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Chesapeake Bay Program Office

# Pennsylvania's Phase III Watershed Implementation Plan

Kick-Off & Listening Session

June 5, 2017



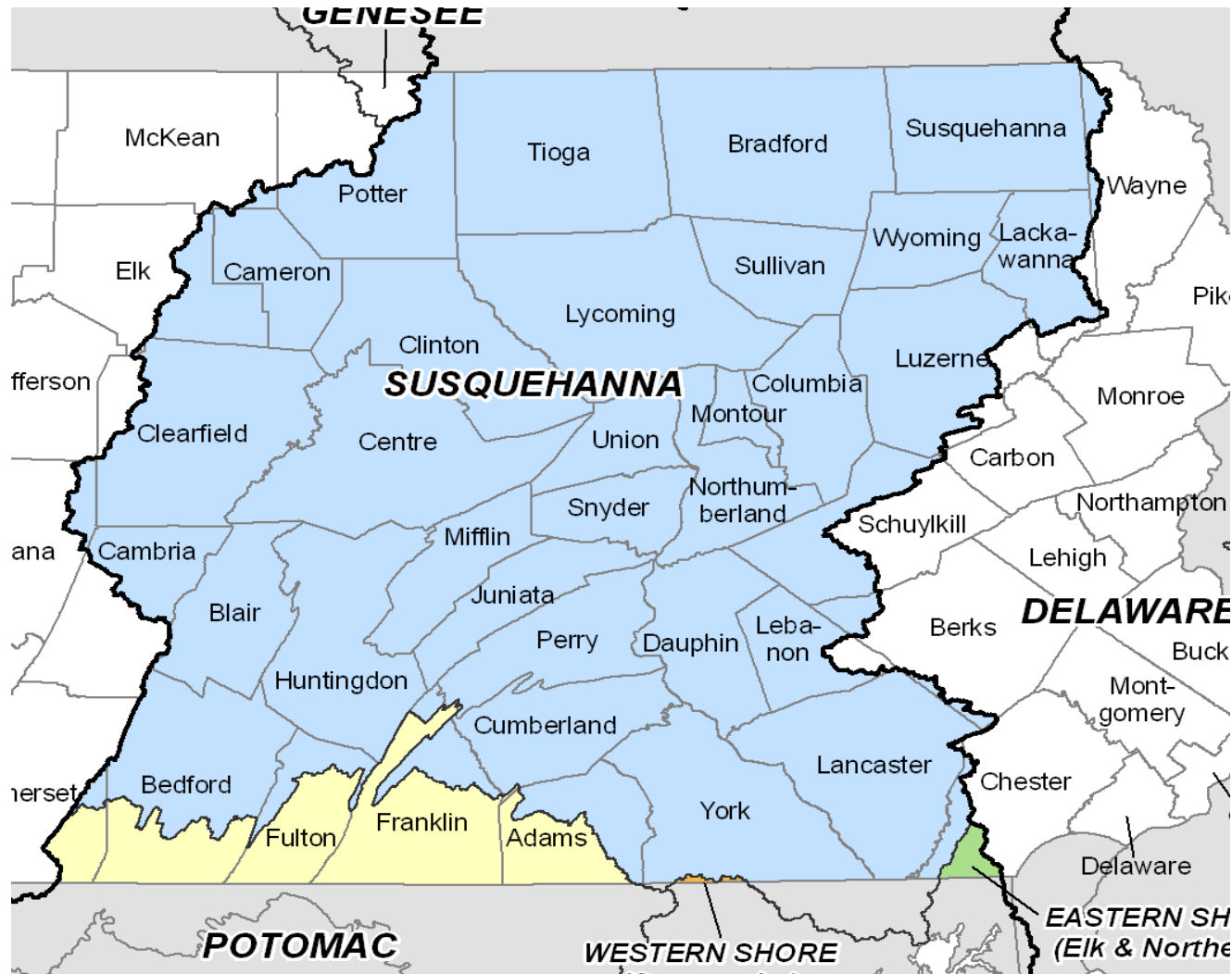
# Agenda -- Background to Promote Discussion Today

- Why Are We Doing This?
- Pennsylvania Allocations and Progress Numbers
- Monitoring Trends
- Bay Program Midpoint Assessment
- Game Plan for the Phase 3 WIP Development

# Why Are We Doing This?

- Federal Clean Water Act, Federal court orders and regulations
  - 2010 Chesapeake Bay Total Maximum Daily Load (TMDL) requires annual loading reductions of nitrogen, phosphorus and sediment
  - Requires the return of Chesapeake Bay waters to Maryland state water quality standards by 2025
- Pennsylvania's Clean Stream Law
- Article 1, Section 27, Pennsylvania Constitution
  - The people have the right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment.
  - As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

# PA's Portion of the 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%)



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- What is a Sector?
- In the TMDL, pollutant sources were divided to efficiently reach facilities with similar operations, processes or practices
  - Point Sources = *Wastewater* (Treatment Plants, Combined Sewer Overflows)
  - Nonpoint Sources = Pollution from rainfall and stormwater runoff
    - *Agriculture* – farms or ranches that grow and harvest crops and animals for production
    - *Urban Runoff* – land area that has been developed, or is planned for development (ex. streets and parking lots)
  - *Forest* – areas covered in trees



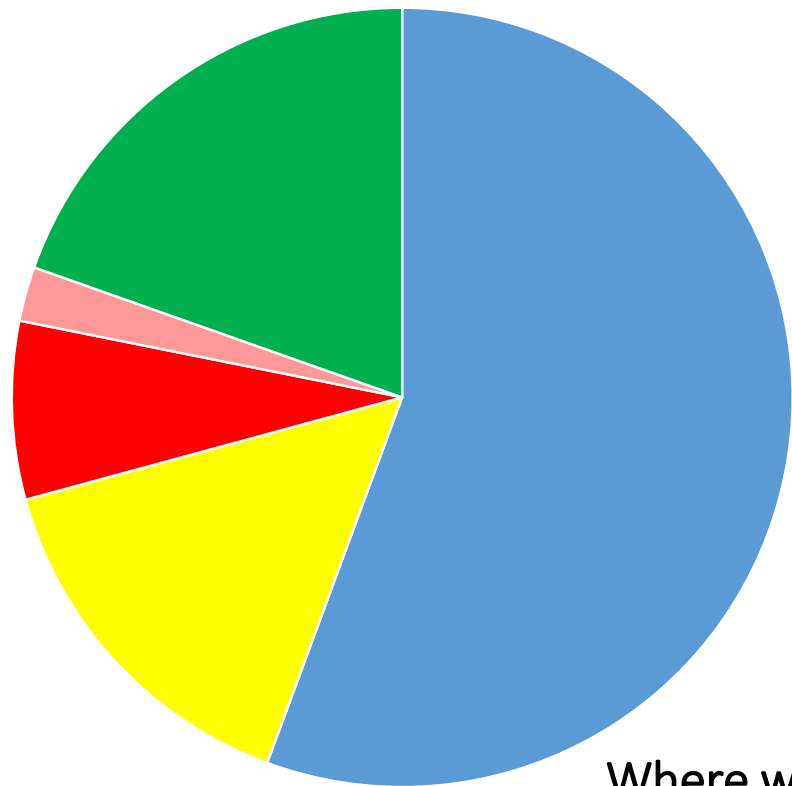
Clean water:  
Great for PA  
Good for the Bay

# Pennsylvania Nitrogen Loads: 2015-2025

■ Agriculture ■ Urban Runoff ■ Wastewater+CSO ■ Septic ■ Forest+

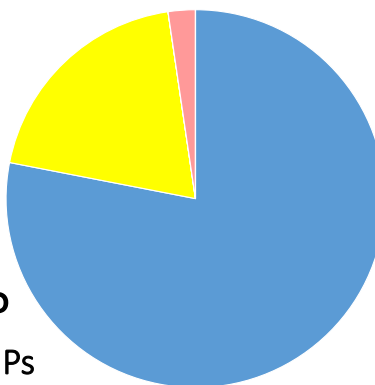
**113 M lbs.**

**(11 M lbs. reduced 1985-2015)**



**2015**

Where will the remaining Nitrogen reductions\* come from?  
\*Based on jurisdictions' Phase II WIPs

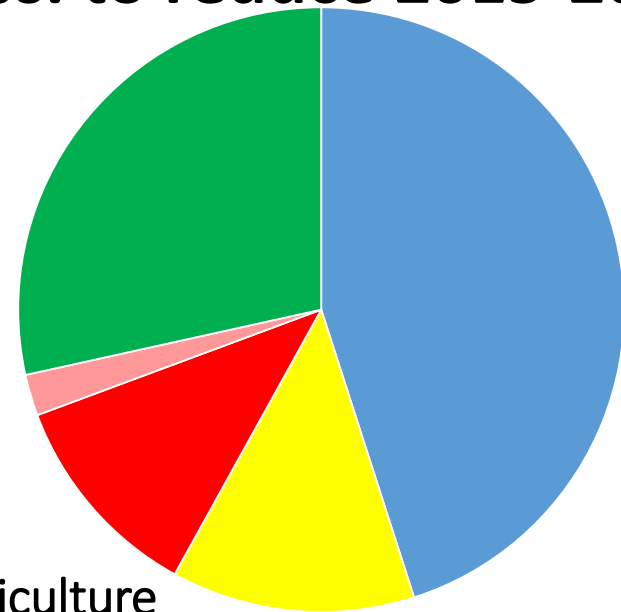


78% Agriculture  
20% Urban  
2% Septic

**2025**

**79 M lbs.**

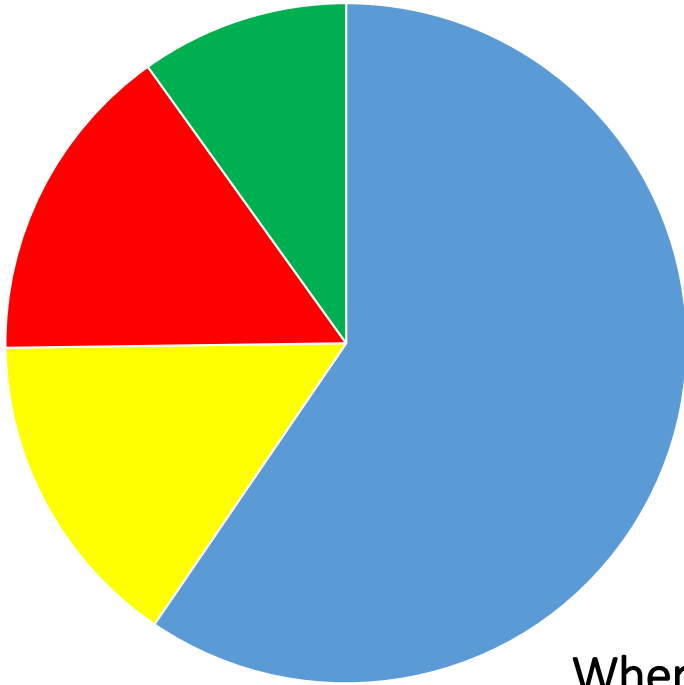
**(34 M lbs. to reduce 2015-2025)**



# Pennsylvania Phosphorus Loads: 2015-2025

■ Agriculture ■ Urban Runoff ■ Wastewater+CSO ■ Forest+

**4.3 M lbs.**  
**(1.7 M lbs. reduced 1985-2015)**

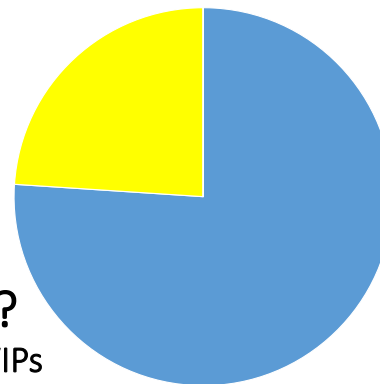


**2015**

Where will the remaining Phosphorus reductions\* come from?  
\*Based on jurisdictions' Phase II WIPs



**3.6 M lbs.**  
**(0.7 M lbs. to reduce 2015-2025)**



76% Agriculture  
24% Urban

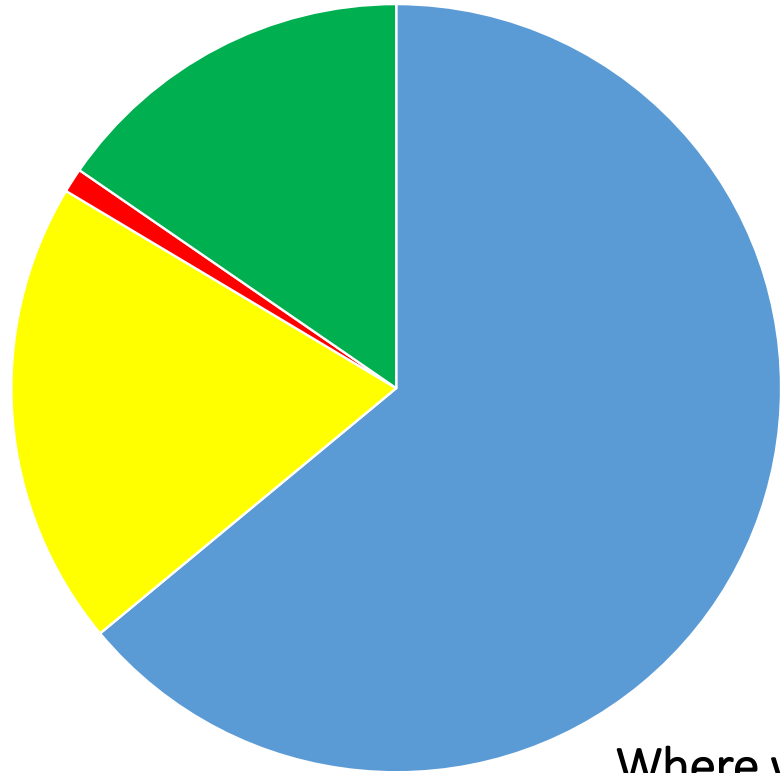
**2025**

# Pennsylvania Sediment Loads: 2015-2025

■ Agriculture ■ Urban Runoff ■ Wastewater+CSO ■ Forest+

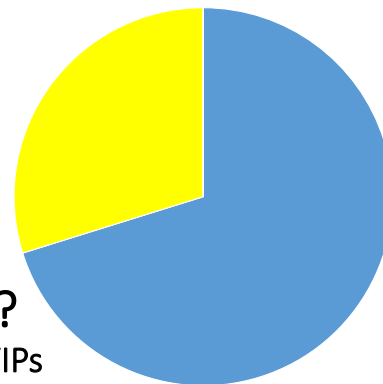
**2,477 M lbs.**

**(540 M lbs. reduced 1985-2015)**



**2015**

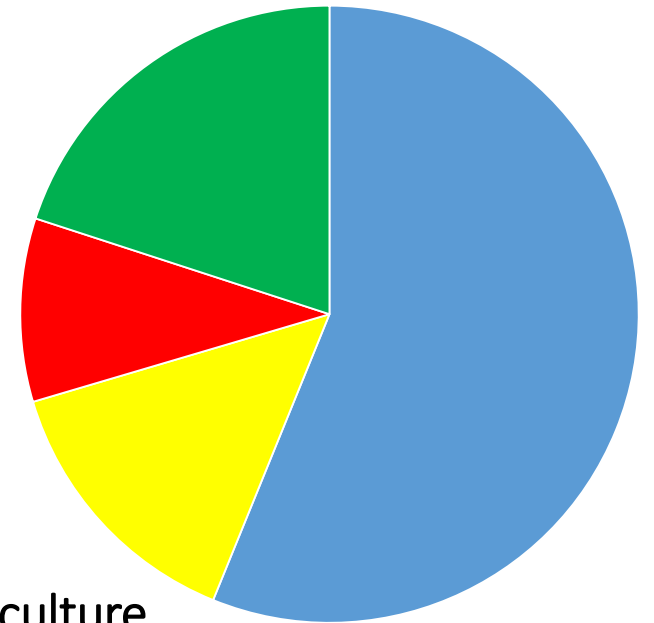
Where will the remaining Sediment reductions\* come from?  
\*Based on jurisdictions' Phase II WIPs



70% Agriculture  
30% Urban

**2025**

**1,946 M lbs.**  
**(531 M lbs. to reduce 2015-2025)**

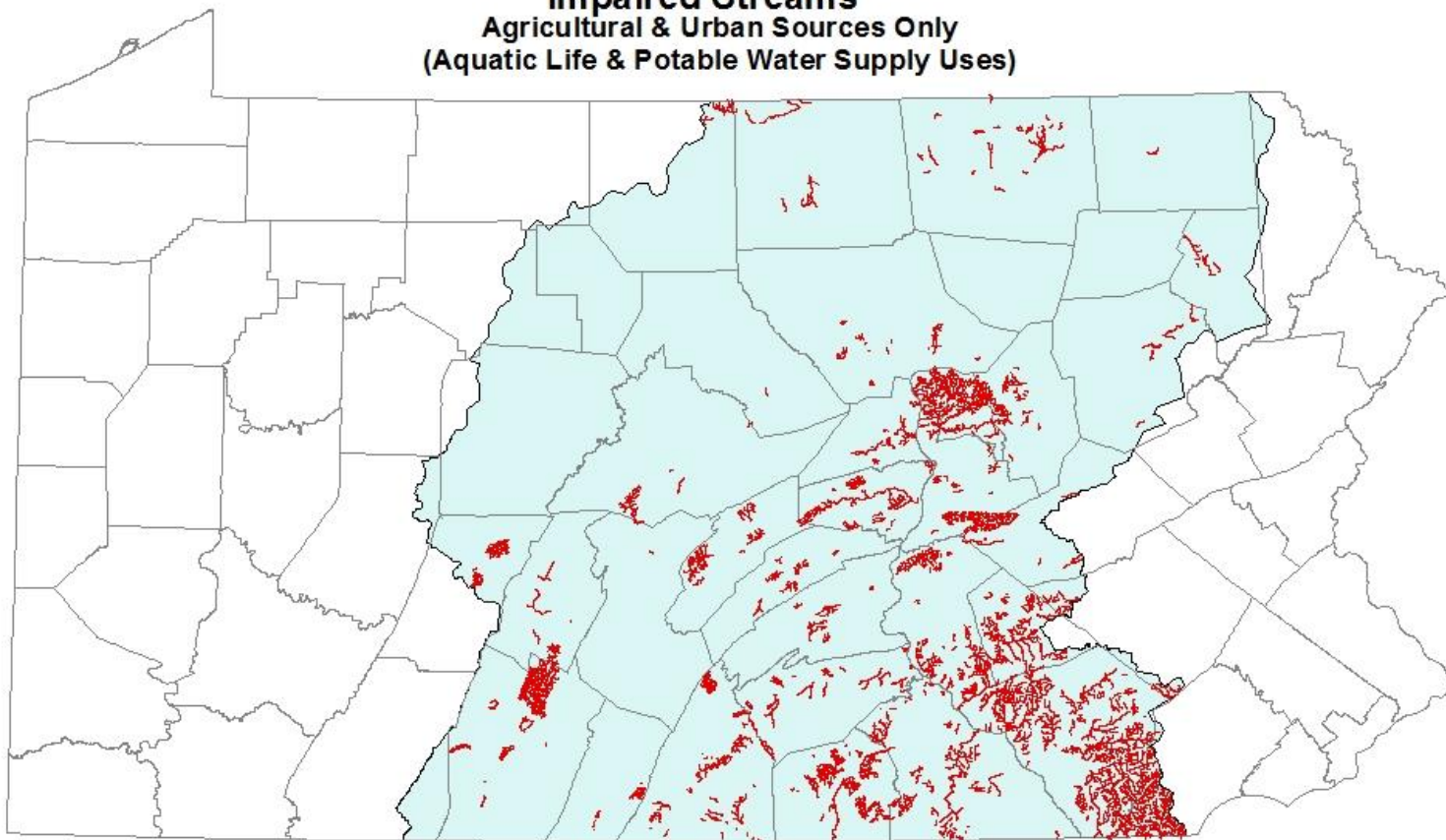




# Pennsylvania's Source Sector Challenges

- Needs to reduce 19 million lbs. nitrogen by 2017 and a total of 34 million lbs. by 2025
- **Responsible for 69 percent of remaining basinwide nitrogen load reductions by 2025**
- **Agriculture will likely be responsible for more than 80 percent of these nitrogen reductions by 2025**
- *How do we put the technical assistance/compliance infrastructure and cost share funding in place to deliver on these needed reductions*

# Chesapeake Bay Watershed Impaired Streams Agricultural & Urban Sources Only (Aquatic Life & Potable Water Supply Uses)



0 12.5 25 50 75 100 Miles

**Legend:**

- Impaired Streams
- Counties
- Chesapeake Bay Watershed - PA

**Number of Miles Impaired:**

**Aquatic Life Use - Agricultural Source: 3500 mi.**  
**Aquatic Life Use - Urban Source: 727 mi.**  
**Aquatic Life Use - Total Impaired: 3906 mi.**

**Potable Water Supply Use - Agricultural Source: 30 mi.**



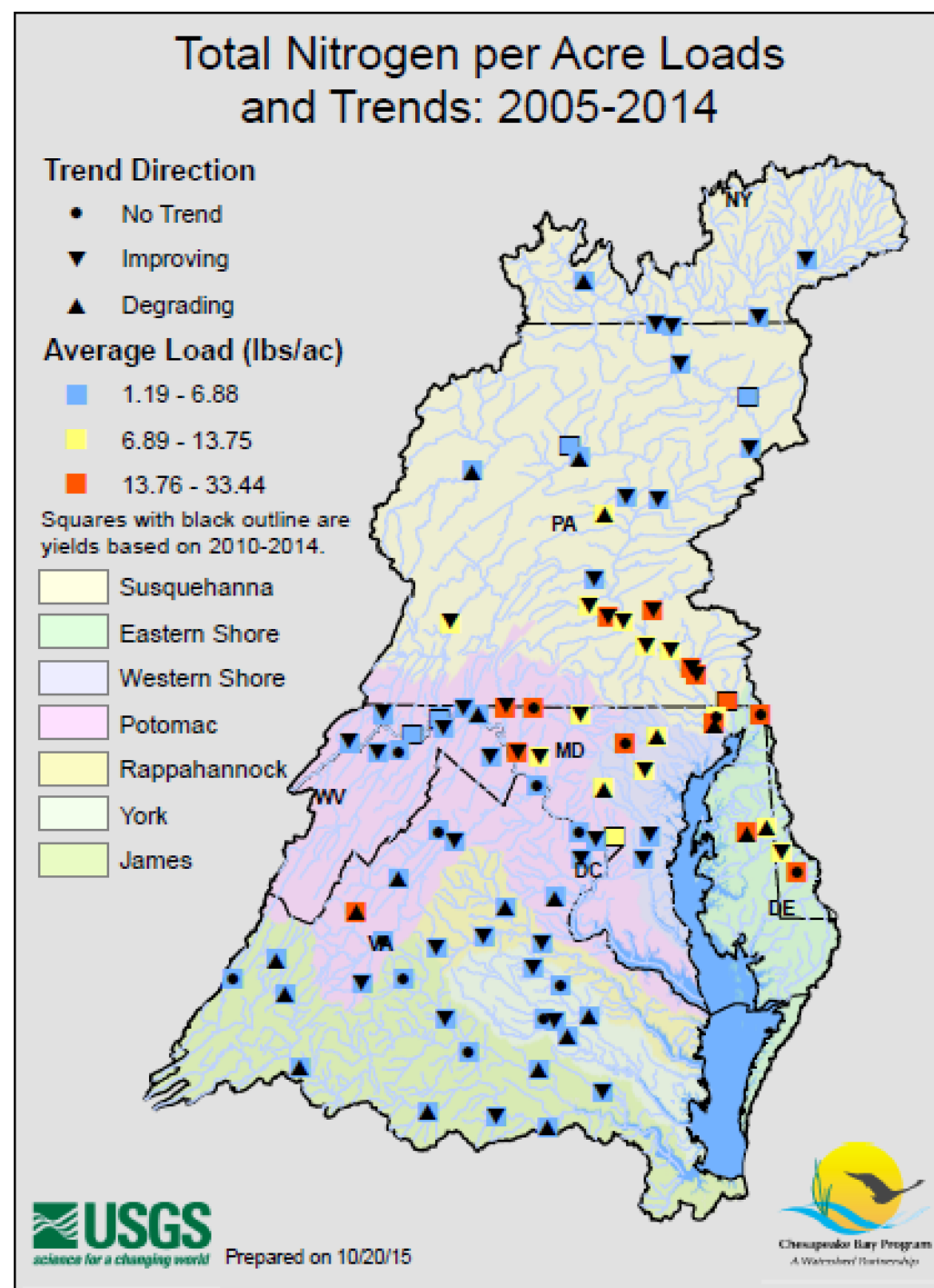
# Total Nitrogen per Acre Loads and Trends: 2005-2014

## Chesapeake Watershed

- Improving Trends: 54%
- Degrading Trends: 27%
- No Trend: 19%

## PA: Majority improving

- Improving: 14
- Degrading: 3
- No change: 1



# Total Phosphorus per Acre Loads and Trends: 2005-2014

Loads per acre

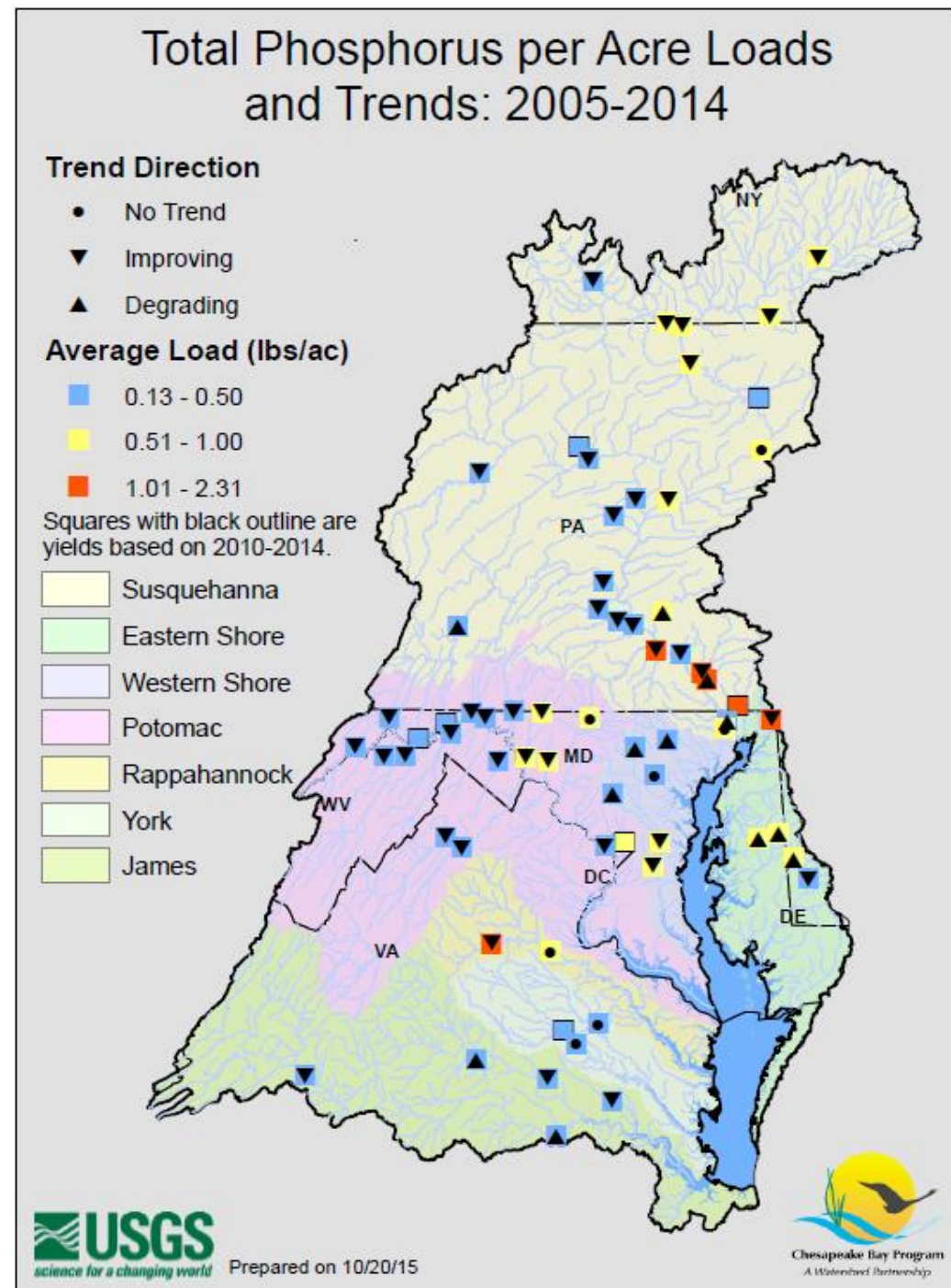
- Above average in PA
- Eastern part of basin

Bay Watershed trends:

- Improving Trends : 68%
- Degrading Trends : 20%
- No Trend : 12%

PA trends: Majority improving

- Improving: 14
- Degrading: 3
- No change: 1





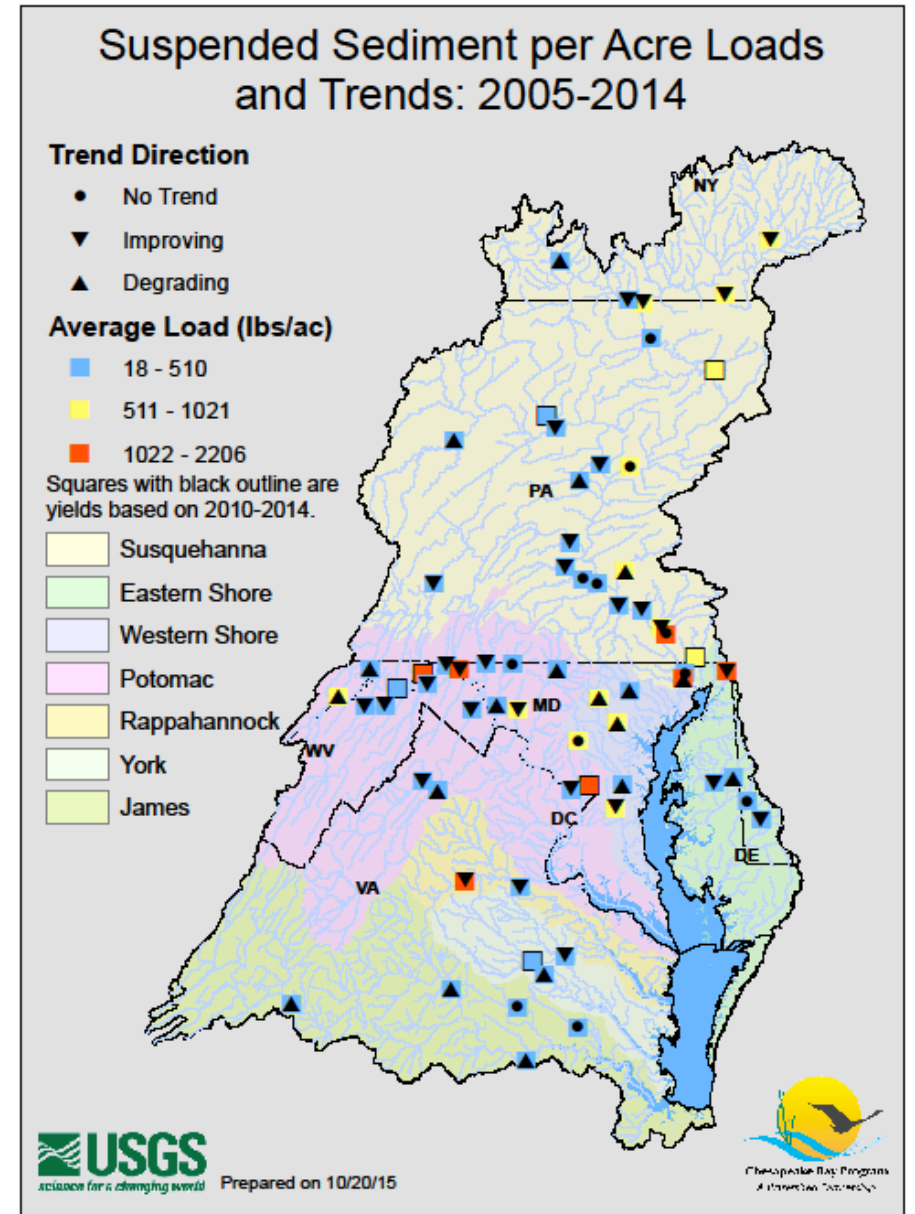
# Total Suspended Sediment per Acre Loads and Trends: 2005-2014

## Bay Watershed trends:

- Improving Trends : 47%
- Degrading Trends : 30%
- No Trend : 23%

## PA trends: Majority improving

- Improving: 9
- Degrading: 3
- No change: 6



# EPA Baywide Expectations—Top 4

- Programmatic and numeric implementation commitments for 2018-2025
- Strategies for engagement of local, regional and federal partners in implementation
- Account for changed conditions: climate change, Conowingo Dam infill, growth
- Develop, implement local planning goals below the state-major basin scales

# EPA Pennsylvania Expectations

- Programmatic, policy, legislative and regulatory changes needed
- Demonstration of the staff, partnerships and financial resources needed
- A dedicated and targeted annual state cost-share program
- Next steps as we move forward:
  - Evaluate the expectations and define how the Commonwealth can meet these expectations or
  - Define a viable alternative to their expectations that achieves the same end result.
- EPA Actions
  - Continue to target federal compliance and enforcement actions
  - Direct or withhold federal funding
  - Establish finer scale load allocations through a Pennsylvania-specific amendment to the TMDL
  - Require additional reductions from point sources
  - Promulgate nitrogen and phosphorus numeric water quality standards for Pennsylvania streams and rivers

# Midpoint Assessment

- Data Collection & Analysis
  - Water Quality Monitoring and Trend Analysis
  - Conowingo Dam
  - Climate Change
  - Sector Growth
- Policy and Methodology Decisions – Planning Targets
  - By state, basin
  - Equity vs Cost-effectiveness
- Model Calibration
  - Expert Panel Reports – BMP Efficiencies
  - Historical Data Cleanup



# Midpoint Assessment Schedule

- June-July: 2017: Partnership's review of models
- October 2017: Draft Phase III WIP planning targets
  - Resolution of Issues around Conowingo, Climate Change, Sector Growth
- October - Feb 2018: Partnership review of targets
- Feb 2018: Final Phase III WIP planning targets
- Dec 2018: Draft Phase III WIPs shared for partner, stakeholder review
- Mar 2019: Final Phase III WIPs due

# Phase 3 Watershed Implementation Plan

- Stakeholder Input and Outreach
  - Steering Committee/Workgroups
  - Website
  - Communications Strategy Being Developed:
    - One-Day Kick-Off Conference, Listening Sessions, Public Comment
- Planning Targets & Implementation
  - Sector Specific
  - Local Area Goals
  - Priority Areas/Watersheds
- Measurable Outputs, Milestones
- Emphasis on Local Water Quality, Local Goals, Local Benefits

# Local Planning Goals

- Jurisdictional Boundaries (County, Township, Borough, Conservation District)
- Federal or State Facilities
- Regional Entity Boundaries (River Basin Commission, Planning Commission)
- Watershed or sub-watershed
- “Segment-shed” as defined in the TMDL
- Area with a defined need for pollutant reduction (ex. MS4s)
- Targeted area with high pollutant loadings

# Phase 3 WIP Schedule

- April, May, 2017 – Form Steering Committee and Workgroups
- **June 5, 2017** – Phase 3 WIP Kick-Off Conference, Radisson Harrisburg
- **June 3 – July 7, 2017** – Follow-up Written Comment Response to Conference
- **July 2017 through October 2017**
  - Bay Program Partnership Works Through Issues
  - Workgroups Formed, Convened
  - Comments Compiled, Additional Information and Data Compiled
- **October 2017 through May 2018**
  - Workgroups and Steering Committee develop the WIP
  - Additional Outreach Around Development of Local Planning Goals/Sector Specific Plans
- **August/September 2018** – Public Comment Period of Draft Phase 3 WIP
- **December 2018** – Submit to EPA for Partnership Review
- **January 2019** – Revise in Response to Partnership Review
- **March 2019** – Submit Final Phase 3 WIP

# Other Resources

- Chesapeake Bay Program Website
  - <http://www.chesapeakebay.net>
- Chesapeake Bay Assessment Scenario Tool - CAST
  - <http://www.casttool.org> – County level scenario calculator
- Chesapeake Bay Facility Assessment Scenario Tool - BayFAST
  - <http://www.bayfast.org> – Facility level scenario calculator
- Phase 6 Model Data Visualization Tool – New Beta 4 Run
  - <https://mpa.chesapeakebay.net/Phase6DataVisualization.html>



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## Contact Information:

Veronica Kasi

[vbkasi@pa.gov](mailto:vbkasi@pa.gov)

717-772-4053

**DEP Chesapeake Bay Website:**

<http://www.dep.pa.gov/ChesapeakeBay>

# What initiatives and collaborations in these sectors would help us achieve the goals of the Phase 3 WIP for Pennsylvania?

- What key elements need to be included for this effort to be a success? What priority issues MUST be addressed in the Phase 3 WIP for me to agree the plan would be implementable?
- Is there a particular initiative, action, partnership, training that would aid this effort?
- When 2025 arrives, what measurable outcome do I want to see us achieve that would make me agree that this effort was a success?
- Are there possibilities for continuing and enhancing current projects or initiatives?
- Aside from today, what other ways can the Phase 3 WIP Steering Committee ensure that when asked you can say, “Yes, I have been heard.”

