

January 1, 2022 – December 31, 2023 Conowingo WIP Programmatic and Numeric Two-Year Milestones

The Conowingo Watershed Implementation Plan (CWIP) identifies the need to reduce nitrogen delivered to the Chesapeake Bay by 6.7-million pounds per year by 2025. The final CWIP was approved by the Principals Staff Committee in September 2021 and this document outlines the initial two-year milestones established to implement that plan. Understanding that CWIP development and implementation is a collaborative, innovative and phased approach with the financing on a separate track and still in a pilot phase, the CWIP Steering Committee has developed consensus-based milestones that focus on building implementation capacity, continuing to expand partnerships, and fostering innovations intended to complement jurisdictional WIPs and accelerate Chesapeake Bay restoration overall. A numeric milestone is also included that sets an ambitious trajectory towards achieving the 6.7-million pounds of nitrogen reduction while recognizing that current implementation efforts are focused on programmatic actions that build the implementation capacity to increase numeric implementation commitments in future 2-year milestones. The CWIP Steering Committee agrees that this approach is consistent with EPA and the Chesapeake Bay Partnership’s Adaptive Management and Accountability frameworks that underpin all jurisdictional WIPs.

Action Item	Target Date	Revised Date	2022-2023 Final Milestone (WIP page reference)*	Deliverable	Lead Agency	Comments/Status Updates (Original from 2022-2023 Milestones)	Progress Report dated June 14, 2024
Capacity Building							
- Finance							
1	December 2021		Draft plan for the CWIP financing authority submitted to SC. (p.32)	Draft plan	Act 2	Draft plan for SC review and feedback. This plan will be an extension of the financing system business plan and will focus on institutional structure.	Complete
2	Spring 2022		Complete financing system implementation, enable course adjustments and establish the permanent Conowingo financing system (p.30)		Act 2		Complete
3	Mid 2022		Begin to deliver implementation funding		Act 2	The Activity 1, 2, and 3 teams are working to identify and outline the processes by which funding will be delivered and incorporate that information into future milestones.	Complete
4	July 2022 – July 2023		Launch implementation of financing authority and restoration investments. (p.32)		Act 2	Once the authority leadership, staffing, and institutional structures are in place, financing activities will begin.	Complete
- Technical							
5	December 2021	Draft due September 1, 2024 and final due December 1, 2024	Updated QAPP detailing how BMP data will be collected and submitted annually to the CBP officer, assurance that the data is valued, and how the data will be interpreted for further use. (p.47)	Updated QAPP	Act 3	The inclusion of a Verification Program Plan will extend beyond this date and require another revision to the QAPP in the next cycle. Conversations about this need to involve representatives from EPA/CBPO and each involved jurisdiction.	Each State is responsible for updating their own QAPP as necessary. EPA will work with the States to ensure appropriate Conowingo reporting and to provide written guidance to include IJA requirements.
6	Winter 2021/Spring 2022		Roll out of the BMP Opportunity Analysis with support to local stakeholders on the data tools produced to support planning of projects to implement the CWIP. (p.21)	Web-map with report generator. Written and recorded tutorial.	Act 1	Virtual meetings have been held with implementing jurisdictions, including a brief presentation to the PA CAP Coordinators to introduce the tool and obtain feedback.	Complete. The BMP opportunity analysis (link) has been linked to the Steering Committee website (link). An online training video (link) and instructions

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							(link) are also posted on the Steering Committee website.
7	March 2022	July 2024	Updated draft of Audit Framework to SC for review and comment. The Audit Framework is the development guide for tracking and validating data through FieldDoc. It will be used to ensure that projects being tracked towards the Conowingo WIP are being implemented as reported and do not overlap with other BMPs being tracked for jurisdictions' WIPs. This framework will help CBP staff and CWIP steering committee members understand how an automated and semi-automated series of audit steps can increase accountability and lower verification costs, as they will be compatible with existing CBP validation requirements. It will also align with BMP Verification programs through state offices/EPA. (p.47)		Act 3	SC Review and Comment	The audit framework is in the process of being revised and will be shared with the Steering Committee. The Audit Framework will be completed prior to the closeout of Activity 3.
8	Early 2022		Establish CWIP tracking and monitoring process; ensure coordination with jurisdictions' WIP 3 tracking processes. (p.47)	CWIP Project tracking module in FieldDoc; reporting alignment with NEIEN in place.	Act 3	Requires support from jurisdictional and CBP technical teams involved with NEIEN.	Complete
9	Summer/Fall 2022		Implementation of new features/services necessary for Audit Framework in FieldDoc.		Act 3		Complete
Fostering Innovation							
10	Ongoing		Explore financial innovations, including pay-for-performance options and private-public partnerships. (p.45)		Act 2		The PENNVEST Clean Water Procurement Program (link) and the MDE/SRBC RFP for Verified Nutrient Reductions (link) target pay-for-performance projects. Both programs were initiated and advertised in 2023. The second round of PENNVEST Clean Water Procurement was advertised in 2024. Criteria for awarding pay-for-performance contracts emphasize innovative financing and greatest return

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							on investment in terms of nitrogen reductions. Projects with co-benefits are incentivized to foster new public-private partnerships. See Milestone 13 for details.
11	Ongoing		Explore contingency plans and opportunities as needed. (p. 48) Re-evaluate Tier II BMPs that are currently under expert review (p.26)	Annual report; re-running CAST scenarios as needed.	Act 1, CBPO	This includes current initiatives to close science gaps related to dredging behind the Conowingo dam, freshwater mussel restoration, and manure treatment technologies as viable and creditable BMPs.	<p>Ongoing review of initiatives to evaluate new BMPs. Participation in the Chesapeake Bay Watershed Region Freshwater Mussel Partnership (link).</p> <p>Pennsylvania continues to work with EPA on manure treatment technology crediting opportunity. This work is happening outside of the expert panel process. With ongoing funding from PA DEP, SRBC convened the Chesapeake Bay Watershed Region Freshwater Mussels Partnership in May and December 2023, along with monthly steering committee meetings, to evaluate available science and opportunities for water quality BMPs.</p> <p>Maryland is also in the final stages of executing a contract with the U.S. Army Corps of Engineers for the Conowingo Model that will help assess dredging as a nutrient BMP.</p>
Identifying and Building Partnerships							
12	Ongoing		Forming, tracking, and developing cooperative or informal agreements with partners in the Susquehanna River watershed to further CWIP goals and implementation. (p.13)		SC, Act 1,2,3	<i>Includes mussel collaboration.</i>	<p>Continuing to build on the established partnerships with the Octoraro Watershed Association, Octoraro Source Water Collaborative, Upper Susquehanna Coalition, SRBC, and the Chesapeake Bay Program.</p> <p>PA DEP began the process of providing funding through the 319 Program to Clean Water for Octoraro Communities and Ecosystems; Increasing Capacity for the Octoraro Source Water Collaborative. PA DEP announced the award of those funds in October 2023.</p>

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							<p>In partnership with PA/MD and Octoraro groups, SRBC provided funding to establish a pilot effort for an Amish liaison program in the watershed to accelerate BMP adoption, while also providing non-fed/state matching funds to support farm BMP implementation. It is expected the success of this pilot will result in expansion of the program.</p> <p>A formal cooperative agreement between NYSDEC and the Upper Susquehanna Coalition was finalized in June 2024 and will be in place through 2028. The cooperative agreement includes numeric BMP targets for high priority BMPs identified in the Conowingo WIP, including natural filters (wetland restoration and riparian forest buffers), sustainable farm practices (prescribed grazing and conservation tillage) and nutrient reduction agricultural practices (nutrient management and manure incorporation).</p>
Pilot Project Development and Implementation							
13	Fall 2022	July 2024	Identify and scope/ one or more implementation pilot projects to achieve numeric CWIP goals.		Act 1, 2, 3	This includes refined implementation targeting in cooperation with the SC and the BMP Opportunity Analysis tool to narrow targeting within the most-effective basins, as identified in the CWIP, to identify locations where a pilot project may be implemented and necessary funding/resources pursued.	<p>A CWIP Implementation Framework (link) was developed that establishes a two-tiered implementation process of Smaller-Scale Pilot watersheds using traditional grant programs in addition to Broader Scale State-wide pay-for-success implementation efforts with the CWIP funding authority. Project identification and progress will be reported for the 2024-2025 reporting period.</p> <p>New York: \$1,000,000 of funding over two years has been allocated to the Upper Susquehanna Coalition for project implementation. Numeric targets for the first year of funding under this agreement</p>

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							<p>include: 30 acres of riparian forest buffer, 150 acres of prescribed grazing, and 1,000 acres of nutrient management.</p> <p>Pennsylvania: \$22,000,000 of funding has been allocated to PENNVEST for pay for performance projects. The first project solicitation was issued in 2023 with projects awarded in the first quarter of 2024. The second solicitation was advertised in the second quarter of 2024. The eligible projects in the PENNVEST Clean Water Procurement Program (link) include Best Management Practices that can be quantified using the Chesapeake Bay Nutrient Tracking Tool (CBNTT) found on the PA DEP Nutrient Trading Program website. Criteria for project selection includes dollar cost per pound of nutrient or sediment removal, quantity of nutrient or sediment loads reduced annually, extent to which the project includes small farms (farms that are not a CAFO), verified nutrient/sediment reduction in a Tiered County, verified nutrient/sediment reduction in a local agriculturally-impaired watershed, fiscal/managerial viability of entity, and additional community/environmental benefits. The award recipients are required to provide a description of the measures to be used to quantify, by measurement or modeling, the amounts of the reduction of nutrients or sediment resulting from the proposed projects or practices, and a verification plan to verify the reduction annually in accordance with the applicable water year, as defined by DEP under Pennsylvania’s BMP Verification Program. Additionally, Pennsylvania’s Local Government Impact grant was awarded to</p>

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							<p>Chester County Soil Conservation District for \$1.19M to Octoraro CWIP implementation.</p> <p>Maryland: \$25,000,000 of funding has been allocated to SRBC for pay for success projects. The first solicitation for projects was issued in 2023 with a proposal opening date in late January 2024. Projects will be awarded in the second quarter of 2024. For the MDE/SRBC RFP for Verified Nutrient Reductions (link), projects focus on nitrogen reduction and sites located within the Susquehanna River watershed in Maryland Counties: Harford and Cecil receive a higher ranking than those located in the Pennsylvania portion of the Deer Creek, Conowingo Creek, and Octoraro Creek Watersheds or in a Most Effective Basin. Criteria for project selection includes the lowest cost per pound of nitrogen removed and provided by an approved Bay Program BMP, location, and projects involving dredging in the Conowingo Reservoir. The award recipients are required to provide a proposed verification plan which describes the protocol for verifying that practices are completed to Chesapeake Bay Program standards using a third-party verifier. Structural practices may only require this once or at regular intervals. Annual practices must be verified yearly.</p>
Securing CWIP Funding							
14	Ongoing		Identify and secure one or more funding sources for CWIP implementation over the 2-year milestone period, as well as continuing current partnership CBRAP support of CWIP.		Act 2	<i>SC WQGIT application option IJA and CWIP</i>	Complete. New York has allocated funding to the Upper Susquehanna Coalition for project implementation. Pennsylvania has allocated funding administered by PENNVEST. SRBC and MDE entered into a Memorandum of Understanding for the SRBC financing structure and

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							developed selection criteria for pay for success projects. The Project Utilization Clause restricts the use of nutrient-based environmental outcomes to only those Pay-For-Success Projects that are attributable to Maryland’s commitment under the CWIP.
Outreach / Engagement							
15	Spring 2022	Ongoing	Providing support to stakeholders to support implementation and the tracking verification and reporting. (p. 22)	Up to 12 training sessions. Written and recorded tutorial.	Act 1, 3	These training sessions will be scheduled to occur virtually and, when possible, in person across the Susquehanna River watershed. Invitees may include, but are not limited to, CAP coordinators in PA, Agency staff from the three implementing jurisdictions, and members of the Financing Authority (or proxy).	Continued engagement with stakeholders is occurring and specific engagement strategies will be guided by Steering Committee members from each jurisdiction involved with implementation. Training sessions will be scheduled to occur virtually and, when possible, in person across the Susquehanna River watershed. Invitees may include, but are not limited to, CAP coordinators in PA, Agency staff from the three implementing jurisdictions, and members of SRBC, the Financing Authority. PA updated the PracticeKeeper database to include Conowingo WIP funding sources and included the requirement to report to PracticeKeeper in the Clean Water Procurement Program and LGI agreements. Clean Water Academy and relevant SOPs will be provided to funding award recipients by the time that project reporting is due. Additional training will be provided in June 2024 to program reporters.
16	Fall 2022		Annual progress report, due to EPA on January 15, 2023. (p. 48)	Annual progress report	Act 1, 3		Complete
17	Summer/Fall 2023		Reconvene stakeholders to evaluate progress and make recommendations on the next set of two-year milestones due January 15, 2024. (p. 22)	Up to 12 stakeholder meetings	Act 1, 3	Specific engagement strategies guided by SC members from each jurisdiction involved with implementation.	Complete. The Steering Committee Co-Chairs meets weekly to discuss CWIP progress. The weekly meetings include staff from the Chesapeake Bay Program, the EPA Grantees, and others as needed based on the topics of discussion.

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							2024/2025 draft milestones discussed at the June 5, 2023, September 11, 2023, December 4, 2023 and June 3, 2024 Steering Committee meetings, as well as numerous Core Team meetings.
Numeric Milestones							
18	December 2023	December 2025	Implement practices sufficient to reduce at least 25% of the nitrogen reductions identified in the CWIP, or 1.675-million pounds.		CWIP		Funding is in place to solicit projects through a pay-for-performance model to target the reduction of 25% of the nitrogen reductions identified in the CWIP. PA anticipates reporting practices implemented through the Clean Water Procurement Program and LGI, beginning 2024 progress year. The Clean Water Procurement Program is funded by the covid-ARPA program, so implementation must be completed prior to the expiration of these funds.

* As part of the adaptive management process for achieving water quality goals, jurisdictions may submit programmatic milestones that modify, are in place of, or are in addition to milestones listed in their WIPs so long as the jurisdiction can demonstrate that they will be as effective toward meeting water quality goals.

Lead Agency Key:

- Act 1 is Activity 1: Facilitate Development and Implementation of the CWIP and Associated Two-Year Milestones: Center for Watershed Protection (lead grantee), Chesapeake Conservancy; University of Maryland Sea Grant Extension; Harry R. Hughes Center for Agro-Ecology.
- Act 2 is Activity 2: Develop and Propose a Comprehensive CWIP Financing Strategy and Associated Implementation Plan: Chesapeake Bay Trust (lead grantee), Center for Global Sustainability/School of Public Policy at the University of Maryland; Throwe Environmental, LLC; others.
- Act 3 is Activity 3: Tracking, Verifying, and Reporting Implementation of CWIP and Two-year Milestones: Chesapeake Conservancy (lead grantee), The Commons, Center for Watershed Protection.