

**THE CHESAPEAKE BAY TMDL:
Restoring Waters of
Pennsylvania and the
Chesapeake Bay**

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Agricultural Producers' Meeting

- **Overview of Chesapeake Bay WIP**
- **New Chapter 102 Regulations**
- **Revisions to Manure Management Manual**

Chesapeake Bay TMDL

- **Dec 29, 2010: The Environmental Protection Agency (EPA) published a Total Maximum Daily Load (TMDL) for the Chesapeake Bay**
- **Identifies reductions of Nitrogen, Phosphorus and Total Suspended Solids from Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia.**

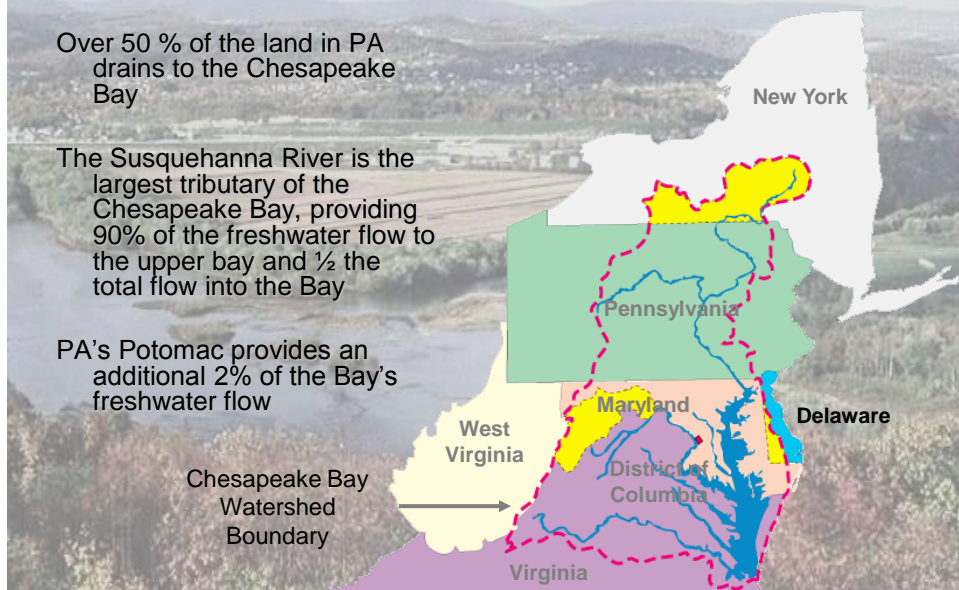
PA Chesapeake Basin

Over 50 % of the land in PA drains to the Chesapeake Bay

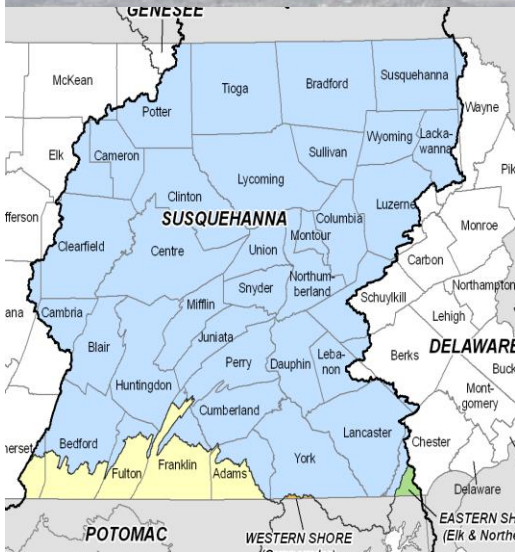
The Susquehanna River is the largest tributary of the Chesapeake Bay, providing 90% of the freshwater flow to the upper bay and 1/2 the total flow into the Bay

PA's Potomac provides an additional 2% of the Bay's freshwater flow

Chesapeake Bay Watershed Boundary



PA's portion of the Chesapeake Bay Watershed



- PA encompasses 35.2% of the Bay watershed -- that's 14,358,159 acres.
- Four PA watersheds
 - Susquehanna River (13,298,520 acres, 32.6%)
 - Potomac River (1,012,222 acres, 2.5%)
 - Eastern Shore (40,262 acres, 0.1%)
 - Western Shore (7,155 acres, 0.02%)
- Impaired PA waters due to major sources:
 - Agriculture 3,558 m.
 - Mine drainage 1,952 m.
 - Urban runoff/stormwater 518m.

PA Reduction Target

Phase 5.3 Watershed Model
 Nitrogen (TN), Phosphorus (TP), & Total Suspended Solids (TSS) – Million Pounds/Year

	TN	TP	TSS
1985	135.17	5.08	2,971
2009	106.41	3.96	2,576
Draft TMDL	76.77	2.74	2,013.62
Final TMDL	73.93	2.93	1,983.78
Remaining Reductions	32.48	1.03	592.22



PA Chesapeake Bay Watershed Implementation Plan (WIP)

- **Built with Significant Public Input**
- **Many Advisory Committee Meetings**
- **Over 125 Individuals Volunteered for Workgroups**
 - **WIP Management Team**
 - **Agriculture Workgroup**
 - **Urban/Suburban/Rural Workgroup**
 - **Wastewater Workgroup**



PA Chesapeake Bay Watershed Implementation Plan (WIP)

Results of this Public Input:

- **500+ page WIP Submitted to EPA**
- **Three Key Elements:**
 - **Milestone Implementation and Tracking**
 - **Advanced Technologies & Nutrient Trading**
 - **Enhancing Compliance Efforts**



PA Chesapeake Bay Watershed Implementation Plan (WIP)

- **Four Approaches for each Element:**
 - Continuing existing programs;
 - Initiating and implementing new programs, or increasing the capacity of existing programs;
 - Implementing new regulations or laws developed since the 2009 Progress Run; and
 - Improving the data that is reported to EPA and included in Watershed Model runs.



PA Chesapeake Bay Watershed Implementation Plan (WIP)

Milestone Implementation and Tracking

- Chesapeake Bay Model only shows what is entered
- **Common Workgroup Issue: BMPs in place have not been reported, including agricultural and stormwater BMPs**
- **WIP Solution: Track Un-reported/Under-reported BMPs**
- External groups interested in helping

PA Chesapeake Bay Watershed Implementation Plan (WIP)

Milestone Implementation and Tracking

- Lancaster and Bradford County Pilot Projects on unreported BMPs
- Examples of results:
 - Large number of voluntary BMPs
 - 85 % of no-till activities in Bradford County are not cost-shared
 - Street Cleaning in Bradford County

PA Chesapeake Bay Watershed Implementation Plan (WIP)

Advanced Technologies & Nutrient Trading

- Pennsylvania Leadership in Technology
 - Proposed Technology project fund
 - \$100 million annually (50% federal & 50% state)
- PA Projects in the works:
 - Bion Environmental Technologies – Dairy Manure
 - Cove Area Regional Digester (CARD) - Dairy Manure
 - EnergyWorks- Poultry Manure

PA Chesapeake Bay Watershed Implementation Plan (WIP)

Advanced Technologies & Nutrient Trading

- 100 proposals have been submitted
- 68 have been approved
 - over 3 million nitrogen (N) credits; 280,000 phosphorous (P) credits
- 10 contracts completed:
 - 7 for new development
 - 2 for existing WWTP facilities
 - 1 industrial source
- 1st Auction Fall of 2010 by PennVest

PA Chesapeake Bay Watershed Implementation Plan (WIP)

Enhancing Compliance Efforts

- Pennsylvania 2006 Point Source Strategy developed in December 2006
 - Phase 1 permits issued to 63 Wastewater Treatment Plants
 - Phase 2 facilities (47 facilities)
 - Phase 3 facilities (74 facilities)
- New Point Source - Zero Net Load:
 - Recycle and Reuse of Effluent
 - Load Offsets
 - Purchasing Credits (Trading)
- New On-lot Systems – No New Requirements
- Connection to Existing Point Source - No New Requirements

PA Chesapeake Bay Watershed Implementation Plan (WIP)

Enhancing Compliance Efforts

- **Pennsylvania Phosphate Reduction Act of 2008**
 - Mandates virtually no phosphate in dishwashing detergent, effective July 1, 2010
- **Air Reductions (State-wide)**
 - Anti-Idling Law
 - Glass Melting Furnaces; Cement Kilns; Renewable Energy/Energy Efficiency (RE/EE) and Demand Reductions
- **Chapter 102 Regulation Revisions**
 - Earth disturbance: More protective BMPs in High Quality (HQ) and Exceptional Value (EV) watersheds
 - Agriculture: E&S Plan requirements for Animal Heavy Use Areas; additional vegetative cover or BMPs for fields within 100 feet of a stream

PA Chesapeake Bay Watershed Implementation Plan (WIP)

Enhancing Compliance Efforts - Agriculture

- **Existing Programs: Ag E&S / Manure Management**
- **Conservation District Chesapeake Bay Efforts:**
 - 49 Chesapeake Bay Staff in 36 Districts
 - Farm Visits: Education Only
 - Grants Funds: Special Projects, PennVest
- **Chesapeake Bay Regulatory and Accountability Program (CBRAP)**
 - Additional funding from EPA
 - Four DEP staff positions
 - Provide compliance and inspections actions for Pennsylvania's CAFO, stormwater, and agriculture regulatory programs
 - Support a targeted watershed approach

PA Chesapeake Bay Watershed Implementation Plan (WIP)

EPA praised PA's significant efforts on WIP

- EPA will oversee PA's efforts to make sure PA implements the WIP.
- Regarding Pennsylvania Sectors:
 - Growth and Trading: Positive Comments
 - Agriculture and Wastewater: "Enhanced Oversight"
 - Stormwater: Backstop Allocation/Adjustment

