The Local Story
Integrating 30 years of data to inform local management in the Chesapeake Bay & its watershed

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The opinions expressed in this technical presentation are those of the author and do not necessarily reflect the views of US EPA.
Context of restoration management in Chesapeake Bay

- Chesapeake Bay Program
- Bay’s “pollution diet” (Total Maximum Daily Load)
- Watershed Implementation Plans
- Local engagement
What do 30 years of data look like?

Monitoring & Trends

Modeling & Tools

Research
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 attainment

Sediment monitoring in Potomac River basin (pounds per acre)

York County nitrogen trends

10-yr trends: improving
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?

York County Nitrogen Delivered to Local Streams (2017 Progress)

Estimated Source of Nitrogen Applied in York County

- Manure: 15%
- Biosolids: 5%
- Fertilizer: 80%

Per-acre nitrate load from groundwater to streams
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
Gathering feedback

Developed local stories and solicited feedback from:

• Water quality managers at state and local levels, citizens advisory committee, local government advisory committee, soil conservation districts, farmers, etc.

• Scientific and technical workshops involving managers

• User/stakeholder research
Gathering feedback

Key messages we found when taking the science local:

• Keeping it local is incredibly important – that often doesn’t mean the Bay
• Connect to what’s locally meaningful
• What we consider “well-known” research isn’t well-known
• Water quality as an indicator of local progress
• Build trust in the science but accept corrections
• Cost-effectiveness is incredibly important – local partners weigh a lot
• “Tell me what to do, but don’t tell me what to do”
Using local stories in planning efforts

The local story concept is being amplified by our partners:

• Pennsylvania’s local engagement strategy

• Chesapeake Bay Commission member fact sheets

• Watershed Implementation Plan Data Dashboard
Poster PPF13. New Tools to Support Restoration Management in the Chesapeake Bay and its Watershed
Thank you!

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