

EPA EVALUATION OF WEST VIRGINIA'S 2018-2019 and 2020-2021 MILESTONES

Executive Summary

The seven jurisdictions (Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia) in the Chesapeake Bay Program (CBP) partnership agreed to develop and implement a framework for holding each partner accountable for reducing nitrogen, phosphorus, and sediment loads to meet water quality standards in the Chesapeake Bay (Bay) and its tidal tributaries. The CBP partnership established the goal to have all practices in place by 2025 that were necessary to achieve applicable water quality standards in the tidal Bay. Part of the U.S. Environmental Protection Agency's (EPA's) role in the partnership's accountability framework is to evaluate and report each jurisdiction's progress toward meeting this goal every two years.

In that role, EPA has evaluated West Virginia's progress toward attaining the goal of having practices in place by 2025. This evaluation includes an assessment of progress toward attaining this goal at the state and state-basin level and progress toward meeting sector-specific programmatic commitments for the 2018-2019 milestone period. This evaluation also provides an assessment of other sector-specific programmatic and numeric commitments (e.g., Best Management Practices or BMP implementation targets) for the 2020-2021 milestone period and the status of the relevant water quality monitoring trends.

In reviewing West Virginia's final progress for the 2018-2019 milestones, the 2019 numeric progress, and the final 2020-2021 milestones, EPA found areas in which the state achieved the goals it had set. For areas where the state did not achieve its goals, EPA identifies areas to address during the 2020-2021 milestone period and beyond. According to the data provided by West Virginia for the 2019 progress run, West Virginia achieved its statewide and state-basin 2019 targets for nitrogen, phosphorus, and sediment.

Some notable strengths identified in this evaluation of the West Virginia 2018-2019 milestones and the final 2020-2021 milestones include:

- Implemented 9,356 acres of cover crops in 2019, exceeding the goal of a minimum of 7,000 acres.
- Coordinated with two local governments (Charles Town and Martinsburg) to include urban tree canopy goals into their comprehensive plans.
- Completed all its programmatic milestone commitments for Phase III WIP development, including conducting a series of Local Leadership Work Sessions to obtain input and understand feasible strategies for nutrient and sediment reductions.
- Plans to conserve 7,500 acres of agricultural land under the West Virginia Farmland Preservation Program and County Farmland Protection Boards.
- Committed to designing a green infrastructure project for the City of Martinsburg.
- Committed to assisting the Warm Springs Public Service District with developing and applying for funding to conduct an inflow and infiltration management project.

Some key areas that EPA recommends West Virginia address during the 2020-2021 milestone period and beyond include:

- Provide updates on programmatic development to support increased implementation levels for prescribed grazing in order to achieve the 2025 target for this practice.
- Report when West Virginia reissues its Oil and Gas Construction Stormwater Permit since it was not reissued in the 2018-2019 milestone period.

Load Reduction Review

When evaluating 2018-2019 milestone implementation, EPA compared nutrient and sediment loads simulated using the 6.0 suite of the CBP partnership's modeling tools and wastewater discharge data reported by West Virginia to the statewide and state-basin Phase III WIP planning targets.

According to the data provided by West Virginia for the 2019 progress run¹, West Virginia achieved its statewide and state-basin 2019 targets for nitrogen, phosphorus, and sediment. West Virginia developed specific BMP implementation targets for the 2020-2021 milestone period for those practices recommended in EPA's evaluation of West Virginia's Phase III WIP.

A summary of the 2019 progress, the 2020/21 commitments and the 2025 goals for these BMPs is listed below. The summary progress from the CBP partnership's modeling tools for 2009 and 2019 incorporate BMP credit duration. The CBP partnership decided to remove reported BMPs from the model simulation at the end of their established lifespans unless verified by the state as inspected and continuing to function as designed. West Virginia provided a programmatic milestone to support BMP implementation targets for forest buffers on fenced pasture corridor, but West Virginia should report on the programmatic actions that will achieve the anticipated implementation rates for poultry waste management systems.

BMP²	2009 Progress	2019 Progress	2020/2021 Milestone Target	2025 WIP Target
Poultry Waste Management Systems (animal units)	340,359	289,227	5,000 new facilities over two-year period	377,447
Forest Buffers on Fenced Pasture Corridor (acres in buffers)	2,554	3,179	200 acres annually	5,701

¹ Each year, jurisdictions in the CBP partnership report on the BMPs installed, tracked and verified and the pollutant load reductions from wastewater treatment plants. Using the Chesapeake Assessment Scenario Tool, this information (or "annual progress runs") provides an estimate of how much nitrogen, phosphorus and sediment pollution will be reduced.

² BMP levels are units reported or planned by the jurisdiction. The levels are calculated using the Phase 6.0 suite of modeling tools and include everything established or installed, reported, and functioning through the particular year, e.g. cumulative through 2009, or through 2019, etc., not just new reported implementation, unless otherwise noted.

Agriculture

2018-2019 Milestone Achievements

- Conducted a strong local engagement process in the agricultural sector for developing its Phase III WIP.
- Implemented 9,356 acres of cover crops in 2019, exceeding the goal of a minimum of 7,000 acres.
- Explained the discrepancy in its poultry litter data between progress and milestone reporting and confirmed that 6,560 tons were exported in 2018 and 4,406 tons were exported in 2019.
- Clarified that 9,000 tons is the 2017 baseline poultry litter transfer amount, according to 2017 progress data. However, West Virginia does not expect to see an annual increase from 9,000 tons due to a reduction in poultry litter available for transfer.

2018-2019 Milestones Missed

Did not implement its agriculture BMP verification training program for staff, nor complete its BMP verification program in the 2018-2019 milestone period.

2020-2021 Milestone Strengths

- Commitment to implement a formal riparian buffer outreach strategy to increase the adoption of effective buffers to 200 acres annually.
- Plans to maintain cover crop implementation of a minimum of 7,000 acres annually within the Potomac Valley and Eastern Panhandle Conservation Districts by providing incentives to plant additional acreage and boost early cover crop adoption.
- Plans to conserve 7,500 acres of agricultural land under the West Virginia Farmland Preservation Program and County Farmland Protection Boards.

Key Areas to Address in the 2020-2021 Milestone Period and Beyond

- Commitment to construct animal waste storage facilities and composting facilities on at least 60% of new poultry operations within 24 months of bird placement. West Virginia should identify how many new poultry operations are expected to be constructed in the next two years and how many new poultry operations have been constructed in the past two years.
- Report on support for increased implementation levels for prescribed grazing in order to achieve the 2025 target for this practice.
- Report on how programmatic milestones will support accelerated implementation of soil health practices (e.g., cover crops and soil and water conservation plans) beyond holding field day educational events.

Urban/Suburban Stormwater

2018-2019 Milestone Achievements

- Conducted outreach and training workshops to Municipal Separate Storm Sewer Systems (MS4s) and other stakeholders throughout the watershed regarding Low Impact Development, BMP implementation, and maintenance.
- Collaborated with the Cacapon Institute to ensure proper inspection and reporting of BMPs.
- Updated BMP tracking database using the CBP partnership's Phase 6 Watershed Model to simplify and reduce confusion by users.

- Coordinated with federal facilities to ensure accurate submission of stormwater BMPs located on federal properties.
- Coordinated with two local governments (Charles Town and Martinsburg) to include urban tree canopy goals into their comprehensive plans.

2018-2019 Milestones Missed

- Did not reissue the Phase II MS4 General Permit.
- Did not reissue the state Oil and Gas Construction Stormwater Permit.

2020-2021 Milestone Strengths

- Commitment to update the West Virginia Stormwater Management and Design Guidance Manual and host a workshop for its use once it is finalized.
- Plans to continue to provide education and outreach to communities on various stormwater management topics.
- Commitment to design a green infrastructure project for the City of Martinsburg.
- Commitment to analyze the current land use data to determine the impact of land use changes on nutrient and sediment loads.

Key Areas to Address in the 2020-2021 Milestone Period and Beyond

- Report on a schedule for when the state plans to reissue its Oil and Gas Construction Stormwater Permit, since it was not reissued during the 2018-2019 milestone period.
- Report on a strategy for how reductions in the urban sector are going to be achieved by 2025 without reductions from existing development.

Wastewater Treatment Plants and Onsite Systems

2018-2019 Milestone Achievements

- Updated the inventory of Wastewater Treatment Plants (WWTPs) with upgrades and schedules, as needed.
- Reviewed compliance of newly upgraded systems with National Pollutant Discharge Elimination System (NPDES) permit limits.

2018-2019 Milestones Missed

None.

2020-2021 Milestone Strengths

- Continues to update the inventory of WWTPs with upgrades and schedules, as needed.
- Continues to review compliance of newly upgraded systems with NPDES permit limits.
- Continues to input compliance schedules and orders into EPA's Integrated Compliance Information System.
- Commitment to assist the Warm Springs Public Service District with developing and applying for funding to conduct an inflow and infiltration management project.

Key Areas to Address in the 2020-2021 Milestone Period and Beyond

None.

Growth, Offsets, and Trading

2018-2019 Milestone Achievements

- Updated and continues to maintain its offset tracking and accountability system in accordance with EPA expectations.
- Approved four offset requests in 2018 on a case-by-case basis.
- Incorporated BMPs in its Phase III WIP to address growth in urban loads by requiring that counties expected to experience growth have pre- and post-construction BMP requirements in place.

2018-2019 Milestones Missed

None.

2020-2021 Milestone Strengths

- Commitment to update and maintain offset tracking and accountability system in accordance with EPA expectations.
- Commitment to report new septic installations and connections to Publicly Owned Treatment Works (POTWs) in annual progress submissions to verify the one-mile buffer assumption and overall minimal growth on septic systems.
- Commitment to approve, if appropriate, offset requests on a case-by-case basis.

Key Areas to Address in the 2020-2021 Milestone Period and Beyond

- Report the number of POTWs that have reached 90% design flow and evaluations of plant capacity at permit reissuance.

Other

2018-2019 Milestone Achievements

- Completed all programmatic milestone commitments for Phase III WIP development, including conducting a series of Local Leadership Work Sessions to obtain input and understand feasible strategies for nutrient and sediment reductions.

2018-2019 Milestones Missed

None.

2020-2021 Milestone Strengths

None.

Key Areas to Address in the 2020-2021 Milestone Period and Beyond

None.

Potential Federal Actions and Assistance

As noted in its Phase III WIP evaluations, EPA remains prepared to assist each of the seven watershed jurisdictions in implementing the 2020/2021 milestones. EPA will work with each jurisdiction to develop a specific oversight and assistance activities to provide prioritized support for implementation efforts, including funding, technical assistance and analysis, training, and regulatory reviews.

2009-2018 Monitoring Trends Summary

The CBP partnership's Chesapeake Bay Program Nontidal Water Quality Monitoring Network, supported by EPA, the U.S. Geological Survey (USGS), the Susquehanna River Basin Commission (SRBC), and the Bay jurisdictions, generates water quality monitoring data in freshwater rivers and streams throughout the watershed that is analyzed by USGS for nutrient and sediment loads and trends. The most recent USGS results (<https://cbrim.er.usgs.gov/summary.html>) over the period of 2009-2018 were made available in March 2020. While identifying drivers behind individual trends is often complex, the monitoring results are worthy of West Virginia's consideration as it develops the programs and BMPs planned for the next two years. EPA's initial summary of how the monitoring results in West Virginia's watersheds can potentially inform planning are below.

- Trends at all of West Virginia's monitored watersheds are improving for phosphorus. Trends at half of the monitored watersheds are improving for nitrogen, while the other half show no trend. Additional exploration of these trends can help elucidate successful programs, policies, or practices in improving areas, and identify additional implementation options in areas showing no trend. All of West Virginia's monitored watersheds are predominantly a mix of agriculture and forested land.