

# **Stormwater Management in Virginia: Amendments to the Virginia Stormwater Management Program Regulations**



- \*State Parks \* Soil and Water Conservation \* Natural Heritage**
- \* Outdoor Recreation Planning \* Land Conservation**
- \* Dam Safety and Floodplain Management**
- \* Chesapeake Bay Local Assistance**

# Key Points

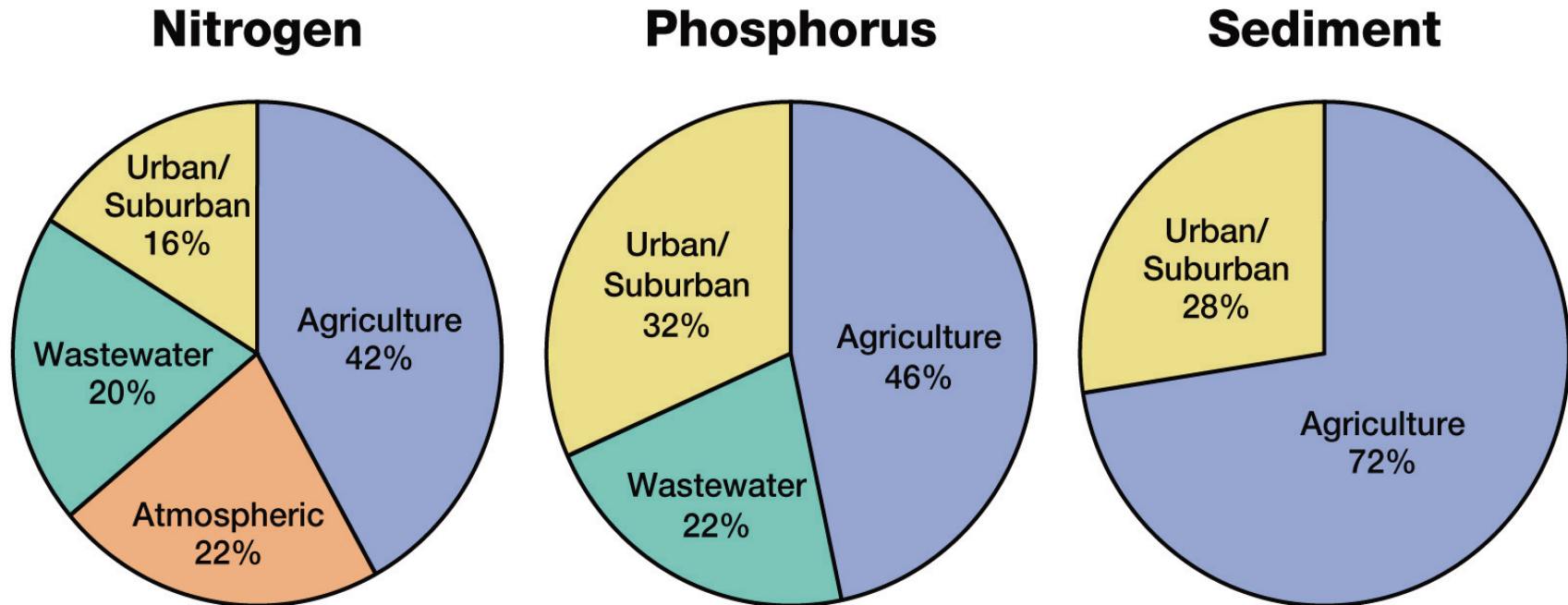
- Significant contributor to WQ problems in Ches. Bay and Virginia waters
- Contributes to closing beaches, shellfish beds, downstream flooding of private property, channel erosion, etc.
- **Localities in Eastern VA** covered by Bay Act have dealt with stormwater for 20 years
- DCR has operated a **minimal SW program statewide** for new construction projects since 2005
- **4 year regulatory process** - one of most open and inclusive ever
- **VA not alone**; EPA and many states are aggressively addressing pollution impacts from stormwater

- **Numerous changes** made to VA regulations since September JCAR meeting.
- Board adopted **final regulations in December** based on today's WQ standards statewide.
- Board dropped more stringent Bay watershed numbers based upon EPA's recently released **new Bay model numbers** for nutrient reductions.
- Board has directed DCR to establish a **technical advisory committee in 2010** to review the sufficiency of the phosphorus standard based on new Bay allocations.
- **Effective date of regulations** different than on-the-ground implementation date.

# Why regulate Stormwater?

- Actual water quality [monitoring still showing declines](#) in stream health
- Today's standards still result in [significant flooding and channel erosion](#)
- Involves treating runoff [during construction](#) as well as long-term runoff [post construction](#)
- Concerns both [Water Quality](#) (pollutants carried off in SW runoff) and [Water Quantity](#) (volume and runoff velocity creating downstream flooding and channel erosion)
- Addressing SW management is [major component](#) to improving VA's rivers, streams, lakes, and Chesapeake Bay (along with addressing impacts from agriculture, sewage treatment plants, and air deposition)
- **[New EPA accountability measures and consequences](#) for states for not meeting Chesapeake Bay pollution reduction milestones**
- **Whatever is not addressed by SW [will need to be addressed](#) by municipal wastewater facilities, local SW systems, agriculture, air, etc.**

# Nutrient and Sediment Sources



SOURCE: EPA Chesapeake Bay Program "State of the Chesapeake Bay Program: Summary Report to the Chesapeake Executive Council" 11/20/08.

- Pollutant loads from developed and developing lands continue to increase while loads from other sources are decreasing. (In 1985: 5% Total Phosphorus; In 2005: 30%)

# State and Federal Authority

## VA Stormwater Management Act (HB 1177) - 2004

- Consolidated into DCR and Virginia Soil and Water Conservation Board.
- Was administered by 4 boards, 3 state agencies. (3 of 4 boards and 2 of 3 agencies now reside within DCR)
- Board has authority to...”permit, regulate, and control stormwater runoff in the Commonwealth...and otherwise act to ensure the general health, safety and welfare of the citizens of the Commonwealth as well as protect the quality and quantity of state waters from the potential harm of unmanaged stormwater”.
- Board is authorized to:
  - adopt regulations that specify minimum technical criteria
  - establish minimum design criteria to control nonpoint source pollution and localized flooding
  - encourage low impact development designs, regional and watershed approaches, and nonstructural means for controlling SW
  - promote the reclamation and reuse of SW to protect state waters and public health and to minimize the direct discharge of pollutants into state waters
  - establish a statewide permit fee schedule set at a level sufficient to carry out its responsibilities under this article.

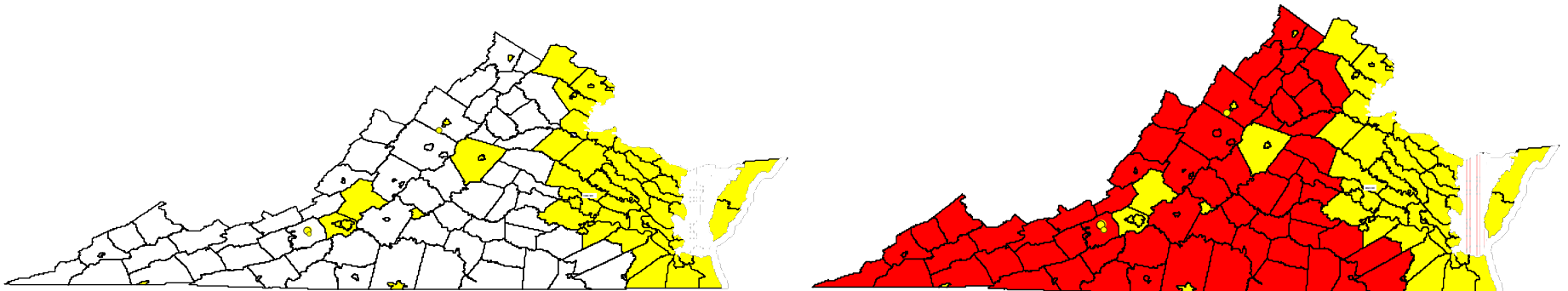
## Federal Clean Water Act

- Received EPA authorization to administer federal CWA program January 2005
- Involves both new construction and MS4 systems
- Prohibits a permit holder from serving on state permitting board

# Future administration of construction stormwater programs in VA

Localities with MS4 permits and localities within the CBPA Area must adopt a local stormwater management program. (yellow)

All other localities may elect to adopt a local SW construction program (Opt-in). Otherwise, DCR will operate a program within a locality. (red)



# Regulatory Process

**December 2005** - Process started

- Over 50 public meetings to develop regs and supporting documents
- 2 Technical Advisory Committees plus subcommittees
- Series of design charrettes (over 400 attended)
- Established BMP Clearinghouse with Water Center at VA Tech
- Worked with nationally-acclaimed Center for Watershed Protection to develop Runoff Reduction Methodology and on SW practice design specifications
- Contracted with Virginia Tech economists to conduct an economic impact analysis
- Reviewed site design analyses
- Developed guidance to address the use of stormwater nutrient offsets



- **Summer 2009** - Formal **Public Comment Period**
  - 5 public hearings across the state; Over 3400 public comments
  - Over 50 additional meetings with groups and individuals
- Director held two **“Sounding Board” meetings** with key stakeholders
- **Sept. 2009** Board meeting and took more **public comment** on possible changes
- **October 5, 2009** Board **adopted and suspended regulations** to allow additional 30-day public comment on changes
- **October 29 to November 25 , 2009** – Additional **public comment** period on Board adopted changes
- **December 9, 2009** - Board adopted **final regulations**; **Governor approved**
- **July 1, 2010** – **“Effective Date” of regulations**
- **October 2011 and April 2012** – **Actual Implementation Begins**

# Technical Criteria

- Criteria for locality-run SW programs and for DCR use when it administers a program.
- Two major components:
  - Water Quality (pollutants)
  - Water Quantity (volume, velocity)

**Stormwater Water Quality phosphorus runoff numbers were originally based on the existing Chesapeake Bay Tributary Strategies; Final regulations based on existing standards**



# Criteria for Local Construction Related Stormwater Programs

- Relates to locality-administered & DCR-administered programs
- Adoption procedures to be used by VA Soil & Water Conservation Board
- Locality adoption between October 2011 and April 2012 (**ACTUAL Implementation Begins**)

# Fees

- Code of Virginia requires stormwater program to be funded by statewide permit fee schedule that is “set at a level sufficient to carry out its responsibilities”
- Fees proposed to be established at a level sufficient to support administration of local programs and DCR responsibilities
- Scaled based on disturbed acreage of project
- **Final regs: gives locality greater flexibility in setting fees**

# Addressing Public Comment

- Numerous changes made between close of Public Comment Period and final adoption in December 2009
- Water Quality Numbers for Southern Rivers
- Water Quality Numbers for Chesapeake Bay localities
- Grandfathering
- Offsite Compliance Options
- Inspection Requirements
- Local Fees
- Small Sites
- Urban Development Areas
- Water Quantity

# Water Quality Standards – Impacted by recent changes to EPA Bay pollution model

## *Original Proposal*

- used 0.28 lbs of phosphorus runoff per acre/per year statewide for new construction
- Based on EPA Bay tributary model - same version used by DEQ and State Water Control Board to set nutrient allocations for municipal wastewater treatment plants

## *October 5, 2009 Board Action*

- Established separate design standards in Bay watershed (0.28 lbs of Phosphorus) and remainder of state (0.45)

**October 23, 2009** – EPA released (preliminary) model projections different than those used to construct previous Tributary Strategies.

# Water Quality (continued)

## *December 2009 Board Action*

- **0.45 phosphorus design standard statewide**
  - Board had adopted this for Non-Bay areas in October
  - Similar design standard used since 1989
  - Runoff from entire site (impervious; managed turf; etc.)
  
- **Board directed DCR to establish an Advisory Panel during 2010 to re-examine whether 0.45 is sufficient for Bay localities based upon completion of VA TMDL Implementation Plan (“pollution diet plan”).**

# Grandfathering of existing projects

- Not previously specifically addressed

## *October Board Action*

- Established new section on Grandfathering for projects that:
  - Meet requirements and obtain SW permit coverage by 7/01/10
  - Project would be grandfathered to 2014
  - If permits maintained, GF extended until 2019

## *December Board Action*

- No change to October actions
- Added: If governmental bonding or public financing has been issued for a project prior to July 1, 2010, the project will remain subject to today's existing criteria.



# Additional offsite compliance options

## *October Board Action*

- Earlier proposal included 3 offsite options (pro-rata, watershed stormwater management plan, and developer site)
- 2009 General Assembly added 4<sup>th</sup> option (buying offsite certified nutrient credits)
- Board added 5th Option: Paying into a new State-level Buy-Down Fund; development achieving at least 0.45 could buy down remainder to 0.28

## *December Board Action*

- No change to October actions
- State-level Buy-Down will remain in the regulation but not be available unless the Board establishes a future standard more stringent than 0.45 phosphorus standard in the Chesapeake Bay Watershed.
- Otherwise, not necessary

# Frequency of Inspection Requirements

## *October Board Action*

- Relaxed local inspection requirements and offered flexibility.
- Stormwater BMPs designed for single residential lots are not subject to local inspection requirements

## *December Board Action*

- No change to October actions

# Adequacy of Fees to Administer Local Programs

## *October Board Action*

- Added flexibility: Qualifying local program may charge higher fees upon demonstration of need.
- Proposed regulations had already allowed for establishment of a lower fee where desired.

## *December Board Action*

- No change to October Action

# **Small Sites and Urban Development Areas**

## ***October Board Action***

- Small Sites would be held to 0.45 standard
- Locality may establish a modified SW standard between 0.45 and 0.28 within UDAs in Bay localities

## ***December Board Action***

- No change to October actions
- Should the Board establish a standard more stringent than 0.45 in the Bay Watershed, then UDA standards would apply
- Otherwise, not necessary as standards everywhere are 0.45

# **Water Quantity Provisions to Address Impacts of Downstream Erosion and Flooding**

## ***October Board Actions***

- Relaxed standard regarding velocity and volume of runoff from “forested condition” to “pasture standard”

## ***December Board Actions***

- No change to October Actions

# Cost Considerations

- Costs vary considerably due to site factors (ex: soils and topography) and local provisions (true under today's rules)
- Early site assessment important to reduce costs (true under today's rules)
- Costs of addressing water quality impairments after-the-fact exceed the costs of addressing SW during development (true under today's rules)
- Lower costs from greater varieties of BMPs and increased BMP efficiencies
- Offsite options will reduce the costs of compliance
- VA Tech analysis did not take into account more recent offsite options or Board adopted amendments
- Recent Board Actions will further reduce costs

# Cost Analysis of Revised Regulations

- The Williamsburg Environmental Group (WEG) analyzed costs of compliance after the October Board Actions.
- WEG found that each site analyzed was able to achieve attainment with the water quality and water quantity requirements.
- **The October Board Actions resulted in an average decreased cost of compliance for commercial sites by 33% and for residential sites by 37%.**
- The December Board actions will very likely reduce compliance costs even further.

# Effective Date of New Regulations

December 9, 2009: Board adopted final regulations

January 4, 2009: Regulations published

2009 Legislation delayed “effective date” to July 1, 2010; gave localities 15 to 21 months later to adopt local programs

July 1, 2010: “Effective date”...Localities and other stakeholders know what will be expected but...

**October 2011-April 2012 - On-the-ground impact is phased-in when local programs are adopted.**

**Until then, today’s regulations apply.**

Plus, grandfathering provisions can extend use of today’s standards for projects.



# Comments

## OCTOBER 2009 BOARD MEETING

### Testimony of Barbara Fried, Fried Companies

“I can tell you that we, and I believe others, can **support the proposed regulations** as promulgated in the September 30, 2009 version provided the precise language of 4VAC50-60-48 Grandfathering is retained. That language restores **fairness and certainty**.”

### Letter from Charles Rotgin, Great Eastern Management Company

“Based on our review of sections with applicability to grandfathering, off-site credits and water quantity..., Great Eastern is pleased to **support and recommend** that SW Management Regulations Version: September 30,2009 be adopted...”

## NOVEMBER 2009 ADDITIONAL PUBLIC COMMENT PERIOD

### Tom Schuler, national expert and president, Chesapeake Stormwater Network

“When adopted, the Virginia stormwater regulations in Virginia will become the most advanced, **scientifically defensible and practical set** of stormwater regulations of any state in the watershed, and for that matter, any state in the nation.

“The process yielded a **workable system** that local designers and plan reviewers can understand and apply, as well as a **flexible approach** of offsets when full compliance is not possible.”

Jon Capacasa, Water Director, EPA Region 3 (Nov. 20, 2009)

- SW Technical Criteria must be protective of water quality, particularly in the Bay watershed.
- Concerned about “relaxation of standards or offsite compliance options”
- By allowing local quality programs to establish relaxed phosphorus limits in urban development areas in the Bay Watershed, it will preclude attainment of water quality goals.
- Supports the use of off-site controls provided that the use of off-site controls does not lead to the impairment of local water quality
- Proposed grandfathering clause has significantly expanded the grandfathering universe, so that it must ensure that it is consistent with federal regulatory requirements; 2019 is “unreasonably long”.
- “In the event that these regulations are not modified to strengthen the underlying water quality requirements, the Commonwealth may be required to develop and issue site-specific (individual) permits that would be subject to EPA review and approval.”

## Letter from EPA Administrator Lisa Jackson (December 2, 2009)

“While encouraged by the regulations as initially proposed, EPA has concerns about the revised (October) regulations...

“We urge the Commonwealth to adopt stormwater management regulations and technical criteria that are at least as stringent as those contained in the initial proposal in order to **sufficiently reduce future nutrient contributions** to the Bay from construction activities and to **protect local channels** from downstream flooding and erosion...”

EPA recently provided to the Bay jurisdictions its expectations for Watershed Implementation Plans to meet nutrient and sediment limits...If the plans do not support these limits, **EPA is committed to taking specific actions, such as objecting to permits and withholding grant funds.**”

“Without significant reductions in pollutants delivered to the Chesapeake Bay system from stormwater runoff, the burden for reaching the load limits would **shift more heavily to other sources** including agriculture, point sources, air sources and others.”

...“if the regulations approved and suspended on October 5, 2009, are not modified to strengthen the underlying water quality requirements, the Commonwealth may be required to develop and issue **site-specific (individual) permits that would be subject to EPA review and approval**. We are eager to work with you to avoid this approach.”

## DECEMBER 9, 2009 BOARD MEETING

### Testimony of David E. Anderson for the Virginia Fountainhead Alliance

Alliance is a group of land owners and mixed use & commercial developers whose mission is to harmonize the goals of environmental progress with economic growth and prosperity.

In light of new EPA Bay data (issued October 23), “the 0.28 standard requires reexamination... the (DCR) staff proposal...would provide for such a reexamination.”

“...the staff recommendation is strikingly similar to the recommendation that the Alliance made to the Board... We believe that creating a new (advisory committee) will provide a forum and process where stakeholders and individuals with technical expertise can come together to consider and assess the various issues, elements and concerns” regarding a new phosphorus standard.

While the (advisory committee) wrestles with important outstanding issues, important elements of the new regulatory framework will continue to go forward and we will keep faith with our federal partners, the other Bay states, and our own citizens.”

In conclusion, the Alliance urges you to adopt the staff recommendation and create a new TAC...”