

# The Chesapeake Bay TMDL



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

**U.S. Environmental Protection Agency  
Virginia Joint Commission on Administrative Rules  
TMDL Briefing  
January 11, 2011**



# 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 and major sources of nutrient and sediment pollution.

## Why a Chesapeake Bay TMDL?



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

# Final Chesapeake Bay TMDL



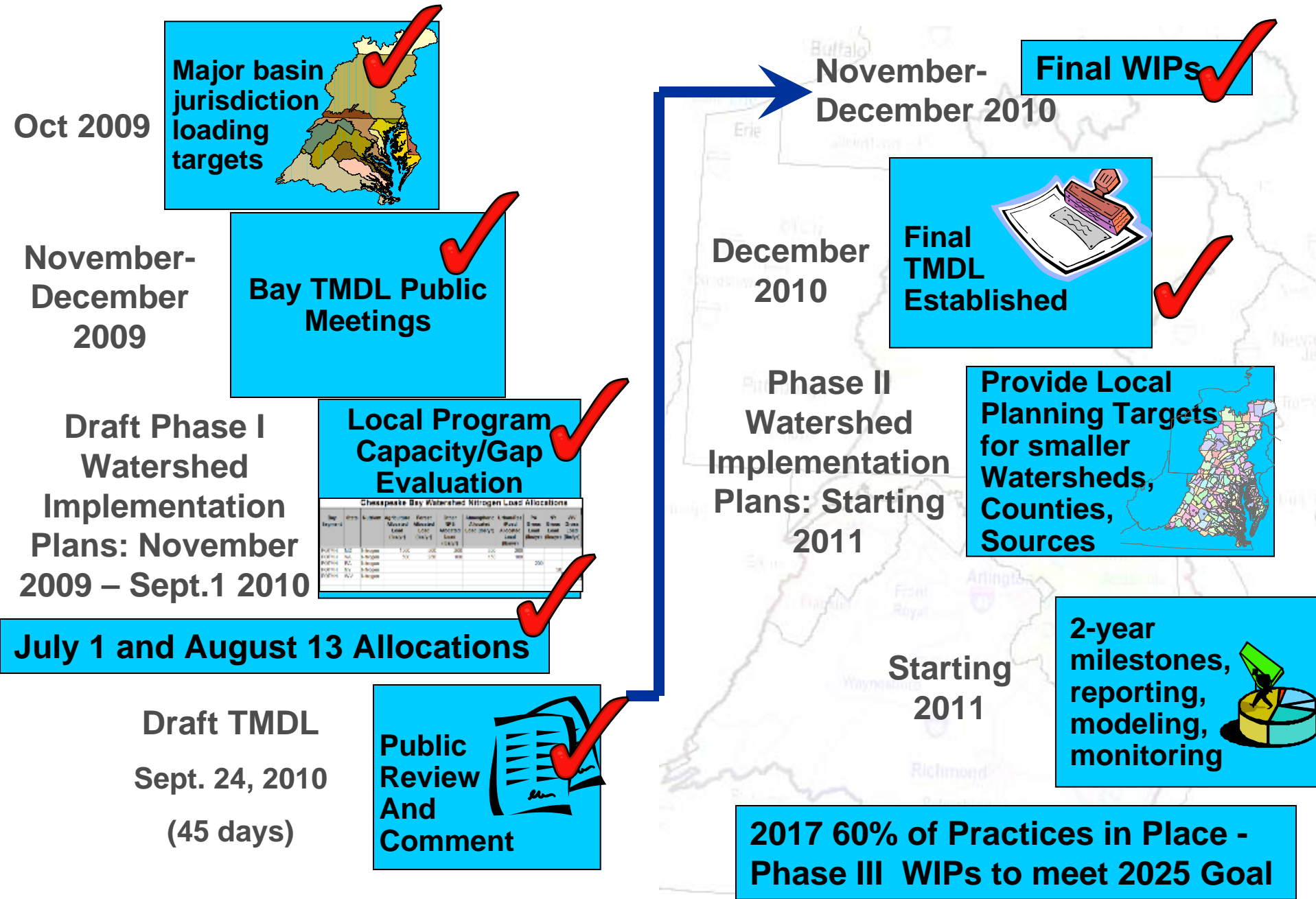
- EPA worked extensively with the six States and the District of Columbia.
- All submitted strong implementation plans that helped to craft the TMDL.
- Final TMDL is shaped by extensive input from public, stakeholder groups & jurisdictions throughout a two-year process.
- Designed with rigorous accountability 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 and enhance the economic value of the Bay and rivers, and be a driver for local economies.



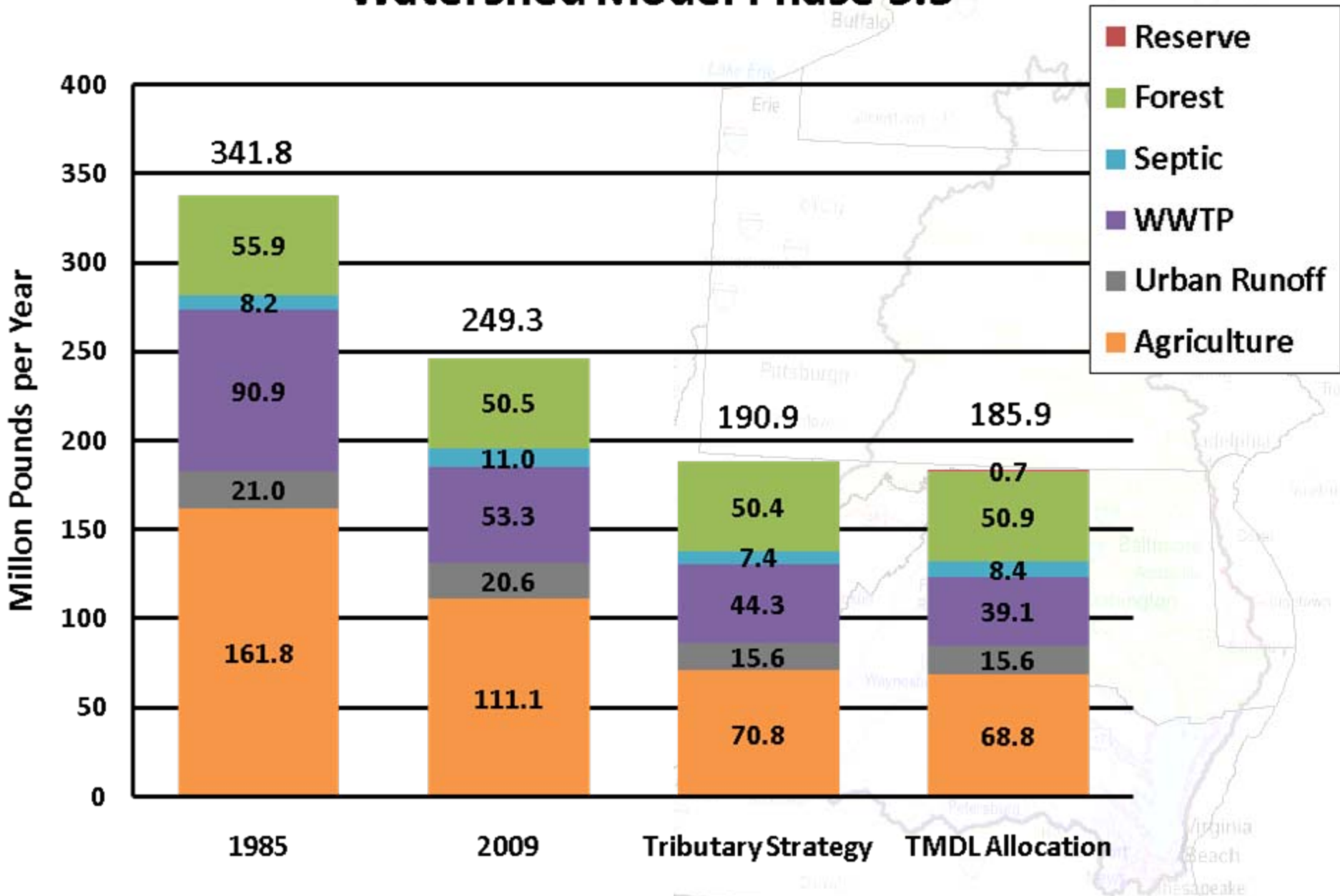
# Setting the Pollution Diet



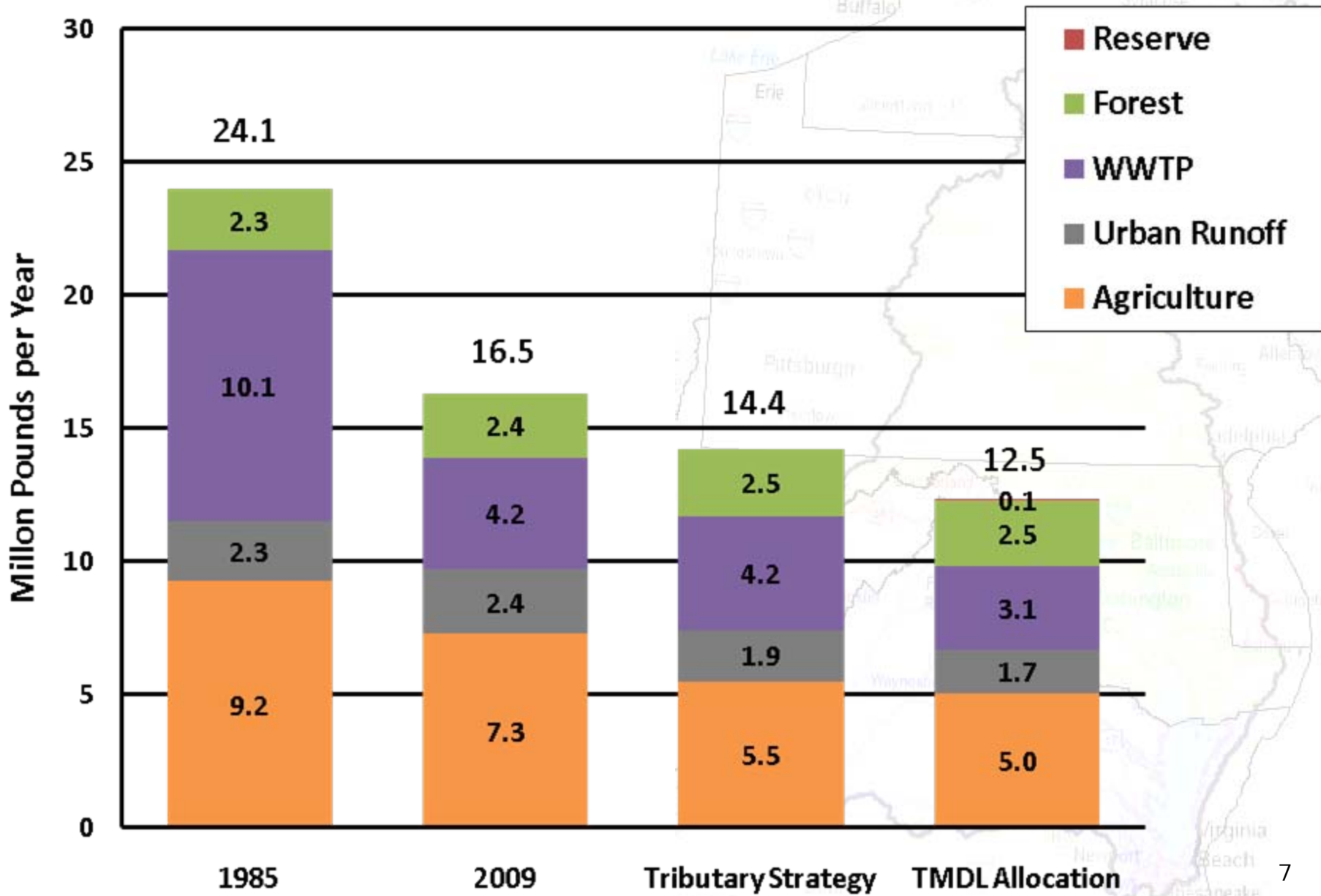
# TMDL and WIP Development Schedule: 2009-2017



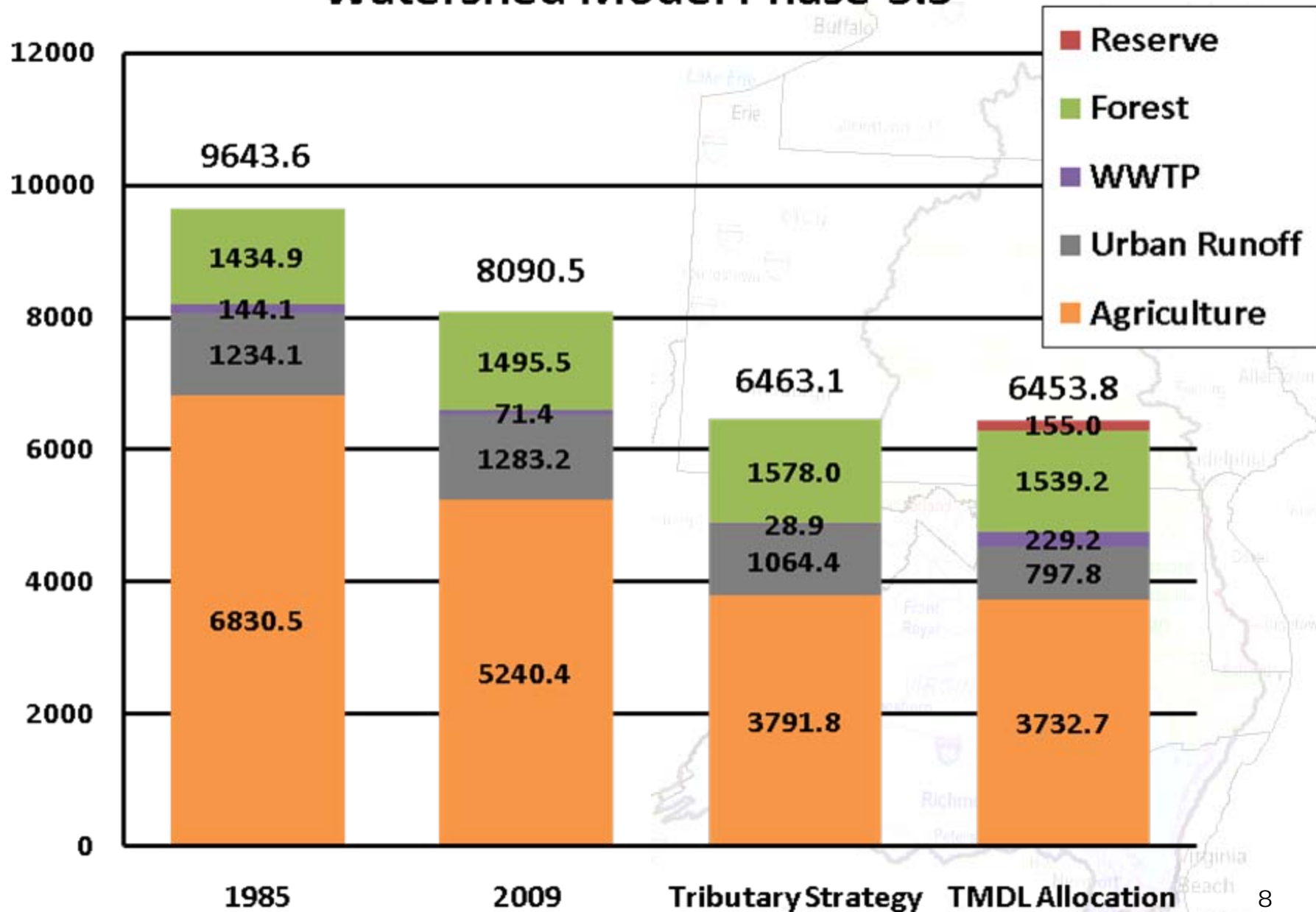
# Nitrogen Loads by Source Sector and Scenario - Watershed Model Phase 5.3



# Phosphorus Loads by Source Sector and Scenario - Watershed Model Phase 5.3



# Sediment Loads by Source Sector and Scenario - Watershed Model Phase 5.3

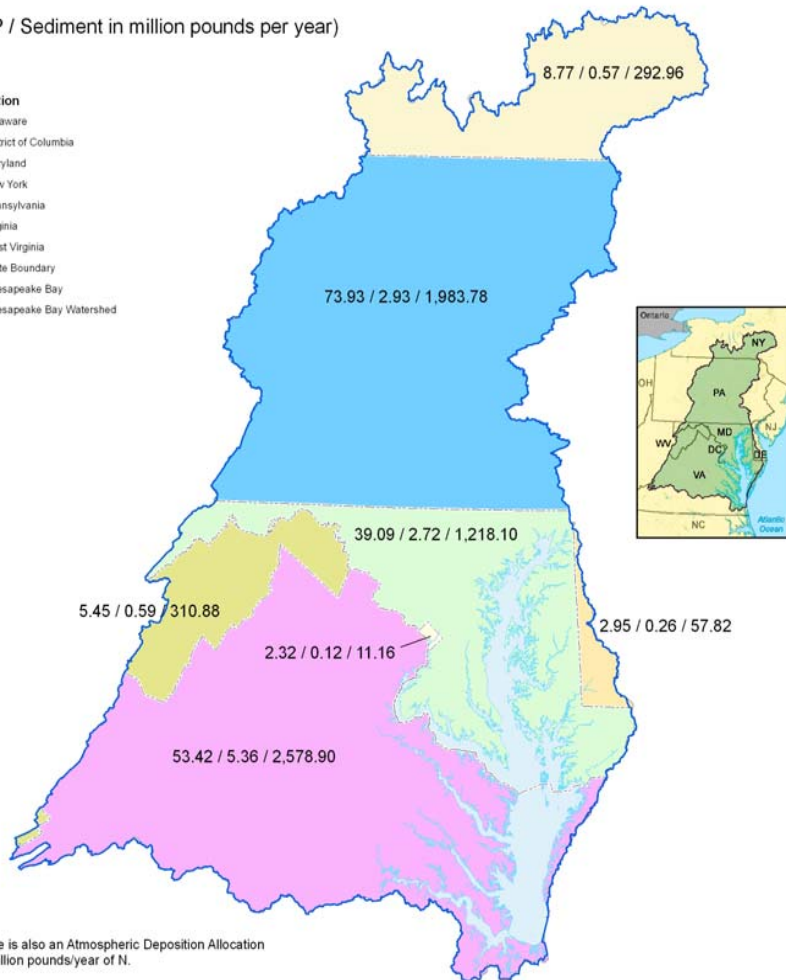


# Pollution Diet

## ...by State

(N / P / Sediment in million pounds per year)

- Jurisdiction**
- Delaware
  - District of Columbia
  - Maryland
  - New York
  - Pennsylvania
  - Virginia
  - West Virginia
  - State Boundary
  - Chesapeake Bay
  - Chesapeake Bay Watershed

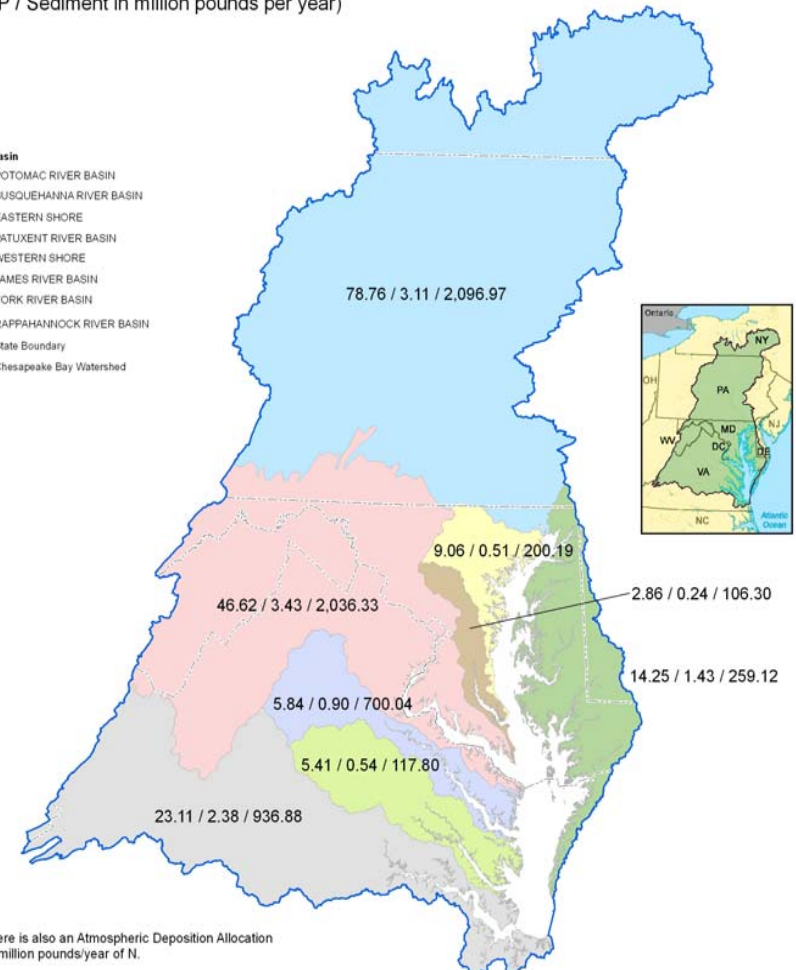


Note: There is also an Atmospheric Deposition Allocation of 15.70 million pounds/year of N.

## ...by River

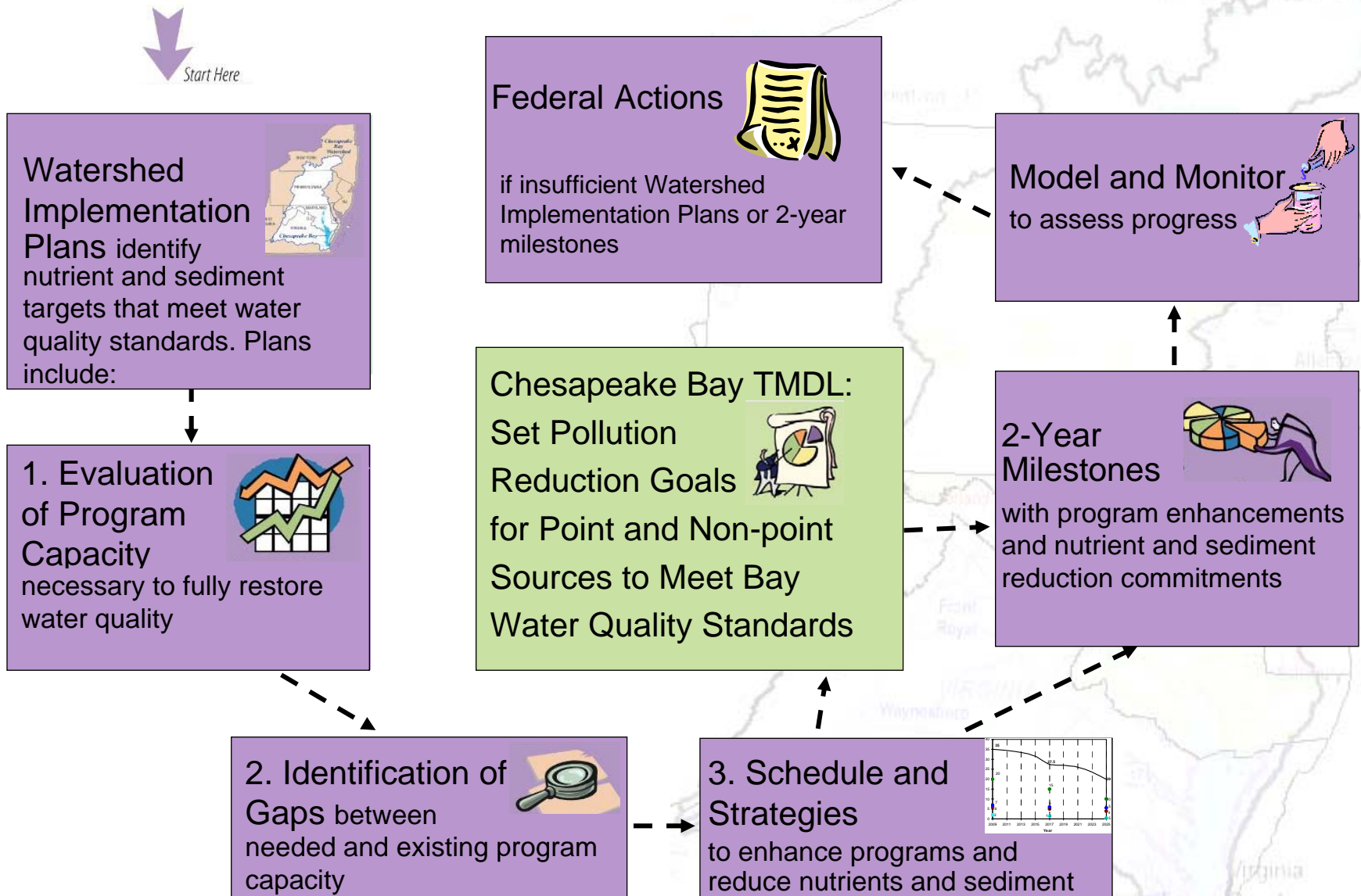
(N / P / Sediment in million pounds per year)

- Major Basin**
- POTOMAC RIVER BASIN
  - SUSQUEHANNA RIVER BASIN
  - EASTERN SHORE
  - PATUXENT RIVER BASIN
  - WESTERN SHORE
  - JAMES RIVER BASIN
  - YORK RIVER BASIN
  - RAPPAHANNOCK RIVER BASIN
  - State Boundary
  - Chesapeake Bay Watershed



Note: There is also an Atmospheric Deposition Allocation of 15.70 million pounds/year of N.

# Overview of Accountability Process



# Watershed Implementation Plans (WIPs)

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

WIPs must:

- achieve pollution reduction targets
- provide reasonable assurance

**Goal:** EPA strongly preferred to use jurisdiction WIPs as the basis for final TMDL allocations.



- The seven jurisdictions provided Draft WIPs in early September 2010.
  - EPA reviewed draft WIPs and evaluated what gaps existed in targets and where plans came up short of expectations.
  - EPA provided 4 sets of written comments to each jurisdiction and had numerous meetings and conference calls and assigned a lead senior manager for each jurisdiction.
  - EPA expected final WIPs to address Agency comments and questions.
  - EPA followed up with jurisdictions to attempt to resolve any outstanding issues in final WIPs and avoid backstop allocations and adjustments where possible.

# Overall Findings of Final Phase I WIPs

- Jurisdictions made significant improvements between draft and final plans.
  - Six of the seven jurisdictions achieved the pollution reduction targets for N, P, S.
  - All committed to meeting allocations by the 2017 and 2025 milestones.
  - WIPs are much stronger than 9/1/10 and have addressed most EPA comments.
  - Most backstop actions have been removed or reduced.
  - **Only a few targeted backstop allocations and adjustments remain to ensure progress.**  
(NY wastewater; PA urban stormwater; and WV agriculture)
  - EPA commits to ongoing oversight and will take contingency actions as necessary to ensure restoration efforts occur on schedule to meet 2017 and 2025 goals.
- **Result: Final TMDL driven primarily by the states' proposed plans to reduce pollution – EPA's goal all along!**



# Overall Findings of Final Phase I WIPs

Many examples of noteworthy improvements, including:

- Commitments to more stringent wastewater treatment plant limits
  - Increased accountability for urban stormwater programs
  - Commitments to strengthen stormwater permits and regulatory programs and to pursue rulemakings
  - New compliance initiatives for agriculture
  - Agreement to expand mandatory agriculture programs if needed
  - Expanded septic system improvements
  - Financial and programmatic commitment to implement state-of-the-art-technologies for animal waste to energy systems
- **Six of seven jurisdiction's WIPs projected that they will achieve the July 1 and August 13 nutrient and sediment allocations. And, the TMDL provides assurances NY will also achieve its allocations.**
  - Where jurisdictions had minor shortfalls, they agreed to fill the gaps through adjustments to nonpoint sources in the final TMDL.

# Final WIP Evaluation: Wastewater

- Previous Shortcomings – Draft WIPs
  - Did not identify all non-significant sources
  - Gap-filling actions for WWTP upgrade funding and state staff were not sufficient
- General improvements for Reasonable Assurance 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 showed strong concern about EPA’s proposed “backstop” allocations to WWTPs – provided incentive for improved WIPs.



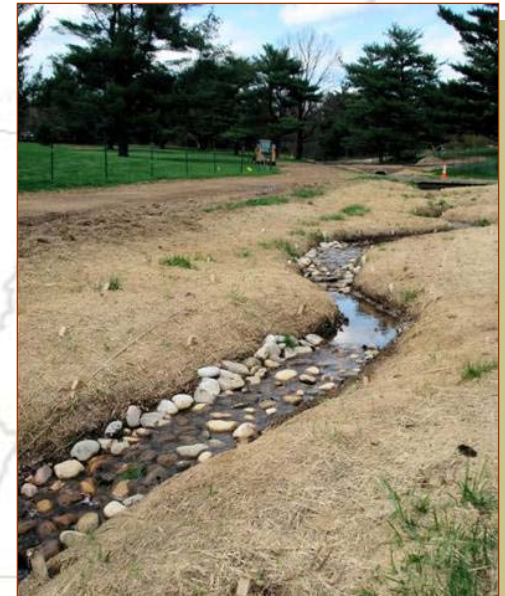
# Final WIP Evaluation: Urban Stormwater

- Previous Shortcomings – Draft WIPs
  - Inadequate accountability and/or enforceability measures
  - Input decks and WIP narratives were not consistent with each other, i.e., states were claiming that they would get significant reductions from stormwater but were not proposing programs or measures that could achieve those kinds of reductions
- General improvements for RA in final WIPs for most states:
  - **More detailed and explicit existing and proposed programs**, making it easier to evaluate reasonable assurance
  - **More consistency** between input deck and narratives
  - **More accountability and/or enforceability**
  - **Better defined contingencies** (Plan B's in case Plan A's aren't adequate)
  - **Commitments to strengthen permits** and regulatory programs and to pursuing rulemakings



# Final WIP Evaluation: Agricultural

- Previous Shortcomings – Draft WIPs
  - Detailed strategies and gap filling actions for funding, staff, etc. were not sufficient
  - Inadequate funding coordination with USDA
  - Lack of P management strategies and NMP verification
  - Contingencies were not strong enough
- 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 and programs if progress not met.
  - Or, a combination of both



# 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.
  - All Bay jurisdictions have existing policies to ensure that new or increased loadings from point and nonpoint sources are offset.
  - Some jurisdictions have already established nutrient credit trading programs that can be used to achieve necessary offsets.
    - Other jurisdictions are coordinating with EPA to develop, refine and in some cases expand their offset programs.
    - Programs can vary in design and content.
  - 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.

# Three Tiers of EPA Oversight and Actions

- **Remaining Backstops, Allocations & Actions** — EPA reduced or removed most federal backstop measures with just a few exceptions where states did not provide EPA with reasonable assurance of achieving necessary pollution reductions.
  - **Ongoing Oversight for ALL Chesapeake Bay Jurisdictions** – This includes ongoing program and permit reviews and assessments of TMDL and WIP implementation through Phased II and III WIPs and 2-year milestones. *(Most Sectors fall here).*
  - **Enhanced Oversight** – Indication that EPA may consider backstop allocations and adjustments if Phase II WIPs don't show progress *(VA urban stormwater, PA agriculture and wastewater, WV urban stormwater and wastewater).*
  - **Backstop Allocations & Adjustments** – These backstops were included in the final TMDL established on December 29 *(NY wastewater; PA urban stormwater; and WV agriculture).*

# 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.

# Final TMDL - Summary

---

## Results of cooperative process:

- Final TMDL with **rigorous accountability** to restore clean water to Bay and the region's streams, creeks and rivers
- **States made significant improvements** to plans to reduce pollution – showing commitment to Bay
- EPA able to **reduce and remove most backstops**, leaving a few targeted backstops and a system of enhanced oversight and contingencies to ensure progress
- **TMDL is driven primarily by the states' proposed plans** to reduce pollution.

**EPA's goal all along!**

# Focus Forward

- **Now the hard work begins:** implementing the pollution controls on the ground and in the water.
- Focus now is implementation by states and EPA tracking progress to hold states accountable for results.
- States will now work with local jurisdictions to distribute TMDL allocations down to a local (e.g., county) scale in Phase II WIPs 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.

- Important to remember it is not an overnight project...

**This is a 15 year plan!**

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



# Detailed Materials are Available on our Website

The screenshot shows the EPA website for the Chesapeake Bay TMDL. The browser address bar displays <http://www.epa.gov/chesapeakebaytmdl/>. The page header includes the U.S. Environmental Protection Agency logo and the text "U.S. ENVIRONMENTAL PROTECTION AGENCY". The main navigation bar is titled "Mid-Atlantic Water" and includes a search bar and a "Share" button. Below the navigation bar, the page is titled "Chesapeake Bay TMDL" and features a "Chesapeake Bay TMDL Quick Finder" section with links to "Chesapeake Bay TMDL Home", "Bay TMDL", "How Does it Work? Ensuring Results", "Calendar of Events", "East Coast's Key Documents", "Partners' Links", "Contact Us", "Frequent Questions", and "Class Room". A red circle highlights a "What's New" section titled "EPA Establishes Bay TMDL" with a sub-headline "Historic 'Pollution Diet' for Restoring the Chesapeake Bay, Region's Waterways". The article text includes links for "Press Release", "TMDL Documents", "Executive Summary", "Fact Sheet", and "EPA WIP Evaluations (PDF Portfolio) (14pg, 603K)". To the right of the article is a "National Information" section with links to "Executive Order Website" and "Federal Register Notice", and a "What's Happening" section with a link to "View the evaluations Delaware, District of Columbia, Maryland, New York, Pennsylvania, Virginia and West Virginia". At the bottom of the page, there are several promotional boxes for "What's Next", "Ensuring Results", "Latest News", and "Plans of Action", along with a "Water For Kids!" logo and a "VIEW THE 2010 FALL PUBLIC MEETING PRESENTATIONS" link.

<http://epa.gov/chesapeakebaytmdl>

# QUESTIONS



<http://epa.gov/chesapeakebaytmdl>