The Chesapeake Clean Water Blueprint: A Pollution Diet with Accountability

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Annapolis Café Scientifique
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Welcome to the Chesapeake Watershed

- Largest estuary in North America
- 3,600 of fish, wildlife, and plants
- Home to 18 million people
- Six states and District of Columbia
- About 1,800 local governments
- Chesapeake now worth $108 bil/year; Clean Bay worth almost $130 bil/year (CBF, 2014)
The Challenge

**Past**
- WHERE WE STARTED
- Failing Aquatic Grasses
- Overharvest
- Low Oxygen
- Zero Oxygen
- Dying Algae
- Restricted Fish Habitat
- Remnant Oyster Beds
- Benthos Killed in Deep Water
- More Nutrients Released
- Nutrient Release Decreases

**Future**
- WHERE WE ARE HEADED
- Sustainable Yields
- Better Water Clarity
- Oysters Occupy Historical Habitat
- Diverse Long-Lived Benthos
- Benthos Survives in Deep Water
- More Oxygen
- More Nutrients
- Expanded Fish Habitat
- Food Particles
- Moderate Algae
- Low Oxygen
- Dying Algae
- Failing Aquatic Grasses
- Uncontrolled Land Use
- Nutrient Load
- High Nutrient Load
- Turbidity and Sediment
- Guided Land Use
- Reduced Nutrients
- Forests
- Clean Air
- Polluted Air

**Legend**
- Deforestation
- PAST
- FUTURE
2013 Progress Run. Wastewater loads based on measured discharges; other loads based on average hydrology year using Chesapeake Bay Program Watershed Model (CBPO, 2014)
The Challenge

Photo Credit: Chesapeake Bay Program
Trivia: What Percent of Bay Segments Meet Water Quality Standards?
The Solution

Practices in place by 2025

Set short-term milestones

Photo Credit: Chesapeake Bay Program
Chesapeake Bay TMDL Accountability Framework

1. Watershed Implementation Plans identify nutrient and sediment targets that meet water quality standards.

2. Chesapeake Bay TMDL establishes allocations for point and non-point sources to meet water quality standards.

3. 2-Year Milestones with programmatic and pollutant reduction commitments.

4. Federal Actions if insufficient Watershed Implementation Plans or 2-year milestones.
Based on 7 Jurisdictions’ Strategies
2012-13: Did jurisdictions and federal agencies achieve their 2012-13 commitments set 2 years ago?

2014-15: Are commitments strong enough to keep jurisdictions and federal agencies on track to have:
- All practices in place by 2025 to achieve clean water in Bay
- Practices in place by 2017 to achieve 60% of necessary reductions compared to 2009

Milestones comprise:
- Numeric: Translate practices into load reductions and compare to long-term trajectories
- Programmatic: Actions to build capacity to achieve necessary implementation levels
Overall Numeric Progress and Goals

**Nitrogen Loads and Goals**

- **2009 Baseline**: 0.2
- **2013 Milestone/Progress**: 0.15
- **2015 Target/Milestone**: 0.1
- **2017 Target**: 0.05

**Phosphorus Loads and Goals**

- **2009 Baseline**: 15
- **2013 Milestone/Progress**: 10
- **2015 Target/Milestone**: 5
- **2017 Target**: 2

**Sediment Loads and Goals**

- **2009 Baseline**: 8
- **2013 Milestone/Progress**: 6
- **2015 Target/Milestone**: 4
- **2017 Target**: 2

**Notes:**
- Forest includes other sources.
- 2013 milestones and progress are based on 2010 conditions.
- For additional information on pollution reduction progress, commitments, and BMP see [http://stat.chesapeakebay.net/milestones](http://stat.chesapeakebay.net/milestones)
# Annual Rate of Pollution Reduction

<table>
<thead>
<tr>
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<th>1985-2013 Annual Average Reductions (million lbs/year)</th>
<th>2013-2025 Average to Meet 2025 Goal (million lbs/year)</th>
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<tbody>
<tr>
<td>Nitrogen</td>
<td>3.8 million lbs/year</td>
<td>4.6 million lbs/year</td>
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<tr>
<td>Phosphorus</td>
<td>0.3 million lbs/year</td>
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<tr>
<td>Sediment</td>
<td>93.6 million lbs/year</td>
<td>69.8 million lbs/year</td>
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Overall Programmatic Progress and Goals

• 2012-13: Majority of programmatic milestones achieved
  – Some important milestones missed, such as permit reissuance

• 2014-15: Trajectory and pace of implementation to meet 2017 goals gets steeper in many instances. Some good commitments, but more needed to build necessary capacity

• Enhanced implementation rates and new, innovative tools are needed to meet the challenges ahead of us
**Oversight Status** takes into account numeric AND programmatic progress and commitments

**Ongoing Oversight:** Good strategy and progress is on track.

**Enhanced Oversight:** Concerns because:
- Progress not on track;
- Lacks capacity to achieve commitments;
- Commitments do not meet 2017 and 2025 goals; or
- Some combination of above.

**Backstop Actions:** Substantial problems:
- Progress not on track;
- Lacks capacity to achieve commitments; and
- Commitments do not meet 2017 and 2025 goals.
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<th>State</th>
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<th>Wastewater:</th>
<th>Trading/Offsets:</th>
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</table>
Federal Agencies

- Single largest landholder in watershed
- Executive Order 13508 calls on federal agencies to lead by example
- Improve BMP progress reporting by federal facilities
- EPA working with federal agencies and jurisdictions to improve coordination
AFFIRMATION

As Chesapeake Bay Program Partners, we recognize the need to accelerate implementation of actions necessary to achieve the Goals and Outcomes outlined herein and realize our shared vision of a healthy and vibrant Chesapeake Bay watershed.

As Chesapeake Bay Program Partners, we acknowledge that this Agreement is voluntary and subject to the availability of appropriated funds. This Agreement is not a contract or an assistance agreement. We also understand that this Agreement does not pre-empt, supersede or override any other law or regulation applicable to each signatory.

We, the undersigned members of the Chesapeake Executive Council, reaffirm our commitment to support the Goals of this Agreement and to work cooperatively in its implementation. We agree to work both independently and collaboratively toward the Goals and Outcomes of this Agreement and to implement specific Management Strategies to achieve them. Every citizen of this great watershed is invited to join with the Partnership, uniting as a region and embracing the actions that will lead to success.

Date: June 18, 2014

For the Chesapeake Bay Commission

For the State of Delaware

For the District of Columbia

For the State of Maryland

For the Commonwealth of Pennsylvania

For the State of New York

For the Commonwealth of Virginia

For the State of West Virginia

For the United States of America,

on behalf of the Federal Government and the Federal Leadership Committee for the Chesapeake Bay

U.S. Environmental Protection Agency

U.S. Department of Agriculture

U.S. Department of Commerce

U.S. Department of Defense

U.S. Department of Homeland Security

U.S. Department of the Interior

U.S. Department of Transportation

[Signatures]
Bay TMDL, Watershed Implementation Plans, Milestones and EPA Evaluations
•  www.epa.gov/chesapeakebaytmdl

Pollutant Load and BMP Progress and Targets
•  http://stat.chesapeakebay.net/

2014 Chesapeake Bay Watershed Agreement and Management Strategies
•  www.chesapeakebay.net/chesapeakebaywatershedagreement/

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