

Pennsylvania's Phase 3 Watershed Implementation Plan 2022 Progress Report Summary



March 2023

Overview: 2022 Progress

Pennsylvania's Phase 3 Watershed Implementation Plan (Phase 3 WIP) is well on its way towards reaching the 2025 goals. The unique bottom up approach to meeting the state's Chesapeake Bay nutrient reduction goals has been well received by the Bay watershed counties. All of 34 counties who were asked to draft Countywide Action Plans (CAPs) did so and are now implementing them.

Local action is making a difference through the work of individuals and partnerships focused on clean water. The Phase 3 WIP focuses on working with local stakeholders at the county level to create and implement Countywide Action Plans (CAPs). Implementation of a CAP comes with many benefits, including financial resources. Both the state, and a diverse group of partners working across the watershed have dedicated funding to fund projects identified in county CAPs. As projects at the county level are funded and completed, water quality improves, benefiting local stakeholders and those living downstream.

Robust action by the state government and sectors led to more funding, more staff members, and more programs focused on helping counties meet their clean water goals. Commonwealth legislators, working with the governor, took historic action to provide funding directed at projects that reduce water pollution across the Chesapeake Bay watershed. Staff across state agencies and state action leaders in agriculture, forestry, stormwater and wastewater had prepared for this in previous years and were able to distribute funds into a variety of programs that made, and will continue to make, measurable differences on-the-ground. Big changes in agency-level organization led to improvements in the state's ability to accomplish state-level work and support county-led efforts.

Cleaner water flows through the Commonwealth, breaking through barriers the pandemic created. While the pandemic may have restricted how progress could be made, progress was still made. Partners at every level—from the landowner who agreed to have a BMP installed on their land, to the local watershed organization on their county CAP team who put the project together, to the state grant program manager who approved the funding for the project—showed up and found a way to do their part. The result is measurably cleaner water across the Chesapeake Bay watershed. In addition, the plans in place all add up to Pennsylvania meeting its nutrient reduction goals for 2025.

Details to date for each milestone are provided in the [Pennsylvania Phase 3 WIP Planning and Progress Report](#). The following sections share highlights.

Milestone Progress Highlights

Pennsylvania's Phase 3 WIP is unique in its strategic bottom up approach to reducing nutrient pollution in the Pennsylvania Chesapeake Bay Watershed. Trusting counties to take the lead on clean water efforts has put the power to make change in the people most impacted by that change, local community members and their representatives.

The state's action leaders take their supporting role in the WIP seriously and have proven it over the last year by taking major steps to ensure counties have all they need to get the job done. Inspiringly, this dedication has not gone unnoticed and the WIP has created a diverse network of people and organizations who are actively working for clean water in the Commonwealth. Due to the momentum the WIP has generated, many organizations are also developing dedicated funding streams to offer grants and other financial support to projects in Pennsylvania's Bay watershed.

Details on the progress made over the last two years are provided in the 2022 milestones report. This includes aggregated data, status of actions, and descriptions of efforts. For efficiency, the plan is broken into five Priority Initiatives:

1. Communications and Outreach
2. Funding and Resources
3. Expanding Capacity for Technical Assistance
4. Reporting and Tracking
5. Compliance

Each initiative was assigned relevant actions by the Phase 3 WIP planning team to help Pennsylvania reach its nutrient reduction goals. All of the Phase 3 WIP milestone action item updates can be found in the Planning and Progress Report. The following are some progress highlights for each priority initiative:

Priority Initiative 1: Communications and Outreach

The Phase 3 WIP is an incredibly ambitious plan. Its success hinges on communities across the Commonwealth coming together to work towards a single goal, clean water. This can only be achieved through well planned and executed outreach and communication. As a result, communication and outreach have formed the backbone of the Phase 3 WIP.

Now that the WIP is being implementation across all of the Bay watershed counties, the benefits of this approach can be fully appreciated. Communities are responding positively by dedicating significant resources to reaching their individual goals—and seeking out partnerships to help get projects on the ground and goals met.

Progress highlights:

- PA Department of Environmental Protection (DEP) Bureau of Watershed Restoration and Nonpoint Source Management's Chesapeake Bay Watershed Restoration Division focused on expanding staff and to support clean water efforts, which included:
 - Holding regular monthly calls with all watershed counties and weekly calls with Countywide Action Plan (CAP) coordinators as needed.
 - Providing grant funding for CAP coordinators and additional CAP grant funds for communication support.
 - Expanding the network of DEP support staff provided to counties and clarifying their roles.
- Several DEP bureaus and divisions have taken meaningful steps to provide training and educational resources for best management practice (BMP) design and implementation.
 - Bureau of Waterways Engineering and Wetlands
 - Training modules have been, and continue to be, developed for the PA Clean Water Academy:
 - Foundations of Pennsylvania Soils (in partnership with Soil Hub)
 - A Case Study – Legacy Sediment Evaluation at Oil Creek (in partnership with LandStudies)
 - Aquatic resource restoration presentations were shared with the conservation districts at the annual Conservation District Watershed Specialist conference.
 - Presentations at the State Conservation Commission (SCC) annual meeting explained permitting considerations and promoted the benefits of bank-full width culvert designs.
 - DEP staff also highlighted the inherent flexibility in permitting which allows for the best possible on-the-ground solutions consistent with Pennsylvania's laws.
 - Bureau of Clean Water
 - Coordinated with the PA Association of Conservation Districts (PACD) to develop and publish a series of short training videos to the Clean Water Academy on the operation, maintenance and inspection of three BMP types.
 - DEP staff are working with Municipal Separate Storm Sewer System (MS4) communities in the watershed counties to plan for future permits and look for opportunities for collaboration.

Priority Initiative 2: Funding and Resources

Funding the Phase 3 WIP is no small task. The total cost of achieving all goals in the Phase 3 WIP numbers is in the hundreds of millions of dollars. In 2022, Pennsylvania took major steps toward fully funding the WIP, in addition to efficiency improvements such as reprogramming funds and reorganizing programs.

Funding has also come from stakeholders with shared clean water goals. To reach the Commonwealth's 2025 goals, the state and partner organizations/entities will continue to pursue new and innovative partnerships and funding opportunities, in addition to existing sources.

Progress highlights:

- Pennsylvania's legislature:
 - The Pennsylvania Clean Streams Fund (\$220 million) was funded as part of the FY2022-23 General Fund State Budget.
 - The Clean Streams Fund will provide funds toward:
 - New Agriculture Conservation Assistance Program (ACAP)
 - New Clean Water Procurement Program
 - New Stormwater Management Grants and Reimbursements
 - Existing Keystone Tree Fund
 - Existing Nutrient Management Fund
 - Existing Acid Mine Drainage program
- State agencies are working together to ensure commitment and expenditure of funds. DEP, PA Department of Agriculture (PDA), SCC, PA Department of Conservation and Natural Resources (DCNR) and PENNVEST have been meeting monthly since September 2022 and will carry that forward through 2023, adding the USDA Natural Resources Conservation Service (NRCS) and the National Fish and Wildlife Foundation (NFWF) representation to further coordinate funding sources and programs.
- DEP continued to implement its successful "block grant" program:
 - The allocation-based funding program continues to be implemented. In December 2022, a total of \$12.2 million was awarded for county-based CAP Coordinators and CAP Implementation Grants, which included both state (\$9.3 million) and federal (\$2.9 million) funding sources.
- State and partner funds are being used to decrease county conservation district staff turnover and hire more staff support.
 - Increased funding for Conservation District Nutrient Management Technicians, Chesapeake Bay Technicians, Chesapeake Bay Engineer Specialists and Engineer Assistants in an effort to reduce staff turnover.
 - The SCC has entered into an agreement with NRCS to move forward with hiring personnel to further support technical assistance efforts.
- Riparian buffers
 - DCNR received \$3 million in federal Chesapeake Bay Infrastructure Investment and Jobs Act (IIJA) funding to further augment the existing Community Conservation Partnerships Program (C2P2) program.
 - DCNR worked with the PA Department of General Services (DGS) to create a contract process for environmental restoration work, including planting and maintenance of forest buffers. In 2023, DCNR intends to test the new funding mechanism with NFWF funds awarded in 2021 for the "Penn's Woods and Meadows" proposal.
 - Post-planting establishment is now a fundable activity for all buffers planted with any funding source in the past five years under the C2P2 grants.

Priority Initiative 3: Expanding Capacity for Technical Assistance

Success relies on having skilled technicians in place to ensure projects are done right the first time. Pennsylvania's Phase 3 WIP includes actions to ensure needs for technical support, expertise and training are met through technical training, hiring technical support staff and leveraging partnerships with organizations that have needed technical resources/expertise.

Progress highlights:

- **Animal Waste Management Systems**
 - The SCC began planning and developing a Technical Assistance Center
 - DEP continues to fund Chesapeake Bay Technicians, Engineer Specialists and Engineer Assistants.
 - DEP continues to provide funding, along with NRCS, toward the PACD Technical Assistance Grant (TAG) program statewide.
 - DEP also provides funding, along with NRCS, to the Chesapeake Bay Watershed Conservation Initiative (CBWCI) Program in the four pilot counties.
- **DCNR is taking steps to increase technical assistance available to landowners for riparian forest buffers, urban forestry technical assistance, and turf-conversion technical assistance program and incorporate technical assistance funds into C2P2 grants.**
 - DCNR created and filled five new Regional Watershed Forestry Specialist positions, bringing the total up to seven.
 - DCNR created a new Chesapeake Bay watershed focused TreeVitalize position, filled in late 2022.
 - DCNR integrated the turf conversion program into the Watershed Forestry program.
- **Wastewater Plant Performance Technical Assistance**
 - DEP provided technical assistance to 10 plants in PA's Chesapeake Bay watershed, with evaluations conducted at four plants.
 - Field meter training and set up was conducted at all six DEP regional offices.
 - Activated sludge training courses were provided to staff in all six regional offices, as well as to certified operators at PA Rural and PennTech conferences.
 - Training related to reducing nutrient loads was provided for wastewater staff at 11 unique facilities.
- **State Revolving Fund Technical Assistance**
 - PENNVEST and DEP collaborated on and created a Request for Proposals (RFP) for technical assistance and outreach to help small and disadvantaged wastewater and water systems.

Priority Initiative 4: Reporting and Tracking

Progress reporting and tracking are critical parts of the Phase 3 WIP, but they can be complicated. In an effort to streamline this process, significant effort went into standardizing data collecting and reporting methods, updating BMP reporting platforms and developing needed trainings.

Progress highlights:

- BMP verification is a priority for DEP and much work has been done to make the reporting process easier and to clarify verification guidelines.
 - DEP continues to encourage counties to pursue remote sensing technology.
 - In July 2022, funding was added to the DEP Chesapeake Bay Technical Assistance Program grants to further augment verification strategies and efforts.
 - The reporting process was streamlined by establishing consistent and standard protocols.
 - DEP revised and submitted the Chesapeake Bay Nonpoint Source Management Quality Assurance Project Plan (QAPP) and BMP Verification Program Plan.
 - Verification guidelines, including criteria and qualifications, as well as training modules, were developed and published for third-party verifiers working with county lead entities.
 - The 2022 Penn State Voluntary Producer Survey was conducted, with data reported to DEP for 2022 progress.
 - The Chesapeake Bay Agriculture Inspection Program (CBAIP) continues to collect and report BMP data across the watershed.
 - SCC and DEP continue to provide funding toward the PAOneStop tool, with the Ag Erosion & Sedimentation Plan Module completed in 2022.
- Stormwater and Concentrated Animal Feeding Operation (CAFO) e-Reporting
 - MS4 e-reporting system was released for 2022 reporting, with a group of permittees asked to beta test the system.
 - The CAFO e-reporting system is currently under development and on track.
- Track and report progress in Phase 3 WIP planning and implementation in all counties
 - In September 2022, Tier 2 CAP counties submitted annual progress reports and 2022-23 CAP milestone updates to DEP. Pilot and Tier 3 and 4 CAP counties submitted annual progress reports to DEP.
 - The 2021 Healthy Waters Healthy Communities Annual Report was published.
 - DEP continues to work with Geodecisions and Chesapeake Conservancy regarding reporting from PracticeKeeper and FieldDoc.
 - DEP and SRBC continue to work together and with county lead entities to develop CAST scenarios, county snapshots, standard templates and QA/QC documentation.
- Phase 3 WIP was amended to incorporate additional efforts and the CAPs that were developed after the original WIP was submitted.
 - EPA provided the evaluation of the draft amended Phase 3 WIP on April 18, 2022. DEP resubmitted the final amended Phase 3 WIP by the EPA deadline of July 18, 2022. EPA published their final evaluation on November 21, 2022. Pennsylvania's final amended Phase 3 WIP is published to the DEP website.
- Adequate real time monitoring stations provide essential data on the status of PA waters.
 - The 2022 Integrated Water Quality Report was approved by EPA on August 3, 2022 and was published to the DEP website. The 2022 Integrated Water Quality

Report includes a focus on Chesapeake Bay watershed restoration efforts as well as climate change impacts in Pennsylvania.

- The Next Generation Station at Marietta was installed using EPA Section 319 Nonpoint Source Program funding as well as funding from the state Chesapeake Bay Agricultural Source Abatement Fund. As of August 2022, the deployment of the Next Generation Station was complete and monitoring and data reporting to USGS website was successfully occurring.
- The Nutrient Credit Trading Program and Chesapeake Bay Nutrient Tracking Tool (CBNTT) work hand-in-hand to support nutrient reduction work.
 - The CBNTT was finalized with USDA and EPA support and went live on DEP's website for the regulated community on July 22, 2022, for use during the 2022 Nutrient Trading season. The CBNTT transitioned from practice-based to performance-based calculations and is now implementing a 2:1 uncertainty ratio (instead of the 3:1 ratio) for all nonpoint source generators. The draft Nutrient Trading Supplement was published to the DEP website on October 20, 2022, ensuring consistent communications.

Priority Initiative 5: Compliance

Compliance with existing regulations and permitting requirements reduce sediment and nutrient loads in Pennsylvania's waters. Pennsylvania and its partners have worked to increase and support compliance with nutrient management and nutrient reduction goals, standards, ordinances, and laws.

Regulatory enforcement is an important tool to ensure compliance, but it is not the only tool in the toolkit. Keeping open lines of communication, setting clear expectations, and providing needed assistance can save valuable time and money down the road. Getting there will take collaboration among several internal and external agencies and organizations.

Progress highlights:

- The Chesapeake Bay Agriculture Inspection Program
 - The Chesapeake Bay Agriculture Inspection Program Phase 1 and Phase 2 Standard Operating Procedures were merged and published on the DEP website in May 2022.
 - The 2021-2022 Agriculture Annual Inspections Summary was published to the DEP website in Fall 2022, with a press release announcement as well.
- Participation in EPA's formal assessment of Pennsylvania's Animal Agriculture Programs.
 - EPA provided DEP with a questionnaire to complete in December 2021. DEP coordinated the completion of the questionnaire and submitted it to EPA. EPA held meetings with DEP Central Office, DEP Southcentral and Northcentral Regions, PDA and SCC, as well as four conservation districts throughout March 2022. EPA conducted file reviews of CAFOs and CAOs. EPA provided the draft

report to DEP on July 8, 2022, and DEP submitted comments on July 22, 2022. EPA provided the final report to DEP on December 22, 2022.

- The final report noted that:
 - “DEP has made progress since the 2015 assessment in its efforts to reduce nutrient and sediment loads in the Chesapeake Bay watershed.”
 - “Pennsylvania has responded to the 2015 recommendations and made progress towards meeting their 2025 goals. However, there are challenges that impact the pace and scale of program implementation. Notably, the scale of agriculture coupled with the demand for assistance, funds, and one-on-one support for farmers, impacts the state’s ability to meet 2025 goals.”
- The CAFO Compliance Evaluation and Inspection (CEI) Standard Operating Procedure (SOP) was finalized and released.
 - It is currently being utilized by DEP regional staff.
 - The CAFO CEI SOP has also been provided to EPA.
- Five-year Nutrient and Manure Management Delegation Agreement with the conservation districts to include additional Manure Management Required Output Measures (ROMs) were revised and approved.
 - The delegation agreements were approved at the July 2022 State Conservation Commission meeting and will be in place from July 1, 2022 – June 30, 2027.
- Develop the NPDES Industrial Stormwater Permit
 - DEP published an initial draft of the Industrial Stormwater General Permit, PAG-03, on January 22, 2022.
 - EPA objected to the PAG-03 on February 22, 2022. DEP resolved EPA’s objection on June 3, 2022. DEP published a second draft permit on August 20, 2022.
 - The final PAG-03 was published in the PA Bulletin on December 24, 2022 and will become effective on March 24, 2023.

Works in Progress

While a majority of the tasks identified in the Phase 3 WIP are either completed or on track, there are some items that are works in progress. Some actions have no fixed end date, as they require continuous effort. Other actions within the WIP are dependent on organizations or partners that may need to prioritize other commitments. In other areas (such as making revisions to plans, and programs), work is progressing, but ensuring full participation from key stakeholders and conducting due diligence necessitates longer than anticipated timelines.

Priority Initiative 1: Communication and Outreach

- Building capacity to emphasize the full range of co-benefits from wetland restoration requires staff and/or funding that is not yet in place. This is an area where partner organizations could play a supporting role.
- Currently, golf course BMPs do not get credit in the Bay Model. The Chesapeake Bay Partnership could take steps to correct this.

Priority Initiative 2: Funding and Resources

- Short term low-interest agricultural loan programs could boost BMP implementation. PENNVEST, DEP and SCC have met multiple times, along with SRBC and Maryland Department of the Environment (MDE), to discuss Pay-for-Performance outcomes through the new Clean Water Procurement Program. Guidelines are under development for Spring 2023 approval.
- DEP continues to advocate for multiprogram accounting. Currently, many co-benefits of stream and wetland restoration projects initiated through mitigation banking and In-Lieu Fee programs are not credited to other programs such as MS4 and other pollution reduction evaluations.

Priority Initiative 3: Expanding Capacity for Technical Assistance

- Fully staffing the DEP coordinator positions is an ongoing process, three of the seven positions identified in the plan are filled. With the shift to a Bureau bringing in new staff resources, the need for additional internal coordinators is being evaluated.
- Plans to expand technical assistance are underway for the Conservation Assistance Program.
- The revised draft of the PA Stormwater BMP Manual was completed and expected to be released for public comment in 2023.
- Compliance and Enforcement Manual for Construction Stormwater: DEP published a new Chapter 102 inspection report in October 2022. The next step is to finalize an SOP and training on how to conduct construction stormwater inspections.

Priority Initiative 4: Reporting and Tracking

- DEP continues to encourage counties to pursue remote sensing to assist and support verification efforts. In July 2022, funding was added to the DEP Chesapeake Bay Technical Assistance Program grants to further augment verification strategies and efforts throughout Pennsylvania's Chesapeake Bay watershed. Time and resources are not available to conduct a broader, multi-jurisdictional approach at this time.
- Expand reporting of dairy precision feeding: Data is being collected from dairy cooperatives to use as baseline to demonstrate what farmers are already doing.
- Expand reporting of Enhanced Nutrient Management: Developed and deployed supplemental onsite status review for Act 38 Concentrated Animal Operations (CAOs), which resulted in increased reporting of implemented supplemental Nutrient Management practices.
- Initiate and collect stormwater BMP data from other DEP programs implementing provisions of the Chapter 102 regulations, to include required post-construction stormwater management.
- Continue to make improvements to ePermit (currently, about 3-5% of Chapter 102 NPDES applications/NOIs are being submitted through ePermit).

Priority Initiative 5: Compliance

- Implement NPDES CAFO Program Delegation: EPA has reviewed DEP's proposed draft PAG-12 general permit and has participated in Ag Advisory Board meetings. EPA proposed additional elements to the PAG-12, including provisions related to the Chesapeake Bay Total Maximum Daily Load (TMDL) and identification of additional BMPs to meet the TMDL, as needed. The public comment period for the draft PAG-12 ended on October 31, 2022. Four sets of comments were received that included two requests by industry organizations to extend PAG-12 to provide sufficient time to vet new requirements relating to TMDL consistency. DEP published the PAG-12 extension on December 17, 2022.
- Publish revision to the Manure Management Manual Technical Guidance Document: Revisions to the document are under development. Draft is scheduled to be published in Spring 2023.
- Complete the Pollutant Reduction or TMDL Plan Reviews for the 2018 MS4: While the majority of permittees in the Chesapeake Bay watershed have approved Pollutant Reduction Plans (PRPs), DEP continues to struggle to get the remaining permittees without approved PRPs to respond to technical deficiency letters and provide the information needed to generate a PRP that can be approved. EPA offered technical assistance to DEP to address this issue. EPA and DEP are working together to determine a path forward to get permittees to the point where their PRPs can be approved.
- Develop the NPDES MS4 Permit: DEP is coordinating with EPA on the development of the next permit term. It is anticipated that an announcement on the timeline for the future permit term will be made in early 2023. DEP has extended the MS4 General Permit (PAG-13) to March 15, 2025, and has formed a workgroup that includes EPA staff and private sector stakeholders. The workgroup will meet at least eight times from November 2022 to March 2023 and will help inform DEP's development of the reissued PAG-13.

Challenges to Implementation

The impact of the COVID-19 pandemic has been greatly reduced over the last two years. In-person events, meetings, trainings and projects have progressively come closer to pre-pandemic levels. Despite this, it remains a consideration and a factor that impacts how work gets done.

While Pennsylvania is mainly on track with milestone progress, there are a few areas that have presented challenges:

- Regular quarterly communication with EPA on Pennsylvania's progress is part of the Phase 3 WIP. While there was significant communication between EPA and Pennsylvania in 2022, it was mostly ad-hoc and/or focused on a handful of specific programs.
- Proposals to specific grant programs to fund elements of the Phase 3 WIP are not all going as expected.
 - DEP's \$7.5 million proposal to the NFWF America The Beautiful Challenge Grant to increase technical capacity through circuit riders was not awarded in 2022.

- DCNR's proposal to the NFWF America The Beautiful Challenge Grant was not awarded in 2022.
- DCNR did not apply for Central Appalachian Stewardship Program funds in 2022, but plans to do so in 2023.
- Several efforts are underway to ensure Pennsylvania is getting full credit for all programs and practices in place to improve water quality, but these efforts have yet to yield significant results.
- Certainty around full grass buffer reporting remains in question for NRCS Conservation Technical Assistance projects due to concerns around duplicate reporting. Resolving this is dependent on USGS to evaluate data sets to determine whether duplication is happening or not.
- The Phase 3 WIP includes a step for exploring the feasibility of developing a GIS-based online monitoring and reporting program that municipalities can use to report on-lot system operation and maintenance. The project cost exceeds available funding, so it is currently on hold.
- A plan to incorporate a revised Phosphorus Index into the planning requirements for land application of biosolids led to the development of pre-draft General Permits for the beneficial use of sewage sludge and were shared with stakeholders for comment. The PA legislature directed the Legislative Budget Finance Committee to "study the costs and methods for permit holders to comply with the proposed revisions to General Permit PAG-07, General Permit PAG-08, and General Permit PAG-09 called for under Pennsylvania's Phase 3 Chesapeake Bay Watershed Implementation Plan."
- State Agency Action Plans are not at full implementation.

Conclusion

Pennsylvania is committed to cleaner water, and the immense progress resulting from the Phase 3 WIP is a testament to this. The Commonwealth is fully committed to capitalizing on the current momentum to achieve its 2025 nutrient reduction goals.

Over the next two years, continued effort will be committed to supporting and developing strategic partnerships, working with counties and local community members, and leveraging the expertise of state sector representatives to get projects on the ground that reduce nutrient pollution and better account for the ones already there.