



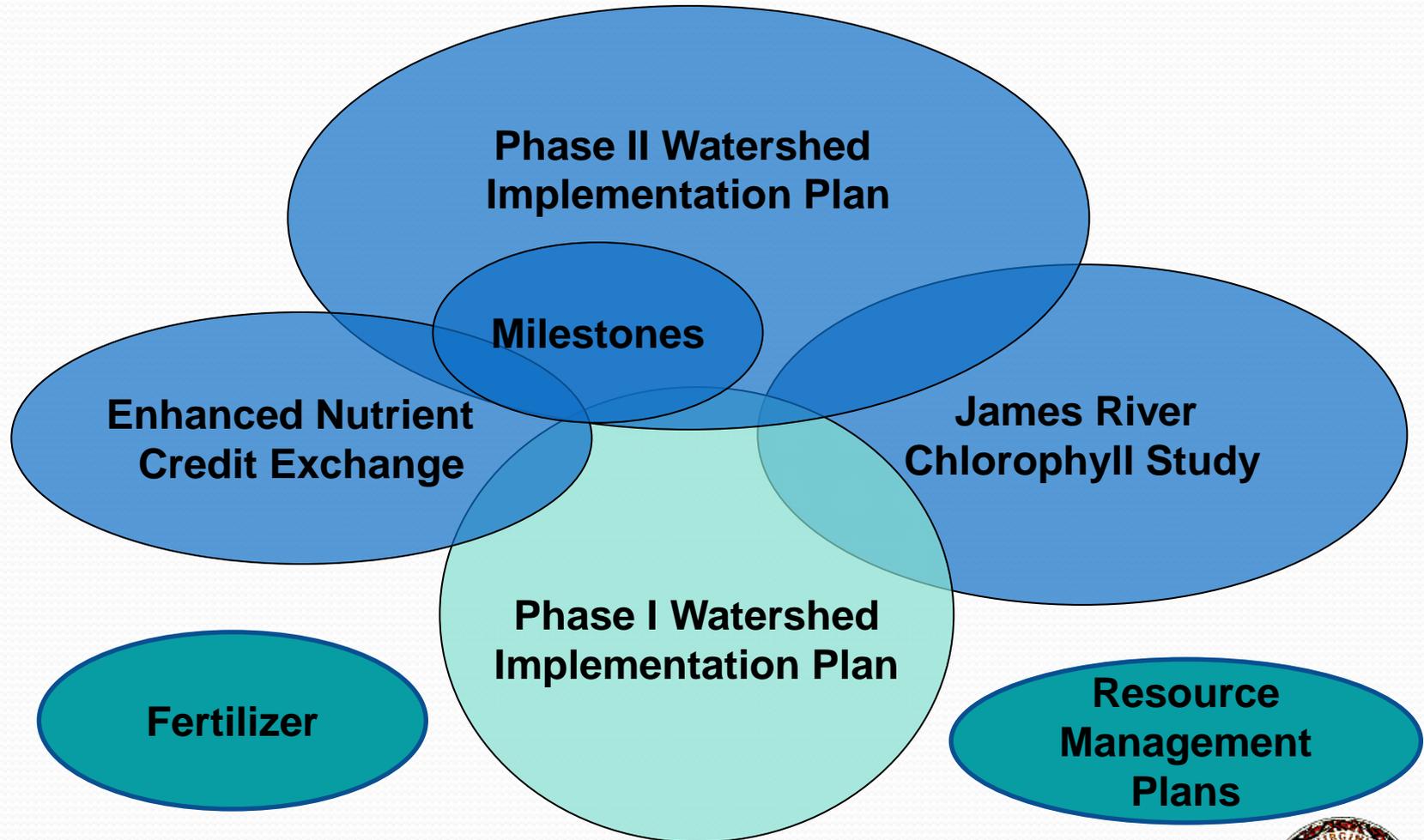
Chesapeake Bay TMDL Watershed Implementation Plan – Phase II

Hampton Roads Planning District Commission

July 14, 2011

Virginia's Chesapeake Bay TMDL

Planning Components



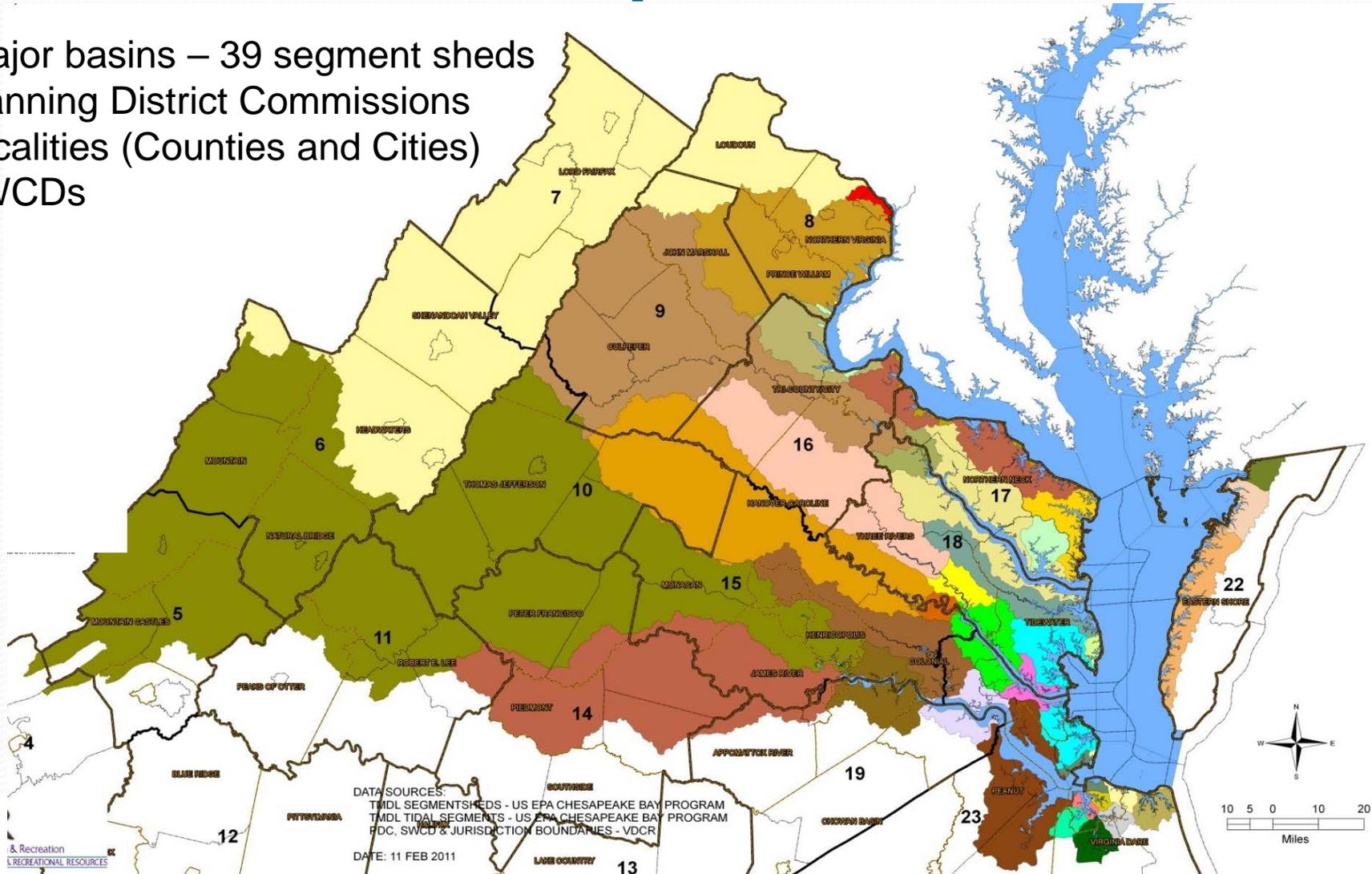
Phase I Review

Virginia's Watershed Implementation Plan: Overview

- Submitted 27 Nov 2010
- Accepted By EPA 29 Dec 2010
- Meets 2017 target loads for all basins through management actions, plus use of existing nutrient credits achieve those target loads.
- Proposes a broad expansion of the existing nutrient credit exchange.
- Includes plan for the James River for additional study of the current chlorophyll standard.
- Expected Revisions to the 2025 allocations in 2017

Scale of Implementation

- Five Major basins – 39 segment sheds
- 16 Planning District Commissions
- 96 Localities (Counties and Cities)
- 32 SWCDs



EPA Expectations for Phase II

- Further divide final Bay TMDL allocations for 39 segment sheds into local area targets
- Work with local elected officials, staff, conservation districts, watershed associations and citizens to identify strategies to be implemented to reduce delivered loads to the Bay
- Provide additional detail on programs, technologies, and practices to implement by 2017
- Include updates resulting from revisions to the Bay Watershed Model
- Include specific programs and practices in the first 2-year milestones (2012-2013)

Phase II Objectives

- Focus on strategies that reduce nutrient and sediment loads to improve the quality of local waters and the Chesapeake Bay
- Convey relationship between Chesapeake Bay restoration and the benefits to local waters and local partners (making implementation locally relevant)
- Establish local targets or goals (subdivided allocations) as a tool for use by the local governments and planning district commissions to identify conservation actions and track progress
- Utilize local goals to facilitate engagement and partnership with local stakeholders to advance a better understanding of the local contribution to and responsibility for reducing pollutant loads
- Use Community Conservation Information to inventory existing practices and determine the extent to which these practices can be enhanced to meet local goals and local conservation objectives.

Phase II Project Elements

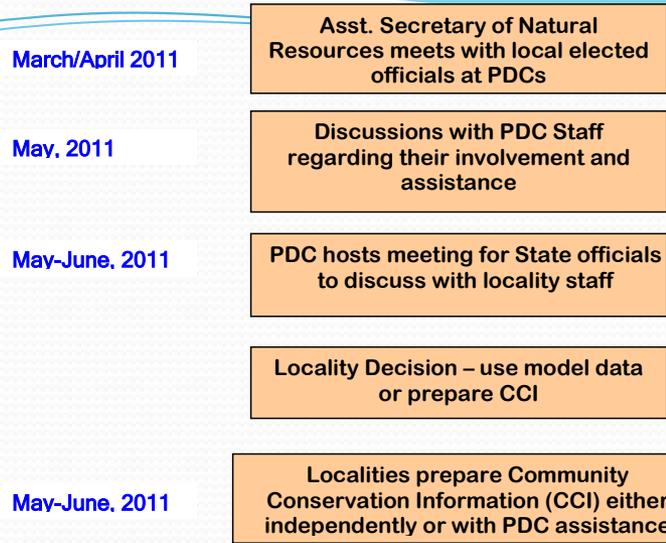
- Development of Local Reduction Goal for each of the 96 localities
- Local Engagement
- Local development of Community Conservation Information (CCI)
- Phase II WIP Development
- 2012/2013 Milestone Development



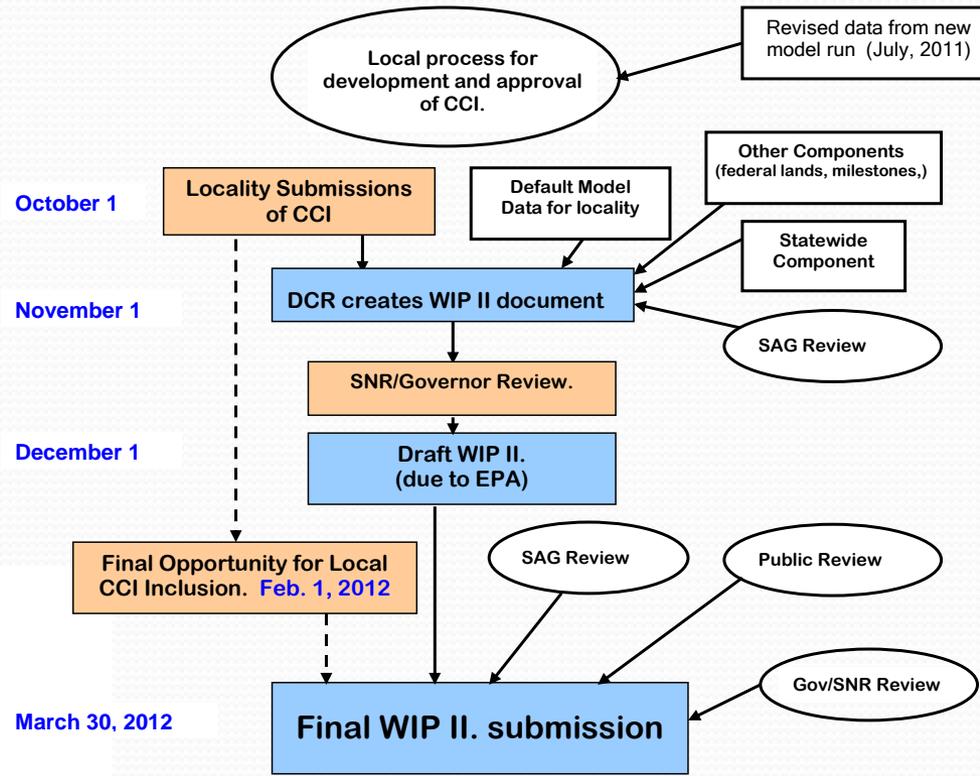
Virginia's WIP II Process

- Brief Congressional delegation
- Secretary's Office presentations to Planning District Commissions
- Convene Phase II Stakeholder Advisory Group
- Develop Local Goals (TMDL & model data)
- Local Engagement and Outreach
 - 16 Planning District Commissions
 - 96 Localities
 - 32 SWCDs
 - NGOs and Federal facilities/lands
- Develop Community Conservation Information (locality scale)

Commonwealth of Virginia WIP II Preparation and Locality Engagement Process



DCR provides model-derived data by sector for each locality: acreage, load goals and reductions, practices to meet goals.



Project Schedule

- Draft Local Goals to Localities - 06/01/2011
- EPA Delivers Phase 5.3.2 Model – 07/1/2011
- Final Local Goals to Localities - 08/01/2011
- Local Conservation Strategies Finalized – 10/01/2011
- Preliminary 2012-2013 Milestones to EPA - 11/01/2011
- Draft Phase II WIP to EPA - 12/01/2011
- Final 2012-2013 Milestones to EPA - 01/03/2012
- Final Phase II WIP to EPA – 03/30/2012



Virginia's Phase II Approach

Local Goal Loads and Model Output Data

- Bay Model goals for each sector assigned to each of 96 localities
 - Land Use / Land Cover acreage
 - Loads, goals, and reductions identified for each pollutant for each sector.
- BMP's , by type, assigned to each of 96 localities
 - 2009 Progress BMPs
 - 2025 and 2017 WIP I proposed BMP's;
- The local reduction goals and associated BMPs will be the starting point for localities to work from during the Phase II WIP development process
- Data will be revised upon EPA completion of the Phase 5.3.2 model (July/August)
- Absent any input from localities, these data will be used as the default values for the Phase II WIP

Virginia's Phase II Approach

Local Goal Loads and Reductions - Richmond Regional PDC

PDC	Crater
County_City	(All)
SWCD	(All)
Major Basin	(All)
Cbseg	(All)

Data													
Subsource	LU/LC (acres)	2009 Nitrogen Load	2025 Nitrogen Goal Load	Nitrogen Reduction Goal	Nitrogen Reduction %	2009 Phosphorus Load	2025 Phosphorus Goal Load	Phosphorus Reduction Goal	Phosphorus Reduction %	2009 Sediment Load	2025 Sediment Goal Load	Sediment Reduction Goal	Sediment Reduction %
Animal Operations	24	12,238	3,031	(9,207)	-75%	1,095	254	(841)	-77%	31,536	22,978	(8,558)	-27%
Crop	20,049	274,480	194,486	(79,994)	-29%	32,482	23,386	(9,096)	-28%	11,963,581	8,167,978	(3,795,603)	-32%
Hay	3,763	23,440	19,606	(3,834)	-16%	591	787	196	33%	1,169,589	1,039,956	(129,633)	-11%
Pasture	4,474	101,523	93,322	(8,201)	-8%	5,731	3,923	(1,808)	-32%	776,036	446,100	(329,936)	-43%
Nurseries	-	286	82	(204)	-71%	203	58	(145)	-71%	1,785	1,785	-	0%
MS4Urban	16,493	114,913	107,886	(7,027)	-6%	19,713	17,780	(1,933)	-10%	7,702,179	6,647,396	(1,054,783)	-14%
NonMS4Urban	6,934	47,957	31,621	(16,336)	-34%	14,887	6,883	(8,004)	-54%	12,955,947	2,746,954	(10,208,993)	-79%
Construction	213	3,272	2,434	(838)	-26%	1,713	1,031	(682)	-40%	1,830,771	1,098,467	(732,304)	-40%
CSS	-	-	-	-	0%	-	-	-	0%	-	-	-	0%
Septic	-	80,343	71,158	(9,185)	-11%	-	-	-	0%	-	-	-	0%
Surface Mine	1,642	12,679	644	(12,035)	-95%	6,773	344	(6,429)	-95%	9,810,630	498,252	(9,312,378)	-95%
Unmanaged Grass	1,495	4,258	13,644	9,386	220%	32	105	73	228%	548,506	1,644,599	1,096,093	200%
Forest	163,925	311,468	316,796	5,328	2%	20,984	21,308	324	2%	2,878,575	2,945,522	66,947	2%
Grand Total	219,012	986,857	854,710	(132,147)	-13%	104,204	75,859	(28,345)	-27%	49,669,135	25,259,987	(24,409,148)	-49%

Notes:

Loading goals for the point source wastewater sector are not currently included in these tables. TMDL allocations for this sector are addressed through the Virginia Watershed General Permit. DCR and DEQ are working to determine how best to incorporate the wastewater sector into the Phase II WIP process

Negative (red) values in the reduction goal and reduction % columns indicate reductions required by 2025. Positive values indicate forecasted increases in loads. Load increases are common for the unmanaged grass and forest land uses. This is a result of increased acres from land use conversion BMPs (ie. Grass or forest buffers)

Goal Load = Best available model representation of the TMDL

Reduction Goal = Goal Load - Modeled 2009 Progress

Reduction % = Reduction Goal / Modeled 2009 Progress

Virginia's Phase II Approach BMPs and Implementation Goals

BMPs	Data			
	2009 Progress BMPs	2025 WIP I Proposed BMPs	New BMPs Proposed by 2025	2017 BMPs 60%
AWMS (Systems)	3	23	20	12
MortalityComp (Systems)	-	0	0	0
BarnRunoffCont (Systems)	1	20	19	12
PastFence(Linft)	13,922	390,792	376,871	226,122
OSWnoFence	-	-	-	-
PrecRotGrazing	808	2,381	1,573	944
CaptureReuse (Acres Treated)	-	2	2	1
ConPlan	14,358	20,072	5,714	3,428
AgNutMan	4,060	21,582	17,522	10,513
CoverCrop	1,079	5,370	4,291	2,575
ContinuousNT	2,828	8,689	5,861	3,517
NonUrbStrmRest (Linft)	-	384	384	231
WaterContStruc (Acres Treated)	-	-	-	-
WetlandRestore	-	94	94	56
GrassBuffers	134	3,089	2,956	1,773
ForestBuffers	117	157	40	24
Land Retirement to hyo	528	1,770	1,242	745
Tree Planting	351	1,882	1,531	918
ForHarvestBMP	13,568	1,554	-	-
Septic Connections (systems)	-	142	142	85
Septic Denitrification (systems)	-	1,706	1,706	1,023
Septic Pumpouts (systems)	1	1,239	1,238	743
StreetSweep	15	453	438	263
UrbanNutMan	170	3,982	3,812	2,287
EandS	488	426	-	-
Impervious Urban Surface Reduction	-	414	414	248
UrbStrmRest (linft)	-	1,274	1,274	764
ExtDryPonds (Acres Treated)	1,929	2,769	841	504
DryPonds (Acres Treated)	728	1,314	586	352
WetPondWetland (Acres Treated)	1,457	3,252	1,794	1,077
Infiltration (Acres Treated)	4	805	800	480
Filtration (Acres Treated)	46	848	802	481



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 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



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

How the State can help

- Continued engagement and some technical assistance from DCR staff
- Provide “Assessment Tool”
- Pass through EPA contract assistance – 360 hours of Tetra Tech assistance available
- Possible Chesapeake Bay Regulatory & Accountability Program (EPA) grants
- Other sources that may be available through the Secretary of Natural Resources



Virginia's Phase II Approach

Questions/Discussion



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slides to follow**



Phase I Review

Virginia's Priorities

- Allow flexibility in implementation to ensure cost-effective practices are given priority
- Want on the ground water quality improvements
- Recognize economic impacts of the TMDL and the need for federal funding as well as reductions from federal facilities
- Developed to meet EPA deadlines and requirements
- Reserve the right to modify the plan and adapt as necessary
- The plan includes regulatory programs that are currently place

Phase I Review

Expand Nutrient Credit Exchange

Legislative Findings and Purpose – [§62.1-44.19:12]

- Meeting cap allocations cost-effectively and as soon as possible
- Accommodating continued growth and economic development
- Providing foundation for establishing market-based incentives to help achieve non-point source reduction goals

Next Steps:

- Major programmatic undertaking for Commonwealth
- Will require General Assembly action
- Conduct legislature-sanctioned study during 2011
- Proposal for consideration during 2012 session of General Assembly

Phase I Review

James River Strategy

- Conduct scientific study to determine the most appropriate chlorophyll criteria for the tidal James River
- Concurrently, begin pollution reduction actions during Phase II of TMDL Implementation to achieve the 60% reduction target by 2017
- Initiate rulemaking under the Virginia Administrative Process Act to amend water quality standards, as needed
- Amend TMDL allocations for the James River Basin, as needed, in response to revised water quality standards
- Implements necessary management actions during Phase III to achieve TMDL allocations prior to 2025

Phase I Review

Virginia's Watershed Implementation Plan: Wastewater Proposals

- Will meet allocations through Watershed General Permit that establishes nutrient caps for all significant discharges and ability to trade
- Propose additional reductions of 2.6 million lbs of N and 200,000 lbs of P in the James basin and 42,500 lbs of P in the York
- Propose new facilities under 1000 gpd must offset entire nutrient load.
- Propose offsets for nutrient loads from small dischargers expanding to less than 40,000 gallons per day

Phase I Review

Virginia's Watershed Implementation Plan: Onsite/Septic Proposals

- New or replacement systems in the Chesapeake Bay watershed utilize nitrogen reducing technology and implementation of new regulations for alternative systems that are currently under development
- Establishing a tax credit or other financial incentive for the upgrade or replacement of existing conventional systems with systems that have nitrogen removal technologies
- The plan proposes requiring septic pumpouts in areas outside those governed by the Chesapeake Bay Preservation Act which currently requires pumpouts every 5 years

Phase I Review

Virginia's Watershed Implementation Plan: Agriculture/Forestry Proposals

- Extensive implementation of resource management plans on agricultural acres which could result in implementation of these practices:
 - nutrient management plans
 - livestock exclusion from streams
 - 35' stream buffers
 - soil conservation
 - other practices accepted by the Bay model
- Vastly improved accounting of voluntary practices
- Improved implementation of forestry water quality BMP requirements

Phase I Review

Virginia's Watershed Implementation Plan: Urban/Suburban Stormwater Proposals

- Urban nutrient management plans on golf courses, municipally owned lands.
- Restrictions on do-it-yourself non-agricultural lawn and turf fertilizers including “P ban”
- 20% phosphorus reduction standard for areas being redeveloped.
- Stormwater *retrofits* on existing developed lands to reduce nitrogen, phosphorus and sediment.
- For new development, post development loads cannot exceed allowed loads of previous land uses

Phase II WIP and Milestones Project Schedule

- Draft Local Goals to Localities - 06/01/2011
- EPA Delivers Phase 5.3.2 Model – 07/1/2011
- Final Local Goals to Localities - 08/01/2011
- Local Conservation Strategies – 11/01/2011
- Preliminary 2012-2013 Milestones to EPA - 11/01/2011
- Draft Phase II WIP to EPA - 12/01/2011
- Final 2012-2013 Milestones to EPA - 01/03/2012
- Final Phase II WIP to EPA – 03/30/2012
- Expected in 2017:
 - EPA model revisions (Phase 6)
 - States develop and submit Phase III WIPS
 - Adjust allocations according to progress on state plans
 - Modifications of the TMDL allocations by Dec 2017

Virginia's Phase II Approach

Local Engagement & Outreach Process

- Provide local goals and model output data
- Desired local deliverables
 - Current BMPs
 - Update progress in current model
 - Land Use / Land Cover
 - Work with EPA for use in Phase 6 model
 - 2017/2025 BMP Scenarios
 - Strategies to implement BMP scenarios
 - Resource needs
- Provide assessment tool for evaluation of scenarios
- Ongoing support and technical assistance

Virginia's Phase II Approach

Local Engagement & Outreach Process

- Brief Congressional delegation
- Secretary's Office presentations to Planning District Commissions
- Contact PDCs exploring their interest in participating
- Face-to-face meeting with PDC staff
 - More detail on Phase II process
 - Discuss of the Community Conservation Profile approach
 - Discuss potential roles with PDCs
 - Technical
 - Facilitation
 - Neither/both
 - Ability/capacity/resources (available and needed)

Virginia's Phase II Approach

Local Engagement & Outreach Process (cont)

- Face-to-face meeting with Localities, SWCDs and PDCs
 - Overview of Phase II process
 - Discussion of desired local deliverables
 - Current BMPs
 - Land Use / Land Cover
 - Strategies
 - Resource needs
 - Discussion of timeline
 - Provide local goals and model output data
 - Provide assessment tool for evaluation of scenarios
- Ongoing support and technical assistance



Local Engagement Process

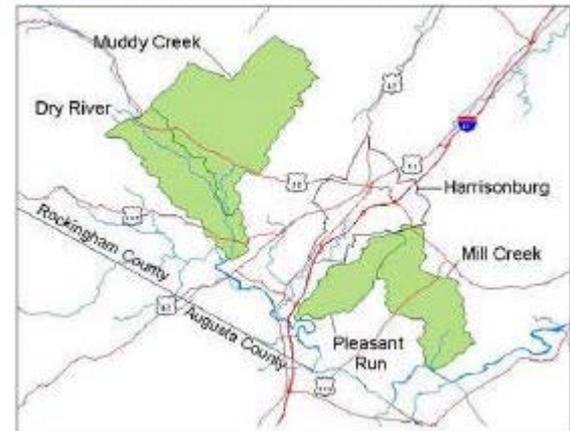
- Secretary's Office presentations to 16 PDCs – 15 completed
- Follow-up discussions with PDCs to explore their interest in participating - initiated
- Meeting with PDC staff
 - More detail on Phase II process
 - Discuss of the Community Conservation Information
 - Discuss potential roles with PDCs
 - Technical
 - Facilitation
 - Neither/both
 - Ability/capacity/resources (available and needed)



What is the relationship with Local TMDLs?

TMDLs are established when water quality standards are violated. The Chesapeake Bay TMDL addresses nutrient and sediment violations.

Where local TMDLs and the Bay TMDL overlap, the most stringent one will take precedence.



Potential Role of PDC

- Technical
- Facilitation
- Neither/both
- Capacity/resources - available and needed



Virginia's Phase II Approach

2012 – 2013 Milestone Development

- Evaluate Phase I WIP actions
- Evaluate 2011 milestone actions and contingencies
- Identify new State programs (Fertilizer control, Enhanced Nutrient Credit Exchange Program, etc.)
- Develop 2012-2013 Actions
- SAG review of preliminary milestones
- Gubernatorial review of preliminary milestones
- Submit preliminary milestones to EPA (11/01/2011)
- Identify resource requirements to achieve implementation goals
- Submit final milestones to EPA (1/03/2012)

Virginia's Phase II Approach

Closing Remarks

- All information provided by localities will be wrapped into a state level Bay TMDL Phase II Watershed Implementation Plan.
- No individual locality Watershed implementation plans will be produced
- DCR would benefit from receiving comments by October 2011
- The draft plan will remain open for comment through February 2012
- Absent comment from localities the data presented will be included in the Phase II WIP

