

# Evaluation of the District of Columbia's Draft Phase III Watershed Implementation Plan

## Background

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 Watershed Implementation Plans (WIPs) in three phases to provide a framework for reducing nitrogen, phosphorus, and sediment loads to meet water quality standards in the Chesapeake Bay and its tidal tributaries. The Phase III WIPs provide a road map for the numeric and programmatic commitments the jurisdictions intend to implement between 2019 and 2025 so that all practices are in place by 2025<sup>1</sup> to achieve the Bay's dissolved oxygen, water clarity/submerged aquatic vegetation, and chlorophyll-a standards. The 2010 Chesapeake Bay Total Maximum Daily Load (Bay TMDL) document outlined the process for the development of WIPs and for tracking progress towards attaining the CBP partnership restoration goals.

The U.S. Environmental Protection Agency (EPA) is providing this evaluation to the CBP partnership and the public. The draft Phase III WIP was evaluated to determine whether the District of Columbia (the District) included sufficient information in the WIP to provide confidence<sup>2</sup> that the District will achieve its statewide and state-basin Phase III WIP planning targets by 2025. The seven jurisdictions, EPA, and the Chesapeake Bay Commission jointly approved these Phase III WIP planning targets in July 2018.

The seven jurisdictions each divided their respective Phase III WIP planning targets into reduction goals for specific source sectors to more finely demonstrate how overall pollutant load reductions would be achieved by 2025. Those major source sectors include agriculture, wastewater, and stormwater. Each jurisdiction could shift reductions between source sectors through development and implementation of programs for pollutant trading and offsetting. In addition, the CBP partnership decided that jurisdictions would highlight pollutant reductions from federal facilities separately in each WIP and would consider the following when addressing specific source sector pollutant reductions: growth, local engagement strategies, local planning goals and climate. The CBP partnership expects these local and changing conditions to be addressed in each jurisdiction's Phase III WIP.

This evaluation is also based on whether the District met the numeric and programmatic expectations as described in the June 2018 [U.S. Environmental Protection Agency's Expectations for the Phase III Watershed Implementation Plans](#). The District recommitted to the CBP partnership that it would meet these numeric and programmatic expectations.

## Overview

EPA's review of the District's draft Phase III WIP found many areas in which the District excelled in addressing the expectations. Some of the notable strengths include:

- The District expects most implementation to come from compliance with their stormwater management regulations based on a review of long-term averages and multiple forecasts of the amount, type, and location of land that is developed or redeveloped within the Municipal Separate Storm Sewer System (MS4) area.
- The District demonstrated funding and specific programs that will be used to implement the draft Phase III WIP.

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<sup>1</sup> This commitment to have all practices and controls installed by 2025 to achieve applicable water quality standards was reaffirmed by the Chesapeake Bay Program signatories in the 2014 Chesapeake Bay Watershed Agreement.

<sup>2</sup> The phrase "reasonable assurance" is a term of art specific to TMDL establishment. In evaluating the Phase I WIPs, EPA used the phrase and concept of "reasonable assurance" because those WIPs ultimately formed the basis of the 2010 Bay TMDL. EPA continued to use the phrase in its evaluation of the Phase II WIPs, but was using it in a more general way, as TMDL establishment had been completed. In Phase III, to be more consistent with applicable guidance and regulations and to avoid potential confusion, EPA is using the term "confidence" instead of "reasonable assurance."

- The District has a robust set of voluntary programs that are well-funded and well-staffed. Assumptions for non-regulated implementation rates were conservative – below historic rates – providing EPA confidence in the District’s ability to achieve the pollution load reductions by 2025.

EPA’s review, however, also noted potential enhancements in the District’s draft Phase III WIP that should be areas of focus in revising the draft document prior to submitting a final WIP. These areas include:

- The District should provide more details on how it is coordinating with federal agencies on crediting BMPs beyond just providing information on funding and project location.
- The District should provide additional detail on both the costs of projected restoration projects as well as the sources of funding to pay for those projects.

### EPA Oversight and Assistance

The 2010 Bay TMDL contains an accountability framework that guides and supports restoration efforts and includes: three phases of WIPs, two-year milestones, and EPA’s tracking and assessment of restoration progress. EPA tracks and assesses annual progress and two-year milestone commitments to determine if the Bay jurisdictions are on track toward meeting their water quality goals.

Under the accountability framework, EPA assigns each jurisdiction’s source sectors (e.g., agriculture, stormwater, wastewater, and trading and offsets) a level of oversight based on its evaluation of whether the jurisdiction provided sufficient information in its WIP and/or two-year milestones that load reductions and programmatic commitments will be achieved in those source sectors by 2025. The levels of oversight are as follows:

- **Ongoing oversight:** EPA, while having no significant concerns with a jurisdiction’s strategy to implement the TMDL goals, will continue to monitor progress.
- **Enhanced oversight:** EPA, having identified specific concerns with a jurisdiction’s strategy to implement the TMDL goals, may take additional federal actions, as necessary, to ensure that the jurisdiction stays on-track.
- **Backstop oversight:** EPA, having identified substantial concerns with a jurisdiction’s strategy to implement the TMDL goals, has taken necessary federal actions to help the jurisdiction get back on-track.

The District is currently subject to ongoing oversight in all applicable sectors.

Since the release of the 2010 Bay TMDL, EPA has provided increased technical and financial assistance to the District to support meeting its 2025 planning goals. During Phase III WIP development, EPA worked closely with staff at the District’s Department of Energy and Environmental (DOEE). Since July of 2018, EPA provided approximately 900 hours of technical assistance to help DOEE incorporate the results of the Bay TMDL’s Midpoint Assessment into their input data for the draft Phase III WIP. This included understanding changes in pollutant loadings and BMP implementation under a new suite of modeling tools; adapting to changing conditions, such as climate, and working with their federal agency partners to provide input into the District’s draft WIP.

EPA will continue to commit staff, contractual, and funding resources to support the finalization and implementation of the District’s Phase III WIPs and future two-year milestones. This support includes evaluation of the most-effective practices and locations, annual WIP assistance funding to address priority implementation needs, evaluation of the District’s 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 the District on WIP and two-year milestone implementation to reduce pollution from federal lands.

## **Detailed Evaluation**

The following sections provide specific highlights of key strengths of the District’s draft Phase III WIP. These sections also provide potential enhancements for the WIP, designed to provide greater confidence to the CBP partnership and the public that the District will have programs and practices in place by 2025 that will promote achievement of its Phase III WIP planning targets. The District should maintain these key strengths and address potential enhancements in its final Phase III WIP.

## **Load Reduction Review**

When evaluating the District’s draft Phase III WIP numeric commitments, EPA modeled implementation scenarios through the CBP partnership’s Phase 6 suite of modeling tools and compared those simulated nutrient<sup>3</sup> loads to the District’s 2025 statewide and state-basin Phase III WIP planning targets. According to these data, the District plans to achieve its district-wide Phase III WIP planning targets for nitrogen and phosphorus. The District also plans to achieve its Phase III WIP planning targets for nitrogen and phosphorus in all its major district-basins<sup>4</sup>.

Jurisdictions divided their respective Phase III WIP planning targets into source sector goals to demonstrate how it plans to achieve pollutant load reductions by 2025. In the District’s draft Phase III WIP, nitrogen and phosphorus load reductions are planned from implementation of best management practices (BMPs) in managing stormwater, including stream restoration.

## **Source Sectors**

### **Stormwater**

#### **Key Strengths**

- The District expects most of its nutrient reductions to come from compliance with their stormwater management regulations based on a review of long-term averages and multiple forecasts of the amount, type, and location of land that is developed or redeveloped within the Municipal Separate Storm Sewer System (MS4) area.
- The District provided BMP locations on maps in their Open Data platform.
- The District Department of Energy & Environment (DOEE) is utilizing its stormwater BMP database to track BMPs, including voluntary practices, and it serves as the centralized implementation agency.
- The District demonstrated funding and specific programs that will be used to implement the draft Phase III WIP.
- The District has a robust set of voluntary programs that are well-funded and well-staffed. Assumptions for non-regulated implementation rates were conservative – below historic rates – providing confidence in the District’s ability to achieve the pollution load reductions by 2025.
- The District signed a new Memorandum of Understanding (MOU) between DOEE and the District Department of Transportation (DDOT) to allow transfer of funds from DDOT to DOEE to ramp up implementation efforts on public and private lands.
- The District planned and accounted for future stream restoration projects.

<sup>3</sup> Phase III WIP planning targets for sediment are currently under development by the CBP partnership.

<sup>4</sup> Each jurisdiction has the option of adjusting its Phase III WIP state-basin planning targets through nutrient exchanges and/or exchanges with other basins within that jurisdiction. Any adjustments to the state-basin planning targets must still result in all 92 Chesapeake Bay segments achieving the respective jurisdictions’ Chesapeake Bay water quality standards under Phase 6 Chesapeake Bay airshed, watershed, and estuarine water quality/sediment transport model simulated conditions.

- The District is proactively addressing climate resiliency in the stormwater sector.

**Potential Enhancements**

- The District should provide more details on how it is coordinating with federal agencies on crediting BMPs beyond just funding and project location.
- The District noted in its draft Phase III WIP that “there are not enough resources and it is difficult to communicate the benefits and co-benefits of DOEE programs.” To support the District’s effort, the CBP partnership developed a series of fact sheets designed to help the jurisdictions identify many co-benefits for specific BMPs. The District can incorporate these co-benefits in future communication efforts.
- The District should reconcile the stream restoration data in the table on page 92 with stream restoration reported annually to EPA for tracking toward the TMDL.
- The District should provide additional detail on both the costs of projected restoration projects as well as the sources of funding to pay for those projects.
- The District should provide further detail on their plans for strengthening the inspection and maintenance of BMPs currently being implemented.

**Wastewater and Septic Systems**

**Key Strengths**

- The District’s progress on providing advanced treatment at the Blue Plains Wastewater Treatment Facility and completion of the Clean Rivers Project--which will eliminate 96% of combined sewage overflows--will enable the District and DC Water to stay within permit limits, without stalling growth.
- The District included a detailed discussion of the non-significant NPDES permitted dischargers, specifically the calculations of the projected loads from these non-significant facilities.

**Trading & Offsets**

**Key Strengths**

- The District’s Stormwater Retention Credit (SRC) Program has become a very successful tool for the reduction of stormwater pollutants. The SRC Price Lock Program has completed 45 credit sales since 2014, the SRC Aggregator Startup Grant Program has awarded eight grants since 2017, and the SCR Site Evaluation Program has provided one site evaluation since 2017.
- The District increased the amount of green infrastructure located in areas that drain to the MS4s, which has been one of the District’s primary goals in implementing the SRC Program.

**Federal Facilities**

**Key Strengths**

- The District has had strong engagement with federal land owners through one-on-one meetings, trainings, webinars, and regular participation in the CBP partnership’s Federal Facilities Workgroup.
- The District included narrative content received from federal agency partners in the draft Phase III WIP.
- The District has been willing to collaborate with federal agencies on securing funds, coordinating projects, and technical assistance to support pollutant reduction and restoration practices on federal land.

**Potential Enhancements**

- The District should provide additional detail on how it will work with federal agencies to improve federal agency implementation data reporting to the District’s Stormwater Database and the CBP partnership so that federal practices are credited in progress assessments.
- The District should work with EPA and the Department of Defense (DoD) to correct identified errors in the federal land Geographic Information System file.

- The District should collaborate with the DOD and the United States Departments of Agriculture and Interior to determine BMP scenarios that result in meeting the District’s Phase III WIP planning targets by 2025.
- The District should consider revising any policy that may be a possible disincentive to federal participation in joint BMP projects, especially if projects are partially funded by federal dollars.

### **Changing and Local Conditions**

#### **Growth**

##### **Key Strengths**

- The District developed its implementation scenarios on 2025 forecasted growth conditions, per the CBP partnership decision.
- The District expects nutrient and sediment loadings to continue to decrease as more of the District is redeveloped in accordance with current stormwater management regulations, even with additional population growth.
- The Blue Plains Wastewater Treatment Facility is projected to reach capacity for treatment between 2030 and 2040, according to the Metropolitan Washington Council of Government (MWCOG) Regional Wastewater Flow Forecast Model. The Bay TMDL allocations and permit limits for the Blue Plains Wastewater Treatment Facility are based on the facility’s design capacity and account for expected growth through at least 2030. DC Water and MWCOG plan to perform ongoing studies and analyses to assess the facility’s capacity to address loads further into the future in the face of economic development, population growth, and changing conditions within the Blue Plains Service Area.

##### **Potential Enhancements**

- The District should provide further details on the use of its customized Land Policy BMP that restricts growth to areas where new stormwater permits are allowed, and whether the District plans to use this BMP in the future.
- The District could consolidate information related to growth under a separate “Accounting for Growth” section of its Phase III WIP for clarity purposes.

#### **Climate**

##### **Key Strengths**

- The District documented its jurisdiction-specific 2025 numeric climate change loads in the draft Phase III WIP and committed to address these numeric loads now, as opposed to starting with its 2022-2023 milestones.
- The District provided a comprehensive inventory and associated descriptions of the District-wide and local action plans and strategies to address climate change.
- The District developed a climate preparedness plan, Climate Ready DC, which identified five areas of the District that are especially vulnerable to climate-related risks and identified strategies to increase the climate preparedness of utilities, transportation systems, neighborhoods, communities, and buildings.

#### **Local Engagement Strategies**

##### **Key Strengths**

- The District developed a multi-pronged strategy for engaging local partners in Phase III WIP development.
- The District worked extensively with its community partners while considering socio-economic conditions and how to target implementation efforts to benefit residents and the environment. Specifically, the District addressed green jobs training, and considered social equity in addressing climate change.

- The District convened a Chesapeake Partner Advisory Group to identify barriers and challenges to implementation and develop proposals to address these barriers.

### **Local Planning Goals**

#### **Key Strengths**

- The District developed local planning goals that are measurable and below the major state-basin scale, following the CBP partnership decision.
- The District set local planning goals based on wastewater and major stakeholders responsible for stormwater load including local planning goals for stormwater load from federal agencies (which account for 30% of the District's land).
- The District followed the same principles for establishing local planning goals that was used to develop the Phase III WIP planning targets.

#### **Potential Enhancements**

- The District should provide further clarification of its key local partners responsible for implementing the BMPs reflected in the local plans.
- The District should define the specific tools and processes to be used to track and report achievement of local planning goals through the two-year milestones and annual progress submissions.

### **Segment-shed Goals for the Tidal Jurisdictions**

#### **Key Strengths**

- The District addressed segment-shed goals and targeting in “Appendix B: Nutrient Loads to River Segments by Source Sector & Agency” of the District's draft Phase III WIP document.
- The District described plans for implementing efforts in the Anacostia segment-shed such as the Anacostia River Corridor Vision, the Combined Sewer Overflow tunnel projects, and sub-watershed targeting that includes some sub-watersheds within the Anacostia Tidal Fresh segment-shed.

#### **Other Potential Enhancements**

- The District should change acres of “Wetland Enhancement” to “Wetland Rehabilitation.” The current Wetland BMP Expert Panel expects to recommend elimination of “Wetland Enhancement” as a water quality BMP. Both practices will remain for the next two-year milestone period, but the District should not rely on the Wetland Enhancement BMP as part of its implementation scenario. There will be no impact to loads as both BMPs are currently credited equally.
- Regarding plans to conduct an inventory of data for BMPs that have already been implemented, it is important that future reporting of this data include accurate implementation and inspection dates, following the CBP partnership's verification protocols. Much of the historic implementation of practices and programs has already been accounted for in the calibration of the CBP partnership's Phase 6 suite of modeling tools through the changes in loads and water quality at monitored locations.