

Virginia Stormwater Regulations Update



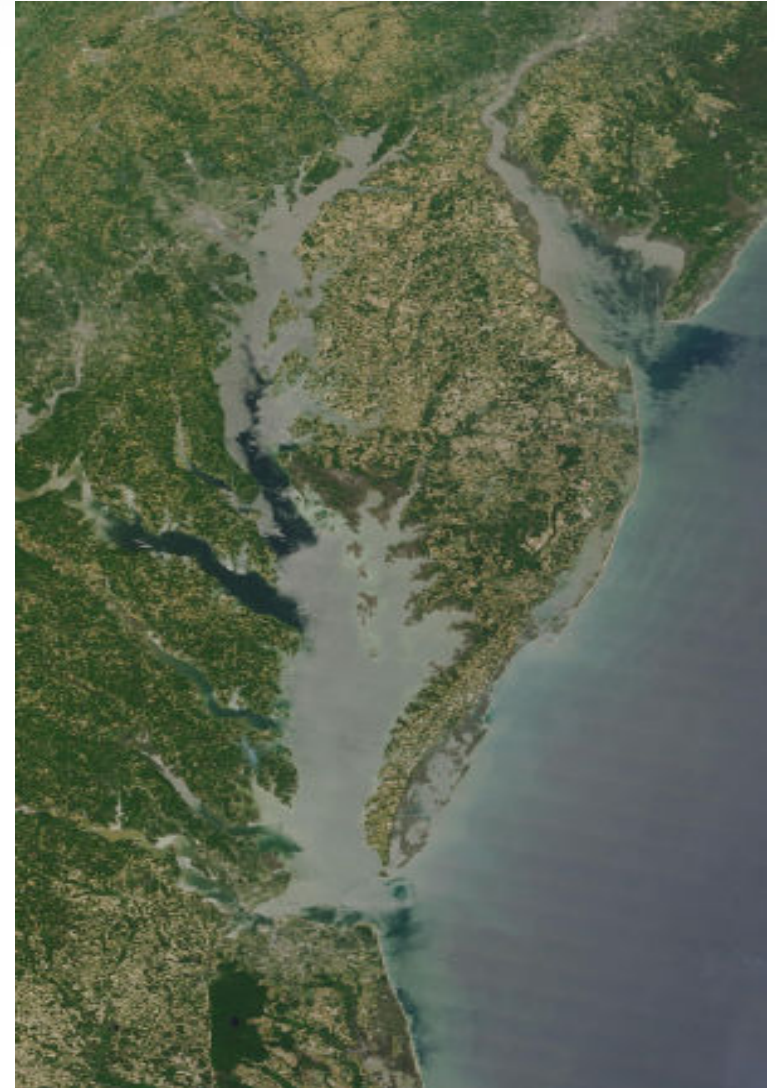
presentation to
American Society of Highway Engineers
May 9, 2011



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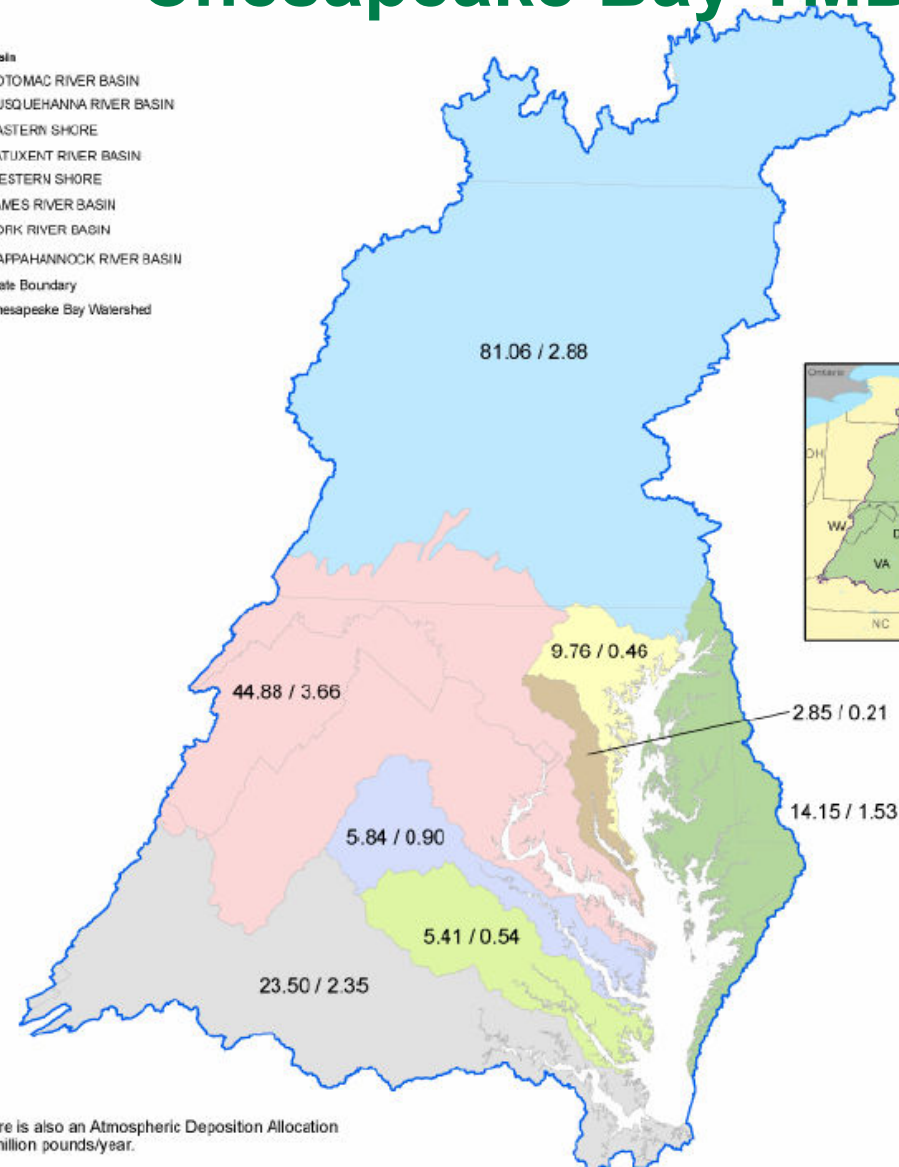
Presentation Outline

- **Chesapeake Bay TMDL**
- MS4 Permitting
- Virginia Stormwater Regulations



Chesapeake Bay TMDL

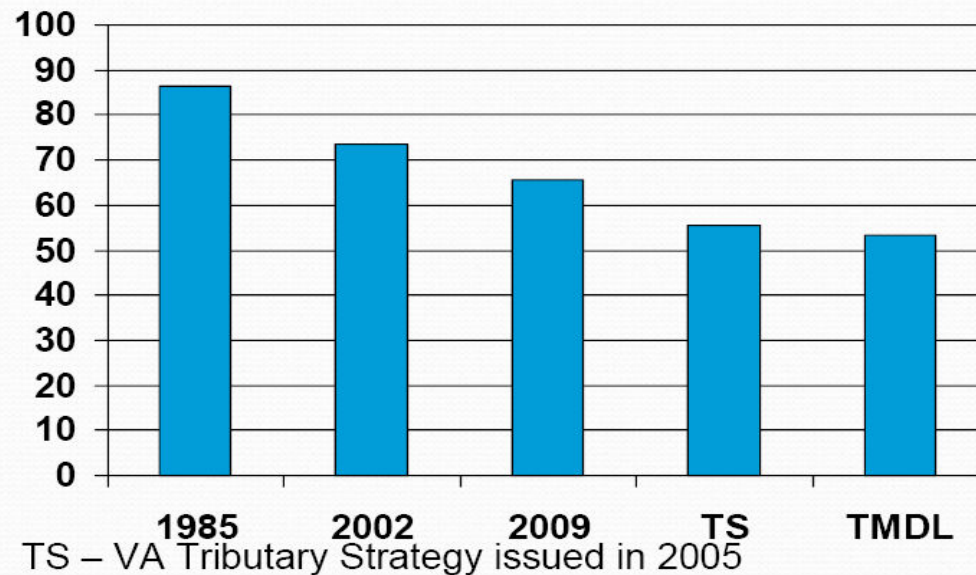
- TMDL = Total Maximum Daily Load
- Defines amount of pollution a water body can handle and be healthy: “Pollution Diet”
- Clean Water Act requires TMDL for waters that do not meet state standards
- Nitrogen, Phosphorous and Sediment



Virginia Nitrogen Loads

[million lbs/yr]

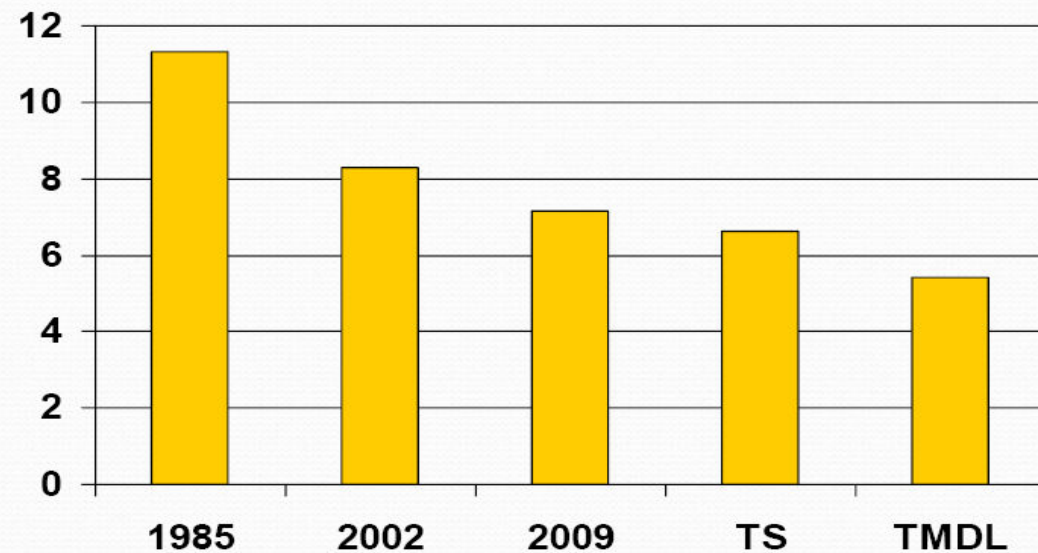
Per EPA
By 2017
58.35 million lbs/yr
By 2025
53.66 million lbs/yr



http://www.dcr.virginia.gov/soil_and_water/baytmdl.shtml

Virginia Phosphorus Loads [million lbs/yr]

Per EPA
By 2017
6.07 million lbs/yr
By 2025
5.36 million lbs/yr



TS – VA Tributary Strategy issued in 2005

http://www.dcr.virginia.gov/soil_and_water/baytmdl.shtml

Virginia's Watershed Implementation Plan

Urban Stormwater

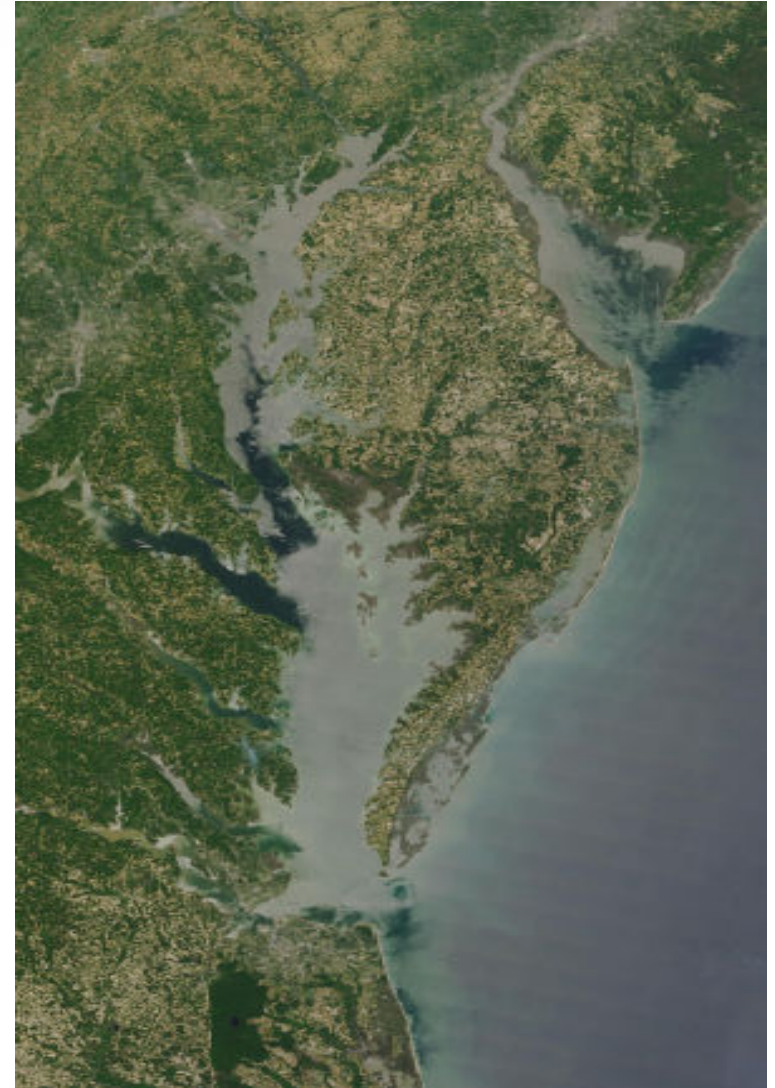
- Expand nutrient credit exchange program
- Urban Nutrient Management Plans required for municipally owned lands and golf courses
- Restrictions on non-agricultural fertilizers (P-ban)
- Proposes BMP retrofits on existing developed lands
- For redevelopment, a 20% reduction in phosphorous
- For new development, post developed loads cannot exceed previous development loads

Chesapeake Bay TMDL Timeline

- *Sept. 3, 2010 VA submits its draft Watershed Implementation Plan (WIP)*
- *Nov. 29, 2010 VA final WIP due*
- *Dec. 31, 2010 final TMDL established, VA WIP approved*
- Fall 2011 VA Stormwater Management Regulations to be promulgated
- Dec. 1, 2011 draft Phase II WIPs due
- Mar. 30, 2012 final Phase II WIPs due
- July 1, 2014 MS-4 localities adopt revised stormwater program per WIP
- 2025 All pollution control measures in place

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MS4 Permits

- MS4 = Municipal Separate Storm Sewer System
- Phase 1 Permits (11 in Virginia)
 - All currently expired, but administratively continued
 - Individually negotiated
- Phase 2 Permits (89 in Virginia)
 - VDOT has a Phase 2 MS-4 permit
 - Will expire July 8th, 2013

MS-4 Implementation Timeline

2013 -
2018

- Establish 2009 N, K, TSS baseline
- Create Action Plan to get to allocation by 2025
- Implement Nutrient Management Plan on municipal properties
- 5% reduction of gap using retrofits

2018 -
2023

- Additional 30% reduction of gap between 2009 baseline and 2025 goal

2023 -
2028

- Additional 65% reduction of gap to meet 2025 goal

MS4 Permits

- EPA published MS4 Permit Improvement Guide (April 2010)
 - “must include substantive retrofit provisions”
 - Dry weather analytical monitoring (Illicit Discharge)
 - Prohibits discharge of soaps/solvents from vehicle/equipment washing
 - Protection of impaired waters

MS4 Permit Improvement Guide



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF WATER

OFFICE OF WASTEWATER MANAGEMENT

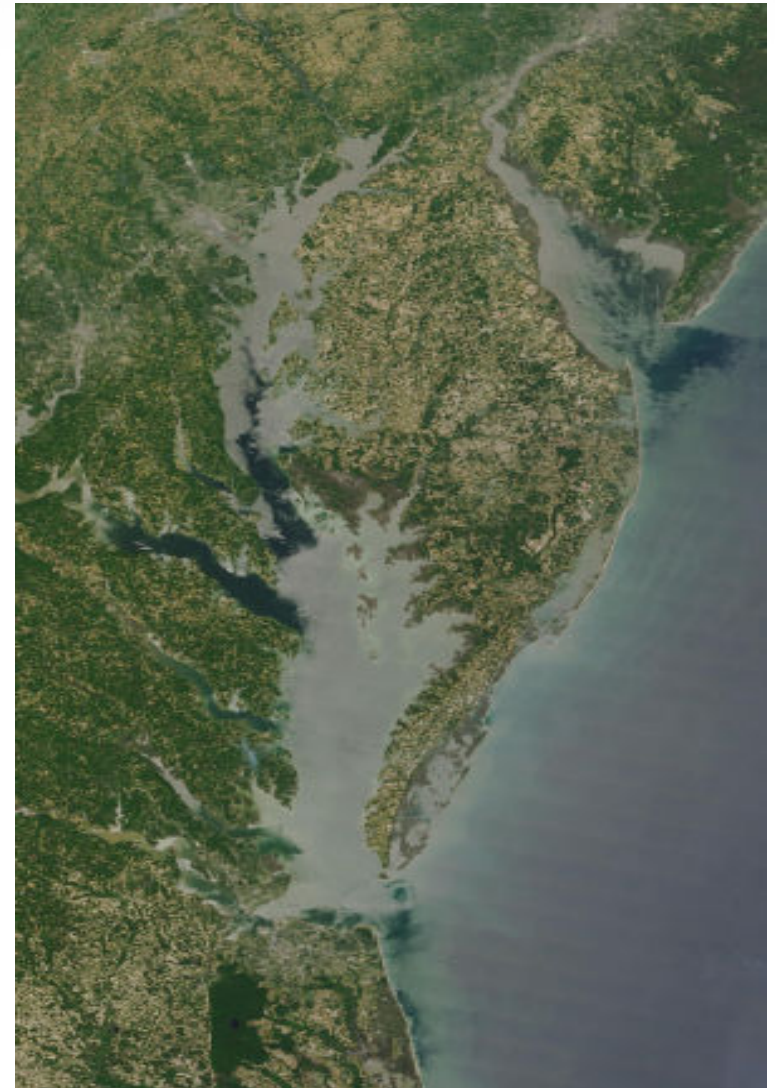
WATER PERMITS DIVISION

APRIL 2010

EPA 833-R-10-001

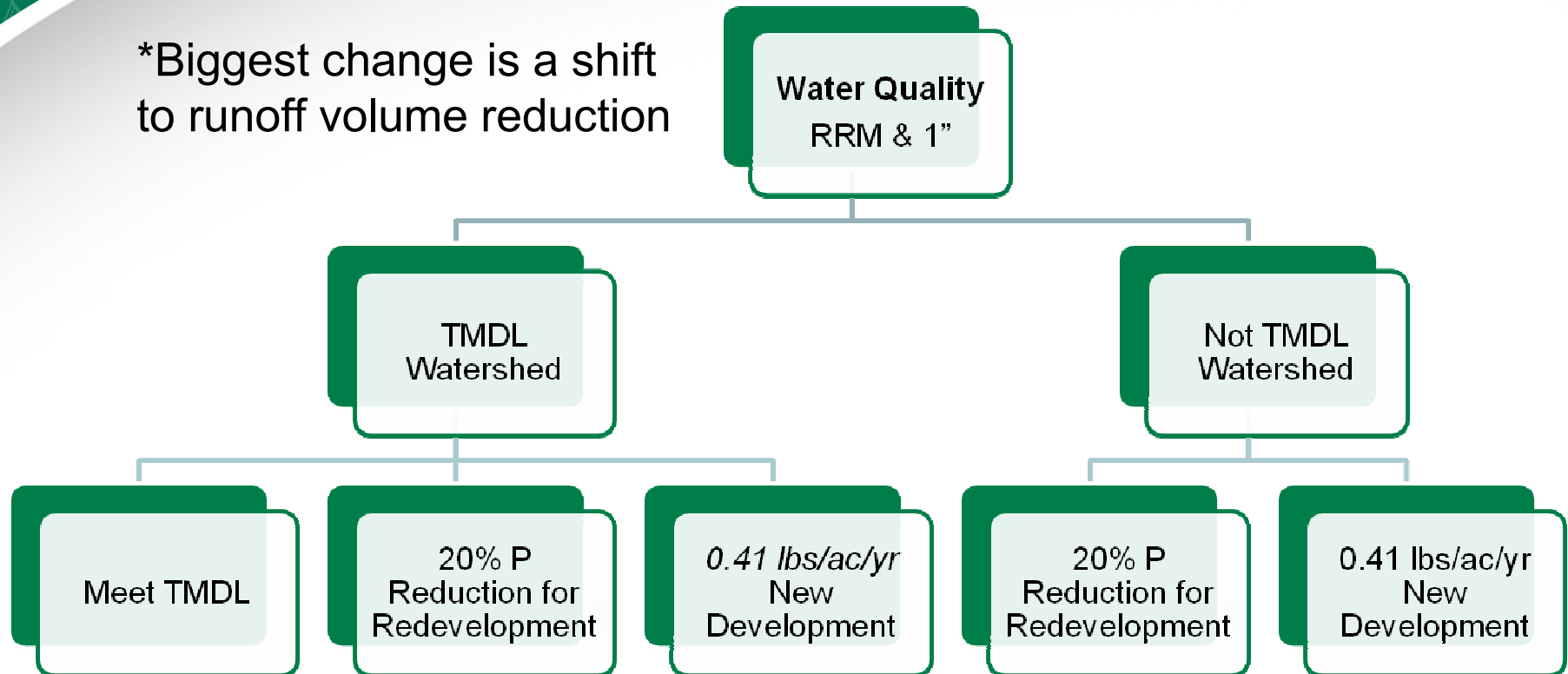
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Virginia Stormwater Regulations

*Biggest change is a shift to runoff volume reduction



Virginia Stormwater Regulations

Water Quantity

*Biggest change is a shift to energy balance equation

Channel Protection

Energy Balance for 1-yr, 24-hr

$$Q_{Dev} * RV_{Dev} \leq 0.90(Q_{Pre-Dev} * RV_{Pre-Dev})$$

Man-made
Conveyance
2-yr or Energy

Restored
Conveyance

Natural
Conveyance
Energy Balance

Virginia Stormwater Regulations

Water Quantity

Flood Protection

If no localized flooding, the conveyance system must contain the 10-yr, 24-hr storm.

If there is currently localized flooding, either contain the 10-yr, 24-hr storm event, or reduce it to the pre-development rates.

Unless flows are reduced to predevelopment rates, analyze receiving stream capacity to the point that is 1% of the contributing drainage area, less than 1% of 10-yr, 24-hour flow, or enters a mapped floodplain

Virginia Stormwater Regulations

Grandfathering

Applicability

- Obtain VSMP coverage prior to July 1, 2014
- Valid proffered or conditional zoning plan;
- approved preliminary or final subdivision plat;
- approved preliminary or final site plan; or
- approved zoning with a plan of development

Locality, State, and Federal projects

- Obligation of locality, state, or federal funding (in whole or in part)
- Department has approved a stormwater management plan
- Governmental bonding or public debt financing has been issued

Effective Dates

Approved prior to the effective date of the new regulations (current target October 7, 2011)→ Grandfathered until **June 30, 2019**

Modifications to Plan/Plat

No increase in Phosphorus discharge,
No increase in the **volume** or rate of runoff

Minimal Requirements

- (i) A **layout** depicting stormwater management facilities, and
- (ii) The land disturbing activity is consistent with the current regulations.

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