NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES
DEVELOPMENTS IN CLEAN WATER LAW

Stormwater, TMDLs and Post-Construction Runoff: Virginia's New Approach

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AQUALAW
WATER AND WASTEWATER SOLUTIONS

Presentation Overview

- Mid-Atlantic Stormwater Policy Drivers
  - Chesapeake Bay Impairment & TMDLs
- Developed Lands
  - MEP, WQSs & TMDLs
- Developing Lands
  - New Post-Construction Runoff Requirements

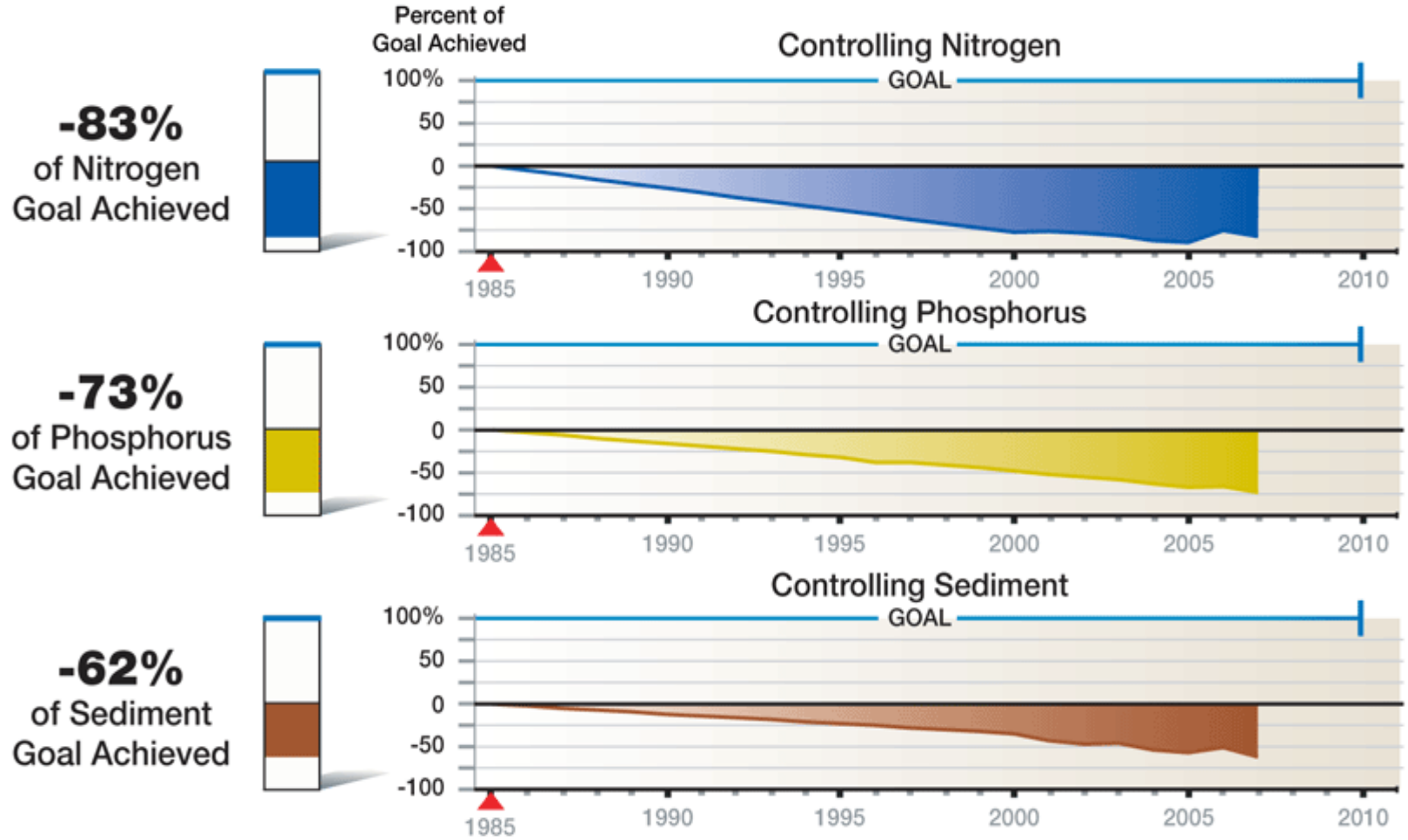
Mid-Atlantic Stormwater Policy Drivers

EPA Office of Inspector General On Chesapeake Bay Cleanup

- Will not meet Nitrogen, Phosphorus or Sediment load reduction goals for developed lands by 2010
- New development is increasing loads at rates faster than restoration efforts are reducing them

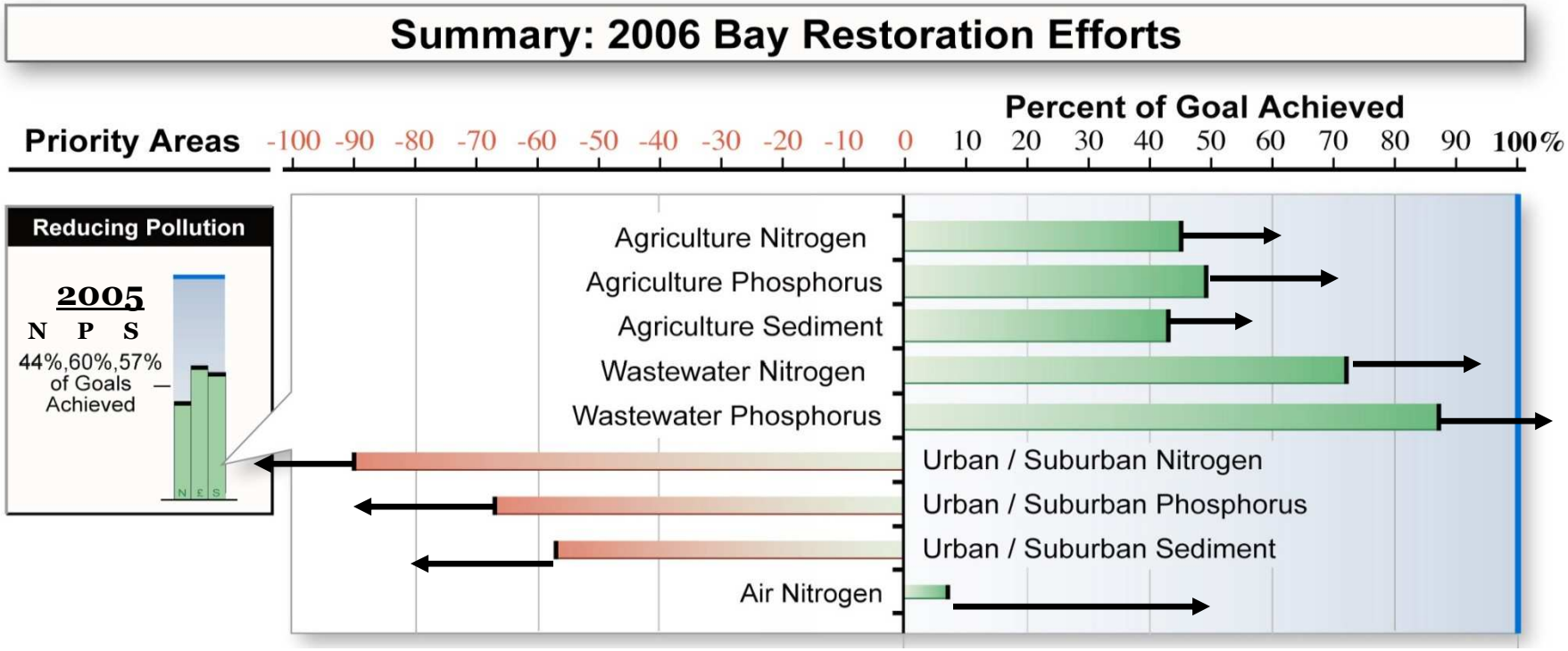
- Quotable Quotes:
  - "Opportunities abound for EPA to show greater leadership" – EPA OIG
  - "All stormwater, all the time" – EPA R3 Water Division

Chesapeake Bay Urban/Suburban Stormwater Loads (EPA, 7/15/08)



Some jurisdictions may be underreporting existing stormwater management practices.
Data and Methods: www.chesapeakebay.net/status_urbansuburban.aspx

Urban Stormwater Goals: Poor Performance or Unrealistic Goals?



Sources: Chesapeake Bay 2006 Health & Restoration Assessment; 1985-2005 BMP tracking and wastewater loading data on www.chesapeakebay.net; MD, VA, PA facility upgrade schedules.

Challenges Identified by OIG

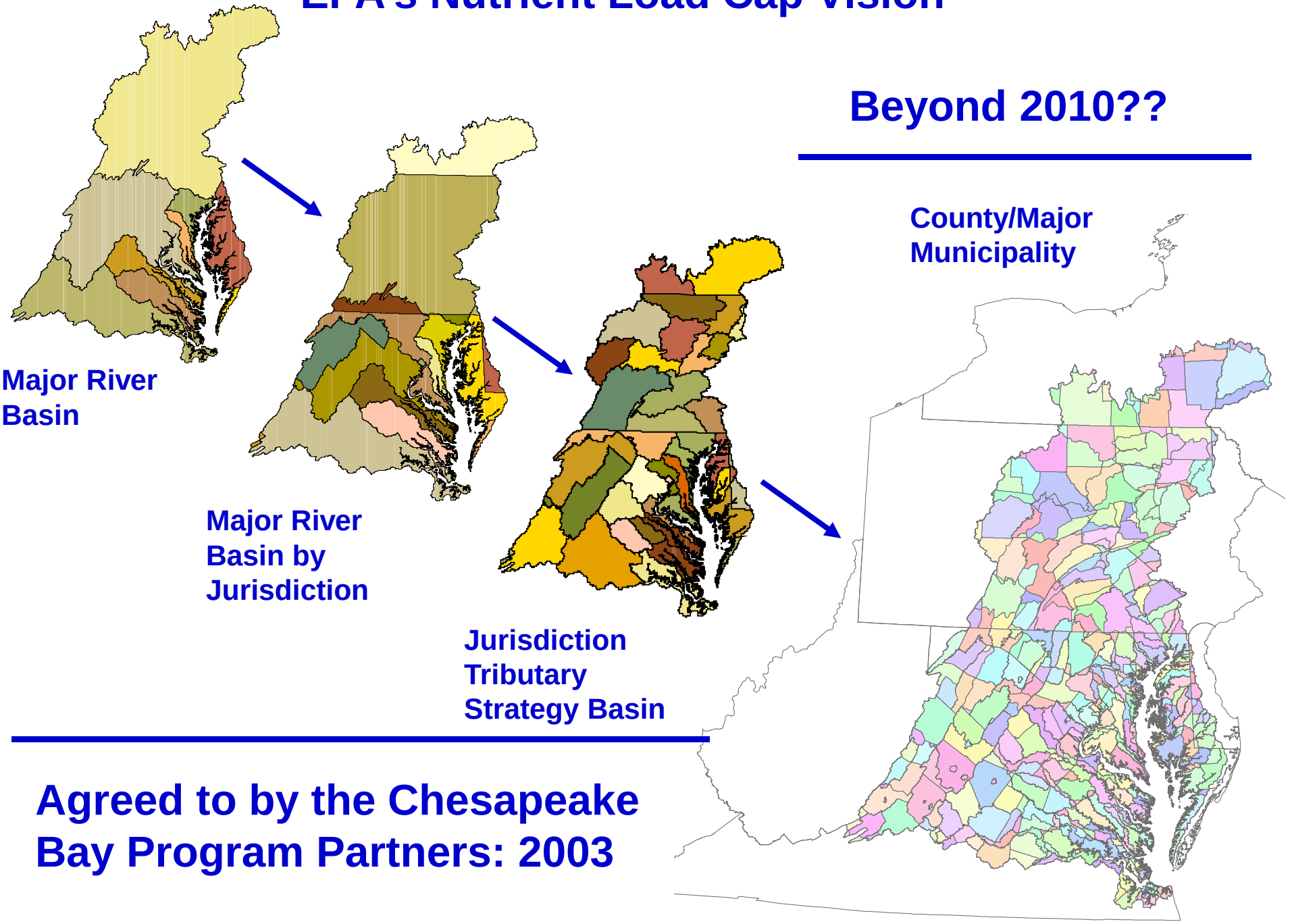
- Lack of community-level loading caps
- Lack of development pattern information
- Ineffective use of regulatory program
- Limited guidance on ESD practices
- Costly practices but limited funding

OIG Comments on Community-Level Loading Caps

- OIG: Community-level reduction goals could assist in establishing WQ-based targets in TMDLs and Permits
  - NOTE: Community loads ≠ MS4 loads
- OIG: States could create trading and offset programs that include stormwater using community-level goals
  - NOTE: Trading may be useful in some case, but in others it could burden POTWs with unrealistic stormwater allocations
- OIG recommends setting realistic community-level load goals for both developed and developing lands

EPA's Nutrient Load Cap Vision

Beyond 2010??



Agreed to by the Chesapeake Bay Program Partners: 2003

OIG Views MS4 Permits As "A Less-Than-Ideal Tool"

- Reliance on technology-based approaches
- Lack of numerical water quality goals
- Evolving implementation each permit cycle
- No requirements to retrofit developed lands
- Not all developed/developing lands are covered by MS4 permits

Nevertheless … OIG Recommends Aggressive New MS4 Permits

- Incorporate measurable outcomes in line with TMDL WLAs
- Include retrofitting of developed areas where beneficial for local water quality as well as Bay
- Develop ESD practices for no net increase in from new development, and implement ESD by regulatory, voluntary & incentive programs
- Disallow increases in loads & flows from new development unless offsets/trades obtained

Small Contributions, High Cleanup Costs, No Money

- Developed/developing lands contribute less than one third of total loads
- But would require over two-thirds of total costs
  - $18B of $28B Trib Strategy Cost (VA, MD, PA, DC)
  - Approximately $3,000 per household

- Questions:
  - Where's the "Strategy" in these Trib Strategies?
  - Who will "own" this impossibility (TMDL WLAs)
  - Who will fund this?

Developed Lands: MEP, TMDLs & WLAs Under Virginia's New Phase II MS4 General Permit

Virginia Phase II MS4 General Permit Administrative Record

- Citizen Activists' Requests
  - Specify numeric WLAs (WQBELs) in the permit
  - Incorporate Chesapeake Bay TMDL-like Tributary Strategy load goals as enforceable criteria

- State's Response
  - Not feasible now
  - May be appropriate to consider for future permit

Administrative Record: Natural Resource Secretary's Letter

Numeric WLAs are "… contrary to the CWA and regulations and EPA guidance, which indicates that numeric effluent limits, whether in a TMDL or non-TMDL situation, are inappropriate at this time for inclusion in the GP. Rather, an interactive BMP management program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA is a more appropriate approach to limiting effluent."

– See Att. A at p. 4

Administrative Record: Secretary's Letter (cont.)

"Permittees do not have the capability for the large scale monitoring required to track numeric goals nor do they have the authority over much of the land within their MS4. Lacking that authority, they cannot fully control the runoff and, therefore, the numeric limits would be both unattainable and unenforceable."

- See Att. A at pp. 4-5

Administrative Record: Interpretation By Citizen Groups

- Example No. 1: Requested change of permit to "force localities to achieve WQS"
  - Chesapeake Bay Foundation

- Example No. 2: Described permit as "goal of WQS attainment based on MEP" and said Board has discretion to "go further" to "require compliance with WQS"
  - Southern Environmental Law Center

Final Permit:
MS4 Program Design

"The operator of a regulated small MS4 must develop, implement, and enforce a MS4 Program designed to reduce the discharge of pollutants from the regulated small MS4 to the maximum extent practicable (MEP), to protect water quality, to ensure compliance by the operator with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and regulations."

- See Att. B at Section II.A.

Final Permit:
MS4 Program Compliance Standard

Implementation of BMPs consistent with the provisions of an iterative MS4 Program required pursuant to [6 Minimum Measures] constitutes compliance with the standard of reducing pollutants to the MEP, protects water quality in the absence of a TMDL wasteload allocation, ensures compliance by the operator with water quality standards, and satisfies the appropriate water quality requirements of the Clean Water Act and regulations in the absence of a TMDL WLA.

– See At. B at Section II.A.

EPA Region III "Understanding TMDLs for Stormwater" Document

5-step guidance for updating MS4 Programs to address TMDLs

- Identify MS4 discharges to impaired waters
- Determine what requirements apply
  - Review MS4 permit for special conditions
  - Review TMDL including assumptions therein
- Update MS4 Program
- Implement programs & practices
- Assess effectiveness for pollutant of concern

Final Permit:
TMDL Special Condition Outline

- Update Plan with measurable goals, schedules & strategies for WLA
- Identify and address program “weaknesses”
- Awareness campaign addressing the WLA pollutant
- Participate/incorporate TMDL IP BMPs
- Outfall reconnaissance
- Evaluated properties owned or operated
- Annual characterization of discharge
- Annual update based on annual evaluation
- Annual report supplement

Final Permit:
Key TMDL Compliance Provisions

- "A wasteload allocation does not establish that the operator of a regulated small MS4 is in or out of compliance with the conditions of this permit."
  - See Att. B at Section I.B.
- "The operator shall update its MS4 Program Plan to include measurable goals, schedules, and strategies to ensure MS4 Program consistency with the assumptions of the TMDL WLA…"
  - See Att. B at Section I.B.1

Final Permit:
TMDL Implementation Provision

- Participate in development of and incorporate TMDL IP's BMPs into your MS4 Program
  - This is strong and potentially problematic language
  - This requirement puts a premium on IP drafting and specific IP provisions and assumptions

- MS4 owner should seek in TMDL IP
  - Iterative BMP-based approach
  - Timing: Long-term phasing
  - Potential need for UAA

Developing Lands: Post-Construction Runoff

Post-Construction Runoff: Virginia's New Approach

- REGULATE – Statewide regulations for post-construction runoff
- DELEGATE – Localities will be the permitting authorities
- FEDERATE (?) – Link localities' site development permitting for post-construction runoff to MS4 permit compliance

- HB 1177 (2004); Proposed Regulation stage

Post-Construction Runoff: REGULATE

- "Physical, chemical, biological & hydrologic characteristics and the water quality and quantity of receiving state waters shall be maintained, protected, or improved in accordance with the requirements of this [regulation]"
- To protect the quality of state waters and to control NPS pollution, the following minimum technical criteria and statewide standards shall be applied to the site
  - New Development: P limited to 0.28 lbs/acre/yr
  - Redevelopment: Reduce P load 20% from pre-development
  - Allowance for use of off-site controls (e.g., regional BMPs)
- Stringent standards drive use of infiltration & GI

Post-Construction Runoff: DELEGATE to Localities

- Technical criteria at least as stringent as state
- Plan review and approval procedures
- Inspections
  - For compliance with Construction Activities GP
  - For long-term O&M of permanent BMPs
- CWA-like enforcement procedures
- Annual reporting & recordkeeping

Post-Construction Runoff: FEDERATE (?)

- Tie State post-construction stormwater management requirements into MS4 permits
- Require use of local ordinance to address post-construction runoff to ensure compliance
- Require long-term O&M through recorded inspection schedule and maintenance agreement
- Develop a mechanism for locality to enforce owner's maintenance responsibilities

Attachments

- A – VDCR, Virginia Phase II MS4 General NPDES Permit Provisions (July 9, 2008)
- B – EPA, Phase II MS4 Post-Construction Stormwater Management Reg (July 1, 2008)
- C – Virginia Natural Resources Secretary Letter (May 14, 2008)

Other References

- D – EPA OIG, Development Growth Outpacing Progress in Chesapeake Bay (Sept. 10, 2007) (www.epa.gov/oig/reports/chesapeake.htm)

- E – EPA, Understanding TMDL Requirements for Municipal Stormwater Programs (Jan. 2008) (www.epa.gov/npdes/pubs/region3_factsheet_tmdl.pdf)

- F – VDCR, Proposed Stormwater Management Regulations (Sept. 24, 2008) (www.dcr.virginia.gov/documents/swmParts12and3.pdf)