

# FREQUENTLY ASKED QUESTIONS

## CONOWINGO WATERSHED IMPLEMENTATION PLAN (CWIP)



The Chesapeake Bay Watershed

### Why was a Conowingo Watershed Implementation Plan (CWIP) Developed?

When the Chesapeake Bay Total Maximum Daily Load (TMDL) was established in 2010 (see [Appendix T](#)), it was predicted that the Conowingo Dam would continue to trap a portion of the sediment and nutrient pollution flowing down the Susquehanna River through 2025. This assumed storage capacity was factored into the load allocations needed to restore the Bay.

New research has determined that the reservoir behind the Conowingo Dam has effectively filled-in and larger pollution reductions are needed to meet the Bay's water quality standards than were originally calculated. To address this issue the Chesapeake Bay Program Principals' Staff Committee (PSC) agreed in December 2017 to work collaboratively on a separate CWIP.

### What's in the CWIP?

The CWIP provides a first phase adaptive strategy that will build upon CWIP implementation successes, challenges, and innovations. The CWIP realizes the PSC's vision by accelerating the pace of restoration, recognizing water quality and ecosystem protection as cost-effective, setting the stage for financing innovations that can help reduce costs and stimulate investments in clean water, and fostering healthy competition in ecosystem restoration markets to achieve Chesapeake Bay implementation goals by 2025.

The CWIP presents a best management practice (BMP) implementation strategy and offers an opportunity to advance the implementation of landscape-scale restoration strategies in the Susquehanna River basin using BMPs that integrate into existing land management strategies.

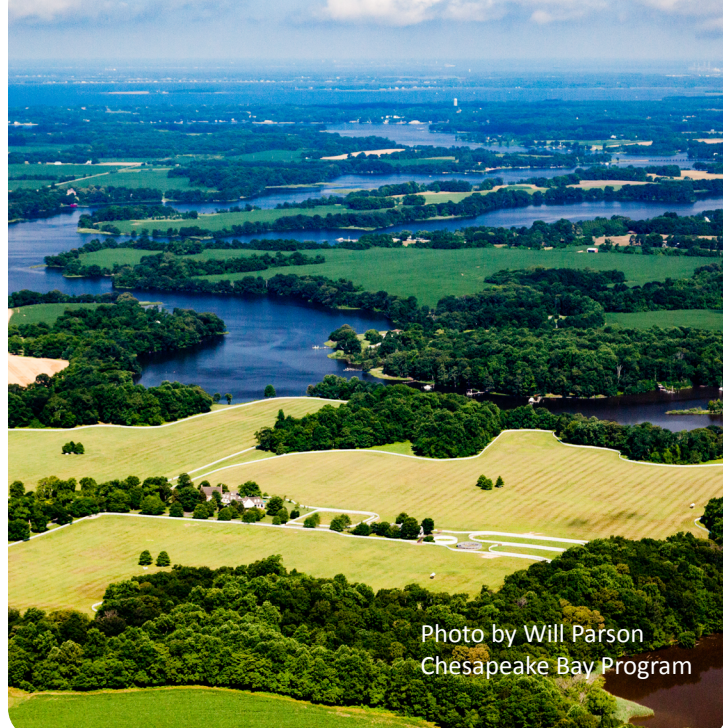


Photo by Will Parson Chesapeake Bay Program

### Who was involved in developing the CWIP?

The CWIP was developed through the guidance and recommendations of a [CWIP Steering Committee](#), a subcommittee of the PSC. The CWIP Steering Committee is composed of a representative from each Bay jurisdiction and the Chesapeake Bay Commission (CBC). The Steering Committee, through Environmental Protection Agency (EPA) and contractor support, developed the CWIP, guided the development of a financing strategy, and will oversee implementation of the CWIP and associated two-year milestones.

In 2019, the EPA issued a Request for Applications for third-party grantees to implement three activities from 2019 - 2023. The EPA administers the cooperative agreements and provides technical staff and contractor support to the Steering Committee and evaluates the CWIP and progress towards the plan's goals.

#### The CWIP Implementation Team is divided into three activities:

- Activity 1 : Facilitate the development and implementation of the CWIP and associated two-year milestones. Grantees include Center for Watershed Protection (lead), Chesapeake Conservancy; University of Maryland Sea Grant Extension; Harry R. Hughes Center for Agro-Ecology.
- Activity 2: Develop and propose a comprehensive CWIP Financing Strategy and associated Implementation Plan. Grantees include Chesapeake Bay Trust (lead), Center for Global Sustainability/School of Public Policy at the University of Maryland; Throwe Environmental, LLC; others.
- Activity 3: Tracking, verifying, and reporting implementation of CWIP and two-year milestones. Grantees include Chesapeake Conservancy (lead), The Commons, Center for Watershed Protection.



The CWIP Implementation Team carried out an extensive outreach strategy to engage local stakeholders during the public comment period for the draft CWIP. In total, 239 unique comments were received and compiled into a [Summary and Response to Public Comments on the draft CWIP](#) document. Steering Committee members considered these comments in revising the draft CWIP.

The Chesapeake Bay Program PSC approved the draft and final CWIP document and is responsible for reviewing the progress of the CWIP Steering Committee in the development and implementation of the plan.

### How was climate change addressed?

A central tenet of the CWIP is to significantly scale-up implementation of BMPs in the most effective areas to reduce nitrogen loads to the Bay. Some of these BMPs (i.e. wetlands and reforestation) can reduce the vulnerability of communities to the effects of climate change, making communities more resilient, healthier, and less susceptible to urban heat island effects while helping restore water quality and ecosystem functions. The CWIP will function in concert with the overall jurisdictions' WIPs, which allows CWIP implementation to adjust to the impacts of climate change as the science evolves and advances.

### How were issues of diversity, equity, justice and inclusion addressed?

The CWIP Implementation Team is responsible for documenting approaches and strategies to achieve the necessary load reductions that will include equity considerations, including prioritized implementation in underserved and underrepresented communities. The next phase of CWIP planning efforts is to develop 2-year milestones that are more local in nature, providing opportunities to explore the needs of and opportunities to support specific communities within the Primary CWIP Geography.

### How will jurisdictions' WIP work in tandem with the CWIP?

The CWIP process is intended to integrate with ongoing efforts to implement BMPs but seeks to go above and beyond what is identified in existing WIPs.

Watershed jurisdictions are not being asked to develop a second WIP document for the Conowingo. Instead, EPA has contracted the CWIP Implementation Team to develop, write and implement the CWIP and perform outreach, in coordination with the jurisdictions.

### Is the CWIP independent from the jurisdictions' Chesapeake Bay WIPs?

Yes. The CWIP is its own plan, independent of the individual WIPs developed and implemented by each of the Bay jurisdictions.

### Who will be held accountable for meeting the nitrogen reduction goals?

The EPA will provide biennial evaluations of the progress toward attaining the goals in the CWIP. EPA's evaluations will be used to determine if corrections or adjustments are necessary to attain the goals of the CWIP. A contingency plan for the CWIP provides safeguards to ensure the nitrogen load reductions are achieved in the case that the primary CWIP scenario is not sufficient to meet the stated goals in advance of the CWIP timeline (e.g., whether the targets need to be re-evaluated or assigned to specific jurisdictions).

### Why does the CWIP focus on nitrogen?

On January 31, 2019, the CBP Principals' Staff Committee (PSC) finalized a framework for developing the CWIP (CBP, 2019a, Appendix C), and the CWIP Steering Committee more recently identified nitrogen load reductions (CBP, 2019b) as the primary goal since most of the jurisdictions within the Chesapeake Bay watershed are projected to exceed their phosphorus goals.

### What are the CWIP BMP implementation goals?

Primary CWIP Strategy: BMPs Implemented across the Primary CWIP Geography			
Practice	Duration	Unit	Amount
<b>Agricultural Practices</b>			
Nutrient Application Management Core Nitrogen	annual	Acres	223,000
Nutrient Application Management Rate Nitrogen	annual	Acres	624,000
Nutrient Application Management Placement Nitrogen	annual	Acres	207,000
Nutrient Application Management Timing Nitrogen	annual	Acres	626,000
Conservation Tillage	annual	Acres	216,000
High Residue Tillage	annual	Acres	48,000
Low Residue Tillage	annual	Acres	10,000
Prescribed Grazing	cumulative	Acres	84,000
Forest Buffers	cumulative	Acres	20,000
Wetland Restoration	cumulative	Acres	12,000
Grass Buffers	cumulative	Acres	21,000
Soil and Water Conservation Plan	cumulative	Acres	113,000
Manure Incorporation	annual	Acres	189,000
Barnyard Runoff Control	cumulative	Acres	600
<b>Urban Practices</b>			
Urban Forest Planting	cumulative	Acres	49,000
Urban Forest Buffers	cumulative	Acres	17,000



Photo by Will Parson Chesapeake Bay Program

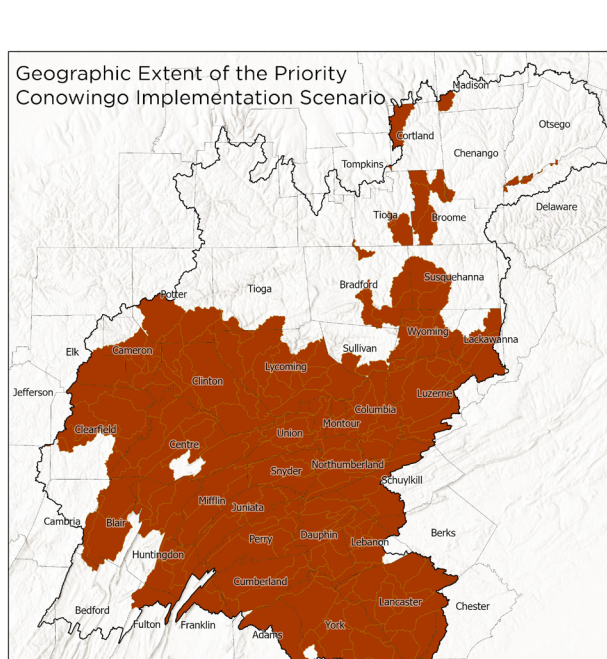
### How was the Primary CWIP Geography identified?

To address efficiency and cost-effectiveness, BMP implementation is targeted to geographies within the Susquehanna River basin that are most effective at delivering nitrogen to the Chesapeake Bay and, therefore, offer the best opportunity to improve conditions in the Bay by reducing nitrogen loads locally. Steering Committee members reviewed a variety of geographic scenarios emphasizing nitrogen effectiveness and came to a consensus on the Primary Conowingo WIP Geography that will consider each jurisdiction's available and needed resources for implementation.

□ Susquehanna Watershed

□ County Boundaries

■ Areas Considered in the Scenario



Map produced by Chesapeake Conservancy, 8/12/2020  
For use in the Conowingo Watershed Implementation Plan.  
Data sources: U.S. Geological Survey (2019), Chesapeake Bay Program (2020)

### How will CWIP implementation occur?

The CWIP proposes to utilize flexible and cost-effective mechanisms to deliver nitrogen reductions. Implementation of the CWIP is structured to dovetail financing institutions and existing state or grant programs to maximize capacity and deploy funds efficiently while providing thorough oversight of project implementation. The CWIP also recommends utilizing performance-based contracting or payment for ecosystem services (PES) contracts to deploy implementation funding directly to the highest performing projects. This approach focuses on developing performance metrics and then directly coupling contracting payment to performance against these metrics.

### Who will pay for implementing practices in the CWIP?

The PSC agreed the CWIP must incorporate innovations in financing that leverage both private capital and market forces to reduce restoration costs. The Activity 2 CWIP Implementation Team developed a [CWIP Financing Strategy](#) (a separate document from the CWIP) to advance the CWIP process. It is predicated on a core recommendation: Establish the Conowingo Financing Authority. The strategy emphasizes that public investment is essential, but public investment alone will not be sufficient. Long-term sustainable implementation success will require investing in the most innovative industries and processes that have the potential to create efficiencies, identify and leverage untapped revenue streams, and utilize long-term financing and investment tools.

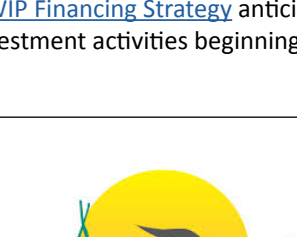
### How much will it cost to implement?

The estimated cost to implement the CWIP is \$53.3M per year, or \$8 per pound of nitrogen reduced. The costs were calculated using state-specific cost profiles in the CAST model (Chesapeake Bay Assessment Scenario Tool), based on newly updated costs in 2018 dollars.

### When will implementation begin?

The [CWIP Financing Strategy](#) anticipates implementation of the investment activities beginning winter 2022.

Since 1983, the Chesapeake Bay Program has led and directed the restoration of the Chesapeake Bay. Bay Program partners include federal and state agencies, local governments, non-profit organizations and academic institutions. Staff members work at our offices in Annapolis, Maryland, and at partner organizations throughout the watershed.



Chesapeake Bay Program  
Science. Restoration. Partnership.

**Project partners include:**  
Center for Watershed Protection  
Chesapeake Conservancy  
Harry R. Hughes Center for Agro-Ecology  
University of Maryland Sea Grant Extension