

# Evaluation of Pennsylvania's Draft Phase III Watershed Implementation Plan

## Background

The seven jurisdictions (Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia) in the Chesapeake Bay Program (CBP) partnership agreed to develop Watershed Implementation Plans (WIPs) in three phases to provide a framework for reducing nitrogen, phosphorus, and sediment loads to meet water quality standards in the Chesapeake Bay and its tidal tributaries. The Phase III WIPs provide a road map for the numeric and programmatic commitments the jurisdictions intend to implement between 2019 and 2025 so that all practices are in place by 2025<sup>1</sup> to achieve the Bay's dissolved oxygen, water clarity/submerged aquatic vegetation, and chlorophyll-a standards. The 2010 Chesapeake Bay Total Maximum Daily Load (Bay TMDL) document outlined the process for the development of WIPs and for tracking progress towards attaining the CBP partnership restoration goals.

The U.S. Environmental Protection Agency (EPA) is providing this evaluation to the CBP partnership and the public. The draft Phase III WIP was evaluated to determine whether Pennsylvania included sufficient information in the WIP to provide confidence<sup>2</sup> that Pennsylvania will achieve its statewide and state-basin Phase III WIP planning targets by 2025. The seven jurisdictions, EPA, and the Chesapeake Bay Commission jointly approved these Phase III WIP planning targets in July 2018.

The seven jurisdictions each divided their respective Phase III WIP planning targets into reduction goals for specific source sectors to more finely demonstrate how overall pollutant load reductions would be achieved by 2025. Those major source sectors include agriculture, wastewater, and stormwater. Each jurisdiction could shift reductions between source sectors through development and implementation of programs for pollutant trading and offsetting. In addition, the CBP partnership decided that jurisdictions would highlight pollutant reductions from federal facilities separately in each WIP and would consider the following when addressing specific source sector pollutant reductions: growth, local engagement strategies, local planning goals and climate. The CBP partnership expects these local and changing conditions to be addressed in each jurisdiction's Phase III WIP.

This evaluation is also based on whether Pennsylvania met the numeric and programmatic expectations as described in the June 2018 *U.S. Environmental Protection Agency's Expectations for the Phase III Watershed Implementation Plans*. Pennsylvania recommitted to the CBP partnership that it would meet these numeric and programmatic expectations.

## Overview

EPA's review of Pennsylvania's draft Phase III WIP found many areas in which the Commonwealth excelled in addressing the expectations. Some of the notable strengths include:

- Pennsylvania conducted outreach and community engagement efforts to develop the draft Phase III WIP. Hundreds of watershed stakeholders were involved in the draft Phase III WIP development process to assess barriers to watershed implementation and creative strategies to overcome them.
- Through the pilot County Action Plan efforts in Lancaster, York, Adams, and Franklin Counties, Pennsylvania provided a comprehensive road map for the counties in the watershed and represented an

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<sup>1</sup> This commitment to have all practices and controls installed by 2025 to achieve applicable water quality standards was reaffirmed by the Chesapeake Bay Program signatories in the 2014 Chesapeake Bay Watershed Agreement.

<sup>2</sup> The phrase "reasonable assurance" is a term of art specific to TMDL establishment. In evaluating the Phase I WIPs, EPA used the phrase and concept of "reasonable assurance" because those WIPs ultimately formed the basis of the 2010 Bay TMDL. EPA continued to use the phrase in its evaluation of the Phase II WIPs, but was using it in a more general way, as TMDL establishment had been completed. In Phase III, to be more consistent with applicable guidance and regulations and to avoid potential confusion, EPA is using the term "confidence" instead of "reasonable assurance."

effective use of targeting areas for pollutant reduction practices. Should the proposed state funding initiative materialize, the county action plan rollout to the Tier 2, 3, and 4 counties would accelerate the pace of best management practice (BMP) implementation going forward.

EPA's review, however, also noted potential enhancements in Pennsylvania's draft Phase III WIP that should be areas of focus in revising the draft document prior to submitting a final WIP. These areas include:

- According to the simulations performed using the CBP partnership's Phase 6 suite of modeling tools, Pennsylvania's draft Phase III WIP achieves approximately 64% of the nitrogen and 76% of the phosphorus Phase III WIP planning targets overall.
- The draft Phase III WIP generally refers to these initiatives as proposals, recommendations, and things under consideration. Pennsylvania's draft Phase III WIP lacks implementation details and programmatic commitments on the initiatives identified for achieving nutrient reductions, including securing the necessary funding and staff, enacting needed legislation, refining programs, and developing necessary regulatory changes.
- The Phase III WIP efforts should be focused on identifying programs and opportunities that will help Pennsylvania achieve its targets. EPA recognizes that many programmatic expectations, assumptions and practices have been developed and agreed upon by the CBP partnership; however, Pennsylvania is not limited to implementing those agreed upon approaches, and there may be more effective or efficient opportunities for Pennsylvania to achieve its targets. EPA understands that making significant progress to reduce nutrient losses in a watershed requires local solutions tailored to local resource needs and opportunities. EPA is available to assist and encourages Pennsylvania to identify more state-specific practices, programs and opportunities for its final Phase III WIP.

### EPA Oversight and Assistance

The 2010 Bay TMDL contains an accountability framework that guides and supports restoration efforts and includes: three phases of WIPs, two-year milestones, and EPA's tracking and assessment of restoration progress. EPA tracks and assesses annual progress and two-year milestone commitments to determine if the Bay jurisdictions are on track toward meeting their water quality goals.

Under the accountability framework, EPA assigns each jurisdiction's source sectors (e.g., agriculture, stormwater, wastewater, and trading and offsets) a level of oversight based on its evaluation of whether the jurisdiction provided sufficient information in its WIP and/or two-year milestones that load reductions and programmatic commitments will be achieved in those source sectors by 2025. The levels of oversight are as follows:

- **Ongoing oversight:** EPA, while having no significant concerns with a jurisdiction's strategy to implement the TMDL goals, will continue to monitor progress.
- **Enhanced oversight:** EPA, having identified specific concerns with a jurisdiction's strategy to implement the TMDL goals, may take additional federal actions, as necessary, to ensure that the jurisdiction stays on-track.
- **Backstop oversight:** EPA, having identified substantial concerns with a jurisdiction's strategy to implement the TMDL goals, has taken necessary federal actions to help the jurisdiction get back on-track.

Pennsylvania is currently subject to enhanced oversight in its trading and offsets sector and backstop oversight in its agriculture and stormwater sectors.

Since the release of the 2010 Bay TMDL, EPA has provided increased technical and financial assistance to Pennsylvania to support meeting its 2025 planning goals. During Phase III WIP development, EPA worked closely with staff at Pennsylvania's Department of Environmental Protection (PADEP). Since July of 2018, EPA provided more than 2,500 hours of technical assistance to help PADEP incorporate the results of the Bay TMDL's Midpoint Assessment into their input data for the draft Phase III WIP. This included understanding changes in pollutant loadings and BMP implementation under a new suite of modeling tools; acquiring high resolution land use and land cover data; developing local planning goals; and adapting to changing conditions, such as climate.

EPA has worked closely with Pennsylvania to increase and accelerate BMP implementation and identify options to strengthen programmatic commitments. EPA understands the unique challenges facing Pennsylvania and remains committed to providing significant resources to help improve water quality in the Commonwealth. For instance, EPA has provided the following:

- Increased grant support to assist Pennsylvania to ensure that Pennsylvania does not put itself in a position to forfeit current or future grant dollars, and to ensure that funding is used and targeted toward on-the-ground implementation efforts, particularly in the agricultural sector;
- Dedicated staff to assist with overall Phase III WIP development, including developing and communicating local, county-level planning goals and designing cost-effective, feasible strategies to meet local and state-wide pollutant reduction goals, particularly with stakeholders from Lancaster, York, Adams, and Franklin Counties;
- Provided analyses of existing and potential future policies that would incentivize or require pollutant reduction;
- Aided in the creation of a plan to inspect, report, and verify compliance with existing regulations and progress in pollutant reduction activities, such as cover crops and conservation tillage;
- Continued support of the United States Geologic Survey (USGS) non-tidal water quality monitoring network that enables USGS and EPA staff to provide detailed descriptions of trends in nutrients throughout the Susquehanna and Potomac watersheds;
- Analyzed pollutant reduction benefits beyond water quality improvements, such as enhanced habitat for sensitive and key indicator species; and
- Quantified the environmental impact of changing animal and human populations, as well as land use and crop patterns.

This assistance has been instrumental in advancing Pennsylvania's Chesapeake Bay cleanup efforts across the Commonwealth over the past two years. Continued technical assistance will be critical as Pennsylvania begins Phase III WIP implementation and considers new strategies to reduce nutrient pollution to its local waters.

On February 6, 2019, EPA issued an updated Water Quality Trading Policy Memo to promote market-based mechanisms for improving water quality. This policy update includes additional flexibilities that state and local policy makers may consider incorporating into trading and other market-based programs to promote water quality improvements and may provide Pennsylvania with an opportunity to update or improve its current policies and regulations related to nutrient accounting and trading. EPA welcomes the opportunity to discuss with Pennsylvania new market-based approaches to consider in support of finalizing the Phase III WIP.

EPA will continue to commit staff, contractual, and funding resources to support the finalization and implementation of Pennsylvania's Phase III WIP and future two-year milestones. This support includes evaluation of the most-effective practices and locations, annual WIP assistance funding to address priority implementation needs, evaluation of Pennsylvania's implementation capacity under various staffing, funding,

regulatory and programmatic scenarios, local planning outreach, legislative and regulatory gap analysis, and monitoring trend analyses. In addition, EPA will continue to work with federal partners to provide leadership and coordinate with Pennsylvania on WIP and two-year milestone implementation to reduce pollution from federal lands.

### **Detailed Evaluation**

The following sections provide specific highlights of key strengths of Pennsylvania's draft Phase III WIP. These sections also provide potential enhancements for the WIP, designed to provide greater confidence to the CBP partnership and the public that Pennsylvania will have programs and practices in place by 2025 that will promote achievement of its Phase III WIP planning targets. Pennsylvania should maintain these key strengths and address potential enhancements in its final Phase III WIP.

### **Load Reduction Review**

When evaluating Pennsylvania's Phase III WIP numeric commitments, EPA modeled implementation scenarios through the CBP partnership's Phase 6 suite of modeling tools and compared those simulated nutrient<sup>3</sup> loads to Pennsylvania's 2025 statewide and state-basin Phase III WIP planning targets. Simulations indicate that Pennsylvania's plan does not achieve 100% of the statewide Phase III WIP planning targets for nitrogen or phosphorus. Pennsylvania's plan achieves its nitrogen and phosphorus targets in the Western Shore basin and the phosphorus target in the Eastern Shore basin. However, modeling simulations do not indicate that the plan will achieve nitrogen targets in the Susquehanna, Potomac, or Eastern Shore basins, nor does the modeling indicate that the plan will fully achieve phosphorus targets in the Susquehanna or Potomac basins<sup>4</sup>.

In the draft Phase III WIP document, Pennsylvania states that it "commits to have all practices and controls in place by 2025 necessary to achieve the final Phase III WIP for phosphorus and nitrogen." However, according to the modeling simulations, Pennsylvania's draft Phase III WIP achieves approximately 64% of the nitrogen and 76% of the phosphorus Phase III WIP planning targets overall. EPA recognizes that Pennsylvania has the largest loads to account for within the Chesapeake Bay, and the actions in the draft Phase III WIP will help improve the health of the resource. However, if Pennsylvania's current planned efforts will not achieve 100% of the Phase III WIP planning targets, the State may need to reevaluate its planned activities or schedule to achieve the planning targets.

Pennsylvania proposes to achieve most of its pollutant reductions by implementing BMPs in the agriculture sector: 96% for nitrogen and 86% for phosphorus. Pennsylvania plans to maintain the progress it has made in pollutant reductions from the wastewater sector. The remainder of the pollutant reductions are to come from the natural sector which includes preservation of forests and wetlands and controls on stream bed and bank loads. Finally, Pennsylvania's Phase III WIP addresses each of the additional changing and local conditions identified by the CBP partnership.

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<sup>3</sup> Phase III WIP planning targets for sediment are currently under development by the CBP partnership.

<sup>4</sup> Each jurisdiction has the option of adjusting its Phase III WIP state-basin planning targets through nutrient exchanges and/or exchanges with other basins within that jurisdiction. Any adjustments to the state-basin planning targets must still result in all 92 Chesapeake Bay segments achieving the respective jurisdictions' Chesapeake Bay water quality standards under Phase 6 Chesapeake Bay airshed, watershed, and estuarine water quality/sediment transport model simulated conditions.

## Source Sectors

### Agriculture

#### **Key Strengths**

- Pennsylvania performed extensive outreach to solicit recommendations from Pennsylvania’s agricultural leaders from the farming community, land grant university, and key agricultural organizations.
- Pennsylvania communicated the recommendations of Pennsylvania’s agricultural workgroup members to the larger agriculture community to solicit their input and refinements.
- Pennsylvania incorporated technical and financial resource recommendations from Pennsylvania in the Balance Conferences such as a “One-Stop-Shop” for technical assistance and expansion of the Resource Enhancement and Protection (REAP) Program.
- Pennsylvania is investing in improving the tracking, verification, and reporting of BMP implementation.
- Pennsylvania identified the funding levels associated with BMP implementation and the resources needed to support implementation.
- Pennsylvania commits to issue NPDES permits to 100% of all Concentrated Animal Feeding Operations (CAFOs).

#### **Potential Enhancements**

- Pennsylvania should provide more details on the implementation of strategies included in the draft Phase III WIP, including:
  - Additional information on new strategies, legislative programs, incentive programs, compliance and other potential programs to support how it will achieve BMP implementation rates, such as 90% of swine and poultry operations and 75% of livestock with adequate manure storage, and the proposed increase in nutrient management compliance.
  - Phase III WIP priority initiatives identified in the draft Phase III WIP, such as the lead(s) organization for these initiatives, incentives, and timeline to secure the funding, staff, legislation, program refinements, and the regulatory changes necessary to meet the accelerated agricultural BMP implementation levels.
  - Proposals to modify regulations, such as enhancement to Pennsylvania’s agriculture erosion and sediment (Ag E&S) controls.
  - Additional explanation about how existing and increased funding will be sufficient and targeted to implement effective practices in higher loading watersheds – particularly in the Tier 1 and Tier 2 counties.
- Pennsylvania should more clearly identify the number and type of CAFOs in Pennsylvania’s portion of the Chesapeake Bay watershed.
- Pennsylvania should identify if there are plans to expand nutrient management to non-CAFO and non-CAO manure operations that have higher water quality risks given density of animals or location in priority high loading watersheds.
- Pennsylvania should consider development, enhancement and implementation of the following initiatives: partnering with NGOs on voluntary conservation, market-based approaches, pay for performance approaches, public-private partnerships, and improving regulatory compliance.

### Stormwater

#### **Key Strengths**

- Pennsylvania provided detailed staffing and funding numbers for multiple state agencies to show what additional resources are needed to meet its restoration goals. The draft Phase III WIP also discusses proposals to maintain a dedicated funding source for Chesapeake Bay restoration.
- Pennsylvania proposed fertilizer legislation that would reduce nitrogen and phosphorus runoff to the Chesapeake Bay.

- Pennsylvania solicited feedback from the public and other stakeholders in the draft Phase III WIP process, including through a dedicated stormwater workgroup in preparing the draft Phase III WIP.
- Pennsylvania commits to updating its Stormwater BMP Manual, which will include updated calculations for BMPs related to water quality, rate, and volume.
- Pennsylvania commits to prioritizing Act 167 compliance and enforcement and will undertake education and outreach related to the benefits of implementing the Act.
- Pennsylvania commits to improve reporting and verification procedures. The new Pennsylvania verification strategy fills a gap for the urban sector with new verification procedures, as well as the pending improvements to the BMP Warehouse and Practice-Keeper reporting systems, that will support Pennsylvania Municipal Separate Storm Sewer Systems (MS4s) communities.
- Pennsylvania emphasized practices that provide strong local co-benefits. For example, Pennsylvania envisions about 12 miles of stream restoration per year, and thousands of acres of reforestation, buffers and urban tree canopy. These practices are also cost-effective and work best in the rural and suburban areas of the Chesapeake Bay watershed.

### **Potential Enhancements**

- The draft Phase III WIP includes minimal nutrient reductions from the stormwater sector, but the model simulations assume accelerated implementation of traditional stormwater BMPs (such as ponds, infiltration, bioretention, filtering, swales, and impervious surface reduction). Pennsylvania should either provide further detail (e.g., new strategies, legislative programs, incentive programs, compliance programs, and/or funding mechanisms) to support how it will achieve implementation rates of those BMPs as simulated or revise the model scenarios to match the narrative provided in the WIP.
- If Pennsylvania intends to achieve pollutant reductions from the nonregulated stormwater sector, Pennsylvania should explain the process it intends to use to achieve pollutant load reductions from non-regulated stormwater since this loading source is nearly 75% of the entire stormwater sector.
- There are no proposed actions for the stormwater sector in the “Communications and Outreach” and “Funding and Resources” sections of the draft Phase III WIP and the *Progress and Tracking Template*. Pennsylvania should describe how it intends to achieve the anticipated BMP implementation levels especially within the nonregulated stormwater sector with no action items in these areas for outreach or additional resources.
- Pennsylvania should develop and explain the preferred BMPs for use in industrial stormwater permits to reduce pollutant loads.
- Pennsylvania should prioritize updated crediting and verification procedures for new and existing BMPs such as stream restoration, conservation landscaping, illicit discharge detection and elimination, tree planting, and urban tree canopy practices.

## **Wastewater**

### **Key Strengths**

- Pennsylvania included cap loads for all significant sewage and industrial waste dischargers in their respective national pollutant discharge elimination system (NPDES) permits.
- Pennsylvania is on track to meet the 2025 goals without further enhancements beyond biological nutrient removal (BNR).
- Pennsylvania made significant investment on the part of wastewater treatment plants (WWTP) to upgrade their facilities to BNR (with some treating between BNR and enhanced nutrient removal (ENR)) to meet pollutant reduction goals.
- Pennsylvania considered some options for additional reductions in this sector such as WWTP optimization and tracking of onsite septic system inspection and pumping programs.

**Potential Enhancements**

- Pennsylvania should clarify whether the 190 WWTPs and their efforts to reduce nitrogen and phosphorus levels is referring to the efforts of all significant Chesapeake Bay dischargers (both sewage and industrial), or solely the significant sewage facilities. According to the Pennsylvania Department of Environmental Protection’s (PADEP) Phase II WIP Wastewater Supplement, there were 183 significant sewage facilities and 23 significant industrial waste facilities that have cap loads in NPDES permits, for a total of 206 significant dischargers.
- Pennsylvania should include details for their proposed expansion of its Plant Optimization Program.

**Trading & Offsets**

**Key Strengths**

- Pennsylvania continued monitoring for WWTP growth through the Pennsylvania Chapter 94 required planning process.

**Potential Enhancements**

- Pennsylvania should consider updating its discussion of the Agricultural Nutrient Trading Program in the draft Phase III WIP including a discussion of the interim policy added to the PADEP Nutrient Trading website. Note that Pennsylvania’s agriculture trading baseline remains inconsistent with the Bay TMDL. EPA is currently reevaluating its baseline policies, which may present an opportunity for Pennsylvania to enhance its program and take advantage of additional flexibilities to implement market-based water quality improvement programs.
- EPA’s ongoing work to promote market-based programs may present additional opportunities for Pennsylvania to enhance its nutrient reduction accountability and trading frameworks. We encourage Pennsylvania to work collaboratively with EPA in updating these frameworks.

**Federal Facilities**

**Key Strengths**

- Pennsylvania engaged in strong collaboration with the Department of Defense (DoD).
- Pennsylvania continues to participate in meetings of the CBP partnership’s Federal Facilities Workgroup.

**Potential Enhancements**

- Pennsylvania should describe the method used to calculate federal planning goals.
- Pennsylvania should continue to participate in resolution of any issues regarding the methodology of DoD’s federal planning goals and to translate any changes in the calculation method to other federal agencies with Pennsylvania facilities (e.g., USGS, and General Services Administration).
- Pennsylvania should describe the overall footprint of federal facilities (e.g., number of facilities and number of acres) in its portion of the Chesapeake Bay watershed.

**Changing and Local Conditions**

**Growth**

**Key Strengths**

- Pennsylvania developed its implementation scenarios based on 2025 forecasted growth conditions, per the CBP partnership decision.
- Pennsylvania developed and refined its Land Policy BMP that is focused on land conservation activities which will reduce nitrogen to the Bay.
- Pennsylvania provided a framework to offset growth, which will be evaluated, tracked, and reported in two-year milestone progress, including conserving and protecting wetlands; conservation and limiting development in riparian areas; modernizing local planning and zoning to conserve critical forests and habitats; and preserving farmland as part of a holistic approach to conserving working lands.

- Pennsylvania described sector-level growth trajectories which establish a baseline for Pennsylvania’s strategies to reduce pollutants from growth.

**Potential Enhancements**

- Pennsylvania should describe how it will track new sediment and nutrient loads to ensure that the Phase III WIP planning targets are not exceeded.
- Pennsylvania is projecting a shift in the land use between 2017 and 2025 due to projected sector growth that is included in the CBP partnership’s Chesapeake Assessment Scenario Tool. Pennsylvania should explain how it will maintain implementation levels necessary to address changes in loads from the stormwater sector.
- Pennsylvania should provide additional estimates predicting how effective its septic inspection and pumping programs will be in addressing growth, since septic system loads comprise nearly 25% of expected growth in load from the developed sector and these programs are not currently being tracked.

**Climate**

**Key Strengths**

- Pennsylvania documented its jurisdiction-specific 2025 numeric climate change loads based on factors such as increasing precipitation and rising sea level in the Phase III WIP document.
- Pennsylvania is working with Pennsylvania State University (PSU) to develop and update a study on the impact of climate change in Pennsylvania specifically focusing on water quality impacts.
- Pennsylvania outlined the actions and strategies it has undertaken to address climate change in recent years.

**Local Engagement Strategies**

**Key Strengths**

- Pennsylvania conducted outreach and community engagement efforts to develop the draft Phase III WIP. Hundreds of watershed stakeholders were involved in the draft Phase III WIP development process to assess barriers to watershed implementation and devise creative strategies to overcome them.
- Pennsylvania identified necessary resources for an agency support team that will work in a phased approach to continue the development of the county action plans. As the county action plans are completed, these technical resources will transition into assisting counties with implementing the county plans to achieve the Phase III WIP goals.
- Pennsylvania clearly defined current local stakeholders as well as plans to identify future local stakeholders throughout the remaining counties.
- Pennsylvania developed and implemented an extensive communication and engagement plan throughout the development of the draft Phase III WIP.
- Pennsylvania engaged stakeholders through large public venues, social media, and individual outreach mechanisms.
- Pennsylvania commits to providing programmatic progress updates using the *Progress and Tracking Template* every six months via the Pennsylvania Chesapeake Bay WIP website.

**Potential Enhancements**

- Pennsylvania should explain how outreach will continue after the Phase III WIP is finalized.
- Pennsylvania should provide additional facilitation, technical and staff resources to support the local engagement process across non-pilot counties.

## **Local Planning Goals**

### **Key Strengths**

- Pennsylvania developed local planning goals that are measurable and below the major state-basin scale, following CBP partnership decisions, by developing numeric load reduction goals at the county level across the entire Chesapeake Bay watershed portion of Pennsylvania.
- Pennsylvania provided detailed information on how local planning goals were developed.
- Pennsylvania demonstrated a commitment to continue to engage with local partners moving into Phase III WIP implementation in counties that already have plans, as well as the remaining counties.
- Pennsylvania developed methods by which to track and report progress from counties and has demonstrated a commitment to work with the CBP partnership on refining these methods and tools.
- Pennsylvania maintained focus on local water quality improvement.
- Pennsylvania provided a mechanism to follow the status of the new program initiatives over the next several years and will be a useful tool in analyzing future submissions for milestones and progress.
- Through the pilot County Action Plan efforts in Lancaster, York, Adams, and Franklin Counties, Pennsylvania provided a comprehensive road map for the counties in the watershed and represented an effective use of targeting areas for pollutant reduction practices. Should the proposed state funding initiative materialize, the county action plan rollout to the Tier 2, 3, and 4 counties would accelerate the pace of best management practice (BMP) implementation going forward.
- Pennsylvania compiled applicable resources and materials for their local partners, such as the Community Clean Water Guide and action plan templates.

### **Potential Enhancements**

- Pennsylvania should identify a process for how its Phase III WIP will be revised to accommodate the additional 39 county action plans as they are completed.
- The draft Phase III WIP states that any additional reductions needed will be achieved through the completion of the remaining countywide action plans and statewide initiatives and activities that have yet to be quantified. Since the four pilot countywide action plans did not result in fully meeting their targets, Pennsylvania should identify a process for how the remaining counties will meet their targets, including a contingency plan in case the non-pilot counties cannot make up for that gap to achieve the Phase III WIP planning targets by 2025.

## **Other Comments**

### **Strengths**

- The draft Phase III WIP focuses on “local benefits” and the benefits discussed in the county action plans heavily overlap with co-benefits and the 2014 Watershed Agreement. EPA encourages Pennsylvania to continue its focus on local solutions and implementation to achieve its Phase III WIP planning targets.

### **Potential Enhancements**

- Pennsylvania’s draft Phase III WIP identifies the funding necessary to implement the WIP and lists several options for generating the necessary funds through dedicated funding sources (i.e. the bottled water tax) but does not indicate if any of the options are actively being pursued. Pennsylvania should clarify what commitments are being made and how establishment of a dedicated funding source for water quality improvements will be achieved.
- Pennsylvania should describe what actions it is taking to ensure there is no double counting of efforts already captured through the annual progress submission or crediting practices potentially ineligible for progress such as BMPs used for trading or mitigation projects as described in Table 2.4 on page 72.
- Pennsylvania has made commendable commitments within the *Progress and Tracking Template*. The Phase III WIP would be strengthened by adding in linkages and details contained in the supplemental

documents to more effectively communicate the actions and plans. The current gap analysis lacks much of the specificity that is a strength of the supplemental documents. A clear cross-reference would greatly assist the reader to understand everything Pennsylvania partners developed.

- The draft BMP verification plan included with the draft Phase III WIP materials suggests that many programs and BMPs “potentially” have resources for verification. The resources for verification or opportunities to secure those resources should be identified in the final Phase III WIP and *Progress and Tracking Template*.
- The conclusion of the draft Phase III WIP refers to concerns with the CBP partnership modeling tools and discrepancies between reported implementation and on-the-ground implementation. Pennsylvania should ensure that such concerns are sufficiently documented and bring these concerns to the appropriate CBP partnership workgroup(s) for resolution. EPA supports refinement of the modeling tools used to evaluate state compliance with the Bay TMDL. To the extent there are jurisdiction-specific issues that should be addressed in the modeling framework, Pennsylvania should identify those and propose a plan for resolution.
- Regarding plans to conduct an inventory of data for BMPs that have already been implemented, it is important that future reporting of this data include accurate implementation and inspection dates, following the CBP partnership’s verification protocols. Much of the historic implementation of practices and programs has already been accounted for in the calibration of the CBP partnership’s Phase 6 suite of modeling tools through the changes in loads and water quality at monitored locations.
- Jurisdictions agreed to follow CBP partnership-approved BMP verification protocols when developing and implementing the Phase III WIPs. Because Pennsylvania is proposing to increase BMP implementation rates of some BMPs by 10-fold or more in the next seven years, the Commonwealth should ensure that implementation at this higher rate can be tracked, verified, and reported within that period. Pennsylvania should also evaluate whether the partnership-approved verification protocols should be adjusted to accommodate this increased implementation.
- Pennsylvania should consider changing acres of “Wetland Enhancement” to “Wetland Rehabilitation.” The current CBP partnership Wetland BMP Expert Panel expects to recommend elimination of “Wetland Enhancement” as a water quality BMP. Both practices will remain for the next two-year milestone period, but Pennsylvania should not rely on the Wetland Enhancement BMP as part of its implementation scenario.