

Chesapeake Bay TMDL: Phase II WIP Update

Presented to
Hampton Roads Regional Steering Committee
April 5, 2012



Summary of Phase II WIP Process

- HRPDC submitted Regional Report to localities including a Regional Preferred Scenario.
- 13 local governments responded to Virginia's request for information and included the Regional Report as an Appendix.
- Virginia incorporated local government strategies into their Phase II WIP submittal to EPA on March 30, 2012.
- Virginia incorporated preferred scenarios into their provisional Phase II WIP input deck.



Regional Narrative

- ❑ Regional Approach to WIP
 - Describe localities, federal and state agencies, and brief description of sectors in Hampton Roads.
 - Describe HRPDC two tier approach: Regional Steering Committee and local teams.
- ❑ Regional Engagement
 - Interactions with local governments through Team meetings, regional meetings, webinars, hands-on training, and other coordination with local governments, federal facilities and State highways.
- ❑ Regional Framework
 - Role of local governments, Soil Water Conservation Districts, State agencies that own property (DoF, VDOT, Universities, etc), Federal agencies that own property (DoD, etc), industrial NPDES permit holders, and HRSD.
- ❑ Programmatic Strategies
 - On-going initiatives
 - Alternate BMPs that should be researched and added to model
- ❑ Implementation Challenges and Recommended Initiatives
- ❑ Regional Preferred Scenario



Regional Preferred Scenario

- Used locality submitted information to create revised scenario consistent with Phase I WIP level of effort.
- Only applied to non federal lands.
- State owned lands were calculated using GIS, and Phase I WIP treatment was applied to the resulting acres.
- Corrected post 2005 BMP data with locally verified information.
- Increased erosion and sediment control from 90% to 95%.
- Increased urban nutrient management by 10% on regulated and unregulated lands in order to simulate fertilizer restrictions.



Summary of Regional Scenario

Scenario	Pounds of nutrients removed compared to 2010 No BMPs		
	Nitrogen (lbs)	Phosphorus (lbs)	Sediment (lbs)
Phase I WIP reductions	541,016	78,181	14,792,723
Regional Scenario	741,079	72,432	39,014,362
Percent of Target	>100%	93%	>100%

Alternate BMPs that cannot be entered in VAST.

- Minimization of Sanitary Sewer Overflows
- No Discharge Zones
- Harvested Wetlands
- Oyster Reef Restoration
- Wetland Restoration
- Catch Basin Cleaning
- Pet Waste Education program
- BMP Upgrades



Information Requested from local governments

1. Develop a current BMP inventory
2. Evaluate land use/ land cover information
3. Review BMP scenarios identified in the Phase I WIP, and develop preferred local scenarios that provide a similar level of treatment.
4. Develop strategies to implement the BMP scenarios.
5. Identify any resource needs to implement the strategies.



BMP Inventory

- All localities provided some updated BMP information.
- Most focused on 2006-present BMPs and those within the MS4 boundary.
- Many need more time to complete full inventory.
- In general, Virginia underestimated Ag BMPs, and overestimated urban BMPs.
 - ❑ Pre – 2006 BMPs have the most discrepancies.
- Virginia did not include a summary of this information in the Phase II WIP submittal.
 - ❑ Noted that information would be used to inform the 2012 Progress update that will be submitted in January 2013.



Land Use/Land Cover Evaluation

- Ten localities provided updated land cover information.
 - ❑ Developed pervious lands generally over-estimated in VAST.
 - ❑ Ag lands generally overestimated in VAST.
 - ❑ VAST overestimates septic systems for most localities.
- Two localities noted watershed boundary discrepancies between local data and EPA data.



Local Preferred Scenarios

- Local governments submitted preferred scenarios to HRPDC for inclusion in the Regional Preferred Scenario.
- Most Phase I localities submitted detailed BMP implementation scenario.
- Most Phase II localities submitted general BMP implementation levels.
- Most localities provided updated septic system numbers.



Local Strategies for BMP Implementation

- Continuation/Expansion of Existing Activities
- Ecosystem Restoration Related Activities
- Retrofits
- Credit for BMPs not currently in the Model



Continuation/Expansion of Existing Activities

- Half of localities plan to expand/refine street sweeping efforts.
- Half of localities mentioned increasing urban nutrient management on public and/or private property.
- Several localities mentioned efforts to improve BMP tracking and reporting.
- Several localities mentioned they would review their codes and ordinances to better support low impact development.



Ecosystem Restoration Related Activities

- Thirty percent of localities included:
 - ❑ Stream restoration projects.
 - ❑ Shoreline stabilization projects.
 - ❑ Wetland restoration
- Half of localities would like to utilize oyster restoration as a BMP.
- Half of localities plan to increase tree planting/urban tree canopy.
- A couple of localities plan to purchase some property for conservation or restoration of floodplain/buffers.



BMP Retrofits

- Half of localities included retrofits as a strategy, but most indicated it would be used as sparingly as possible.
- Most focused on the conversion/upgrade of existing public BMPs.
- Several localities mentioned that BMPs implemented through future redevelopment, but only one locality quantified the treatment potential.
- Localities will focus on placing practices on public property, but several localities included a plan to encourage small practices on private property.



Credit for BMPs not currently in the Model

- Conversion of vehicle fleets to natural gas. (air deposition)
- Floating/harvested wetlands
 - ❑ EPA has approved interim rate for VA.
- Oyster Restoration
- Shoreline Stabilization (living shorelines)
- No Discharge Zones
- Catch Basin Cleanouts
- SAV Restoration
- Fertilizer Restrictions (Current Urban SW Workgroup Panel)
- Illicit Discharge Detection and Elimination
 - ❑ Urban SW Workgroup panel for 2012, looking for volunteers.



Funding Needs

- Only one locality included a current analysis of stormwater program funding and two indicated they planned to in the next 1-2 years.
- Four localities estimated the cost of planned implementation actions.
- Two localities indicated they had proactively or planned to raise stormwater fees.
- Several localities without existing fees indicated they would study revenue sources.
- Many localities mentioned the need for outside funding sources.



Resources Requested in Regional Report

- Increase budget of Agriculture Cost-Share Program and double Soil Water Conservation District staffing.
- Issue \$300M state bond to finance wastewater upgrades.
- Establish septic system cost share program to provide 50% of projected total costs (\$114M/yr) to support upgrades, replacements, or connecting to sewer.
- Expand Chesapeake Bay Preservation Act to entire Bay watershed.



Resource Needs Identified by Localities

- Additional information on treatment of terminal reservoirs in the Model.
- Include wetlands as a discrete land cover category.
- State guidance on BMP tracking.
- Authority for BMP inspections/maintenance outside MS4 phase II boundaries.
- Information on the nutrient removal of flooding control projects.
- Information on the bacteria removal efficiency of BMPs in the Bay Model.

