The Midpoint Assessment and Phase III WIP

A Regional Workshop from the Maryland Department of the Environment

Generously sponsored by the Harry R. Hughes Center for Agro-Ecology of the University of Maryland and supported by the Town Creek Foundation
Bay TMDL and WIP Timeline

2010: TMDL Established
Phase I WIP
Phase II WIP

2017: **Midpoint Assessment**
60% of needed actions
Improved science

2018: **Phase III WIP**

2025: 100% of needed actions
What is the midpoint assessment?

- **Evaluation of progress toward 2025 goal:**
  - 60% needed actions by 2017 target

- **Update the decision support tools**
  - Ongoing preparation since 2012
  - Improve accuracy, transparency and confidence in the planning and tracking tools

- **Optimize WIPs**
  - Engage local partners
  - Address emerging issues
  - Financially feasible path to 2025 goals
Percent of Nitrogen Goal Achieved

After EPA Chesapeake Bay Program (2016) – Personal Communication with Rich Batiuk
Update Decision Support Tools

• Improved Accounting (land use, BMPs, Septic)
• Nearly 20 new BMP Expert Panels, over 200 practices available in MAST
• Refined watershed modeling platform
• Additional Calibration Monitoring Data
• Improved geographic accuracy
• Phosphorus Transport (soil saturation)
• Conowingo Infill
• Climate change
High Resolution Land Cover Imagery is Changing How We View our Watershed...

1 Meter VS 30 Meter

Urban/Suburban Lands

...and Greatly Improving Our Understanding of the Location and Extent of Pollutant Sources
Local Landuse Data
An Even Better View of the Watershed

MD 6-in pixel imagery

NLCD 30m pixels
Refined Modeling System

- Land: landuse, atmospheric deposition, manure, fertilizer
- Management practices
- Land to the Water: Based on local physical characteristics
- The effect of small streams
- Transport through large rivers
## 100’s of Approved Practices + Refining/Expanding Menu of Solutions

### CBPO Phase 6 Bay Model BMP Panels Priority and Status

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<td>Manure Injection/Manure Incorporation</td>
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<td>Wetlands</td>
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<td>Impervious Disconnection</td>
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#### Status with regard to September 30, 2016 deadline

- **Green**: Panel approved by sponsor work group and Watershed Technical Workgroup
- **Light Green**: Panel report being finalized
- **Yellow**: Panel providing technical appendix to work groups to allow BMP in P6 calibration, but BMP efficiencies will not be finalized by 9/30/16.
- **Red**: Panel report stalled
- **Blue**: Panel not formed or status uncertain

- **Light Blue**: Boat Pump-Out
- **Teal**: Advanced Onsite Systems (Part III)
- **Dark Blue**: Agricultural Ditch (NRCS BMPs)
- **Olive**: Ag Stormwater Structures
Optimize WIPs
Phase III WIP Building Blocks

• Phase I/II WIP (2010/2012)

• Funding programs

• 2016 - 17 Milestones

• Advisory Committees

• Financial Framework
Section 40 Report, Part 3: Framework for Reaching 2025 Target

- Draws on report by the UMD Environmental Finance Center*
- Key Observation of EFC Report: **Resources are in place that put the 2025 target within reach subject to three caveats:**
  1. Anticipated shortfalls in stormwater and septic sectors at 2025 are covered temporarily by surpluses at WWTPs.
  2. The current regulations are maintained with effective enforcement.
  3. State Bay grant programs are fully funded and applied in the most cost effective manner possible.

Maryland’s Chesapeake Bay Restoration Financing Strategy Report, University of Maryland Environmental Finance Center, February 2015
https://efc.umd.edu/assets/financing_strategy_final_6_5.pdf
Six Elements of Maryland’s Bay Restoration Framework:

1. Use WWTP growth allocations wisely to preserve options for local growth
2. Mitigate the future impact of growth in pollutant loads
3. Transition to credit-based financing/accounting
4. Reaffirm that restoration responsibility starts and ends with the States
5. Complete a strategy to address the cost to implement remaining nutrient and sediment reductions
6. Recognize that Success doesn’t end in 2025
Funding Strategies

• From Section 40
  – BRF Grant and Trust Fund available to local governments to offset stormwater costs
  – Below market rate loans
  – Bond leveraging
  – Public-Private-Partnerships
  – Nutrient trading

• Next Steps
  – Trading Advisory Committee outcomes
  – Consider recommendations from Environmental Finance Symposium
Conowingo Dam and Reservoir

- The Susquehanna basin has a significant influence on Chesapeake Bay water quality
- The net (long term) reservoir trapping capacity is near zero
- Loss of trapping capacity will have more effect on the sediment and phosphorus than nitrogen
- Loss of reservoir trapping impacts the ability to achieve the Bay TMDL water quality goals under current strategies, but not yet fully quantified with new information and tools
- Increased Load Needs to be Offset and offset Policy to be Adopted this winter
- Maryland working group initiated and RFI under review
- 401 WQ Certification expected by Early 2018
Climate Change and the Midpoint Assessment

- Changing precipitation and temperature, sea level rise, shoreline erosion
- Estimating future conditions
- Should the loading impacts be quantified for the WIP III or only accounted for in the strategy choices and quantified later?
- Partnership decision this winter
Summary

• Take Away Points
  – 60% by 2017, 100% by 2025
  – Improved tools
  – Conowingo, Climate and Phosphorus
  – Phase III building blocks in place
  – “Resources are in place that put the 2025 target within reach subject to three caveats”
  – Early engagement with local partners, seeking input
  – Chart a fiscally viable path to our 2025 Bay cleanup target and beyond

• Schedule
  – In 2016, Finish collecting information and develop WIP planning tools.
  – In 2017, Set planning expectations and initiate the Phase III WIP planning process.
  – In 2018 Complete a draft WIP in August and a final WIP in December.
Thank You! Questions