

Chesapeake Bay Total Maximum Daily Load and Watershed Implementation Plan

Presented to
Hampton Roads Planning District Commission
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Chesapeake Bay TMDL Impacts

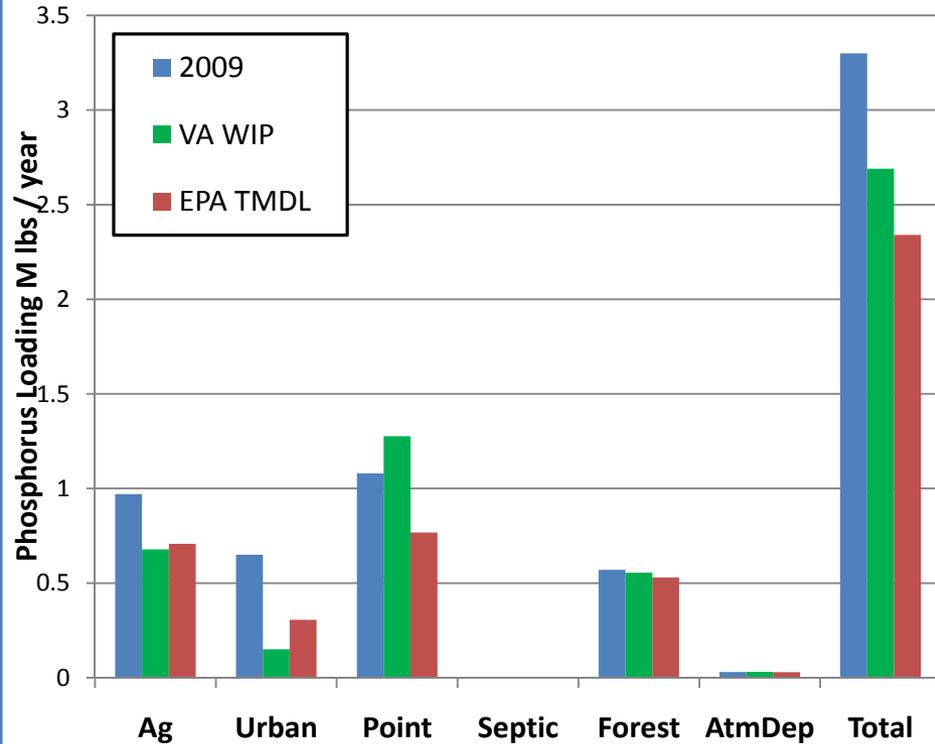
- Bay TMDL will cost Hampton Roads citizens up to \$1,400 per household each year.
- Implementing stormwater nutrient reductions is logistically challenging.
 - Only 15 years to plan, negotiate, finance, and construct \$3-9B of stormwater treatment facilities.
- Reductions will be enforced with MS4 stormwater permits.
- If localities don't meet permit milestones:
 - Fines
 - Enforcement actions

Comment Outlines

- EPA TMDL
 - Major issue: Additional nutrient reductions in James River Watershed
- Virginia Implementation Plan
 - Major issue: Sector allocations should allow the most cost effective nutrient reductions.

Additional reductions in James

Phosphorus Loading



Phosphorus

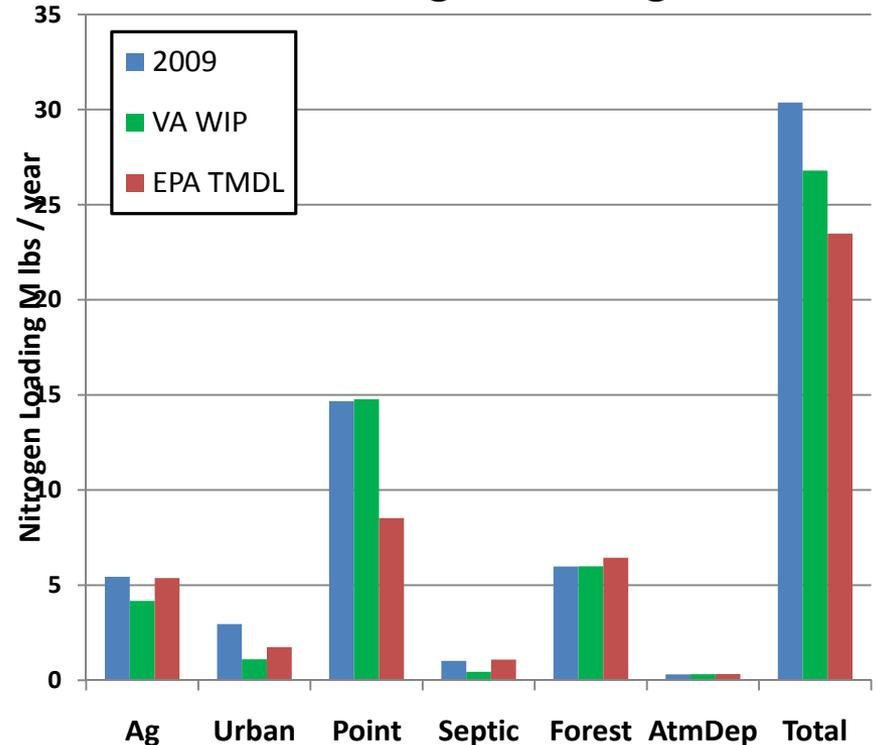
Total EPA cut = 0.35 Mlbs

Point source cut = 0.509 Mlbs

Urban increase = 0.156 Mlbs

Ag increase = 0.03 Mlbs

Nitrogen Loading



Nitrogen

Total EPA cut = 3.31 Mlbs

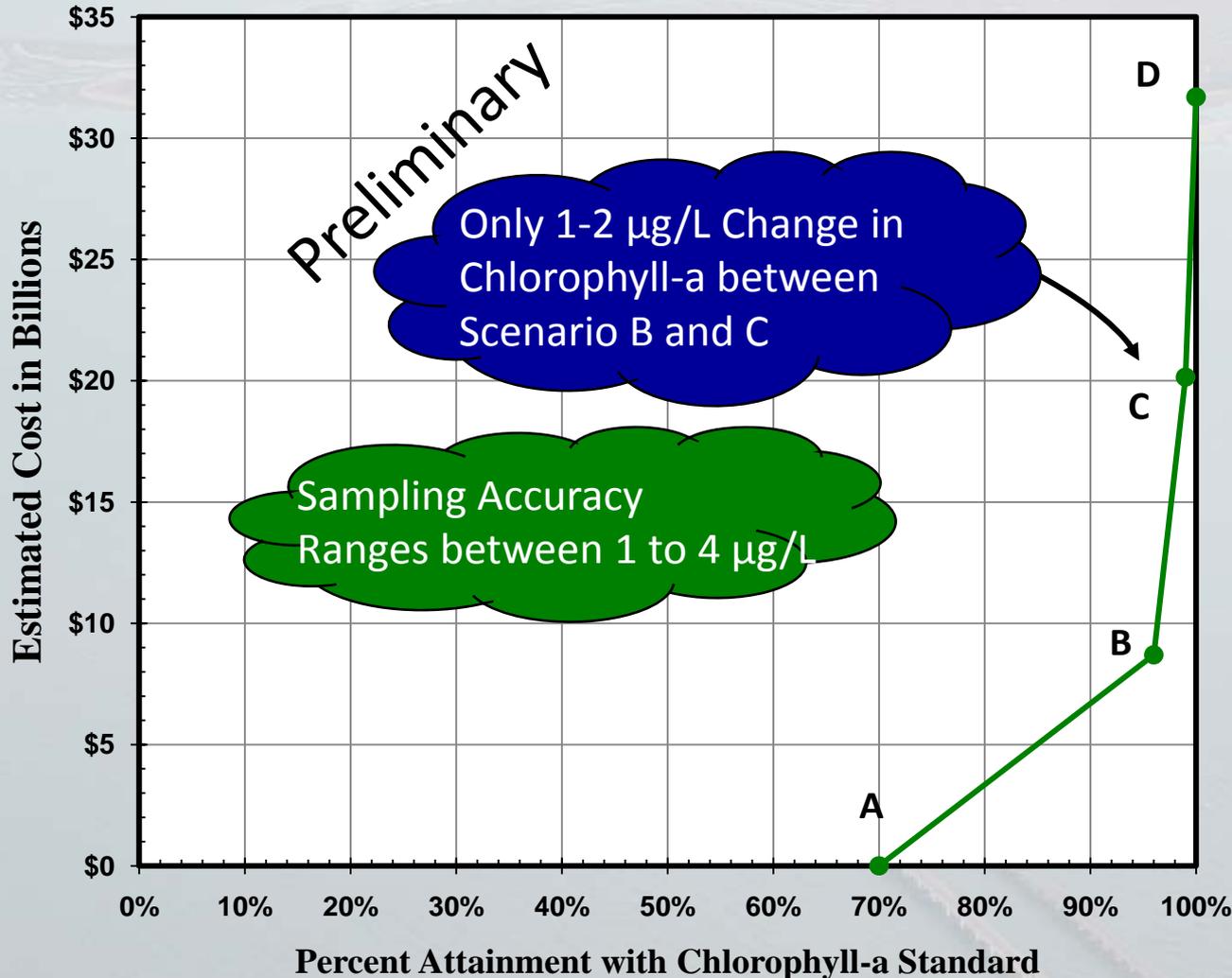
Point source cut = 6.24 Mlbs

Urban increase = 0.64 Mlbs

Ag increase = 1.2 Mlbs

Impact of cuts to James River Nutrient Loads

Cost doubles for immeasurable water quality improvements



D - E3 - Everything, Everywhere, by Everybody

C - EPA Allocation

B - Bay DO Compliance

A - 2010 No Action

Sector Allocations: Stormwater Reductions

- Virginia's plan requires 74% reduction in phosphorus and assumes localities will find partners for trading nutrient credits.
- EPA's plan requires 54% reduction in phosphorus.
- \$679M annual costs to meet EPA backstops are 10% of Hampton Roads revenues in FY09.

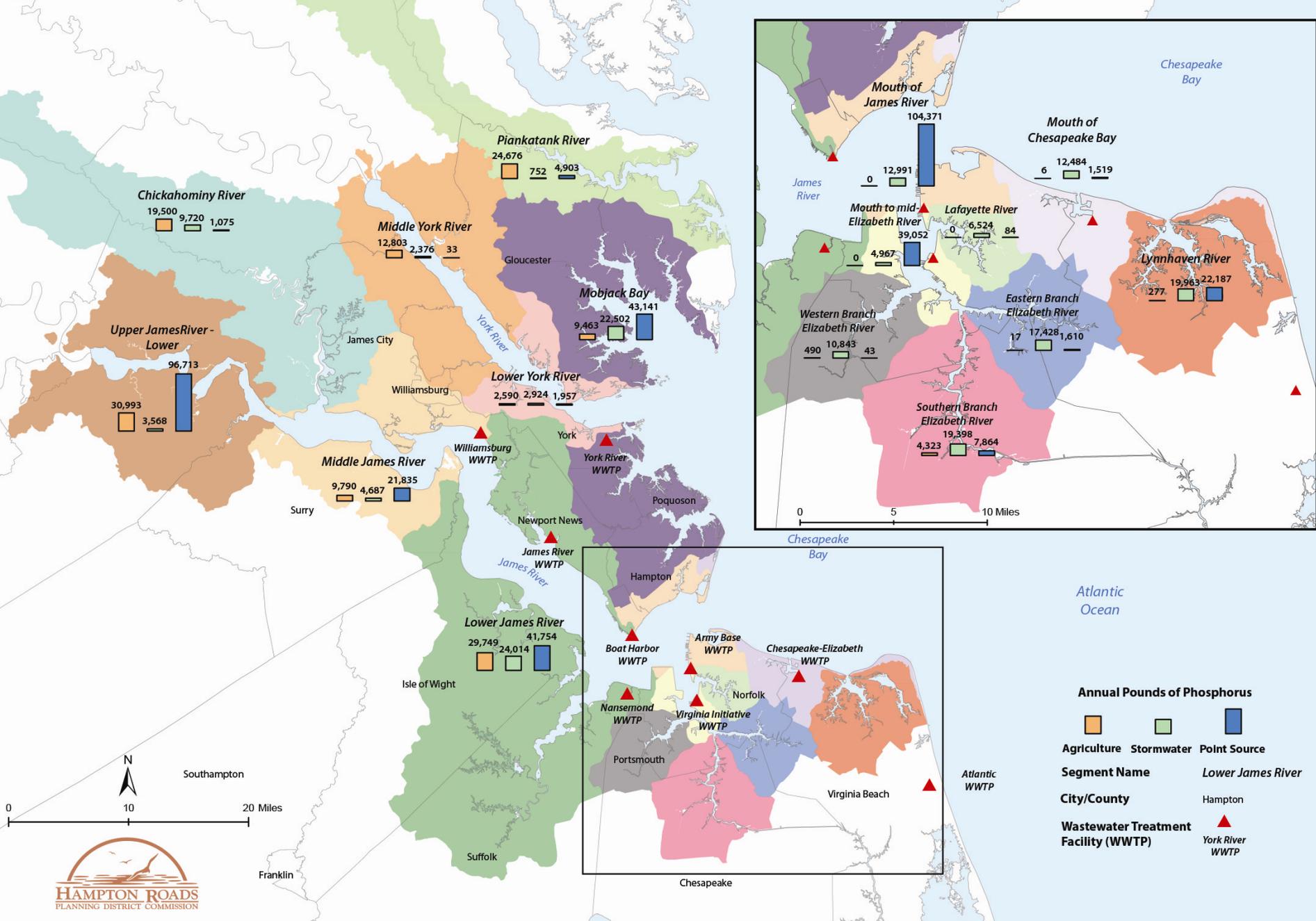
Preliminary Estimated Capital Cost to comply with EPA TMDL Allocations for Urban Stormwater *

Community	Total cost			Annual Cost			
	BMP Costs (Millions)	Storage & Reuse Costs (Millions)	Total (Millions)	BMP Costs (Millions)	BMP Costs per capita	Total (Millions)	Total per capita
Chesapeake	\$210	\$1,157	\$1,367	\$15	\$67	\$98	\$437
Hampton	\$148	\$905	\$1,053	\$11	\$71	\$75	\$509
Newport News	\$172	\$994	\$1,166	\$12	\$68	\$83	\$461
Norfolk	\$208	\$1,176	\$1,384	\$15	\$63	\$99	\$419
Portsmouth	\$100	\$566	\$666	\$7	\$71	\$48	\$472
Virginia Beach	\$264	\$1,474	\$1,737	\$19	\$43	\$124	\$284
Isle Of Wight	\$35	\$196	\$231	\$3	\$70	\$17	\$460
James City	\$75	\$427	\$501	\$5	\$81	\$36	\$546
Poquoson	\$12	\$77	\$90	\$1	\$72	\$6	\$526
Suffolk	\$95	\$533	\$628	\$7	\$80	\$45	\$528
Williamsburg	\$14	\$80	\$94	\$1	\$74	\$7	\$510
York	\$82	\$512	\$594	\$6	\$91	\$42	\$658
TOTAL	\$1,414	\$8,096	\$9,510	\$101		\$679	

*Based on retrofitting 19% of land with BMPs and remaining reductions achieved with storage and reuse.

EPA and Virginia Compromise

- Cost to remove pound of phosphorus depends on the sector.
- Reasonable and cost effective allocation:
 - Maximum agricultural nutrient reductions
 - Stormwater treats 19% of land with BMPs
 - Wastewater makes remaining reductions
- Estimated total cost in James Watershed could be reduced from \$9.9B to \$2.2B.
- Not equitable burden; need compromise for costs and implementation responsibility.



Hampton Roads Chesapeake Bay Segments and 2010 Phosphorus Loads



Recommended Comments to EPA

- EPA should adopt nutrient reductions based on the Tributary Strategies and update the nutrient allocations when:
 - Virginia and EPA have completed the proposed chlorophyll study.
 - Phase 5.3 model is fully developed and calibrated including consistent simulations of the chlorophyll standard.

Recommended Comments to Virginia

- Allocations should divide burden among sectors and allow each sector some flexibility to trade nutrient credits to reach reductions economically.
- Stormwater sector should not be accountable for implementing all reductions in other sectors.
- Strengthen reasonable assurances to achieve agricultural reductions.

Next Steps

Authorize Chairman to submit comments to the EPA and Virginia on behalf of the localities based on the outlines in the agenda packets.

HRPDC staff and consultants will continue to develop more detailed data to support the comments.

Final comment letter with supporting materials would be sent to Commissioners on October 29th for final review.

Submit comments by Nov 8th deadline.