

EPA EVALUATION OF VIRGINIA'S 2016-2017 and 2018-2019 MILESTONES

In its role in the accountability framework described in the Chesapeake Bay Total Maximum Daily Load (Bay TMDL) document, EPA is evaluating each Bay jurisdiction's progress toward attaining the goal of having practices in place by 2017 that would achieve 60 percent of the nitrogen, phosphorus, and sediment reductions necessary to achieve applicable water quality standards compared to 2009. In addition to including an assessment of this 60 percent goal at the state and state-basin level, this evaluation includes assessments of progress toward meeting sector-specific programmatic commitments, water quality monitoring trends, and the sector-specific commitments for the 2018-2019 milestone period.

The Chesapeake Bay Program (CBP) partnership agreed to use its 5.3.2 suite of modeling tools through 2017 to measure progress towards attaining the 60 percent goal. When the Bay TMDL was established in 2010, the CBP partnership anticipated that the science, data and understanding of the watershed would continue to improve and evolve as the restoration work proceeded and that adjustments to the implementation efforts could be necessary. Therefore, the CBP partnership committed to update the modeling tools to allow the Bay Program partners to better predict areas and degrees of water quality non-attainment and provide better estimates of progress toward attaining the 2025 goal. These updated tools (6.0 suite of models) will be used to develop new numeric planning targets (i.e., the "Phase III Watershed Implementation Plan or WIP Planning Targets"), to be approved by the CBP partnership, to meet the 2025 goal and will be used to measure pollutant reduction progress from 2018 through 2025.

The upgraded 6.0 suite of tools predict a different level of pollutant reduction effort than the 5.3.2 suite of models to meet the 2025 goal.

Load Reduction Review

When evaluating 2016-2017 milestone implementation, EPA compared nutrient and sediment loads simulated using the 5.3.2 suite of the CBP partnership's modeling tools and wastewater discharge data reported by Virginia to the statewide and state-basin goal of 60 percent of the necessary reductions compared to 2009.

According to the data provided by Virginia for the 2017 progress run, Virginia achieved its statewide 2017 targets for nitrogen and phosphorus but did not achieve its statewide target for sediment. Virginia achieved its 2017 targets for all pollutants in all major basins except for nitrogen in the Rappahannock and for sediment in the James and the Rappahannock.

As noted above, progress measured using the 6.0 suite of tools is different than progress using the 5.3.2 suite of tools. These numeric differences were provided to the jurisdictions in May 2018. Virginia will have the opportunity to optimize its strategies to attain the 2025 goals with the development of a Phase III Watershed Implementation Plan (WIP). This Phase III WIP will be finalized in 2019.

Through the CBP partnership's Chesapeake Bay Watershed Water Quality Monitoring Network, supported by U.S. Geological Survey (USGS), the Susquehanna River Basin Commission (SRBC), and the Bay jurisdictions, the monitoring trends indicate that, in the Rappahannock River, nitrogen loads are improving (decreasing) over the past 10 years but that there is no significant trend in phosphorus loads. Both nitrogen and phosphorus loads are degrading (increasing) for the Mattaponi River and Appomattox River. For the James River, data from the

River Input Monitoring (RIM) stations indicate that nitrogen loads are improving and there is no significant trend for phosphorus. For the Pamunkey River, trends data indicate that nitrogen loads are degrading but that there is no significant trend in phosphorus loads. The area draining to the RIM stations covers almost three quarters of Virginia's area in the Chesapeake Bay Watershed outside of the Potomac. Additional work funded and supported by the CBP partnership will continue by USGS, EPA, SRBC, numerous academic partners, and others to better understand, and, ultimately, explain the causes behind the short-term and long-term monitoring trends observed at all of the CBP partnership's tidal and watershed networks' monitoring stations. The continued investment in monitoring allows the CBP partnership to demonstrate observed improvements to local water quality, to make linkages to pollutant load reduction actions being taken by farmers, municipalities, homeowners, federal facilities and many others, and to assist in identifying where additional implementation is necessary to restore local streams and rivers and achieve jurisdictions' water quality standards in the Chesapeake Bay.

Agriculture – Maintain Ongoing Oversight

2016-2017 Milestone Achievements

- Allocated supplemental funds and targeted implementation of Virginia's Department of Conservation and Recreation (DCR) priority for Stream Exclusion with Grazing Land Management reducing the backlog to less than \$2.8 million in the Chesapeake Bay watershed and \$12.5 million statewide, as of December 2017.
- Developed a cumulative total of 92,016 acres of new Resource Management Plans (RMPs) through August 2017. A special annual RMP Program Report entitled "An Examination of the Needs and Potential Incentives to Encourage Implementation of Resource Management Plans" was submitted to the Governor of Virginia and the Chairmen of the Virginia House Appropriations and Senate Finance Committees on October 1, 2017.
- As of December 2017, 242 unpermitted dairies have active nutrient management plans, 69 of which did not have plans in 2016. DCR shall continue to strive for 20 additional plans on unpermitted dairies each year.
- Increased cover crop acreage by 33 percent since last year; Virginia's current WIP calls for 8 percent of the nitrogen load reductions (since 2009) to come from this Best Management Practice (BMP) alone.

2016-2017 Milestones Missed

- Virginia did not convert applicable Concentrated Animal Feeding Operations (CAFO) and Virginia Pollution Abatement (VPA "no discharge") permits to Virginia Pollutant Discharge Elimination System (VPDES) permits by the end of the 2016-2017 milestone cycle. However, Virginia issued two permits in the Bay watershed on April 23, 2018 to complete this milestone.

2018-2019 Milestone Strengths

- EPA would like to recognize Virginia for the thoroughness of its BMP Verification Program Plan, for upgrading its BMP tracking capabilities, and for the state's outreach to localities for quality practice data.

Key Areas to Address in the 2018-2019 Milestone Period and in the Phase III WIPs

- EPA expects Virginia to complete evaluations on the remaining 95 Animal Feeding Operations (AFOs) in Virginia's portion of the Chesapeake Bay watershed by December 2018.

Urban/Suburban Stormwater – Maintain Ongoing Oversight

2016-2017 Milestone Achievements

- Reissued all expired Phase I Municipal Separate Storm Sewer System (MS4) permits and issued an individual permit to Virginia Department of Transportation (VDOT).
- Reviewed and approved four Phase I MS4 TMDL Action Plans.
- Virginia is on track to reissue its Phase II MS4 general permit. A draft permit was submitted to EPA in December 2017.
- Committed a cumulative \$80 million to implement approximately 86 projects through the Stormwater Local Assistance Fund (SLAF) in an effort to accelerate BMP implementation in the urban sector, including retrofits, stream restoration, filtration and infiltration practices.
- As of December 2017, implemented urban nutrient management plans on 302 golf courses covering 27,782 acres. There are fewer than 25 golf courses still working on completing nutrient management plans.

2016-2017 Milestones Missed

- The testing and deployment of the "SMART" Stormwater Management and Restoration Tracker to track BMPs and the planned verification and reporting of homeowner-installed BMPs has been shifted to the 2018-2019 milestone plan.
- Virginia did not achieve its goals to promote Urban Nutrient Management (UNM) on urban turf. During the milestone period, it saw a reduction of certified UNM planners and did not implement any new Virginia Grass Roots Programs.
- It was not clear whether Virginia completed VDOT guidance documents or established pollutant removal efficiencies for typical roadway vegetated shoulders and drainage conveyances.

2018-2019 Milestone Strengths

- Committed to reissue of the construction general permit, Phase II MS4 general permit and the Arlington County Phase I MS4 permit.
- Committed to review and approve Chesapeake Bay TMDL action plans for six Hampton Roads Phase I MS4 jurisdictions.

Key Areas to Address in the 2018-2019 Milestone Period and in the Phase III WIPs

- The Chesterfield and Prince William County Phase I MS4 permits will expire in 2019. EPA expects Virginia to reissue these permits during the 2018-2019 milestone period.
- EPA recommends including milestones for continued training and outreach to MS4 communities.
- Given that unregulated urban land in Virginia accounts for approximately 70 percent of urban land area, EPA expects Virginia to include a milestone to address implementation strategies for non-regulated developed land. EPA recommends that Virginia conduct outreach to small un-regulated communities to install, inspect, maintain, verify and report urban BMPs installed.
- Based on the progress made through 2017, EPA anticipates that Virginia will need to increase BMP implementation rates in the urban sector to meet its WIP and Bay TMDL targets by 2025.

Wastewater Treatment Plants and Onsite Systems – Maintain Ongoing Oversight

2016-2017 Milestone Achievements

- Pumped out a total of 20,522 septic tanks
- Reissuance of the Watershed General Permit was approved by the State Water Control Board on December 12, 2016.
- Virginia Department of Health (VDH) has coordinated with several local wastewater authorities and localities to identify new sewer line connections during Fiscal Year 2016. Additionally, a spatial dataset of all public sewer service areas in the state is under development. VDH has worked with localities and wastewater authorities across the state, as well as state agencies and the Chesapeake Bay program, to gather this information.

2016-2017 Milestones Missed

- None

2018-2019 Milestone Strengths

- There are no milestones for the wastewater sector during the 2018-2019-time period.

Key Areas to Address in the 2018-2019 Milestone Period and in the Phase III WIPs

- EPA expects Virginia to compile a final report documenting the findings of the sampling implementation plan for non-significant dischargers.

Offsets and Trading – Maintain Ongoing Oversight

2016-2017 Milestone Achievements

- Continued to work through the Trading and Offsets Workgroup and Water Quality Goal Implementation Team to ensure that sector growth is tracked and accounted for in annual progress scenarios, while advocating that growth be explicitly accounted for in the Phase 6 planning targets and Phase III WIP, and not as separate demonstration

submittals. Virginia agreed to continue to work with EPA on sector growth and tracking and accounting for growth.

- The State Water Control Board authorized a second comment period for the revised certification of non-point source nutrient credit regulations on July 19, 2017. The draft regulations are currently in Executive Review. Once the Executive Review is completed, the draft regulations will go to the Board for authorization for another public comment and then again for final approval. It is anticipated that these regulations will be presented to the State Water Control Board by July 1, 2019.
- The Department of Environmental Quality continues to approve nonpoint source banks and is working on the approval of stream restoration projects as nutrient banks. The Virginia General Assembly also expanded the program to include sediment trading in 2016.
- Virginia is considering the use of the Regulatory In lieu fee and Bank Information Tracking System (RIBITS) registry for nutrient trading which would be accomplished under an agreement between United States Army Corps of Engineers (USACOE) and United States Department of Agriculture (USDA). Target completion date is mid-2019. If Virginia is unable to use RIBITS, it will commence development of an independent, online nutrient registry.
- Continues to evaluate annually whether increases in poultry manure and poultry house construction activities are resulting in new or increased nutrient and/or sediment loads.

2016-2017 Milestones Missed

- None

2018-2019 Milestone Strengths

- Regulations for the revised certification of non-point source nutrient credits is anticipated to be presented to the State Water Control Board by July 1, 2019.

Key Areas to Address in the 2018-2019 Milestone Period and in the Phase III WIPs

- The CBP partnership agreed to develop 2025 growth projections for jurisdictions to use in developing their Phase III WIPs. EPA will provide growth projections to Virginia by sector and basin based on Virginia's data. EPA expects Virginia to account for and describe how it will offset any sector or basin growth in its Phase III WIP (e.g., programs, regulations, etc.). Growth projections will be updated every two years and EPA expects Virginia to address any projected growth in its two-year milestones. In particular, EPA has observed data showing increases in loads (e.g., growth in the agriculture and septic sectors and increases in nitrogen in the Urban/Suburban Stormwater sector).
- EPA recommends that Virginia include a milestone for the completion of the agreement to use the RIBITS registry for nutrient trading or initiate development of a state hosted online registry.

Other

Key Areas to Address in the 2018-2019 Milestone Period and in the Phase III WIPs

- In 2018, EPA expects that Virginia's BMP Verification Program will be fully implemented for all BMPs except for Nutrient Management practices, which EPA expects will be fully implemented in 2019. The CBP partnership agreed that all reported practices and control technologies must be implemented, maintained and working so they effectively yield nutrient and sediment load reductions. EPA expects a modification to the 2018-2019 milestones to reflect Virginia's commitment to this implementation effort. The BMP verification process should be updated through Virginia's BMP Verification Program Plan (Quality Assurance Project Plan) whenever changes are made after approval by relevant CBP Partnership workgroups and Goal Implementation Teams.
- EPA expects that Virginia will work with EPA and the appropriate federal agencies to establish 2025 federal facility targets that are coordinated with local area goals and also ensure that BMPs reported by specific federal agencies are included in jurisdiction progress submittal, to allow accurate assessment of federal progress in meeting the federal facility targets. Virginia should collaborate with federal agencies to address any issues related to the progress data and reconcile federal agency records with jurisdiction databases or other jurisdiction BMP record systems.

Potential Federal Actions and Assistance

- EPA's Chesapeake Bay Program Office intends to commit staff, contractual and funding resources to support of the development and implementation of each of the seven watershed jurisdictions' Phase III WIPs. This support includes evaluation of the most-effective practices and locations, evaluation of a jurisdiction's implementation capacity under various staffing, funding, regulatory and programmatic scenarios, local planning outreach, legislative and regulatory gap analysis, and monitoring trend analysis.