

U.S. Environmental Protection Agency’s Interim Expectations for the Phase III Watershed Implementation Plans

The U.S. Environmental Protection Agency (EPA) provided expectations for the Phase I¹ and Phase II² Watershed Implementation Plans (WIPs) in 2009 and 2011, respectively, for the seven Chesapeake Bay watershed jurisdictions to demonstrate reasonable assurance those allocations would be achieved and maintained, and that the 2017³ targets would be achieved. EPA is providing expectations for the jurisdictions’ Phase III WIPs⁴ to maintain accountability in the work under the 2010 Chesapeake Bay Total Maximum Daily Load (Bay TMDL), encourage continued adaptive management to the new information generated during and after the Bay TMDL 2017 midpoint assessment, and lay the groundwork for implementation of the next generation of innovative practices. These expectations are directed toward ensuring EPA and the public has confidence the seven jurisdictions, and their local, regional, and federal partners have in place, or are committed to put in place, the funding, financing, cost-share, technical assistance, voluntary, incentive, policy, programmatic, legislative, and regulatory infrastructures necessary to achieve their Phase III WIP planning targets⁵, thereby having all practices in place by 2025⁶ that will achieve the Bay’s dissolved oxygen, water clarity/submerged aquatic vegetation and chlorophyll-*a* standards. EPA recognizes that such commitments may need to be modified during the course of the 2018-2025 timeframe, and EPA expects the jurisdictions to update those programmatic and/or numeric commitments, as appropriate, through their 2-year water quality milestones.

EPA expects each of the seven jurisdictions to describe in their respective Phase III WIPs how they, in collaboration with local, regional, and federal partners, will:

- Specify the programmatic and numeric implementation commitments between 2018 and 2025 needed to achieve their Phase III WIP planning targets;
- Commit to comprehensive strategies for engagement of the full array of their local, regional, and federal partners in WIP implementation;
- By 2025, account for changed conditions due to climate change, Conowingo Dam infill and growth, and address any related additional level of effort; and
- Develop and implement local planning goals below the state-major basin scales and in the form best suited for directly engaging local, regional and federal partners in WIP implementation.

For jurisdictions and pollutant source sectors which are under enhanced levels of federal oversight or are not on trajectory to meet their 2017 targets, EPA expects more detailed documentation⁷ in comparison with

¹ USEPA (2009), letter from Region III Acting Regional Administrator William C. Early to L. Preston Bryant, Virginia Secretary of Natural Resources, Office of the Governor, November 4, accessed at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/tmdl_implementation_letter_110409.pdf

² USEPA (2011), Guide for Chesapeake Bay Jurisdictions for the Development of Phase II Watershed Implementation Plans, March 30, accessed at https://www.epa.gov/sites/production/files/2015-07/documents/guideforthephaseiiwips_330final.pdf

³ By 2017, have practices and controls in place that are expected to achieve 60 percent of the nutrient and sediment pollution load reductions necessary to achieve applicable water quality standards compared to 2009 levels.

⁴ Draft and final Phase III WIPs are due to EPA by August 2018 and December 2018, respectively.

⁵ EPA will establish and release the draft and final Phase III WIP planning targets by June 2017 and December 2017, respectively.

⁶ This commitment to have all practices and controls in place by 2025 to achieve applicable water quality standards was reaffirmed by the Chesapeake Bay Program signatories in the *2014 Chesapeake Bay Watershed Agreement*.

⁷ Detailed document may include programmatic capacity assessments or more detailed strategies than what is reflected in the WIP and 2-year milestones.

jurisdictions and source sectors with ongoing oversight levels and that are on trajectory to meeting their 2017 targets.

Elements EPA Expects in the Phase III WIPs

Programmatic and Numeric Implementation Commitments between 2018-2025

While significant progress has been made to date, challenges to implementation remain. The jurisdictions and EPA, through the continued implementation of their WIPs and the evaluations of jurisdictions' programs and milestones, have identified gaps between the jurisdictions' current programmatic capacity and the capacity they estimate is necessary to fully achieve their 2025 targets. Gaps in programmatic capacity the jurisdictions will need to address in the 2018-2025 timeframe through their Phase III WIPs include:

- Building the financial capacity, technical assistance, and regulatory oversight to oversee and implement MS4 and other stormwater management and prevention programs;
- Increasing and/or sustaining the financial cost share, technical assistance, and regulatory oversight capacity to deliver agricultural conservation practices at levels consistent with those projected as needed to achieve their Phase III WIP agricultural sector load reductions;
- Securing legislative, regulatory, cost-share, incentive, voluntary, and market-based levels of pollutant load reducing practice implementation across all source sectors, which in combination, will achieve each jurisdiction's 2025 targets; and
- Building the programmatic infrastructure, tracking systems, policies, legislation, and regulations necessary for fully accounting for growth, and offsetting all resultant new or increased pollutant loads through 2025.

EPA expects the Phase III WIPs to include documentation of the programmatic actions and the specific pollutant load reducing practices, treatments, and technologies to be implemented between 2018-2025 in order to achieve the jurisdiction's 2025 targets, including, but not limited to:

- Identification of the specific funding, financing, cost-share, technical assistance, voluntary, incentive, policy, programmatic, legislative, and regulatory actions needed to be taken to address recognized gaps in programmatic capacity and quantification of the practice implementation anticipated resulting from each set of actions;
- Full listing of all NPDES permits— for example, municipal and industrial wastewater, Phase I and II MS4s, and CAFOs — included in the jurisdictions' Phase III WIP major river-basin targets with updates to include all NPDES permits(s) that are included as individual wasteload allocations or as part of aggregate wasteload allocations;
- Submission of Phase III WIP input decks for the Phase 6 Chesapeake Bay Watershed Model which includes the level and location⁸ of pollutant load reducing practices, treatments, and technologies that are currently planned, and expected to be in place by 2025;
- Greater targeting of more effective pollutant load reduction practices in higher loading watersheds based on modeling and monitoring data⁹; and
- Enhanced level of detail for increasing implementation of pollutant load reduction practices for which implementation is lagging.

⁸ Location can be defined as a specific permitted facility, a county, a Phase 6 Watershed Model land/river segment, a Bay segment-shed, or a state-basin.

⁹ Efforts are currently underway by the Partnership on ways to reconcile any differences between monitoring and modeled data.

EPA expects more detailed and more systematic documentation of planned changes to existing programmatic capacity or development of new programmatic capacity for jurisdictions with source sectors under “enhanced” or “backstop” oversight, or with specific source sectors not on a trajectory to achieve their 2017 targets. These programmatic changes or enhancements should specifically address all the issues and needs documented in EPA’s assessments of milestone progress and past programmatic assessments.

EPA also encourages state and local jurisdictions to consider the corollary benefits of BMPs that are targeted for implementation. Corollary benefits are those that not only result in water quality improvements but could address other *2014 Chesapeake Bay Watershed Agreement* Outcomes (e.g., safety concerns, environmental problems, wetlands, or forest buffers) and local water quality benefits as well. To assist in this targeting, particularly in future 2-year milestone commitments, the Partnership is currently developing an optimization system for the Chesapeake Assessment and Scenario Tool (CAST). Although the primary purpose of CAST is to assist in WIP development and planning, this optimization system could potentially capture a broader range of ecosystem benefits beyond water quality to help inform decision making and priority-setting in restoration activities.

Comprehensive Local, Regional and Federal Engagement Strategies and Commitments

The implementation of the pollutant reduction practices, as articulated in the jurisdictions’ WIPs, is expected to be carried out by state governments, in partnership with federal agencies, regional and local governments, quasi- and non-governmental organizations, and the private sector, including businesses, farmers and individual citizens. Therefore, the Phase III WIP development process should include timely communication and engagement of local, regional, and federal partners and other entities. The Phase III WIPs should also clearly articulate how local, regional, and federal partners will be engaged in implementation.

In order to facilitate effective local engagement in the Phase III WIP process, EPA expects documentation of the detailed strategy of how jurisdictions engaged their local, regional, and federal partners in the development of the Phase III WIPs, and how these local, regional, and federal partners will be engaged in implementing the Phase III WIPs. EPA encourages the jurisdictions to tailor their local, regional, and federal engagement strategies to restoration and protection efforts that would resonate with their targeted audiences.

Components of such engagement strategies could include:

- Development of an overall schedule for engaging local, regional, and federal partners, including a schedule and description of key policy and technical decisions related to the Phase III WIPs in order to allow localities and federal agencies to actively participate in decision making processes;
- Identification of specific target audiences for local, regional, and federal engagement in the Phase III WIP development process, as well as the geographical and/or source sector areas where local, regional, and federal engagement is most needed to accelerate WIP implementation;
- Clear description of the specific roles local, regional, and federal partners will play in implementing programmatic and numeric (e.g., BMP) commitments in each of the source sectors between 2018-2025, including tracking, verification, and reporting of those commitments;
- Clear description of local, regional, and federal involvement in their jurisdiction’s strategy to account for growth; and
- Resources available to local partners to aid in WIP planning and implementation (e.g., meeting coordination and facilitation services), or, where no financial or technical resources are available, identification of pollution reduction strategies that can be accomplished with no additional resources;

Phase III WIPs should provide a strong foundation for success, built on government leadership, strategically aligned federal-state-local priorities, strong networks, sufficient financial and programmatic capacity, and clear communication of roles and responsibilities. Therefore, jurisdictions' Phase III WIPs should include an implementation component which addresses the following:

- Clear description of the specific roles local, regional, and federal partners will play in implementing programmatic and numeric (e.g., BMP) commitment in each of the source sectors between 2018-2025;
- Required funding and technical support needed;
- BMP verification program implementation;
- Clear descriptions of local, regional, and federal partner involvement in their jurisdiction's strategy to account for population growth and land use changes;
- Identification of the gaps in capacity and technical assistance needed to advance WIP implementation and recommendations to address those gaps and needs; and
- Examples of successful working relationship or models (e.g., local stormwater ordinance) that local, regional, and federal partners can adopt and replicate in other portions of a jurisdiction's Bay watershed to support WIP implementation.

The Partnership has developed a suite of decision support tools (e.g., CAST and the Bay Facility Assessment Scenario Tool (BayFAST)) for WIP planning and implementation by local, regional, and federal partners. These tools aid in the decision making process for BMP funding, targeting, and implementation. EPA strongly encourages the jurisdictions to utilize these decision support tools in engaging their local, regional, and federal partners as part of their Phase III WIP development and implementation processes.

Accounting for Growth

There should be greater certainty that increased nutrient and sediment pollutant loads resulting from growth have been accounted for and will be fully offset up through 2025. It is EPA's preference for jurisdictions to use 2025 forecasted conditions to account for projected growth (e.g., land use changes and population growth) early on in the Phase III WIP development process. Under this approach, EPA would run the jurisdictions' respective Phase III WIP input decks on these forecasted conditions. The jurisdictions' Phase III WIP documents should describe how the jurisdictions are going to offset any increases in nutrient and sediment pollutant loads as a result of growth, which is consistent with the expectation in the 2010 Bay TMDL. The jurisdictions would also take any steps required by the Clean Water Act and National Pollutant Discharge Elimination System regulations to offset, or adjust source sector goals for, new or increased loads at the general and/or individual permit level. Additionally, the jurisdictions' Phase III WIP documents should describe the programs and regulations that jurisdictions intend to implement to maintain existing high quality beneficial land covers (e.g., mature forests). As part the development of their 2-year milestones from 2018-2025, the jurisdictions will have the opportunity to factor in updated future growth projections, thus adjusting their milestone commitments accordingly.

Alternatively, if the Partnership decides not to use 2025 forecasted conditions in the Phase III WIPs, EPA expects each jurisdiction's Phase III WIP will describe the specific procedures, underlying data sources, and programmatic commitments for regular accounting of growth and the operational tracking and accountability mechanisms for ensuring all new or increased pollutant loads are fully offset. In either approach on which the Partnership reaches consensus, EPA strongly encourages jurisdictions to utilize Partnership-approved approaches, data, and decision support tools for forecasting conditions to fully account for projected growth at

the appropriate geographic scales and for each source sector in their Phase III WIP development process as well as in their succeeding 2018-2025 2-year milestones.

The Partnership decision on whether to use 2025 forecasted conditions to account for projected growth in the Phase III WIPs will be incorporated into this document by spring 2017.

Adjustments to Phase III WIP State-basin Targets and the Phase II WIP Source Sector Goals

EPA expects the jurisdictions to consider changes¹⁰ to their existing Phase II WIP goals to reflect the new information and data from the midpoint assessment and lessons learned from previous implementation efforts. Specifically, changes to the existing Phase II WIP source sector goals should be based on:

- EPA and jurisdictional assessments of numeric and programmatic implementation progress to date through the Phase I and Phase II WIPs and 2-year milestones;
- Enhanced understanding and the ability to better simulate lag times and delivery factors of nutrients and sediments from the watershed to the Chesapeake Bay and its tidal tributaries and embayments;
- Implementation actions needed to respond to Partnership decisions on how to address the infill of Conowingo Dam and its reservoir and how to account for the ongoing and projected effects of climate change on Bay watershed pollutant loads and Bay water quality;
- Refinements to the Partnership’s Phase 6 suite of modeling and other decision support tools which will be used to develop the Phase III WIP planning targets and support the jurisdictions’ development and implementation of their Phase III WIPs and 2-year milestones;
- Programmatic and policy implications of the explanations of observed long term trends in watershed and tidal water quality and biological resource monitoring data;
- More specific geographical or source sector targeting in the 2018-2025 timeframe based on lessons learned from implementation of the Phase I and Phase II WIPs, the 2-year milestones, and the Chesapeake Bay Partnership’s Modeling Workgroup efforts to run a series of “geographic isolation runs” to determine the relative effectiveness¹¹ of each contributing area of the Chesapeake Bay watershed on dissolved oxygen and water clarity in each of the 92 Bay segments; and
- New innovative technologies, treatments and practices emerging as a result of the Partnership’s BMP expert panel recommendations.

The Phase III WIP planning targets (i.e., state-basin targets) will be developed by EPA, in coordination with the jurisdictions, using the Phase 6 suite of modeling tools. As provided in the Phase II WIP planning target development process, each jurisdiction can adjust its Phase III WIP state-basin targets through exchanges with other basins within that jurisdiction. The Chesapeake Bay Program’s Modeling Workgroup will develop exchange ratios that will be used to inform the basin-to-basin exchanges within each jurisdiction. The geographic isolations runs will show those geographic areas that are most vulnerable to nonattainment if loads are exchanged within that basin. Jurisdictions will have the opportunity to conduct these nitrogen and phosphorus exchanges when the draft Phase III WIP planning targets are released and before those targets are finalized.

¹⁰ EPA will determine whether to modify the 2010 Chesapeake Bay TMDL based on these changes as reflected in the jurisdictions’ final Phase III WIPs.

¹¹ Relative effectiveness defined in Section 6.3.1 of the TMDL: https://www.epa.gov/sites/production/files/2014-12/documents/cbay_final_tmdl_section_6_final_0.pdf

Changes in the geographic location of the pollutant load reductions can have a significant influence on local tidal water quality responses. Any exchange ratios developed, and subsequent changes to the state-basin targets, must 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.

Additional expectations on targeting implementation and developing goals at the Bay segment-shed scale can be found in Appendix A and are applicable only to the tidal jurisdictions of Delaware, the District of Columbia, Maryland, and Virginia.

Development and Implementation of Local Planning Goals

One of the biggest capacity needs identified during the Phase II WIP process was developing a game plan for engaging local partners and focusing the Partnership's efforts at a smaller scale as appropriate, as many localities were unaware of their role in meeting their jurisdiction's WIP commitments. A Task Force was established to develop recommendations to the Partnership on how local planning goals could best be expressed in each of the seven Bay watershed jurisdictions. The Task Force addressed findings from the 2015 *Chesapeake Bay Stakeholder Assessment*¹², including the goal of raising awareness of local partners' contribution toward achieving the Bay TMDL; the technical capacity of the Partnership's Phase 6 suite of modeling tools in developing local planning goals; how local implementation addresses local conditions, needs, and opportunities, such as local water quality; and the availability of tools to assist in the development and optimization of local implementation strategies.

As a result of the work completed by the Partnership's Task Force, EPA expects the jurisdictions to work with their local and regional partners, stakeholders, and federal and state facilities to establish measurable local planning goals at a geographic scale below the state-major river basin and implement them through their Phase III WIPs. In and of themselves, these local planning goals do not supersede or modify any statutory or regulatory obligations of the local and regional partners; nor do the goals establish any new requirements or rights for those local and regional partners. Decisions regarding how local and regional stakeholders may be involved in developing and achieving local planning goals will remain with the jurisdiction.

The Task Force developed a recommended list of options for how "local" could be defined for the purposes of establishing local planning goals. When a jurisdiction is considering these options, consideration should be given to any existing political or programmatic structures that could provide guidance and/or funding opportunities that would support implementation efforts and provide a framework for tracking progress. The options are:

1. Locality jurisdictional boundaries (city, town, county, borough, township) or collections of such sub-state political subdivisions;
2. Federal facilities;
3. State facilities;
4. Soil & Water Conservation District (Conservation District) boundaries;
5. Regional entity boundaries (i.e. planning district commissions; regional river basin commissions and utility districts);
6. Watershed or sub-watersheds of Chesapeake Bay tributaries;
7. Targeted areas with high nitrogen, phosphorus or sediment yields (loadings);

¹² The Phase III WIP Stakeholder Assessment can be found at:

http://www.chesapeakebay.net/channel_files/22350/chbaytmdlstakeholderassessment7dec2015.pdf

8. Bay segment-sheds as depicted in the 2010 Chesapeake Bay TMDL;
9. Any area (e.g., MS4), entity or political subdivision based on an identified need for pollutant reductions for a given source sector or sectors; and
10. Some combination of the above.

In addition, each jurisdiction will also have the flexibility with regard to how local planning goals are expressed. There are many options for how to express local planning goals in a way that helps jurisdictions achieve their Phase III WIPs, and helps local partners to better understand their expected contributions. All options recommended below are supported by the Partnership’s decision support tools (e.g., CAST). In addition, the Task Force recommends that monitoring trend data, provided to the Partnership by USGS or developed by an individual jurisdiction, could also be used to support the establishment of local planning goals either independently, or in conjunction with the support of the Partnership’s suite of modeling tools. Goals may be expressed using any one of these options, or in some combination, but should result in measurable outcomes. The options are:

- Percentage of BMP Implementation on land uses defined in the Phase 6 Watershed Model;
- Quantifying implementation goals for particular BMPs;
- Programmatic goals (i.e. ordinances with provisions for erosion and sediment control, urban nutrient management, post-construction performance standards) that include specific implementation, oversight and enforcement requirements;
- Numeric nitrogen, phosphorus and sediment as expressed as reductions or maximum load goals
 - Numeric load goals for one or more pollutants (delivered load of 300 lbs. phosphorus)
 - Numeric reduction goals for one or more pollutants (reduce loads by 4000 lbs. nitrogen)
 - Yield based goals for one or more pollutants (0.41 lbs. phosphorus/acre/year from developed lands);
- Pace of implementation over a certain time frame;
- Percent reduction of existing loads over a certain time frame; and
- Percent of flow in certain tributaries/runoff captured – flow-based targets.

EPA expects the jurisdictions to document in their Phase III WIPs the approaches they took in establishing these local planning goals, in coordination with their local and regional partners.

Additional Implementation Actions Needed as a Result of Loss of Trapping Capacity of Conowingo Dam

The Partnership, building from the U.S. Army Corps of Engineers Lower Susquehanna River Watershed Assessment study¹³, is assessing the loss of trapping capacity of three dams and reservoirs on the lower Susquehanna River, especially Conowingo Dam and reservoir. USGS studies have shown the Conowingo Dam and reservoir are now in a state of “dynamic equilibrium”, indicating the Conowingo reservoir is at near-full capacity¹⁴. The Lower Susquehanna Army Corps of Engineers study concluded more nutrients, not just sediment, are coming over the dam than was assumed in developing the 2010 Bay TMDL; this loss of trapping capacity will need to be addressed in order to attain applicable state water quality standards in the Chesapeake Bay.

¹³ The Susquehanna River Watershed Assessment study can be accessed here: <http://dnr.maryland.gov/waters/bay/Pages/LSRWA/Final-Report.aspx>

¹⁴ A recording of the Conowingo infill webinar can be viewed using the following link: <http://epawebconferencing.acms.com/p29j5g7he49/>

Based on these findings and the follow-through additional research, monitoring and modeling work, EPA expects the impacted jurisdictions' Phase III WIPs will document the additional practices and other management actions needed in place by 2025 as a result of the loss of trapping capacity of Conowingo Dam and its reservoir.

The Partnership decision for how the additional level of effort related to the Conowingo Reservoir's infill conditions may be allocated amongst the jurisdictional partners will be incorporated into this document by spring 2017.

Incorporating Projected Influence of Climate Change into the Phase III WIPs

In 2012, the Partnership identified climate change as one of the key priorities of the Bay TMDL's midpoint assessment¹⁵. Through the combined efforts of the Partnership's Modeling Workgroup and the Climate Resiliency Workgroup, the Partnership is developing the tools needed to quantify the effects of changes in river flows, storm intensity on the Chesapeake Bay watershed, changes in hypoxia due to increased temperatures, and sea level rise in the estuary. Efforts are underway to frame a range of future climate change scenarios based on estimated 2025 and 2050 conditions.

Although the 2010 Bay TMDL accounts for the potential effects of climate change based on a preliminary assessment conducted at that time, it recognized the need to conduct a more complete analysis of the effects of climate change during the midpoint assessment¹⁶. The 2025 climate change projection scenarios will be assessed and relayed to the jurisdictions by summer 2017. EPA expects, at a minimum, that jurisdictions will develop Phase III WIPs and 2-year milestones to address the additional level of effort these scenarios may identify.

The Partnership decision on how the jurisdictions will incorporate climate change considerations in their Phase III WIPs will be incorporated into this document by spring 2017.

State-Specific Phase III WIP Expectations

EPA plans to develop state-specific expectations for jurisdictions and pollutant source sectors which are under enhanced or back-stopped levels of federal oversight, significantly off track in meeting their programmatic and numeric WIP and 2-year milestone commitments, or not on trajectory to meet their 2017 interim targets. The following information could inform EPA's development of these state-specific expectations for the Phase III WIPs:

- Necessary shifts in source sector targets based on jurisdictional progress to date (including achievement of the 60 percent by 2017 targets);
- Identifications of programmatic capacity gaps and needs, such as changes to existing or new incentive based programs, funding priorities, and legislative and regulatory initiatives likely needed to ensure the jurisdiction can achieve its 2025 targets;
- Findings from the work underway on explaining trends observed in the watershed and tidal water quality monitoring data;
- Key findings from EPA's agriculture and stormwater assessments completed to date; and
- EPA's 2-year milestone evaluations that highlight key programmatic and implementation gaps and recommendations.

¹⁵ http://www.chesapeakebay.net/channel_files/18968/modeling_workgroup_workplans_2-13.pdf

¹⁶ Chesapeake Bay TMDL at Section 10.5, page 10-7.

EPA's Role in the Phase III WIP Development and Implementation Processes

EPA is providing these Phase III WIP expectations to the seven Bay watershed jurisdictions and the federal agencies as part of its role under the Bay TMDL's accountability framework. The Bay TMDL is supported by an accountability framework to ensure cleanup commitments are established and met, including WIPs, 2-year milestones, a tracking and accountability system for jurisdictions' and federal agencies' activities, and federal actions that may be employed if jurisdictions do not meet their milestone and WIP commitments.

EPA will continue to assess the jurisdictions' and federal agencies' progress toward reaching their Bay TMDL's ultimate nitrogen, phosphorus, and sediment reduction targets through its evaluation of the Phase III WIPs and at least biennially using the jurisdictions' and federal agencies' 2-year milestones commitments. In addition, EPA will¹⁷:

- **Continue support for WIP development** and implementation through EPA contractor support, implementation grants, coordination and resources for on-the-ground service providers and source sector expertise through the Partnership's source sector workgroups, and technical assistance through trainings and webinars to help partners estimate nitrogen, phosphorus, and sediment reductions associated with proposed management actions. Support is subject to the availability of federal appropriations;
- **Partner with jurisdictions, federal agencies, and local entities, as requested, in outreach efforts.** EPA will make information such as presentations, fact sheets, and talking points available for partners to share with their audiences and will maintain an up-to-date website on the Bay TMDL and Phase III WIPs;
- **Conduct a review** of the draft Phase III WIPs focused on: a) whether the jurisdictions provided information to show that sources collectively will meet their nitrogen, phosphorus, and sediment Phase III WIP planning targets by 2025 and result, collectively, in achievement of each Chesapeake Bay segment's Chesapeake Bay water quality standards; b) how jurisdictions offset any new or increased loadings, and that any trading mechanisms meet EPA's expectations as set forth in Appendix S of the 2010 Chesapeake Bay TMDL; c) how state-basin and sector-specific strategies differ from the Phase II WIPs due in part to changes resulting from the Bay TMDL's midpoint assessment; and d) whether the jurisdictions have demonstrated with greater confidence that pollutant source sectors receiving enhanced oversight or backstop actions in the 2010 Chesapeake Bay TMDL will meet the Phase III WIP planning targets;
- **Provide comments** on the draft Phase III WIPs and allow the jurisdictions to submit final Phase III WIPs before any potential refinements to the 2010 Chesapeake Bay TMDL are considered by EPA;
- **Take appropriate federal actions** if a jurisdiction's Phase III WIP and 2-year milestones does not meet EPA expectations, particularly as it relates to state-basin and sector strategies that will rely on local partners for implementation;
- **Help with coordination among the federal agencies** and the jurisdictions to ensure a system is in place that provides the information and tools needed for the federal agencies to provide input to Phase III WIPs directly to the jurisdictions including commitments to federal actions on federal lands and facilities, 2-year water quality milestones, and 2025 targets/ goals¹⁸ for federal facilities. EPA will annually request federal agencies to submit BMP implementation progress data to the jurisdictions for inclusion in their respective input deck submissions to EPA. EPA will help to identify and resolve issues

¹⁷ USEPA (2011), Guide for Chesapeake Bay Jurisdictions for the Development of Phase II Watershed Implementation Plans, March 30, accessed at https://www.epa.gov/sites/production/files/2015-07/documents/guideforthephaseiiwips_330final.pdf

¹⁸ The Protocol for Setting Targets, Planning BMPs and Reporting Progress for Federal Facilities and Lands can be accessed here: http://www.chesapeakebay.net/channel_files/22813/federal_targets_protocol_final_06_22_2015_2.pdf

related to jurisdiction use of implementation data provided by federal agencies to ensure jurisdiction progress reporting fully accounts for progress made by federal agencies. EPA also will assist with the resolution of any disputes among federal agencies and jurisdictions when requested; and

- **EPA will coordinate these actions with the CBP Federal Office Directors**, the Water Quality GIT's Federal Facilities Workgroup, and where appropriate, the Federal Leadership Committee for the Chesapeake Bay. EPA will evaluate federal agencies' progress in meeting their 2-year water quality milestones consistent with the E.O. 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed which states "Federal agencies with property in the watershed will provide leadership and will work with the Bay jurisdictions in the development of their watershed Implementation Plans to:
 - Estimate nutrient and sediment loads delivered from federal lands to the Bay by providing information on property boundaries, land cover, land use, and implementation of best management practices;
 - Identify pollution reductions from point and non-point sources associated with federal lands that will help restore water quality; and
 - Commit to actions, programs, polices and resources necessary to reduce nitrogen, phosphorous, and sediment by specific dates."

Appendix A: Expectations for Targeting Implementation at the Bay Segment-shed¹⁹ Scale for Delaware, District of Columbia, Maryland, and Virginia

The Bay nutrient and sediment allocations under the 2010 Chesapeake Bay TMDL were established based on: 1) nutrient and sediment load reductions needed to achieve each of the 92 individual Bay segment's Chesapeake Bay water quality standards; and 2) nutrient and sediment load reductions necessary to achieve those Bay segment's Chesapeake Bay water quality standards whose water quality conditions are directly influenced by major river basins and jurisdictions throughout the Bay watershed (e.g., Bay segments such as the middle Chesapeake Bay mainstem and the lower Potomac River are affected by nutrient loads from all parts of the Bay watershed).

The Chesapeake Bay Partnership's Modeling Workgroup will run a series of geographic isolation runs for both point and non-point sources as part of the development of the draft Phase III WIP planning targets, and to understand the relative effectiveness of each contributing area of the Chesapeake Bay watershed on dissolved oxygen and water clarity in each of the 92 Bay segments. These geographic isolation runs will better quantify the role of geography on nutrient and sediment load changes in restoring Chesapeake Bay water quality at the Bay segment scale. These geographic isolation runs will also identify those geographic areas that are most vulnerable to nonattainment if loads are exchanged within that basin.

EPA expects the four tidal jurisdictions—Delaware, District of Columbia, Maryland and Virginia—to use the information from these geographic isolation runs, as well as explanations of observed long-term trends in watershed and tidal water quality and biological resource monitoring data, to develop Phase III WIPs that demonstrate a greater level of targeting towards those Bay segments significantly out of attainment²⁰ with their Chesapeake Bay water quality standards. Flexibility is a critical element in this process, as tidal jurisdictions may take a diverse suite of actions and use a wide array of information and data to inform targeting at the segment-shed scale. For example, this greater level of targeting could entail developing specific BMP implementation strategies or local planning goals in those segment-sheds where increased implementation is necessary in order to bring those Bay segments back into attainment. EPA will not use these geographic isolation runs to issue load reduction targets for each of the 92 Bay segment-sheds beyond the Phase III WIP planning targets at the state-major river basin scale, nor does EPA expect the tidal jurisdictions to develop numeric targets for each of their respective Bay segment-sheds. In the Phase III WIP evaluation process, EPA will conduct a closer review of how the four tidal jurisdictions are focusing implementation efforts on those Bay segment-sheds that are (1) significantly out of attainment and (2) have an influential role in water quality standards attainment for other Bay segment-sheds.

EPA can assist with coordinating and facilitating these efforts among the jurisdictions (both tidal and non-tidal) to ensure any proposed geographic or nitrogen and phosphorus exchanges and implementation strategies will result in achieving all jurisdictions' Chesapeake Bay water quality standards across all 92 Chesapeake Bay segments. Technical staff are available to work with each of the jurisdictions—tidal and watershed—to analyze the results of the geographic isolation runs conducted for each of the 92 Chesapeake Bay segments and to conduct exchanges of nitrogen and phosphorus within and between their state-basins.

¹⁹ A segment-shed is a discrete land area that drains into each of the 92 Bay segments that have TMDLs associated with them. http://www.chesapeakebay.net/maps/map/chesapeake_bay_segmentsheds

²⁰ Based on monitoring assessments

EPA fully recognizes the four tidal jurisdictions will need to continue to work adaptively over time to understand exactly where and from which source sectors these nutrient and sediment load reductions are needed to achieve their respective Bay segments' Chesapeake Bay water quality standards. This understanding will be informed by not only modeled data but also through the continued development and communication of short- and long-term monitoring trends data that can help explain how the system is responding and the specific factors influencing those trends. The two-year milestones provide an opportunity for the jurisdictions to continue to refine and/or change their programmatic and implementation strategies, particularly for those Bay segments that remain impaired. The objective is the collective pollutant load reductions documented as occurring over time across each of the four tidal jurisdictions will result, in combination with pollutant load reductions from the three non-tidal watershed jurisdictions—New York, Pennsylvania, and West Virginia – in achievement of Chesapeake Bay water quality standards in each of the 92 Chesapeake Bay segments.