

RESTORE CLEAN WATER ACTIONS: Federal Water Quality Two-Year Milestones for 2020-2021

The Executive Order (EO) 13508 Strategy calls upon federal agencies to join the Chesapeake Bay watershed jurisdictions in establishing two-year milestones, many of which are designed to support the jurisdictions in meeting their water quality milestones leading to the 2025 implementation goal of 100 percent practices in-place. This set of federal two-year milestones for water quality applies to calendar years 2020 and 2021. The list below presents milestones for the Environmental Protection Agency (EPA) and nine other federal agencies (USDA, DoD, USACE, USGS, NPS, FWS, NOAA, DOT, and GSA) that support the water quality goals and outcomes in the [Chesapeake Bay Watershed Agreement](#). The milestones commitments represent activities with the potential to have significant environmental outcomes, require significant resources, or directly support the jurisdictions in meeting Watershed Implementation Plan (WIP) commitments. These commitments are contingent on receiving adequate funding in the 2020 and 2021 fiscal year budgets.

The federal milestones, along with the jurisdictional milestones, will contribute to the achievement of the Outcomes stated in the Watershed Agreement. Assuming a steady rate of implementation toward the 2025 goal, the following increments of progress will be achieved for the outcomes by the end of the 2020-2021 milestone period.

Numeric Milestones:

- EPA facilitates the CBP Partnership to collectively achieve 80 percent of the 2025 goal by 2021 for implementing nitrogen, phosphorus and sediment pollution reduction actions to achieve final Total Maximum Daily Load (TMDL) allocations, as measured through the phase 6.0 watershed model.*
- Using the latest 2017 Air Model scenarios developed for the 2017 Midpoint Assessment, EPA's air deposition load to tidal surface waters will be reduced by 0.30 million pounds of nitrogen over the 2020-2021 period based on the Phase 6.0 Watershed Model. This is 86 percent of the required load reductions from 2010 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).
- Apply 300,000 acres of conservation practices in conjunction with U.S. Department of Agriculture (USDA) High Priority Performance Goals.

* This outcome used 2009 as the baseline year.

Programmatic Milestones:

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Target Date	Programmatic Milestone
TMDL/WIPs/Water Quality Standards	
Winter 2020	Announce federal 2020-2021 water quality two-year milestones. (EPA, USDA, DoD, USACE, DOT, USGS, FWS, NPS, NOAA, GSA)
Summer 2020	Evaluate jurisdictional and federal 2020-2021 two-year milestones. (EPA)
Summer 2020	Assess progress made to implement the 2018-2019 two-year milestones to ensure jurisdictions remain on pace to achieve 100% practices in place by 2025 to achieve the CBP partnership’s restoration goal. (EPA)
2020/2021	Federal agencies to report BMP implementation progress to the Bay jurisdictions annually with copy to EPA. (Multiple Federal Agencies/EPA)
December 2020	Complete technical review of the CBP analysis of future climate risk to the living resource-based Chesapeake water quality standards. (EPA)
December 2021	Complete policy review of the CBP analysis of future climate change risk to the living resource-based Chesapeake water quality standards. Starting with the 2022-2023 milestones, determine how climate change will impact the BMPs included in the WIPs and address these vulnerabilities in the two-year milestones. (EPA)
2020/2021	Continue to assess federal agency progress using the Phase 6 suite of modeling tools. (EPA)
2020	Continue to provide funding to support a consortium of land grant universities to run BMP expert panels and to provide other technical expertise to the partnership. (EPA)
2020/2021	Provide trainings on CAST to federal, state and local partners in the Bay watershed. (EPA)
2020/2021	Develop BMP planning, prioritization, tracking and reporting tools in coordination with jurisdictions and their local partners to provide access to data that can help with BMP siting and streamline tracking and reporting, especially from local partners. (EPA working with Chesapeake Conservancy)
2020/2021	Communicate findings of trends updates in the watershed and tidal waters to support WIP implementation. Provide key results updates for watershed trends (nutrients and sediment) and tidal trends (DO, clarity and nutrients) to WQ GIT and associated work groups. Work with jurisdictions to understand water-quality response in selected areas to practices being implemented to reduce nutrients and sediment. See agriculture, storm water and science support sections for more details. (USGS, academic partners, working with EPA)
2020/2021	Continue to work with Chesapeake Conservancy and partners to update the watershed-wide high-resolution land cover and land use, and to develop methods for improved mapping of hydrologic features throughout the watershed. (EPA, USGS)
2020/2021	Federal agencies will work with jurisdictions to correct any errors identified in the federal land GIS files for landholdings within the Chesapeake watershed. (USGS coordinating; DoD, GSA, NPS, USFWS, USDA-USFS, USDA-other, Smithsonian)

2020/2021	Continue to work with Chesapeake Commons, Chesapeake Conservancy and jurisdictions to develop BMP siting, tracking and reporting tools, such as Field Doc, that incorporate available high-resolution data for use in WIP implementation. (EPA, USGS)
March 2020-June 2020	Conduct review and evaluation of draft and final Conowingo WIP. (EPA)
March 2021	Support development of the Conowingo WIP Financing Strategy. (EPA)
2020/2021	Take appropriate action on proposed state water quality criteria updates developed to be consistent with the <i>Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries- 2017 Technical Addendum</i> . (EPA)
2020/2021	By 1 October, report BMP implementation progress to EPA and the Bay jurisdictions annually. (DoD and multiple federal agencies)
2020/2021	Develop BMP Crediting Reports in VA, MD, DC, and PA. (DoD)
2020/2021	Conduct DoD CB TMDL Progress Evaluations in VA, MD, DC, and PA. (DoD)
2020	Submit 2020-2021 planned BMP implementation in CAST for VA, MD, DC, and PA. (DoD)
2020/2021	Determine feasibility and develop four to five installation local-scale Chesapeake Bay status reports that would track BMP implementation progress toward the 2025 DoD Phase III Fill Gap and 2025 DoD Federal Planning Goals. (DoD)
2020/2021	Work with installation staff to pilot the identification and documentation of Integrated Natural Resources Management Plan (INRMP) projects with a water quality co-benefit. (DoD)
2020/2021	Participate in the Federal Facilities Workgroup to enhance collaborative efforts within the Chesapeake Bay Program Partnership. (multiple federal agencies)

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Agriculture	
2020	Provide assistance and oversight to Maryland in reissuing the MDE NPDES General Permit for CAFOs (MDG01A). (EPA)
2020	<ul style="list-style-type: none"> ● Provide assistance and oversight to Delaware to develop and issue the DNREC NPDES General Permit for CAFOs for Non-Poultry Animal Feeding Operations that land-apply manure as fertilizer (GP3). (EPA) ● Provide assistance and oversight to Delaware to continue to grant permit coverages under the DNREC NPDES General Permit for CAFOs for Poultry Animal Feeding Operations that do not land-apply manure as fertilizer (GP1). (EPA) ● Provide assistance and oversight to Delaware to start to grant permit coverages under the DNREC NPDES General Permit for CAFOs for Poultry Animal Feeding Operations that land-apply manure as fertilizer (GP2). (EPA)

2020	USGS will work with NRCS and FSA to renew the USGS-USDA 1619 data sharing agreements for 2020-2025. (USGS and USDA)
2021	EPA will provide funding to USGS to implement the USGS-USDA 1619 data sharing agreement to provide aggregated USDA agricultural practice data to the States for reporting Chesapeake Bay restoration progress. (EPA)
2020/2021	USDA, USGS, and EPA will continue to support State agencies in BMP reporting within the Chesapeake Bay watershed through the annual provision of aggregated USDA conservation data to the States. (EPA, USDA, USGS)
2020/2021	EPA, USDA, and USGS will conduct 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, USGS, USDA)
2020/2021	EPA and USGS will update the Chesapeake Bay Partnership's Priority Agricultural Watersheds Map used to target EPA grants such as the Chesapeake Bay grants and EPA's Innovative Nutrient and Sediment Reduction Program and Small Watershed Grants programs. (EPA, USGS)
2020/2021	USGS will examine nutrient trends in agricultural showcase watersheds to better understand water-quality response to implementing conservation practices. The showcase watersheds were established in 2010 by NRCS with monitoring by USGS, and include sites in MD, VA, and PA. (USGS)
2020/2021	USDA and EPA coordinate respective grant programs in FY2020 and FY2021 to ensure best use of federal funding to support state Phase III Watershed Implementation Plans commitments to reduce agricultural nutrient and sediment loadings and to address key challenges facing the agricultural community. Grant programs are EPA's Innovative Nutrient and Sediment Reduction Program administered by NFWF and NRCS's Conservation Innovation Grant Program. (EPA, USDA-NRCS)
2020/2021	EPA will facilitate meetings, as requested, with State agencies (CWSRF, environmental, agricultural, etc.) to explore how the Clean Water State Revolving Fund can be used to reduce nutrient and sediment loads from agriculture and rural communities. (EPA)
2020/2021	Continue to support the implementation of agricultural certainty programs in the Bay watershed states. (EPA, USDA)
2020/2021	Investigate the DoD Agricultural Out-lease program for opportunities to support jurisdictions' Phase III WIPs and the 2025 WIP Outcome. (DoD)
2020/2021	NRCS will continue to support voluntary actions by farmers and landowners to improve water quality and other resources by providing technical assistance through its Conservation Technical Assistance (CTA) program; and technical and financial assistance from the Environmental Quality Incentives Program (EQIP), Regional Conservation Partnership Program (RCPP), Agricultural Management Assistance (AMA) Program, Agricultural Conservation Easement Program (ACEP), Conservation Stewardship Program (CSP). (USDA-NRCS)
2020/2021	USDA will continue to provide financial and technical support for voluntary temporary retirement of cropland and marginal pasture and establishment of conservation cover for water quality and wildlife habitat improvement, through the Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP). (USDA-FSA, USDA-NRCS)

2020/2021	Incorporate changes in Farm Bill Conservation Programs resulting from the new 2018 Farm Bill into ongoing efforts to improve water quality in the Chesapeake Bay. Work with partners to inform Chesapeake Bay Program partners and the general public about farm bill conservation program opportunities. (USDA-NRCS)
2020/2021	Work with partners to develop and implement strong projects to improve water quality, working with agricultural producers through the Regional Conservation Partnership Program (RCPP). (USDA-NRCS)
2020/2021	Provide opportunities for non-USDA conservation professionals to participate in NRCS technical training activities such as for conservation planning and practice design and implementation. (USDA-NRCS)
2020/2021	Promote adoption of practices and systems by agricultural producers that improve soil health. (USDA-NRCS)
2020/2021	USDA will continue to work with partners to develop and implement strategies to ensure that federal, State, and NGO conservation programs create mutually reinforcing incentives for producers to install and maintain riparian forest buffers. (USDA)

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Atmospheric – Rules, Deposition, Allocations	
2020/2021	<p>Significantly reduce nitrogen deposition to the Bay and watershed by 2020 through implementation of national rules under the Clean Air Act. (EPA)</p> <ul style="list-style-type: none"> ● Apply and track new Community multi-scale Air Quality Model (CMAQ) air deposition modeling for future climate risk in the CB watershed incorporating estimated increased wet deposition loads. (EPA) ● Continue implementation of Tier 3 vehicle emission standards. (EPA) ● Oversee state implementation of Clean Air Act 129 rules, including those for Commercial and Industrial Solid Waste Incineration Units (CISWI); Sewage Sludge Incineration Units (SSI); and Hospital, Medical, Infectious Waste Incinerators (HMIWI). Once fully implemented, these rules will reduce emissions of NO_x as well as toxic air pollutants. (EPA)
2020/2021	<p>Work with states to develop State Implementation Plan (SIP) revisions to reduce NO_x emissions. (EPA)</p> <ul style="list-style-type: none"> ● Work with states and review SIPs that address reasonably available control technology (RACT) standards for the 2008 ozone National Ambient Air Quality Standards (NAAQS). RACT requirements limit the NO_x emissions at certain sources. (EPA) ● Work with states and review SIPs that address infrastructure requirements, including interstate transport, for the 2015 ozone NAAQS. (EPA) ● Work with states to develop rules to implement the 2015 ozone NAAQS. (EPA)

	<ul style="list-style-type: none"> Assist states with their development of state implementation plan submissions to address reasonably available control technology (RACT) for the 2015 ozone NAAQS. (EPA) Assist states with their development of regional haze state implementation plan submissions for the second planning period. These plans may include federally enforceable rules that reduce air emissions of visibility impairing pollutants, including NO_x. (EPA)
2020/2021	Review state permits which may include rules that limit emissions of NO _x . (EPA)
2020/2021	Issued the final Affordable Clean Energy rule (ACE). In 2030, the ACE rule is projected to reduce NO _x emissions nationwide by 7,100 tons. (EPA)

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Stormwater	
2020/2021	Conduct oversight review and comment, per federal regulations and NPDES Memoranda of Agreement with the states, on draft state Municipal, Construction, and Industrial Stormwater permits: to ensure consistency with the Bay TMDL allocations and the level of pollutant reduction called for in state WIPs; and to ensure permits contain enforceable performance measures. (EPA)
2020/2021	Review certain MS4 TMDL Plans for compliance with permit requirements. (EPA)
2021	Conduct MS4 permittee and state inspector trainings in coordination with jurisdictions. (EPA)
2020/2021	Meet with Federal Agencies and the District of Columbia Department of Energy and Environment (DC DOEE) as part of the 2013 Memorandum of Understanding among EPA, DoD, NPS and GSA regarding Federal Agency Stormwater Management in the District of Columbia. (NPS, DoD-Navy, GSA, EPA)
2020/2021	Share results of the effects of stormwater practices on water-quality response. USGS has been working with Fairfax Co, VA, and Montgomery Co, MD to monitor water quality and stream conditions as stormwater practices are implemented in these areas. (USGS)

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Wastewater	
2020/2021	Assist states, as requested, with nutrient optimization and compliance assistance. (EPA)
2020/2021	Track number of significant NPDES permits reviewed and objections. (EPA)

Trading and Offsets/Growth	
2020	Conduct assessments of the jurisdictions' trading and offsets programs per Section 10.1.4 of the TMDL. (EPA)
2020/2021	As part of the 2-year milestone evaluation, determine how much of the change in loads is due to BMP implementation versus how much is due to changing conditions in the watershed, for example, increases in impervious areas, changes in animal populations, etc. (EPA)
2020/2021	Review Bay jurisdictions' trading and offset regulations and policies and support Bay jurisdictions as they develop trading and/or offset programs. (EPA)
2020/2021	Work with other Federal agencies to build capacity that will support an efficient and robust trading market. (USDA, EPA, DOT)

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Toxic Contaminants	
2020/2021	Take appropriate action on proposed PCB TMDLs submitted in the Bay watershed for local waters. (EPA)
2020/2021	Take appropriate action on proposed state water quality criteria updates developed to be consistent with the 2015 EPA Updated Ambient Water Quality Criteria for the Protection of Human Health. (EPA)
20 20/2021	Update a GIS desktop tool to identify potential land sources of contamination in the watershed (PCBs and mercury). The use of EJ SCREEN will be evaluated to identify the location of such sites in areas with diverse populations. (EPA)
2020/2021	Review NPDES permits to ensure consistency with the requirements and assumptions with the PCB TMDLs. (EPA)
2020/2021	Conduct inspection(s) and take appropriate enforcement follow-up to ensure compliance with the Toxic Substances Control Act regulations related to PCBs. (EPA)
2020/2021	Conduct studies of the sources and occurrence of PCBs in the Washington DC region to help support multi-jurisdictional approach for reduction. (USGS working with DC and MD)
2020	Share results of STAC report on potential co-benefits of nutrient and sediment practices with reducing toxic contaminants in agricultural and urban settings. Results will be shared with WQ GIT and associated workgroups. (USGS)
2020/2021	Update materials on the potential co-benefits of nutrient and sediment practices with reducing toxic contaminants in agricultural and urban settings. (USGS working with CBP workgroups)
2020/2021	Complete publications from study on the sources of endocrine-disrupting compounds (EDCs) and their effects on fish health. Share results with Toxic Contaminant WG and WQ GIT to inform potential co-benefits of nutrient and toxic contaminant reduction. (USGS)

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Enforcement	
December 2020 and 2021	<p>Track EPA-led enforcement cases for Stormwater, Wastewater, Agriculture, Trading/Offsets, Air that result in nitrogen, phosphorus, sediment, and/or nitrogen oxides reductions.</p> <ul style="list-style-type: none"> • Clean Water Act enforcement case conclusions for stormwater, wastewater and agriculture operations (EPA) • Clean Air Act stationary source enforcement case conclusions with nitrogen oxide reductions (EPA) • Clean Air Act case enforcement case conclusions for stopping after-market defeat devices (EPA)

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Monitoring and Science Support	
2020/2021	Utilize the Partnership’s Strategic Science & Research Framework to assess opportunities to address science needs across the program and work through STAR to facilitate collaborations between science providers and CBP as well as between CBP workgroups. (EPA, USGS, NOAA, NPS)
2020/2021	Update the Chesapeake Bay Watershed Data Dashboard with the most recent monitoring trends, modeled progress, and BMP implementation. (EPA, USGS)
2020/2021	Conduct trainings to jurisdictional and local partners on the Chesapeake Bay Watershed Data Dashboard. Conduct user testing and iteratively incorporate feedback to improve content and usability of the tool. (EPA, USGS)
2020/2021	Assess current decision-support tools developed and used by the Partnership and develop path forward for integrating new information on water quality and other outcomes. (EPA, USGS)
2020/2021	Continue to support the Chesapeake Monitoring Cooperative's ongoing integrated non-traditional monitoring partners into the Chesapeake Bay Program Partnership's Watershed and Tidal Monitoring Networks, thereby expanding data of documented quality available to support Chesapeake Bay and watershed restoration decision making. (EPA, USGS)
2020/2021	Collaborate with the all six states and DC to continue monitoring of nutrient and suspended-sediment conditions across the full range of hydrologic conditions at each of the stations in the CBP nontidal network and the associated river-input stations. Work through STAR Integrated Monitoring Networks work group to coordinate activities. (USGS working with States and EPA)

2020/2021	Provide updates of nutrient and sediment load trends in the Bay watershed to help assess progress toward implementing the Bay TMDL. Updates of loads at the River-Input Monitoring stations will be provided annually with results from additional stations in the non-tidal network provided every two years. (USGS working with states and EPA)
2020/2021	Compute total loads to the Bay to help understand changes in tidal water-quality conditions. The CBP monitoring and modeling teams combine information from the RIM stations with loadings from unmonitored areas to estimate annual loads for N, P, and S. Activity is funded by EPA. (UMCES, PSU, USGS, EPA)
2020/2021	Conduct monitoring of tidal waters to assess attainment of water-quality standards and associated conditions. Monitoring conducted by multiple partners in MD and VA and funding provided mostly by USEPA. (EPA, MD, VA)
2020/2021	Analyze tidal monitoring data, including results from SAV surveys, to assess progress toward attainment of water-quality standards. The CBP monitoring team is responsible for the analysis and funded primarily by EPA. (EPA, UMCES, ICPRB, USGS)
2020/2021	Analyze tidal monitoring data to assess changes in water-quality conditions important for living resources. The CBP monitoring team works with state and academic partners to employ consistent trend methods for updates in nutrients, clarity, and selected parameters important for living resources. The effort is funded primarily by EPA. (UMCES, ICPRB, USGS, agencies in MD and VA, EPA)
2020/2021	Conduct surveys of submerged aquatic vegetation (SAV) to provide information for attainment of water-quality standards and assess progress toward SAV acreage goals. (VIMS, EPA)
2020/2021	Complete the second 2-year cycle of the Biennial Strategy Review System, an adaptive management process designed to improve our effectiveness in achieving the Chesapeake Agreement Goals and Outcomes. ChesapeakeDecisions, second in the suite of ChesapeakeStat tools, will support this process. (EPA working with the Partnership)
2020/2021	USGS and NOAA will provide technical leadership to complete the Chesapeake Bay mainstem vertical profile hypoxia monitoring pilot and work with the Chesapeake Bay Program to explore longer term implementation. USGS efforts are through the CBP monitoring team. (USGS, NOAA)

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Target Date	Programmatic Milestone
EPA Grant Support to States and the District of Columbia	
2020/2021	Provide financial support to Bay jurisdictions, as authorized and assuming adequate appropriations, through EPA's assistance programs including CWA Section 319, SRF, CWA 117 CBIG and CBRAP. (EPA)
2020/2021	Provide financial support to localities and other entities, as authorized and assuming adequate appropriations, through the Innovative Nutrient and Sediment Reduction Grants and the Small Watershed Grants. (EPA)

Acronym Guide

BayFAST/CAST/MAST/VAST – Federal Assessment Scenario Tool/Chesapeake AST/Maryland AST/Virginia AST
BMP – Best Management Practice
CAFO – Concentrated Animal Feeding Operation
CBP – Chesapeake Bay Program
CBIG – Chesapeake Bay Implementation Grants
CBRAP – Chesapeake Bay Regulatory and Accountability Program Grants
CEAP – Conservation Effects Assessment Project
CWA - Clean Water Act
DNREC - Department of Natural Resources and Environmental Control
DoD – Department of Defense
DOT – Department of Transportation
EJ SCREEN – Environmental Justice Screening and Mapping Tool
EO Strategy – Executive Order 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed
EPA – Environmental Protection Agency
FSA - Farm Services Agency
FWS – Fish and Wildlife Service
GIS – Geographic Information System
GSA - General Services Administration
Maryland DNR – Maryland Department of Natural Resources
MS4 – Municipal Separate Storm Sewer System
NAAQS – National Ambient Air Quality Standards
NFWF - National Fish and Wildlife Foundation
NOAA – National Oceanic and Atmospheric Administration
NOx - Nitrogen Oxides
NPDES – National Pollutant Discharge Elimination System
NRCS – Natural Resources Conservation Service
NPS – National Park Service
PCB – Polychlorinated Biphenyl
RACT - Reasonably Available Control Technology
SAV – Submerged Aquatic Vegetation
SIP - State Implementation Plan
SRF - State Revolving Fund
STAC – Scientific and Technical Advisory Committee
STAR – Scientific and Technical Assessment Reporting team
TMDL – Total Maximum Daily Load
UMCES – University of Maryland Center for Environmental Science
USACE – U.S. Army Corps of Engineers
USDA – U.S. Department of Agriculture
USGS – U.S. Geological Survey
WIP – Watershed Implementation Plan
WQ GIT - Water Quality Goal Implementation Team