Chesapeake Bay TMDL:

Development and Implementation

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What is a TMDL?

- Pollution ‘budget’ or ‘diet’
- Total Maximum Daily Load=

allowable point source load

+

allowable non-point source load

+

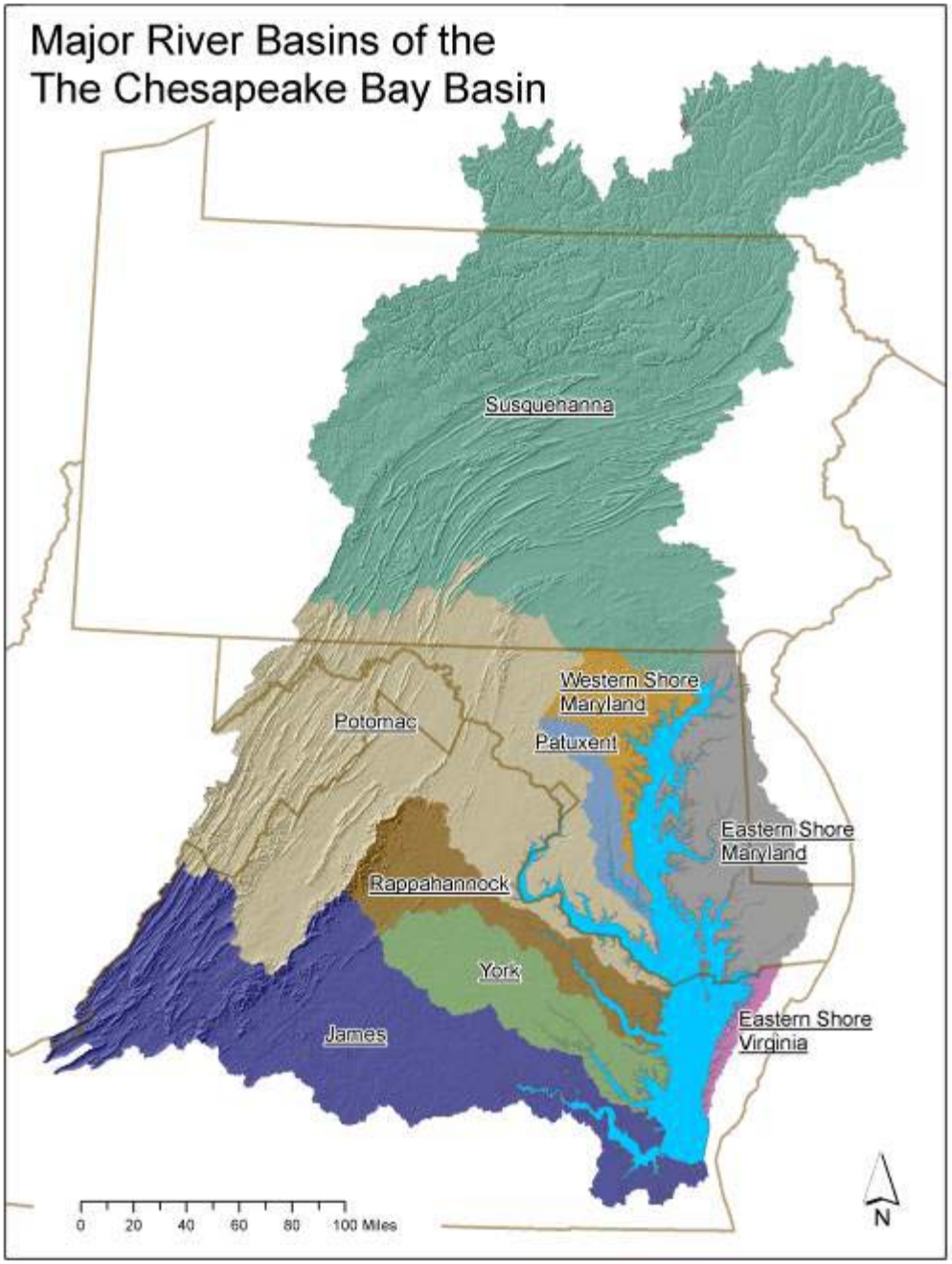
allowable air load

+

margin of safety

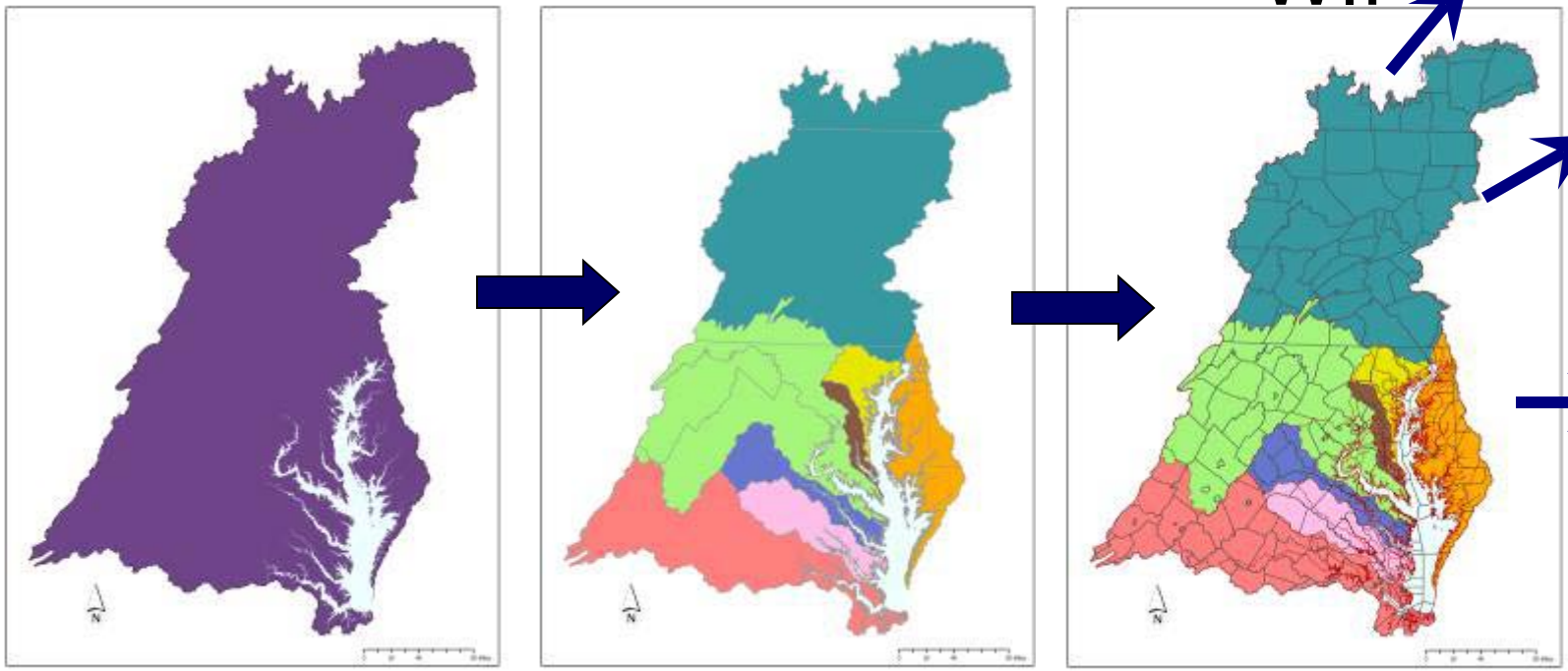
The Chesapeake Bay TMDL

- All 6 states and the District of Columbia are covered.
- Caps on nitrogen, phosphorus, and sediment
- Caps on point sources and non point source sectors
- Draft TMDL August 2010
  - Round 2 of public meetings Aug – October, 2010
- Final TMDL December 2010



Bay TMDL Development: How are states involved?

WIP



What total loading for nitrogen, phosphorus, and sediment can the Bay assimilate?

What is an equitable distribution of the watershed-wide loadings to the states/basins?

How should the state/basin load be sub-allocated to: individual point sources, non- point source sectors, and sub-watersheds or counties?

Guidelines for Distributing the Basinwide Target Loads

- Water quality and living resource goals should be achieved.
- Waters that contribute the most to the problem should achieve the most reductions (on a per pound basis).
- All previous reductions in nutrient loads are credited toward achieving final cap loads.

The Bay TMDL and Performance and Accountability System will..

- …Learn from lessons of the past
  - Bay Program
    - Long term goals ***+ short term goals***
    - Planning and commitment ***+ accountability***
  - TMDL Program
    - Point source implementation ***+ non-point source implementation***

Mandatory Pollution Diet at Work

Develop Watershed Implementation Plans

Establish Bay TMDL:

Set 2-Year Milestones

Monitor Progress

Employ Federal Actions or Consequences

Watershed Implementation Plans (WIPs)

- Stage 1: 60% reductions achieved by 2017
- Stage 2: All controls in place no later than 2025
- Include:
  - Individual PS target loads and aggregate target loads for NPS sectors
  - Schedule for load reductions
  - *Strategy and schedule to fill program gaps*
    - *May include Legislative actions*
  - Commitments to install needed controls
  - Accounting for growth

EPA Support to States WIPs

- Doubling of the Chesapeake Bay funding
- Contractor support to each state
- Contractor support for local pilots
- identified extensive WIP expectations
- modeling and other technical support
- regulatory actions to further support the control of stormwater and animal runoff.

2 year milestones

- Commitment on what will be accomplished for the next 2 years
  - source controls
  - loading reductions
  - program enhancements

Federal Actions

- For state failure to:
  - submit WIPs consistent with EPA expectations
  - submit 2-year milestones consistent with EPA expectations
  - achieve 2 year milestone target loads

Federal Actions Include…

- Expand NPDES permit coverage to unregulated sources
- Require net improvement offsets
- Require additional reductions from PS’s
- Increased federal enforcement
- Condition or redirect federal grants
- Promulgation of local nutrient standards

Possible needed source reductions

- Upgrades on municipal and industrial WWTP’s
- More BMPs for crop and animal agriculture
- Better stormwater control on developed land
- Reduce fertilizer on lawns

Bay TMDL: Bottom-line

- **Actions will clean and protect local waters in Pa thereby supporting the local economy**
- **Restore a thriving Chesapeake Bay**
- **Need support from Federal, state, local officials and agencies and landowners**
- **Significant accountability**



- Extra slides

Current State Target Loads

Nitrogen

State	Tributary Strategy	Target Load
DC	2.12	2.37
DE	6.43	5.25
MD	42.37	41.04
NY	8.68	10.54
PA	73.48	73.64
VA	56.75	59.21
WV	5.93	5.71
Total	195.75	197.76

Phosphorus

State	Tributary Strategy	Target Load
DC	0.10	0.13
DE	0.25	0.28
MD	2.54	3.04
NY	0.56	0.56
PA	3.10	3.16
VA	6.41	7.05
WV	0.43	0.62
Total	13.39	14.84

All loads are in millions of pounds per year.

Nutrient Impacts on Bay Oxygen