



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Office of Water Management

# Chesapeake Bay Updates

WRAC Meeting

May 14, 2014

Ted Tesler – 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.

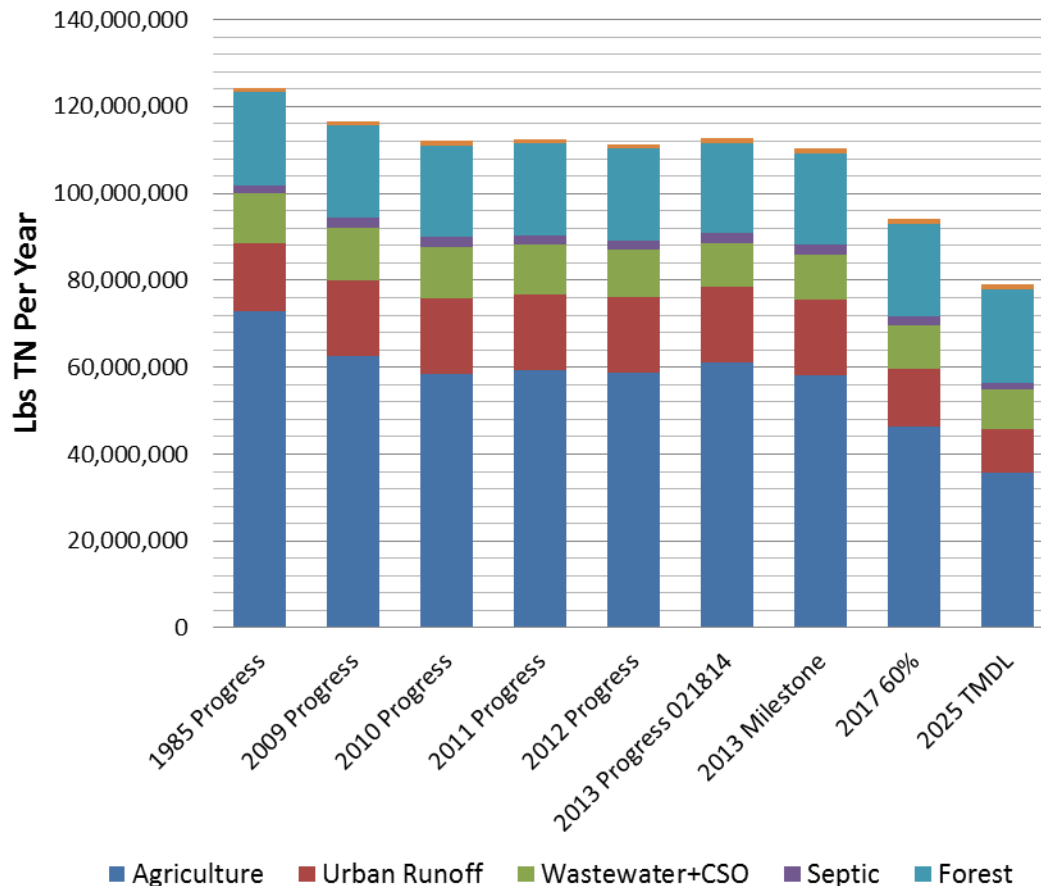
# Measuring Progress

- **Two – 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



## Since 1985:

- Completed 27 percent 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

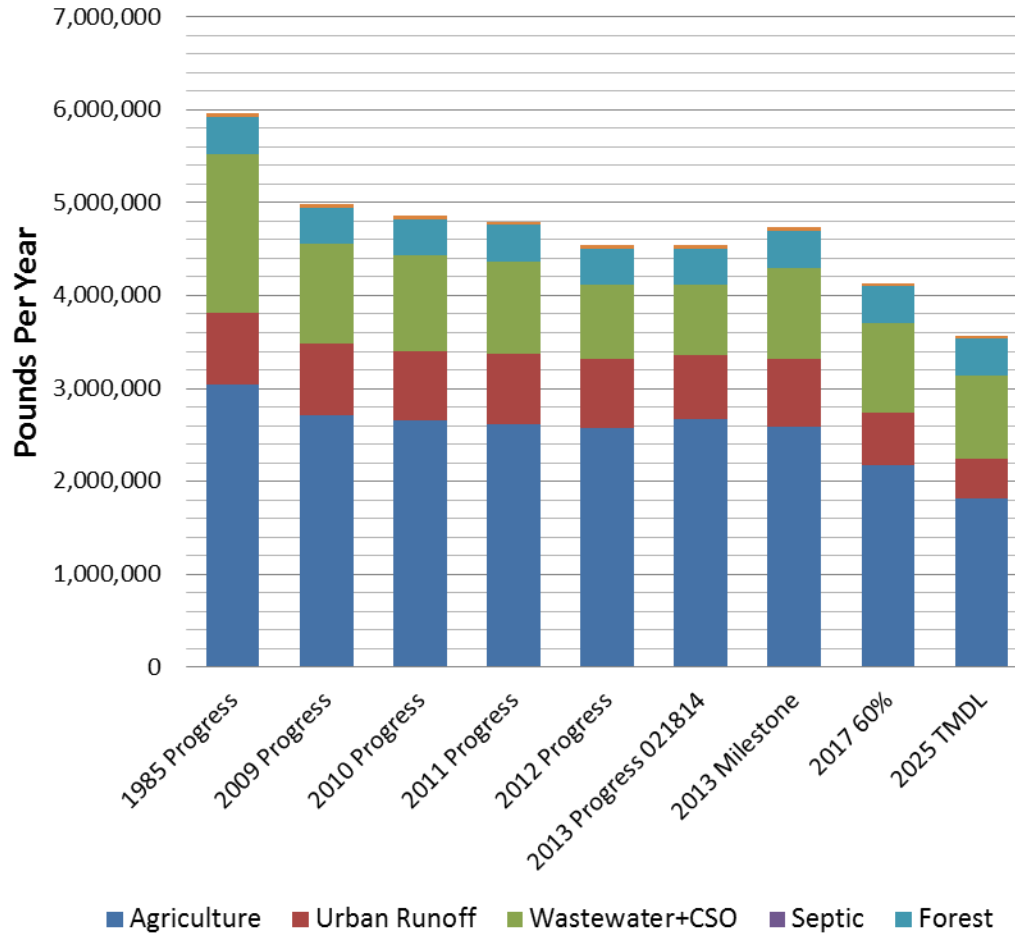
# Chesapeake Bay TMDL Progress

## Nitrogen Loads (Millions of Pounds/Yr)

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



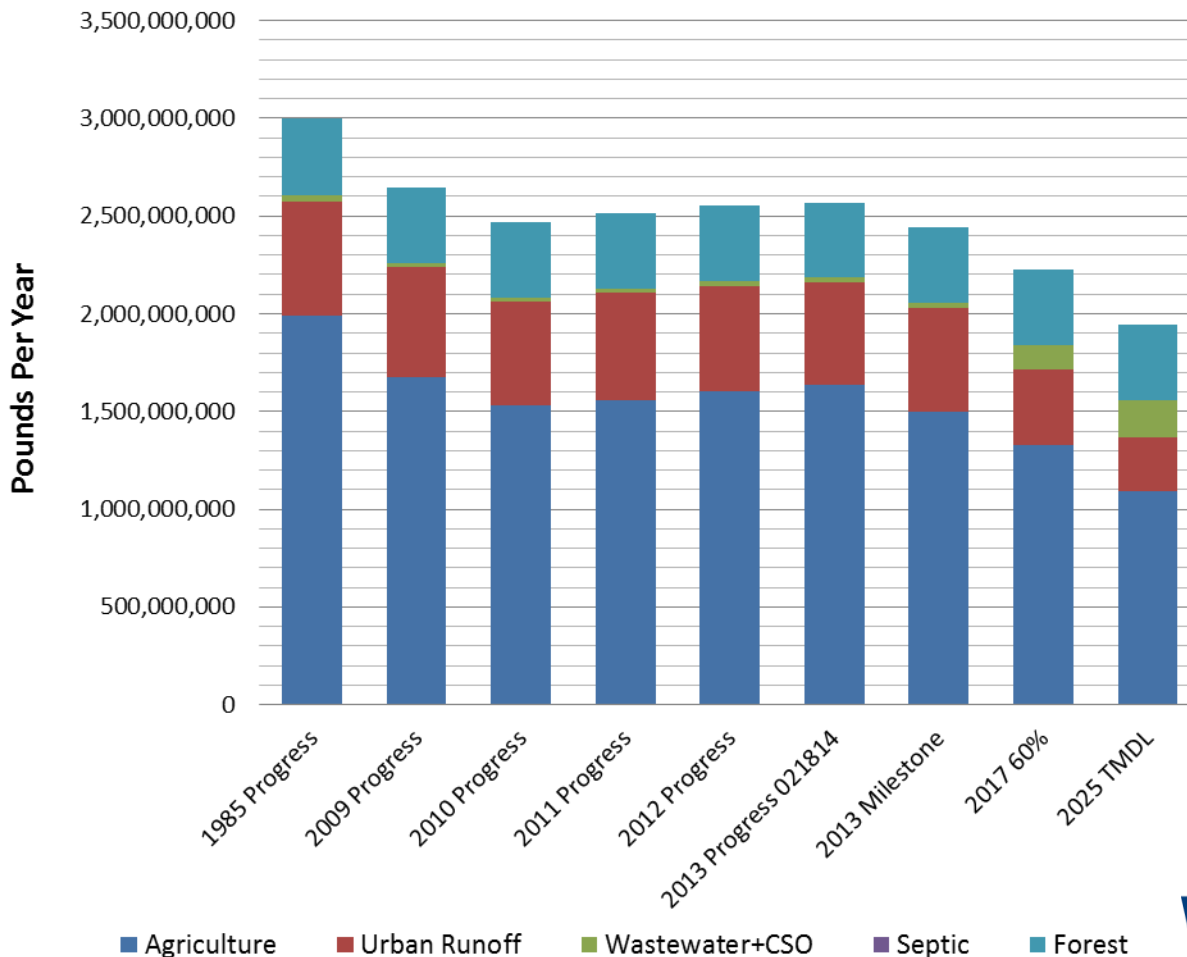
# Chesapeake Bay TMDL Progress

## Phosphorous Loads (Millions of Pounds/Yr)

	<u>1985</u>		<u>2012</u>		<u>2013</u>		<u>2017 Checkpoint</u>		<u>Reductions by 2017</u>
<b>Total</b>	<b>5.957</b>	<b>%</b>	<b>4.541</b>	<b>%</b>	<b>4.541</b>	<b>%</b>	<b>4.400</b>	<b>%</b>	<b>0.141</b>
<b>Agriculture</b>	3.045	51%	2.572	57%	2.663	59%	2.395	54%	0.268
<b>Urban Runoff</b>	0.764	13%	0.751	17%	0.689	15%	0.630	14%	0.059
<b>Wastewater &amp; CSO</b>	1.715	29%	0.787	17%	0.767	17%	0.943	21%	-0.176
<b>Forests</b>	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:

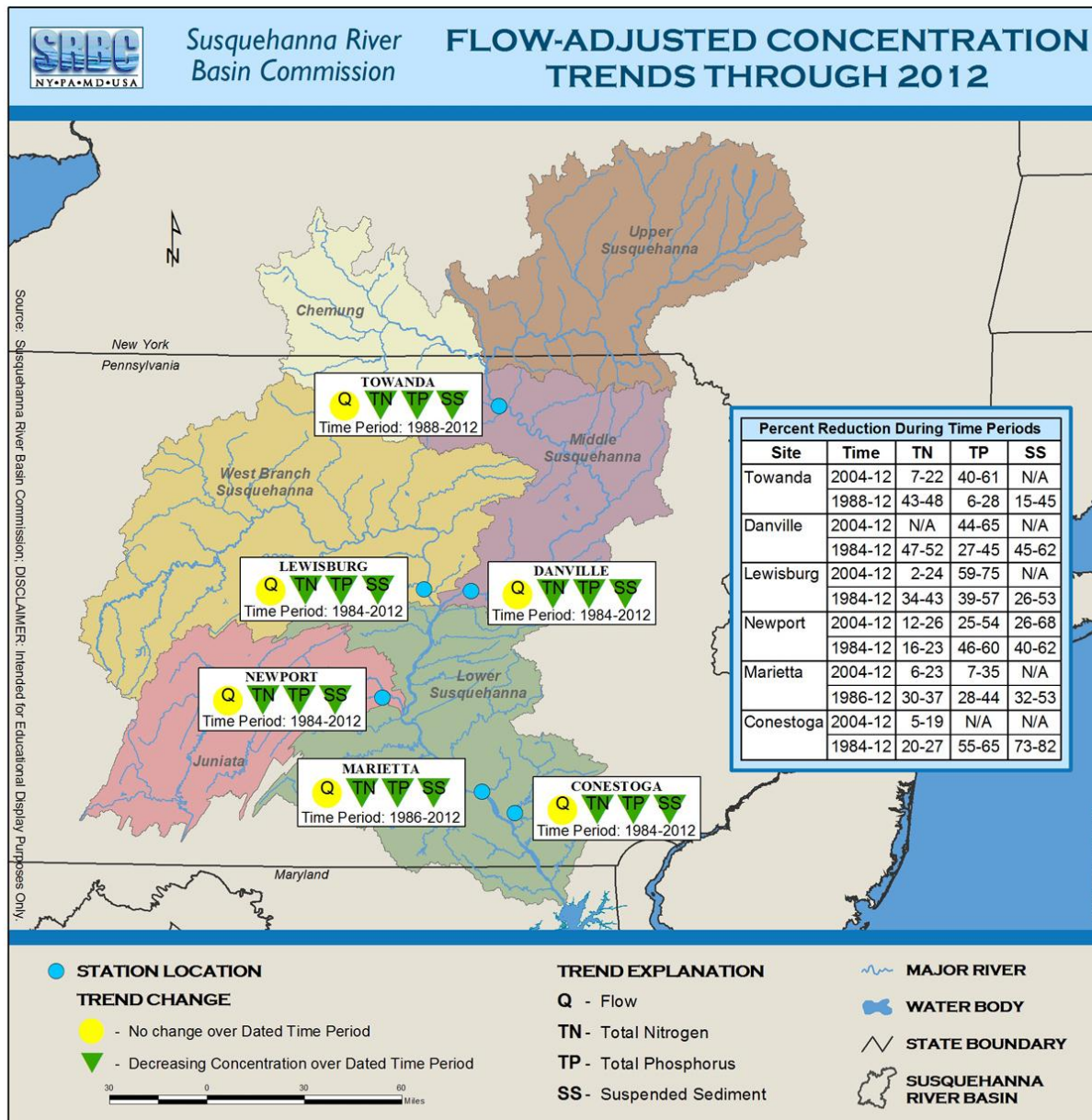
- Completed 40 percent of TSS reductions needed to meet the TMDL
- Additional 648 million pounds to be reduced by 2025
- Downward revisions made to 2010 FSA-supplied data

# Chesapeake Bay TMDL Progress

## Total Suspended Solids (Millions of Pounds/Yr)

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

# Monitoring



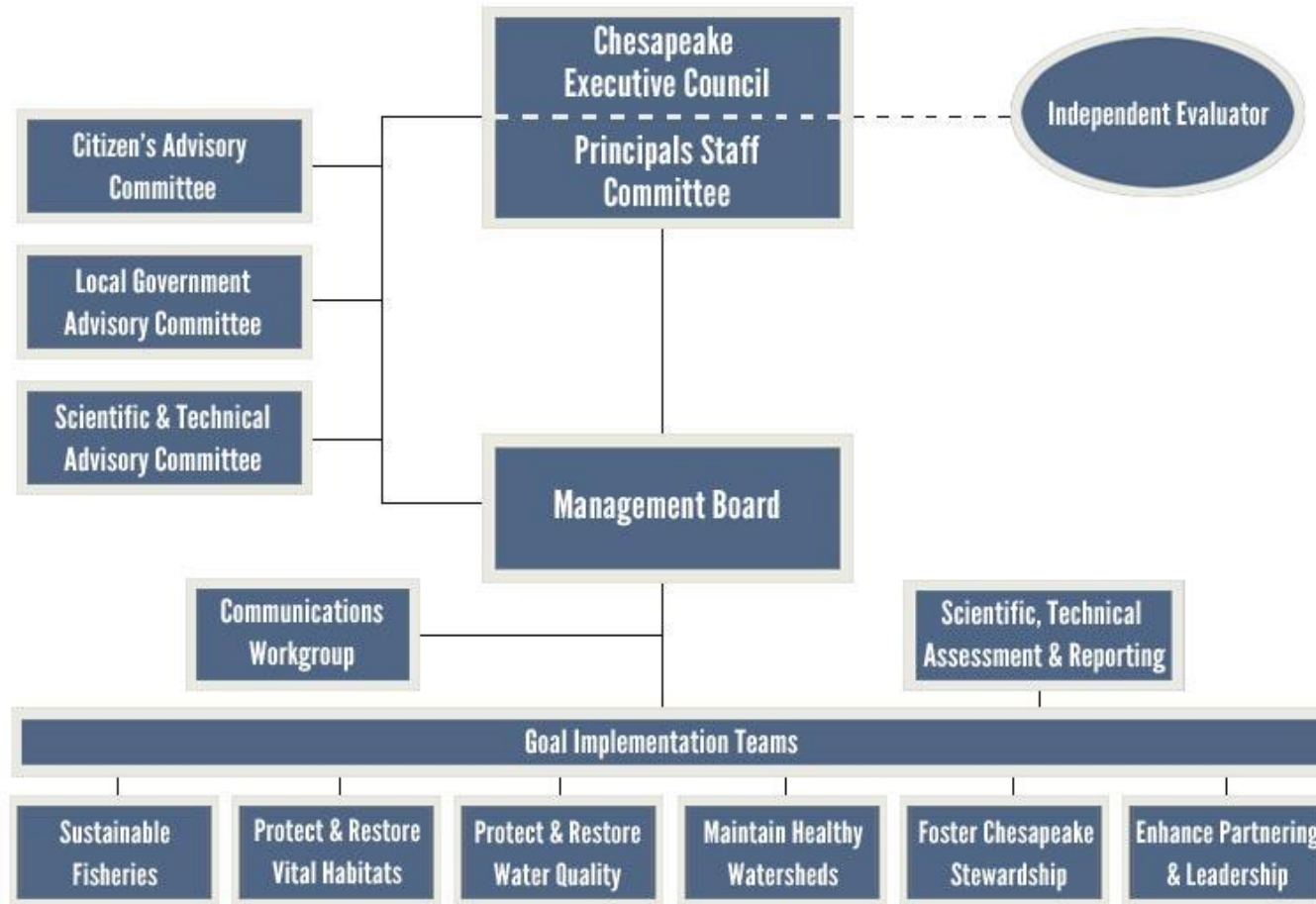
# Chesapeake Bay TMDL Progress

- 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**

# Chesapeake Bay Program



# ▶ 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
- May 7: Chesapeake Bay Management Team Meeting
- Spring 2014: EC meeting – sign Final Agreement



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Office of Water Management

**Ted Tesler**  
**DEP Interstate Waters Office**  
**717-772-4785**  
**[ThTesler@pa.gov](mailto:ThTesler@pa.gov)**

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