

The Chesapeake Bay Watershed Data Dashboard



**Emily Trentacoste, PhD
Environmental Scientist**

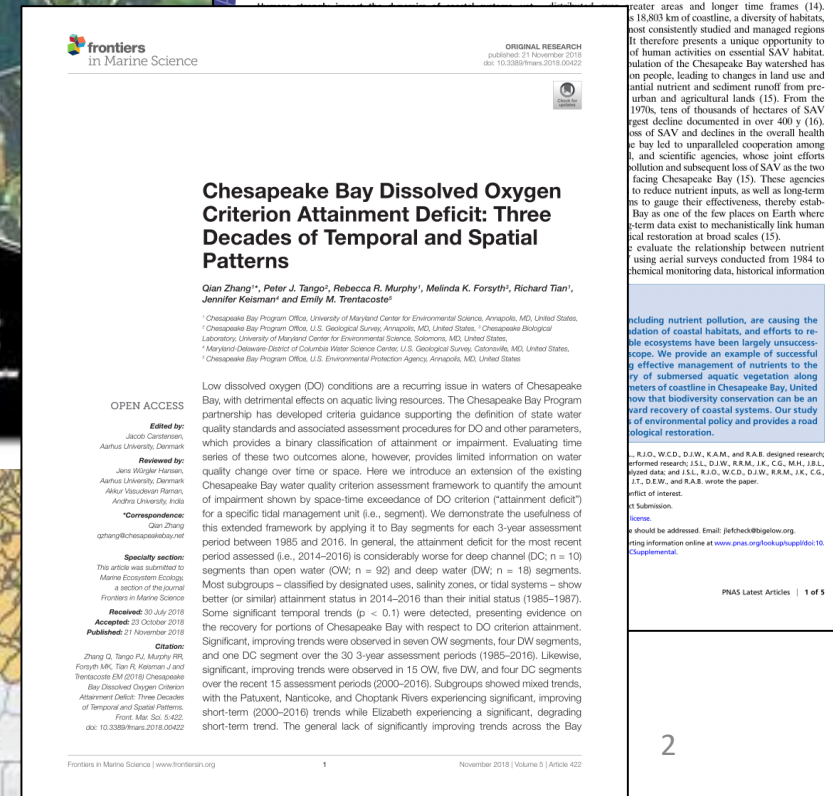
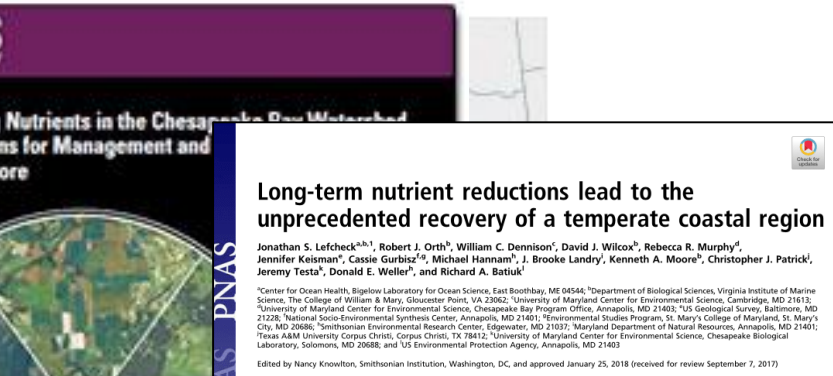
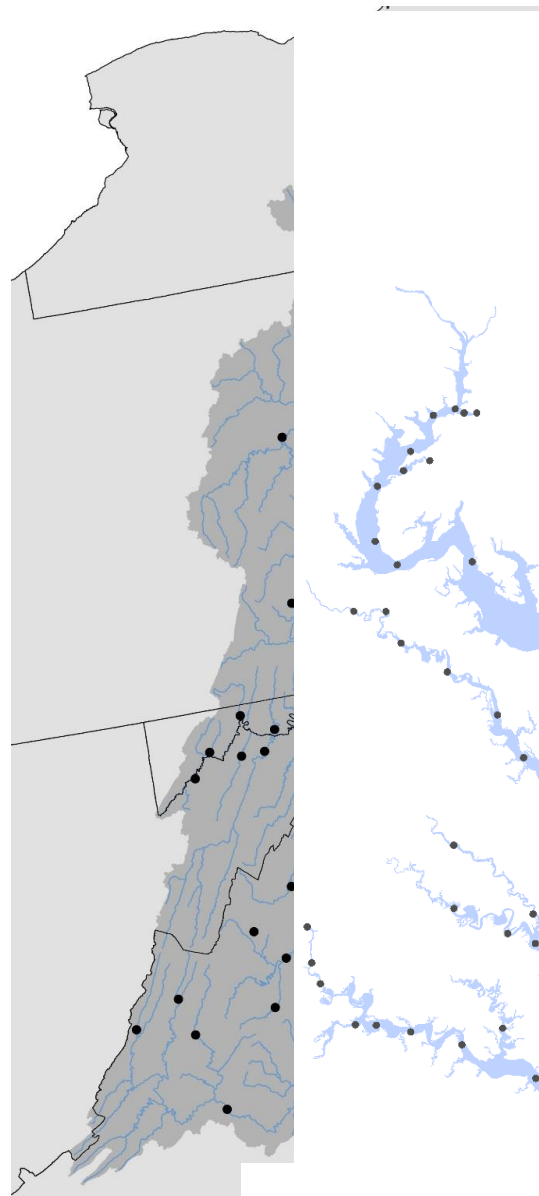
**US EPA Chesapeake Bay Program Office
Local Government Advisory Committee
6/5/2019**

What do 30 years of data look like?

Monitoring & Trends

Modeling & Tools

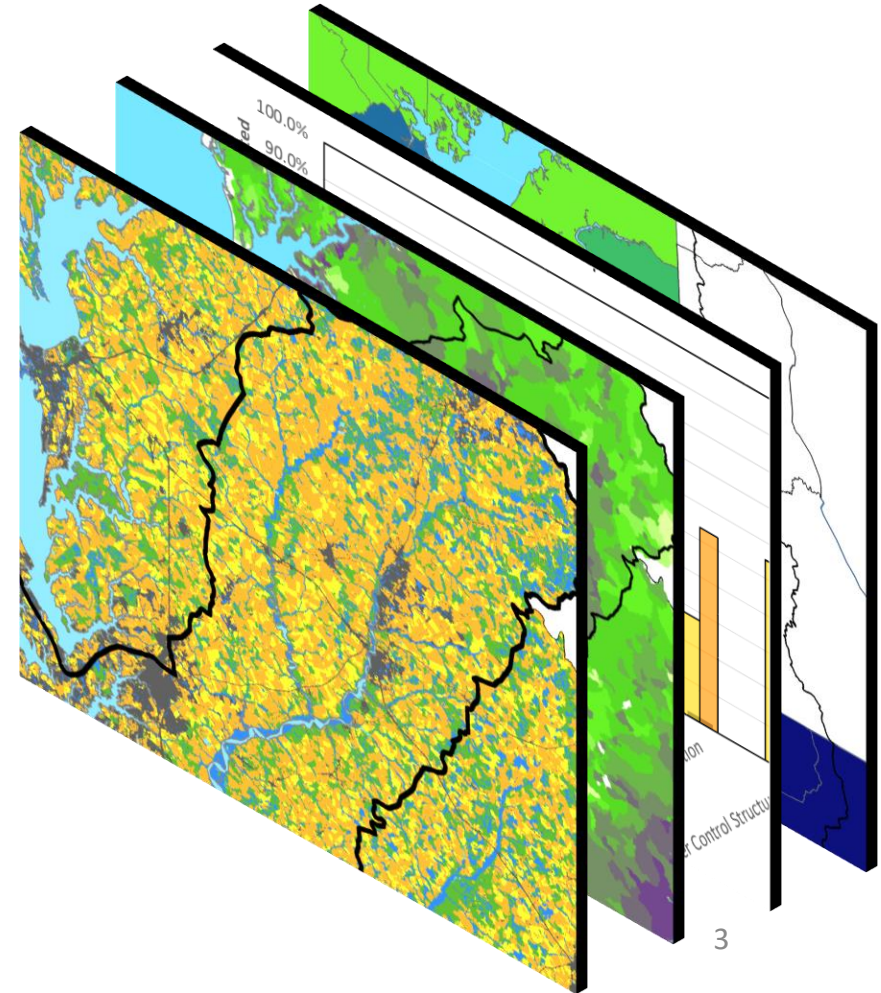
Research



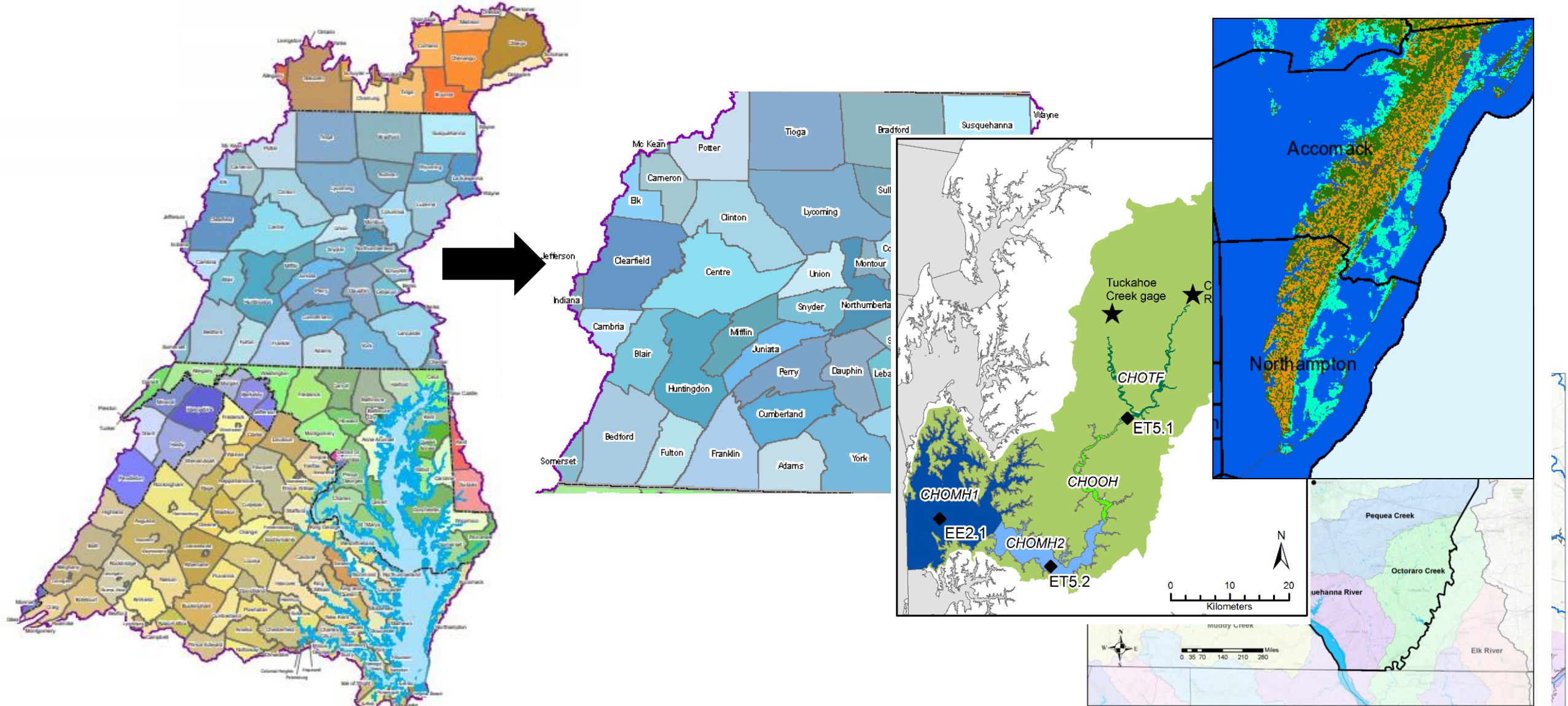
Understanding management implications

The challenge: new data & new expectations for managers

- Assess what's been working and what hasn't
- Develop “local area goals” at finer resolution
- Target/focus restoration efforts
- Plan for urban growth and climate change
- Co-benefits of nutrient and sediment reduction



Telling local stories to demonstrate utility of data

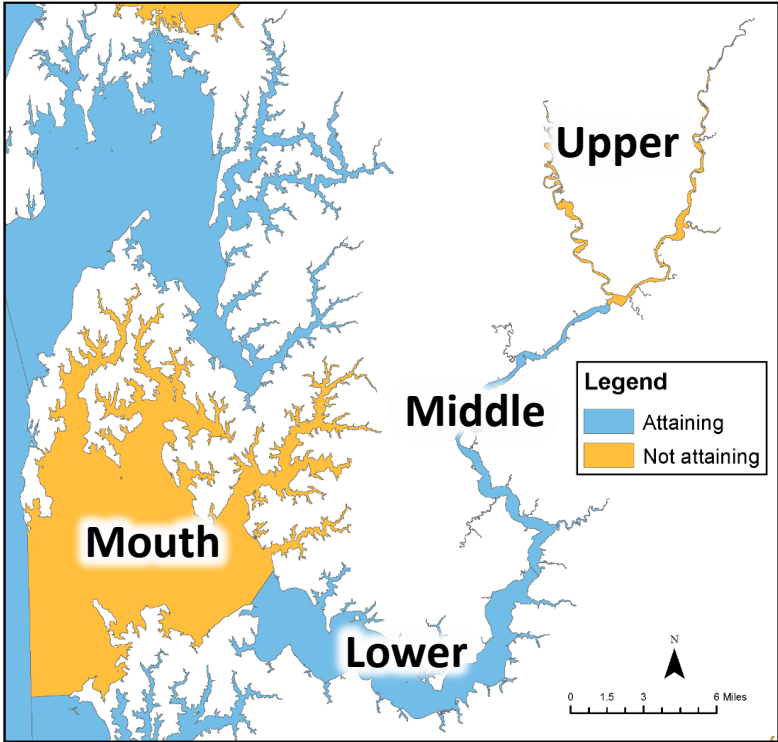


Telling a local story

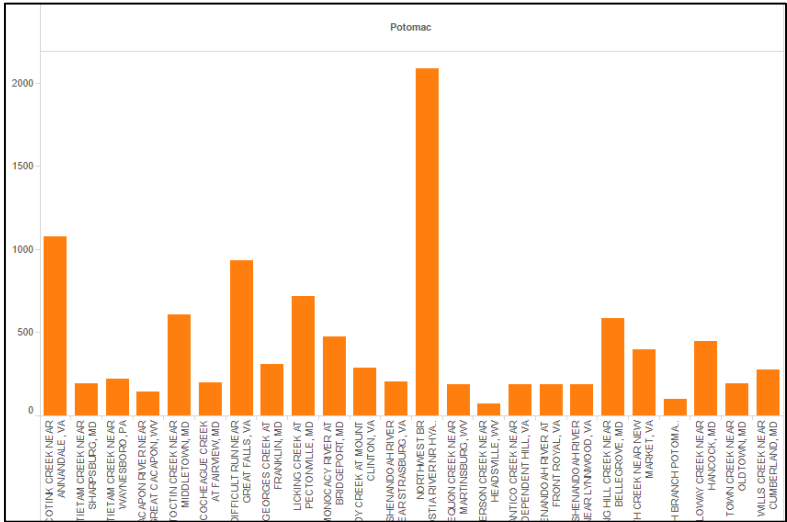
Local water quality

- What's happening with local water quality in my area?
- What's the status?
- What are the trends?

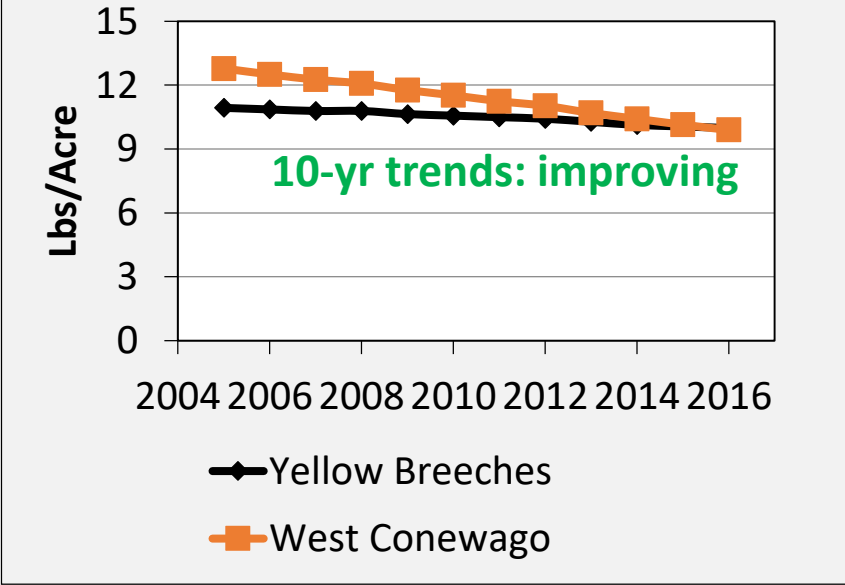
Choptank River water quality standards



Sediment monitoring in Potomac River basin (pounds per acre)



York County nitrogen trends

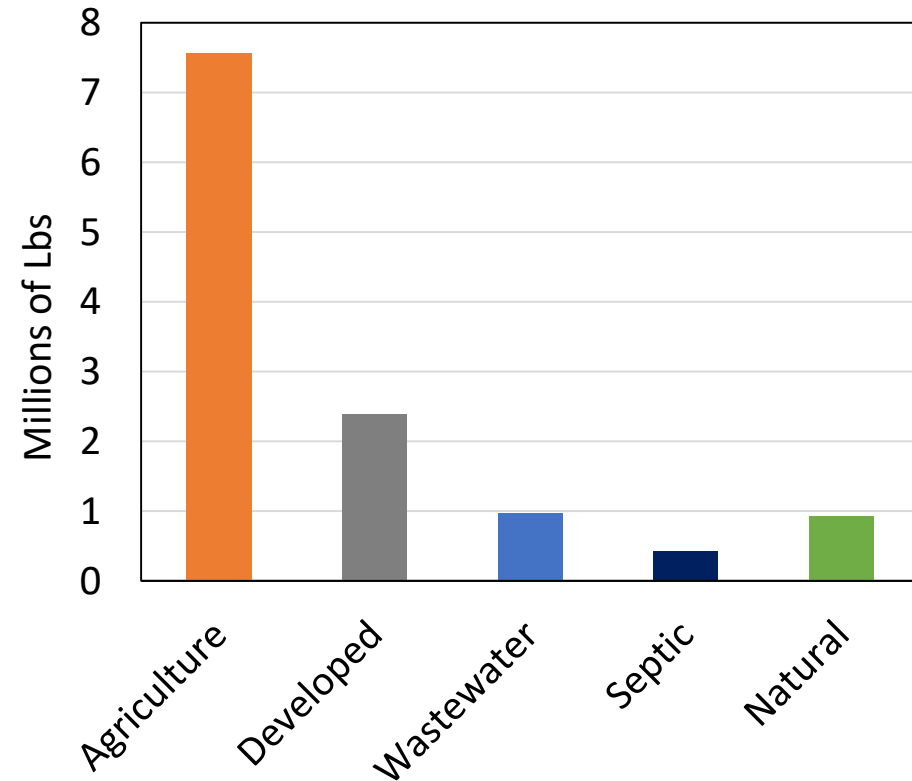


Telling a local story

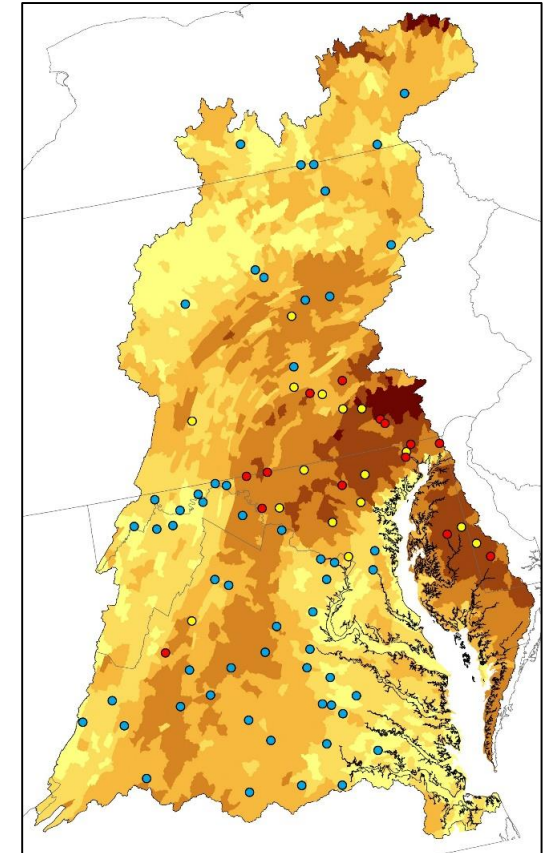
Sources and drivers behind local water quality

- Where does pollution come from?
- Where geographically?
- How is pollution making it to streams? Nitrate from groundwater delivered to streams

York County Nitrogen Delivered to Local Streams (2017 Progress)



High resolution land cover

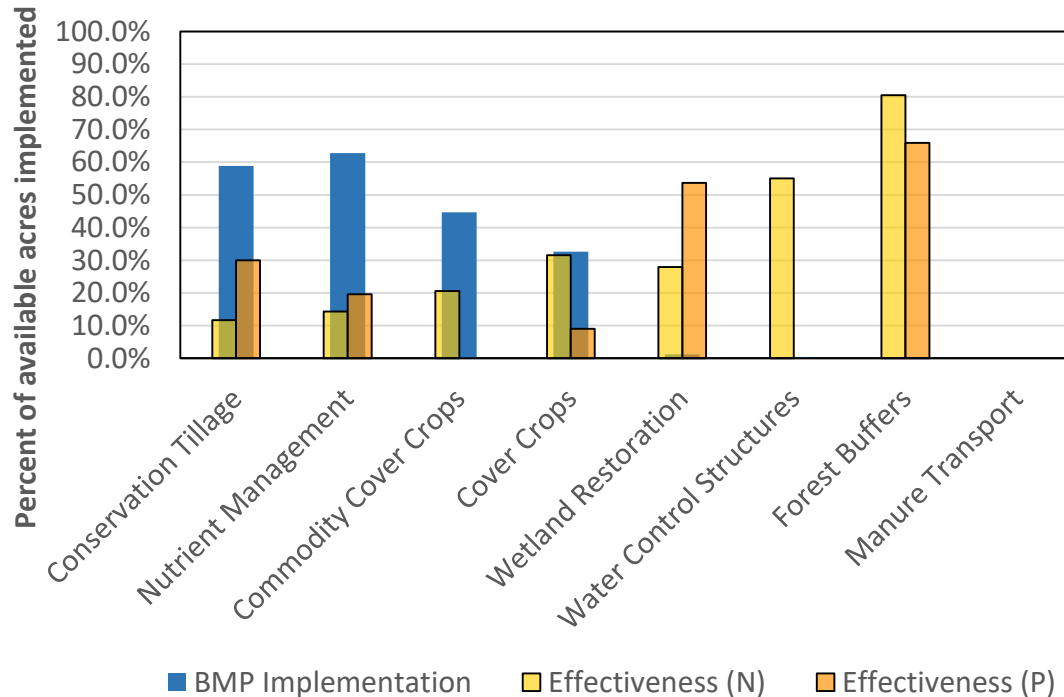


Telling a local story

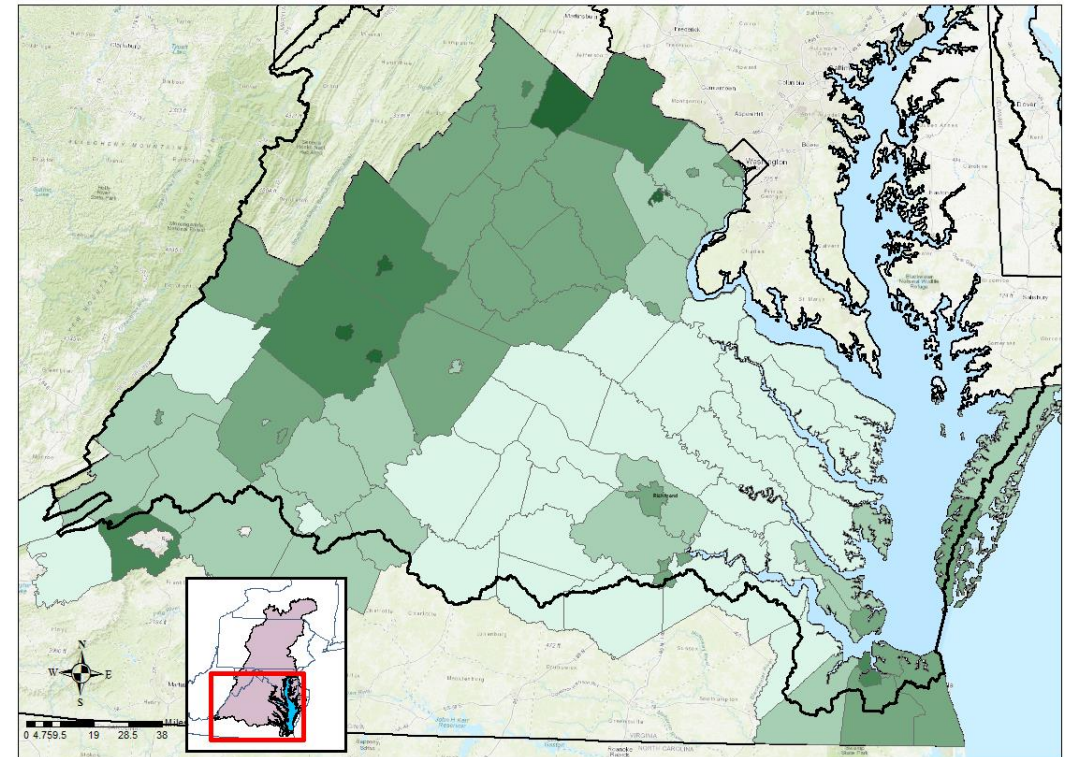
Opportunities for restoration efforts

- What practices address the sources and drivers?
- What are the most effective and cost-effective practices?
- What practices have we been implementing?
- Where do opportunities exist moving forward?

2016 Reported Agricultural Conservation Practice Implementation in the Choptank Watershed



Acres available for buffer implementation by county

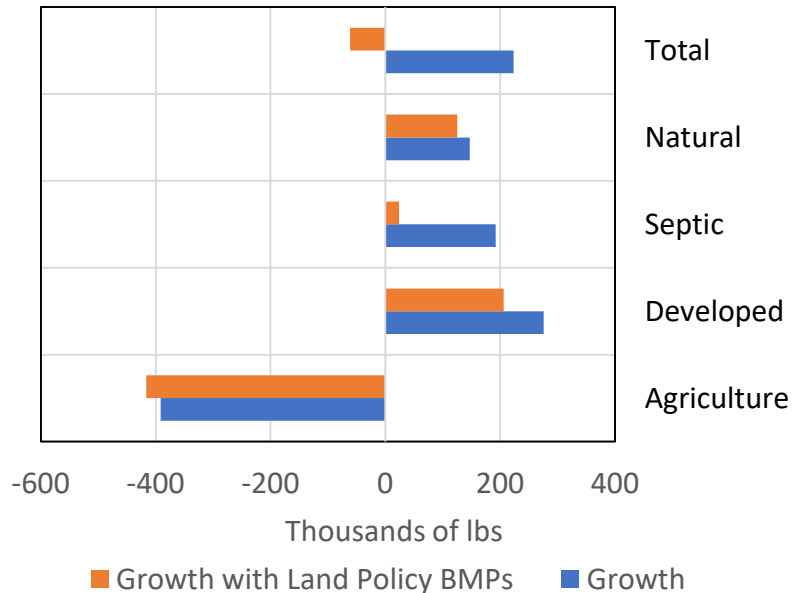


Telling a local story

Planning for future change

- Where are growth and development going to occur?
- What impacts may climate change have and where?
- How can we conserve lands or grow smartly?

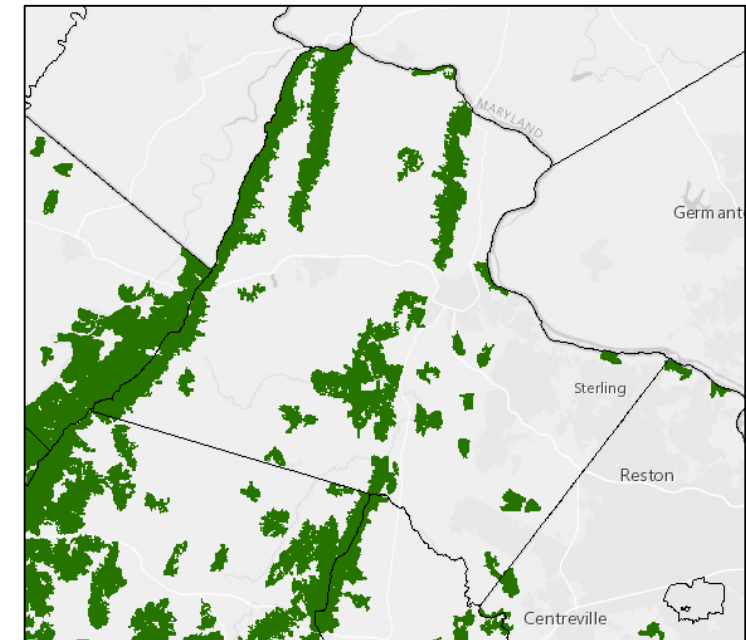
Virginia estimated change in nitrogen load 2018-2025



Lands impacted by 1 meter sea level rise in Virginia



Large forest tracts available for conservation in Loudoun County, VA



Making data accessible, understandable & usable

Chesapeake Bay Watershed Data Dashboard



- Start Here!
- Rivers & Streams
- Tidal Waters
- Targeting Restoration
- Management Practices
- Planning for Change

Get started here...

Understanding Sources

[Click here to open the tool separately in its own window.](#)

This section provides information on land use of nutrients and sediment entering water bodies in geographic areas as estimated by the 2 Chesapeake Bay Watershed Model.



Watersheds with more developed, agricultural, and urban land tend to have higher nutrients and sediment levels in streams than more natural or forested watersheds.



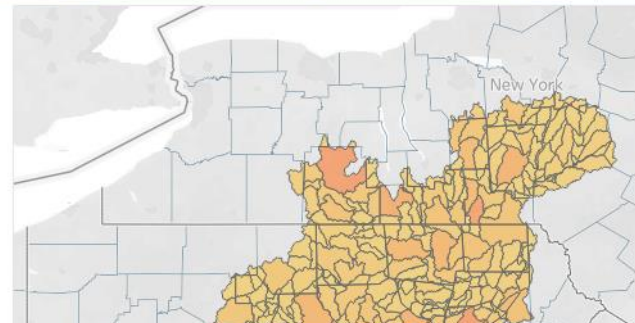
Watersheds with high amounts of nutrients and sediment, especially relative to their size, are some of the most effective places to focus restoration efforts.



Tailoring restoration efforts to focus on an area's specific nutrient and sediment sources is an effective way to target implementation.

Nutrient Application Management

Wastewater Treatment Plants



Breakdown of Land Use



Tidal Segment
(All)

River
(All)

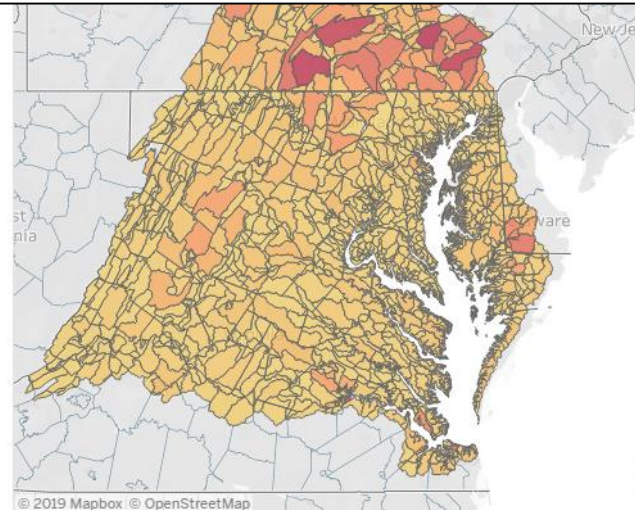
Major River Basin
(All)

County Name
(All)

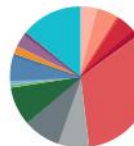
State
(All)

Load Source Minor
(All)

Chesapeake Bay Watershed Data Dashboard

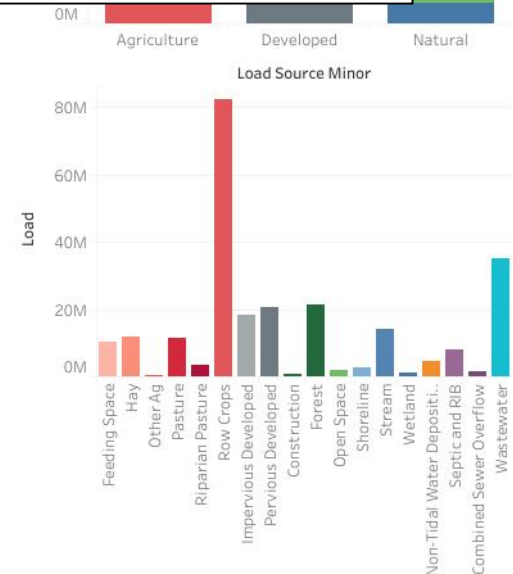


Breakdown of Loads



Total Load: 249,782,870

- Load Source Minor
- Feeding Space
 - Hay
 - Other Ag
 - Pasture
 - Riparian Pasture
 - Row Crops
 - Impervious Dev..
 - Pervious Devel..
 - Construction
 - Forest
 - Open Space
 - Shoreline
 - Stream
 - Wetland
 - Non-Tidal Wate..
 - Septic and RIB
 - Combined Sew..
 - Wastewater



NPS
☒ Nitrogen
☐ Phosphorous
☐ Sediment

EOTS
Delivered to the Bay

Agency
(All)



Thank you!
Emily Trentacoste
trentacoste.Emily@epa.gov

