MARYLAND
Smart, Green & Growing

The Chesapeake Bay TMDL & Maryland's Watershed Implementation Plan

Chesapeake Bay Commission
September 9 & 10, 2010
Lancaster, PA

Maryland Department of Planning

Chesapeake Bay TMDL

- TMDL establishes a “pollution diet” to restore water quality
- Bay TMDL will set limits for nitrogen, phosphorus and sediment that meet dissolved oxygen, water clarity and submerged aquatic vegetation criteria

Eight WIP Elements

1. Interim and Final Nutrient and Sediment Target Loads
2. Current Baseline Loading and Program Capacity
3. Account for Growth
4. Gap Analysis
5. Commitment & Strategy to Fill Gaps
6. Tracking and Reporting Protocols
7. Contingencies for Slow or Incomplete Implementation
8. Appendix with Detailed Targets and Schedule

Phased Approach

- **Phase I Plans - 2010**
  - Interim and Final nutrient and sediment target loads by sector and impaired segment
  - Statewide response to 8 Elements
  - Mechanism for engaging local partners
- **Phase II Plans – 2011**
  - TMDL allocations may be modified in Phase II
    - **More time to address technical issues**
    - **More time for stakeholder advice**
  - Loads divided by smaller geographic areas (e.g., county)
  - Local contributions and responsibilities to reduce pollutant loads
  - Controls and practices to be implemented by 2017
- **Phase III Plans – 2017**
  - Possibly modify TMDL and allocations
  - Identify controls to meet final target loads

Maryland's Allocation

- Nitrogen
  - Need to go from 49.53 to 39.09 million pounds per year
  - 21% reduction
- Phosphorus
  - Need to go from 3.10 to 2.72 million pounds per year
  - 12% reduction

Maryland's Phase I Plan

- Proposes strategy options that will exceed our 2017 reduction goal by 31%
- Maryland is committed to meeting its nutrient and sediment reduction goals by 2020. Therefore we must achieve 70% of the reduction by 2017.
- Plan builds on State's 2 year milestones and is rooted in accountability created through BayStat

Strategy Options – Point Sources

Ongoing

- ENR Upgrades at 67 Major Wastewater Treatment Plants
- Major Industrial retrofits
- Federal facilities major – in accordance with July 2006 MOU with DOD
- Eliminate Sewer Overflows – consent orders, long-term control plans in play

New

- Minor Industrial – 462 sources
- Federal facilities minor
- Upgrade Large Minor Municipal WWTP- 0.1 to 0.5 MGD

Strategy Options – Urban Stormwater

Ongoing

- Urban Nutrient Management Law

New

- MS4 Phase I – Require 30%, 40% or 50% retrofits for largest counties and State Highway Administration
- MS4 Phase II – Require 20% retrofits
- Expand MS4 permits
- Expand Urban Nutrient Management
- Expand Urban Tree Canopies
- Stream Restoration

Strategy Options - Septic

Ongoing

- Retrofit new and replacement septic systems in the Critical area

New

- Retrofit all septics in critical area
- Require all septics within 1,000 feet of a stream use best available technology for nitrogen removal

Strategy Options
Agriculture BMPs

Ongoing

- Cover Crops
  - Option 1: 355,000 acres Cover Crops
  - Option 2: 500,000 acres (new)
- Conservation Tillage
- Continuous No-Till
- CAFO/MAFO
- Water Control Structures
- Dairy Manure Incorporation Technology
- Manure Transport
- Poultry Manure Incorporation Technology

New

- Alum Addition to Poultry Houses
- In-house Poultry Ammonia Emission Control
- Agronomic Improvements
- Voluntary BMPs
- Alternative Uses of Manure – Waste to Energy
- Revise P-index for Nutrient Management

Strategy Options – Natural Filters

Ongoing

- Streamside Grass and Forest Buffers – Private and Public
- Wetland Restoration – Private and Public
- Tree Planting through Forest Brigade – Public

New

- Shoreline Erosion Control – Private
- Agricultural strategies on DNR land

Strategy Options – Air

Ongoing

- Reduction of nitrogen emissions from power plants

New

- Expand Diesel Engine Retrofit Program

Equitable Allocation Approach

Key principles to determine the way the major basin loads are distributed to the segment-sheds by source sector (urban, agricultural and septic):

1. Maintaining **equity** in assigning required levels of effort among source sectors;

2. Giving **credit for existing actions** - account for all nutrient and sediment reductions achieved to date;

3. Consideration of **relative effectiveness** - optimize results by increasing effort in areas that have the greatest impact on water quality in the Bay;

4. Consideration of the **opportunity for reductions** - evaluate the overall “reducible load” available in each segment-shed.

Offset Policy

- Target loads for new and increased sources will be designated for new development and redevelopment.
- Promotes growth where it's best suited:
  - If in Priority Funding Areas, served by WWTPs, little or no offsets required
  - In areas with higher pollution rates offsets required

Job Creation

- Plan maintains and creates jobs
- Specifically:
  - Upgrading wastewater treatment plant
  - Septic installation
  - Stormwater retrofit
  - Natural filters plantings such as living shorelines, wetland restoration, buffer and tree plantings

Available Programs and Funding

- Chesapeake and Coastal Bays Trust Fund more than doubled in FY 2011 to $20 million
- The FY 2011 capital budget includes $247.3 million for Chesapeake Bay restoration activities and $65.5 million for land preservation programs
- Farm Bill earmarked for Chesapeake Bay
- Bay Restoration Fund for WWTP & septic upgrades and cover crops
- Maryland Agricultural Cost Share Program (MACS)
- Imperative that the final plan selected strategies must be the most cost-efficient and targeted to areas where science tells us pollution reductions will be the most effective.

Public Outreach

- Web site development: Chesapeake Bay TMDL web pages at www.mde.state.md.us
- EPA webinars – Maryland participation May 17
- Public meetings & presentations, including five regional exchanges for stakeholder input to Watershed Implementation Planning process held June 15-July 15
- Four BayStat listening sessions
- On-line “Suggestion Box” for Gap Closing strategies
- Local Phase II Pilot Projects: Anne Arundel and Caroline Counties
- Stakeholder Advisory Committee for participation in Phase II process – First Meeting – Wednesday, August 11
- Planning for Public Comment Period meetings in September and October

Public Meetings in MD

Upcoming

- Maryland Hosted:
  - Monday, September 27, 7-9pm – South Hagerstown High School
  - Thursday, September 30, 6:30-8:30pm – Talbot County Community Center
  - Monday, October 4, 6:30-8:30pm, MD State Fairgrounds
  - Wednesday, October 6, 6:30-8:30pm, Prince George's Soil Conservation District
- EPA Hosted:
  - Tuesday, October 12 – Easton Club
  - Wednesday, October 13 – Annapolis Sheraton
  - Thursday, October 14 – Hagerstown Hotel Convention Center
  - All meetings 2:00-4:00 PM
  - Webinar broadcast concurrent with Hagerstown meeting

Schedule

September 1, 2010	Draft Phase I Plan submitted to EPA
September 24 – November 8, 2010	Public Comment Period for Final Draft TMDL (EPA)
December 31, 2010	Final TMDL and Phase I Plans Approved and Published
June 2011	Draft Phase II Plans submitted to EPA
November 2011	Final Phase II Plans submitted to EPA
January 2017	Plan updates with detailed 2018 - 2025 (2020) actions and controls