

Lower Susquehanna River Watershed Assessment

December 9, 2014

Public Meeting

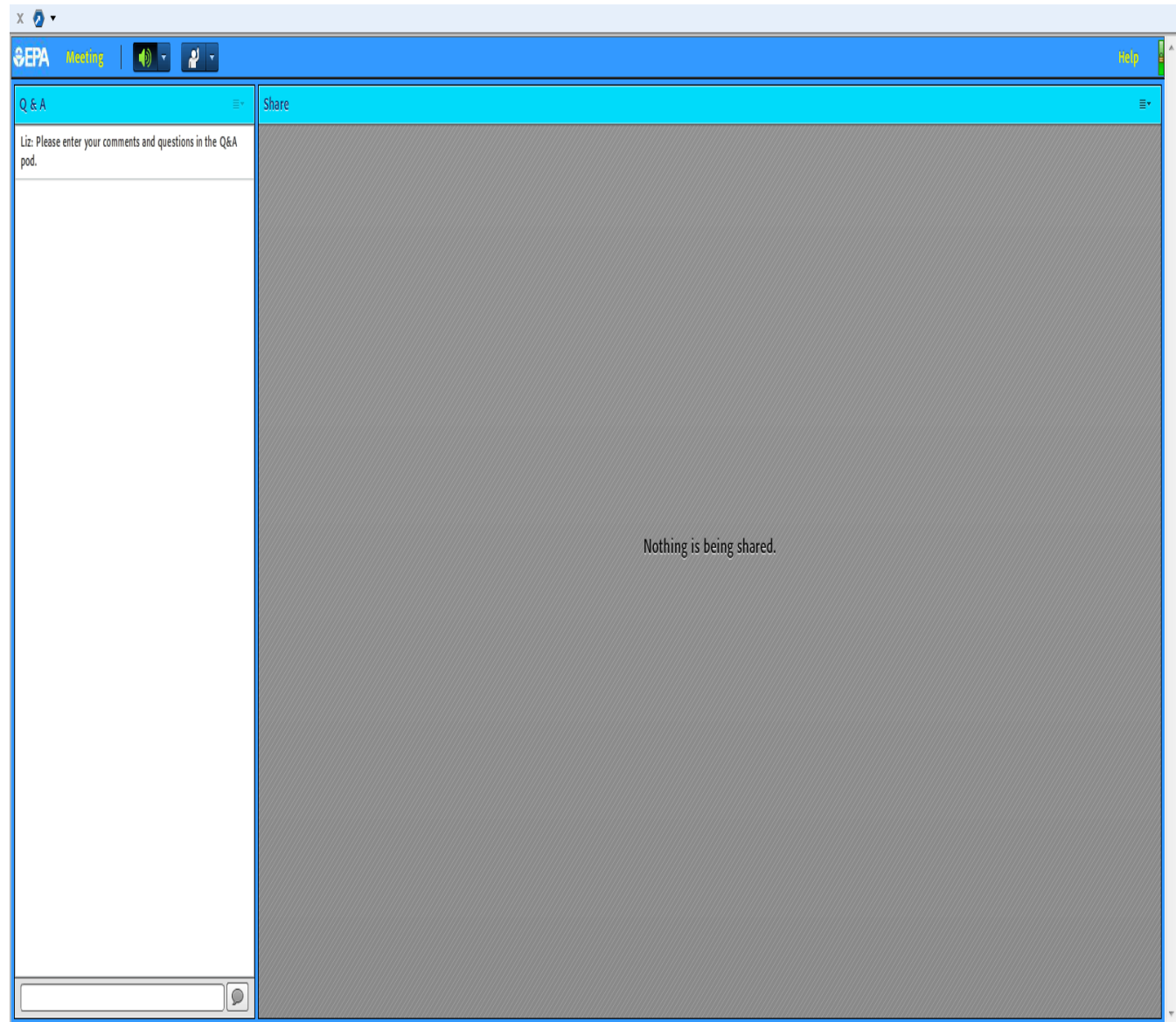


Graphic courtesy of SRBC

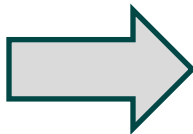
Public Meeting Agenda

- 7:00 PM - Welcome and Review of the Public Meeting/Live Webinar Logistics
 - *Al Todd, Executive Director, Alliance for Chesapeake Bay*
- 7:10 PM - Study Overview Presentation
- 7:40 - Panel Question and Answer Period Begins
- 9:00 – Panel Question and Answer Period Ends - Meeting Adjourned

Q & A Instructions



**Type Your
Questions
Here and
Provide Your
Organizational
Affiliation**



Public Review

- Draft Report Available NOW.
 - Available: <http://bit.ly/LSRWA>
- Submit Comments:
 - Email: LSRWAccomments@usace.army.mil
 - Mail : U.S. Army Corps of Engineers, Baltimore District
Attn: Anna Compton
P.O. Box 1715
Baltimore, MD 21203
- Comment Period: November 13, 2014 – January 9, 2015
- Final Report: Anticipated for Summer 2015

Presentations By Study Team

- Study Overview
 - *Dan Bierly, US Army Corps of Engineers*
- Major Findings
 - *Bruce Michael, Maryland Department of Natural Resources*
- Study Recommendations
 - *Mark Bryer, The Nature Conservancy*

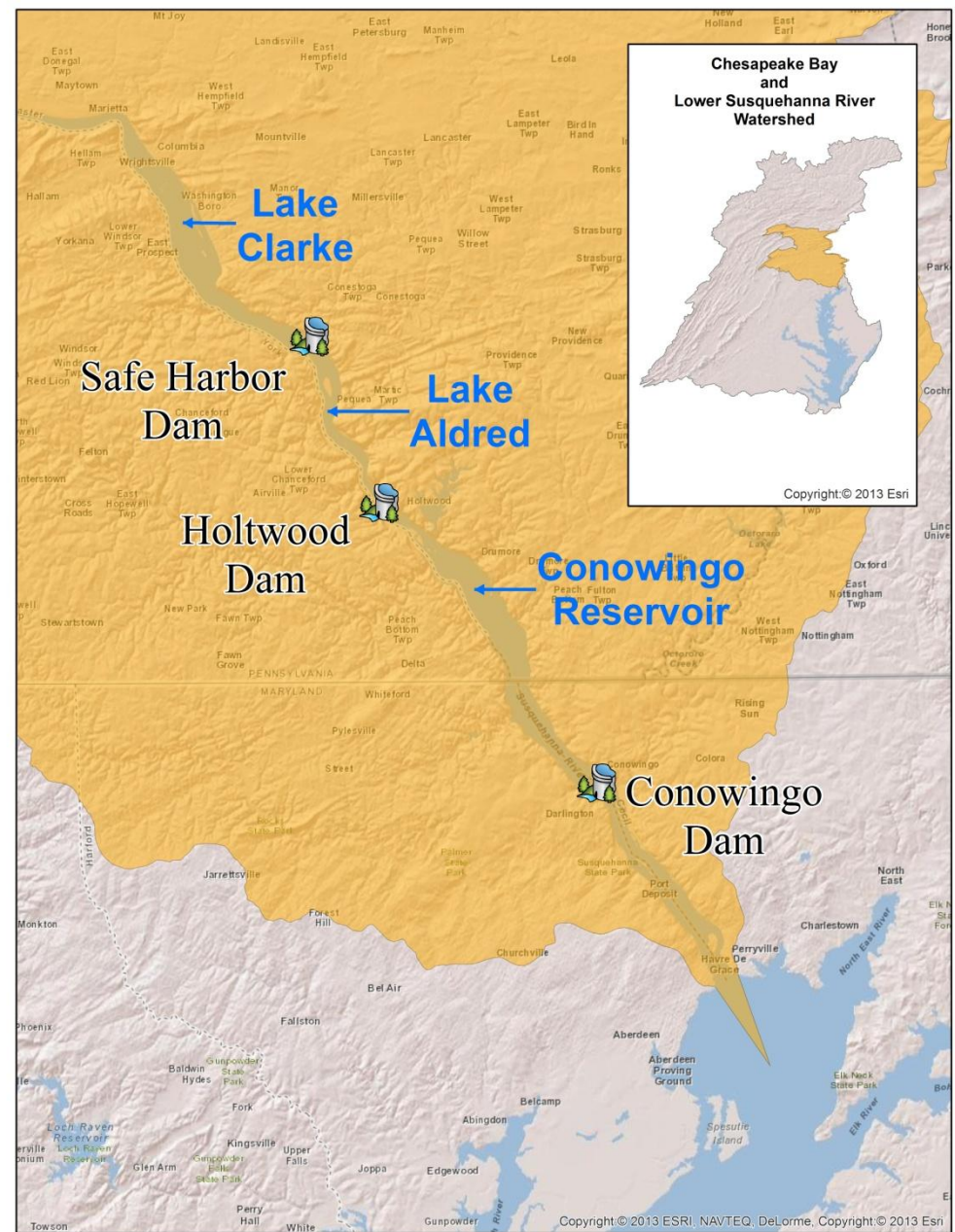
Study Overview

*Dan Bierly, Chief, Civil Project Development
Branch, US Army Corps of Engineers*

Study Area



Graphic courtesy of SRBC







Chesapeake Bay Program
Science. Restoration. Partnership.



LSRWA Goals

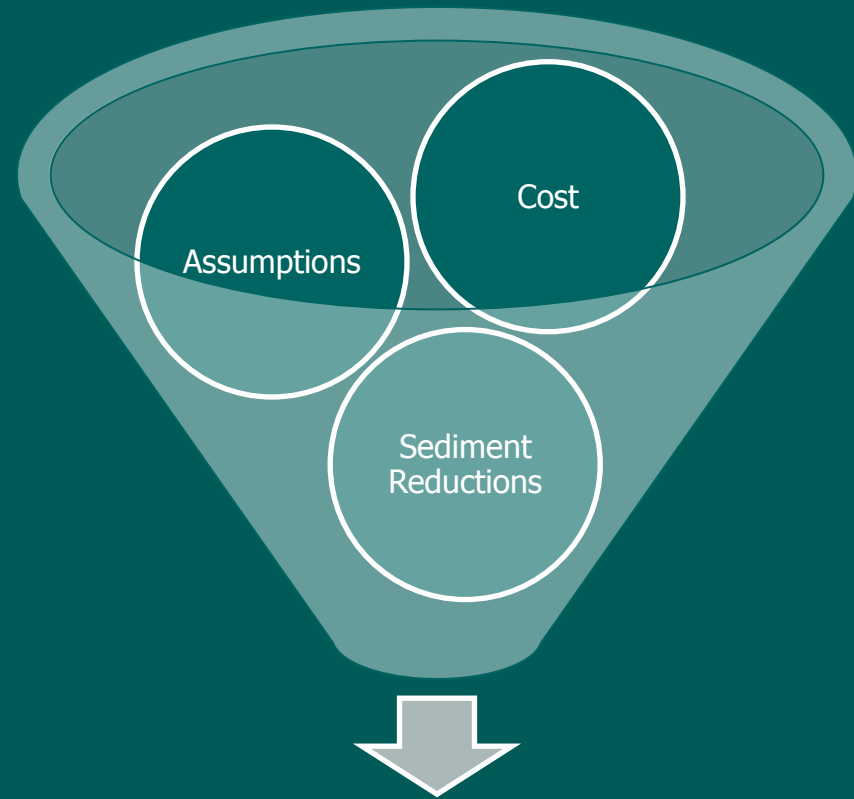
- Determine Bay health effects due to the loss of trapping capacity
- Describe sediment and associated nutrient transport effects during high flow storm events
- Evaluate sediment and associated nutrient load reduction strategies

Managing Sediment

- In-Reservoir Options
- Upstream Best Management Practices



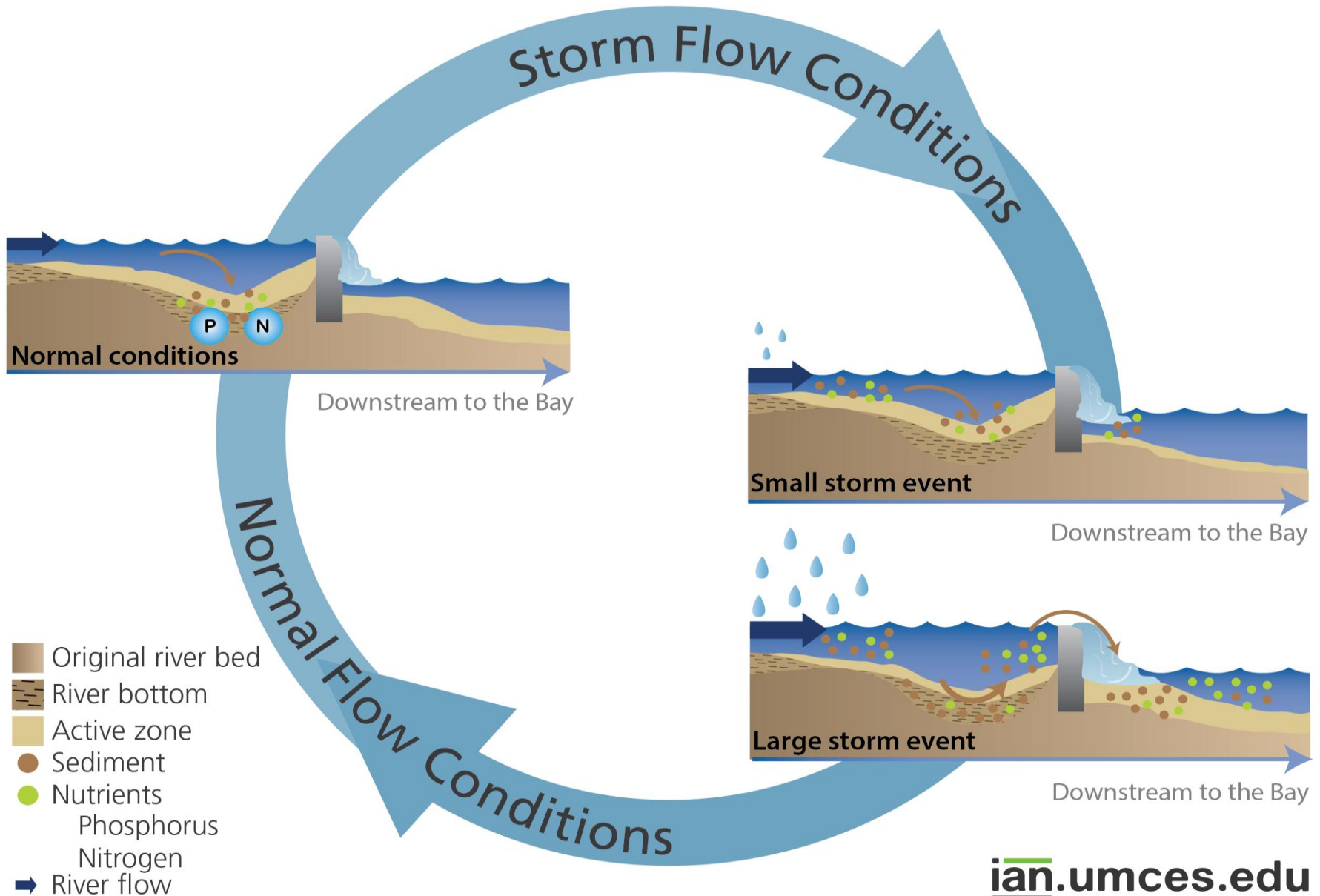
Photo credit: Washington DOT (Top) Chesapeake Bay Program (Bottom)



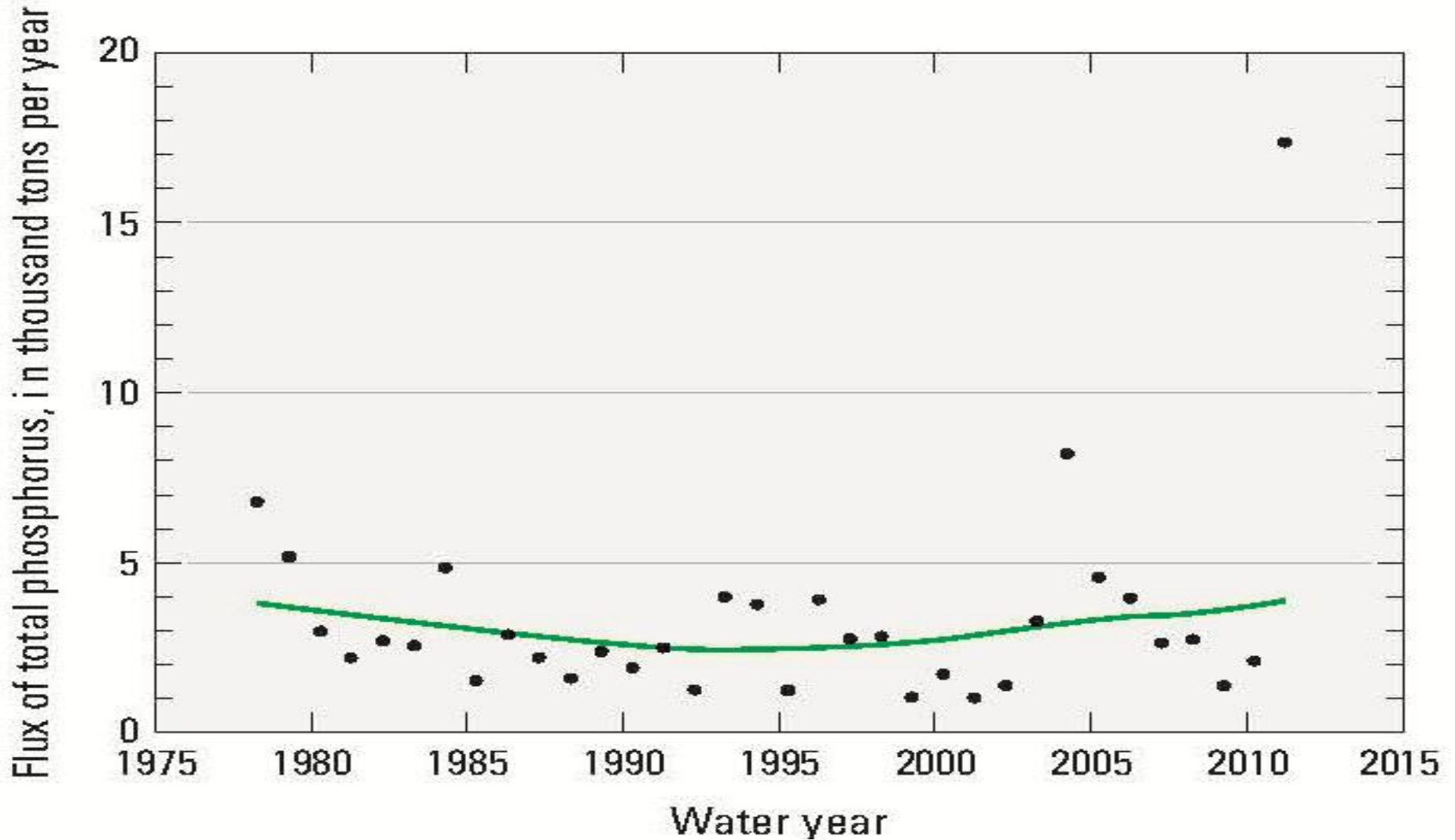
Major Findings

*Bruce Michael, Director Resource
Assessment Service, Maryland Department
of Natural Resources*

Finding 1: Conditions are Different Than Previously Understood



Finding 2: Loss of Long-Term Trapping Impacts the Bay



Graphic courtesy of USGS

Finding 2 Continued:

Excess Nutrients ↴

Algae Blooms ↴

Low Dissolved Oxygen ↴

Harm to Aquatic Life



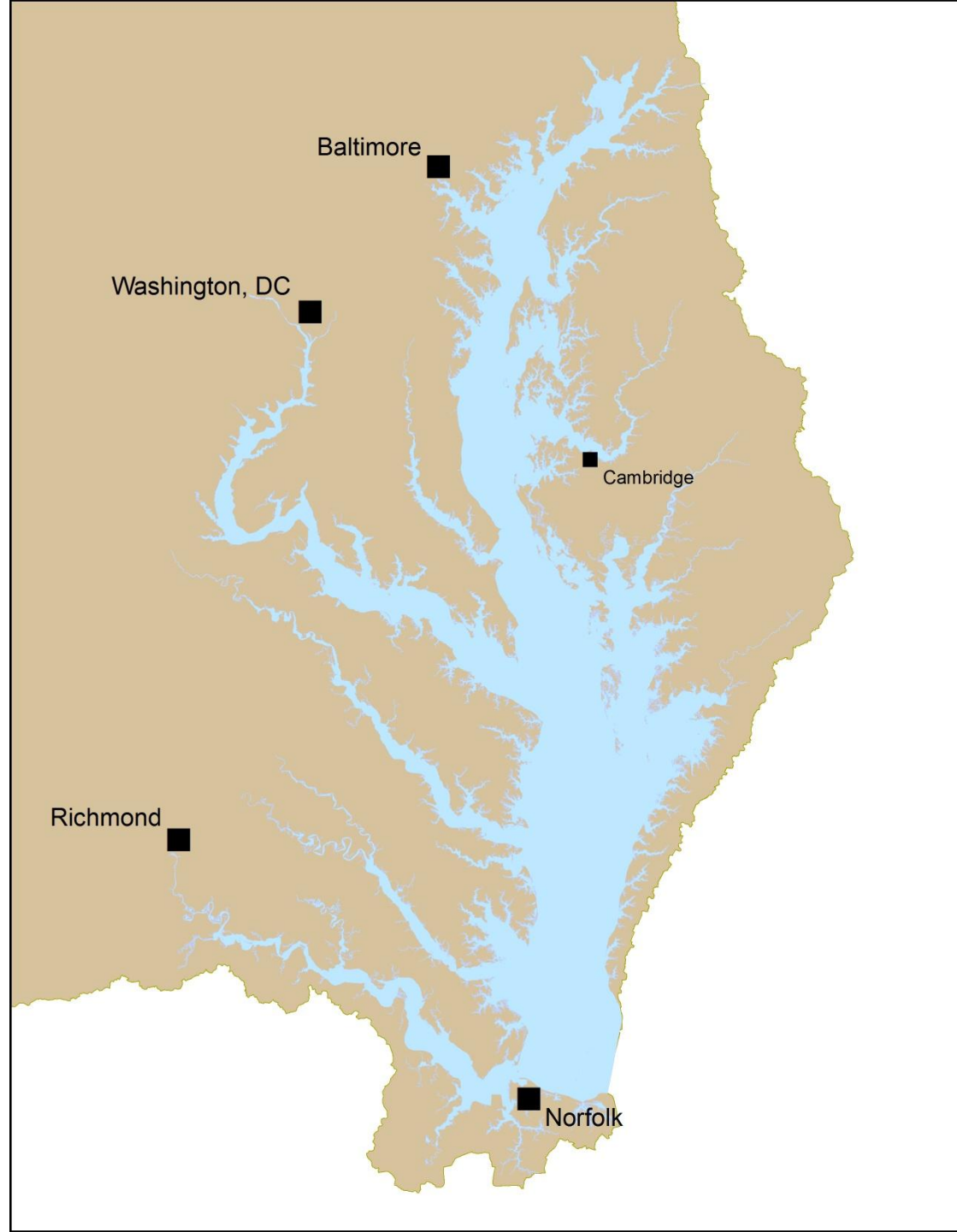
Photo: Wikimedia



Photo: Chesapeake Bay Program

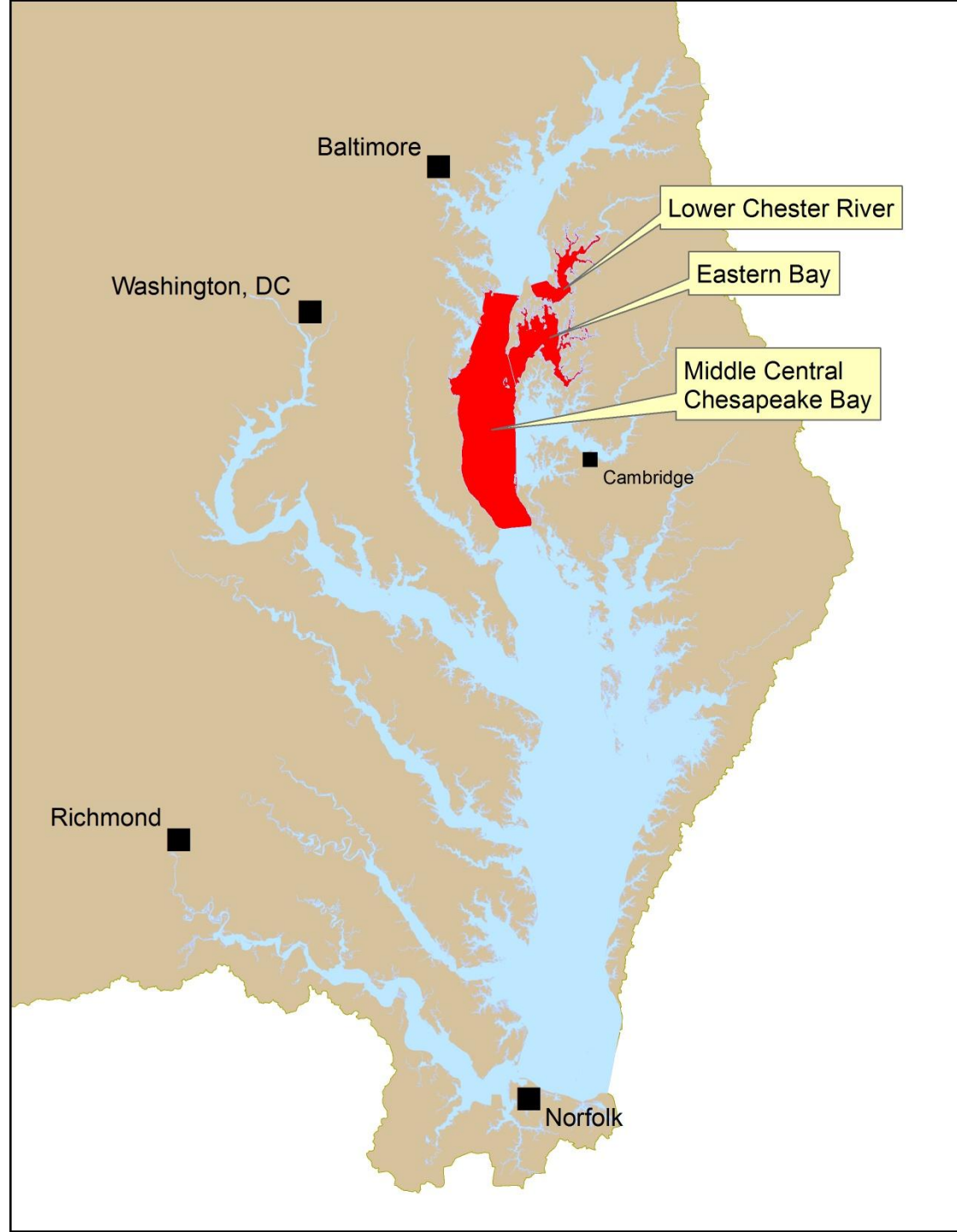
Finding 2 Continued:

Chesapeake Bay Water
Quality Under
Watershed
Implementation Plans
Fully Achieved



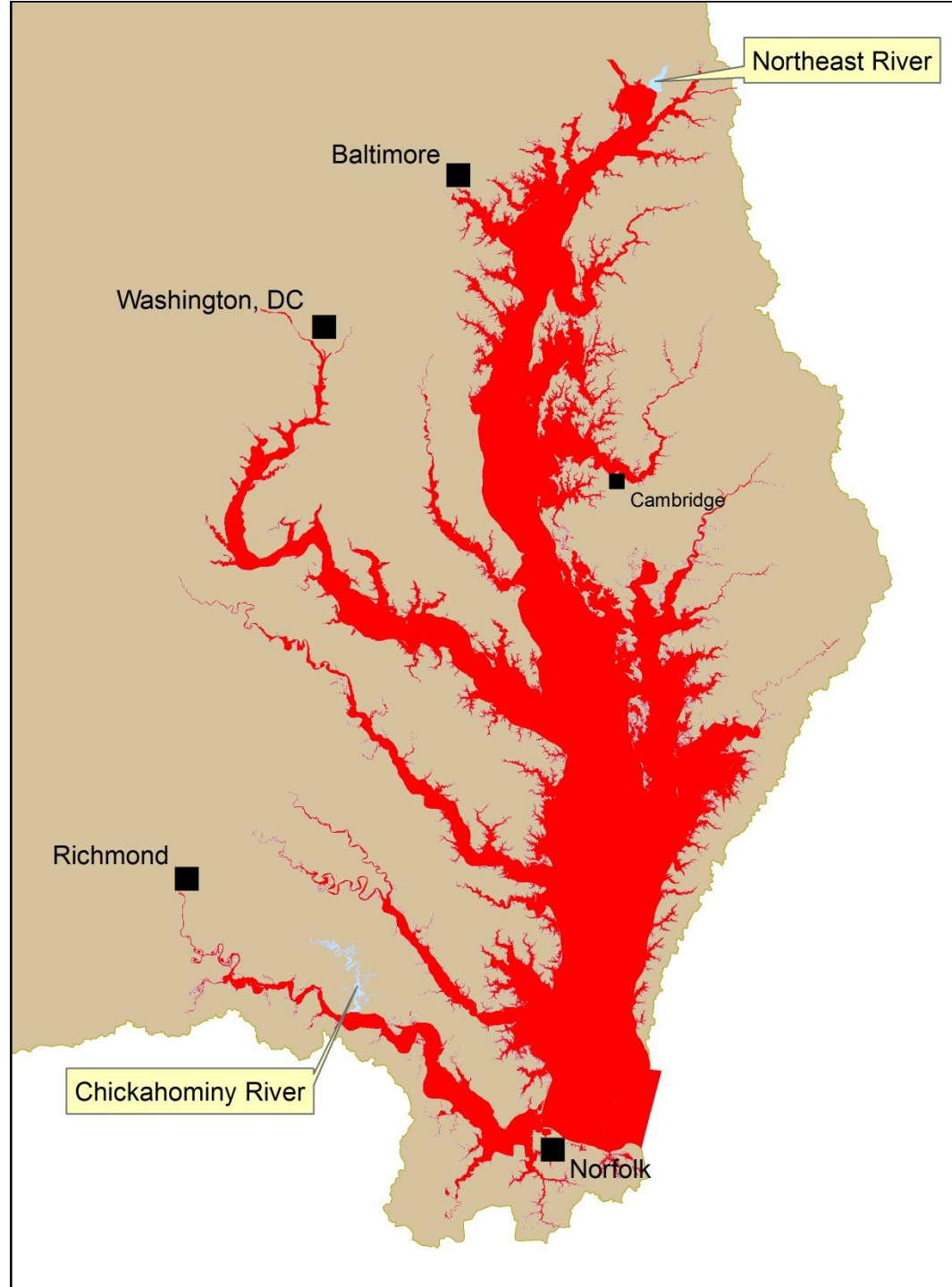
Finding 2 Continued:

Chesapeake Bay Water
Quality Under
Watershed
Implementation Plans
Fully Achieved:
Dams in Dynamic
Equilibrium

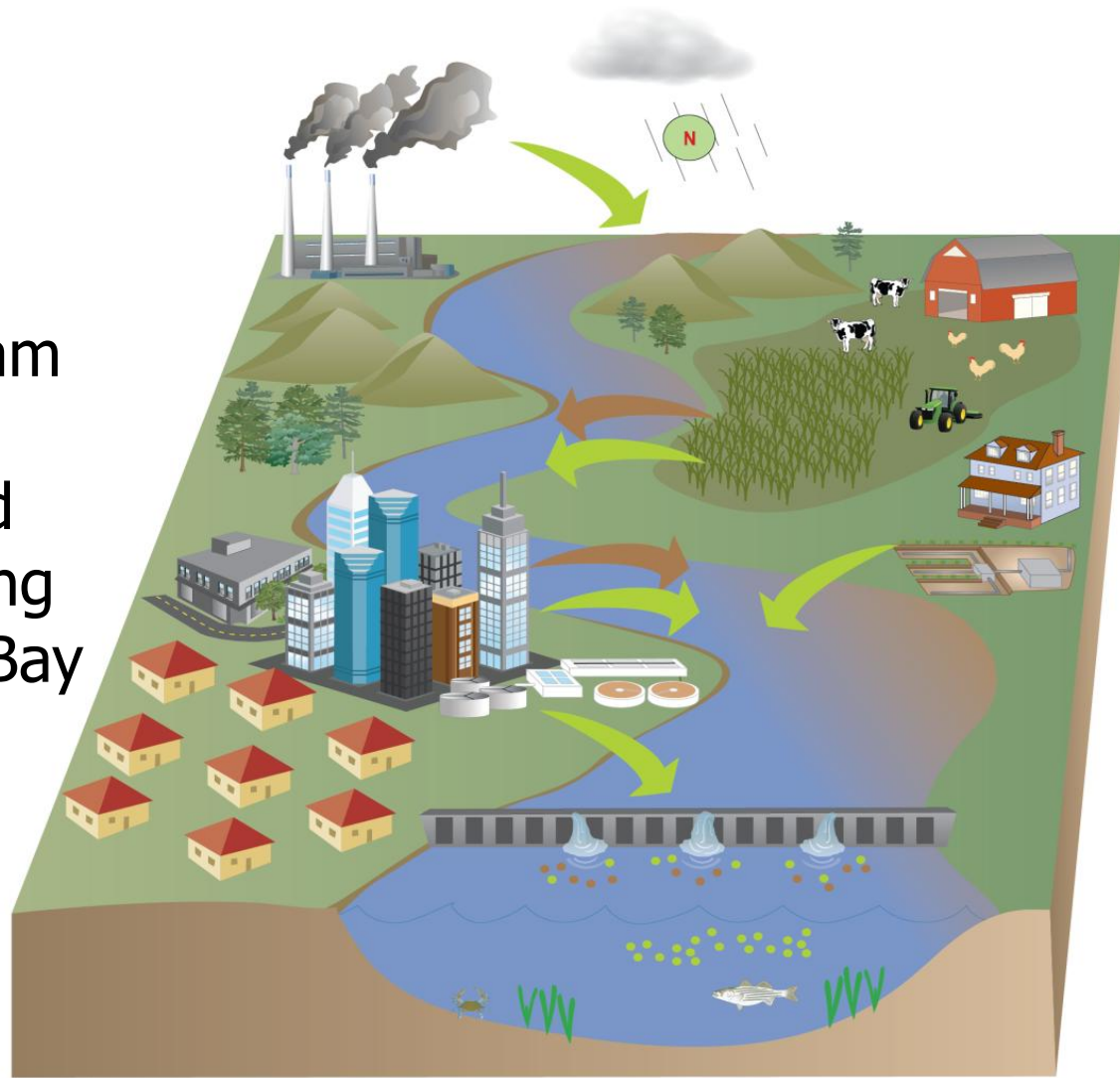


Finding 2 Continued:

Chesapeake Bay Water
Quality if We
Don't Do Anything
More



Finding 3:
Sources Upstream
Deliver More
Sediments and
Nutrients Causing
More Impact to Bay



Development



Stormwater runoff



Agriculture



Septic systems



Wastewater treatment



Atmospheric inputs



Nutrients

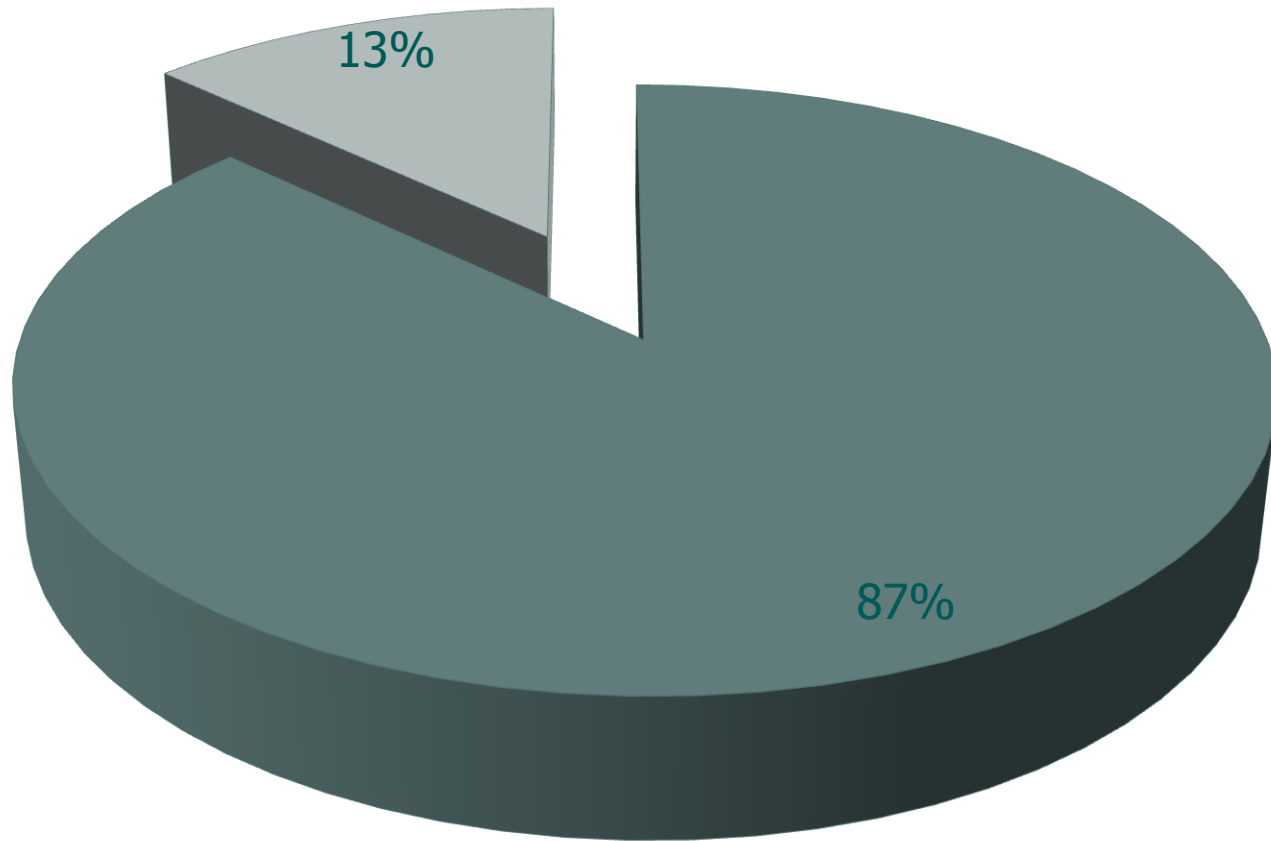


Sediment

Finding 3 Continued:

Estimated Sediment Loads 2008-2011

■ Susquehanna Watershed ■ Conowingo



Finding 3 Continued:

With or Without the Dams,
Large Storms Will Continue
To Contribute Sediment
and Nutrients to the Bay



February 2013 Storm

***Photo credit:
NASA***

Finding 4: Dredging, Bypassing, and Dam Operational Changes, By Itself, Does Not Provide Sufficient Benefits to Offset Impacts From the Loss of Long-Term Trapping Capacity

- Dredging = Minimum, Short Lived Water Quality Benefits
- Cost: \$15-270 Million Every Year
- Back to Mid-1990's = \$496 million to \$2.8 billion
- Only 'Keeping Up' With Inflowing Sediment
- Reducing Nutrients at Their Source More Effective

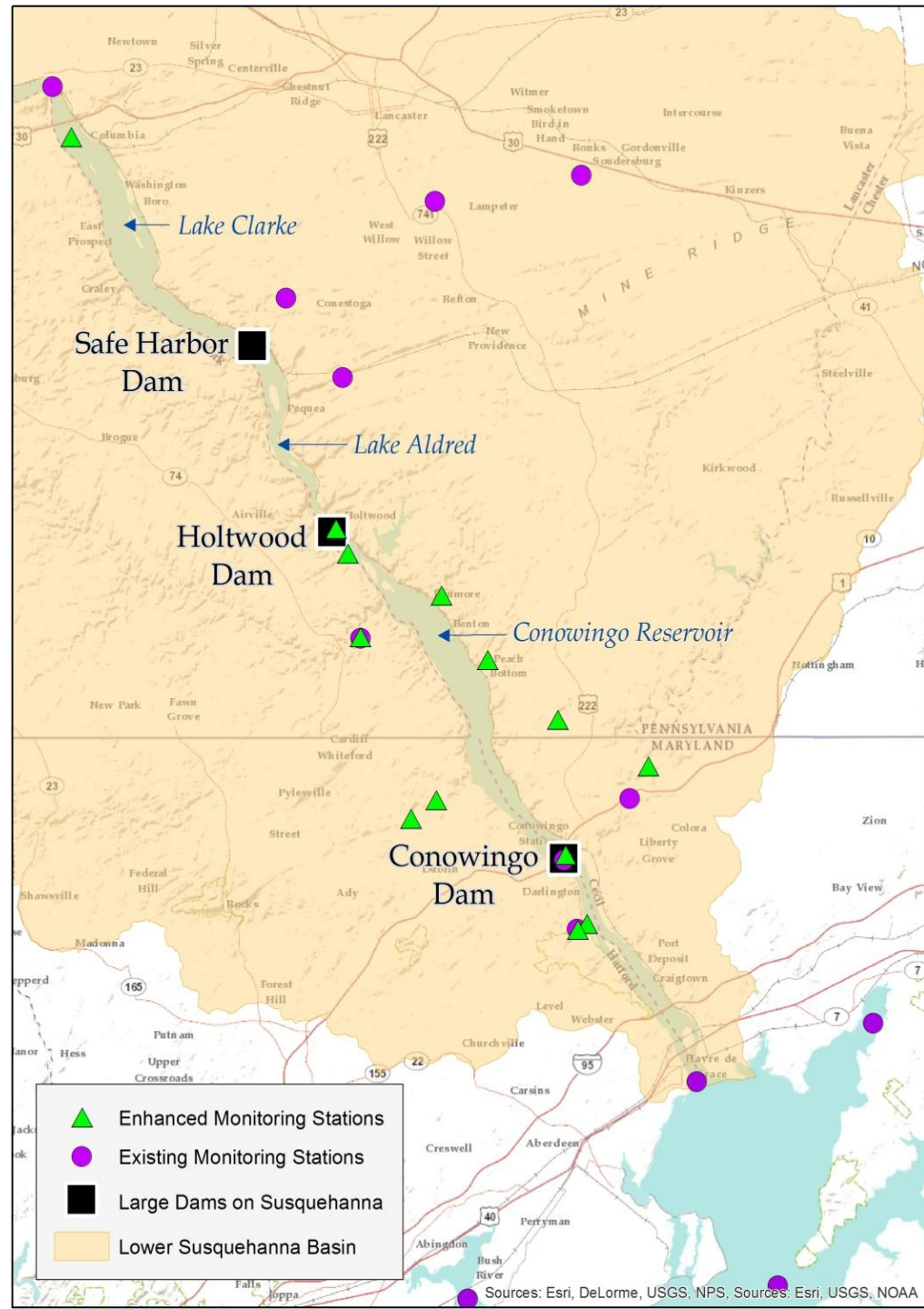


Study Recommendations

*Mark Bryer, Chesapeake Bay Program
Director, The Nature Conservancy*

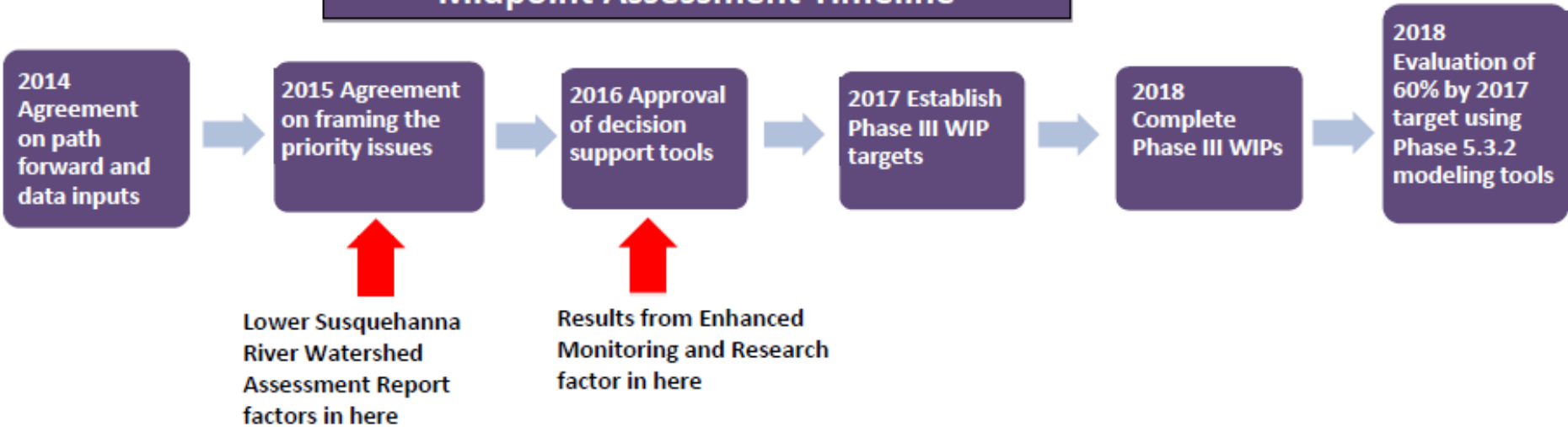
Enhanced Monitoring and Modeling

- Short-Term
- Long-Term



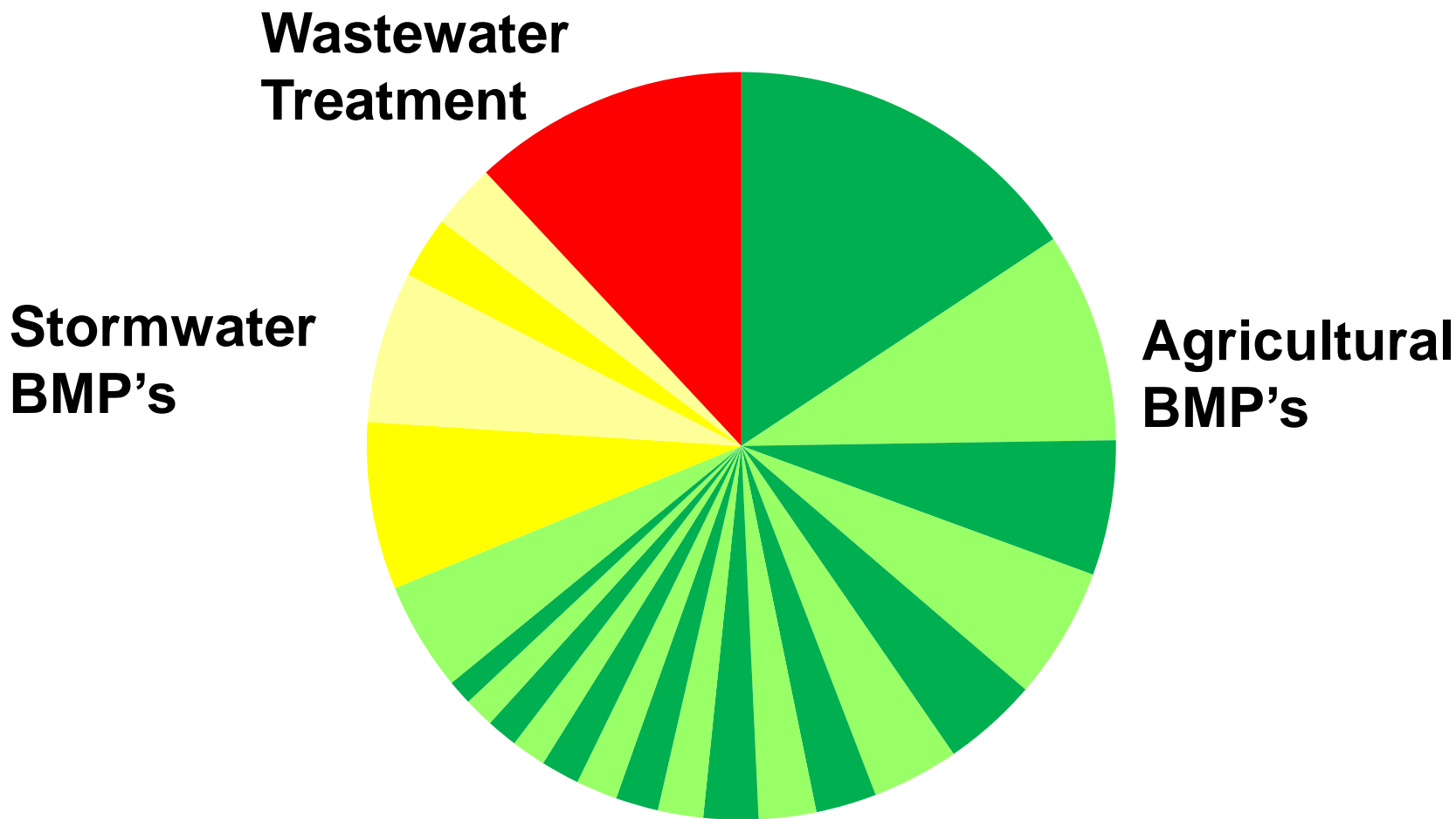
Integrate LSRWA Findings into Bay Total Maximum Daily Load Midpoint Assessment

Chesapeake Bay TMDL 2017 Midpoint Assessment Timeline



Develop and Implement Management Options

Relative Contributions of Pennsylvania's Watershed Implementation Plan Best Management Practices



Panelist Question and Answer Period

Moderator: *Al Todd, Executive Director,
Alliance for Chesapeake Bay*

LSRWA Panelists

- *Dan Bierly*
 - *Chief, Civil Project Development Branch , US Army Corps of Engineers*
- *Bruce Michael*
 - *Director Resource Assessment Service, Maryland Department of Natural Resources*
- *Mark Bryer*
 - *Chesapeake Bay Program Director, The Nature Conservancy*
- *Matt Rowe*
 - *Deputy Director, Science Services Administration, Maryland Department of the Environment*
- *Mike Langland*
 - *Hydrologist, US Geological Survey, Pennsylvania Water Science Center*
- *Rich Batiuk*
 - *Associate Director for Science, Analysis and Implementation, Chesapeake Bay Program Office – US Environmental Protection Agency*

Public Review

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Supplemental Slides

Satellite Photo of Tropical Storm Lee

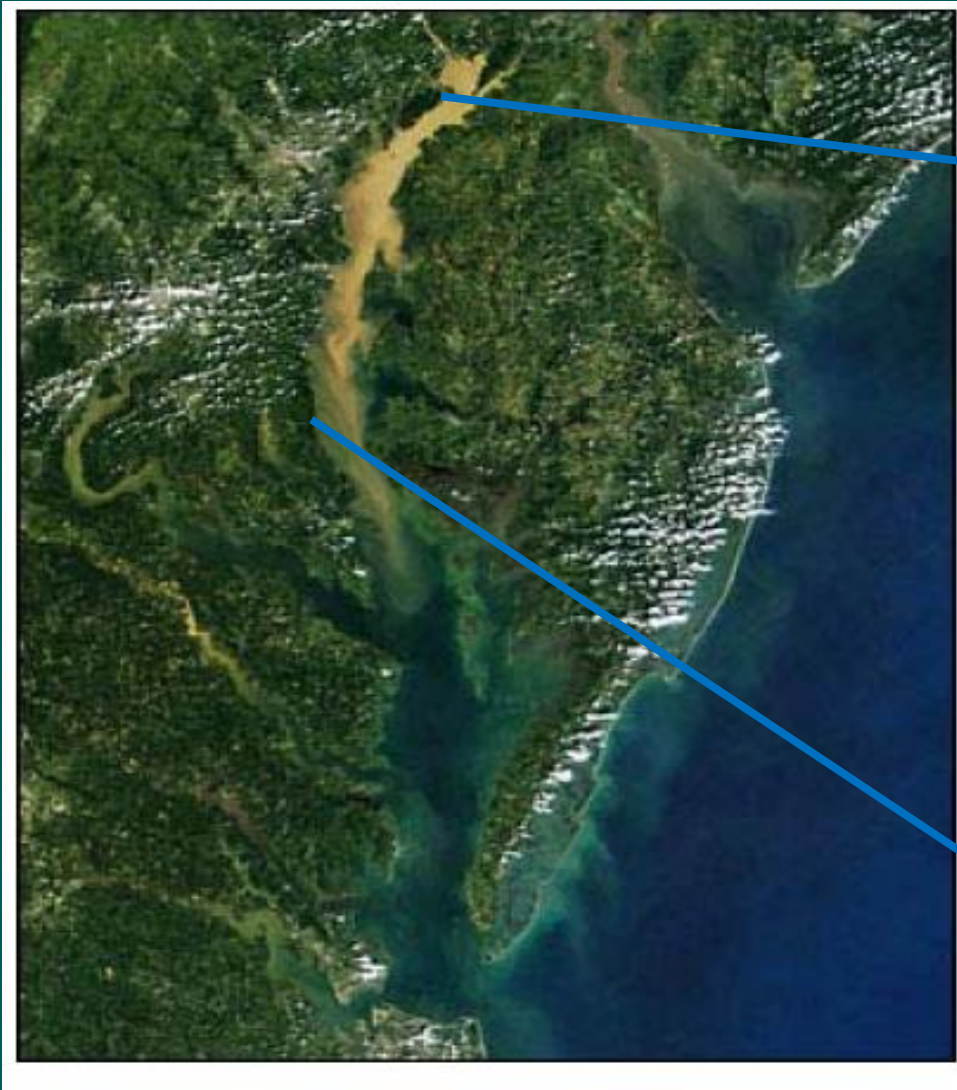
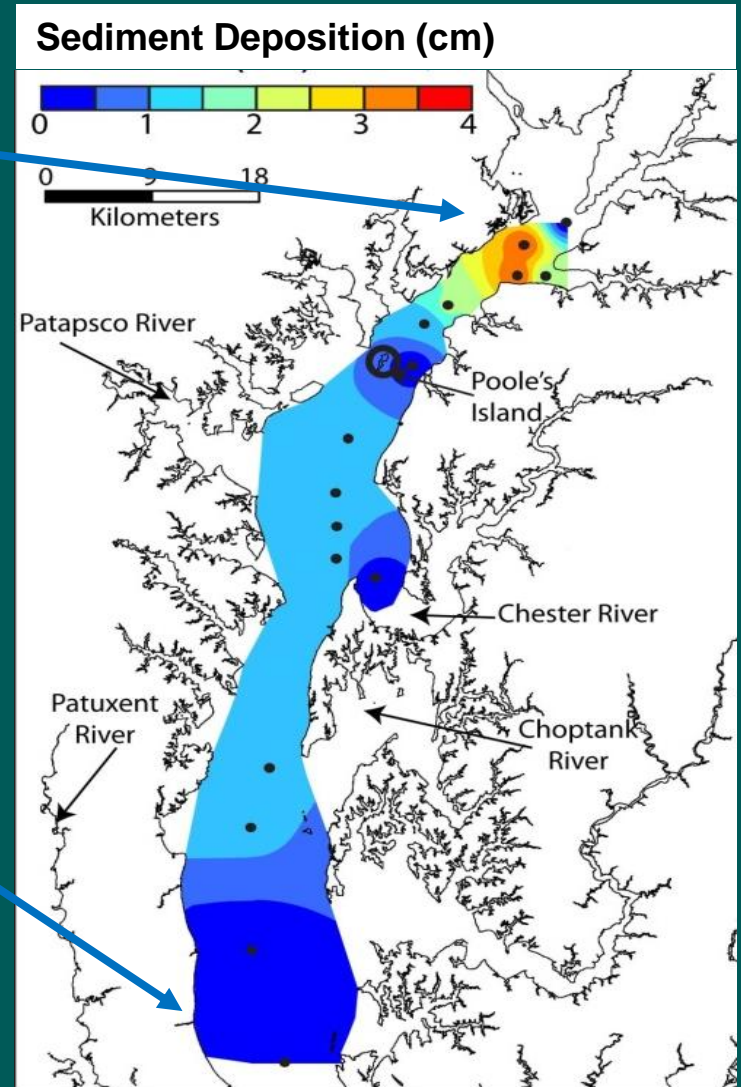


Photo Credit: NASA

What the Data Shows



Graphic courtesy of UMCES