

EPA EVALUATION OF FEDERAL AGENCY 2020-2021 and 2022-2023 MILESTONES

Executive Summary

The Chesapeake Bay Program (CBP) partnership established the goal to have all practices and controls in place by 2025 that were necessary to meet applicable water quality standards in the Chesapeake Bay (Bay) and its tidal tributaries (“2025 Goal”). The seven jurisdictions (Delaware (DE), the District of Columbia (DC), Maryland (MD), New York (NY), Pennsylvania (PA), Virginia (VA), and West Virginia (WV)) in the 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 U.S. Environmental Protection Agency (EPA) is providing this evaluation of the Federal Agency 2020-2021 and 2022-2023 milestones to the CBP partnership and the public in accordance with its oversight role and responsibility under the CBP partnership’s accountability framework.

In that role, EPA has evaluated federal agency progress toward attaining the 2025 Goal. To the extent possible, this evaluation includes an assessment of progress toward meeting local federal planning goals and an overview of the federal programmatic progress for the 2020-2021 milestone period. EPA also evaluated the sector-specific programmatic and numeric commitments for the 2022-2023 milestone period.

In reviewing federal agency progress for the 2020-2021 milestone progress and the 2022-2023 milestone commitments, EPA identified sector-by-sector strengths as well as areas for enhancement. According to the data provided by the federal agencies, EPA found that federal agencies are performing well in completion of programmatic milestones; however, the numeric milestone for model-estimated implementation of pollution reduction practices by the partnership is not on track.

Some notable strengths identified in this evaluation of the federal agencies 2020-2021 milestone progress, and the 2022-2023 milestone commitments include:

- During 2021, United States Department of Defense (DoD), United States Department of Agriculture (USDA), United States Fish and Wildlife Service (USFWS), National Aeronautics and Space Administration’s (NASA) Langley Research Center, National Park Service (NPS), General Services Administration (GSA) National Capitol Region, and United States Forest Service (USFS) submitted information on best management practice (BMP) implementation as of June 30, 2021. Most of these federal agencies also submitted a full historical BMP record. This effort has substantially improved the record of BMPs installed on federal lands in the watershed.
- The federal partners provided leadership in developing climate resiliency commitments and strategies.

Some key areas that EPA recommends federal agencies address during the 2022-2023 milestone period include:

- All federal agencies should continue to work with the CBP partnership's Federal Facilities Workgroup (FFWG) and its contractor resources to fulfill the Executive Order 13508 federal commitment to lead by example and provide data to verify whether the agencies are meeting local federal planning goals.
- Develop plans to implement BMPs, including stormwater BMPs, on federal lands to meet the federal local planning goals and local stormwater permit requirements.
- Continue federal and jurisdiction coordination to establish equitable federal planning goals for pollutant reduction and develop a method for estimating pollutant reductions from land use categories not currently tracked on federal land (e.g., agriculture, septic, timber harvest, construction).
- Continue to use monitoring networks to improve targeting of Watershed Implementation Plan (WIP) strategies, particularly agricultural assistance programs, in priority watersheds.

Progress on 2020-2021 Federal Numeric Milestones¹

As of 2021, BMPs have been implemented to achieve an estimated 49 percent of the nitrogen reductions, 64 percent of the phosphorus reductions, and 100 percent of the sediment reductions needed to attain applicable water quality standards when compared to the 2009 baseline established in the 2010 Chesapeake Bay Total Maximum Daily Load (Bay TMDL).

EPA achieved its numeric milestone for air reductions: Using the new Air Model scenarios developed for the 2017 Midpoint Assessment, EPA reduced its air deposition to tidal surface waters by 0.30 million pounds of nitrogen over the 2020-2021 period (estimated using the Phase 6.0 Watershed Model). This is 86 percent of the load reduction needed to achieve the 15.7-million-pound air deposition load allocation to tidal waters by 2025 (2010 = 19.4-million-pound load of atmospheric deposition to the tidal Bay; 2021 = 16.2-million-pound load of atmospheric deposition load to the tidal Bay).

USDA's Natural Resources Conservation Services (NRCS) did not achieve its numeric milestone for conservation practices: In Fiscal Year (FY) 2020 NRCS implemented 137,005 new acres under conservation practices and implemented 122,353 new acres under conservation practices in FY 2021. That brings the total new acres toward the 4,000,000-acre goal under the Chesapeake Bay Executive Order 13508 Strategy to 2,567,870 (64 percent) since FY2010. Progress should be at 75 percent as of the end of 2021.

USFS – The milestone for conducting timber harvest on 745 acres each year with water quality BMPs in place (1,490 acres total) in Virginia was incomplete.

- FY20 – confirmed only 100 acres of timber was harvested due to low market demand.

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 has been reduced.

- FY21 – approximately 300 acres harvested.

USFS - Monitor at least one timber sale/year for water quality BMPs utilizing the USFS National BMP Monitoring protocol for Vegetation Management (protocol A). The monitoring protocol assesses post-harvest BMP implementation and effectiveness. (If the site is not found to be meeting standards, then follow-up corrective actions are required.)

- FY20 - did not monitor due to COVID-19.
- FY21 – completed 2 monitoring sites for Tub Run Sale and Good Neighbor Authority (GNA) sale.

USFS - Develop Chesapeake Assessment Scenario Tool (CAST) scenarios to quantify the benefit of forest harvest BMPs. This cannot be completed in the current version of CAST, as harvested forest is currently not an eligible federal land use. To inform a partnership decision on changing eligible federal land uses, USFS and other agencies will work with the Chesapeake Bay Program Office (CBPO) to evaluate the relative costs and benefits of updating the list of eligible federal land uses and to determine whether adequate data is available. Incomplete and ongoing.

USFS - Implement 2 culvert/road improvement projects per year (4 total).

- FY20 - completed 1) Bob Downey Branch - culvert and weir removal; 2) Skidmore ford - aquatic organism passage (AOP) improvement.
- FY21- completed 1) Porter's Mill culvert replaced for AOP improvement; 2) Little Patterson culvert replacement for AOP improvement.

USFS - Implement Road Decommissioning of approximately 4 total miles (equivalent to ~6 acres restored)

- FY20 - completed for Kephart Run and Pines Chapel.
- FY21- completed for Nicholson Run and Braley Pond Access

Load Reduction Review

Local federal planning goals for federal facility pollutant reductions were proposed in most jurisdictions' Phase III WIPs. Subsequently, issues arose that created a need to revisit the methods used to determine federal planning goals. CBPO staff and jurisdiction leads are making substantial progress toward reaffirming clear equitable goals for federal facilities. Those goals will be the basis for evaluating agency progress in the future.

Federal Facilities Goals and 2022-2023 Milestones

- DoD, USFS, NPS, USACE, USDA-NRCS and USGS submitted 2022-2023 programmatic or BMP milestones.
- DoD submitted CAST scenarios for PA, MD, VA, and DC.

Agriculture

2020-2021 Milestone Achievements

- USFS - Annual review of grazing permits – FY20 completed.
- EPA reviewed and Maryland reissued the [General Discharge Permit](#) for concentrated animal feeding operations (CAFOs). It became effective 7/8/2020 and will expire 7/7/2025.

- EPA, USDA, and U.S. Geological Survey (USGS) conducted a pilot project in PA to develop a data management methodology to more comprehensively account for agricultural conservation practices implemented through state, federal and voluntary efforts.
- EPA and USDA NRCS formed the Agricultural Conservation Funding Team to develop recommendations for how to enhance federal coordination of funding programs.
- EPA, USDA NRCS, and USGS formed a water-quality monitoring team and produced a [monitoring report](#) focused on potential for monitoring nutrients and sediment in small watersheds where agricultural conservation practices are being targeted.
- EPA and USDA NRCS held quarterly meetings to enhance interagency federal coordination in November 2021. USDA NRCS and EPA signed a decision memorandum for EPA and NRCS funding coordination in June 2021.
- EPA and USDA NRCS held a local workshop in July 2021 with agricultural stakeholders to ensure this federal coordination addresses the needs of the agricultural community.
- EPA explored how the Clean Water State Revolving Fund (CWSRF) can be used to reduce nutrient and sediment loads from agriculture and rural communities:
 - EPA provided one virtual regional CWSRF training in 2020 and one in 2021 for the CWSRF program leads for the Region 3 states.
 - EPA also provided four presentations to jurisdictions on CWSRF to reduce nutrients and sediment in 2020 and four in 2021.
 - EPA and USDA NRCS held a local workshop for the agriculture community on July 29, 2021, where successful approaches for using CWSRF to fund agricultural conservation practices were showcased.
 - EPA is conducting research and interviews with the State CWSRF leads to identify successful approaches for marketing and using CWSRF to reduce nutrient and sediment loads from agricultural operations.
 - PA Center for Water Quality Excellence was established in 2021 to provide technical assistance to farmers and local governments regarding the various funding options for agricultural and stormwater BMPs. The Center is funded by support from PENNVEST under the CWSRF.
- USDA NRCS provided technical support to the Farm Service Agency's (FSA) Conservation Reserve Program and Conservation Reserve Enhancement Program and worked and coordinated with partners to implement Farm Bill programs in 2021.
- USDA NRCS funded four Regional Conservation Partnership Program (RCPP) projects in FY 2020 and USDA NRCS continued additional partnership opportunities through RCPP. USDA NRCS issued the FY 2021 RCPP announcement in April 2021 and funded ten RCPP agreements.
- USDA NRCS provided training and education to conservation professionals through the Chesapeake Bay Action plan with 761 trained in 2020.

- USDA NRCS worked with producers to implement conservation that improves soil health on 306,413 acres in 2020. Also adopted 2 interim standards for soil health, 808- Soil Carbon Amendment and 810- Annual Forages for Grazing Systems.
- USFS assessed opportunities to restore grazing allotments along the South Fork Shenandoah River.

2020-2021 Milestones Not Achieved

- USFS - Restoration plans for allotments along the South Fork Shenandoah River floodplain were submitted in FY20, as part of the Dupont Settlement case; however, in FY21 only partial funding was secured for implementation.
- EPA - Delaware issuance of the General Permit for CAFOs for Non-Poultry Animal Feeding Operations that land-apply manure as fertilizer (GP3) is delayed. GP3 permit was published for public notice and comment in April 2021 but remains unissued.
- USGS worked with NRCS to renew the USDA 1619 data sharing agreements for 2020-2025 data, but this is still in progress with FSA.

2022-2023 Milestone Strengths

- EPA and USDA will work together to fund climate-smart agricultural conservation practices that benefit both climate resiliency (sequester carbon, reduce greenhouse gas emissions) and local and Chesapeake Bay water quality.
- EPA and USDA NRCS will assess opportunities to prioritize support for historically underserved farmers and ranchers through outreach, ranking, match adjustment options, and the selection process associated with agricultural conservation practice grants in the Chesapeake Bay watershed.
- EPA will provide assistance and oversight on Pennsylvania's General Permit for CAFOs (PAG-12) in 2023 as well as Delaware's General Permit for CAFOs for Poultry Animal Feeding Operations that do not land-apply manure as fertilizer (GP-01).
- EPA, USDA, and USGS will present the findings of the pilot project in PA to develop a data management methodology to more comprehensively account for agricultural conservation practices implemented through state, federal, and voluntary efforts.
- USDA NRCS will promote adoption of practices and systems by agricultural producers that improve soil health and mitigate climate change.
- USDA will continue to work with partners to develop and implement strategies to ensure that federal, State, and non-governmental organization conservation programs create mutually reinforcing incentives for producers to install and maintain riparian forest buffers.

Key Areas to Address in the 2022-2023 Milestone Period and Beyond

- None

Urban/Suburban Stormwater

2020-2021 Milestone Achievements

- EPA reviewed the following stormwater permits:

- DE: 2 Phase II Municipal Separate Storm Sewer System (MS4) General Permits (GPs); Construction GP; Industrial GP.
- MD: Phase I MS4 permits for Baltimore City, Baltimore County, Montgomery County, Anne Arundel County, Prince Georges County, Carroll County, Charles County, Frederick County, Howard County, and Construction GP; Industrial GP.
- PA: Construction GP for small sites-new permit (PAG-01), MS4 individual permits for PennDOT and PA Turnpike.
- VA: Arlington County Phase I MS4 permit.
- WV: Modified 2019 Construction GP; Industrial GP modification; draft Phase II MS4 GP; draft individual MS4 permit for Berkeley County.
- EPA conducted 4 MS4 virtual Forums in PA for small MS4 permittees and held virtual MS4 training for PA inspectors in 2020.

2020-2021 Milestones Not Achieved

- USFS - Work with USGS to produce an updated shapefile of forest boundaries and land use is incomplete.
- USFS – Development of a Facilities Master Plan to assess impervious surfaces and maintenance/operational changes is incomplete

2022-2023 Milestone Strengths

- EPA will Conduct Forums/Workshop for regulated MS4s in Maryland and will reissue the DC MS4 permit (expiration date is 6/22/23).

Key Areas to Address in the 2022-2023 Milestone Period and Beyond

- None.

Wastewater Treatment Plants and Onsite Systems

2020-2021 Milestone Achievements

- EPA provided funding and technical assistance to Bay jurisdictions to support trainings to wastewater professionals.
- EPA provided technical assistance to 6 wastewater utilities:
 - Inflow and Infiltration (I&I) flow monitoring with 3 utilities
 - Assisted with compliance issues and for opportunities to optimize treatment.
 - Conducted 10 different training events related to wastewater treatment.
- EPA reviewed approximately 145 Chesapeake Bay wastewater treatment plant permits during 2020 and 2021. EPA objected to 1 wastewater treatment plant permit that discharges to the Bay watershed in that timeframe.

2020-2021 Milestones Not Achieved

- None.

2022-2023 Milestone Strengths

- EPA will continue to partner with state technical assistance (TA) staff and non-profit TA staff to conduct classroom and on-site training to wastewater professionals on topics ranging from compliance assistance to nutrient removal optimization.

Key Areas to Address in the 2022-2023 Milestone Period and Beyond

- None.

Programmatic Support to Bay TMDL/WIPs

2020-2021 Milestone Achievements

- NPS completed projects in each jurisdiction as summarized below and provided a detailed presentation on a new BMP tracking and operations and maintenance system to the FFWG:
 - DC: NPS is an active partner with DC agencies in permitting and approval of DC funded BMPs on NPS land, including the completed Rock Creek Park tennis facility low impact development (LID) retrofits (11.4 acres treated).
 - MD: warm season grasses were planted, and forest buffer and permeable pavement were constructed at Antietam and Catoctin.
 - VA: Dyke Marsh Phase I is complete along George Washington Parkway.
- NPS completed evaluations of voluntary BMP opportunities in six national parks in 2021.
- EPA evaluated jurisdictional and federal 2020-2021 two-year milestones and assessed progress made to implement the 2018-2019 two-year milestones.
- EPA completed technical and policy review of the CBP partnership's analysis of future climate risk to the living resource-based Chesapeake water quality standards for 2025.
- EPA evaluated New York's amended Phase III WIP, Pennsylvania's draft amended Phase III WIP and the Conowingo WIP.
- In 2020, EPA provided several sessions of trainings on CAST to federal, state, and local partners in the Bay watershed.
- USGS and EPA completed fact sheet of nutrient trends and drivers. [Fact Sheet Summarizes Nutrient Trends and Drivers in the Chesapeake Watershed \(usgs.gov\)](#)
- DoD completed BMP Credit Reports in FY20 and FY21 and provided the reports to EPA and the jurisdictions (MD, VA, PA, and DC).
- DoD completed Bay TMDL progress evaluations in FY20 and FY21 in VA, MD, DC, and PA, which provide a range of metrics for DoD performance evaluation.
- The DoD CBP developed a two-page template with standardized language and a set of metrics to characterize installation DoD CBP performance. Five installations representing a cross section of DoD Services and jurisdictions volunteered to be part of the pilot project.
- DoD provided a detailed analysis of one installation's Integrated Natural Resource Management Plan (INRMP), identifying areas where language could be strengthened to recognize and align the overlap between the INRMP and Chesapeake Bay Watershed Agreement and Executive Order 13508 goals and outcomes.

2020-2021 Milestones Not Achieved

- None.

2022-2023 Milestone Strengths

- EPA will assess progress made to implement the 2020-2021 two-year milestones to ensure jurisdictions remain on pace to achieve 100 percent practices in place by 2025 to achieve the 2025 Goal.
- NPS will select and fund at least two prioritized projects from the Wetland Restoration Action Plan for Catoctin, Monocacy, Harper’s Ferry, and Chesapeake and Ohio Canal.
- NPS will continue to update and refine the BMP database for tracking and reporting of stormwater BMPs.
- NPS will evaluate opportunities to integrate stormwater management with NPS climate resilience goals in the Chesapeake Bay, such as creating a Climate Action Projects Database.
- NPS will evaluate opportunities to support partnership projects in MD, PA, VA, and WV similar to the tennis court retrofits and stream restoration projects in Rock Creek Park in the District of Columbia.
- NPS will evaluate development of a bundled Chesapeake Bay design and construction contract as a resource for park staff to implement pollutant reduction and climate resilience projects.
- NPS will continue to evaluate voluntary BMP opportunities at additional parks in 2022-2023.
- USACE will finalize its Facilities Bay TMDL Action Plan to assess impervious surfaces and develop recommendations for stormwater BMP implementation.

Key Areas to Address in the 2022-2023 Milestone Period and Beyond

EPA should complete the technical review of the CBP analysis of future climate risk to the living resource-based Chesapeake water quality standards for 2035 climate impacts.

Other (Trading and Offsets, Monitoring and Science Support, Atmospheric Reductions) **2020-2021 Milestone Achievements**

- EPA conducted assessments of the jurisdictions’ trading and offsets programs per Section 10.1.4 of the Bay TMDL. The assessments were posted online at EPA’s [Chesapeake Bay TMDL](#) website.

2020-2021 Milestones Not Achieved

- None.

2022-2023 Milestone Strengths

- EPA will review the Bay jurisdictions’ trading and offset regulations and policies and support Bay jurisdictions as they develop trading and/or offset programs.

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 2022-2023 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.

As it has done since the release of the Bay TMDL, EPA plans to continue to commit staff, contractual and funding resources to support the seven watershed jurisdictions in implementing the 2022-2023 milestones and future two-year milestones. This support includes evaluation of the most-effective practices and locations, annual funding assistance to address priority implementation needs, evaluation of Bay jurisdictions' implementation capacity under various staffing, funding, regulatory and programmatic scenarios, local planning outreach, legislative and regulatory gap analysis, and monitoring trend analyses.

In addition, EPA will continue to work with federal partners to provide leadership and coordinate with Bay jurisdictions on WIP and two-year milestone implementation to reduce pollutants from federal lands. EPA will continue its commitment to track annual progress of the Bay jurisdictions and make those results available to the partnership and the public. [See: <https://www.epa.gov/chesapeake-bay-tmdl/epa-oversight-watershed-implementation-plans-wips-and-milestones-chesapeake-bay> and <https://www.chesapeakeprogress.com/>]

EPA will continue to coordinate the CBP partnership's Federal Facilities Workgroup and the Federal Office Directors group to coordinate on programmatic and BMP-specific milestones including contractual support provided through a Memorandum of Understanding with DoD.