



**Chesapeake Bay TMDL  
Watershed Implementation Plan – Phase II  
Culpepper, VA  
Rappahannock-Rapidan Regional Commission**

**August 30, 2011**

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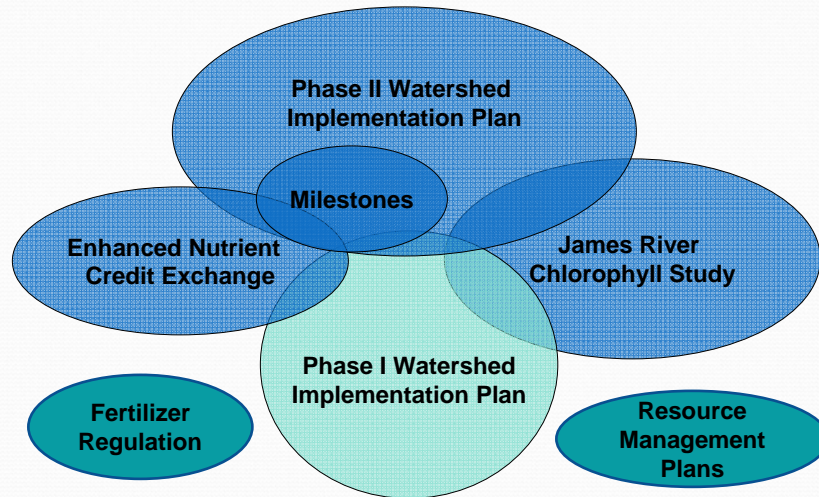
## **Phase I Review**

### **Virginia's Watershed Implementation Plan Phase I**

- Strategies developed at state programmatic level
- Focused on enhanced best management practices implemented for each sector:
  - Wastewater
  - Onsite Sewage Treatment
  - Agriculture/Forestry
  - Urban
- Proposes a broad expansion of the existing nutrient credit exchange.
- Includes study on the James River chlorophyll standard

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## Virginia's Chesapeake Bay TMDL Planning Components



## EPA Guidance for Phase II

- Develop local area pollution targets & reduction goals
- Engage localities and stakeholders to identify conservation and pollution reduction strategies
- Provide additional detail on programs and practices presented in Phase I WIP (state level strategies for implementation)
- Include updates resulting from revisions to the Bay Watershed Model
- Include specific programs and practices, at the state level, in the first 2-year milestones (2012-2013)

## Virginia's Phase II WIP Timeline

- June 2011 Draft Local Goals to Localities
- July 2011 EPA Delivers Phase 5.3.2 Model – final numbers
  - Still in process
- November 2011 Initiate Draft Phase II
  - Incorporate Locality Conservation Strategies/Data Review
- November 2011 Preliminary 2012-2013 Milestones to EPA
- December 2011 - Draft Phase II WIP to EPA
- January 2012 Final 2012-2013 Milestones to EPA
- March 2012 Final Phase II WIP to EPA

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## July 2011 Bay TMDL Allocation

Concerns with most recent watershed model output:

- 2011 target allocation for nitrogen is nearly a million lbs. lower than the 2010 TMDL allocation.
- identified anomalies with nutrient management BMP in a number of Virginia counties (increasing pollution load)
- issues related to sediment changes in the application of the Nutrient Management Plan BMP
- changes in urban land use and pollution load (increase in urban acres with decrease in P.)

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## Virginia's Phase II Approach Local Engagement & Outreach Process

- Meet with individual Planning District and Regional Commissions
- Meet with localities for data delivery:
  - Current BMPs implementation progress
  - Land Use / Land Cover
  - Pollution load targets
  - 2017/2025 BMP implementation goals
- **Provide assessment tool for evaluation of scenarios**
- Incorporate locality data revisions/strategies into State Phase II plan

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## VAST

Virginia Assessment and Scenario Tool

- Allows users less familiar with land use and BMP definitions to develop BMP implementation scenarios
- Quantifies/predicts pollution load reductions and progress toward meeting locality goals
- Pre-processes data files for direct input to the Chesapeake Bay Program's Scenario Builder
- Available to authorized users giving private access via web based interface using a login and password

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## Virginia's Phase II Approach Community Conservation Information

- A review and revision of the Current BMP inventory (2009 Progress BMPs) – Revision of this data can immediately impact the progress toward meeting pollution reduction targets/goals
- A review and revision of 2017/2025 BMP implementation scenarios – Revised to reflect more appropriate local scenario
- Evaluation of watershed model land use and collection of local land use data – Though not possible to include in current watershed model can be used in revision to the model in 2017
- Developing strategies for BMP implementation
- Identification of resource needs for BMP implementation
- Identification of local water quality efforts not credited in the watershed model

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## Example Local Approaches:

Thomas Jefferson Planning District Commission Regional Planning Project:

November 2011 – February 2012:

- Assess current Phase 2 data sets comparing available local data/implementation trends
- Engage pilot project stakeholder groups/expert panels, report out on data assessment, revise and identify a “workable mix of BMPs”
- Vet draft BMP implementation mix through public comment
- Present draft local BMP option to DCR February 2012

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## Example :

March 2012 - December 2012:

- Full local programmatic review, assessing capacity to meet pollution reduction and BMP implementation targets
- Identify highest priority areas for BMP implementation, having greatest local water quality impact
- Develop strategies and a regional implementation plan with specific steps to meet implementation targets
- identify additional technical, financial, policy and regulatory mechanisms needed to reach implementation goals

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## Example Local Approaches:

Unnamed Middle Peninsula County:

- Create workgroup around individual pollution/land use sectors
  - Forest Harvesting
  - Erosion & sediment control
  - Urban nutrient management planning
  - Onsite sewage treatment
  - Agriculture
  - Urban retrofits
- Each workgroup to review BMP implementation targets vs. local implementation trends

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## 1. Forestry

### Ches Bay Model Assumptions for BMP Usage

Time Frame	2010	Average Year	2009 - Model	2025 - Model
Number of acres	350	300-350	610	695

Based on information from the County Forester, the model assumptions will likely not be met because the forest harvesting acreage will not be that high in 2025. However, this is a very small load and not a significant problem to address.

## 2. Erosion and Sediment Control

### Ches Bay Model Assumptions for BMP Usage

Time Frame	FY11	Last 4 Years Average	2009 - Model	2025 - Model
Number of acres	168	237	294	417

Based on information from the Engineering & Resource Protection Division, the model assumptions may not be met because the land disturbing acreage might not be that high in 2025. The levels are driven by the economy but all disturbed acreage will be using BMPs and this represents a fairly small load and not a significant problem to address.

### 3. Septic Systems

#### Ches Bay Model Assumptions for BMP Usage

##### a. Septic system pumpouts

Time Frame	FY11	Last 4 Years Average	2009 - Model	2025 - Model
Number of pumpouts	656	765	676	913

a. Based on information from the Engineering & Resource Protection Division, the model assumptions should be met without too much difficulty. There are currently 4478 systems in the county and one-fifth of that number would be 896. Assuming that pumpout compliance is increased and that the number of systems in the county increases by 10% over the next 15 years, then one-fifth of the systems would be 985 suggesting The model number appears to be achievable.

##### b. Septic system connections

The model assumes that 104 systems will be taken offline and connected to the sewer by 2025. There are currently 160 lots not connected to sewer in neighborhoods that have sewer service. There are another 922 lots in neighborhoods that could have access to sewer. It is likely that the number of 104 connections could be met or exceeded.

##### c. Septic system de-nitrification

The model assumes that 1257 systems will be improved or replaced to include denitrification by 2025. There are currently about 30 (per VDH) systems in the county that would be considered to be de-nitrification systems. The cost of converting a system to a denitrification system is approximately \$30,000. It is unlikely that 1200 more systems would be converted.

### 4. Nutrient Management Plans - Urban

#### Ches Bay Model Assumptions for BMP Usage

Time Frame	FY10	Total from FY04-11	2009 - Model	2025 - Model
Number of acres	22.5	811	279	4319

Based on information from the Cooperative Extension, the model assumptions will not be met without significant additional resources. The difficulty is attaining this goal is that the plan are only valid for a certain period of time, either 3 or 5 years. After that time, they need to be redone. So there would need to be about 865 to 1440 acres done each year, which represents a significant increase over the level of resources currently available. However, this is a very cost-effective BMP and increased resources should be pursued.

## Virginia's Phase II Approach Remarks

- Individual locality information will be aggregated into a state level Virginia Chesapeake Bay TMDL Phase II Watershed Implementation Plan.
- Local and regional strategies will serve to further articulate the Phase I WIP or revise Phase I strategies
- No individual locality plans will be produced as a part of the Phase II WIP
- Phase II WIP does not supersede local TMDL implementation, local IPs can be added to regional and local strategies
- DCR benefits from receiving comments sooner rather than later, shooting for October, 2011
- The draft plan will remain open for comment through February 2012

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### **Do local governments only get credit for BMPs installed after 2006, after the last progress run?**

*Yes; DCR is mainly looking for post-2006 BMPs;*

*But, improving the pre-2006 data improves future model outputs and may improve Virginia progress toward meeting targets*

### **If the local governments submit urban bmp data will their nutrient allocations be reduced accordingly?**

*Localities do not receive an "allocation" in the same fashion as the state. The term "allocation" carries much greater legal weight in the TMDL world*

*When the model is run again the impact of new BMPs submitted by a locality will be seen in the localities progress toward meeting pollution reduction goals. Reduction targets may be lower but the pollution goal number will not change as a result of additional BMPs. The pollution goal is a function of land use*

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**Is it possible that localities will receive a higher nutrient allocation if a locality's on-the-ground urban BMP data shows less BMPs than DCR's estimated BMP data?**

*Substituting pollution goal for allocation, no the pollution goal will not change but yes progress toward the goal could change*

**When will the BMP data localities submit be input into the Bay model?**

*After the next progress run for which the timeframe is unknown. Until Virginia and EPA conclude discussion over the issues with the current model run outputs a new progress run will not be run.*

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**When is DCR planning to send out new data and nutrient allocations?**

*Unknown due to issues with 2010 model run.*

**When is the local BMP data due?**

*Receiving revised data sooner rather than later benefits Virginia in developing a more robust December draft WIP to submit to EPA. October is the current deadline for this draft*

*Absolute deadline is Feb 1, 2012 to be included in final VA WIP report to EPA*

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### What specifically does DCR want them to do?

- A review and revision of the Current BMP inventory (2009 Progress BMPs) – Revision of this data can immediately impact the pollution reduction targets/goals
- A review and revision of 2017/2025 BMP implementation scenarios – Revised to reflect more appropriate local scenario
- Evaluation of watershed model land use and collection of local land use data – Though not possible to include in current watershed model can be used in revision to the model in 2017
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### What are the potential consequence of not acting (for local governments and the agricultural community)?

*There is no mandate for localities to participate, to develop or implement strategies. However, if they do not, Virginia will have difficulty showing how it will meet its allocations and EPA may impose “backstops” using regulatory tools at their disposal or revoking state authority over specific programs. These actions could have adverse impact on localities.*

*It is not clear what impact imposing of “backstops” may have but they could be costly for local governments, developers and farmers. Examples include losing state authority over waste water treatment plant permitting, MS<sub>4</sub> permitting, stormwater program management. This include the potential for federal rules regarding agricultural as well.*

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### **What are the potential benefits of acting?**

*The Phase 2 watershed implementation planning process is the first step in staving off potential federal actions and gives localities an opportunity to self-determine how BMP implementation scenarios are shaped to meet reduction goals in their jurisdiction. The more participation by localities the stronger this effort will be.*

*As a result of the earlier tributary strategies, hundreds of millions of dollars have been made available for wastewater treatment plant upgrades and agricultural best management practices. The hope is that this effort will drive similar funding efforts in the future. Localities that participate will be in better position to receive this funding as it is made available.*

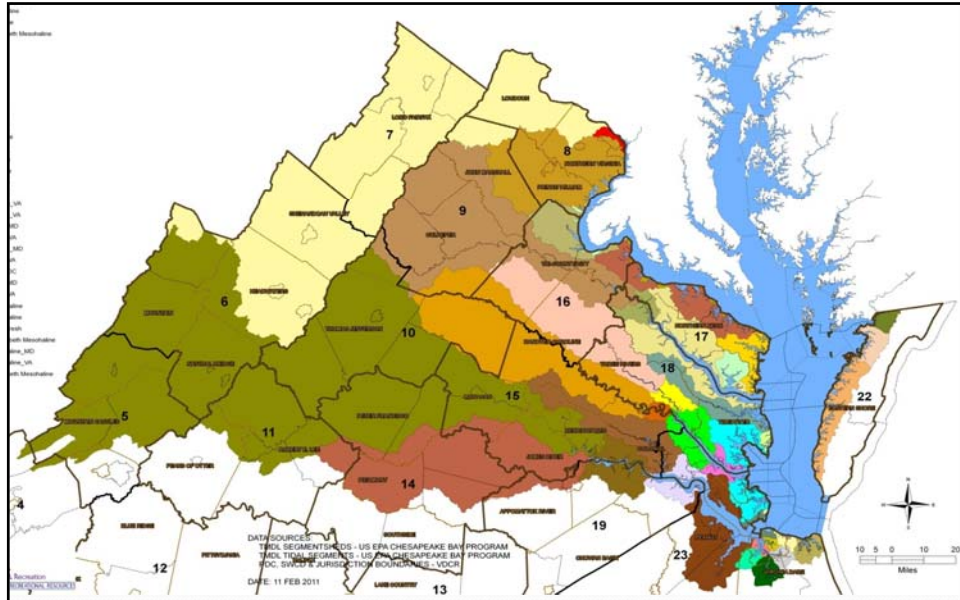
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### **Will there be any funds available for these tasks?**

*DCR is will commit a component of the Chesapeake Bay funding the state receives from the federal program to this planning effort. An announcement is forthcoming that will cover:*

- 1. A limited RFP to localities and planning district commissions to cover the cost of Phase 2 planning efforts.*
- 2. How localities can access technical planning assistance available through a US EPA contractor*
- 3. How localities can access technical assistance being provided through the Bay Program's Local Government Advisory Committee's Circuit Rider Program.*

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## Virginia's Phase II Approach Questions/Discussion