

Overview: Maryland's Phase III Watershed Implementation Plan

This document compiles high level information regarding the development of Maryland's Phase III Watershed Implementation Plan (WIP) for meeting the Chesapeake Bay Total Maximum Daily Loads (TMDL) by 2025, and maintaining that goal beyond 2025.

What is the Phase III WIP, and why did Maryland develop it?

There are three phases of WIPs developed by each Bay watershed jurisdiction (New York, Pennsylvania, Delaware, Maryland, West Virginia, District of Columbia, and Virginia). Phase I and Phase II WIPs were developed and submitted to EPA in 2010 and 2012, respectively. Both Phase I and Phase II WIPs describe actions and controls to be implemented by 2017 and 2025 to achieve applicable water quality standards. The Phase II WIPs built on the initial Phase I WIPs by providing more specific local actions. Phase III WIPs are based on a midpoint assessment of progress and scientific analyses completed in 2017. Phase III WIPs provide information on actions Bay jurisdictions intend to implement between 2018 and 2025 to meet the Bay restoration goals. Maryland's Phase III WIP is the State's plan to meet nitrogen, phosphorus, and sediment targets established by the Chesapeake Bay TMDLs by 2025, and to maintain those pollution goals into the future.

What pollution reductions have we achieved to date?

Between 2010 and 2017, Maryland has reduced:

- Nitrogen: 3.8 million lbs per year
- Phosphorus: 0.34 million lbs per year
- Sediment: 51 million lbs per year

What does this Phase III WIP accomplish?

Maryland's Phase III WIP will achieve the following reductions:

- Nitrogen: 9.2 million lbs per year
- Phosphorus: 0.4 million lbs per year

These are estimated reductions from 2017 to 2025, and represent reductions beyond those needed to achieve Maryland's 2025 targets.

Why are we focusing so much attention on nitrogen for this Phase of the WIP?

The focus is on nitrogen because EPA's modeling results indicate that the State is on track to meet its phosphorus and sediment goals for 2025, but there was still a gap in meeting the nitrogen goal.

How is this WIP different from the previous WIPs?

This plan recognizes that the pace of implementation and capacity to do the work varies across the state and within pollution source sectors. In developing the Phase III WIP, Maryland worked closely with local partners to document planned restoration actions while also having a better understanding of historical progress as well as future capacity that more realistically informed both local and sector pollution targets. This plan includes a mix of practices, including permanent practices that reduce pollution while providing co-benefits such as increasing climate resiliency and improving soil health on farms. Many of the strategies in the Phase III WIP also work toward meeting the 2014 Bay Agreement goals. Another aspect of this plan that

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sets it apart is that it looks beyond meeting our 2025 goals towards maintaining these reductions over a longer period of time. This plan also includes a climate change strategy.

Key themes for the Phase III WIP:

1. **Locally Driven** - stakeholder process to develop WIP
2. **Achievable** pollution reduction strategies
3. **Balanced** responsibilities across wastewater treatment plants, urban stormwater runoff, septic systems, and farms

What are the implications for Maryland's local jurisdictions in this WIP?

The WIP was built with local input and aligns with anticipated agriculture, stormwater, septic, and wastewater goals, as well as permit requirements. These goals set meaningful and achievable expectations for local partners that can help guide budget planning and capital projects.

It is important to note that the inclusion of these strategies is part of an overall adaptive management process that will depend on a number of factors including adequate financial and staffing resources within each local jurisdiction.

What is the key strategy to meet our goals?

The strategy is to use enhanced capacity from our wastewater treatment plants and additional agricultural implementation for our 2025 goal in the short term, so that we can increase the more challenging restoration in stormwater and septic sectors more gradually over time, beyond 2025. This is done in recognition that by meeting targets in 2025, we'll still need strategies to maintain those reductions into the future.

Will the Phase III WIP meet our 2025 goals?

The current strategy will meet 2025 goals as well as provide additional pollution reductions to sustain those goals into the future. The WIP also recognizes local implementation challenges, such as restoration practice maintenance and verification, technical assistance and restoration capacity, as well as increased loads anticipated from climate change.

Is this WIP more cost-effective than previous WIPs?

By leveraging wastewater treatment plant capacity and agricultural practices, which are the most cost-effective solutions, Maryland is allowing time to develop plans for additional restoration in other sectors. This allows for longer-term, sustained restoration in those sectors that provides more time to optimize the most cost-effective practices and leverage innovations.

What about the Conowingo Dam?

Maryland has a three-part strategy to address pollution impacts from Conowingo Dam:
1 - Leading the Chesapeake Bay Program partnership's Conowingo Watershed Implementation Plan ([CWIP](#)). The CWIP pools funding from across Bay jurisdictions, as well as other public and private funding sources, to put pollution reduction practices in the most effective areas and hire third parties to assist with implementing and financing.

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2 – Issuing a comprehensive set of environmental protection [requirements](#) to Exelon Corporation as conditions for dam relicensing.

3 - Overseeing a [pilot project](#) for dredging, beneficial use, and characterization of sediments behind the dam. Work on this project is underway and expected to be completed in 2020.

Is climate change being addressed in the Phase III WIP?

Yes, but not fully, because EPA will provide improved scientific understanding of climate change on the nutrient and sediment loads to the Chesapeake Bay to inform 2021 climate-related pollution targets. Maryland will then address these targets in 2022/2023 milestones and/or a WIP addendum. The Phase III WIP provides a comprehensive list of programmatic strategies Maryland is using to address anticipated climate change impacts to Chesapeake Bay.

Does the plan meet goals at the State level and the major basin level?

Yes. The plan meets all State and basin pollution reduction goals and water quality goals.

What are co-benefits and why are they highlighted in this WIP?

Co-benefits refer to the value added to our State's ecology, infrastructure and community provided by implementing Best Management Practices (BMPs) to reduce nutrient and sediment impacts. Co-benefits are important because:

- 1) There are [Chesapeake Bay Watershed Agreement](#) goals for habitat and living resources that will be addressed through the implementation of certain BMPs in this plan.
- 2) There is a general understanding that stormwater BMPs may be less effective in reducing nutrients from our waters, but they provide essential climate resiliency, flooding protection, and other local benefits.

Does the WIP account for growth in some sectors?

Yes, the plan does highlight a number of State programs that have been put in place to minimize and offset the impacts of growth, particularly with respect to urban development. The plan recognizes that this process will need to be managed adaptively over time.

How will the State go about implementing this plan?

The Phase III WIP will be implemented through federal, state and local funding, incentives, permits and partnerships. MD will meet its Bay goals through approaches such as

1. Using incentive programs to improve the performance of wastewater
2. Ensuring there are boots on the ground to do the work
3. Using pay for performance approaches in state and local funding
4. Advancing markets through water quality trading
5. Fostering public private partnerships

Every year, the State participates in an evaluation of the status of pollutant load reductions toward the goals issued by EPA. These evaluations are used to inform our two-year milestone goals, which will be the tool used to manage the implementation process moving forward.

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Will there be a Phase IV WIP?

This has not been determined yet. Through adaptive management, two-year milestones, and progress evaluation, Maryland will make sure we stay under the pollution cap into the future, beyond 2025.

Where do I find more information about technical aspects of the plan?

In order to see the comments and responses provided during the 2019 public participation period, see the [Comment Response Document](#). If you do not find answers to specific questions, you can email the contact listed at the bottom of [Maryland's Phase III WIP page](#).