



Chesapeake Bay Updates

Chesapeake Bay Management Team Meeting

May 7, 2014

Andy Zemba – Interstate Waters Office

Updates

- **Total Maximum Daily Load (TMDL)**
- **Chesapeake Bay Watershed Agreement**



Chesapeake Bay TMDL Progress

- **December 2010:** Chesapeake Bay TMDL published by EPA
- **January 2011:** Phase 1 Watershed Implementation Plan (WIP)
- **2011:** EPA Revises Watershed Model – Issue revised TMDL allocations
- **March 2012:** Phase 2 WIP – Draft County Planning Targets



Chesapeake Bay TMDL Progress

- **2017 Evaluation:** Have practices and controls in place that are expected to achieve 60 percent of load reductions necessary to achieve applicable water quality standards compared to 2009 levels.
- **2018:** Phase 3 WIP
- **2025:** Have all practices and controls installed by 2025 to achieve the Bay's DO, water clarity/SAV, and chlorophyll-a standards.



Measuring Progress

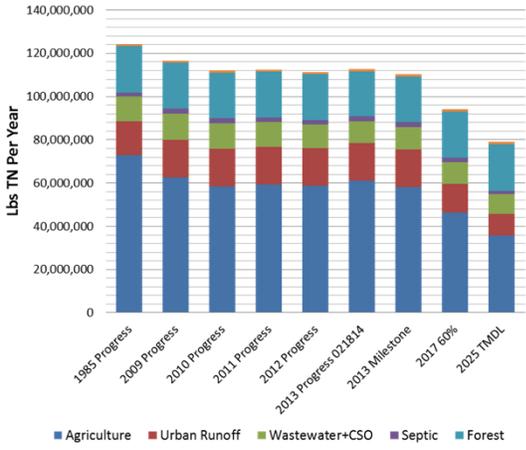
- **2 – Year Milestones**
 - **Chesapeake Bay Watershed Model**
 - Best Management Practices (BMPs)
 - Loading (lb/yr) of Nitrogen, Phosphorous and Sediment
 - **Programmatic Milestones**
 - Regulatory
 - Grants, Projects and Partnerships
- **EPA Evaluation**



Chesapeake Bay TMDL Progress

Where we are:

PA Estimated Delivered Total Nitrogen



Year/Category	Agriculture	Urban Runoff	Wastewater+CSO	Septic	Forest
1985 Progress	~75,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2009 Progress	~65,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2010 Progress	~60,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2011 Progress	~60,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2012 Progress	~60,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2013 Progress 021814	~60,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2013 Milestone	~60,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2017 60%	~50,000,000	~15,000,000	~10,000,000	~5,000,000	~15,000,000
2025 TMDL	~40,000,000	~10,000,000	~10,000,000	~5,000,000	~15,000,000

Since 1985:

- Completed 27% of N reductions needed to meet the TMDL
- Additional 31.4 million pounds to be reduced by 2025
- Downward revisions made to 2010 FSA-supplied data



Chesapeake Bay TMDL Progress

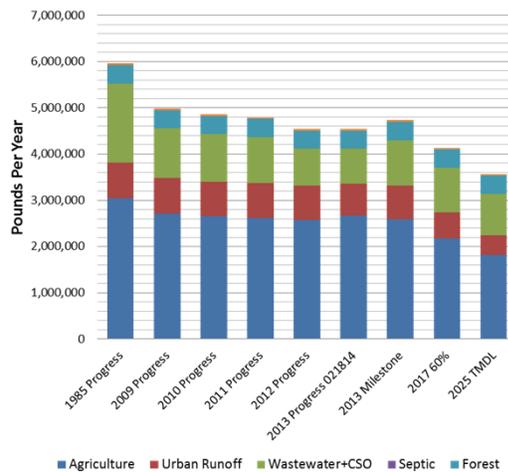
Nitrogen Loads (Millions of Pounds/Yr)

	1985	2012	2013	2017 Checkpoint (60% of WIP)	Reductions by 2017
Total	124.28 %	111.36 %	112.71 %	102.52 %	10.19
Agriculture	72.79 59%	58.63 53%	61.20 54%	52.69 51%	8.51
Urban Runoff	15.66 13%	17.44 16%	17.18 15%	14.55 14%	2.63
Wastewater & CSO	11.64 9%	11.10 10%	10.21 9%	10.93 11%	-0.72
Septic	1.72 1%	2.07 2%	2.22 2%	2.09 2%	0.13
Forests	22.47 18%	21.08 19%	20.85 18%	21.84 21%	-0.99



Chesapeake Bay TMDL Progress

PA Estimated Delivered Total Phosphorus



Since 1985:

- Completed 58% of Phosphorus reductions needed to meet the TMDL
- Additional one million pounds needed by 2025
- 2013 results meet 2013 milestone goal
- WWTP Phosphorus loads met 2013 MS and on track for 2017 midpoint loads

Chesapeake Bay TMDL Progress

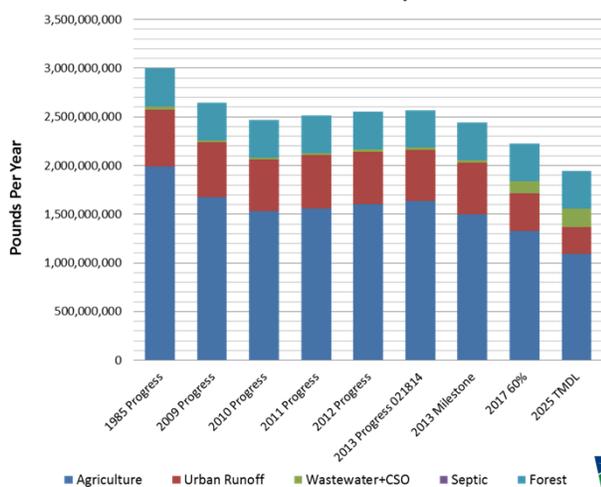
Phosphorous Loads (Millions of Pounds/Yr)

	1985		2012		2013		2017 Checkpoint		Reductions by 2017
Total	5.957	%	4.541	%	4.541	%	4.400	%	0.141
Agriculture	3.045	51%	2.572	57%	2.663	59%	2.395	54%	0.268
Urban Runoff	0.764	13%	0.751	17%	0.689	15%	0.630	14%	0.059
Wastewater & CSO	1.715	29%	0.787	17%	0.767	17%	0.943	21%	-0.176
Forests	0.432	7%	0.394	9%	0.385	8%	0.418	9%	-0.033



Chesapeake Bay TMDL Progress

PA Estimated Delivered Total Suspended Solids



Since 1985:

- Completed 40% of TSS reductions needed to meet the TMDL
- Additional 648 million pounds to be reduced by 2025
- Downward revisions made to 2010 FSA-supplied data



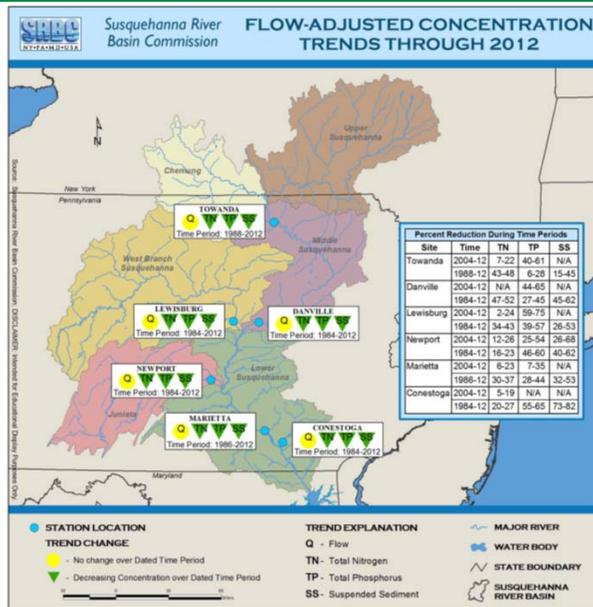
Chesapeake Bay TMDL Progress

Total Suspended Solids (Millions of Pounds/Yr)

	1985		2012		2013		2017 Checkpoint		Reductions by 2017
Total	2,998.8	%	2,553.6	%	2,565.0	%	2,353.1	%	211.9
Agriculture	1,990.4	66%	1,602.8	63%	1,636.4	64%	1,431.4	61%	205.0
Urban Runoff	580.6	19%	539.1	21%	526.9	20%	447.0	19%	79.9
Wastewater & CSO	35.1	1%	25.9	1%	24.3	1%	87.5	4%	-63.2
Forests	392.6	13%	385.9	15%	377.5	15%	387.2	16%	-9.7



Monitoring



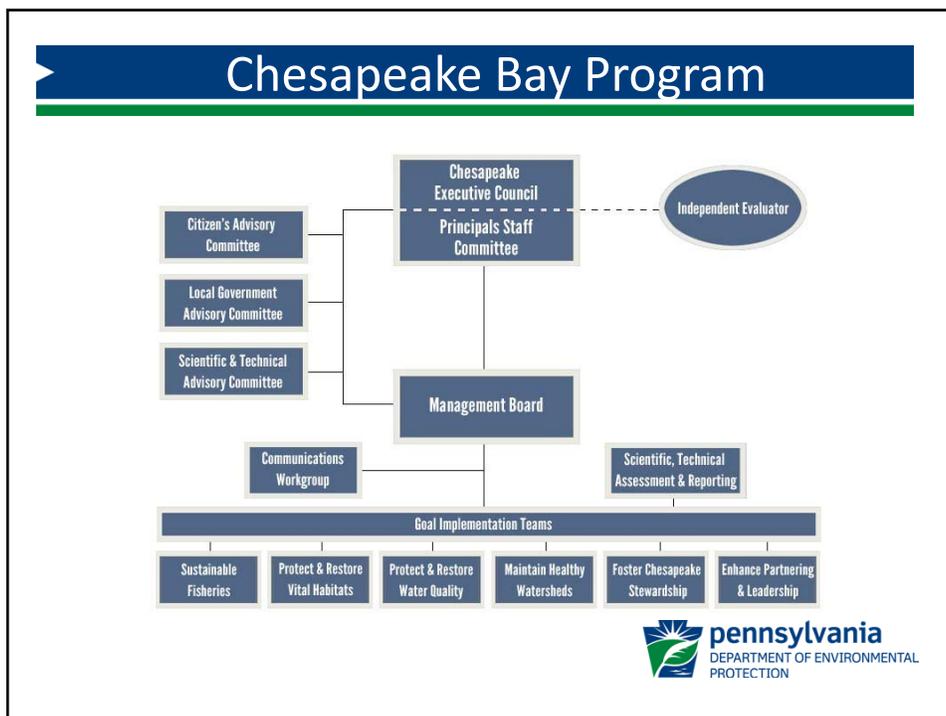
Chesapeake Bay TMDL Progress

- Sectors have made steady progress
- Newly issued WWTP permit limits have reduced point-source phosphorus loads to below 2017 midpoint loading rates
- More aggressive implementation will be needed in other areas to meet 2017 goals



New Chesapeake Bay Watershed Agreement





New Chesapeake Bay Watershed Agreement

Why Now?

- The Chesapeake 2000 Agreement is largely outdated
- Federal Agencies - Executive Order (EO) of 2009
- The Congressional General Accountability Office called for the “alignment” of the federal EO Chesapeake Bay Strategy goals and the Chesapeake Bay Program Agreement goals
- Process started in 2011
- Signatories eligible to receive funding

New Chesapeake Bay Watershed Agreement

What's New?

- “Headwater” states (NY, DE, and WVA) are invited to sign for the first time
- Agreement will be shorter and reflect the goals of the overall partnership
- Focused measurable outcomes
- Management Strategies will be developed for outcomes
- Jurisdictions have flexibility to choose which outcomes they will participate in



New Chesapeake Bay Watershed Agreement

What's Happened So Far?

- The Executive Council agreed to goals and outcomes for Sustainable Fisheries, Vital Habitats, Water Quality, Healthy Watersheds, Land Conservation, Public Access and Environmental Literacy.
- Draft Chesapeake Bay Watershed Agreement was released for public comment on Jan. 29, 2014.

<http://www.chesapeakebay.net/chesapeakebaywatershedagreement/page>



New Chesapeake Bay Watershed Agreement

What's Happened So Far?

- Comment Period Closed March 17, 2014
- Subject Areas Receiving Most Comment:
 - Climate Change
 - Toxics
 - Public Access
 - Accountability
 - Education
 - Water Quality and Pollutant Sources



New Chesapeake Bay Watershed Agreement

Development Timeline

- Dec. 12: Chesapeake Executive Council (EC) meeting held
- Jan. 29: Release Draft Agreement for 45 day public comment, closed March 17, 2014
- March/April – Address public comments
- April – PSC approve final edits
- Spring 2014: EC meeting – sign Final Agreement





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