

Proposed Virginia Stormwater Management Regulations: Major Themes

Virginia Association of
Counties
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David J. Hirschman,
Program Director for
Stormwater

Center for Watershed
Protection

**CENTER FOR
WATERSHED
PROTECTION**



About the Center for Watershed Protection



- ◆ Non-profit 501(c)3, non-advocacy organization
- ◆ Work with watershed groups, local, state, and federal governments
- ◆ Provide tools communities need to protect streams, lakes, and rivers
- ◆ 20 staff in MD, SC, VA, NY

www.cwp.org

www.stormwatercenter.net

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Recent & Current Projects in VA

- Arlington Co. – stormwater plan, Little Pimmit Run Watershed
- James City Co. – various watershed plans
- City of Charlottesville – public lands stewardship plan
- James River Watershed – Extreme BMP Makeover
- Virginia DCR – technical support for Stormwater Regulations

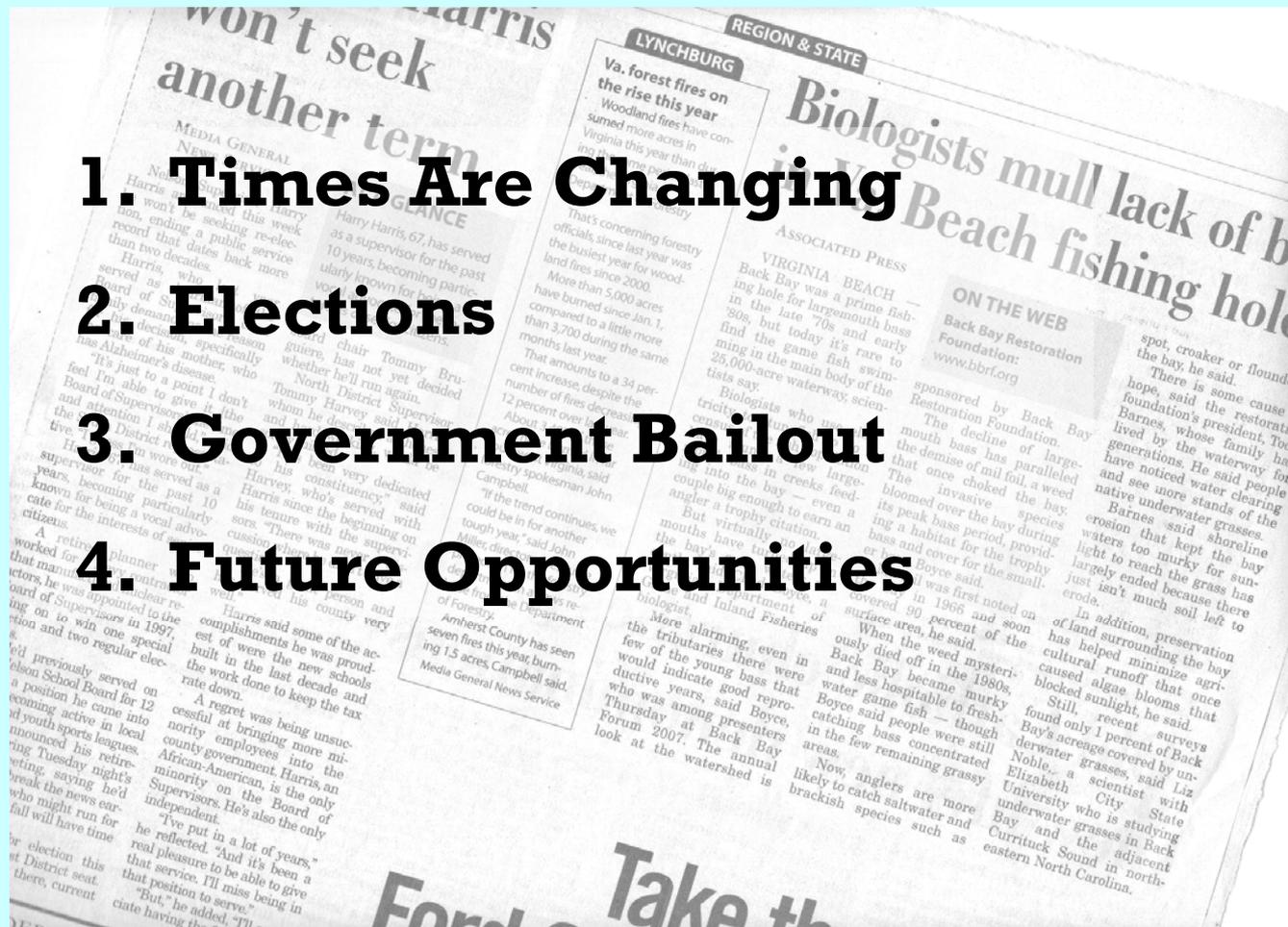
CWP Role With Proposed Regulations

Scientific Foundation & Regulatory Tools

- Update Stormwater Quality & BMP Research
- Develop Stormwater Quality Approach
 - Methods & Computations
 - Structural & Site Design BMPs
 - Assistance with BMP Specifications
- Assist with ASCE/DCR Charettes

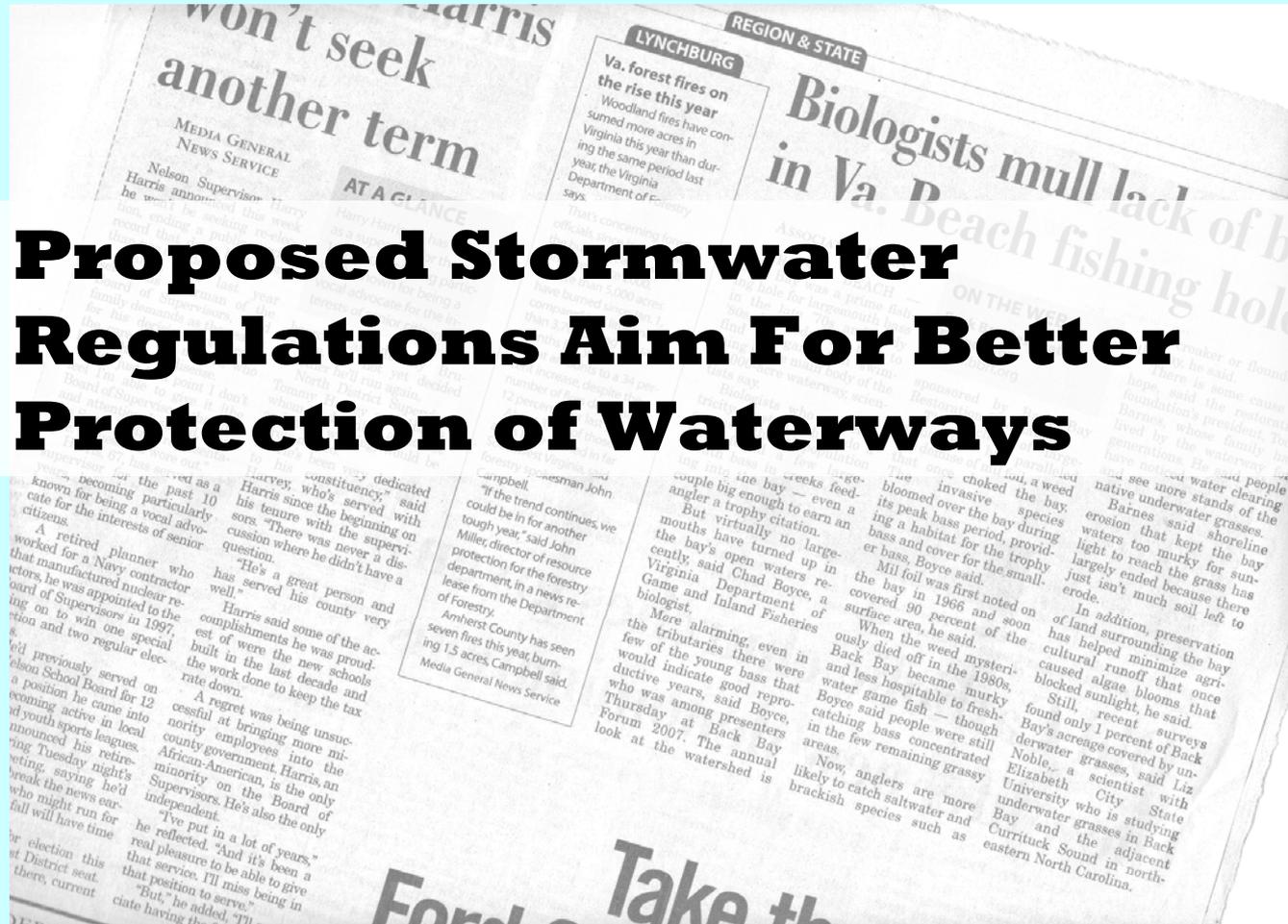
Stormwater News & Gazette: Late Breaking Headlines!

1. Times Are Changing
2. Elections
3. Government Bailout
4. Future Opportunities



1. Times Are Changing

Proposed Stormwater Regulations Aim For Better Protection of Waterways





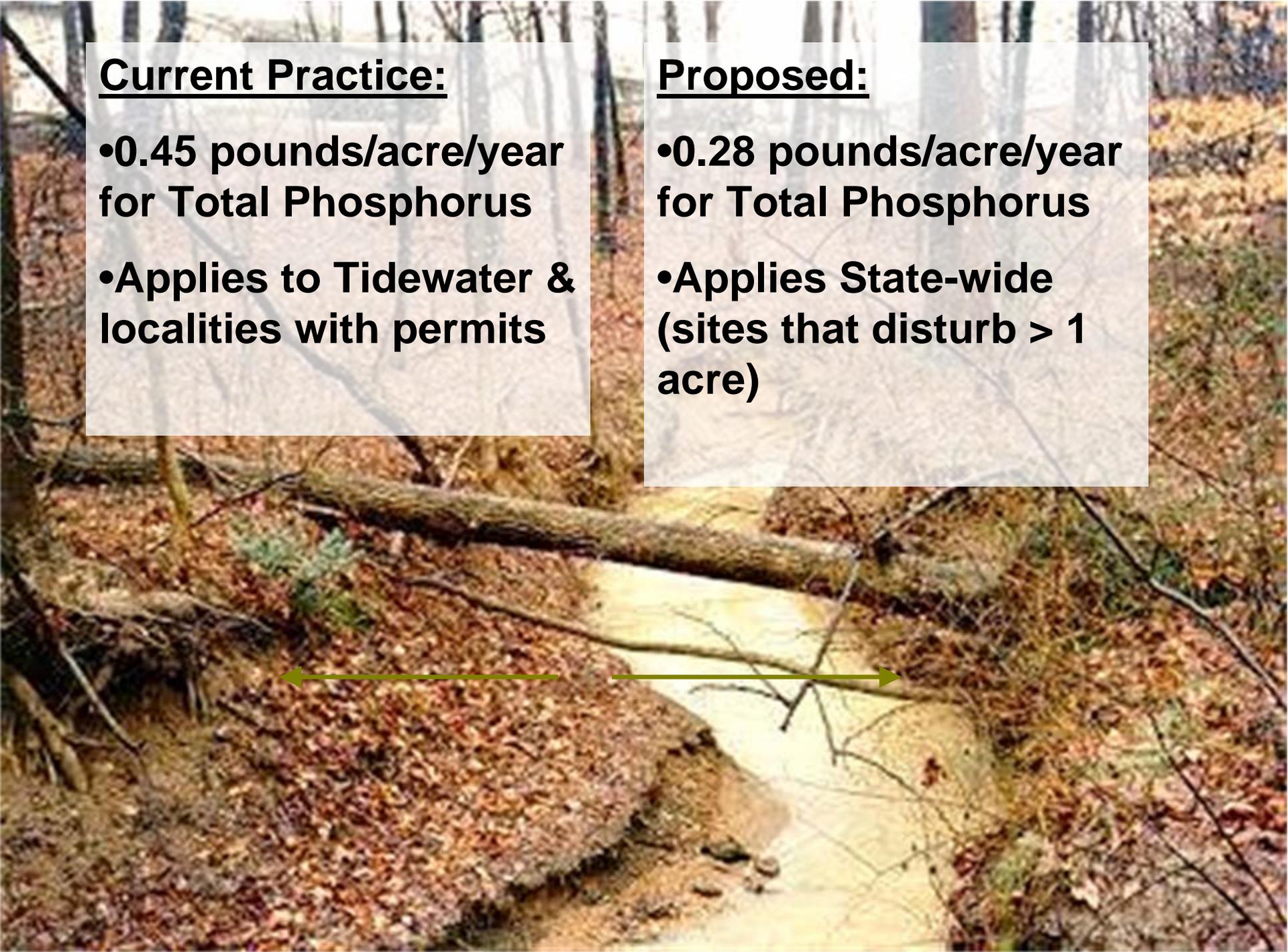


Current Practice:

- 0.45 pounds/acre/year for Total Phosphorus
- Applies to Tidewater & localities with permits

Proposed:

- 0.28 pounds/acre/year for Total Phosphorus
- Applies State-wide (sites that disturb > 1 acre)



Reduce Runoff Volume to Reduce Impacts to Waterways



Runoff Reduction (RR)

Runoff reduction is defined as the total volume reduced through canopy interception, soil infiltration, evaporation, rainfall harvesting, engineered infiltration, extended filtration or evapotranspiration at small sites



Water Quality Compliance Spreadsheet

1. Post-Development Project & Land Cover Information					
Constants					
Annual Rainfall (inches)	43				
Target Rainfall Event (inches)	1.00				
Phosphorus EMC (mg/L)	0.28				
Target Phosphorus Load (lb/acre/yr)	0.28				
Pj	0.90				
Land Cover (acres)					
	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space -- undisturbed, protected forest/open space or	0.0	2.0	4.0		6.0
Managed Turf -- disturbed, graded for yards or other turf to be		6.0	14.0		20.0
Impervious Cover (all soil types)	14.0				14.0
				Total	40.0
Rv Coefficients					
	A soils	B Soils	C Soils		
Forest/Open Space	0.02	0.03	0.0		
Managed Turf	0.15	0.20	0.0		
Impervious Cover			0.95		
Channel Protection					
Allowable $Q_{Developed} = Q_{Forested} \times V_{forested} / V_{Developed}$					
Target Rainfall Event (in)					2.60
Runoff Reduction Volume (cf)					19,116.22
Drainage Area A					
Drainage Area (acres)					19.00
Runoff Reduction Volume (cf)					12,657.08
Drainage Area B					
Drainage Area (acres)					18.00
Runoff Reduction Volume (cf)					6,459.13

ASCE/DCR Charettes



2. Elections



More Stormwater Practices Available for Use At Development & Redevelopment Sites

Ponds & Basins



Center for Watershed

Underground Treatment Devices



Stormwater Wetlands



Bioretention



Rainwater Harvesting



Green Roof



Sheetflow to Open Space

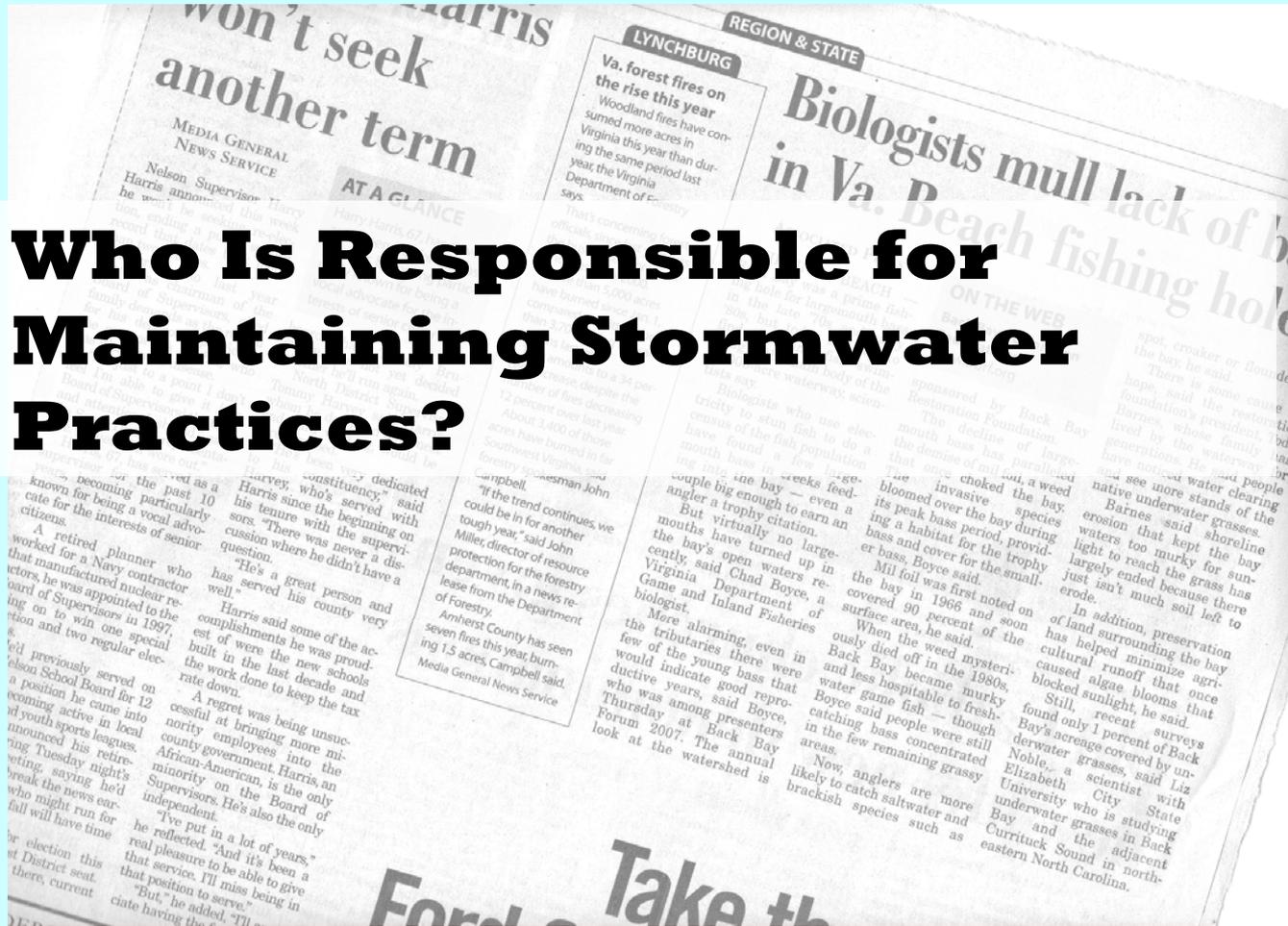


Pervious Parking



3. Government Bailout

Who Is Responsible for Maintaining Stormwater Practices?



Government Bailout





Responsible Party:

- HOA?
- Property Owner?
- Local Gov't?





Low-Impact Development: Practices on Lots?





4. Opportunities For The Future

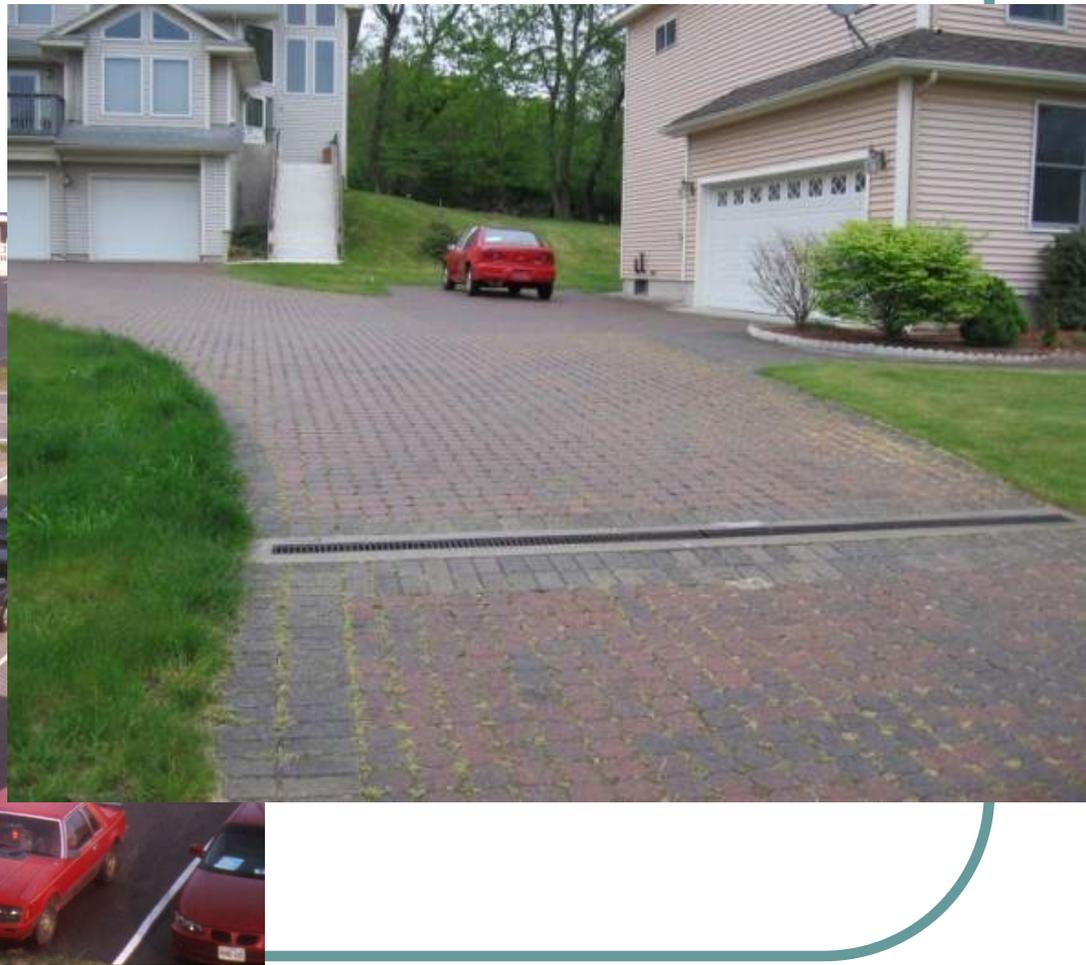
The Next Generation of Promising Stormwater Practices



Rainwater Harvesting



Alternative Parking Surfaces



Government Demonstration Sites



Take Home Points

- More stringent standard tied to Tributary Strategies & water quality goals
- Broader menu of available stormwater practices, including site design that protects water quality
- Long-term maintenance continues to be major issue
- Emerging trends in stormwater promise better designs, healthier waterways

Next Steps

- State agency review
- Economic impact analysis
- More charettes and stakeholder meetings
- 60-day public comment (after April, 2009)
- Respond to comments
- Soil & Water Board (target: Sept. 2009)
- Final Regulations (target: end of 2009)

<http://www.dcr.virginia.gov/lawregs.shtml>