

## **Evaluation of the District of Columbia's Phase III Watershed Implementation Plan (WIP)**

### **Executive Summary**

The U.S. Environmental Protection Agency (EPA) is providing this evaluation of the District of Columbia's (the District's) Phase III Watershed Implementation Plan (WIP). EPA's review of the District's Phase III WIP found the District largely addressed the goals of the Chesapeake Bay Total Maximum Daily Load (Bay TMDL) and the additional expectations set by the Chesapeake Bay Program (CBP) partnership.

Overall, EPA's review found that the District demonstrated adequate funding and specific programs that will be used to implement the Phase III WIP and information about funding programs was further strengthened in their final plan. The District engaged with local partners in developing a "locally-driven" Phase III WIP. In addition, the District has voluntary programs that are well-funded and well-staffed.

The District's plan meets its numeric planning targets for nitrogen and phosphorus at the state levels through the submission of Best Management Practices (BMPs) and wastewater reductions. The District's plan provides confidence in its narrative submission that it will attain the necessary load reductions by 2025 through the suite of BMPs proposed. EPA will continue to monitor progress through milestone submissions to assure those goals will be achieved by the partnership-established goal of 2025.

## **Evaluation of the District of Columbia's Phase III Watershed Implementation Plan (WIP)**

### **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 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. The Chesapeake Bay TMDL (Bay TMDL), which is an informational planning tool, established goals to be met using the CBP partnership's timeline of 2025. In 2010, EPA worked with the CBP partnership to establish the Bay TMDL based primarily on the Phase I WIP commitments made by each of the Bay jurisdictions. The District agreed to develop Phase II and Phase III WIPs to set out an adaptable approach for achieving the pollutant reductions and programmatic commitments that the District intended to implement in each Phase so that it would meet its commitment to the CBP partnership's 2025 goals.

The CBP partnership agreed that EPA should help provide accountability and assess whether (1) each jurisdiction's WIP sets out sufficient commitments to meet the 2025 goals and (2) whether there is an adequate level of confidence that the jurisdiction will achieve those specific commitments. While EPA does not approve or disapprove a WIP, EPA provides the assessment for the benefit of the CBP partnership and, as appropriate, may provide additional recommendations for strengthening the WIP or its components. EPA evaluated the District's Phase III WIP to assess whether the District's commitments will meet the 2025 district-basin Phase III WIP planning targets and whether the District included sufficient information in the WIP to provide confidence that the District will achieve these targets by 2025.

### **Overview**

In reviewing the District's Phase III WIP, EPA found the District addressed the CBP partnership's expectations. Using the CBP partnership's suite of modeling tools, simulations indicate that full implementation of the District's plan is expected to achieve 100% of the Phase III WIP planning targets for nitrogen and phosphorus.

Additionally, Phase III WIP planning targets for sediment were approved by the CBP partnership's Management Board on October 17, 2019 and recommended to the Principals Staff Committee (PSC) for final approval. In its Phase III WIP, the District committed to address the sediment targets approved by the CBP partnership and to provide an addendum to its Phase III WIP once the PSC approves these sediment targets. The Phase III WIP sediment targets will not affect the BMPs called for in the WIP and are not intended to be the driver for implementation moving forward.

Some notable strengths identified in the Phase III WIP 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 adequate funding and specific programs that will be used to implement the Phase III WIP. Information about funding programs was further strengthened in their final WIP.
- The District has 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.
- Significant additional information reflecting more recent local engagement activities was added to the District’s final WIP and it will be conducting semi-annual meetings in the future.

**EPA Oversight and Assistance<sup>1</sup>**

As it has done since the release of the Bay TMDL, EPA will continue to commit staff, contractual, and funding resources to support the implementation of the District’s Phase III WIP 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. EPA will continue its commitment to track annual progress of the District and all the other Bay jurisdictions and make those results available to the CBP partnership. [See: <https://www.epa.gov/chesapeake-bay-tmdl/epa-oversight-watershed-implementation-plans-wips-and-milestones-chesapeake-bay> ]

In our role to help the District improve its accountability to the CBP partnership in meeting its commitment to the 2025 goals, EPA recommends that the following be included in the District’s 2020 – 2021 milestones:

<b>Recommended Enhancements to the Phase III WIP (See Detailed Review)</b>	<b>Recommended Actions</b>
Information in support of practices that account for the majority of nitrogen load reductions	Consider developing numeric BMP implementation targets for the 2020-2021 milestone period for BMPs expected to account for at least 60% of the nitrogen reductions between now and 2025: <ul style="list-style-type: none"> <li>• Stormwater Performance Standard – Runoff Reduction</li> <li>• Urban Stream Restoration</li> </ul>
Additional detail about how co-benefits <sup>2</sup> can be promoted through communication efforts	Consider incorporating into their communication efforts the CBP’s series of fact sheets designed to help the jurisdictions identify and communicate the many co-benefits for specific BMPs.
Additional project cost data for restoration projects	Provide project costs in their two-year milestones.

<sup>1</sup> This Evaluation is not a final agency action, and does not create any right, responsibility, or benefit, substantive or procedural, enforceable by law or equity. Pursuant to the Anti-Deficiency Act, 31 U.S.C. §§ 1341 and 1342, all commitments made by EPA in this Evaluation are subject to the availability of appropriated funds and budget priorities. Nothing in this Evaluation obligates EPA to obligate or transfer any funds.

<sup>2</sup> Co-benefits are those that not only result in water quality improvements but could address other 2014 Chesapeake Bay Watershed Agreement Outcomes (e.g., environmental problems, wetlands, or forest buffers), local water quality benefits, as well as economic and ecosystem services benefits generated from restoration activities.

Stream restoration data (p. 106)	Reconcile the stream restoration data in the table on page 106 with stream restoration reported annually to EPA for tracking toward the TMDL.
Errors noted in the federal land Geographic Information System file	Work with EPA and the Department of Defense (DoD) to correct identified errors in the federal land Geographic Information System file.
Disincentives to federal participation in joint BMP projects	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.
Additional information about local partners responsible for implementing BMPs	Provide further clarification of its key local partners responsible for implementing the BMPs reflected in the local plans in future programmatic two-year milestones.
Additional information about tools and processes to be used to track and report achievement of local planning goals	Define in future programmatic milestones 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.

Over the 2020-2021 milestone period, EPA plans to provide the following specific assistance to the District:

**General Assistance**

- Continue to provide annual grant (e.g., Chesapeake Bay Implementation Grant, Chesapeake Bay Regulatory and Accountability Program, Local Government, etc.) and WIP assistance funding to the District to support implementation of their Phase III WIP.
- Continue to provide technical assistance, data and tools to aid the District in conducting assessments, including water quality monitoring data, model analyses, high-resolution land cover, improved stream networks, BMP opportunity layers and application of management-relevant research findings.
- Track and report the District’s progress with its initiatives.

**Stormwater**

- If requested, EPA will:
  - provide opportunities to collaborate and exchange ideas on improved permitting and compliance and,
  - conduct green infrastructure workshops as appropriate.
- EPA will follow-up on the District’s Department of Energy and Environment (DOEE) referrals to evaluate compliance with construction, and industrial activities required to manage stormwater.

**Wastewater**

Evaluate opportunities to use integrated planning.

**Trading and Offsets**

Continue to provide oversight and input into the District’s trading and offset program by reviewing draft regulations, and policies as well as participate on regulatory advisory committees.

**Growth**

If requested, provide to the District a sector growth breakout for each sector based on its submitted progress data each milestone period.

**Detailed Evaluation of Overall Load Reduction and Source Sectors**

The following sections provide specific highlights of key strengths of the District's Phase III WIP. These sections also highlight areas for improvement to assist the District in implementing its Phase III WIP and subsequent two-year milestones to provide confidence that the District will have programs and practices in place by 2025 to achieve its Phase III WIP planning targets.

**Load Reduction Review**

When evaluating the District's 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 basin Phase III WIP planning targets. Simulations using that scenario indicate that full implementation of the District's plan is expected to achieve 100% of the district-wide Phase III WIP planning targets for nitrogen and phosphorus in its major basin, the Potomac.

Since the release of the Bay TMDL, the majority of the District's nitrogen load reduction came from wastewater. The District's Phase III WIP calls for almost all the remaining reductions to come from its stormwater sector and streams. Specifically, the Phase III WIP calls for four times the level of effort from the stormwater sector than what has been achieved by this sector since the Bay TMDL.

Nutrient loads are currently lower than the targets and the Phase III WIP allows for load increases for both nitrogen and phosphorus, but ultimately, discharges are expected to remain under the goals. Two proposed BMPs will account for 70% of the WIP nitrogen load reduction: Stormwater Performance Standard-Runoff Reduction and Urban Stream Restoration.

Finally, the District's Phase III WIP addresses each of the additional changing and local conditions identified by the CBP partnership.

**Source Sectors****Stormwater****Key Strengths**

Key strengths in the Phase III WIP include:

- The District expects most of its remaining 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 expanded on their plans for strengthening the inspection and maintenance of BMPs currently being implemented.
- DOEE is utilizing its stormwater BMP database to track BMPs, including voluntary practices, and it serves as the centralized implementation agency.

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<sup>3</sup> Phase III WIP planning targets for sediment were developed by the CBP partnership after the Phase III WIP submittal and will be incorporated into the District's WIP.

- The District demonstrated funding and specific programs that will be used to implement the Phase III WIP.
- The District has 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 pollutant 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.
- The District is addressing climate resiliency in the stormwater sector.

### **Enhancements**

EPA recommends the District address the following in its 2020-2021 milestones to satisfy its partnership commitments:

- While the District’s Phase III WIP did consider habitat, stream health, and climate resiliency in some areas, the District should consider incorporating into their communication efforts the CBP partnership’s series of fact sheets designed to help the jurisdictions identify and communicate the many co-benefits for specific BMPs.
- Although the District provided additional detail regarding the sources of funding to pay for restoration projects in the Phase III WIP, additional information on project costs should be provided in their two-year milestones.
- The District should reconcile the stream restoration data in the table on page 106 with stream restoration reported annually to EPA.
- Since the District expects most of its nutrient reductions to come from compliance with their stormwater management regulations and it already provided BMP locations on maps in their Open Data platform, it would be helpful to include detailed two-year numeric targets for BMP implementation targets as part of its programmatic milestones, especially for the Stormwater Performance Standard-Runoff Reduction and Urban Stream Restoration BMPs.

### **Wastewater and Septic Systems**

#### **Key Strengths**

Key strengths in the Phase III WIP include:

- 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 National Pollutant Discharge Elimination System (NPDES) permitted dischargers, specifically the calculations of the projected loads from these non-significant facilities.

## **Trading & Offsets**

### **Key Strengths**

Key strengths in the Phase III WIP include:

- 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**

Key strengths in the Phase III WIP include:

- 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 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.
- The District provided significant additional detail in their Phase III WIP about their plan for collaborating with the DoD as well as 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. DOEE created a custom submission form for federal agencies to submit BMPs to the Stormwater Database and will provide additional training to continue to accommodate BMP submissions as part of its annual reporting efforts.

## **Enhancements**

EPA recommends that the District address the following in its 2020-2021 milestones to satisfy its CBP partnership commitments:

- The District should work with EPA and DoD to correct identified errors in the federal land Geographic Information System file.
- 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**

Key strengths in the Phase III WIPs include:

- 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.
- The District consolidated information related to growth under a new, separate “Accounting for Growth” section in its Phase III WIP.

## **Climate**

### **Key Strengths**

Key strengths in the Phase III WIP include:

- The District documented its jurisdiction-specific 2025 numeric climate change loads in the 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**

Key strengths in the Phase III WIP include:

- 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**

Key strengths in the Phase III WIP include:

- 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 were used to develop the Phase III WIP planning targets.

### **Enhancements**

EPA recommends the District include the following in its 2020-2021 milestones to satisfy its CBP partnership commitments:

- 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**

Key strengths noted in EPA’s review of the Phase III WIP include:

- The District addressed segment-shed goals and targeting in “Appendix B: Nutrient Loads to River Segments by Source Sector & Agency” of the District’s Phase III WIP.
- 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.

#### **BMP Verification**

Jurisdictions agreed to follow CBP partnership-approved BMP verification protocols when developing and implementing the Phase III WIPs. Because the District is proposing to increase BMP implementation rates of some BMPs by four-fold or more in the next seven years, the District should ensure that implementation at this higher rate can be tracked, verified, and reported within that period in accordance with the agreed upon verification protocols, or by another method established by the CBP partnership.