

The Next Generation of Tools and Actions to Restore Water Quality in the Chesapeake Bay

A Draft Report Fulfilling Section 202(a) of Executive Order 13508

U.S. Environmental Protection Agency

Executive Summary

The Chesapeake Bay and its watershed are an ecosystem and resource of enormous economic, social, and environmental significance. Yet the Bay is imperiled by decades of human activities that have burdened its streams, rivers, and estuary with excessive pollution, destroyed vital habitat for aquatic life and waterfowl, and dramatically reduced commercial and recreational fisheries.

In order to restore the Chesapeake Bay watershed to health, bold action is needed. In May 2009 the six watershed states, the District of Columbia, and the federal government agreed that by no later than 2025 they would have completed implementing the measures necessary to restore water quality in the Chesapeake Bay watershed. As part of the President's commitment to federal leadership in this effort, EPA intends to adopt an accountability framework to ensure that these measures are identified, committed to, implemented, and reported to the public.

The key to restoring water quality in the Chesapeake Bay watershed is to achieve significant reductions in nitrogen, phosphorous, and sediment loads. In 2008, total estimated nitrogen and phosphorus loads from the watershed to the Bay were 311 million pounds and 19 million pounds, respectively. To meet water quality goals for the Bay, nitrogen and phosphorus loads will have to be reduced by 44 percent and 27 percent respectively, despite expected population increases of 30 percent between 2000 and 2030.¹

Achieving these loading reductions will require significant reductions in: runoff from urban and suburban lands and farmland; discharges of nutrient pollution from municipal and industrial wastewater facilities; leaching to surface waters from onsite (septic) systems; and atmospheric deposition of nitrogen to the Bay and its watershed. EPA intends to work with the six watershed states, the District of Columbia, federal partners, local governments, and other parties to put in place a comprehensive, transparent, and accountable set of commitments and actions that, together, ensure that the technologies and management practices needed to restore Bay water quality are implemented by no later than 2025.

Section 202(a) of the President's Executive Order, Chesapeake Bay Protection and Restoration, directs EPA to prepare a report on the next generation of tools and actions for restoring the Bay under existing legislative authorities. This draft report identifies the pollution control strategies and actions EPA recommends to protect and restore Bay water quality and reflects consultation with state agencies and input from other stakeholders.

EPA's 202(a) strategy has three principal components:

¹ As of early September 2009, estimates of the sediment reductions needed are being recalculated using newly available models.

- 1. Create a new accountability program to guide federal and state efforts to restore the Bay.** In December 2010, EPA will establish a Total Maximum Daily Load (TMDL) for the Chesapeake Bay.² Under the TMDL process, EPA intends to provide the watershed states and the District of Columbia with draft loading reduction targets for nitrogen and phosphorus for each major river basin in the fall of 2009. EPA expects that the seven jurisdictions will use these draft loading targets to further subdivide and allocate the needed reductions among point and nonpoint sources of nutrient and sediment pollution. Using that information, EPA intends to establish waste load and load allocations for those sources in the Bay TMDL.

Because the Bay TMDL will allocate pollutant reductions to both point and nonpoint sources to meet the Bay's water quality standards, EPA expects the six watershed states and the District of Columbia to provide EPA with documented "reasonable assurance" that nonpoint source loading reductions will be achieved as a condition for reflecting such reductions in the Bay TMDL. Pursuant to section 117(g) of the Clean Water Act (CWA) and other authorities, EPA would build on the forthcoming Bay TMDL and announce its "expectations" for Clean Water Accountability Program commitments by the six watershed states and the District of Columbia to achieve the pollutant reductions needed to restore the Bay. In brief, EPA would expect the six watershed states and the District of Columbia to commit to establish and implement:

- Clean Water Accountability Programs that (1) achieve the pollutant reductions needed from all sources through regulations, permits, or enforceable agreements, and (2) include commitments to dates by which any necessary regulations or other instruments would be established and implemented³
- A series of 2-year milestones detailing near-term actions and loading reduction targets to evaluate progress toward water quality goals

While more than two decades of voluntary, cost share, and regulatory efforts to reduce nutrient and sediment pollution from point and nonpoint sources to the Chesapeake Bay watershed have made some important progress, that progress has not been sufficient and is not likely to be sufficient to ensure restoration of the Bay in a reasonable period of time. Limited public funds further constrain agencies' ability to restore water quality at all levels of government. EPA believes that the watershed jurisdictions need to take strong action to assure the public that nutrient and sediment problems in the Bay will be reduced and controlled in the face of continued population growth and development of the watershed. EPA believes state adoption of enforceable or similarly accountable pollution control programs will reduce pollutant loadings to a degree far greater than EPA and the Bay watershed jurisdictions have been able to accomplish to date.

² The section "Current Policy and Legal Framework," below, provides more information on TMDLs and the Bay TMDL in particular.

³ EPA would not expect states that did not sign the Chesapeake 2000 Agreement but have committed to the water quality goals through a Memorandum of Understanding (Delaware, New York and West Virginia) to commit to establish and implement Clean Water Accountability Programs based on regulations, permits or enforceable agreements if they commit to an alternative program or programs that EPA can be assured will result in necessary loading reductions and demonstrate progress toward these goals through 2-year milestones.

Along with its “expectations,” EPA would identify a number of potential actions (“consequences”) EPA may take in the event that jurisdictions do not commit to establish and implement Clean Water Accountability Programs or do not achieve their 2-year milestones. These “consequences” may include, but are not limited to:

- Revising the draft or final pollutant WLAs in the Bay TMDL to assign more stringent pollutant reduction responsibilities to point sources of nutrient and sediment pollution
- Objecting to state-issued CWA National Pollutant Discharge Elimination System (NPDES) permits
- Acting to limit or prohibit new or expanded discharges of nutrients and sediments
- Withholding, conditioning, or reallocating federal grant funds
- Taking other actions as appropriate

EPA would hold itself accountable by adopting 2-year federal milestones for completing the actions described in item 2) below. EPA also would work with its federal partners, the six Bay watershed states, and the District of Columbia to control wastewater discharges and prevent runoff from federal facilities and lands, and account for these actions using federal 2-year milestones or a similarly transparent process.

2. New rulemakings/actions under the CWA, the CAA, and other authorities. To lead by example, EPA would initiate several actions to establish transparent accountability and set strong performance standards for restoring the Bay.

EPA would initiate rulemaking under the CWA to reduce nutrient and sediment pollution in the Chesapeake Bay watershed from the following sources, unless states strengthen their pollution control programs to achieve similar or greater reductions that EPA would achieve through rulemaking:

- Concentrated animal feeding operations (CAFOs): Expand the universe of regulated operations and set new minimum performance standards for permits, including regulating the land application of animal manure
- Stormwater: Expand the jurisdiction of the regulatory MS4 program to include high-growth areas and establish stringent minimum performance standards within permits consistent with Bay water quality goals
- New or expanding sources of nutrients and/or sediment: Ensure that any new or expanding discharges are offset by reductions from other sources at levels that account for scientific uncertainty and are in addition to existing commitments necessary to achieve Bay water quality goals
- Other pollutant sources as EPA deems necessary

EPA would propose and finalize its rulemakings as expeditiously as possible. The rules would be developed pursuant to authority provided in Sections 117 and 402 of the CWA and other relevant statutory provisions.

EPA would implement a Chesapeake Bay compliance and enforcement strategy that focuses on four key sectors — stormwater, CAFOs, municipal and industrial wastewater facilities, and stationary and mobile air sources.

EPA would ensure advanced nutrient removal technologies are installed by the 483 municipal and industrial wastewater dischargers that, collectively, discharge about 90 percent of the total municipal/industrial wastewater flow to the Bay, as necessary to meet these facilities' water quality-based permit limits. EPA would take action to ensure these technology upgrades stay on schedule, including objecting to draft permits as appropriate.

To assist the states in their management of pollution from onsite systems, EPA would develop a model state program for reducing discharges from onsite (septic) systems and set clear expectations that the jurisdictions commit to achieve Bay TMDL onsite system load allocations through enforceable or similarly effective programs.

EPA would fully implement its current nitrogen emission control programs and establish air deposition allocations as part of the load allocations for the Chesapeake Bay and tributary TMDLs. EPA would analyze whether additional reductions are needed to meet the air allocation targets.

The Executive Order directs Agencies to consult with the Federal Leadership Committee and, to the extent practicable and authorized under existing authorities, begin implementing core elements of their protection and restoration programs and strategies as soon as possible and prior to release of a final strategy. While EPA develops new regulations and programs, the Agency will also take action using a range of existing authorities to reduce nutrient and sediment pollution to the Bay.

EPA would account for, and track progress on, all of its rulemakings, actions, and their subsequent pollution reductions by adopting federal 2-year milestones.

3. An enhanced partnership between USDA and EPA to implement a “Healthy Bay – Thriving Agriculture” Initiative. Meeting the challenges in the Bay would require federal agencies to commit and coordinate resources on a scale that matches the scope of the environmental and agricultural issues in the region. EPA has a unique opportunity to undertake with USDA several new and ambitious efforts that build and expand upon the strong working relationships that have been reinforced in the development of the Chesapeake Bay Watershed Initiative. There are several key areas that could result in significant improvements for the Bay and farming communities:

- Development and implementation of an intensive and strategic effort to expand the use of key conservation practices in the high priority watersheds in the Bay
- Coordination on the development with other federal and state partners of next generation nutrient management planning tools
- Establishment of centerpiece projects in each of the Bay states to demonstrate benefits of significant and innovative conservation approaches to addressing key issues in the region
- Implementation of a targeted, collaborative initiative using USDA and EPA funds to support development of critically needed tools and technologies that

can create new market and revenue streams that support the adoption of conservation measures

Through the alignment of resources and continued work with federal, state, and local partners, the collaboration of EPA and USDA would accelerate the wider adoption of conservation practices and support innovative efforts to address some of the most pressing challenges to meeting water quality and agricultural goals in the Bay

