

EPA INTERIM EVALUATION OF PENNSYLVANIA'S 2016-2017 MILESTONES

As part of its role in the accountability framework described in the Chesapeake Bay Total Maximum Daily Load (Bay TMDL) for nitrogen, phosphorus, and sediment, the U.S. Environmental Protection Agency (EPA) is providing this interim evaluation of Pennsylvania's progress toward meeting its statewide and sector-specific two-year milestones for the 2016-2017 milestone period. In 2018, EPA will evaluate whether each Bay jurisdiction achieved the Chesapeake Bay Program (CBP) partnership goal of practices in place by 2017 that would achieve 60 percent of the nitrogen, phosphorus, and sediment reductions necessary to achieve applicable water quality standards in the Chesapeake Bay compared to 2009.

Load Reduction Review

When evaluating 2016-2017 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 percent of necessary reductions compared to 2009. Loads in this evaluation are simulated using version 5.3.2 of the CBP partnership Watershed Model and wastewater discharge data reported by the Bay jurisdictions.

According to the data provided by Pennsylvania for the 2016 progress run, Pennsylvania is off track to achieve its statewide 2017 targets for nitrogen, phosphorus, and sediment.

The data also show that, at the sector scale, Pennsylvania is on track to meet its 2017 targets for all three pollutants in the Wastewater sector but is off track in the Agriculture and Urban/Suburban Stormwater sectors for all three pollutants. However, data that are being gathered for the Bay TMDL midpoint assessment could show that changes in levels of effort may be necessary in order to achieve the 2025 targets for all three pollutants. The Phase III Watershed Implementation Plan (WIP), combined with supporting two-year milestones, will address reductions needed from 2018 to 2025.

Through the CBP partnership's Chesapeake Bay Watershed Water Quality Monitoring Network, supported by U.S. Geological Survey (USGS), the Susquehanna River Basin Commission, and the Bay jurisdictions, the monitoring trends indicate that nutrient and sediment in the Susquehanna watershed are generally improving (decreasing), with a 13 percent decrease in nitrogen loads since 2005 at the Marietta monitoring station above the Conowingo Dam. However, currently the reduction levels are not at a pace that will achieve the 2025 Bay TMDL targets. The Susquehanna River loads to the Chesapeake Bay estuary at Conowingo are degrading (increasing) for both nitrogen and phosphorus. Additional study will continue by USGS and others to better understand the causes behind the short-term and long-term monitoring trends observed at all monitoring stations. The continued investment in long-term monitoring allows the CBP partnership to demonstrate observed improvements to local water quality and to assist in identifying where additional implementation is necessary to achieve applicable water quality standards locally and in the Chesapeake Bay.

Agriculture – Maintain Backstop Actions Level

2016-2017 Milestone Achievements

- Announced a new federal and state partnership between Pennsylvania, U.S. Department of Agriculture (USDA) and EPA which provided an additional commitment of \$28.8 million to accelerate agricultural nutrient reductions to help achieve local water quality goals and support the Chesapeake Bay restoration. Of that amount, Pennsylvania is contributing \$11.8 million in state funds in Fiscal Year 2016 to further the implementation of the [*Pennsylvania Chesapeake Bay Restoration Strategy*](#) and help reach its 2025 nutrient and sediment reduction goals under the Bay TMDL.
- Trained over 75 Conservation District (CD) staff from the 29 counties that signed up for the Agriculture Compliance Initiative to perform Agriculture Compliance inspections and those inspections began in October 2016. Pennsylvania Department of Environmental Protection (PADEP) regional office staff from four different PADEP regions were also trained on how to perform these Agriculture Compliance inspections.
- In the first six months of the Agriculture Compliance Inspection initiative, ending March 31, 2016, regional PADEP staff performed 264 inspections and the county CD staff performed 858 inspections.
- Pennsylvania in the Balance conference attendees continue to meet to formulate strategies to address achieving Pennsylvania's nutrient and sediment reduction targets.
- Pennsylvania State University developed the voluntary self-reporting conservation practice inventory. Over 6,700 farmers responded and of that, a total of 711 farms were visited for verification, representing 10.48 percent of the total population of respondents. Results of those surveys have been successfully reported to the CBP partnership and incorporated into the CBP partnership watershed model as part of the 2016 progress run.
- The CBP partnership Agriculture Workgroup approved Pennsylvania's transect survey approach for traditional cover crops and its remote sensing concept. Pennsylvania intends to pursue with the CBP partnership the ability to account for commodity cover crops acres in annual progress runs utilizing information gathered from the transect surveys.
- Launched a new pilot riparian buffer program in July 2016 to help meet riparian goals awarding 17 grants for multiple-landowner projects in January 2017; opened a second grant round in January 2017 to fund buffer installations; and secured \$3 million over three years in funding from the Pennsylvania Infrastructure Investment Authority (PennVEST) to install additional buffers. In addition, Pennsylvania Department of Conservation and Natural Resources initiated a statewide multi-agency task force in 2016 that now represents more than 40 stakeholder groups to coordinate outreach, planning, funding, technical assistance, and other buffer-related issues.

Key Areas to Address to meet 2016-2017 Milestones

- Pennsylvania has done well in meeting the programmatic milestones it projected for this year, but Pennsylvania has not addressed EPA's overall concern regarding the amount of reductions expected from the Agriculture sector, particularly for nitrogen. To achieve the 2017 target, Pennsylvania will need to reduce nitrogen by over 19 million pounds statewide, with 16.6 million pounds coming from the Agriculture sector.
- EPA has remaining concerns that the Agriculture Compliance Initiative inspections currently only focus on the presence/absence of the state-required plans and not implementation of the

plans, that Pennsylvania lacks a dedicated funding source on par with the level of reductions needed to improve water quality, and that Pennsylvania does not have programs and resources to support increased implementation levels.

- It is EPA's understanding that Pennsylvania intends to revise the Agriculture Compliance Initiative Inspection Standard Operating Procedures (SOP) to incorporate assessing implementation of the state-required plans in summer 2017 as part of the Agriculture BMP Supplemental Information form used as part of the Agriculture Compliance inspections.
- EPA expects Pennsylvania to synthesize the data collected from the Agriculture Compliance Initiative inspections, develop a mechanism to share the findings, and provide results of follow up actions to the inspections.

Urban/Suburban Stormwater – Maintain Backstop Actions Level

2016-2017 Milestone Achievements

- Reissued the Municipal Separate Storm Sewer System (MS4) General Permit (PAG-13) in June 2016 with numeric reduction goals for nitrogen, phosphorus, and sediment. Under the 2018 permit, approximately 650 PAG-13 Notices of Intent (NOIs), applications, and accompanying plans are expected on or before September 16, 2017.
- Provided multiple trainings on the updated PAG-13 permit related to developing plans, permit requirements, and the inspection process.
- Developed and populated its MS4 website with numerous materials to assist MS4 applicants and permittees.
- Awarded contracts for stormwater implementation Best Management Practices (BMPs), with an additional round of funding for BMPs of approximately \$1.1 million, and accepted grant applications through March 2017.

Key Areas to Address to meet 2016-2017 Milestones

- Pennsylvania has done well in meeting the programmatic milestones it projected for this year, but has not addressed EPA's concern regarding the amount of reductions expected from the Urban/Suburban Stormwater sector, particularly for nitrogen. Pennsylvania will address EPA's concern regarding urban stormwater pollutant reductions in the Phase III WIP and two-year milestones.
- Prepared MS4 permittees for submitting complete permit applications, however to date no draft Pollutant Reduction Plans/MS4 TMDL plans have been submitted by permittees for review by PADEP, however these plans are due starting in September 2017. PADEP is aware that many MS4 permittees are currently working on their plans and PADEP staff have met with numerous MS4 permittees and consultants.
- Pennsylvania has not yet developed technical guidance for minimum control measure 3 (MCM 3) due to resource limitations and prioritizing staff time to assist MS4 permittees in developing the plans required under PAG-13. PADEP is encouraging permittees to utilize EPA guidance for MCM 3. As time allows, PADEP will consider developing a model Illicit Discharge Detection and Elimination plan for use by MS4 permittees.
- Pennsylvania made little progress on the implementation of an MS4 circuit rider program due to resource limitations and a lack of interested applicants.

- Pennsylvania will not pursue a stormwater authority feasibility study due to limited resources and prioritizing staff time to assist MS4 permittees in developing the plans required under PAG-13.
- EPA expects Pennsylvania to reissue the Stormwater Construction General Permit (PAG-02) by December 2017.
- EPA expects Pennsylvania to notify EPA and to revise the timeline for the draft BMP manual, if contracting delays continue to impact the schedule to finalize the BMP manual.

Wastewater Treatment Plants and Onsite Systems – Maintain Ongoing Oversight **2016-2017 Milestone Achievements**

- On track with issuing permits that are consistent with the assumptions and requirements of applicable wasteload allocations.
- Wastewater sector remains below the 2025 Bay TMDL goals for numeric loading results for each pollutant.

Key Areas to Address to meet 2016-2017 Milestones

- EPA objected to 14 draft Chesapeake Bay National Pollutant Discharge Elimination System (NPDES) permits in 2014-2015. EPA and PADEP agreed upon changes to permit language and other measures, which addressed concerns of the objections. Ten of the 14 permit objections were withdrawn by EPA (one of which will be withdrawn shortly); however, four of these permit objections are outstanding. EPA expects PADEP to resolve the concerns with these four remaining permits as expeditiously as possible given current resources and provide a status update with subsequent programmatic milestone progress reports.

Offsets and Trading – Maintain Enhanced Oversight **2016-2017 Milestone Achievements**

- Continues to monitor the number of credits generated and purchased by compliance year and posts the information on the PADEP website.
- The draft strategy for the development of the Phase III WIP has been developed internally and it will include an evaluation of load growth by sector. It will address load growth in the sectors where it occurs, and the development of methods to track and account for sector load growth.

Key Areas to Address to meet 2016-2017 Milestones

- Due to recent staff changes at PADEP, milestone deliverable deadlines in this section need to be revised where dates/deadlines were missed.
- EPA expects Pennsylvania to decide, as part of the development of the Phase III WIP, which nutrient trading tool it will use.
- EPA expects Pennsylvania to quantify and offset any additional nutrient loads resulting from the increase in poultry layer operations. Between 2007 and 2012, Pennsylvania layer operations increased by 38 percent in Pennsylvania counties that have some portion in the Chesapeake Bay watershed.
- EPA expects Pennsylvania to move forward with revising its Nutrient Trading Program regulations to address the issue of baseline and any additional expectations defined as part of the development of the Phase III WIP.

Other

2016-2017 Milestone Achievements

- Contracted with WorldView Solutions to develop a “data warehouse” and a cloud-based application of the PracticeKeeper software. The “data warehouse” is complete and was used for the 2016 progress submittal. PracticeKeeper is currently piloted by several CD’s and other Pennsylvania organizations and is expected to be readied for use by all conservation districts by July 2017.
- Requested additional staffing resources and funding for Act 167 from the Pennsylvania Office of the Budget and the General Assembly.
- Convened the Phase III WIP Steering Committee in April 2017 and the Phase III WIP kick-off meeting, open to the public, on June 5, 2017.

Key Areas to Address to meet 2016-2017 Milestones

- No progress has been made with documenting and tracking legacy sediment projects pending results of the Science and Technical Advisory Committee (STAC) workshop.

Potential Federal Actions and Assistance

- EPA developed state-specific [Phase III WIP Expectations for Pennsylvania](#), which were issued on April 28, 2017.
- EPA will perform a resources workload model in order to determine if there are sufficient resources to implement Urban/Suburban Stormwater regulatory programs.
- EPA provided a draft Stormwater Program Reassessment in April 2017 as follow up to the [2012 Stormwater Assessment](#) that includes findings and recommendations to address noted areas of concern.

Suggested Considerations for Development of the Phase III WIP and 2018-2019 Milestones

Any recommendations in this section for the Phase III WIP and 2018-2019 milestones are in addition to the state-specific Expectations for Pennsylvania.

Agriculture

- EPA expects Pennsylvania to have the programs in place to support farmers in properly managing phosphorus on agricultural lands based on the latest science. For example, a commitment to update Pennsylvania’s phosphorus index with the latest science during the 2018-2019 milestone period.
- EPA expects Pennsylvania to report information related to compliance actions taken from the Agriculture Compliance Initiative including what are the findings, what actions taken, what results came from the actions.
- EPA expects Pennsylvania to continue investigation and study of the utilization of regional manure transport/treatment technologies for areas of manure imbalance in order to generate more nutrient reductions and offset new loads to achieve the Bay TMDL goals.
- EPA expects Pennsylvania to develop a strategy for implementation of initiatives, including Agriculture Recognition Programs and Agricultural Certainty, designed to implement nutrient management planning and other priority agricultural BMPs.

Urban/Suburban Stormwater

- EPA expects Pennsylvania to include a milestone to revise the BMP manual during the 2018-2019 milestone period.
- EPA expects that Pennsylvania and EPA will enter into a management agreement to correct remaining program deficiencies identified in the findings from the Pennsylvania Stormwater Program Reassessment shared in Spring 2017.
- EPA supports the continued pursuit of local government collaboration to address nutrient reductions using efforts in York, Lancaster, Lycoming, Blair Counties as examples of initiatives to form partnerships to address stormwater.

Offsets and Trading

- EPA expects Pennsylvania to continue to understand where growth is occurring, and where loads need to be offset, to offset these new loads within the appropriate timeframe, and to continue to track and account for new or increased loads. In particular, EPA has observed data showing increases in loads from poultry and increases in nitrogen in the Urban/Suburban Stormwater sector.

Federal Facilities

- EPA recommends Pennsylvania strengthen its involvement in the Federal Facilities Workgroup (FFW) and contribute to continuing the progress made in reporting BMP data received from federal agencies. The FFW will also rely on Pennsylvania's input to ensure federal facility targets, the use of the Phase 6 watershed model, and federal facility-content in the Phase III WIPs are fully supportive of Pennsylvania's WIP implementation. Continued coordination with federal agencies is necessary to allow full credit to be available to the jurisdiction and federal agencies for BMP implementation on federal land.