

Guide for Chesapeake Bay Water Quality Two-year Milestones

I. Purpose

Based upon agreements by the Chesapeake Executive Council beginning in 2008, EPA has created an accountability framework that guides local, state, and federal water quality restoration efforts in the Chesapeake Bay watershed. The accountability framework is composed of the Chesapeake Bay Total Maximum Daily Load (Bay TMDL)¹, Watershed Implementation Plans (WIPs), two-year milestones for tracking and assessment of progress towards meeting the Bay TMDL allocations, and specific federal actions that might be taken if a Bay watershed jurisdiction (Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia) does not meet its commitments. This accountability framework provides assurance that the Bay TMDL allocations will be achieved and maintained.

In addition, Executive Order 13508² directed federal agencies to “define environmental goals for the Chesapeake Bay and describe milestones for making progress toward attainment of these goals.” The Executive Order Strategy³ further clarified that federal agencies will join the Bay watershed jurisdictions in establishing two-year milestones that specify federal efforts to support the Bay watershed jurisdictions in meeting their current and future water quality milestones.

This Guide addresses the Bay watershed jurisdictions’ and federal agencies’ two-year milestones for water quality. Milestones described in this Guide encompass pollutant load reduction milestones and programmatic milestones. Pollutant load reduction milestones detail the reductions from pollutant reduction measures such as the implementation of best management practices or wastewater treatment plant upgrades. Programmatic milestones reflect enhancements to existing water quality programs that will support meeting the Bay TMDL allocations. Programmatic milestones may include new legislation, regulations and/or capacity-building actions to increase the resources needed to support the implementation of pollutant reduction measures.

¹ USEPA (2010), *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment*, December 29, accessed at <<http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html>>

² Presidential Executive Order 13508—Chesapeake Bay Protection and Restoration, Friday, May 15, 2009. Federal Register Vol. 74, No. 93. accessed at <<http://executiveorder.chesapeakebay.net>>.

³ Executive Order 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed, May 12, 2010, accessed at <<http://executiveorder.chesapeakebay.net/file.axd?file=2010%2f5%2fChesapeake+EO+Strategy%20.pdf>>

This Guide summarizes but does not replace related documents⁴ that refer to the two-year milestones. It provides additional detail on the expectations for Bay watershed jurisdictions and federal agencies regarding the establishment and evaluation of future two-year milestones for water quality and includes a detailed schedule in Appendix A.

II. Expectations for the Bay Watershed Jurisdictions' Development of the 2012-2025 Two-Year Milestones

Bay watershed jurisdictions are to submit final two-year milestones to EPA by January 7 of each even year, beginning in January 2012, with draft milestones due to EPA by November 1 of each odd year beginning in 2011.

EPA expects the Bay watershed jurisdictions to:

- Develop detailed two-year milestones that identify and commit to implement specific pollutant reduction measures to achieve the two-year milestone commitments. The milestones are expected to contain more detail and more transparent reporting to the public than past Bay restoration efforts.⁵
- Explain how the increments of pollutant reduction for each two-year milestone are on pace to implement 60% of the practices needed to achieve the pollution reductions allocated to the Bay watershed jurisdiction in the Bay TMDL by 2017 and 100% of those practices by 2025.

⁴USEPA (2008), letter from Region III Administrator Donald S. Welsh to Secretary John Griffin, Maryland Department of Natural Resources, September 11, accessed at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/EPARegionIIIlettertoPSC091108.pdf; USEPA (2009), letter from Region III Acting Administrator William C. Early to Secretary L. Preston Bryant, Virginia Department of Natural Resources, November 4, accessed at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/tmdl_implementation_letter_110409.pdf; USEPA (2009), letter from Region III Administrator Shawn M. Garvin to Secretary L. Preston Bryant, Virginia Department of Natural Resources, December 29, accessed at http://www.epa.gov/region03/chesapeake/bay_letter_1209.pdf; U.S. EPA (2010), *Guide for EPA's Evaluation of Phase I Watershed Implementation Plans*, April 2, accessed at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/GuideforEPAWIPEvaluation4-2-10.pdf; USEPA (2010), *Clarification on Watershed Implementation Plans and 2-Year Milestones: MEMORANDUM*, November 09, accessed at http://archive.chesapeakebay.net/pubs/calendar/47043_03-14-11_Handout_2_11167.pdf; (2010) Executive Order 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed, May 12, accessed at <http://executiveorder.chesapeakebay.net/file.axd?file=2010%2f5%2fChesapeake+EO+Strategy%20.pdf>; USEPA (2011), *EPA Expectations & Draft Schedule for Phase II Watershed Implementation Plans: Fact Sheet*, January 12, accessed at http://archive.chesapeakebay.net/pubs/calendar/PSC_02-17-11_Handout_3_11177.pdf

⁵ USEPA (2009), Letter from Region III Acting Administrator William C. Early to Secretary L. Preston Bryant, Virginia Department of Natural Resources, November 4, accessed at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/tmdl_implementation_letter_110409.pdf

- Work with federal agencies to submit an input deck with the number, location (as appropriate) and type of nitrogen, phosphorus, and sediment reductions on federal, state, municipal, and private lands that will be implemented within the two-year period, starting July 1 of the prior odd year and ending June 30 of the following odd year as illustrated in Appendix A.
- Identify and commit to implement specific programmatic actions, such as rulemakings and additional resources to reduce nitrogen, phosphorus, and sediment loads, which will be needed in order to achieve the pollutant reductions identified for the current two calendar year period or future two calendar year periods.

Although programmatic actions may not result in on-the-ground implementation within the two-year milestone period, EPA expects Bay watershed jurisdictions to include this information to demonstrate assurance⁶ that future nitrogen, phosphorus, and sediment controls resulting from these capacity-building actions will occur on schedule.

Prior to the start of each milestone period, EPA will evaluate whether the draft two-year milestones are sufficient to achieve the pollutant reductions necessary to meet the Bay TMDL allocations, which were based upon the Bay watershed jurisdictions' WIPs. EPA recognizes that the Bay watershed jurisdictions' actions may differ from their milestone commitments based on changing conditions and the availability of new information. EPA does not expect the Bay watershed jurisdictions to revise their commitments on an ongoing basis throughout the milestone period if they can account for their actions in the annual progress reporting due to EPA at the end of December each year. EPA supports adaptive management of two-year milestones so long as the overall pace of pollutant reductions remains consistent with a Bay watershed jurisdiction's WIP commitments and remain on pace to implement 60% of the practices needed to achieve the pollutant reductions allocated to the jurisdiction in the Bay TMDL by 2017, and 100% of the practices by 2025.

III. Evaluation of Bay Watershed Jurisdictions' Progress in Meeting the 2012-2025 Two-Year Milestones

The jurisdictions are expected to submit load reduction progress information—tracked, reported, and verified practices over the prior July 1 through June 30 time period—to EPA by

⁶ For example, a jurisdiction may commit to develop legislation to restrict lawn fertilizer use in the 2012-2013 milestone period. The Bay jurisdiction would report the acres receiving urban nutrient management and EPA would model the nitrogen, phosphorus and sediment reductions resulting from this legislation when it became effective; the reductions would then be verified in the 2014-2015 milestone period.

the end of December each year, in accordance with the schedule in Appendix A, and should be submitted in the appropriate format that will be supplied by EPA. All permitted wastewater treatment plant information is expected to be provided in the spreadsheet template that will be supplied by EPA; all other implementation practices approved by the Chesapeake Bay Program partnership for use in the Chesapeake Bay Program Watershed model should be entered into the National Environmental Information Exchange Network (NEIEN).

In addition, EPA expects the Bay watershed jurisdictions to provide progress updates for programmatic actions, which have been implemented over the past calendar year by the end of December each year. EPA will work with the Bay watershed jurisdictions and federal partners to develop annual progress reports to present to the Chesapeake Executive Council by late spring each year, as required under Executive Order 13508, based on the data and information provided to EPA each year. EPA will use NEIEN, the Chesapeake Bay Tracking and Accountability System (BayTAS), and ChesapeakeStat⁷, respectively, to track and communicate progress to the public in meeting the two-year milestones.

Through 2017, EPA intends to use the Chesapeake Bay Program's Chesapeake Bay Watershed Model Phase 5.3.2⁸ to evaluate whether the proposed pollutant reduction measures, actions, and practices reported are on pace to fulfill or have fulfilled the milestone commitments submitted by the Bay watershed jurisdiction. If the Bay watershed jurisdictions implement nitrogen, phosphorus, and sediment reduction actions that differ from the two-year milestone commitments but result in the same or greater nitrogen, phosphorus, and sediment load reductions, then the Bay watershed jurisdiction will have met its milestone commitment. If modeled reductions are less than the two-year milestone commitment, EPA will then assess and identify which source sectors, basins, and/or local areas are not meeting the milestone commitments.

If EPA finds that the milestones will not keep the Bay watershed jurisdiction on pace to implement 60% of the practices needed by 2017 and 100% by 2025, or that the Bay watershed jurisdiction has not provided assurance that the pollutant reduction measures to achieve the milestones will be implemented as needed, EPA may take appropriate federal actions as identified in EPA's letter of December 29, 2009. It is expected that the Bay watershed jurisdictions will continue to work with and be in communication with EPA so that EPA is aware of and could possibly help address any potential issues prior to the final milestone evaluation.

⁷ Chesapeake Bay Program Partners, *ChesapeakeStat*, June 2010, accessed at <<http://stat.chesapeakebay.net/>>

⁸ After 2017, a new version of the Chesapeake Bay watershed model, factoring in more recent scientific findings and data, will likely be used by EPA and the Chesapeake Bay Program partnership.

IV. Expectations for Federal Agencies' Development and Support of Water Quality Two-Year Milestones

In the May 2010 13508 Executive Order Strategy (Executive Order Strategy), federal agencies identified the restoration of clean water as one of four goals for achieving the most essential priorities for a healthy Chesapeake Bay ecosystem. Federal agencies then developed 12 key environmental outcomes⁹ that will be achieved through federal actions described in the Executive Order Strategy and will reflect progress toward attainment of the overall goals identified in the Executive Order Strategy. As noted earlier, this Guide focuses on those goals and outcomes relating to water quality restoration.

As indicated in the Executive Order Strategy, federal agencies, including EPA, will join the Bay watershed jurisdictions in establishing two-year milestone commitments for water quality. Many federal efforts will be designed to reduce nitrogen, phosphorus, and sediment pollutant loads from federal lands and facilities and to support the Bay watershed jurisdictions in meeting their current and future water quality milestones. In addition to its other water quality milestones, EPA will develop two-year milestones for reducing atmospheric deposition of nitrogen to the Chesapeake Bay watershed and tidal waters in order to help meet the Bay TMDL allocations. These planned atmospheric nitrogen reductions to tidal surface waters are needed to meet EPA's allocations under the Bay TMDL which were not allocated to the Bay watershed jurisdictions.

EPA expects federal agencies to work with the Bay watershed jurisdictions to develop two-year milestones that revise programs, policies, and/or investments that will help implement pollutant reduction measures to achieve specific pollutant reduction targets. Federal agencies are expected to develop two-year milestones for specific lands and facilities that are substantial sources of nitrogen, phosphorus and sediment to the Bay or that reflect actions for aggregated lands and facilities.

Each federal agency is expected to coordinate with the appropriate Bay watershed jurisdiction(s) and provide draft new two-year milestones to EPA and the appropriate Bay watershed jurisdiction(s) by October 1 of each odd year in order to provide all necessary information and maintain the schedule identified in Appendix A. Federal agencies' final new two-year milestone commitments are due to EPA, with a copy to the appropriate Bay jurisdiction(s), by January 7 of each even year.

⁹ (2010) Executive Order 13508 Strategy for Protecting and Restoring the Chesapeake Bay Watershed Goals and Outcomes, May 12, accessed at:

<http://executiveorder.chesapeakebay.net/file.axd?file=2010%2f5%2fChesapeakeEO+Goals+and+Outcomes.pdf>

The federal two-year milestones for water quality will cover on the same two-year period as Bay watershed jurisdictions' two-year milestones, similar to the expectation that FFIPs will operate on the same schedule as the Bay watershed jurisdictions Phase II WIPs to the extent possible. Federal agencies are expected to coordinate with the appropriate Bay watershed jurisdiction(s), to the extent possible, prior to the development of two-year milestones in order to provide all necessary information and maintain the schedule identified in Appendix A.

V. Evaluation of Federal Agencies' Water-Quality Related Two-Year Milestones

Federal agencies are expected to report annually to EPA with a copy to the appropriate Bay watershed jurisdiction(s) on pollutant reduction measures implemented for all federal lands and facilities that are consistent with the jurisdictions' reporting (see Section VI). The deadline for federal agencies to report pollutant reduction measures—tracked, reported, and verified over the prior July 1 through June 30 time period—is November 1 of each year to allow time for the Bay watershed jurisdictions to account for the information in their annual progress submission to EPA due at the end of December.

EPA expects federal agencies to report on programmatic actions taken in the prior calendar year by March 31 of each year, consistent with the timeframe for the annual progress report required by Executive Order 13508. Federal agencies are expected to use the BayTAS system to report on programmatic milestones for building capacity for future pollutant load reductions for federal lands and facilities (e.g., engineering and feasibility studies, budget actions, policy development).

Similar to its evaluation of the Bay watershed jurisdictions' two-year milestones, EPA will evaluate the submitted milestones on whether federal agencies' commitments to pollutant load reduction implementation are at least comparable to the jurisdictions' actions. Also consistent with the Bay watershed jurisdictions, EPA may take appropriate actions, consistent with its December 29, 2009 letter, if federal agencies do not set and/or meet sufficient milestones to show progress toward the nitrogen, phosphorus, and sediment reductions agreed to with the jurisdictions. Actions could include but are not limited to creating public report cards, reports to the White House Council on Environmental Quality and the Office of the Federal Environmental Executive, increasing frequency of inspections, expanding the universe of federal facilities subject to NPDES permits, taking enforcement actions and/or entering into federal facility compliance agreements.

VI. Summary of Reporting Progress on Two-Year Milestones

This table summarizes EPA's expectations of both the Bay watershed jurisdictions and federal agencies with respect to reporting their respective progress on two-year milestones.

		Bay Watershed Jurisdictions	Federal Agencies
Water Quality (Actions)	WWTPs	Spreadsheet supplied by EPA	Spreadsheet supplied by EPA
	Other	NEIEN	NEIEN or other reporting vehicle to be developed by EPA
Programmatic and capacity-building actions		BayTAS	BayTAS

VII. Closing

The WIPs, two-year milestones, tracking and assessment of progress, and EPA's commitment to take federal actions together create an accountability framework for the Chesapeake Bay TMDL that ensures long-term goals will be achieved. The expectations set forth in this Guide will facilitate future two-year milestones that are consistent, transparent, easily evaluated, and supportive of adaptive management efforts to clean up the streams and rivers flowing to the Chesapeake Bay.

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Chesapeake Bay Milestone Timeline	2011						2012 (and subsequent even years)												2013 (and subsequent odd years)											
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Bay Watershed Jurisdiction Milestone Activities																														
Bay watershed jurisdictions submit a draft input deck to EPA for the next set of two-year milestones by November 1, odd years																														
Bay watershed jurisdictions report to EPA on progress toward achieving milestone commitments, based on the timeframes highlighted below, by December 31 each year																														
Bay watershed jurisdictions final new two-year milestone commitments are due to EPA by January 7, even years																														
EPA CBPO provides final model results for reductions achieved from prior set of two-year milestones and/or single year progress runs March 1, each year																														
Chesapeake Executive Council meets																														
Actual timeframe covered by jurisdiction's two-year milestone commitments																														
July 1 through June 30-based reporting period for all tracked, reported, and verified nitrogen, phosphorus, and sediment load reduction actions ¹⁰																														
Calendar year-based reporting period for programmatic capacity-building efforts																														

¹⁰ The one exception to the wastewater treatment plant reporting period is Virginia due to the Code of Virginia, which requires wastewater treatment plants to be regulated on a calendar year basis. EPA will include wastewater treatment plant data for the most recent year that it is available at the time that EPA is evaluating progress.

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Chesapeake Bay Milestone Timeline	2011						2012 (and subsequent even years)												2013 (and subsequent odd years)											
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Federal Agency Milestone Activities																														
Federal agencies submit drafts of the next set of two-year milestones to EPA with a copy to the appropriate Bay watershed jurisdiction(s) by October 1, odd years																														
Federal agencies final new two-year milestone commitments are due to EPA with a copy to the appropriate Bay watershed jurisdiction(s) by January 7, even years																														
Federal agencies report on programmatic and capacity -building (non-implementation) progress for two-year milestones by March 31, each year																														
Federal agencies report to EPA on progress toward achieving milestone commitments based on the timeframes highlighted below by December 31 each year ¹¹																														
Actual timeframe covered by federal agencies' two-year milestone commitments																														
July 1 through June 30-based reporting period for all tracked, reported, and verified nitrogen, phosphorus, and sediment load reduction actions																														
Calendar year-based reporting period for programmatic capacity-building efforts																														

¹¹ There are no federal agency milestones for 2009-2011 so reporting will not begin until 2012.