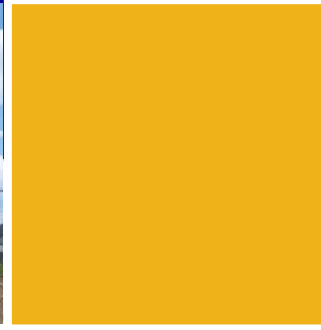


EPA Evaluation of Chesapeake Bay Progress

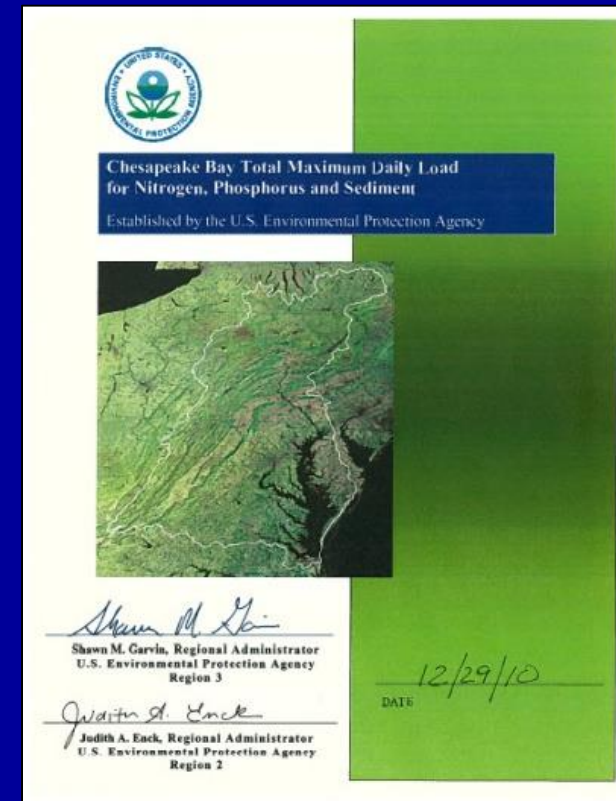


June 21, 2016 CBP Ag Workgroup
Kelly Shenk, EPA Region III, Agricultural Advisor
shenk.kelly@epa.gov
410.267.5728



Chesapeake Bay TMDL - 2010

- State Watershed Implementation Plans
 - Regulatory and voluntary programs, BMPs, pollution reduction targets
 - WWTPs
 - Urban Stormwater
 - Septic Systems
 - Agriculture (cropland and animal)
- By 2025, all practices in place to meet WQ standards.
- By 2017, 60% of the way there.
- 2 Year Milestones



EPA Evaluation of Chesapeake Bay Progress

- 2014/2015 pollution reduction milestones met?
- 2014/2015 programmatic milestones met?
- 2016/2017 on pace?
- Milestones are flexible and adaptable.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III- OFFICE OF PUBLIC AFFAIRS
1650 Arch Street Philadelphia, Pennsylvania 19103-2029
Phone - 215/814-5100 Fax - 215/814-5102**

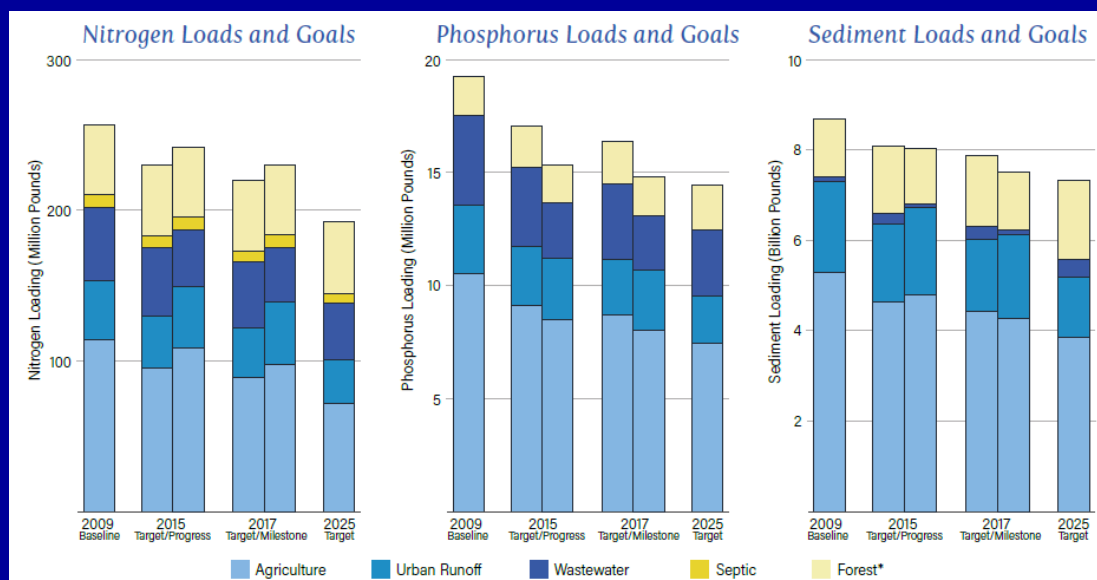
EPA Environmental News

Contact: David Sternberg 215-814-5548 sternberg.david@epa.gov

Evaluations of Chesapeake Bay Restoration Efforts Show Progress and Remaining Challenges in Reducing Nitrogen, Phosphorus, and Sediment Pollution.

- On track for P and sediment.
- Unlikely that the N goal will be met by 2017.

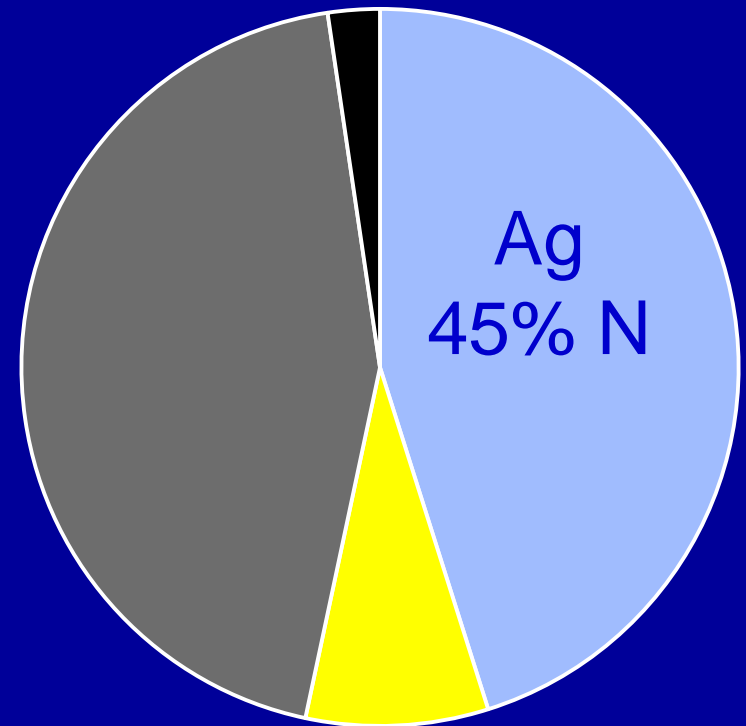
Watershed Wide Results



- P – On Track.
 - Ag YES, WW YES, Urban NO
- N – Not on Track
 - Ag NO, Urban NO, WW YES
- 2017 milestones for N not on pace.
- On track for sediment.
 - Ag NO, Urban NO, WW YES

Virginia – Big Picture

Reliance on Sources for TMDL N Reductions



VA Findings

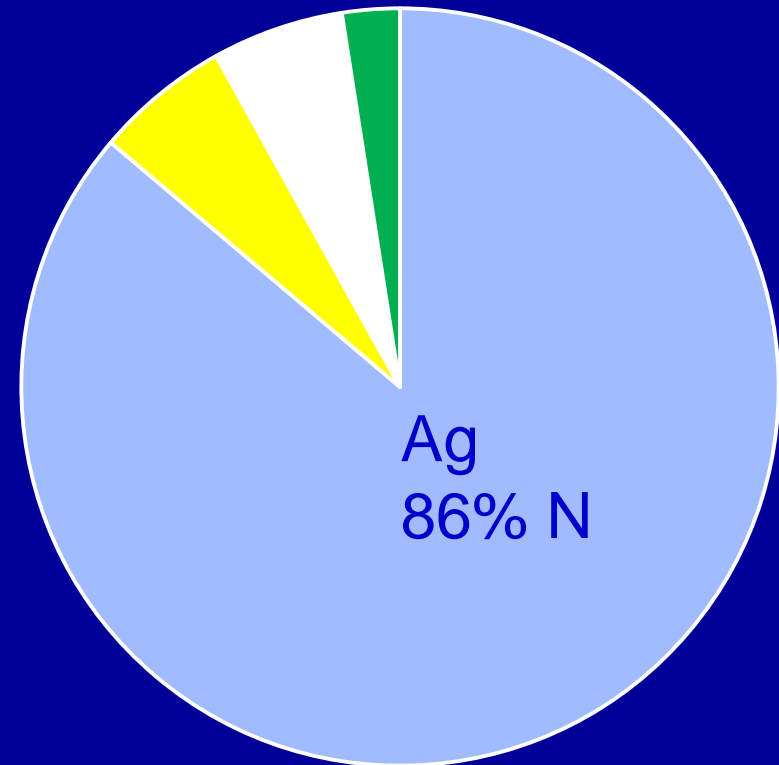
- Pollution targets:
 - Met 2015 P and N targets for all sources.
 - Missed 2015 sediment target (ag and urban off track).
 - 2016/2017 – puts VA on track to meet 2017 targets (not on track for urban)
- Kudos
 - Financial assistance for livestock stream exclusion.
 - RMP (Ag Certainty) Program Sign Up
 - Increased NMPs on unpermitted operations.
 - Committing to quantify and offset any increases of nutrients from poultry operations.
 - Committing to evaluate and stay on pace with ag reductions.

VA Findings

- “To Do List”
 - Increase urban load reductions to meet urban targets.
 - Did not issue VPDES CAFO permits as planned in 2015, but committing to do so in next milestones.
 - Urban sector – maintain “enhanced oversight”

West Virginia – Big Picture

Reliance on Sources for TMDL N Reductions



- Urban
- Septic
- WW
- Forest

West Virginia Findings

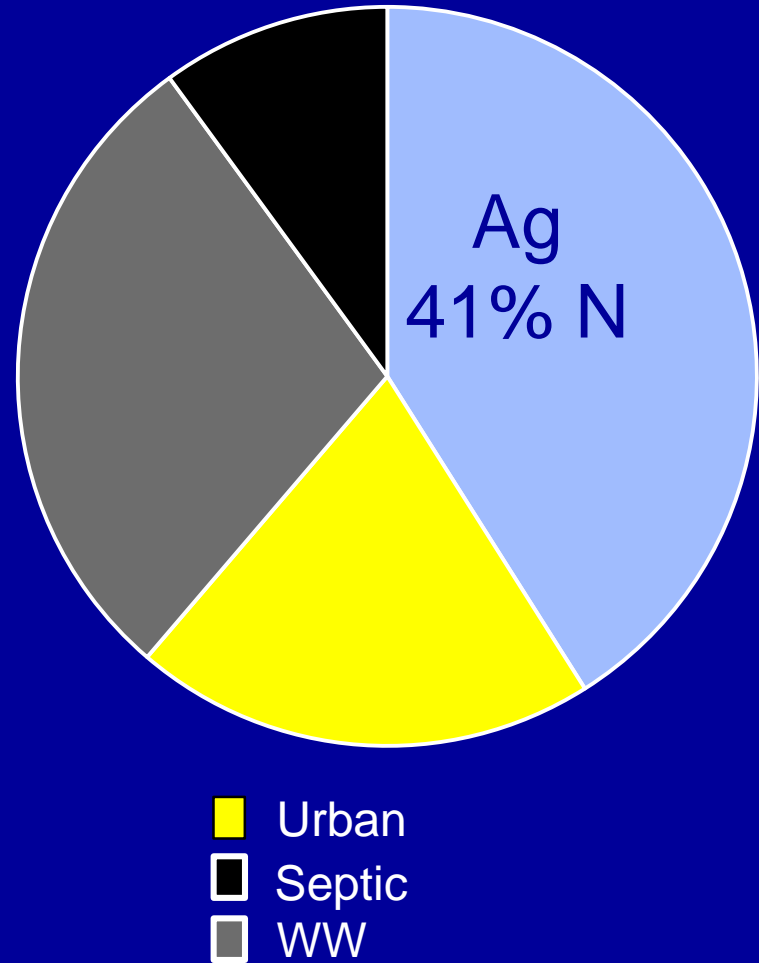
- Pollution targets:
 - Met 2015 targets.
 - On track to meet 2017 targets (P already achieved)
 - On track for ag and WW, not for urban.
- Kudos – Upgraded for Ag.
 - Increased cover crops.
 - Developed buffer outreach program.
 - Developed ag BMP verification program approved by EPA.
 - 2016/2017 milestones target priority practices such as cover crops, forest buffers, and nutrient management.

WV Findings

- “To Do List”
 - EPA recommends WV conduct an evaluation of its voluntary nutrient management program to bolster compliance levels reported.
 - Implement programmatic actions to address increasing nitrogen loads from urban sector.

Maryland – Big Picture

Reliance on Sources for TMDL N Reductions



MD Findings

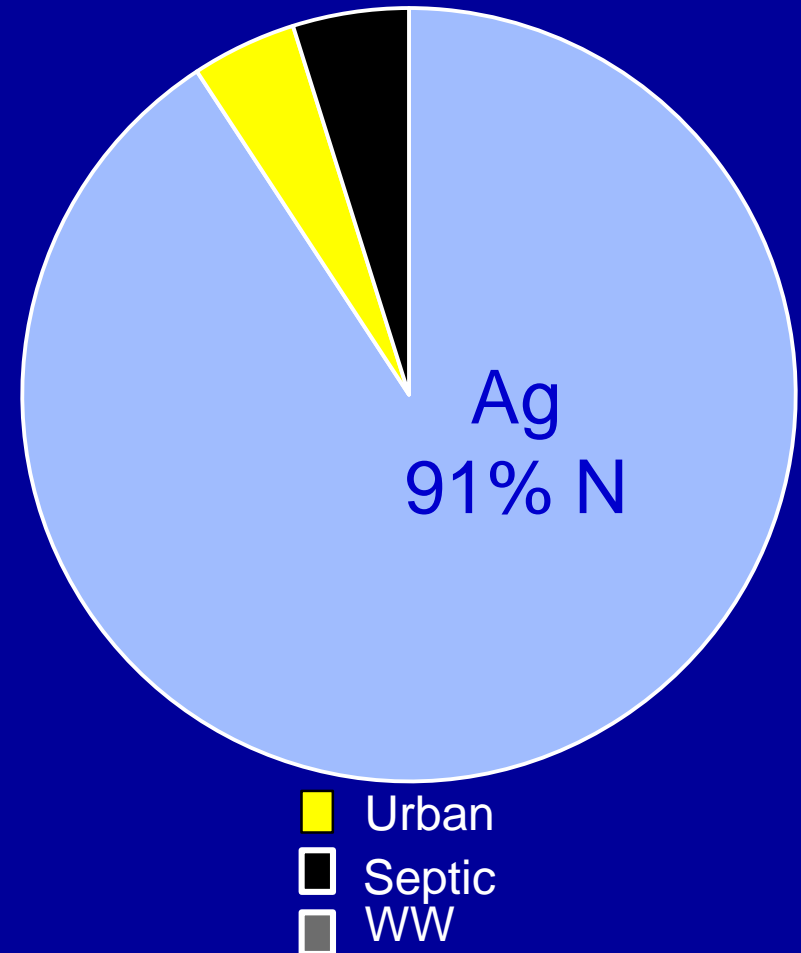
- Pollution targets:
 - Met 2015 P and sediment targets for all sources.
 - Missed 2015 N target (ag and urban off track).
 - 2016/2017 – puts MD on track to meet 2017 targets (but not on track for urban).
- Kudos
 - MD PMT regulations
 - MD tracking systems for ag and urban sectors
 - CAFO GP was renewed and aligns with fed requirements.
 - 2016/2017 milestone to quantify and offset any increase in poultry nutrient loads.

MD Findings

- “To Do” List
 - MD PMT soils data – finish collection.
 - Issue CAFO permits for new and non-registered CAFOs.
 - Add milestones for how to meet aggressive animal waste system goals.
 - Make Substantial improvements in urban sector (Phase II MS4 permits). Potential for enhanced oversight.

Delaware – Big Picture

Reliance on Sources for TMDL N Reductions



DE Findings

- Pollution targets:
 - Met 2015 P and sediment targets for all sources.
 - Missed 2015 N target (ag and urban off track).
 - 2016/2017 – puts DE on track to meet 2017 targets (but off track for urban sector).
- Kudos
 - Increased cover crops by 34%.
 - Transect surveys for conservation tillage and CC.
 - Issued CAFO Permit for large and medium no-land operations.

DE Findings

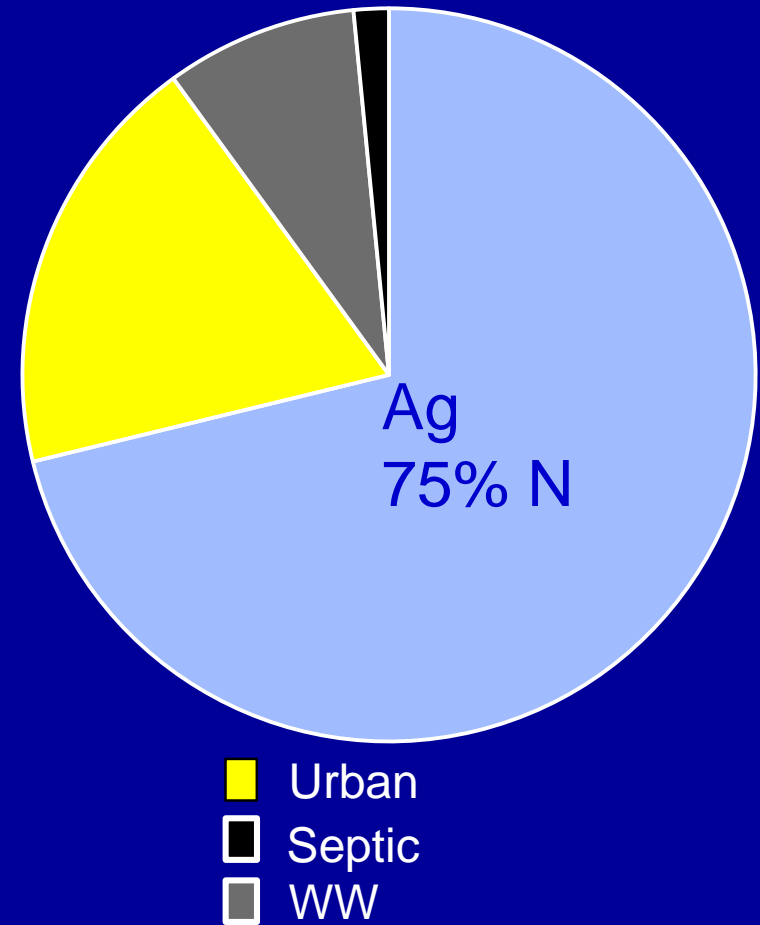
- “To Do” List – enhanced oversight
 - Issue permit coverage for 167 no-land ops. DE is moving forward.
 - Issue General Permit for land-applying poultry ops.
 - Provide adequate documentation to back up reported nutrient management implementation.

DE Findings

- “To Do” List
 - Improve databases for ag practices and nutrient management compliance.
 - Clarify how any increases in nutrients from poultry operations will be quantified and offset.
 - If DE reduces Forest Buffer goals, develop alternatives where reductions will come from.

Pennsylvania – Big Picture

Reliance on Sources for TMDL N Reductions



PA Findings

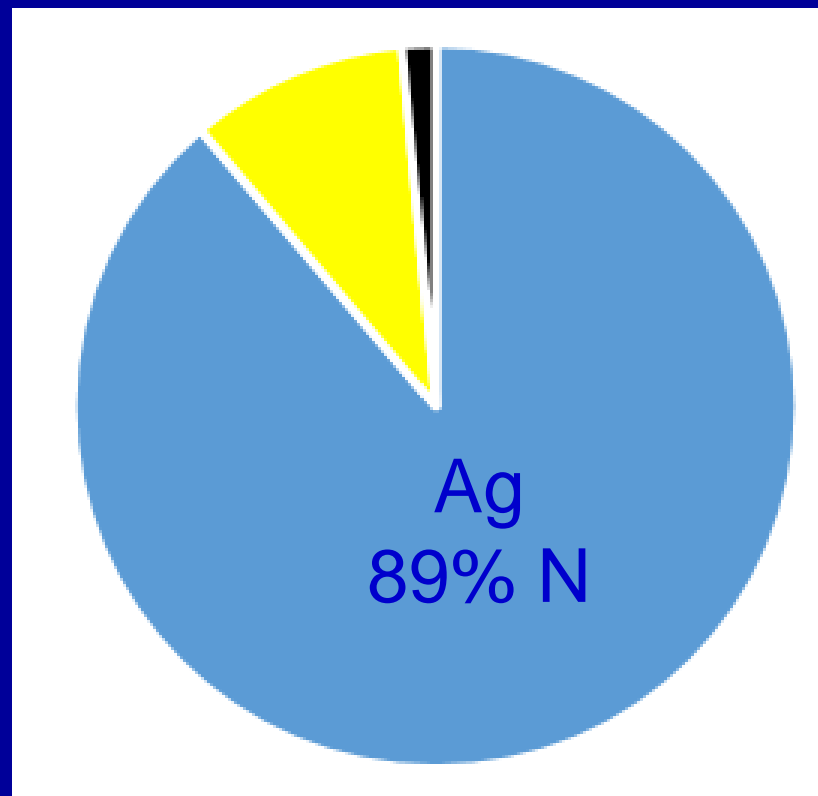
- Pollution targets:
 - Met 2015 target for P, but not for N and sediment.
 - Not on track to meet 2017 nutrient targets.
- Kudos
 - Transect surveys for conservation tillage and cover crops.
 - Increased MMPs and Ag E&S plans.
 - Reboot Strategy – committed to improve reg compliance and practice tracking.

PA Findings

- “To Do List” – Maintains Ag Backstop
 - Need 2016/2017 numeric milestones to increase implementation of priority agricultural conservation practices.
 - Evaluate and refine grant programs to ensure funding is targeted to priority practices and watersheds.
 - Describe process and timeline for engaging local stakeholders in Phase III WIP.
 - Urban sector – maintain backstop.

NY – Big Picture

Reliance on Sources for TMDL N Reductions



NY Findings

- Pollution targets:
 - Met 2015 P goal, but not N and sediment.
 - 2017 goals not on track to meet nutrient and sediment targets.
 - Did not meet 2015 targets for specific BMPs (stream rehabilitation, buffers, conservation plans, tillage).
- Kudos
 - Draft CAFO General Permits.
 - Technical assistance, and BMP implementation (big focus on Animal Waste Management Systems).

NY Findings

- “To Do List” – Considering enhanced oversight in 2016.
 - Develop a strategy for how to offset increased loads (2012 Ag Census) and meet 2017 targets by August 5, 2016.
 - WWTP: Maintain enhanced oversight

Remember Context

It's about Water Quality

And we are seeing signs of progress!

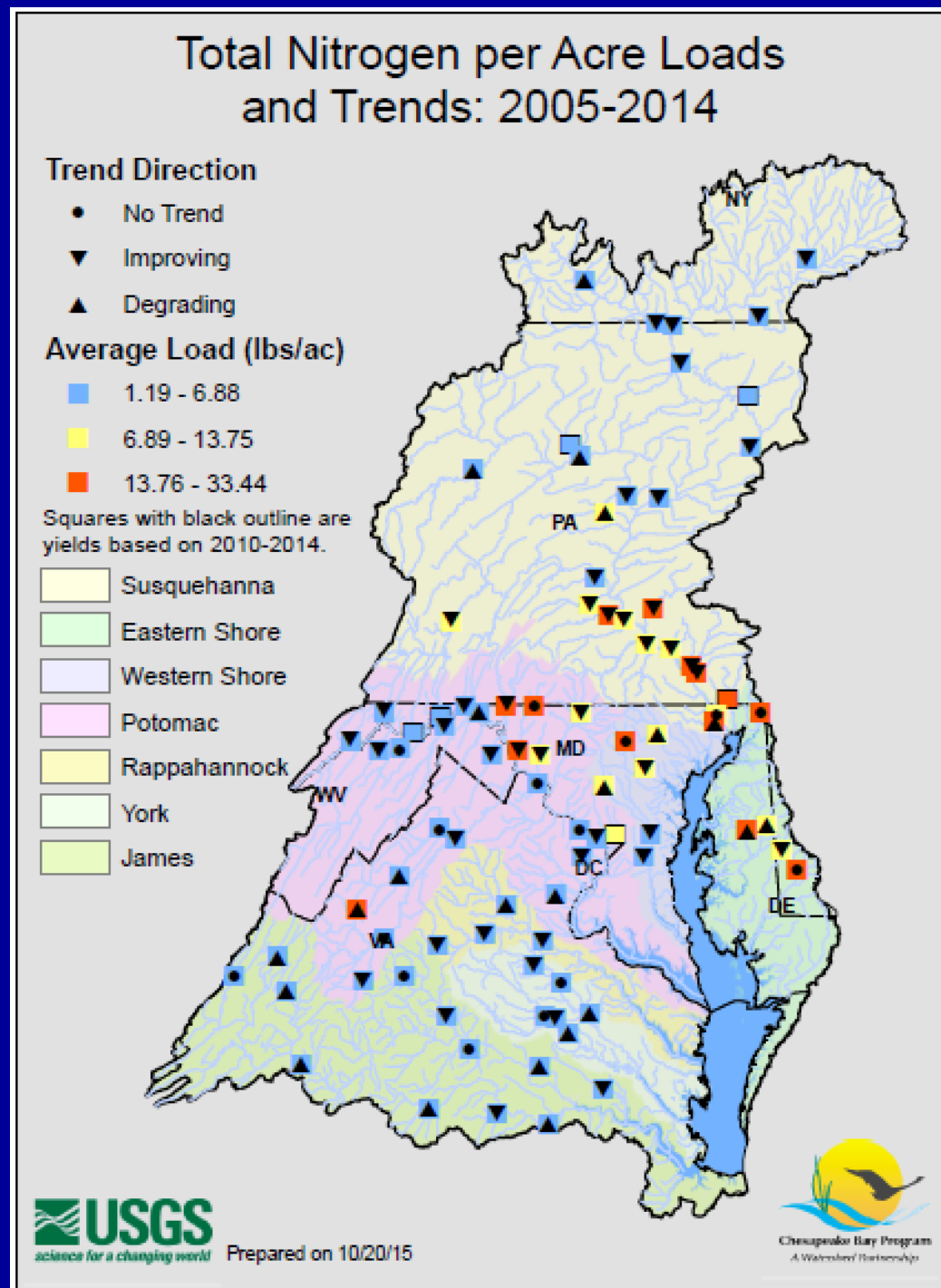
Total Nitrogen Trends (2005-2014)

Chesapeake Watershed

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

PA: Majority improving

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



Total Phosphorus Loads and Trends: (2005-2014)

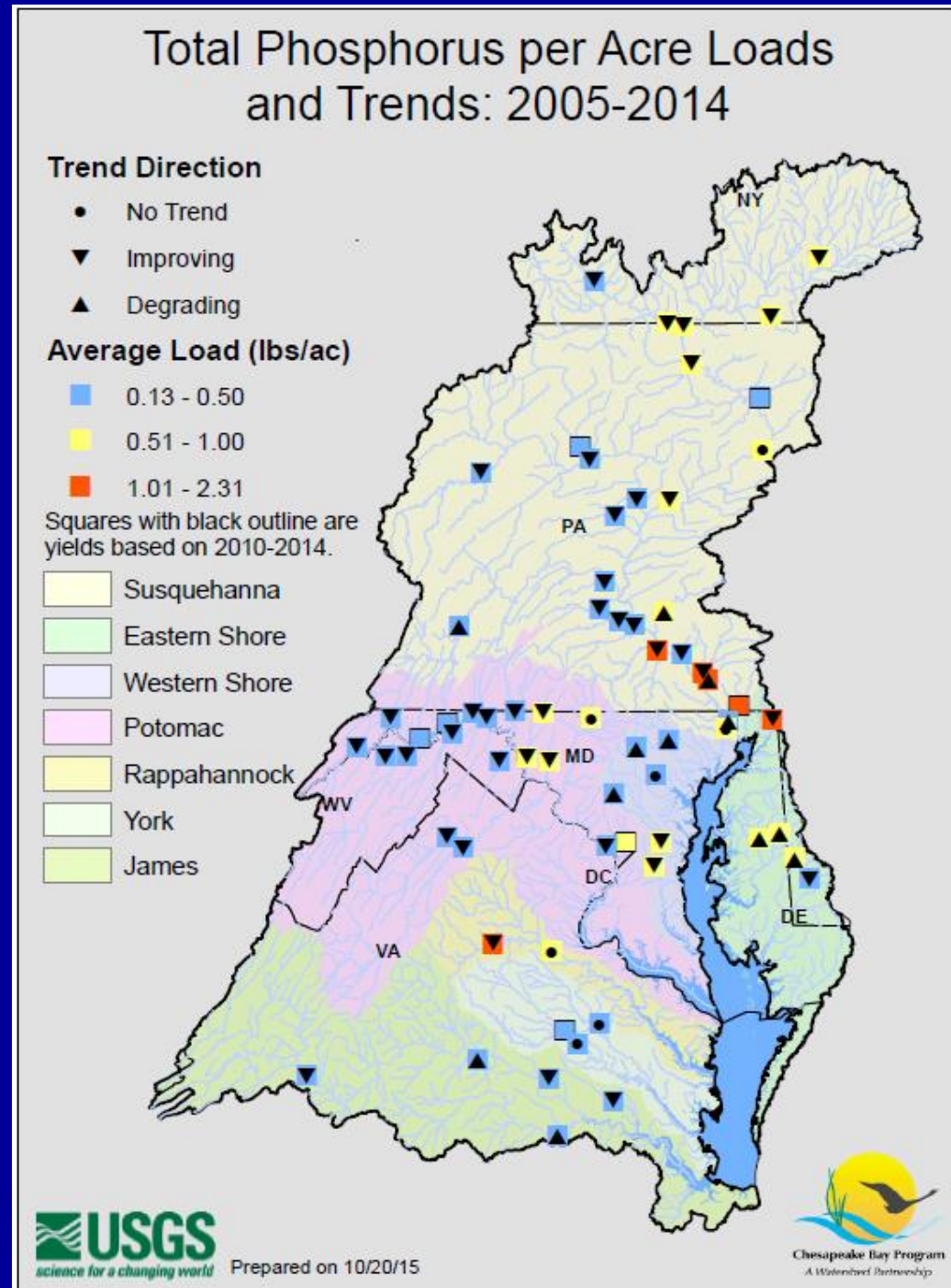
Loads per acre

- Above average in PA
- Eastern part of basin

Watershed: Majority improving

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

PA trends: Similar trends



Suspended Sediment Loads and Trends (2005-2014)

Loads per acre

- Range from 18 to 2,206 lbs/ac
- Average load of 482 lbs/ac

Trends: Mixed Results

- Improving: 50%
- Degrading: 30%
- No Trend : 20%
- PA similar

Suspended Sediment per Acre Loads and Trends: 2005-2014

Trend Direction

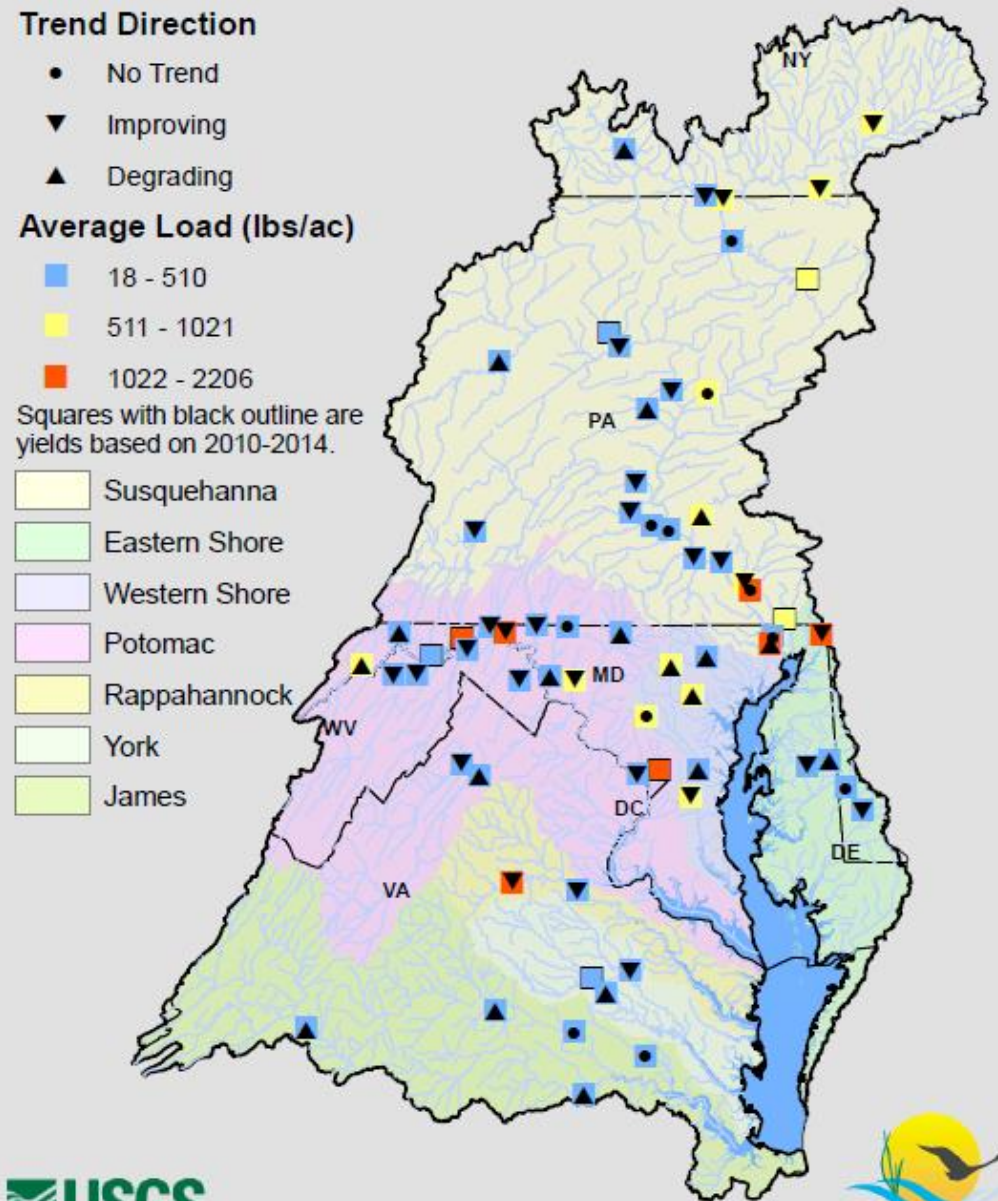
- No Trend
- ▼ Improving
- ▲ Degrading

Average Load (lbs/ac)

- 18 - 510
- 511 - 1021
- 1022 - 2206

Squares with black outline are yields based on 2010-2014.

- Susquehanna
- Eastern Shore
- Western Shore
- Potomac
- Rappahannock
- York
- James



Chesapeake Bay Report Card 2015

University of Maryland Center for Environmental Science



Click to close image, click and drag to move. Use arrow keys for next and previous.



One of highest scores.

Bay health improved everywhere.

Key fish populations remain healthy

Bay grasses expand to greatest extent in more than 30 years

WWTPs met goals 10 years ahead of schedule.

Attributed to:

- Sewage treatment upgrades.
- Cover crops.
- Air reductions.

<http://ecoreportcard.org/site/assets/files/1627/2015-chesapeake-bay-report-card.pdf>