

# CHESAPEAKE BAY TMDL EXECUTIVE SUMMARY

## INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has established the Chesapeake Bay Total Maximum Daily Load (TMDL), a historic and comprehensive “pollution diet” with rigorous accountability measures to initiate sweeping actions to restore clean water in the Chesapeake Bay and the region’s streams, creeks and rivers.

Despite extensive restoration efforts during the past 25 years, the TMDL was prompted by insufficient progress and continued poor water quality in the Chesapeake Bay and its tidal tributaries. The TMDL is required under the federal Clean Water Act and responds to consent decrees in Virginia and the District of Columbia from the late 1990s. It is also a keystone commitment of a federal strategy to meet President Barack Obama’s Executive Order to restore and protect the Bay.

The TMDL – the largest ever developed by EPA – identifies the necessary pollution reductions of nitrogen, phosphorus and sediment across Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia and sets pollution limits necessary to meet applicable water quality standards in the Bay and its tidal rivers and embayments. Specifically, the TMDL sets Bay watershed limits of 185.9 million pounds of nitrogen, 12.5 million pounds of phosphorus and 6.45 billion pounds of sediment per year – a 25 percent reduction in nitrogen, 24 percent reduction in phosphorus and 20 percent reduction in sediment. These pollution limits are further divided by jurisdiction and major river basin based on state-of-the-art modeling tools, extensive monitoring data, peer-reviewed science and close interaction with jurisdiction partners.

The TMDL is designed to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025, with at least 60 percent of the actions completed by 2017. The TMDL is supported by rigorous accountability measures to ensure cleanup commitments are met, including short-and long-term benchmarks, a tracking and accountability system for jurisdiction activities, and federal contingency actions that can be employed if necessary to spur progress.

Watershed Implementation Plans (WIPs), which detail how and when the six Bay states and the District of Columbia will meet pollution allocations, played a central role in shaping the TMDL. Most of the draft WIPs submitted by the jurisdictions in September 2010 did not sufficiently identify programs needed to reduce pollution or provide assurance the programs could be implemented. As a result, the draft TMDL issued September 24, 2010 contained moderate- to high-level backstop measures to tighten controls on federally permitted point sources of pollution.

A 45-day public comment period on the draft TMDL was held from September 24 to November 8, 2010. During that time, EPA held 18 public meetings in all seven Bay watershed jurisdictions, which were attended by about 2,500 citizens. EPA received more than 14,000 public comments and, where appropriate, incorporated responses to those comments in developing the final TMDL.

After states submitted the draft WIPs, EPA worked closely with each jurisdiction to revise and strengthen its plan. Because of this cooperative work and state leadership, the final WIPs were significantly improved. Examples of specific improvements include:

- Regulated point sources and non-regulated nonpoint sources of nitrogen, phosphorus, and sediment are fully considered and evaluated separately in terms of their relative contributions to water quality impairment of the Chesapeake Bay's tidal waters.
- Committing to more stringent nitrogen and phosphorus limits at wastewater treatment plants, including on the James River in Virginia. (Virginia, New York, Delaware)
- Pursuing state legislation to fund wastewater treatment plant upgrades, urban stormwater management and agricultural programs. (Maryland, Virginia, West Virginia)
- Implementing a progressive stormwater permit to reduce pollution. (District of Columbia)
- Dramatically increasing enforcement and compliance of state requirements for agriculture. (Pennsylvania)
- Committing state funding to develop and implement state-of-the-art-technologies for converting animal manure to energy for farms. (Pennsylvania)
- Considering implementation of mandatory programs for agriculture by 2013 if pollution reductions fall behind schedule. (Delaware, Maryland, Virginia)

These improvements enabled EPA to reduce and remove most federal backstops, leaving a few targeted backstops and a plan for enhanced oversight and contingency actions to ensure progress. As a result, the final TMDL is shaped in large part by the jurisdictions' plans to reduce pollution, which was a long-standing priority for EPA and why the agency always provided the jurisdictions with flexibility to determine how to reduce pollution in the most efficient, cost-effective and acceptable manner.

Now the focus shifts to the jurisdictions' implementation of the WIP policies and programs that will reduce pollution on-the-ground and in-the-water. EPA will conduct oversight of WIP implementation and jurisdictions' progress toward meeting two-year milestones. If progress is insufficient, EPA is committed to take appropriate contingency actions including targeted compliance and enforcement activities, expansion of requirements to obtain NPDES permit coverage for currently unregulated sources, revision of the TMDL allocations and additional controls on federally permitted sources of pollution, such as wastewater treatment plants, large animal agriculture operations and municipal stormwater systems.

In 2011, while the jurisdictions continue to implement their WIPs, they will begin development of Phase II WIPs, designed to engage local governments, watershed organizations, conservation districts, citizens and other key stakeholders in reducing water pollution.

## **TMDL BACKGROUND**

The Clean Water Act (CWA) sets an overarching environmental goal that all waters of the United States be "fishable" and "swimmable." More specifically it requires states and the District of Columbia to establish appropriate uses for their waters and adopt water quality standards that are protective of those uses. The CWA also requires that every two years jurisdictions develop – with EPA approval – a list of waterways that are impaired by pollutants and do not meet water

quality standards. For those waterways identified on the impaired list, a TMDL must be developed. A TMDL is essentially a “pollution diet” that identifies the maximum amount of a pollutant the waterway can receive and still meet water quality standards.

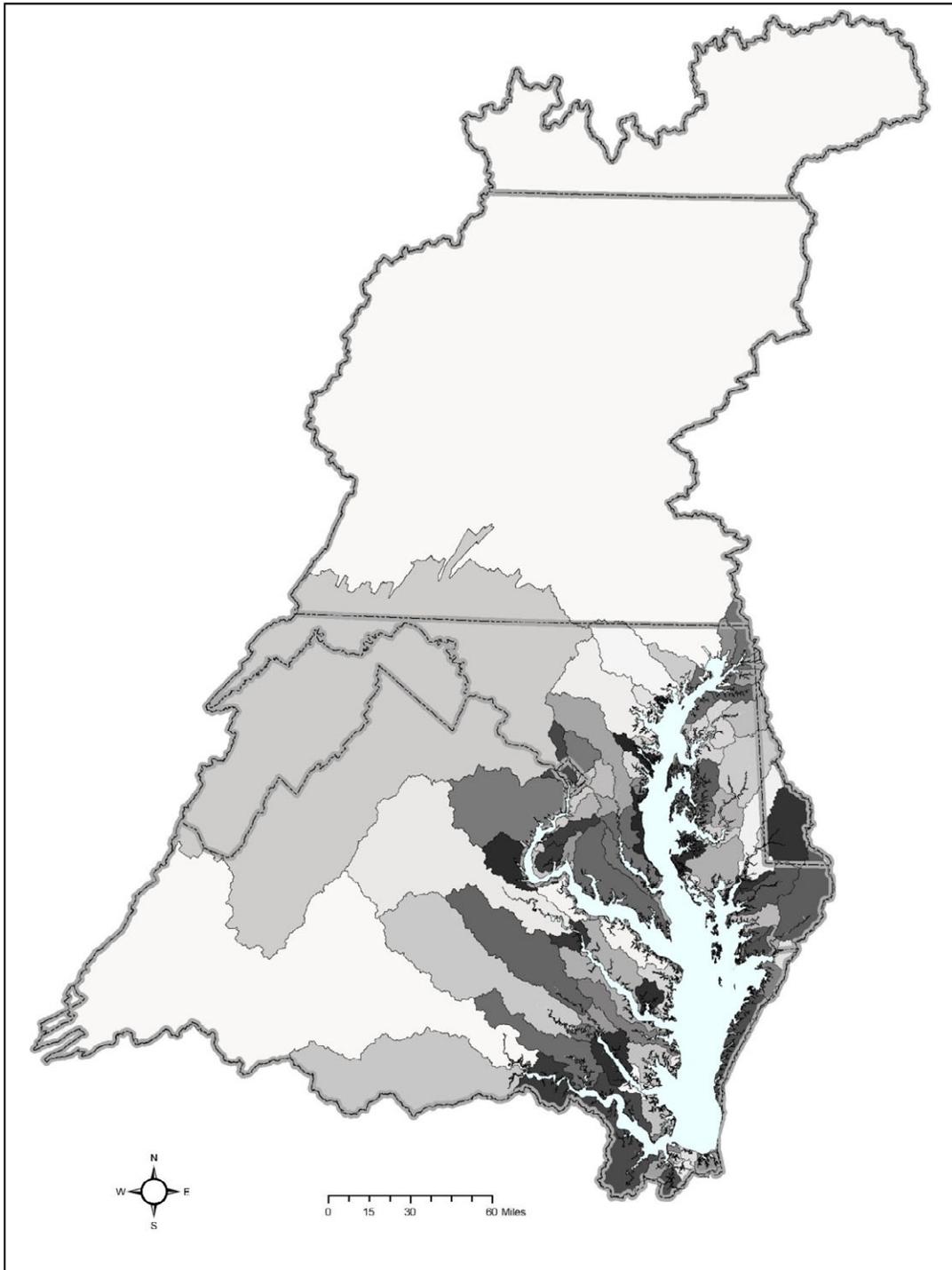
Most of the Chesapeake Bay and its tidal waters are listed as impaired because of excess nitrogen, phosphorus and sediment. These pollutants cause algae blooms that consume oxygen and create “dead zones” where fish and shellfish cannot survive, block sunlight that is needed for underwater Bay grasses, and smother aquatic life on the bottom. The high levels of nitrogen, phosphorus and sediment enter the water from agricultural operations, urban and suburban stormwater runoff, wastewater facilities, air pollution and other sources, including onsite septic systems. Despite some reductions in pollution during the past 25 years of restoration due to efforts by federal, state and local governments; non-governmental organizations; and stakeholders in the agriculture, urban/suburban stormwater, and wastewater sectors, there has been insufficient progress toward meeting the water quality goals for the Chesapeake Bay and its tidal waters.

More than 40,000 TMDLs have been completed across the United States, but the Chesapeake Bay TMDL will be the largest and most complex thus far – it is designed to achieve significant reductions in nitrogen, phosphorus and sediment pollution throughout a 64,000-square-mile watershed that includes the District of Columbia and large sections of six states. The TMDL is actually a combination of 92 smaller TMDLs for individual Chesapeake Bay tidal segments and includes pollution limits that are sufficient to meet state water quality standards for dissolved oxygen, water clarity, underwater Bay grasses and chlorophyll-*a*, an indicator of algae levels (Figure ES-1). It is important to note that the pollution controls employed to meet the TMDL will also have significant benefits for water quality in tens of thousands of streams, creeks, lakes and rivers throughout the region.

Since 2000, the seven jurisdictions in the Chesapeake Bay watershed (Delaware, District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia), EPA and the Chesapeake Bay Commission, which are partners in the Chesapeake Bay Program, have been planning for a Chesapeake Bay TMDL.

Since September 2005, the seven jurisdictions have been actively involved in decision-making to develop the TMDL. During the October 2007 meeting of the Chesapeake Bay Program’s Principals’ Staff Committee, the Bay watershed jurisdictions and EPA agreed that EPA would establish the multi-state TMDL. Since 2008, EPA has sent official letters to the jurisdictions detailing all facets of the TMDL, including: nitrogen, phosphorus and sediment allocations; schedules for developing the TMDL and pollution reduction plans; EPA’s expectations and evaluation criteria for jurisdiction plans to meet the TMDL pollution limits; reasonable assurance for controlling nonpoint source pollution; and backstop actions that EPA could take to ensure progress.

The TMDL also resolves commitments made in a number of consent decrees, Memos of Understanding, the Chesapeake Bay Foundation settlement agreement of 2010, and settlement agreements dating back to the late 1990s that address certain tidal waters identified as impaired in the District of Columbia, Delaware, Maryland and Virginia.



**Figure ES-1. A nitrogen, phosphorus and sediment TMDL has been developed for each of the 92 Chesapeake Bay segment watersheds.**

Additionally, President Obama issued Executive Order 13508 on May 12, 2009, which directed the federal government to lead a renewed effort to restore and protect the Chesapeake Bay and its watershed. The Chesapeake Bay TMDL is a keystone commitment in the strategy developed by 11 federal agencies to meet the President’s Executive Order.

## DEVELOPING THE CHESAPEAKE BAY TMDL

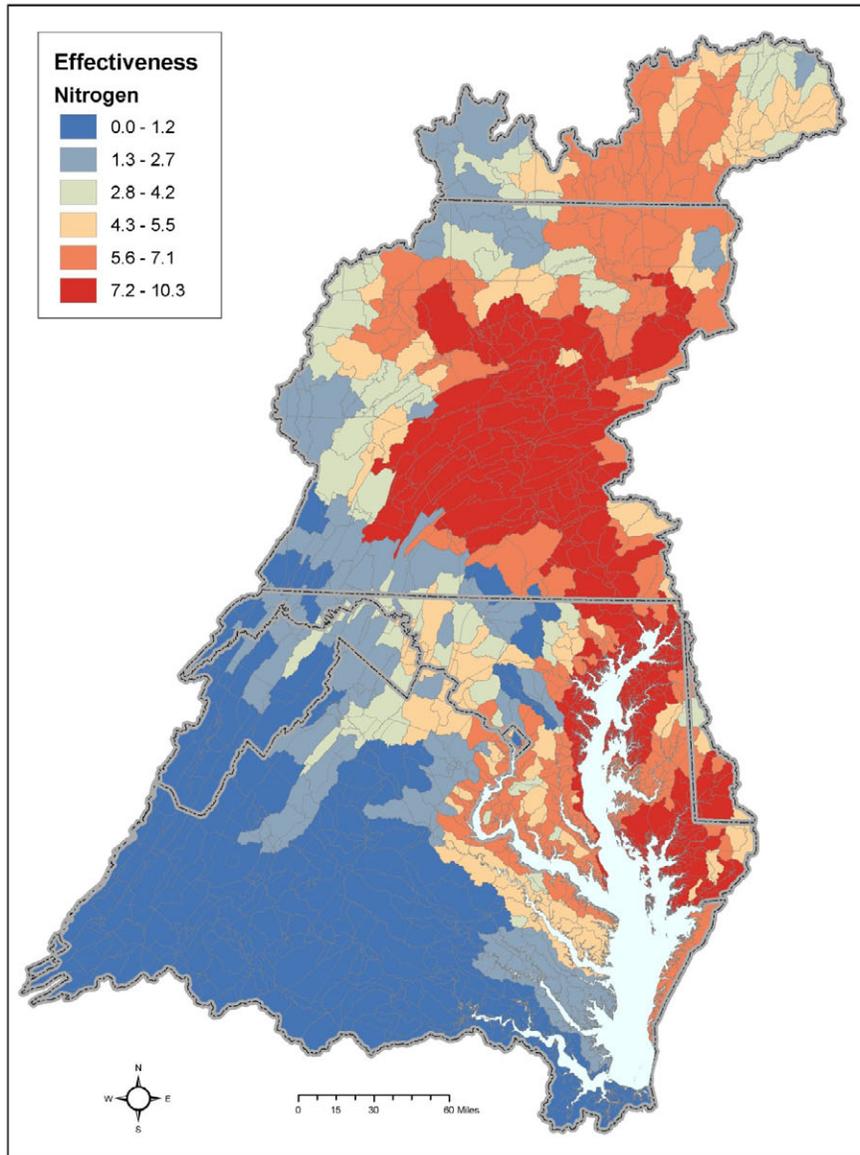
Development of the Chesapeake Bay TMDL required extensive knowledge of the stream flow characteristics of the watershed, sources of pollution, distribution and acreage of the various land uses, appropriate best management practices, the transport and fate of pollutants, precipitation data and many other factors. The TMDL is informed by a series of models, calibrated to decades of water quality and other data, and refined based on input from dozens of Chesapeake Bay scientists. Modeling is an approach that uses observed and simulated data to replicate what is occurring in the environment to make future predictions, and was a critical and valuable tool to develop the Chesapeake Bay TMDL.

The development of the TMDL consisted of several steps:

1. EPA provided the jurisdictions with loading allocations for nitrogen, phosphorus and sediment for the major river basins by jurisdiction.
2. Jurisdictions developed draft Phase I WIPs to achieve those basin-jurisdiction allocations. In those draft WIPs, jurisdictions made decisions on how to further sub-allocate the basin-jurisdiction loadings to various individual point sources and a number of point and nonpoint source pollution sectors.
3. EPA evaluated the draft WIPs and, where deficiencies existed, EPA provided backstop allocations in the draft TMDL that consisted of a hybrid of the jurisdiction WIP allocations modified by EPA allocations for some source sectors to fill gaps in the WIPs.
4. The draft TMDL was published for a 45-day public comment period and EPA held 18 public meetings in all six states and the District of Columbia. Public comments were received, reviewed and considered for the final TMDL.
5. Jurisdictions, working closely with EPA, revised and strengthened Phase I WIPs and submitted final versions to EPA.
6. EPA evaluated the final WIPs and used them along with public comments to develop the final TMDL.

Since nitrogen and phosphorus loadings from all parts of the Bay watershed have an impact on the impaired tidal segments of the Bay and its rivers, it was necessary for EPA to allocate the nitrogen and phosphorus loadings in an equitable manner to the states and basins. EPA used three basic guides to divide these loads.

- Allocated loads should protect living resources of the Bay and its tidal tributaries and should result in all segments of the Bay mainstem, tidal tributaries and embayments meeting water quality standards for dissolved oxygen, chlorophyll *a*, water clarity and underwater Bay grasses.
- Tributary basins that contribute the most to the Bay water quality problems must do the most to resolve those problems (on a pound-per-pound basis) (Figure ES-2).
- All tracked and reported reductions in nitrogen, phosphorus and sediment loads are credited toward achieving final assigned loads.



**Figure ES-2. Sub-basins across the Chesapeake Bay watershed with the highest (red) to lowest (blue) pound for pound nitrogen pollutant loading effect on Chesapeake Bay water quality.**

In addition, EPA has committed to reducing air deposition of nitrogen to the tidal waters of the Chesapeake Bay from 17.9 to 15.7 million pounds per year. The reductions will be achieved through implementation of federal air regulations during the coming years.

To ensure that these pollutant loadings will attain and maintain applicable water quality standards, the TMDL calculations were developed to account for critical environmental conditions a waterway would face and seasonal variation. An implicit margin of safety for nitrogen and phosphorus, and an explicit margin of safety for sediment, also are included in the TMDL.

Ultimately, the TMDL is designed to ensure that by 2025 all practices necessary to fully restore the Bay and its tidal waters are in place, with at least 60 percent of the actions taken by 2017.

The TMDL loadings to the basin-jurisdictions are provided in Table ES-1. These loadings were determined using the best peer-reviewed science and through extensive collaboration with the jurisdictions and are informed by the jurisdictions' Phase I WIPs.

**Table ES-1. Chesapeake Bay TMDL watershed nitrogen, phosphorus and sediment final allocations by jurisdiction and by major river basin.**

Jurisdiction	Basin	Nitrogen allocations (million lbs/year)	Phosphorus allocations (million lbs/year)	Sediment allocations (million lbs/year)
Pennsylvania	Susquehanna	68.90	2.49	1,741.17
	Potomac	4.72	0.42	221.11
	Eastern Shore	0.28	0.01	21.14
	Western Shore	0.02	0.00	0.37
	<b>PA Total</b>	<b>73.93</b>	<b>2.93</b>	<b>1,983.78</b>
Maryland	Susquehanna	1.09	0.05	62.84
	Eastern Shore	9.71	1.02	168.85
	Western Shore	9.04	0.51	199.82
	Patuxent	2.86	0.24	106.30
	Potomac	16.38	0.90	680.29
	<b>MD Total</b>	<b>39.09</b>	<b>2.72</b>	<b>1,218.10</b>
Virginia	Eastern Shore	1.31	0.14	11.31
	Potomac	17.77	1.41	829.53
	Rappahannock	5.84	0.90	700.04
	York	5.41	0.54	117.80
	James	23.09	2.37	920.23
	<b>VA Total</b>	<b>53.42</b>	<b>5.36</b>	<b>2,578.90</b>
District of Columbia	Potomac	2.32	0.12	11.16
	<b>DC Total</b>	<b>2.32</b>	<b>0.12</b>	<b>11.16</b>
New York	Susquehanna	8.77	0.57	292.96
	<b>NY Total</b>	<b>8.77</b>	<b>0.57</b>	<b>292.96</b>
Delaware	Eastern Shore	2.95	0.26	57.82
	<b>DE Total</b>	<b>2.95</b>	<b>0.26</b>	<b>57.82</b>
West Virginia	Potomac	5.43	0.58	294.24
	James	0.02	0.01	16.65
	<b>WV Total</b>	<b>5.45</b>	<b>0.59</b>	<b>310.88</b>
<b>Total Basin/Jurisdiction Draft Allocation</b>		<b>185.93</b>	<b>12.54</b>	<b>6,453.61</b>
<b>Atmospheric Deposition Draft Allocation<sup>a</sup></b>		<b>15.7</b>	<b>N/A</b>	<b>N/A</b>
<b>Total Basinwide Draft Allocation</b>		<b>201.63</b>	<b>12.54</b>	<b>6,453.61</b>

<sup>a</sup> Cap on atmospheric deposition loads direct to Chesapeake Bay and tidal tributary surface waters to be achieved by federal air regulations through 2020.

## ACCOUNTABILITY AND GOALS

The Chesapeake Bay TMDL is unique because of the extensive measures EPA and the jurisdictions have adopted to ensure accountability for reducing pollution and meeting deadlines for progress. The TMDL will be implemented using an accountability framework that includes WIPs, two-year milestones, EPA's tracking and assessment of restoration progress and, as necessary, specific federal contingency actions if the jurisdictions do not meet their commitments. This accountability framework is being established in part to provide demonstration of the reasonable assurance provisions of the Chesapeake Bay TMDL pursuant to both the Clean Water Act (CWA) and the Chesapeake Bay Executive Order, but is not part of the TMDL itself.

When EPA establishes or approves a TMDL that allocates pollutant loads to both point and nonpoint sources, it determines whether there is a "reasonable assurance" that the point and nonpoint source loadings will be achieved and applicable water quality standards will be attained. Reasonable assurance for the Chesapeake Bay TMDL is provided by the numerous federal, state and local regulatory and non-regulatory programs identified in the accountability framework that EPA believes will result in the necessary point and nonpoint source controls and pollutant reduction programs. The most prominent program is the CWA's National Pollutant Discharge Elimination System (NPDES) permit program that regulates point sources throughout the nation. Many nonpoint sources are not covered by a similar federal permit program; as a result, financial incentives, other voluntary programs and state-specific regulatory programs are used to achieve nonpoint source reductions. These federal tools are supplemented by a variety of state and local regulatory and voluntary programs and other commitments of the federal government set forth in the Executive Order strategy and identified in the accountability framework.

Beginning in 2012, jurisdictions (including the federal government) are expected to follow two-year milestones to track progress toward reaching the TMDL's goals. In addition, the milestones will demonstrate the effectiveness of the jurisdictions' WIPs by identifying specific near-term pollutant reduction controls and a schedule for implementation (see next section for further description of WIPs). EPA will review these two-year milestones and evaluate whether they are sufficient to achieve necessary pollution reductions and, through the use of a Bay TMDL Tracking and Accountability System, determine if milestones are met.

If a jurisdiction's plans are inadequate or its progress is insufficient, EPA is committed to take the appropriate contingency actions to ensure pollution reductions. These include expanding coverage of NPDES permits to sources that are currently unregulated, increasing oversight of state-issued NPDES permits, requiring additional pollution reductions from point sources such as wastewater treatment plants, increasing federal enforcement and compliance in the watershed, prohibiting new or expanded pollution discharges, redirecting EPA grants, and revising water quality standards to better protect local and downstream waters.

### *Watershed Implementation Plans*

The cornerstone of the accountability framework is the jurisdictions' development of WIPs, which serve as roadmaps for how and when a jurisdiction plans to meet its pollutant allocations under the TMDL. In their Phase I WIPs, the jurisdictions were expected to subdivide the Bay TMDL allocations among pollutant sources; evaluate their current legal, regulatory,

programmatic and financial tools available to implement the allocations; identify and rectify potential shortfalls in attaining the allocations; describe mechanisms to track and report implementation activities; provide alternative approaches; and outline a schedule for implementation.

EPA provided the jurisdictions with detailed expectations for WIPs in November 2009 and evaluation criteria in April 2010. To assist with WIP preparation, EPA provided considerable technical and financial assistance. EPA worked with the jurisdictions to evaluate various “what if” scenarios – combinations of practices and programs that could achieve their pollution allocations.

The two most important criteria for a WIP is that it achieves the basin-jurisdiction pollution allocations and meets EPA’s expectations for providing reasonable assurance that reductions will be achieved and maintained, particularly for non-permitted sources like runoff from agricultural lands and currently unregulated stormwater from urban and suburban lands.

After the draft Phase I WIP submittals in September 2010, a team of EPA sector experts conducted an intense evaluation process, comparing the submissions with EPA expectations. The EPA evaluation concluded that the pollution controls identified in two of the seven jurisdictions’ draft WIPs could meet nitrogen and phosphorus allocations and five of the seven jurisdictions’ draft WIPs could meet sediment allocations. The EPA evaluation also concluded that none of the seven draft Phase I WIPs provided sufficient reasonable assurance that pollution controls identified could actually be implemented to achieve the nitrogen, phosphorus and sediment reduction targets by 2017 or 2025.

In response to its findings, EPA developed a draft TMDL that established allocations based on using the adequate portions of the jurisdictions’ draft WIP allocations along with varying degrees of federal backstop allocations in all seven jurisdictions. Backstop allocations focused on areas where EPA has the federal authority to control pollution allocations through NPDES permits, including wastewater treatment plants, stormwater permits, and animal feeding operations.

### **Public Participation**

The draft Chesapeake Bay TMDL was developed through a highly transparent and engaging process during the past two years. The outreach effort included hundreds of meetings with interested groups; two rounds of public meetings, stakeholder sessions and media interviews in all six states and the District of Columbia in fall of 2009 and 2010; a dedicated EPA website; a series of monthly interactive webinars; notices published in the Federal Register; and a close working relationship with Chesapeake Bay Program committees representing citizens, local governments and the scientific community.

The release of the draft Chesapeake Bay TMDL on September 24, 2010 began a 45-day public comment period that concluded on November 8, 2010. During the comment period EPA conducted 18 public meetings in all six states and the District of Columbia. More than 2,500 people participated in the public meetings. Seven of these meetings were also broadcast live online. During the six weeks that EPA officials traveled around the watershed, they also held dozens of meetings with stakeholders, including local governments, agriculture groups, homebuilder and developer associations, wastewater industry representatives and environmental

organizations. EPA received more than 14,000 comments – most of which supported the TMDL – and the Agency’s response to those comments is included as an appendix to the TMDL.

### ***Final Watershed Implementation Plans and TMDL***

Since submittal of the draft WIPs and release of the draft TMDL in September 2010, EPA worked closely with each jurisdiction to revise and strengthen its plan. Because of this cooperative work and state leadership, the final WIPs were significantly improved. Examples of specific improvements include:

- Committing to more stringent nitrogen and phosphorus limits at wastewater treatment plants, including on the James River in Virginia. (Virginia, New York, Delaware)
- Pursuing state legislation to fund wastewater treatment plant upgrades, urban stormwater management and agricultural programs. (Maryland, Virginia, West Virginia)
- Implementing a progressive stormwater permit to reduce pollution. (District of Columbia)
- Dramatically increasing enforcement and compliance of state requirements for agriculture. (Pennsylvania)
- Committing state funding to develop and implement state-of-the-art-technologies for converting animal manure to energy for farms. (Pennsylvania)
- Considering implementation of mandatory programs for agriculture by 2013 if pollution reductions fall behind schedule. (Delaware, Maryland, Virginia)

These improvements enabled EPA to reduce and remove most federal backstops, leaving a few targeted backstops and a plan for enhanced oversight and contingency actions to ensure progress.

### **Backstop Allocations, Adjustments, and Actions**

Despite the significant improvement in the final WIPs, one of the jurisdictions did not meet all of its target allocations and two of the jurisdictions did not fully meet EPA’s expectations for reasonable assurance for specific pollution sectors. To address these few remaining issues, EPA included in the final TMDL several targeted backstop allocations, adjustments and actions. As a result of the jurisdictions’ significant improvements combined with EPA’s backstops, EPA believes the jurisdictions are in a position to implement their WIPs and achieve the needed pollution reductions. This approach endorses jurisdictions’ pollution reduction commitments, gives them the flexibility to do it their way first, and signals EPA’s commitment to fully use its authorities as necessary to reduce pollution.

#### **New York Wastewater – Backstop Allocation**

- EPA closed the numeric gap between New York’s WIP and its modified allocations by establishing a backstop that further reduces New York’s wasteload allocation for wastewater. EPA is establishing an aggregate wasteload allocation for wastewater treatment plants.
- EPA calculated this backstop WLA using the nitrogen and phosphorus performance levels that New York committed to, but assumes that significant wastewater treatment plants (WWTPs) are at current flow rather than design flow.

- EPA understands that New York plans to renew and/or modify WWTP permits upon completion of its Phase II WIP, consistent with the applicable TMDL allocations at that time. New York is reviewing engineering reports from WWTPs and, in its Phase II WIP, will provide information to support individual WLAs for these plants.

#### Pennsylvania Urban Stormwater – Backstop Adjustment

- EPA transferred 50 percent of the stormwater load that is not currently subject to NPDES permits from the load allocation to the wasteload allocation. The TMDL allocation adjustment increases reasonable assurance that pollution allocations from urban stormwater discharges will be achieved and maintained by signaling that EPA is prepared to designate any of these discharges as requiring NPDES permits. Urban areas would only be subject to NPDES permit conditions protective of water quality as issued by Pennsylvania upon designation. EPA will consider this step if Pennsylvania does not demonstrate progress toward reductions in urban loads identified in the WIP. EPA may also pursue designation activities based on considerations other than TMDL and WIP implementation.
- EPA will maintain close oversight of general permits for the Pennsylvania stormwater sector (PAG-13 and PAG-2) and may object if permits are not protective of water quality standards and regulations. Upon review of Pennsylvania's Phase II WIP, EPA will revisit the wasteload allocations for wastewater treatment plants, including more stringent phosphorus limits, in the event that Pennsylvania does not reissue PAG-13 and PAG-2 general permits for Phase II MS4s and construction that are protective of water quality by achieving the load reductions called for in Pennsylvania's Phase I WIP.

#### West Virginia Agriculture – Backstop Adjustment

- EPA shifted 75 percent of West Virginia's animal feeding operation (AFO) load into the wasteload allocation and assumed full implementation of barnyard runoff control, waste management and mortality composting practices required under a CAFO permit on these AFOs. The shift signals that any of these operations could potentially be subject to state or federal permits as necessary to protect water quality. AFOs would only be subject to NPDES permit conditions as issued by West Virginia upon designation. EPA will consider this step if West Virginia does not achieve reductions in agricultural loads as identified in the WIP. EPA may also pursue designation activities based upon considerations other than TMDL and WIP implementation.
- Based upon West Virginia's ability to demonstrate near-term progress implementing the agricultural section of its WIP, including CAFO Program authorization and permit applications and issuance, EPA will assess in the Phase II WIP whether additional federal actions, such as establishing more stringent wasteload allocations for wastewater treatment plants, are necessary to ensure that TMDL allocations are achieved.

#### Enhanced Oversight and Contingencies

While final WIPs were significantly improved and the jurisdictions deserve credit for the efforts, EPA also has minor concerns with the assurance that pollution reductions can be achieved in certain pollution sectors in Pennsylvania, Virginia and West Virginia. EPA has informed these jurisdictions that it will consider future backstops if specific near-term progress is not demonstrated in the Phase II WIP.

### Pennsylvania Agriculture

- Based on Pennsylvania's ability to demonstrate near-term progress implementing the agricultural section of its WIP, including EPA approval for its CAFO program and enhanced compliance assurance with state regulatory programs, EPA will assess in the Phase II WIP whether additional federal actions, such as shifting AFO loads from the load allocation to the wasteload allocation or establishing more stringent wasteload allocations for WWTPs, are necessary to ensure that TMDL allocations are achieved.

### Pennsylvania Wastewater

- EPA established individual wasteload allocations for wastewater treatment plants in the TMDL to ensure that sufficient detail is provided to inform individual permits for sources within the wasteload allocation. Individual allocations do not commit wastewater plants to greater reductions than what the state has proposed in its WIP. Provisions of the TMDL allow, under certain circumstances, for modifications of allocations within a basin to support offsets and trading opportunities.
- EPA will assess Pennsylvania's near-term urban stormwater and agriculture program progress and determine whether EPA should modify TMDL allocations to assume additional reductions from wastewater treatment plants.

### Virginia Urban Stormwater

- If the statewide rule and/or the Phase II WIP do not provide additional assurance regarding how stormwater discharges outside of MS4 jurisdictions will achieve nitrogen, phosphorus, and sediment reductions proposed in the final Phase I WIP and assumed within the TMDL allocations, EPA may shift a greater portion of Virginia's urban stormwater load from the load allocation to the wasteload allocation. This shift would signal that substantially more stormwater could potentially be subject to NPDES permits issued by the Commonwealth as necessary to protect water quality.

### West Virginia Urban Stormwater

- If stormwater rules and/or the Phase II WIP do not provide additional assurance regarding how urban stormwater discharges outside of MS4 jurisdictions will achieve nitrogen, phosphorus, and sediment allocations proposed in the final Phase I WIP and assumed within the TMDL load allocations, EPA may shift a greater portion of West Virginia's urban stormwater load from the load allocation to the wasteload allocation. The shift would signal that substantially more urban stormwater could potentially be subject to state permit coverage and/or federal Clean Water Act permit coverage as necessary to protect water quality.

### West Virginia Wastewater

- EPA established individual wasteload allocations for significant wastewater treatment plants in the TMDL to ensure that sufficient detail is provided to inform individual permits for sources within the wastewater wasteload allocation. Individual allocations do not commit wastewater plants to greater reductions than what the state has proposed in its WIP. Provisions of this TMDL allow, under certain circumstances, for modifications of allocations within a basin to support offsets and trading opportunities.

- EPA will assess West Virginia's near-term agriculture program progress and determine whether additional federal actions consistent with EPA's December 29, 2009 letter, such as modifying TMDL allocations to assume additional reductions from wastewater treatment plants, are necessary to ensure that TMDL allocations are achieved.

### Ongoing oversight of Chesapeake Bay jurisdictions

EPA will carefully review programs and permits in all jurisdictions. EPA's goal is for jurisdictions to successfully implement their WIPs, but EPA is prepared to take necessary actions in all jurisdictions for insufficient WIP implementation or pollution reductions. Federal actions can be taken at any time, although EPA will engage particularly during two-year milestones and refining the TMDL in 2012 and 2017. Actions include:

- Expanding coverage of NPDES permits to sources that are currently unregulated
- Increasing oversight of state-issued NPDES permits
- Requiring additional pollution reductions from federally regulated sources
- Increasing federal enforcement and compliance
- Prohibiting new or expanded pollution discharges
- Conditioning or redirecting EPA grants
- Revising water quality standards to better protect local and downstream waters
- Discounting nutrient and sediment reduction progress if jurisdiction cannot verify proper installation and management of controls

### FINAL TMDL

As a result of the significantly improved WIPs and the removal and reduction of federal backstops, the final TMDL is shaped in large part by the jurisdictions' plans to reduce pollution. Jurisdiction-based solutions for reducing pollution was a long-standing priority for EPA and why the agency always provided the jurisdictions with flexibility to determine how to reduce pollution in the most efficient, cost-effective and acceptable manner.

Now, the focus shifts to jurisdictions' implementation of the WIP policies and programs designed to reduce pollution on-the-ground and in-the-water. EPA will conduct oversight of WIP implementation and jurisdictions' progress toward meeting two-year milestones. If progress is insufficient, EPA will utilize contingencies to place additional controls on federally permitted sources of pollution, such as wastewater treatment plants, large animal agriculture operations and municipal stormwater systems, as well as target compliance and enforcement activities.

Federal agencies will greatly contribute to restoration of the Chesapeake Bay watershed, particularly through implementation of the new federal strategy created under President Obama's Executive Order. Eleven federal agencies have committed to a comprehensive suite of actions and pursuit of critical environmental goals on the same 2025 timeline as the TMDL. Additionally, federal agencies will be establishing and meeting two-year milestones, with the specific charge of taking actions that directly support the jurisdictions in reducing pollution and restoring water quality.

The jurisdictions are expected to submit Phase II WIPs that provide local area pollution targets for implementation on a smaller scale; the timeframe for these Phase II WIPs will be determined in early 2011. Phase III WIPs in 2017 are expected to be designed to provide additional detail of restoration actions beyond 2017 and ensure that the 2025 goals are met.