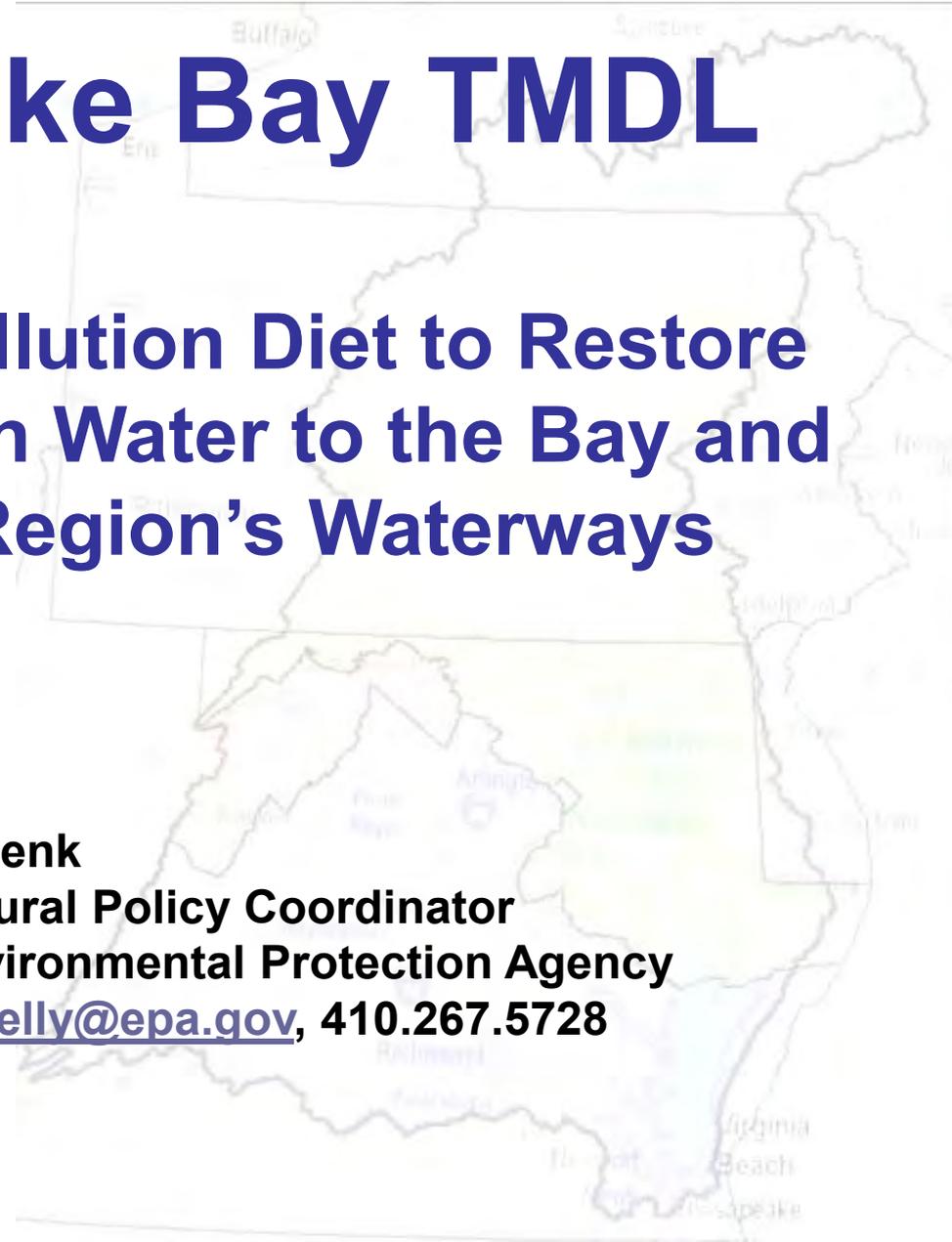


The Chesapeake Bay TMDL



**A Pollution Diet to Restore
Clean Water to the Bay and
the Region's Waterways**

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Final Chesapeake Bay TMDL

- A rigorous and historic “pollution diet” to restore clean water to Bay and the region’s streams, creeks and rivers.
- Bay TMDL is the most comprehensive roadmap for restoration we have ever had for Chesapeake Bay.
- Addresses all sectors/major sources of nutrient & sediment pollution.

Why a Chesapeake Bay TMDL?



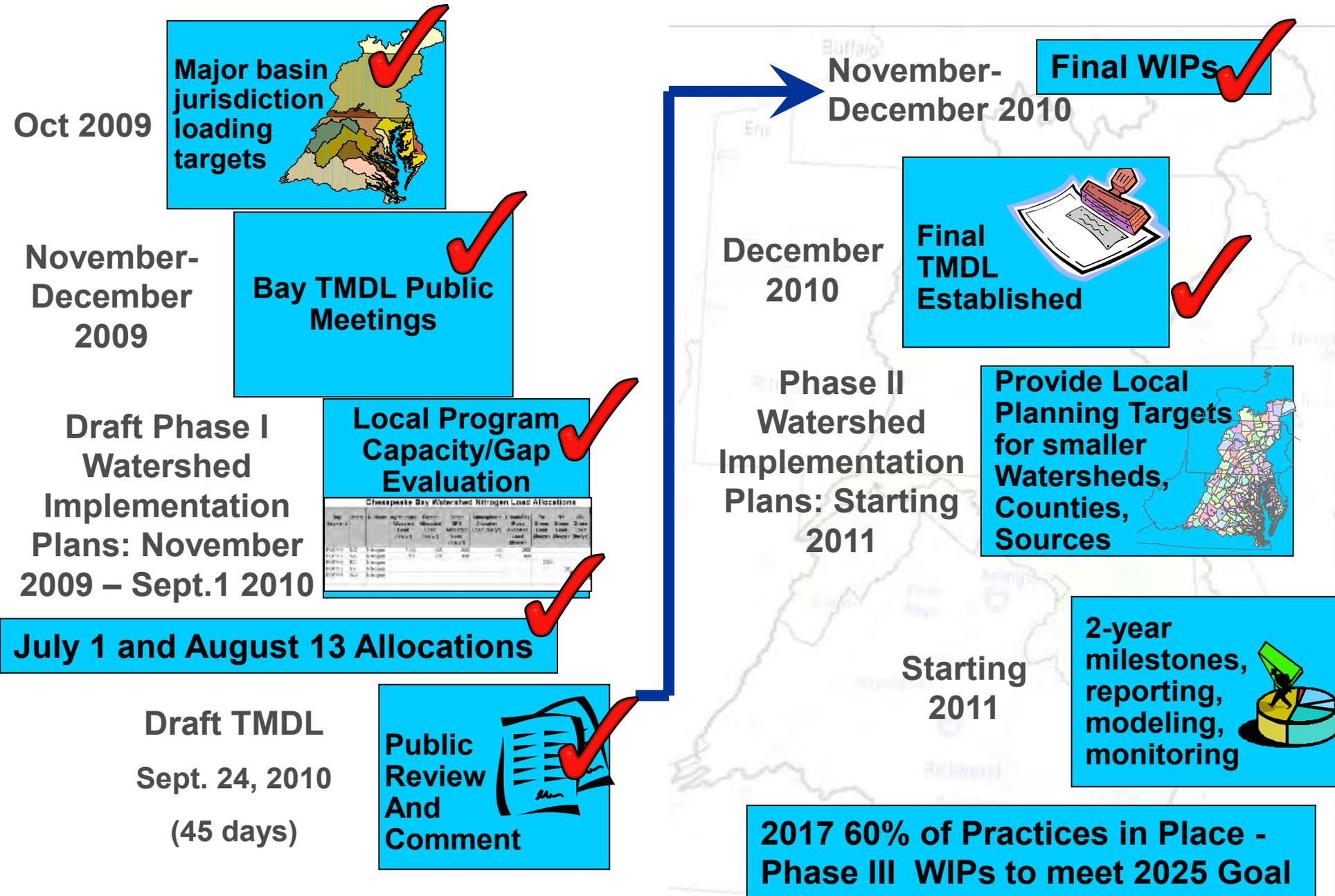
- Insufficient restoration progress through current voluntary and regulatory measures.
- Required under the Clean Water Act and responds to court orders and legal settlements. Cornerstone of the Executive Order Strategy.
- Bay jurisdictions (Chesapeake Executive Council) agreed to the December 2010 deadline.

Final Chesapeake Bay TMDL



- EPA and jurisdictions worked extensively together in crafting the TMDL.
- Final TMDL is shaped by extensive input from public, stakeholder groups & jurisdictions throughout a two-year process.
- Designed with rigorous accountability measures to ensure that all pollution controls needed to restore Bay are in place by 2025, with 60 percent by 2017.
- Restoration activities will protect the economic value of the Bay and rivers, and be a driver for local economies.

TMDL and WIP Development Schedule: 2009-2017



Watershed Implementation Plans (WIPs)

The how, when and where of attaining the TMDL diet.

Goal: EPA's strong preference was to use jurisdiction WIPs as the basis for final TMDL allocations. Backstop allocations and adjustments were initiated by EPA only where this was not possible.

- WIPs must:
 - achieve pollution reduction targets
 - provide reasonable assurance

- The seven jurisdictions provided Draft WIPs in early September 2010 and worked with EPA to resolve any outstanding issues for final submission in November.



Overall Findings of Final Phase I WIPs

- Jurisdictions made significant improvements between draft and final plans.
 - Six of the seven jurisdictions achieved nutrient & sediment allocations
 - WIPs significantly strengthened & have addressed most EPA comments.
 - Most earlier backstop actions have been removed or reduced.
- **Result:** Final TMDL driven primarily by the states' proposed plans to reduce pollution – **EPA's goal all along!**



Final WIP Evaluation: Wastewater

- General improvements for RA in final WIPs for most states:

- **Identified additional sources** to allow proper WLA accountability
- **Included gap filling measures** to address funding and staff resource concerns
- **Provided stronger language** with compliance timeframes and commitments for compliance tracking

- States strong concern about EPA's proposed "backstop" allocations to WWTPs – provided incentive for improvements.

- PA: Provided more detail on permit #'s and implementation schedules for sig WWTP upgrades.



Final WIP Evaluation: Urban Stormwater

- General improvements for RA in final WIPs for most states:
 - **More detailed and explicit programs**, making it easier to evaluate reasonable assurance
 - **More consistency** between input deck and narratives
 - **More accountability and/or enforceability**
 - **Better defined contingencies**
 - **Commitments to strengthen permits** and regulatory programs and to pursuing rulemakings

- PA: Strong description of Chapter 102, no net increase provision.



Final WIP Evaluation: Agricultural

- General improvements for RA in final WIPs for most states:

- **More detailed strategies** with timeframes, actions to fill funding and staff gaps, and nutrient/sediment load reduction targets, new commitments for compliance/enforcement, or
- **Strong contingencies** committing to new policies, programs, agricultural mandates if progress not met.
- Or, a combination of both



PA WIP – Game Changing Plan for Agriculture!

- Compliance and enforcement of current regulations.
- Advancing manure technologies.
- Tracking and verifying non-cost shared, un-reported practices.
- Detailed strategies with specific actions and dates.



Offsets and Growth: Overview

- Where the TMDL does not provide a specific allocation for a new or increased load of N, P, or sediment, jurisdictions may authorize new loadings ONLY through offsets.
- Offsets need to be supported by credible and transparent programs consistent with TMDL and subject to EPA and public review.
 - Regular EPA oversight of jurisdictions' offset programs through periodic audits and evaluations will begin in 2011.
 - Phase II WIPs will provide an opportunity for states to further evaluate the impact of where and how growth occurs on water quality.

Federal Lands and Facilities

- Federal leadership in helping meet WIP commitments through implementation and financing (~\$0.5 Billion in FY2011).
- Executive Order Strategy outlines federal actions for Bay restoration.
- Must have 2-year milestones starting in 2012.
- Must follow 502 guidance requirements.
- For Phase II WIPs, all jurisdictions have expressed the need for:
 - Increased involvement from federal agencies on WIP development
 - Commitments from federal agencies to achieve specific nutrient and sediment reduction goals or implement specific practices by specific dates

Final TMDL – Results of Cooperative Process

- EPA removed or significantly relaxed backstops.
- A few additional EPA actions were needed to build the reasonable assurance needed for the TMDL.
- Three Categories of EPA Actions:
 - **EPA Ongoing Oversight** of all state programs to ensure they are on track to meet the WIP goals & 2-yr milestones.
 - **EPA Enhanced Oversight** to assess whether additional federal actions, including modifications to TMDL allocations, are necessary.
 - **EPA Backstop Adjustments or Allocations** for jurisdictions that did not meet EPA criteria for reasonable assurance or load allocations.

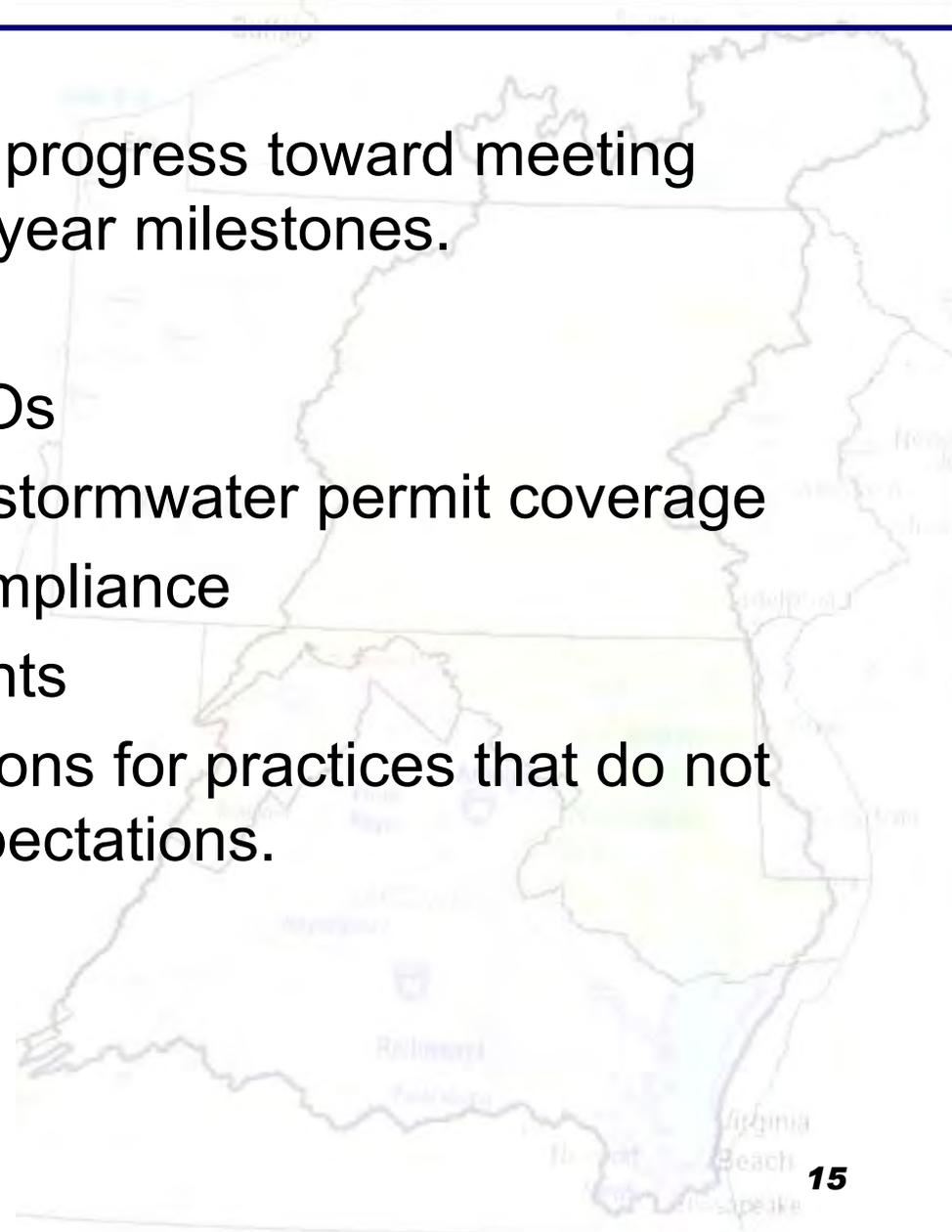
EPA Allocations, Adjustments and Actions based on Final WIPs

- DC, DE and MD had no backstops
- DC, DE and MD will continue to receive “Ongoing oversight and actions for Chesapeake Bay Jurisdictions”
- Federal actions can be taken at any time, although EPA will focus on two-year milestones reviews

		No Backstop Allocation		Backstop Allocations, Adjustments and/or Actions	
		Ongoing Oversight and Actions	Enhanced Oversight and Actions	Backstop Adjustments and Actions	Backstop Allocations
NY	Agriculture				
	Stormwater				
	Wastewater				Reduce to allocation
PA	Agriculture		Possible future backstop adjustments		
	Stormwater			Shift 50% stormwater from LA to WLA	
	Wastewater		Individual allocations; Possible future backstop allocations		
VA	Agriculture				
	Stormwater		Possible future backstop adjustments		
	Wastewater				
WV	Agriculture			Shift 75% AEOs from LA to WLA	
	Stormwater		Possible future backstop adjustments		
	Wastewater		Individual allocations; Possible future backstop allocations		

EPA Ongoing Oversight - Examples

- Track and assess annual progress toward meeting WIP commitments and 2-year milestones.
- Object to permits
- Designate AFOs as CAFOs
- Designate new areas for stormwater permit coverage
- Target enforcement & compliance
- Condition or re-direct grants
- Discount pollutant reductions for practices that do not meet EPA verification expectations.
- Etc.



		No Backstop Allocation		Backstop Allocations, Adjustments, and/or Actions	
		Ongoing Oversight and Actions	Enhanced Oversight and Actions	Backstop Adjustments and Actions	Backstop Allocations and Actions
NY	Agriculture				
	Stormwater				
	Wastewater				Reduce wastewater WLA to meet statewide allocation
PA	Agriculture		Possible future backstop adjustments		
	Stormwater			Shift 50% stormwater from LA to WLA	
	Wastewater		Individual allocations; Possible future backstop allocations		
VA	Agriculture				
	Stormwater		Possible future backstop adjustments		
	Wastewater				
WV	Agriculture			Shift 75% AFOs from LA to WLA	
	Stormwater		Possible future backstop adjustments		
	Wastewater		Individual allocations; Possible future backstop allocations		

Note: Jurisdictions not included in table have “ongoing oversight” for all agriculture, urban stormwater and wastewater. **16

Summary of EPA Actions for PA

- Agriculture:
 - Track progress in CAFO approval, enhanced compliance, targeted contingency actions, manure technology.
 - Enhanced oversight: Consider shift of AFO load to WLA or more stringent P limits for WWTPs if progress is not on track.
 - National review of CAFO State Technical Standards, including PA P management program, to ensure protective of water quality.

- Urban Stormwater:
 - Backstop adjustment: Shift 50% of urban load to WLA to signal that EPA is prepared to designate discharges as requiring NPDES permits to ensure reductions are achieved if progress not made.

- Wastewater:
 - Enhanced oversight: Individual WLA for significant plants to assure permits are consistent with WLA (reduction targets in WIP remain the same).
 - EPA will consider revising WWTP allocations if progress in urban and ag sectors isn't made.

Summary of EPA Actions for PA

■ Agriculture:

- Track progress in CAFO approval, compliance, targeted contingency actions, manure
- Enhanced oversight, stringent P limits
- N management

**Bottom-line: This is Still PA's Plan!
We want PA to succeed!**

■ Urban

-

■ Wastewater

- Enhanced oversight to assure permits are consistent with WLA (reduction targets in vwp remain the same).
- EPA will consider revising WWTP allocations if progress in urban and ag sectors isn't made.

Focus Forward

- **Now the hard work begins:** implementing the pollution controls.
- **Phase II:** States work with local jurisdictions to distribute TMDL allocations down to a local scale to facilitate implementation. These **local targets** do not represent finer scale allocations.
- EPA will closely track implementation of the WIPs and progress toward two-year milestones, and hold states accountable.

- **NOT an overnight project...**

We have 15 years to get the job done!

- Success depends on continued partnership, not just between federal and state government, but also with local governments, stakeholders and citizens.



QUESTIONS



<http://www.epa.gov/chesapeakebaymdl/>

EPA Allocations, Adjustments and Actions by Jurisdiction



EPA Allocations, Adjustments and Actions: Delaware

Allocations

- **Delaware meets its nutrient and sediment allocations in the final TMDL.** Statewide loads are 3% under nitrogen, 12% under phosphorus, and 33% under sediment allocations. Delaware has agreed to apply the spare pounds back to the nonpoint source agriculture allocation, and the implementation measures will be refined in the Phase II WIP.

Agriculture

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will use its national review of CAFO State Technical Standards in 2011 and beyond to identify any deficiencies. EPA reserves its authority to object to permits if they are not protective of water quality.

Urban Stormwater

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will monitor Delaware's progress in securing performance standards for new development and redevelopment in stormwater regulation changes currently under consideration.
- EPA will monitor Delaware's progress in developing a system for tracking inspections and compliance information.

Wastewater

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will review NPDES permit conditions to ensure that they are consistent with the loads and assumptions of the Chesapeake Bay TMDL.

EPA Allocations, Adjustments and Actions: District of Columbia

Allocations

- **DC meets nutrient and sediment allocations in the final TMDL.** Loads are 0% over for nitrogen, phosphorus and sediment allocations.

Urban Stormwater

- **Ongoing oversight for Chesapeake Bay jurisdictions** and implement TMDL WLAs through permit re-issuance or modification.
- EPA will continue to work with DDOE to finalize the MS4 permit to include new retention standards for both federal and nonfederal facilities.
- EPA will continue to work with other federal agencies towards a resolution of the municipal stormwater program fee for service payment. (pending federal legislation awaiting signature)

Wastewater

- **Ongoing oversight for Chesapeake Bay jurisdictions** and implement TMDL WLAs through permit re-issuance or modification.
- EPA will continue to work closely with the District in assuring that loads from non-significant wastewater facilities are consistent with the aggregate wasteload allocation.

EPA Allocations, Adjustments and Actions: Maryland

Allocations

- **Maryland meets its nutrient and sediment allocations for each basin in the final TMDL.** Maryland's WIP input deck resulted in statewide loads that are 0% over modified nitrogen, phosphorus and sediment allocations.

Agriculture

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will use its national review of CAFO State Technical Standards in 2011 and beyond to identify any deficiencies. EPA reserves its authority to object to permits if they are not protective of water quality.

Urban Stormwater

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will assess how well Maryland is able to track expected nutrient and sediment load reductions and quantify outcomes from retrofits that are projected in the WIP.

Wastewater

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will review NPDES permit conditions to ensure that they are consistent with the loads and assumptions of the Chesapeake Bay TMDL.

EPA Allocations, Adjustments and Actions: New York

Allocations

- **New York meets its sediment allocation and comes close to, but does not meet, its modified nutrient allocation in the final TMDL.** Loads are 14% under its sediment allocation and 5% and 2% over its modified nitrogen and phosphorus allocations, respectively.
- EPA closed the gaps between New York's WIP and its allocations with an aggregate WLA backstop that further reduces New York's wastewater load.

Agriculture

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will use its national review of CAFO State Technical Standards in 2011 and beyond to identify any deficiencies. EPA reserves its authority to object to permits if they are not protective of water quality.

Urban Stormwater

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- New York shifted 50% of the urban stormwater load to wasteload allocation to enhance reasonable assurance that nutrient and sediment allocations will be achieved and maintained.

Wastewater

- **Backstop allocations, adjustments and actions**
- EPA is closing the numeric gap between New York's WIP and its modified allocations by 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 Allocations, Adjustments and Actions: Pennsylvania

Allocations

- **Pennsylvania meets its nutrient and sediment allocations for each basin in the final TMDL.** After adjusting for EPA-approved nitrogen and phosphorus exchanges, Pennsylvania's WIP input deck resulted in statewide loads that are 2% over for nitrogen and phosphorus, and 5% under for sediment allocations. EPA and the Commonwealth reached agreement on further nonpoint source reductions in order to achieve allocations both statewide and in each basin in Final TMDL.

Agriculture

- **Enhanced oversight and actions**
- 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.

Urban Stormwater

- **Backstop allocations, adjustments and actions**
- EPA will transfer 50% of urban stormwater load not currently subject to NPDES permits from the load allocation to the wasteload allocation. EPA will assess in the Phase II WIP whether additional federal actions, such as establishing more stringent wasteload allocations for WWTPs, are necessary.

Wastewater

- **Enhanced oversight and actions**
- EPA is establishing individual wasteload allocations for significant wastewater plants to increase assurance that permits are consistent with the overall wasteload allocation. Individual allocations do not commit wastewater plants to greater reductions than what the jurisdiction has proposed in its WIP.
- EPA may consider federal actions such as revisiting wastewater allocations if the Phase II WIP does not demonstrate adequate progress toward implementing WIP strategies for agriculture and urban stormwater.

EPA Allocations, Adjustments and Actions: West Virginia

Allocations

- **West Virginia meets its nutrient and sediment allocations for each basin in the final TMDL.** Statewide loads are 0% under nitrogen, 1% under phosphorus and 11% under sediment allocations.

Agriculture

- **Backstop allocations, adjustments and actions**
- EPA is shifting 75% of West Virginia's AFO load into the wasteload allocation and assuming full implementation of barnyard runoff control, waste management, and mortality composting practices required under a CAFO permit on these AFOs.
- Shift signals that these operations could potentially be subject to NPDES 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.

Urban Stormwater

- **Enhanced oversight and actions**
- EPA may shift a greater portion of West Virginia's urban stormwater load from the load allocation to the wasteload allocation if stormwater regulations and/or the Phase II WIP do not provide additional reasonable assurance.

Wastewater

- **Enhanced oversight and actions**
- EPA is establishing individual wasteload allocations for significant wastewater plants consistent with the WV WIP. Individual allocations do not commit wastewater plants to greater reductions than what the jurisdiction has proposed in its WIP. Provisions of the TMDL Report allow for allocation modifications within a basin to support offsets and trading opportunities.
- EPA may consider federal actions such as revisiting wastewater allocations if the Phase II WIP does not demonstrate adequate progress toward implementing WIP strategies for agriculture and stormwater.

EPA Allocations, Adjustments and Actions: Virginia

Allocations

- **Virginia meets its nutrient and sediment allocations for each basin in the final TMDL.** Statewide loads are 2% over for nitrogen and phosphorus, and 3% under for sediment. EPA and the Commonwealth reached agreement on further nonpoint source reductions in order to achieve allocations both statewide and in each basin in Final TMDL.

Agriculture

- **Ongoing oversight of Chesapeake Bay jurisdictions**
- EPA will use its national review of CAFO State Technical Standards in 2011 and beyond to identify any deficiencies. EPA reserves its authority to object to permits if they are not protective of water quality.

Urban Stormwater

- **Enhanced oversight and actions**
- EPA may shift a greater portion of Virginia's urban stormwater load from the load allocation to the wasteload allocation if the stormwater rule and/or the Phase II WIP do not provide additional reasonable assurance.

Wastewater

- **Ongoing oversight for Chesapeake Bay jurisdictions**
- EPA will review NPDES permit conditions to ensure that they are consistent with the loads and assumptions of the Chesapeake Bay TMDL.

Schedule Schematic for Phases I, II, and III



