



Backgrounder

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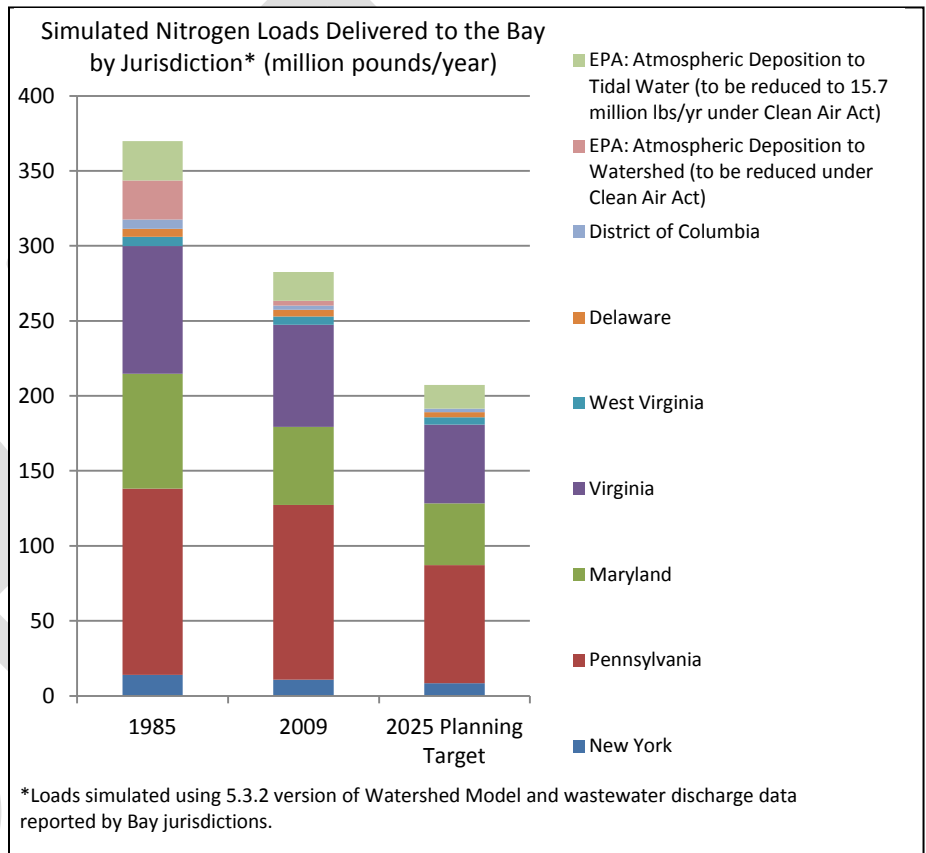
Progress toward Healthy Waters Part I: Understanding Bay Restoration Progress

History – 2009-11 Milestones

In 1987 with the creation of the Chesapeake Bay Agreement, the Chesapeake Bay Program became one of the first major restoration efforts to measure its success using quantitative metrics. Metrics give us something to strive for, measure against and drive our work forward. As the process evolves, we have refined the way we use metrics in order to present the most accurate picture of progress available.

In 2008, the Executive Council directed the partnership to take an innovative approach toward improved accountability. In pursuit of the long-term goal set in 2009 for having all water quality restoration practices in place by 2025, the partners would begin to track their progress through short, two-year targets, starting with the years 2009 through 2011. These short-term checks on water quality restoration progress were a significant departure from prior CBP tracking periods of ten or more years.

The original intent of the 2009-11 water-quality milestones was to allow for flexibility so the partners could alter their management decisions based on what worked best. Success was to be measured against the end goal of reducing the pounds of pollutants entering the region’s waters, rather than acres or miles of specific practices put in place. This “common currency” of expected pounds of pollution reduced allowed jurisdictions to establish an initial set of practices to implement and to adapt if the original practices were less effective than anticipated.



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This approach was the beginning of a significant culture shift for the Bay Program in setting goals and tracking progress toward restoring the Bay. Progress would be checked constantly and management efforts adapted as needed to meet the overall goal. The 2010 findings of the National Academy of Sciences (NAS) supported the concept of these shorter, two-year milestones, stating that consequences for failing to meet the milestones should work to increase accountability.

Changing Course & Looking Ahead

The Chesapeake Bay Program took another step forward in its strategy to decrease nutrient and sediment pollution to the Bay and its rivers in December, 2010. EPA, in partnership with the states and the District, established the largest and most innovative Total Maximum Daily Load (TMDL) for the Chesapeake Bay. This change required a new baseline, new pollution reduction targets and new tracking and accounting systems. These new features limit CBP's ability to definitively determine if the original milestone pollution reduction commitments were met, but practices completed during that timeframe were accounted for (see *Progress toward Healthy Waters Part II: 2009-11 Milestones Final Progress Fact Sheets*). More importantly, practices put into place between 2009 and 2011 can now be assessed as to whether they kept the watershed jurisdictions on pace to meet the 2017 interim targets for pollution loads (see *Progress toward Healthy Waters Part III: 2011 Progress in Reducing Nitrogen, Phosphorus and Sediment Pollution* summary).

CBP leadership has embraced the concept of near-term, two-year goals, recognizing that the Executive Council had set the partnership's accountability measures on a reasonable, achievable course. This milestone tracking system was incorporated into the TMDL, the large-scale blueprint for restoring the Bay, and the first milestone period is 2012 through 2013 (see *Progress toward Healthy Waters Part IV: 2012-13 Milestone Commitments Fact Sheets*). The commitments made by Bay states, the District of Columbia and EPA toward achieving their individual milestones offer reasonable assurance they will meet the 2017 and 2025 targets for pollution loads.

Defining Success

Ultimately the answer for whether we have restored water quality in the Bay and its rivers lies in meeting the standards for dissolved oxygen, water clarity, and chlorophyll *a*. Only by making sure the appropriate practices are put in place will we achieve the water quality needed to support crabs, oysters and fish. The CBP uses sound science to both estimate load reductions from practices under the TMDL and identify water-quality changes in rivers and the Bay. By measuring nutrient and sediment trends throughout the watershed for long term progress (over 25 years) and short term progress (10 years) we can see the differences actions on the land are making in nearby rivers and streams. By measuring and monitoring dissolved oxygen, water clarity, and chlorophyll *a* in the Bay and its tidal rivers, we can assess progress toward water-quality standards (see *Progress toward Healthy Waters Part V: Water Quality Changes in the Chesapeake Bay and its Watershed*).

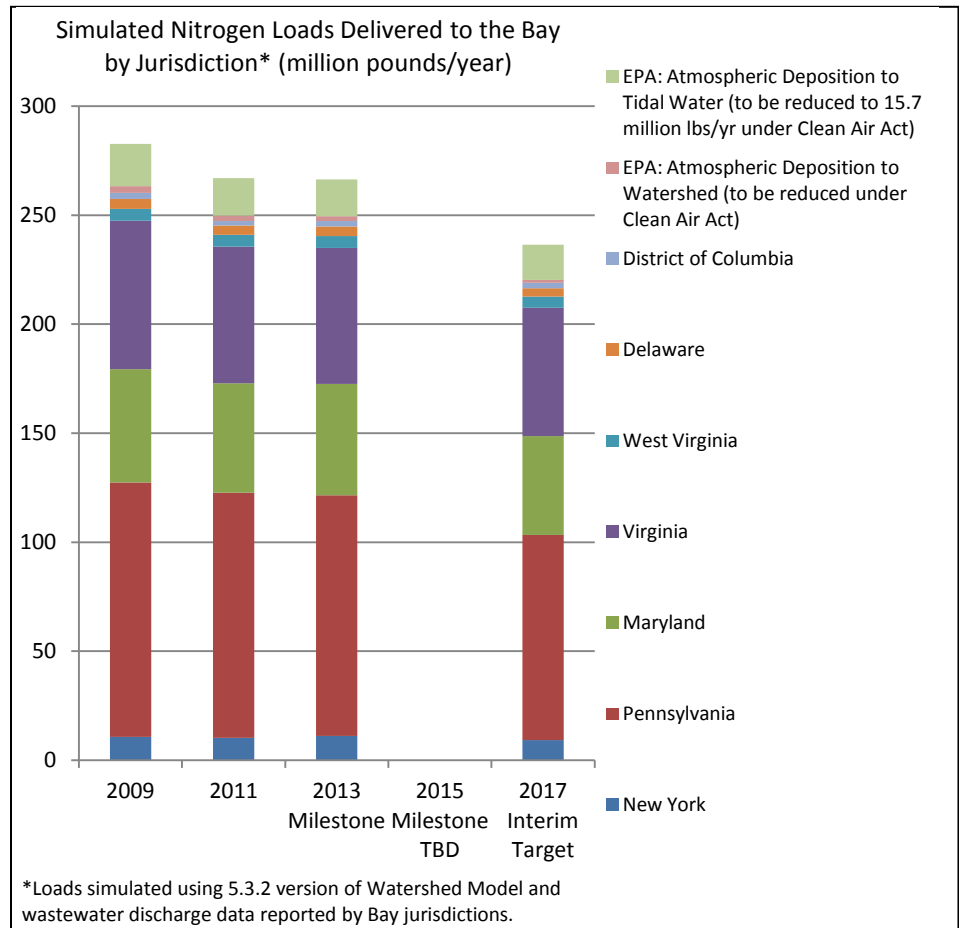
In the coming years, the CBP partnership will be making key enhancements to its efforts including improved tracking and verification of the practices being implemented on the land and expanded watershed monitoring of nutrient and sediment levels in waterways. Both of these enhancements will strengthen our ability to assess the effects of our land-based actions on local rivers and tidal waters. With this continually improving understanding of the connections between land and water, the partnership can then make sound decisions about the best practices to improve water quality and further solidify progress toward meeting the TMDL water-quality standards.

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The Bay TMDL has been called a “pollution diet” and it is similar in some ways to any personal weight loss plan. Any good personal plan includes establishing a goal, counting calorie intake (a calorie “estimate”) and stepping on a scale (regular “measurement”) to achieve that goal. Achieving the nutrient goals for the Bay will also take a combined approach using two types of scientific rigor – the best possible simulations combined with regular monitoring – to keep us on track for creating healthy waters. In either case, we know results are not instantaneous – you can’t expect to lose weight the moment you reduce calories by eliminating snacks or desserts and we can’t expect new actions on land that reduce pollution to result in immediate changes in the conditions of our rivers and the Bay. Ultimately, however, we can expect results when the right regime is in place. This two-pronged approach can help estimate progress toward our target, determine when changes in water quality occur and offer the information needed to successfully adapt our decision-making in ways that support reaching restoration goals of a clean Bay and watershed.

Coming Together

The early 2009-11 milestones called for by the Executive Council in 2008 have proven to be valuable, forward-thinking tools for how the CBP should adapt and measure its restoration progress in the future. They have allowed the jurisdictions to put forth their strongest efforts while also encouraging them to test which practices work best and which should be changed. In retrospect, they were a critical piece to the CBP partnership charting the course for the future, allowing us to manage our work adaptively and learn from our efforts. Their value should be recognized in helping us create a new, successful blueprint, looking to the future of our work together toward a restored Bay.



The Chesapeake Bay Program is a regional partnership that has coordinated and conducted the restoration of the Chesapeake Bay since 1983. Partners include the U.S. Environmental Protection Agency; the U.S. Department of Agriculture; the states of Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia; the District of Columbia; the Chesapeake Bay Commission, a tri-state legislative body; and advisory groups of citizens, scientists and local government officials.