

**EPA EVALUATION OF THE DISTRICT OF COLUMBIA'S  
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, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia) 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 Bay and its tidal tributaries. The U.S. Environmental Protection Agency (EPA) is providing this evaluation of the District’s 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 the District of Columbia’s (District) progress toward attaining its portion of the 2025 Goal. This evaluation includes an assessment of progress toward attaining nutrient and sediment goals at the state and state-basin level and progress toward meeting sector-specific programmatic commitments for the 2020-2021 milestone period. This evaluation also provides an assessment of sector-specific programmatic and numeric commitments (e.g., Best Management Practices (BMP) or BMP implementation targets) for the 2022-2023 milestone period and the status of the relevant water quality monitoring trends.

In reviewing the District’s final programmatic progress for the 2020-2021 milestones, the 2021 numeric progress, and the final 2022-2023 milestone commitments, EPA identified sector-by-sector strengths as well as areas for enhancement. According to the data provided by the District for the 2021 progress run, the District achieved its statewide 2021 targets for nitrogen, phosphorus, and sediment. EPA stands ready to assist the District with implementing its 2022-2023 two-year milestone commitments.

Some notable strengths identified in this evaluation of the District’s 2020-2021 milestones and the final 2022-2023 milestones include:

- Met its 2025 planning targets for nitrogen, phosphorus, and sediment.
- The Wastewater sector has achieved its goals for nutrients and sediment. Blue Plains facility discharges (primary sources of District nutrient loads) are considerably under the 2025 planning targets.
- Achieved 882 acres managed during the current Municipal Separate Storm Sewer System (MS4) Permit term, which is on track to meet the Permit’s 5-year goal to manage 1,038 acres.

Some key areas that EPA expects the District of Columbia to address in the final 2022-2023 milestone submission period include:

- Some COVID delays were noted; EPA expects the District to continue to make progress to meet its milestones.

## **Detailed Evaluation of Overall Load Reductions and Source Sectors**

### **Load Reduction Review**

When evaluating the District's 2020-2021 milestone implementation, EPA simulated nutrient and sediment loads using the Chesapeake Assessment Scenario Tool 2019 (CAST-19)<sup>1</sup> and wastewater discharge data reported by the District, and compared those simulated loads to the District's statewide and state-basin (Potomac) Phase III Watershed Implementation Plan (WIP) planning targets.

According to the data provided by the District for the 2021 progress run<sup>2</sup>, the District achieved its statewide 2021 targets for nitrogen, phosphorus, and sediment in its portion of the Potomac basin.

**Table 1.** Loads and Targets for the District based on CAST-19 and reported wastewater data.

<b>Pollutant</b>	<b>2009 Progress Loads (M lbs/year)</b>	<b>2021 Progress Loads (M lbs/year)</b>	<b>2025 Target (M lbs/year)</b>
<b>Nitrogen</b>	2.762	1.652	2.425
<b>Phosphorus</b>	0.0720	0.0702	0.1301
<b>Sediment</b>	44.0	35.6	41.9

The District of Columbia developed specific BMP implementation targets for the 2020-2021 milestones for those practices identified in the District of Columbia's Phase III WIP that account for the majority of the nitrogen reductions. Table 2 provides a summary of the District's 2021 progress compared to the 2009 baseline and the 2025 targets, as well as the 2022-2023 commitments, for these priority BMPs.

<sup>1</sup> CAST-19 is part of the Phase 6.0 suite of modeling tools for the Chesapeake Bay.

<sup>2</sup> 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 2019, this information (or "annual progress runs") provides an estimate of how much nitrogen, phosphorus and sediment has been reduced.

**Table 2.** Progress toward Targets for the District’s priority BMPs (those that account for the majority of the nitrogen reductions).

<b>BMP<sup>2</sup></b>	<b>2009 Progress</b>	<b>2021 Progress</b>	<b>2022-2023 Milestone Target</b>	<b>2025 WIP Target</b>
Runoff Reduction Performance Standard (acres)	120	1,039	1,239	1,901
Urban Stream Restoration (feet)	None reported <sup>3</sup>	28,752	2,250	56,928

The summary progress from the CBP partnership’s modeling tools for 2009 and 2021 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. In the sector-specific sections below, EPA provides its evaluation of these programmatic milestones and the connection to increased implementation.

**Looking Forward for Future Reviews of Progress**

The CBP partnership is just a few years away from the 2025 date that has been agreed upon for several of the goals and outcomes under the [2014 Chesapeake Bay Watershed Agreement](#), including the 2025 Goal. Given the number of changing conditions (e.g., human and animal population growth, 2025 and 2035 climate impacts, model updates) that have and will continue to impact progress and the level of effort needed to meet these goals, it is critical to begin planning for the future.

**Source Sector Review**

**Urban/Suburban Stormwater**

The District is expecting additional nutrient reductions from the stormwater sector by 2025 based on its Phase III WIP. EPA expects the District to accelerate BMP implementation.

**2020-2021 Milestone Achievements**

- Achieved 176 acres managed with stormwater BMPs during the 2021 reporting year and 344 acres during the 2020 reporting year. To date, the District has achieved 882 acres managed during the current Municipal Separate Storm Sewer System (MS4) permit term, which is on track to meet the permit’s 5-year goal to manage 1,038 acres.
- Assessed opportunities for new stormwater regulations and received pre-clearance for the potential rulemaking updates.
- Dedicated funding from the American Rescue Plan Act (ARPA) to support an overhaul of how the District manages stormwater BMPs in 2021.
- Completed an evaluation of a potential stormwater fee increase in 2020.

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<sup>3</sup> CBP partnership modeling tools evolve based on CBP partnership decisions. As a result, some BMPs have “none reported” listed since those particular BMP names were not available for reporting. These practices were often included in another BMP category before the refinement to be more specific in the naming convention.

- Coordinated with the District's Department of Transportation (DDOT) on the development and implementation of a streamlined permitting process and an interagency agreement to facilitate a program to incentivize MS4 green infrastructure (GI) retrofits.
- Published the first full update to the Stormwater Management Guidebook since 2014.
- Planted a net 12,356 trees District-wide and a net 8,218 trees in the MS4 area in 2021.
- Adopted a final rulemaking in 2021 to add new Chapters 25 (Critical Area – General Rules) and 26 (Critical Area – Wetlands and Streams) to Title 21 of the District of Columbia Municipal Regulations (DCMR).
- Worked with and met directly with the Department of Defense, National Park Service, and the U.S. Department of Agriculture's Agriculture Research Service in support of the 2021 progress submissions and Phase III WIP goals. The District continued to co-chair the CBP partnership's Federal Facility Workgroup and continued to request support from EPA in urging federal facilities to continue to support Phase III WIP goals.

### **2020-2021 Milestones Missed**

- Progress has been delayed by staff turnover and the COVID-19 public health emergency in issuing grants for implementing the Stormwater Retention Credits (SRC) Trading Program to encourage outreach and engagement with community stakeholders and the inclusion of co-benefits to SRC generating practices. The District is still committed to implementing an SRC incentive program and has drafted a request for applications (RFA) that it anticipates releasing in early 2022.
- Although the District hosted a virtual vendor forum in 2020, staffing problems and impacts from COVID-19 prevented the District from hosting the event in 2021. The District plans to relaunch the forum in 2022 and continue to host it annually.

### **2022-2023 Milestone Strengths**

- The District is on track to meet its milestone of 200 managed acres and to surpass the Permit's 5-year goal to manage 1,038 acres.
- At the completion of the 2022-2023 Milestone period the District will have implemented at least 31,005 feet of the Urban Stream Restoration BMP.
- Implement Best Management Practice Maintenance Program for District-owned green infrastructure practices
- Complete approximately 1,000 RiverSmart Homes audits annually
- Implement 44 acres of Urban Tree Planting
- Retrofit ten parks and schools for low impact development (LID) projects

### **Key Areas to Address in the 2022-2023 Milestone Period**

- None.

## **Wastewater Treatment Plants and Onsite Systems**

### **2020-2021 Milestone Achievements**

- Updated formal flow projections for the Blue Plains Wastewater Treatment Plant Service Area.

- Submitted quality-controlled wastewater data to the CBP partnership's point source online application for the 2021 Progress Submission ahead of schedule (2021 deadline).
- Continued construction of the Northeast Boundary Tunnel in 2021. Mining of the tunnel was completed in 2021. Work continues on the shaft sites to divert flow into the tunnel for the planned placed-in operation date in 2023.
- DC Water completed development of 60 percent and 90 percent Request for Proposal (RFP) documents for the Potomac River Tunnel (contract for design was awarded in October 2019).

#### **2020-2021 Milestones Missed**

- None.

#### **2022-2023 Milestone Strengths**

- Commits to update their formal flow projections for the Blue Wastewater Treatment Plant Service Area by mid-2022.

#### **Key Areas to Address in the 2022-2023 Milestone Period**

- None.

#### **Growth, Offsets, and Trading**

##### **2020-2021 Milestone Achievements**

- Published proposed regulations prioritizing the use of High-Impact Stormwater Retention Credits (SRCs) generated from new voluntary GI in the MS4 in September 2020. These proposed regulations are being refined and will be republished by 12/31/2023.
- SRC Aggregators sold more than 67,000 SRCs on the private market throughout 2021. Many of these sales utilized a subsidy from the Price Lock program that enables participants to sell SRCs to the District government at a fixed price, providing confidence to investors who commit funding to GI projects.
- Continued to fund grant activities of three SRC-aggregating businesses during the reporting year. New awards under the SRC Aggregator Startup Grant Program were delayed due to the COVID-19. DOEE did not reopen the program back up during the reporting year but will make grants available again in 2023.
- Continue work to update the Blue Plains Wastewater Treatment Plant Service Area flow projections.

##### **2020-2021 Milestones Missed**

- None.

##### **2022-2023 Milestone Strengths**

- Commits to refine the proposed regulations prioritizing the use of High-Impact Stormwater Retention Credits (SRCs) generated from new voluntary GI in the MS4 by 12/31/2023.
- Continues implementation of the SRC Price Lock Program, including support for developers to purchase from SRC Price Lock Program participants and look for ways to incorporate diversity, equity, inclusion, and justice efforts into the program.

- Commits to relaunch the SRC Aggregator Startup Grant Program in the next reporting period. These grants support technical and outreach work to identify GI opportunities on properties whose owners are interested in the financial and other benefits of SRC-generating GI.
- Commits to continue work to update the Blue Plains Wastewater Treatment Plant Service Area flow projections.

### **Key Areas to Address in the 2022-2023 Milestone Period**

- Continue to work with EPA in offsetting any new increased nutrient and sediment loads in the District's portion of the Chesapeake Bay watershed.

### **Climate**

In 2020, the Principals' Staff Committee (PSC) issued a directive that by 2022 all jurisdictions would account for the additional nutrient loads due to 2025 climate change conditions in a Phase III WIP addendum, or in the two-year milestones, if they had not already done so in their Phase III WIP. The District addressed the 2025 climate change loads through its 2019 Phase III WIP. Therefore, this evaluation reflects the work and effort that the District put toward addressing the 2025 climate loads understanding that expectations related to 2025 climate change conditions could change as a result of future PSC decisions and future model updates.

At its August 29, 2022 meeting, the PSC decided to address "unaccounted additional loads" after 2025. The CBP partnership will define "unaccounted additional loads" and will determine how to address them. This decision came after the District completed the work and effort noted in this section to address the 2025 climate loads.

### **2020-2021 Milestone Achievements**

- Began the process of drafting updates to the Flood Hazard Rules, which regulate floodplain development in conjunction with the Construction Codes in 2020.
- Reviewed its performance standards in the context of the future projected storms resulting from climate change and has identified the current 2-year and 15-year peak discharge requirements as needing further evaluation.
- Reviewed stormwater BMP design guidelines to address projected storm size increases. Published resilient design guidelines to help public and private sector projects incorporate future climate projections into their designs.
- Finished mapping to assess which parts of the District are most exposed and sensitive to heat. DOEE has also completed a community survey assessing heat needs.

### **2022-2023 Milestone Strengths**

- Met the 2020 PSC directive to address the additional nutrient loads due to 2025 climate change conditions by including a CAST scenario in its 2019 Phase III WIP that demonstrates an ability to account for the additional nutrient pollutant loads.
- Includes a narrative in its 2022-2023 two-year milestones to describe the current understanding of the 2035 climate change conditions.

- Commits to review stormwater BMP design guidelines to address projected storm size increases. DOEE intends to incorporate these design changes in the next edition of the Stormwater Management Guidebook.

#### **Key Areas to Address in the 2022-2023 Milestone Period**

- None.

#### **Other (BMP verification, Segment-shed Goals for the Tidal Jurisdictions, Local Engagement, etc.)**

##### **2020-2021 Milestone Achievements**

- Uses the Surface and Groundwater System (formerly Stormwater Database) to track and verify BMPs across the District and to prioritize maintenance inspections.
- Works directly with DC Water to support the submission of wastewater data to the CBP Point Source app for the 2021 Progress Submission.

##### **2020-2021 Milestones Missed**

- None.

##### **2022-2023 Milestone Strengths**

- N/A

#### **Key Areas to Address in the 2022-2023 Milestone Period**

- 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 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.

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/>]

### **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 ([www.usgs.gov/CB-wq-loads-trends](http://www.usgs.gov/CB-wq-loads-trends)) over the long-term period 1985-2020 and short term 2009-2020 for most stations were made available in September 2020. New nutrient and suspended-sediment load and trend results became available for the nine River Input Monitoring (RIM) stations for the long-term period 1985-2020 and short term 2011-2020. While identifying drivers behind individual trends is often complex, the monitoring results are worthy of the District'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 the District's watersheds can potentially inform planning are:

- Trends for the Northwest Branch of the Anacostia River show a degrading trend for nitrates and suspended sediments and an improving trend for total phosphorus. There is no pattern of trending for total nitrogen.