

## **EPA INTERIM EVALUATION OF PENNSYLVANIA'S 2014-2015 MILESTONES**

The U.S. Environmental Protection Agency (EPA) is providing this interim evaluation of Pennsylvania's progress towards meeting its 2014-2015 sector-specific milestones and Watershed Implementation Plan (WIP). The Chesapeake Bay restoration operates through a measurable accountability framework. This framework includes the WIPs, annual progress reviews, and two-year milestones. Jurisdictions have the opportunity to adaptively manage their plans and make necessary adjustments to stay on track within this framework and at a midpoint assessment. In 2016, EPA will evaluate whether Pennsylvania achieved its 2014-2015 milestones and has commitments to achieve the Chesapeake Bay Program (CBP) partnership goal of practices in place by 2017 that would achieve 60% of the nitrogen, phosphorus and sediment reductions necessary to achieve water quality standards in the Bay compared to 2009.

### **Load Reduction Review**

When evaluating 2014-2015 milestone implementation, EPA is comparing progress to expected pollutant reduction targets to assess whether statewide and sector load reductions are on track to have practices in place by 2017 that will achieve 60% of necessary reductions compared to 2009. According to the data provided by Pennsylvania for the 2014 progress run, Pennsylvania is on track to meet the 2017 targets for phosphorus, but is not on track for nitrogen or sediment. Pennsylvania will need to place additional emphasis on improving implementation in the agriculture and urban sectors to stay on track to meet its WIP and Chesapeake Bay Total Maximum Daily Load (Bay TMDL) commitments by 2025.

While Pennsylvania did increase its implementation of best management practices (BMPs) during the 2014 reporting period, additional BMP implementation beyond what was anticipated when the 2014-2015 milestones were developed may be necessary. New information such as U.S. Department of Agriculture agricultural census, population and land cover data that the CBP partnership approved for use in its tools to track progress indicates that, since 2007, Pennsylvania has seen changes in agricultural production beyond what was anticipated when the 2014-2015 milestones were developed. These changes in agricultural production have resulted in increases in the estimates of nitrogen and sediment loads and decreases in phosphorus loads to the Chesapeake Bay. EPA expects these changes and other new information as appropriate will be used in the development of future milestones, which is consistent with the adaptive management framework.

### **2014-2015 Milestone Achievements**

#### **Agriculture – Backstop Actions Level**

- Performed conservation tillage transect surveys to improve tracking and is on pace to meet tillage implementation targets. Pennsylvania has a pilot project in 5 counties to add cover crops to these transect surveys and should improve cover crop reporting in future years.
- Continues to support the state's Growing Greener program, which provides cost-share funding to implement BMPs across the Commonwealth.
- Conducted three targeted watershed assessments within the Chesapeake Bay watershed in 2014 to ensure that all operations in these targeted watersheds have plans required by state regulations and BMPs implemented.

- Conducted over 14,000 “farm visits” as included in the Phase I WIP to ensure Pennsylvania agriculture is aware of their regulatory requirements.

#### **Urban/Suburban Stormwater – Backstop Actions Level**

- Shared a draft version of the renewal of Pennsylvania General Permit (PAG-13) for Municipal Separate Storm Sewer Systems (MS4s) for EPA review and comment.
- Conducted 178 MS4 inspections in 2014, and 130 of those were within the Chesapeake Bay watershed.
- Provided a draft model Chesapeake Bay Pollutant Reduction Plan on the Pennsylvania website. EPA is reviewing to ensure consistency with the Bay TMDL.
- Pennsylvania conducted over 376 stormwater construction permit termination inspections per year per the 2014-2015 milestone commitment.

#### **Wastewater Treatment Plants and Onsite Systems – Ongoing Oversight**

- On track with permit limits becoming effective for permits issued with limits consistent with the assumptions and requirements of applicable TMDL wasteload allocations (WLAs).
- Made progress in drafting permits for the remaining significant dischargers needing limits consistent with the assumptions and requirements of applicable TMDL WLAs; however, these permits are not yet reissued due to pending EPA permit objections regarding the trading provisions of those permits and the Commonwealth’s trading program. This issue is nearing resolution.

#### **Offsets and Trading – Enhanced Oversight**

- Completed the true-up period for the 2014 Water Year on time and completed a summary table of 2014 Water Year pollutant reduction activities that generated certified, verified and registered credits.
- Continued to support PennVEST in the implementation of the Nutrient Credit Clearinghouse. Several Forward and Spot auctions were held during the 2014 Water Year.
- Presented a schedule for revisions to its Nutrient Trading Program in March 2015 so that it meets EPA expectations for trading programs consistent with the Bay TMDL.
  - Spring/Summer 2015 – Outreach and Training
  - March 2015 – Begin Permit Amendments
  - March/April 2015 – Re-certification of Credits Begins
  - Fall/Winter 2015 – Review Draft Regulations
  - Spring 2016 – Environmental Quality Board (EQB) Meeting Draft Regulations
  - Summer 2016 – Public Comment on Draft Regulations
  - Spring 2017 – Review revisions based on public comment
  - Summer 2017 – EQB Meeting Final Regulations
  - Fall 2017 – Regulations Published as Final

#### **Tracking, Reporting and Verification**

- Hired a contractor for the development of a tracking system that will start with tracking BMP information for the stormwater sector and ultimately cover all sectors.

## **Improvements to Meet the 2014-2015 Milestones and Maintain WIP Progress**

### **Agriculture – Backstop Actions Level**

- Pennsylvania's 2014 numeric progress for nitrogen is substantially off track towards meeting the interim goal of having practices in place by 2017 that would achieve 60% of the needed reductions. Pennsylvania would need to reduce nitrogen loads from agriculture by 14.6 million pounds to be on track at the end of the 2014-2015 milestone period.
- Pennsylvania is not meeting its annual numeric targets for nutrient management plan development and this practice is not on track to meet Pennsylvania's 2017 and 2025 target levels for enhanced nutrient management implementation. It is not clear what mechanisms or strategies Pennsylvania will use to almost double its nutrient management acres to meet the 2014-2015 milestone and begin to shift all acres from standard nutrient management to more advanced forms (decision and enhanced nutrient management) to meet future goals. EPA recognizes that efforts underway by the Chesapeake Bay Program's Nutrient Management Panel may result in accounting for more ways that nutrients are managed in Pennsylvania beyond the current CBP definition of nutrient management. If the Panel efforts result in expanding the practices that are credited, this could aid Pennsylvania in better accounting for on-the-ground changes in managing nutrients resulting from programs such as the Manure Management Program.
- Pennsylvania will need to implement over 22,000 acres of additional forest and grass buffers to reach its 2014-2015 milestone compared to just over 3,000 acres in 2014. It is unclear what programs, policies, and initiatives are in place to achieve the 2015 and future targets for forest and grass buffers.

### **Urban/Suburban Stormwater – Backstop Actions Level**

- The urban/suburban stormwater sector is not on track to meet the planned 2014-2015 targets for nitrogen, phosphorus and sediment. Pennsylvania has committed in its WIP to reduce its urban/suburban stormwater load for nitrogen by 41%, phosphorus by 45% and sediment by 50% by 2025. To date, Pennsylvania has reduced nitrogen loads by 1%, phosphorus loads by 10% and sediment loads by less than 1%.
- In order to achieve the 2014-2015 milestones EPA expects Pennsylvania to increase implementation of priority BMPs in the Phase II WIP and 2014-2015 milestones such as infiltration practices, urban tree planting and buffers, and stream restoration to increase load reductions from the urban sector.
- EPA recommends that Pennsylvania report its progress for implementing stormwater BMPs associated with new construction, redevelopment and retrofits in accordance with the performance standards and retrofits methods approved by the CBP partnership in 2012. EPA appreciates Pennsylvania's being the first state to attempt to use the performance standard for the 2014 progress reporting. EPA and Pennsylvania will work closely to ensure use of the newly approved Stormwater Performance Measure Standards in 2015.

### **Wastewater Treatment Plants and Onsite Systems – Ongoing Oversight**

- EPA expects Pennsylvania to resolve the EPA permit objections regarding the trading provisions of those permits and the commonwealth's trading program as noted in the Offsets and Trading section below.

### **Offsets and Trading – Enhanced Oversight**

- Pennsylvania is currently conducting an internal review of draft guidance for stormwater offsets.
- Pennsylvania is working on a strategy to complete this guidance for stormwater offsets.
- Finalize and implement Pennsylvania Nutrient Trading program strategy that meets EPA expectations and is consistent with the Bay TMDL, including: finalization of new permit language to resolve permit objections that includes an increase in sampling frequency and elimination of credit generation from excess capacity, and adjustment of the agricultural baseline calculation to be consistent with the Bay TMDL by applying a 3:1 uncertainty ratio.

### **Tracking, Reporting and Verification**

- EPA expects all Chesapeake Bay watershed jurisdictions, including Pennsylvania, to submit a draft BMP verification program quality assurance project plan (QAPP) by June 30, 2015, consistent with the schedule and guidelines adopted by the CBP Principals' Staff Committee. EPA further expects Pennsylvania to begin implementing its BMP tracking, reporting and verification program in January 2016 based upon review and approval of the program's QAPP by EPA, with full implementation by 2018.
- EPA also expects Pennsylvania to work with their contractor to review and improve its historical BMP record for all sectors, including wastewater discharge information. Pennsylvania should submit draft historical data, along with documentation of methods and assumptions, to the Chesapeake Bay Program Office (CBPO) by June 30, 2015, and final historical data by September 30, 2015, as part of the CBP partnership's midpoint assessment of the Chesapeake Bay TMDL.
- Continue making improvements to an existing tracking and accountability system or develop a new system for tracking new or increased loads to that it is fully operational by December 31, 2015.

### **Expectations and Recommendations for Development of the 2016-2017 Milestones**

#### **Load Reductions**

- EPA recommends that Pennsylvania review its programs to offset additional nitrogen and sediment loads and set milestones to ensure TMDL goals can be met in light of the new information incorporated into the CBP partnership's tools for tracking progress, which indicate increases in the estimated nitrogen and sediment loads to the Chesapeake Bay since 2007 beyond what was previously anticipated.
- U.S. Geological Survey (USGS) short-term (2001-2010) trends based on monitoring data indicate increasing phosphorus loads in the Susquehanna River watershed. Based on these monitoring results and other available science such as phosphorus saturation and transport in soils and recent poultry data, EPA believes that the level of effort to manage phosphorus may increase and recommends that Pennsylvania consider additional actions to manage phosphorus in its 2016-2017 milestones and Phase III WIP.

#### **Agriculture**

- EPA will continue to meet with Pennsylvania to discuss how to translate the findings from EPA's recent Animal Agriculture Program Assessment, along with other WIP and milestone

evaluations, into specific milestones intended to get Pennsylvania back on track with meeting its agricultural pollutant reduction targets. EPA expects the Commonwealth to:

- Develop and implement an effective and robust compliance assurance strategy to ensure full compliance of the state Manure Management Program and Agricultural Erosion and Sediment Control Program
- Accelerate implementation of more advanced forms of nutrient management.
- Accelerate implementation of agricultural conservation practices that will reduce agricultural nutrient loads.
- The 2012 Census of Agriculture indicates that the Pennsylvania poultry industry has expanded greatly since 2007, with an estimated 38% increase in layers raised within Pennsylvania counties that share a border with the Chesapeake Bay watershed. In light of these increases, EPA would recommend programmatic milestones that address how Pennsylvania will offset the increased loads from this expanding industry.
- EPA recommends that Pennsylvania include milestones for ensuring that Pennsylvania has the programs and funding in place to support farmers in properly managing phosphorus on agricultural lands based on the latest science to address manure nutrient imbalances in regions with dense animal agricultural operations.

#### **Urban/Suburban Stormwater**

- EPA expects a milestone to shift a portion of the urban/suburban load reductions to different sectors that will get Pennsylvania back on track to meet the nutrient and sediment targets for 2017 and 2025.
- EPA expects programmatic milestones to increase implementation of the highest priority water quality BMPs such as infiltration and filtration practices in the urban sector.
- EPA expects Pennsylvania to continue to provide training and outreach to its MS4 communities on how to comply with permit requirements and be consistent with the Bay TMDL as either a milestone or a grant commitment.
- EPA expects milestones to continue to work with EPA on the development of specific reduction targets for discharges to the Chesapeake Bay for inclusion in the revised PAG-13 MS4 permit.
- EPA expects Pennsylvania to renew the industrial and construction stormwater permits by November 2017 as either a milestone or a grant commitment.
- EPA recommends Pennsylvania to continue inspections and any necessary follow-up actions to meet its 5-year milestone for inspections as either a milestone or grant commitment.

#### **Wastewater Treatment Plants and Onsite Systems**

- EPA recommends that Pennsylvania continue to incorporate additional monitoring data where possible in their tracking and reporting of nonsignificant wastewater treatment plants in the 2016 progress run. For many nonsignificant facilities, Pennsylvania relies upon default nutrient and sediment concentration values or one-time estimates. Additional monitoring data would allow Pennsylvania to more accurately verify that nonsignificant facilities are achieving their aggregate Bay TMDL wasteload allocations.

### **Offsets and Trading**

- EPA expects Pennsylvania to continue to identify new or increased sector loads and to offset them within the appropriate timeframe and to continue to track and account for new and increased loads in sector growth demonstrations.

### **Next Steps**

- EPA will continue to work with Pennsylvania to determine which sets of BMPs equate to full compliance with current regulations in order to determine where additional measures can be taken to reduce nitrogen, phosphorus and sediment.
- If load reductions remain off track, EPA may consider seeking additional pollutant reductions from the wastewater sector.
- EPA may perform animal feeding operation (AFO) assessments in Pennsylvania in order to ensure the operations are in compliance with current regulations.
- Pennsylvania will ensure that the Conservation District staff funded by EPA's Chesapeake Bay Regulatory and Accountability Program (CBRAP) grant engage in BMP data collection and use the most appropriate BMP verification standards. These staff will also continue to address the other activities identified in the approved CBRAP grant, including the development, design and implementation of agriculture BMPs that improve water quality and conducting farm visits Pennsylvania committed to in its WIP.
- For the Urban/Suburban stormwater sector, EPA will revisit its 2012 stormwater assessment, work with Pennsylvania as it revises and reissues the PAG-13 MS4, industrial and construction general permits and assist Pennsylvania with training if needed.
- EPA will provide an analysis of 2013 sector load growth demonstration to Pennsylvania by June 30, 2015. EPA expects Pennsylvania to update the sector load growth demonstration with new information including EPA's findings during the 2016-2017-milestone period. EPA also expects Pennsylvania to develop offset regulations and policies if the demonstration shows that new or increased loads are generated and need to be offset.
- EPA will work with federal partners to provide leadership and coordinate with the jurisdictions on WIP and milestone implementation. EPA and jurisdictions are working with federal agencies in 2015 to set federal facility-specific pollution reduction targets for the 2016-2017 milestones and on methods for enhanced reporting of BMPs.