

## Chesapeake Bay TMDL

**Background:** Despite measurable accomplishments over the past 30 years to restore and enhance the water quality of the Chesapeake Bay and its tributaries, the U.S. Environmental Protection Agency (EPA) established in 2010 a Total Maximum Daily Load (TMDL) to compel additional and more sufficient pollution reduction progress in the Chesapeake Bay. The TMDL requires specific and measurable pollution reductions of nitrogen, phosphorus, and sediment from sources including but not limited to agricultural operations, urban and suburban stormwater runoff, wastewater facilities, and other sources, from areas that contribute to loadings into the Chesapeake Bay, including Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia. Each contributing jurisdiction is provided with a pollution limit under the TMDL, which is necessary to meet the overall applicable water quality standards in the Chesapeake Bay and its watershed. Specifically, the TMDL established total Chesapeake Bay watershed limits of 185.9 million pounds of nitrogen, 12.5 million pounds of phosphorus and 6.45 billion pounds of sediment per year, equaling a 25% reduction in nitrogen, a 24% reduction in phosphorus and a 20% reduction in sediment. With the TMDL, EPA anticipates by 2025 that all nutrient and sediment pollution control measures will be in place by all states to assure restoration of the Chesapeake Bay.

A key component of the TMDL is each jurisdiction's Watershed Implementation Plan (WIP), which guides and directs state or district specific goals and actions over two-year timeframes (two-year milestones) in order for jurisdictions to demonstrate progress in meeting their TMDL obligations. Under the TMDL framework, accountability by the states and district for achieving progress is closely monitored and evaluated by EPA. If jurisdictions fail to comply or make meaningful progress in accomplishing two-year milestones, EPA can take action against the state or district. Such federal action can include any or all of the following listed below:

- Expand NPDES permit coverage to currently unregulated sources.
- Object to NPDES permits and increase program oversight.
- Require net improved offsets.
- Establish finer scale wasteload and load allocations in the Bay TMDL.
- Require additional reduction of loadings from point sources.
- Increase and target federal enforcement and compliance assurance in the watershed.
- Condition or redirect EPA grants.
- Federal promulgation of local nutrient water quality standards.<sup>1</sup>

Pennsylvania plays a key role in the Chesapeake Bay restoration effort, as it contributes 35.2% of the Bay watershed through drainage of the Susquehanna River. Of the waters contributing to the Bay from Pennsylvania, these waters are from sources influenced from agriculture, mine drainage, urban runoff and stormwater.

In response to the TMDL established in 2010, a number of Commonwealth municipalities within the Chesapeake Bay Watershed made significant investments in upgrading and advancing

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<sup>1</sup> U.S. EPA Region III, Shawn M. Garvin, Regional Administrator, Correspondence to L. Preston Bryant, Secretary of Natural Resources, Commonwealth of Virginia, December 2009.

wastewater infrastructure and technology to meet the new water quality standards and limits. DEP also developed a Nutrient Trading Credit Program as a cost-effective means to facilitate pollution trading among sources. These initiatives produced results as EPA recently announced that Pennsylvania made enough progress in the Wastewater sector to assure the federal agency that proper program implementation is occurring; however, further challenges lie ahead for Pennsylvania across several other program areas.

**Pennsylvania's Challenges:** In June 2014, EPA released its evaluation of Pennsylvania's progress toward meeting its 2012-2013 milestones. Although Pennsylvania surpassed its 2013 milestone target for phosphorus, it did not achieve its 2013 milestone targets for nitrogen and sediment. Based upon its evaluation of the Commonwealth's program to date, EPA has concluded that Pennsylvania needs to substantially increase its efforts in the agriculture sector and improve its capacity, implementation and reporting in the stormwater sector in order to achieve results that will help it accomplish its WIP goals and Chesapeake Bay TMDL commitments. As a result of their review, EPA has placed Pennsylvania on notice that it must improve its best management practices (BMP) data gathering, including improving its tracking, verification and reporting of BMPs – in accordance with the Bay Model – to ensure pollutant load reductions are calculated accurately. As such, EPA has designated Pennsylvania's agriculture and urban/suburban sectors as "Backstop Actions Level", a distinction only Pennsylvania has received, which involves higher scrutiny and monitoring by EPA.

Pennsylvania is in a challenging position to increase its efforts in the agriculture sector. For its 2014-2015 milestone commitments, Pennsylvania has already committed to achieving 75% of its nutrient and sediment reductions from the agriculture sector alone. A number of those reductions will be dependent upon the implementation and verification of BMPs by farmers across the Chesapeake Bay watershed; however, Pennsylvania has nearly 44,000 farms operational in the Chesapeake Bay Watershed, which, for example, is almost four times the number of farms the entire state of Maryland has in operation. While EPA is concerned about the verification of BMPs and is encouraging Pennsylvania to place as many "boots on the ground" as possible to authenticate the pollution reductions achieved by the BMPs, the Commonwealth does not have the resources by itself to independently audit every farm in Pennsylvania that affects the Chesapeake Bay Watershed. Furthermore, the agriculture community in Pennsylvania is confident it is already implementing a number of BMPs – often times voluntarily – that are not being appropriately credited by the Chesapeake Bay model as producing measurable pollutant reductions. To overcome these challenges, it is essential Pennsylvania continues to work closely with EPA and the Chesapeake Bay Program to gain the resources and flexibility it needs to implement innovative approaches, new partnerships and strategies to meet its goals. Ultimately, Pennsylvania's success will depend on its ability to collaboratively work with local municipal governments, private industry, agricultural organizations and individual farmers in order to collect measurable and reliable data that demonstrates the Commonwealth is meeting and exceeding its Chesapeake Bay TMDL commitments.

**Policy Considerations:** As the Wolf Administration contemplates the challenges and future direction of Pennsylvania's Chesapeake Bay Program, the CAC offers the following policy considerations:

- ✓ Establish a third-party independent, non-regulatory auditor that will inspect, verify, and report to EPA the BMPs implemented on Pennsylvania farms in the Chesapeake Bay Watershed.
- ✓ Continue to implement Regional Agricultural Pilot Projects to identify, share and implement BMPs and foster good working relationships between DEP and the agricultural community.
- ✓ Continue to work with contractors to rectify data inconsistencies with Pennsylvania's data and the Chesapeake Bay Program's data and model.
- ✓ Establish a senior-level position within DEP's Water Management Deputate who will work directly with EPA and the Chesapeake Bay Program on the Bay's Model and how it can be expanded to include other BMPs that are voluntarily implemented on Pennsylvania farms.
- ✓ Utilize existing programs and services to address the needs of the Chesapeake Bay (i.e. the federal Natural Resources Conservation Service's aerial monitoring of Pennsylvania farms to account for the implementation of BMPs).
- ✓ Continue to have DEP message that all local efforts to restore and clean Pennsylvania's waters benefit the Chesapeake Bay.
- ✓ Continue efforts to fund the design, implementation and advertisement of best management practices on Pennsylvania's farms.
- ✓ Explore opportunities to develop a self-certification initiative where Pennsylvania farmers can "self-certify" under proper criteria the BMPs installed on their farmland.