depends on how many nitrogen reductions are achieved under the current WIP.** The graph below shows the costs per household if no additional nitrogen reductions are achieved. If half the nitrogen reductions anticipated by the WIP are achieved, the costs per household would also be cut in half.



- **A source of funding would need to be found for the competitive RFP program.** In 2010, about \$187 million was spent statewide (federal and state dollars) on nonpoint source pollution management, and it is possible some of these sources of funds could be redirected to fund a competitive RFP program. A "flush tax" such as Maryland imposes (\$60 annually) would be another possible source of funds.