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**.

- Submit Comments:
  - **Email**: LSRWAComments@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
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)

Water Quality Effects

Cost

Assumptions

Sediment Reductions
Major Findings

Bruce Michael, Director Resource Assessment Service, Maryland Department of Natural Resources
Finding 1: Conditions are Different Than Previously Understood

- Normal conditions
- Storm Flow Conditions
  - Small storm event
  - Large storm event

Legend:
- Original river bed
- River bottom
- Active zone
- Sediment
- Nutrients
- Phosphorus
- Nitrogen
- River flow
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: Chesapeake Bay Program

Photo: Wikimedia
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

Graphic courtesy of UMCES
Finding 3 Continued:

Estimated Sediment Loads 2008-2011

- Susquehanna Watershed: 87%
- Conowingo: 13%
Finding 3 Continued:

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

2014 Agreement on path forward and data inputs → 2015 Agreement on framing the priority issues → 2016 Approval of decision support tools → 2017 Establish Phase III WIP targets → 2018 Complete Phase III WIPs → 2018 Evaluation of 60% by 2017 target using Phase 5.3.2 modeling tools

Lower Susquehanna River Watershed Assessment Report factors in here

Results from Enhanced Monitoring and Research factor in here
Develop and Implement Management Options

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

- Wastewater Treatment
- Stormwater BMP’s
- Agricultural BMP’s
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
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Supplemental Slides
Satellite Photo of Tropical Storm Lee

What the Data Shows

Sediment Deposition (cm)

Patapsco River
Poole's Island
Chester River
Choctank River

Photo Credit: NASA
Graphic courtesy of UMCES