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Final Regulation
Agency Background Document

Agency name	Virginia Soil and Water Conservation Board
Virginia Administrative Code (VAC) citation	4 VAC 50 - 60
Regulation title	Virginia Stormwater Management Program (VSMP) Permit Regulations
Action title	Amend Parts I, II, and III of the Virginia Stormwater Management Program Permit Regulations to address water quality and quantity and local stormwater management program criteria.
Date this document prepared	December 10, 2009

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual.*

Brief summary

Please provide a brief summary (no more than 2 short paragraphs) of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation. Also, please include a brief description of changes to the regulation from publication of the proposed regulation to the final regulation.

This final regulatory action amends the technical criteria applicable to stormwater discharges from construction activities, establishes minimum criteria for locality-administered stormwater management programs (qualifying local programs) and Department of Conservation and Recreation (Department) administered local stormwater management programs, as well as authorization procedures and review procedures for qualifying local programs, and amends the definitions section applicable to all of the Virginia Stormwater Management Program (VSMP) regulations.

The proposed version of the regulations established consistent statewide water quality requirements that included a 0.28 lbs/acre/year phosphorus standard for new development and a requirement that total phosphorus loads be reduced to an amount at least 20% below the pre-development phosphorus load on prior developed lands. Concerning water quantity, the

proposed version specified that stormwater discharged from a site to an unstable channel must be released at or below a "forested" peak flow rate condition. No exceptions to the standard were provided. As described below, the final regulations change these technical standards and provide additional flexibility that was not present in the proposed regulations.

In the final action, with regard to technical criteria applicable to stormwater discharges from construction activities, revised water quality and water quantity requirements are included in Part II A of the regulations (existing technical criteria will now be maintained in a new Part II B that applies to grandfathered projects). These revised technical requirements in Part II A include:

- a 0.45 lbs/acre/year phosphorus standard for new development activities statewide;
- a requirement that total phosphorus loads be reduced to an amount at least 20% below the pre-development phosphorus load on prior developed lands for land disturbing activities greater than or equal to an acre and 10% for redevelopment sites disturbing less than 1 acre;
- a requirement that control measures be installed on a site to meet any applicable wasteload allocation; and
- water quantity requirements that include both channel protection and flood protection criteria. In the final version, stormwater that is discharged from a site to an unstable channel must be released at or below a "good pasture" peak flow rate condition unless the pre-developed condition for the site is forest, in which case, the runoff shall be held to the forested condition. Exceptions to the "good pasture" standard are provided to a land disturbing activity that is less than 5 acres on prior developed lands; or less than 1 acre for new development. Under the exceptions, the sites are expected to improve upon the pre-developed runoff condition.

The final regulations also provide five offsite options organized in a new section that may be utilized as specified in the regulation for a developer to achieve the required onsite water quality and where allowed water quantity requirements (the proposed regulations only contained three options). One of the new provisions includes a state buy-down option that would be available in the future should a standard more stringent than 0.45 lbs/acre/year phosphorus be established for projects occurring within the Chesapeake Bay Watershed.

The proposed regulations did not contain grandfathering provisions. The final regulations contain a new section on grandfathering that specifies that if the operator of a project has met the three listed local vesting criteria related to significant affirmative governmental acts and has received general permit coverage by July 1, 2010, then the project is grandfathered under today's water quality and quantity technical standards (Part II B) until June 30, 2014. If permit coverage is maintained by the operator, then the project will remain grandfathered until June 30, 2019. It also notes that past June 30, 2019, or if a project's general permit coverage is not maintained, portions of the project not yet completed shall become subject to the new technical criteria set out in Part II A. The grandfathering provisions also contain criteria for the grandfathering of state agency projects for which state or federal funding has been approved as of July 1, 2010, and finally, criteria for grandfathering projects which governmental bonding or public debt financing has been issued prior to July 1, 2010.

This final action would also establish the minimum criteria and ordinance requirements (where applicable) for a Virginia Soil and Water Conservation Board (Board) authorized qualifying local program (Part IIIA) or for a Board-authorized Department-administered local stormwater management program (Part IIIB) which include, but are not limited to, administration, plan review, issuance of coverage under the General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Construction Activities, inspection, enforcement, reporting, and recordkeeping. Part IIID establishes the procedures the Board will utilize in authorizing a locality to administer a qualifying local program. Part IIIC establishes the criteria the Department will utilize in reviewing a locality's administration of a qualifying local program.

The primary issue in Part III that changed between the proposed and final regulations is that in the final regulations, language was added that specified that stormwater management facilities designed to treat stormwater runoff primarily from an individual residential lot, at the qualifying program's discretion, are not subject to the locality inspection requirements (once every five years), homeowner inspection requirements, maintenance agreement requirements, or construction record drawing requirements. Instead, a qualifying local program is authorized to develop a strategy for addressing maintenance of stormwater management facilities located on and primarily designed to treat stormwater runoff from an individual residential lot. Such a strategy may include periodic inspections, public outreach and education, or other method targeted at promoting the long-term maintenance of such facilities.

Finally, this action would make changes to definitions in Part I, which is applicable to the full body of the VSMP regulations. Unnecessary definitions are deleted, needed definitions are added, and many existing definitions are updated. In the final action, several additional definitions were added and other minor refinements made to address comments received.

Statement of final agency action

Please provide a statement of the final action taken by the agency including (1) the date the action was taken, (2) the name of the agency taking the action, and (3) the title of the regulation.

This action to amend and adopt final regulations 4 VAC 50 -60, Parts I, II, and III of the Virginia Stormwater Management Program (VSMP) Permit Regulations was approved by the Virginia Soil and Water Conservation Board on October 5, 2009. Following adoption, the Board also voted to suspend the final regulations and called for an additional 30-day public comment period on the final regulations. The additional public comment period was held between October 26, 2009 and November 25, 2009. The Board then rescinded the suspension and once again adopted the final regulations on December 9, 2009.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter numbers, if applicable, and (2) promulgating entity, i.e., agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

The Virginia Stormwater Management Program was created by Chapter 372 of the 2004 Virginia Acts of Assembly (HB1177). This action transferred the responsibility for the permitting programs for Municipal Separate Storm Sewers (MS4s) and construction activities from the State Water Control Board and DEQ to the Virginia Soil and Water Conservation Board and DCR and provided the Board with authority to adopt regulations that specify minimum technical criteria and administrative procedures for stormwater management programs in Virginia 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. This federally-authorized program is administered in accordance with requirements set forth in the federal Clean Water Act (33 USC § 1251 et seq.) as well as the Virginia Stormwater Management Act (§10.1-603.1 et seq.).

Section 10.1-603.2:1 of the Code of Virginia speaks to the powers and duties of the Virginia Soil and Water Conservation Board. Among those powers and duties, the Board:

> "…***shall permit, regulate, and control stormwater runoff in the Commonwealth***. *In accordance with the VSMP [Virginia Stormwater Management Program], the Board may issue, deny, revoke, terminate, or amend stormwater permits; adopt regulations; approve and periodically review local stormwater management programs and management programs developed in conjunction with a municipal separate storm sewer permit; enforce the provisions of this article; 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***."

Specifically, the Board may:

> "*…(1) issue, deny, amend, revoke, terminate, and enforce permits for the control of stormwater discharges from Municipal Separate Storm Sewer Systems and land disturbing activities;*
> *(2) delegate to the Department or to an approved locality any of the powers and duties vested in it by this article except the adoption and promulgation of regulations. Delegation shall not remove from the Board authority to enforce the provisions of this article."*

Subdivision 2 of §10.1-603.2:1 of the Code of Virginia authorizes the Virginia Soil and Water Conservation Board to delegate to the Department or an approved locality the implementation of the Virginia Stormwater Management Program:

> *§10.1-603.2:1 Powers and duties of the Virginia Soil and Water Conservation Board.*
> *(2) Delegate to the Department or to an approved locality any of the powers and duties vested in it by this article except the adoption and promulgation of regulations. Delegation shall not remove from the Board authority to enforce the provisions of this article.*

Section 10.1-603.3 of the Code of Virginia requires establishment of stormwater management programs by localities. The Board must amend, modify or delete provisions of the Virginia

Stormwater Management Program (VSMP) Permit Regulations to allow localities to implement local stormwater management programs:

> *§10.1-603.3. Establishment of stormwater management programs by localities.*
> *A. Any locality located within Tidewater Virginia as defined by the Chesapeake Bay Preservation Act (§ 10.1-2100 et seq.), or any locality that is partially or wholly designated as required to obtain coverage under an MS4 permit under the provisions of the federal Clean Water Act, shall be required to adopt a local stormwater management program for land disturbing activities consistent with the provisions of this article according to a schedule set by the Board. Such schedule shall require adoption no sooner than 15 months and not more than 21 months following the effective date of the regulation that establishes local program criteria and delegation procedures, unless the Board deems that the Department's review of the local program warrants an extension up to an additional 12 months, provided that the locality has made substantive progress. A locality may adopt a local stormwater management program at an earlier date with the consent of the Board.*
> *B. Any locality not specified in subsection A may elect to adopt and administer a local stormwater management program for land disturbing activities pursuant to this article. Such localities shall inform the Board and the Department of their initial intention to seek delegation for the stormwater management program for land disturbing permits within six months following the effective date of the regulation that establishes local program criteria and delegation procedures. Thereafter, the Department shall provide an annual schedule by which localities can submit applications for delegation.*
> *C. In the absence of the delegation of a stormwater management program to a locality, the Department will administer the responsibilities of this article within the given jurisdiction in accordance with an adoption and implementation schedule set by the Board.*

Additionally, enactment clause 2 of the Chapter 18 of the 2009 Virginia Acts of Assembly stipulates that *the regulation that establishes local program criteria and delegation procedures and the water quality and water quantity criteria, and that is referenced in subsections A and B of §10.1-603.3 of this act, shall not become effective prior to July 1, 2010.*

Subsection E of §10.1-603.3 further stipulates minimum requirements for a local stormwater program:

> *§10.1-603.3(E). Establishment of stormwater management programs by localities.*
> *E. Each locality that is required to or that elects to adopt and administer an approved local stormwater management program shall, by ordinance, establish a local stormwater management program that may be administered in conjunction with a local MS4 program and a local erosion and sediment control program, which shall include, but is not limited to, the following:*
>
> > *1. Consistency with regulations adopted in accordance with provisions of this article;*
> > *2. Provisions for long-term responsibility for and maintenance of stormwater management control devices and other techniques specified to manage the quality and quantity of runoff; and*

3. Provisions for the integration of locally adopted stormwater management programs with local erosion and sediment control, flood insurance, flood plain management, and other programs requiring compliance prior to authorizing construction in order to make the submission and approval of plans, issuance of permits, payment of fees, and coordination of inspection and enforcement activities more convenient and efficient both for the local governments and those responsible for compliance with the programs.

F. The Board shall delegate a local stormwater management program to a locality when it deems a program consistent with this article.

G. Delegated localities may enter into agreements with soil and water conservation districts, adjacent localities, or other entities to carry out the responsibilities of this article.

H. Localities that adopt a local stormwater management program shall have the authority to issue a consolidated stormwater management and erosion and sediment control permit that is consistent with the provisions of the Erosion and Sediment Control Law (§10.1-560 et seq.).

I. Any local stormwater management program adopted pursuant to and consistent with this article shall be considered to meet the stormwater management requirements under the Chesapeake Bay Preservation Act (§10.1-2100 et seq.) and attendant regulations.

Section 10.1-603.4 also provides additional authority and guidance to the Board in the development of regulations, including authority to develop criteria associated with local program administration and implementation, criteria to control nonpoint source pollution, and to establish statewide standards for stormwater management from land disturbing activities.

§10.1-603.4. Development of regulations.

The Board is authorized to adopt regulations that specify minimum technical criteria and administrative procedures for stormwater management programs in Virginia. The regulations shall:

1. Establish standards and procedures for delegating the authority for administering a stormwater management program to localities;

2. Establish minimum design criteria for measures to control nonpoint source pollution and localized flooding, and incorporate the stormwater management regulations adopted pursuant to the Virginia Erosion and Sediment Control Law (§ 10.1-560 et seq.), as they relate to the prevention of stream channel erosion. These criteria shall be periodically modified as required in order to reflect current engineering methods;

3. Require the provision of long-term responsibility for and maintenance of stormwater management control devices and other techniques specified to manage the quality and quantity of runoff;

4. Require as a minimum the inclusion in local programs of certain administrative procedures which include, but are not limited to, specifying the time period within which a local government that has adopted a stormwater management program must grant permit approval, the conditions under which approval shall be granted, the procedures for communicating disapproval, the conditions under which an approved permit may be changed and requirements for inspection of approved projects;

6. Establish statewide standards for stormwater management from land disturbing activities of one acre or greater, except as specified otherwise within this article, and

allow for the consolidation in the permit of a comprehensive approach to addressing stormwater management and erosion and sediment control, consistent with the provisions of the Erosion and Sediment Control Law (§ 10.1-560 et seq.) and this article. However, such standards shall also apply to land disturbing activity exceeding an area of 2500 square feet in all areas of the jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20 et seq.) adopted pursuant to the Chesapeake Bay Preservation Act (§ 10.1-2100 et seq.);
7. Require that stormwater management programs maintain after-development runoff rate of flow and characteristics that replicate, as nearly as practicable, the existing predevelopment runoff characteristics and site hydrology, or improve upon the contributing share of the existing predevelopment runoff characteristics and site hydrology if stream channel erosion or localized flooding is an existing predevelopment condition…;
8. Encourage low impact development designs, regional and watershed approaches, and nonstructural means for controlling stormwater;
9. Promote the reclamation and reuse of stormwater for uses other than potable water in order to protect state waters and the public health and to minimize the direct discharge of pollutants into state waters;
10. Establish, with the concurrence of the Director, a statewide permit fee schedule for stormwater management related to municipal separate storm sewer system permits; and
11. Provide for the evaluation and potential inclusion of emerging or innovative stormwater control technologies that may prove effective in reducing nonpoint source pollution.

It should also be noted that localities may adopt more stringent criteria than the minimum criteria developed by the Board through this regulatory process.

§10.1-603.7. Authorization for more stringent ordinances.
A. Localities are authorized to adopt more stringent stormwater management ordinances than those necessary to ensure compliance with the Board's minimum regulations, provided that the more stringent ordinances are based upon factual findings of local or regional comprehensive watershed management studies or findings developed through the implementation of a MS4 permit or a locally adopted watershed management study and are determined by the locality to be necessary to prevent any further degradation to water resources or to address specific existing water pollution including nutrient and sediment loadings, stream channel erosion, depleted groundwater resources, or excessive localized flooding within the watershed and that prior to adopting more stringent ordinances a public hearing is held after giving due notice.
B. Any local stormwater management program in existence before January 1, 2005 that contains more stringent provisions than this article shall be exempt from the requirements of subsection A.

HB2168 of the 2009 Legislative Session established a new §10.1-603.8:1 containing a process for approving stormwater management offsets in the Chesapeake Bay Watershed and grants the Board the necessary authority to develop a future program in the remainder of the state.

§ 10.1-603.8:1. Stormwater nonpoint nutrient offsets.
A. As used in this section:

“Nonpoint nutrient offset” means nutrient reductions certified as nonpoint nutrient offsets under the Chesapeake Bay Watershed Nutrient Exchange Program (§ 62.1-44.19:12 et seq.).
"Permit issuing authority" has the same meaning as in § 10.1-603.2 and includes any locality that has adopted a local stormwater management program.
“Tributary” has the same meaning as in § 62.1-44.19:13.
B. A permit issuing authority may allow compliance with stormwater nonpoint nutrient runoff water quality criteria established pursuant to § 10.1-603.4, in whole or in part, through the use of the permittee's acquisition of nonpoint nutrient offsets in the same tributary.
C. No permit issuing authority shall allow the use of nonpoint nutrient offsets to address water quantity control requirements. No permit issuing authority shall allow the use of nonpoint nutrient offsets in contravention of local water quality-based limitations: (i) consistent with determinations made pursuant to subsection B of § 62.1-44.19:7, (ii) contained in a municipal separate storm sewer system (MS4) program plan approved by the Department, or (iii) as otherwise may be established or approved by the Board.
D. A permit issuing authority may only allow the use of nonpoint nutrient offsets when the permit applicant demonstrates to the satisfaction of the permit issuing authority that (i) alternative site designs have been considered that may accommodate on-site best management practices, (ii) on-site best management practices have been considered in alternative site designs to the maximum extent practicable, (iii) appropriate on-site best management practices will be implemented, and (iv) full compliance with postdevelopment nonpoint nutrient runoff compliance requirements cannot practicably be met on site.
E. Documentation of the permittee's acquisition of nonpoint nutrient offsets shall be provided to the permit issuing authority in a certification from an offset broker documenting the number of phosphorus nonpoint nutrient offsets acquired and the associated ratio of nitrogen nonpoint nutrient offsets at the offset generating facility. The offset broker shall pay the permit issuing authority a water quality enhancement fee equal to six percent of the amount paid by the permittee for the nonpoint nutrient offsets. If a locality is not the permit issuing authority, such fee shall be deposited into the Virginia Stormwater Management Fund established by § 10.1-603.4:1. If the permit issuing authority is a locality, such fees shall be used solely in the locality where the associated stormwater permit applies for inspection and maintenance of stormwater best management practices, stormwater educational programs, or programs designed to protect or improve local water quality.
F. Nonpoint nutrient offsets used pursuant to subsection B shall be generated in the same or adjacent eight digit hydrologic unit code as defined by the United States Geological Survey as the permitted site. Nonpoint nutrient offsets outside the same or adjacent eight digit hydrologic unit code may only be used if it is determined by the permit issuing authority that no nonpoint nutrient offsets are available within the same or adjacent eight digit hydrologic unit code when the permit issuing authority accepts the final site design. In such cases, and subject to other limitations imposed in this section, nonpoint nutrient offsets generated within the same tributary may be used. In no case shall nonpoint nutrient offsets from another tributary be used.

G. For that portion of a site's compliance with stormwater nonpoint nutrient runoff water quality criteria being obtained through nonpoint nutrient offsets, a permit issuing authority shall (i) use a 1:1 ratio of the nonpoint nutrient offsets to the site's remaining postdevelopment nonpoint nutrient runoff compliance requirement and (ii) assure that the nonpoint nutrient offsets are secured in perpetuity.

H. No permit issuing authority may grant an exception to, or waiver of, postdevelopment nonpoint nutrient runoff compliance requirements unless off-site options have been considered and found not available.

I. In considering off-site options, the permit issuing authority shall give priority to the use of nonpoint nutrient offsets unless a local fee-in-lieu-of, pro-rata share, or similar program has been approved by the Board as being substantially equivalent in nutrient reduction benefits However, prior to approval by the Board, there shall be a rebuttable presumption that any local government fee-in-lieu- of, pro-rata share, or similar program is substantially equivalent in nutrient reduction benefits. The Board shall establish criteria for determining whether any such local program is substantially equivalent, which shall be used during the local stormwater management program approval process in § 10.1-603.3.

J. The Board may establish by regulation a stormwater nutrient program for portions of the Commonwealth that do not drain into the Chesapeake Bay.

2. That no Virginia Soil and Water Conservation Board regulatory action, nor any local government ordinance or regional (watershedwide) stormwater management plan amendment, is necessary prior to implementation of this act; however, the Virginia Soil and Water Conservation Board may conform its regulations to this act through an exempt action and may adopt regulations through a nonexempt action.

Also, requirements set forth in the federal Clean Water Act (33 USC § 1251 et seq.), formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, or any subsequent revisions thereto, and its attendant regulations set forth in 40 CFR Parts 122, 123, 124 and 125 requires states to establish a permitting program for the management of stormwater for municipal separate storm sewer systems (MS4s) and construction activities disturbing greater than or equal to an acre.

The EPA has also noted in a recent presentation before the Joint Commission on Administrative Rules regarding this regulatory action that these regulations "are the operative requirements of the Construction and MS4 permit programs, and as such, EPA has a responsibility to review these regulations to ensure that they are protective of water quality. If these regulations are not protective of water quality, the Commonwealth cannot rely upon them to meet federal water quality requirements in NPDES permits. This would require the Commonwealth or the permitting agency to develop site specific permits which is a time and resource consuming endeavor."

More recently, in a December 2, 2009 letter from the EPA Administrator Lisa P. Jackson to Governor Kaine, EPA indicated that if the Bay jurisdictions' Watershed Implementation Plans, to meet nutrient and sediment limits in a Chesapeake Bay Total Maximum Daily Load, do not support EPA's expectations, then the agency "is committed to taking specific actions, such as

objecting to permits and withholding grant funds." Furthermore, Administrator Jackson had stated that "[w]ithout 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." Her letter continues by stating that if the regulations are not stringent enough to support 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."

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Detail the specific reasons it is essential to protect the health, safety or welfare of citizens. Discuss the goals of the proposal and the problems the proposal is intended to solve.

The Virginia Stormwater Management Program (VSMP) is necessary to address water quality within the Commonwealth. Section 10.1-603.2:1 of the Code of Virginia specifies that "[i]n addition to other powers and duties conferred upon the Board, it shall permit, regulate, and control stormwater runoff in the Commonwealth. In accordance with the VSMP, the Board may issue, deny, revoke, terminate, or amend stormwater permits; adopt regulations; approve and periodically review local stormwater management programs and management programs developed in conjunction with a municipal separate storm sewer permit; enforce the provisions of this article; **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**.

Controlling stormwater runoff and its impacts is a serious issue facing the Commonwealth and its local governments. Citizens are complaining about flooding caused by increased amounts of stormwater runoff and the runoff is also reported as a contributor to excessive nutrient enrichment in numerous rivers, lakes, and ponds throughout the state, as well as a continued threat to estuarine waters and the Chesapeake Bay. Numerous studies have documented the cumulative effects of urbanization on stream and watershed ecology. Research has established that as impervious cover in a watershed increases, stream stability is reduced, habitat is lost, water quality becomes degraded, and biological diversity decreases largely due to stormwater runoff. We recognize that impervious areas decrease the natural stormwater purification functions of watersheds and increase the potential for water quality impacts in receiving waters. Additionally, runoff from managed turf is recognized as an additional significant source of pollutants.

Uncontrolled stormwater runoff has many cumulative impacts on humans and the environment including:

- Flooding - Damage to public and private property
- Eroded Streambanks - Sediment clogs waterways, fills lakes and reservoirs, and kills fish and aquatic animals
- Widened Stream Channels - Loss of valuable property
- Aesthetics - Dirty water, trash and debris, foul odors

- Fish and Aquatic Life - Impaired and destroyed
- Impaired Recreational Uses - Swimming, fishing, boating
- Threatens Public Health - Contamination of drinking water, fish/shellfish
- Threatens Public Safety - Drownings occur in flood waters
- Economic Impacts – Impairments to fisheries, shellfish, tourism, recreation related businesses

Additionally, development can dramatically alter the hydrologic regime of a site or watershed as a result of increases in impervious surfaces. The impacts of development on hydrology may include:

- Loss of vegetation, resulting in decreased evapotranspiration
- Soil compaction
- Reduced groundwater recharge
- Reduced stream base flow
- Increased runoff volume
- Increased peak discharges
- Decreased runoff travel time
- Increased frequency and duration of high stream flow
- Increased flow velocity during storms
- Increased frequency of bank-full and over-bank floods

It is believed that these final regulations will work to minimize the cumulative impacts of stormwater on humans and the environment and moderate the associated hydrologic impacts. If not properly managed, stormwater can have significant economic impacts and the stream restoration costs to fix the problems after the fact are very high.

A 2007 EPA Office of the Inspector General report entitled "Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay; Report No.2007-P-00031; September 10, 2007, noted that "new development is increasing nutrient and sediment loads at rates faster than loads are being reduced from developed lands". The Chesapeake Bay Program Office estimated that impervious surfaces in the Bay watershed grew significantly – by 41 percent – in the 1990s. Meanwhile, the population increased by only 8 percent. Because progress in reducing loads is being offset by increasing loads from new development, greater reductions will be needed to meet the Bay goals as well as to address stream impairments across the Commonwealth. The Chesapeake Bay Program Office estimated that loads from developed and developing lands increased while loads from agriculture and wastewater facilities decreased. Currently, 32% of the phosphorus loads and 28% of the sediment loads to the Bay Watershed are attributed to urban and suburban sources, making it one of the most significant contributors to the Bay's poor health.

The Commonwealth needs to employ all possible strategies in its tool box to address water quality improvements on a statewide basis in both agricultural and urban settings, including making marked improvements in its stormwater regulations. The final stormwater regulations are a necessary and critical part of the Commonwealth's overall nutrient reduction strategies and the criteria included in the final regulations will slow nutrient and sediment increases, and where

possible, contribute to water quality improvements. Improved stormwater management through these regulations will have numerous benefits including reductions in flood risk, avoidance of infrastructure costs through the use of LID practices, improved aquatic life, and enhancement of recreational and commercial fisheries.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. A more detailed discussion is required under the "All changes made in this regulatory action" section.

Key provisions of this final regulatory action include the following:

Part II A and Part II B [4VAC50-60-40 through 4VAC50-60-99]

1) In the final regulations, a new section numbered **4VAC50-60-48** and entitled **Grandfathering** is added. In order to accommodate the grandfathering provision, the proposed Part II was split into a Part II A and a Part II B. Part II A contains the new water quality and quantity technical criteria and Part II B contains today's current standards that grandfathered projects will be subject to in accordance with the following:
   - Subsection A specifies that if a project receives general permit coverage prior to adoption of a local stormwater management program within the jurisdiction within which the project is located, the project shall remain subject to the Part II B criteria until June 30, 2014. This reiterates the process already embodied in the Construction General Permit.
   - Subsection B specifies that if the operator of a project has by July 1, 2010 met the three listed local vesting criteria related to significant affirmative governmental acts and has received general permit coverage also by July 1, 2010, then the project is grandfathered until June 30, 2014. If permit coverage is maintained by the operator, then the project will remain grandfathered until June 30, 2019. Significant affirmative governmental acts was expanded to include state and federal projects that have received approval of state or federal funding or the approval of a stormwater management plan.
   - Additionally, in the event that the affirmative governmental act or the general permit coverage is modified during the grandfathering period and the amendments do not result in any increase in the amount of phosphorus leaving the site through stormwater runoff or any increase in the volume or rate of runoff, the project may remain grandfathered.
   - Past June 30, 2019 or if the project's general permit coverage is not maintained, portions of the project not yet completed shall become subject to the new technical criteria set out in Part II A.
   - Subsection C specifies that a project that is part of a common plan of development or sale and that has obtained general permit coverage by July 1, 2010 shall remain grandfathered and subject to the Part II B criteria.

- Subsection D specifies that incases where governmental bonding or public debt financing has been issued for a project prior to July 1, 2010, the project shall remain grandfathered and subject to the Part II B criteria.

2) Section **4VAC50-60-63** entitled **Water Quality Design Criteria Requirements** specifies that in order to protect the quality of state waters and to control stormwater pollutants, a local program shall apply the minimum technical criteria and statewide standards set out in this section for stormwater management associated with land disturbing activities unless such project is grandfathered as discussed above.

NOTE: In general, since 2005 when the Board took over the federal stormwater permit program, the **current** water quality technical criteria for construction activity statewide are as follows:

- Sites between 0 and 15% imperviousness for new development, all stormwater runoff goes virtually untreated.
- New development above the 16% imperviousness threshold requires a post development pollutant load that is approximately 0.45 lbs/acre/year phosphorus.
- A 10% reduction in the pre-development load is required on redevelopment sites.

- The water quality technical criteria for construction activity in the proposed regulations prior to the final changes outlined below were as follows:
  - For new development, a statewide 0.28 lbs/acre/year phosphorus standard was established.
  - On prior developed lands, total phosphorus loads were required to be reduced to an amount at least 20% below the pre-development phosphorus load.

In the final regulations, statewide water quality technical criteria for construction activities are as follows:

- For new development, a statewide 0.45 lbs/acre/year phosphorus interim standard is established.
- Language is added that specifies that should the Board establish by regulatory action a standard more stringent than 0.45 pounds per acre per year in the Chesapeake Bay Watershed, then authority is given to the qualifying local program to establish a standard between 0.28 and 0.45 lbs/acre/year phosphorus in a UDA in order to encourage compact development that achieves superior water quality benefits.
  - In this situation, the qualifying local program is required to provide to the Board for approval a justification for any standards established greater than 0.28. Factors are provided upon which the standard may be based.
- Language is added that upon the completion of the Virginia TMDL Implementation Plan for the Chesapeake Bay Nutrient and Sediment TMDL approved by EPA, the Board shall by regulatory action establish a water quality design criteria for new development activities that is consistent with the pollutant loadings called for in the approved Implementation Plan.
- On prior developed lands the following technical criteria apply:

- Where land disturbance is greater than or equal to 1 acre, total phosphorus loads shall be reduced to an amount at least 20% below the pre-development phosphorus load.
- Where land disturbance is less than 1 acre, total phosphorus loads shall be reduced to an amount at least 10% below the pre-development phosphorus load.
- The total phosphorus load shall not be required to be reduced to below the applicable standard for new development unless a more stringent standard has been established by a qualifying local program.

- As was the case in the proposed regulations, the following continue to apply in the final regulations:
  - If a wasteload allocation for a pollutant has been established in a TMDL and is assigned to stormwater discharges from a construction activity, control measures must be implemented to meet the WLA.
  - A qualifying local program may establish more stringent standards.

3) **Water Quality Compliance** set out in **4VAC50-60-65** specifies the following:
   - Compliance with the water quality criteria shall be determined utilizing the Virginia Runoff Reduction Method. (The Method and associated spreadsheets were refined between proposed and final regulations.)
   - BMPs listed in the BMP Pollutant Removal Efficiency table (Table 1) of Part II shall be utilized to reduce the phosphorus load. (The table was updated between proposed and final.) The practice names and several of the efficiencies have been updated in the table in the final regulations. Design specifications for the BMPs listed in the table can be found on the Virginia Stormwater BMP Clearinghouse website. Other approved BMPs available on this website may also be utilized to achieve compliance.
   - A locality may establish use limitations on specific BMPs (such as wet ponds or certain infiltration practices).
   - Offsite alternatives where allowed (as specified in a new section numbered 4VAC50-60-69) may be utilized to meet the technical standards. (Offsite options set out in 4VAC50-60-65 in the proposed regulations were moved to the new section in the final regulations and refined.)

4) A new section numbered **4VAC50-60-69** entitled **Offsite Compliance Options** is added to the final regulations. The section is outlined as follows:
   - Subsection A specifies that a qualifying local program shall have authority to consider the use of 4 specified offsite compliance options.
     - COMPREHENSIVE PLAN: Specifies that if a local comprehensive watershed stormwater management plan has been adopted for the local watershed within which a project is located, then the development may be able to use offsite options to achieve all or part of the water quality and quantity technical criteria. In the final regulations additional details on this option are set out in Section 4VAC50-60-92 (section 4VAC50-60-96 in the proposed version.)
     - LOCAL PRO-RATA: Specifies that a locality may use a pro rata fee in accordance with § 15.2-2243 or similar local funding mechanism to achieve

offsite the water quality and quantity reductions required. Participants will pay a locally established fee sufficient to fund improvements necessary to adequately achieve those requirements.
    - NUTRIENT OFFSET: Incorporates the new offset option passed by the 2009 General Assembly (HB2168) for water quality and is to be applied in accordance with the stipulations set out in the Code of Virginia (§10.1-603.8:1).
    - DEVELOPER SITE: The option was modified to specify that water quality controls must be located within the same HUC or within the upstream HUCs in the local watershed that the land disturbing activity directly discharges to. The option may be utilized where no comprehensive watershed stormwater management plan or pro-rata fee exists, or where a qualifying local program elects to allow this option.
- Language is added that specifies that should the Board establish by regulatory action a standard more stringent than 0.45 pounds per acre per year in the Chesapeake Bay Watershed, then the STATE BUY DOWN option in Subsection B may be utilized where 1) the 4 options outlined above are not available; 2) the fee established by a qualifying local program to offset a pound of phosphorus removal on site exceeds $23,900; or, 3) a qualifying local program elects to allow its use. The section further specifies the following:
    - The payment shall be $15,000 per pound of phosphorus not treated on site in a UDA and $23,900 per pound in all other cases.
    - Payments will be deposited to the Virginia Stormwater Management Fund.
    - The Board shall establish priorities for the use of these payments by December 1 of each year (a list of priorities are provided for the Board to consider).
    - At least 50% of the payments shall be utilized for projects to address local urban stormwater quality issues.
    - The remaining payments shall be utilized to acquire certified nonpoint nutrient offsets where they exist and then any remaining funds may be utilized to establish contracts for long-term agricultural best management practices.
    - The Department shall track the monies received and expended and the reductions needed and achieved.
    - The Department may annually utilize up to 6% of the payments to administer the stormwater management program.
    - The Board shall periodically review the payment amount, at least every five years or in conjunction with the development of a new construction general permit and shall evaluate the performance of the fund and the sufficiency of the payment rate in achieving the needed off-site pollution reductions. The Board shall adjust the payment amount based upon this analysis.
    - Use of the STATE BUY DOWN option is in accordance with the following limitations:
        - A new development project disturbing greater than or equal to 1 acre in the Chesapeake Bay Watershed must reduce its phosphorus discharge to a level of 0.45 pounds per acre per year of phosphorus on

site, or less, and then may achieve all or a portion of the remaining required phosphorus reductions through a payment.
- A new development project disturbing less than 1 acre in the Chesapeake Bay Watershed may achieve all necessary phosphorus reductions through a payment.
- Development on prior developed lands disturbing greater than or equal to 1 acre must achieve at least a 10% reduction from the predevelopment total phosphorus load on site and then may achieve the remaining required phosphorus reductions through a payment.
- Development on prior developed lands disturbing less than 1 acre may achieve all necessary phosphorus reductions through a payment.

- Subsection C stipulates that where the Department is administering a local program, only the DEVELOPER SITE, NUTRIENT OFFSET, and when available STATE BUY-DOWN offsite options shall be available.

5) Section **4VAC50-60-66** entitled **Water Quantity** specifies minimum standards to address channel protection and flood protection.
   - Channel protection shall be achieved through one of the following:
     - Stormwater released into a man-made conveyance system from the 2-year 24-hour storm shall be done without causing erosion of the system.
     - Stormwater released into a restored stormwater conveyance system, in combination with other existing stormwater runoff, shall not exceed the design of the restored system nor result in instability of the system.
     - Stormwater released to a stable natural stormwater conveyance shall not cause the system to become unstable from the one-year 24-hour storm discharge and it shall provide a peak flow rate from the one-year 24-hour storm that is less than or equal to the pre-development peak flow rate as ascertained by the energy balance equation. It also specifies that the peak flow rate for the developed project needs to be less than or equal to the peak flow rate of the pre-developed condition. [Keep a stable stream stable.]
     - Stormwater released to an unstable natural stormwater conveyance shall provide a peak flow rate from the one-year 24-hour storm that is less than or equal to the good pasture peak flow rate as ascertained by the energy balance equation, unless the pre-developed condition is forested, in which case, both the peak flow rate and the volume of runoff from the developed site shall be held to the forested condition. (In the proposed regulation the specified standard was the forested condition instead of the good pasture condition that is now included in the final regulations.) It also specifies that the peak flow rate for the developed project needs to be less than or equal to the peak flow rate of the good pasture or forested condition as may be applicable.
     - In the final regulations, exceptions to the unstable natural stormwater conveyance situation were added for land disturbing activity less than 5 acres on prior developed lands or a regulated land disturbing activity less than 1 acre for new development. In these situations, the sites are only expected to improve upon the pre-developed runoff condition.
   - Flood protection shall be achieved through one of the following:

- The post-development peak flow rate from the 10-year 24-hour storm is confined within a man-made conveyance system.
- The post-development peak flow rate from the 10-year 24-hour storm is confined within a restored stormwater conveyance system.
- The post-development peak flow rate from the 10-year 24-hour storm is confined within a natural stormwater conveyance that currently does not flood.
- The post-development peak flow rate from the 10-year 24-hour storm shall not exceed the pre-development peak flow rate from the 10-year 24-hour storm based on good pasture conditions in a natural stormwater conveyance where localized flooding exists, unless the pre-developed condition is forested, in which case the peak flow rate from the developed site shall be held to the forested condition. (In the proposed regulation the standard was the forested condition instead of good pasture condition that is now included in the final regulations.)
- In the final regulations, exceptions to the criteria for natural stormwater conveyance systems where localized flooding exists were also added for land disturbing activity less than 5 acres on prior developed lands or a regulated land disturbing activity less than 1 acre for new development. In these situations, the postdevelopment peak flow rate for the 10-year 24-hour storm must be less than the predevelopment peak flow rate from the 10-year 24-hour storm.
- As was the case with water quality, a qualifying local program may establish more stringent water quantity standards.

- If either of the following conditions are met, the channel protection and flood protection criteria do not apply:
  - The site's contributing drainage area is less than or equal to one percent of the total watershed area draining to the point of discharge.
  - The development of the site results in an increase in the peak flow rate from the one-year 24-hour storm that is less than one percent of the existing peak flow rate from the one-year 24-hour storm generated by the total watershed area draining to the point of discharge.

6) Section **4VAC50-60-122** entitled **Qualifying Local Program Exceptions** in Part III A specifies that a local program may also grant exceptions to the water quality and quantity provisions of Part II A and Part II B in accordance with the following:
   - The exception is the minimum necessary to afford relief.
   - Reasonable and appropriate conditions are imposed to preserve the intent of the Act.
   - Granting will not confer on the permittee any special privileges denied to others under similar circumstances.
   - The exception requests are not based upon conditions or circumstances that are self-imposed or self created.
   - Economic hardship alone is not sufficient reason to grant an exception.
   - In the final regulations, additional language was added to tighten up the provision and specify that any exception to the water quality technical criteria of 4VAC50-60-63 subdivisions 1 and 2 shall require that all available offsite options be utilized before

an exception is granted and that any necessary phosphorus reductions unable to be achieved on site, or through the available offsite options of subsection A of 4VAC50-60-69, be achieved through a payment made in accordance with subsection B of 4VAC50-60-69, when such payment option is available. In the case of the granting of an exception, the minimum on site thresholds of subsection B of 4VAC50-60-69 shall not apply.

Part III A - D [4VAC50-60-102 through 4VAC50-60-159]

7) Section **4VAC50-60-106** entitled **Qualifying Local Program Administrative Requirements** specifies the minimum criteria and ordinance requirements (where applicable) which include but are not limited to administration, plan review, issuance of coverage under the General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Construction Activities, inspection, enforcement, reporting, and record keeping, for a Board-authorized qualifying local program (**Part III A**) or for a Board-authorized department-administered local stormwater management program (**Part III B**).

   A local program shall provide for the following:
   - a) Identification of the authority(ies) issuing permit coverage, reviewing plans, approving plans, conducting inspections, and carrying-out enforcement.
   - b) Any technical criteria differing from those set out in the regulations.
   - c) Plan submission and approval procedures.
   - d) Project inspection and monitoring processes.
   - e) Enforcement
   - f) Procedures for long-term inspection and maintenance of stormwater management facilities. (The order of e and f was switched in the final regulations.)

   - An ordinance that incorporates the components (a - e) outlined above is required.
   - A local program shall report specified information to the Department.
   - A local program may require performance bonds or other financial surety.

8) Section **4VAC50-60-108** entitled **Qualifying Local Program Stormwater Management Plan Review** specifies that a local program shall require stormwater management plans be that include the following elements:
   - Location of points of discharge, receiving waters, pre and post-development conditions.
   - Contact information.
   - Project narrative.
   - Location and design of stormwater management facilities.
   - Hydrologic characteristics and structural properties of the soils utilized during facility installation.
   - Hydrologic and hydraulic computations of the pre and post-development runoff conditions for the required design storms.
   - Calculations verifying compliance with the water quality and quantity requirements.

- A site map that includes the specified elements.
- Plans shall be appropriately signed and sealed by a professional.
- Plan approval is required prior to commencement of land disturbing activities.
- The final regulations move the language in section 4VAC50-60-93 related to plan requirements in the proposed regulations into this section and strike the former section.

This section also establishes timelines for establishing plan and application completeness, for plan review and approval, and for plan modifications. It also establishes applicant notification requirements.

9) Section **4VAC50-60-112** entitled **Qualifying Local Program Authorization of Coverage Under the VSMP General Permit for Discharges of Stormwater from Construction Activities** establishes that coverage under the construction general permit shall be authorized in accordance with the following:
   - The applicant must have an approved stormwater management plan.
   - The applicant must have submitted proposed right-of-entry agreements or easements granted from the owner to the local program for the purposes of inspection and maintenance of stormwater management facilities as well as maintenance agreements, including inspection schedules, where required for such facilities.
   - An approved general permit registration statement.
   - The required fee form and total fee.

10) Sections **4VAC50-60-114** entitled **Inspections** and **4VAC50-60-124** entitled **Qualifying Local Program Stormwater Management Facility Maintenance** collectively specify that inspections shall be conducted as follows:
   - The local program or its designee shall inspect the land disturbing activity during construction.
   - At the termination of the project and prior to any bond or surety release of the performance bond or surety (if required), construction record drawings for the permanent stormwater facilities shall be submitted to the local program.
   - The owner of the stormwater management facilities shall conduct inspections in accordance with the inspection schedule in the recorded maintenance agreement and shall submit the inspection report to the local program.
   - The local program shall develop a Board approved inspection schedule.
   - In the final regulations language was added that specified that stormwater management facilities designed to treat stormwater runoff primarily from an individual lot, at the qualifying programs discretion, are not subject to the locality inspection requirements (once every five years), homeowner inspections, maintenance agreement requirements, or construction record drawing requirements.

11) Section **4VAC50-60-116** entitled **Qualifying Local Program Enforcement** outlines enforcement procedures and establishes a Schedule of Civil Penalties as guidance for a court as required by law.

12) Section **4VAC50-60-126** entitled **Qualifying Local Program Report and Recordkeeping** specifies that information shall be reported by the local program to the Department on a fiscal year basis by October 1st annually as follows:
    - Information regarding permanent stormwater facilities completed during the fiscal year.
    - Number of permitted projects inspected by acreage categories.
    - Number and type of enforcement actions taken.
    - Number of exceptions granted or denied.

13) Establishes in **Part III D** the procedures the Board will utilize in authorizing a locality to administer a qualifying local program. The application package shall include the following:
    - The local program ordinance(s);
    - A funding and staffing plan based on the projected permitting fees;
    - The policies and procedures, including but not limited to, agreements with Soil and Water Conservation Districts, adjacent localities, or other entities, for the administration, plan review, permit issuance, inspection and enforcement components of the program.
    - The department shall operate a program in any locality in which a qualifying local program has not been adopted in accordance with a Board-approved schedule.

14) Establishes in **Part III C** the criteria the Department will utilize in reviewing a locality's administration of a qualifying local program. The review shall consist of the following:
    - An interview between department staff and the qualifying local program administrator or his designee;
    - A review of the local ordinance(s) and other applicable documents;
    - A review of a subset of the plans approved by the qualifying local program and consistency of application including exceptions granted;
    - An accounting of the receipt and of the expenditure of fees received;
    - An inspection of regulated activities; and
    - A review of enforcement actions and an accounting of amounts recovered through enforcement actions.

Part I [4VAC50-60-10 through 4VAC50-60-30]

15) Makes changes to definitions in **Part I** as follows:
    - Deletes unnecessary definitions;
    - Establishes abbreviations for commonly used terms;
    - Updates definitions such as "adequate channel", "channel", "development", "drainage area", "flood fringe", "floodplain", "floodway", "impervious cover", "local stormwater management program", "permit-issuing authority", "pre-development", "site", and "watershed"; and
    - Adds needed definitions such as "comprehensive stormwater management plan", "karst features", "man-made stormwater conveyance system", "natural channel design concepts", natural stormwater conveyance system", natural stream", "point of

discharge", pollutant discharge", "prior developed lands", "qualifying local program", "restored stormwater conveyance system", "runoff characteristics", "runoff volume", "site hydrology", "stable", "stormwater conveyance system", "stormwater management standards", "unstable", "Virginia Stormwater Management Handbook", and "Stormwater management standards".

- In the final regulations, additional refinements were made to the definitions "adequate channel", "comprehensive stormwater management plan", "development", "drainage area", flood fringe", "linear development project", natural stream", point of discharge", "pollutant discharge", "predevelopment", and "runoff characteristics". In the final regulations, definitions were added for "Chesapeake Bay Watershed", "karst area", and "urban development area".

DOCUMENTS INCORPORATED BY REFERENCE

16) In the final regulations, the Documents Incorporated by Reference section has been updated to include new dates and to include the Virginia Runoff Reduction Method Worksheet associated with Redevelopment.

Issues

Please identify the issues associated with the proposed regulatory action, including:
1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;
2) the primary advantages and disadvantages to the agency or the Commonwealth; and
3) other pertinent matters of interest to the regulated community, government officials, and the public.
If there are no disadvantages to the public or the Commonwealth, please indicate.

The primary advantage of this regulatory action is enhanced water quality and management of stormwater runoff in the Commonwealth. Citizens are complaining about flooding caused by increased amounts of stormwater runoff and the runoff is also a contributor to excessive nutrient enrichment in numerous rivers, lakes, and ponds throughout the state, as well as a continued threat to estuarine waters and the Chesapeake Bay. The water quality and quantity criteria established by this regulatory action will improve upon today's stormwater management program and assist the Commonwealth in reducing nutrient pollution and meeting Chesapeake Bay restoration goals. The regulations will have numerous benefits including reductions in flood risk, avoidance of infrastructure costs through the use of LID practices, improved aquatic life, and enhancement of recreational and commercial fisheries.

The implementation of local stormwater management programs will also have benefits for the regulated community. Today, construction activity operators must go to two sources in order to receive needed Erosion and Sediment Control (locality) and Stormwater (Department) approvals. The development of locality-run qualifying local programs will allow for both approvals to be received from a singular source, thus improving efficiency as well as saving time for the developer. Even in localities where the Department administers the local stormwater management program, the program envisioned by these regulations will allow for greater customer service and oversight over today's more limited program.

As the Board is also advancing a final regulatory action related to permit fees (Part XIII) as a compliment to this final regulatory action, and as the base permit fees established by that regulatory action are based on estimated costs associated with program administration, this regulatory action is not projected to have an adverse financial impact upon localities administering qualifying local programs or upon the Department in administering local stormwater management programs or in its oversight of qualifying local programs. However, as some stormwater management programs may have higher or lower costs due to a variety of factors, qualifying local programs are authorized to lower or raise the fees upon demonstration to the Board of such a need. Additionally, the Department is considering providing one-time grants to assist those localities that need to establish new stormwater management programs.

The primary disadvantage of this regulatory action will be increased compliance costs in some instances for construction site operators. However, the final regulations have been modified in a number of ways to significantly reduce the fiscal impacts associated with compliance with the water quality and quantity technical standards and it is believed that the final regulations represent a reasonable balance between necessary water quality and quantity improvements and potential economic concerns.

Changes made since the proposed stage

Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar's office, please put an asterisk next to any substantive changes.

Section number	Requirement at proposed stage	What has changed	Rationale for change
4VAC50-60-10	Section 10 contains definitions that are applicable throughout the VSMP regulations. Newly defined terms were proposed to be added to this section, including: 1) "Act": to be defined as the VA Stormwater Management Act (§10.1-603.1 et seq.). 2) "Comprehensive stormwater management plan": new term used in section 96; similar to the concept of a "regional (watershed wide) plan" utilized in the current regulations. 3) "Drainage area": term is utilized in other definitions, and in sections 63, 72, 108, and 114. 4) "Flood fringe": utilized in other terms that are relevant to section 66. 5) "Floodplain": utilized in other terms that are relevant to section 66. 6) "Floodway": utilized in other terms that are relevant to section 66. 7) "Karst features": used in other terms in section 10, in section 85, section 108, and section 126. 8) "Manmade stormwater conveyance system": utilized in other terms and section 66. 9) "Natural channel design concepts": utilized in other terms that are relevant to section 66. 10) "Natural stormwater conveyance system": utilized in other terms and in section 66. 11) "Natural stream": utilized in the definition of "channel". 12) "Peak flow rate": utilized in other terms and in section 66.	Additional new terms and definitions have been added, including: 1) Chesapeake Bay Watershed 2) Karst area 3) Urban Development Area or UDA Further revisions are made to the definitions to the following terms: 1) Adequate channel 2) Comprehensive stormwater management plan 3) Development 4) Drainage area 5) Flood fringe 6) Linear development project 7) Natural stream 8) Point of discharge 9) Pollutant discharge 10) Predevelopment 11) Runoff characteristics	A definition of "Chesapeake Bay Watershed" was added, as that term is now utilized in determining water quality requirements. A further revision was made to the definition of "adequate channel" to clarify how that term applies to wetlands. A further revision was made to the definition of "comprehensive stormwater management plan" to clarify that such plans may be used for either water quality or quantity purposes, or both. A further revision was made to the definition of "development" in response to a comment requesting clarity as to whether land disturbing activities that did not result in the construction of a structure could still be considered "development activities". A further revision was made to the definition of "drainage area" in order to increase clarity following questions raised in public comments.

	13) “Point of discharge”: utilized throughout section 66. 14) “Pollutant discharge”: as amended, intended to replace the current term “nonpoint source pollutant runoff load” or “pollutant discharge”. Utilized in various sections of the greater body of VSMP regulations. 15) “Prior developed lands”: utilized in section 63. 16) “Qualifying local stormwater management program” or “qualifying local program”: term used in various places throughout Parts II and III, especially Part IIIA. 17) “Restored stormwater conveyance system”: term used in section 66. 18) “Runoff characteristics”: term used in other definitions and in section 66. 19) “Runoff volume”: defined as the volume of water that runs off the site of a land disturbing activity from a prescribed design storm. 20) “Site hydrology”: term utilized in section 66. 21) “Stable”: term is used in the definition of “unstable” and in section 66. 22) “Stormwater conveyance system”: term is used in other definitions and in section 66. 23) “Stormwater management standards”: term used in sections 20 and 40. 24) “Unstable”: term is used in section 66. 25) “Virginia Stormwater Management Handbook”: term is used in section 66. Amendments were proposed to the definitions of existing terms, including: 1) “Adequate channel”: to add clarity. 2) “Best management practice” or “BMP”: to align the title of the definition with other terms in section 10. 3) “Channel”: to add clarity. 4) “Development”: to add clarity; also does remove the requirement that residential activities result in three or more dwelling units to be considered development. 5) “Environmental Protection Agency” or “EPA”: to align the title of the definition with other terms in section 10. 6) “Facility or activity”: delete the word “program”, as it is		Further revisions were made to the definitions of “flood fringe” , “floodplain”, and “floodway” in order to increase clarity following questions raised in public comments. A definition of “karst area” was added, as that term is utilized in section 85. A revision was made to the definition of “linear development project” following a question during the public comment period as to whether that term included water and sewer lines. A revision was made to the definition of “natural stream” to clarify that channels designed utilizing natural channel design concepts may be considered a natural channel. A further revision was made to the definition of “point of discharge” in order to increase clarity following questions raised in public comments. A further revision was made to the definition of “pollutant discharge” in order to increase clarity following questions raised in public comments. A further revision was made to the definition of “pollutant discharge” in order to clarify how sites with pre-existing structures that have been demolished fit within this term. The definition of “runoff characteristics” was further revised to indicate that the list included in the definition is all-

	already the last word represented by the letter P in "VSMP". 7) "Flooding": addition of the word "thereby" for clarity purposes. 8) "Impervious cover": addition of the word "conventional" in two places; changes to the language concerning gravel to include gravel surfaces that may become compacted within the definition. 9) "Land disturbance": amendment to abbreviate "federal Clean Water Act" as "CWA". 10) "Local stormwater management program" or "local program": added language to specify that the Department may administer a local program in some cases, to add plan review to the list of items included in a local program, and to remove the discussion of ordinance contents, as the Department will not utilize an ordinance and the definition otherwise provides for use of an ordinance by a locality operating a local program. 11) "Major municipal separate storm sewer outfall" or "major outfall": to align the title of the definition with other terms in section 10. 12) "Municipal Separate Storm Sewer System Management Program" or "MS4 Program": deletion of "Virginia Stormwater Management", as the term "Act" is now proposed to be defined. 13) "National Pollutant Discharge Elimination System" or "NPDES": to align the title of the definition with other terms in section 10. 14) "Owner": addition of "or pollutants" to add clarity. 15) "Permit-issuing authority": removal of description of the responsibility of a permit issuing authority, as these responsibilities are described more fully in proposed Parts IIIA and IIIB. Addition of "with a qualifying local program" to clarify which localities may be permit-issuing authorities. 16) "Pre-development": changes the time for determining a pre-development land condition to the time of plan submittal, rather than the current time of plan approval. 17) "Privately owned treatment works" or "PVOTW": to		inclusive. A new definition of "Urban Development Area" or "UDA" was included, as that term is used in sections 63 and 69.

	align the title of the definition with other terms in section 10. 18) “Publicly owned treatment works” or “POTW”: to align the title of the definition with other terms in section 10. 19) “Site”: amendments are proposed for clarification, including additional language regarding lands that have frontage on tidal waters. 20) “Stormwater management plan”: proposed amendment simply indicates that a plan could consist of more than one document. 21) “Stormwater Management Program”: amendment would delete “Virginia Stormwater Management”, as the term “Act” is now proposed to be defined. 22) “Virginia Stormwater Management Program” or “VSMP”: to align the title of the definition with other terms in section 10, and to utilize the abbreviated terms for the federal Clean Water Act and the Virginia Stormwater Management Act. 23) “Virginia Stormwater Management Program permit” or “VSMP permit”: to align the title of the definition with other terms in section 10. 24) “Water quality standards”: to utilize the abbreviated terms for the federal Clean Water Act and the Virginia Stormwater Management Act. 25) “Watershed”: amendments are proposed to clarify the interaction of this definition in situations involving karst. Terms were proposed to be deleted due to their no longer being used in the regulations, including: 1) “Aquatic bench”: a component of a stormwater pond; term is not useful in the regulations and the concept will be included in the VA Stormwater Management Handbook if necessary. 2) “Average land cover condition”: formerly had relevance to water quality treatment requirements, but is not utilized by the new proposed Runoff Reduction Method.		

	3) “Bioretention basin”: a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 4) “Bioretention filter”: a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 5) “Grassed swale”: a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 6) “Infiltration facility”: a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 7) “Nonpoint source pollutant runoff load” or “pollutant discharge”: “nonpoint source pollutant runoff load” is no longer utilized; a new definition is proposed to be created for “pollutant discharge”. 8) “Regional (watershed wide) stormwater management facility” or “regional facility”: term is not utilized in the regulations. 9) “Regional (watershed wide) stormwater management plan” or “regional plan”: term has been replaced with “comprehensive stormwater management plan”. 10) “Sand filter”: a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 11) “Shallow marsh”: a component of an extended detention basin; term is not useful in the regulations and the concept will be included in the VA Stormwater Management Handbook if necessary. 12) “Stormwater detention basin” or “detention basin”: a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 13) “Stormwater extended detention basin” or “extended		

	detention basin": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 14) "Stormwater extended detention basin enhanced" or "extended detention basin-enhanced": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 15) "Stormwater retention basin" or "retention basin": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 16) "Stormwater retention basin I" or "retention basin I": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 17) "Stormwater retention basin II" or "retention basin II": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 18) "Stormwater retention basin III" or "retention basin III": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 19) "Vegetated filter strip": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 20) "Water quality volume": term is no longer used in the regulations.		
4VAC50-60-20	This section sets out the overall purposes of the Virginia Stormwater Management Program (VSMP) Permits regulations. Additional language was proposed to be added to this section describing generally the concept of a "qualifying local program" (which is further defined in	No additional changes were made; proposed revisions to this section were adopted as proposed.	The language of this section as proposed and adopted reflects the intended changes to this section.

	Part IIIA) and Board procedures related to stormwater management programs.		
4VAC50-60-30	This section lists the entities and projects that are subject to the Board's regulations pursuant to the Code of Virginia. Clarifying language was proposed to be added specifying that the Board's regulations apply to the Department in its oversight of locally administered programs or in its own administration of a local program and to an entity that establishes an MS4 program. Language was also proposed to be added to note that some land disturbing activities are specifically exempted from the Board's regulations by the Code of Virginia.	No additional changes were made; proposed revisions to this section were adopted as proposed.	The language of this section as proposed and adopted reflects the intended changes to this section.
4VAC50-60-40	Greater explanatory language was proposed to be added to set forth the Board's authority for the requirements of Part II under the Virginia Stormwater Management Act, to relate the applicability of the technical criteria established in Part II, and to specify that this technical criteria shall not take effect until a local program is approved by the Board.	The language of the proposed section, entitled "Authority and Applicability", was separated into two sections, "Authority" (contained in section 40) and "Applicability" (relocated to new section 45). The language related to the current technical criteria being applicable until the time of the adoption of a qualifying local program was also removed.	Separating the two concepts embodied in the proposed section into two separate sections helps with clarity. A new section 48 was created to deal specifically with the effect of the regulations on existing projects.
4VAC50-60-45	Section 45 is a new section. The language of section 45, however, had been largely included in proposed 4VAC50-60-40.	The "applicability" portion of proposed 4VAC50-60-40 has been relocated to this new section, with an added qualifier that new section 48 specifies other technical criteria that apply to certain land disturbing activities.	Separating the concepts of authority and applicability into two separate sections helps with clarity. Adding language indicating that Part IIA of the regulations applies except where 4VAC50-60-48 specifies otherwise indicates to the reader that section 48 should be consulted in regards to the requirements for a specific project.
4VAC50-60-48*	The proposed regulations did not contain any "grandfathering" provisions, whereby certain existing projects are exempted from having to meet new technical criteria.	New section 48 has been included. This section includes language from proposed section 40 indicating that all projects that receive permit coverage prior to the adoption of a qualifying local program will be held to the technical criteria contained in the existing general permit. It additionally	Concerns were expressed during the public comment period that imposition of the new technical criteria upon long-term projects that were already under construction would cause hardships, as already-completed portions of these projects had been designed to meet the current technical criteria and

		adds a provision in subsection B that specifies that if certain criteria are met, certain land disturbing activities can remain subject to the existing technical criteria (Part IIB) until June 30, 2019. Projects which continue beyond this date would then need to come into compliance with the new technical criteria in Part IIA thereafter. Subsection C specifies that where a land disturbing activity is part of a common plan of development or sale that received permit coverage prior to July 1, 2010, the land disturbing activity will be subject to the existing technical criteria found in Part IIB. Finally, subsection D contains grandfathering provisions applicable to projects which have received governmental bonding or public financing.	redesigned could require reconstruction of the site. Additionally, concerns were raised that approvals for these projects were based on designs utilizing the existing technical criteria, and that requiring redesigns would require those projects to go through local planning processes for a second time.
4VAC50-60-50	This section was proposed to be deleted. Most of the provisions of the current section were proposed to be incorporated into other sections of the regulations where similar provisions are located. A new section 53 (explained below) was proposed to describe the general requirements of Part II.	This section is likewise deleted in the final regulations.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-53	This new section was proposed to be added in place of deleted section 50 and sets forth the goals and objectives of Part II, and also specifies that all control measures must be employed in a manner which minimizes impacts on receiving state waters. More specific requirements were set forth in later sections within Part II.	No change was made to the proposed language of this section; the section was adopted as proposed. It is of note that this section is now located in Part IIA, as Part II has been separated into Parts IIA and IIB.	The proposed and adopted language reflects the intent of this section.
4VAC50-60-56	The proposed section separately sets out the concept that had previously be included in section 50 that nothing in these regulations limits the applicability of other laws and regulations (not just the Erosion and Sediment Control Law and Regulations), nor do they limit the ability of other agencies to impose more	No change was made to the proposed language of this section; the section was adopted as proposed. It is of note that this section is now located in Part IIA, as Part II has been separated into Parts IIA and IIB.	The proposed and adopted language reflects the intent of this section.

	stringent requirements as allowed by law. Separately setting this information out in its own section was intended to increase clarity concerning the interaction of these regulations and other laws, regulations, and authorities.		
4VAC50-60-60	This section, which had contained the water quality requirements of Part II, was proposed to be deleted in its entirety. New water quality criteria and compliance methods were proposed to be established in 4VAC50-60-63 and 4VAC50-60-65 (both discussed below).	This section is likewise deleted in the final regulations. It is of note that this language has been included in new section 96 of the final regulations, as it is available for use to projects that meet the conditions specified in new section 48.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-63	As proposed, this new section would revise the water quality criteria required to be met by land-disturbing activities. Rather than the current performance-based and technology-based methods, compliance would be achieved in accordance with the methods set out in new section 65 (discussed below). Under the proposed language, new development projects (those other than projects occurring on prior developed lands, discussed below) must achieve a phosphorus loading of 0.28 lbs. per acre per year. Projects occurring on prior developed lands (as proposed to be defined in 4VAC50-60-10) would be required to reduce phosphorus loads to a level that is at least 20% below the pre-development loading; however, in no case would the load be required to be reduced to less than 0.28 lbs per acre per year unless a more stringent standard is established by a qualifying local program. The 0.28 standard was derived from the reductions deemed necessary to meet Virginia's Chesapeake Bay goals under the Tributary Strategies. The 20% reduction for redevelopment projects is actually a lesser standard than is needed to meet those goals; however, it represents a marked improvement from the existing 10% reduction while having the intent of not discouraging redevelopment or encouraging sprawl.	This section has been revised. Water quality requirements for new development projects are as follows: 1) New Development.* Under this section, new development projects (those other than projects occurring on prior developed lands, discussed below) must achieve a phosphorus loading of 0.45 lbs. per acre per year. As new data is being developed regarding necessary pollutant reductions related to the Chesapeake Bay, this standard applies statewide and a separate regulatory action will be undertaken to address standards for the Bay watershed in the future. Should such an action result in a more stringent standard being adopted within the Bay watershed, then within Urban Development Areas, a qualifying local program may establish a standard of no greater than 0.45 pounds per acre per year to be applied to projects that disturb greater than or equal to one acre, based upon factors set forth in subdivision (1)(a).	The 0.28 phosphorus standard was developed based upon Virginia's Tributary Strategies for the Bay. However, new data is currently under development related to the Bay and it is believed inappropriate to establish a standard related to the Bay cleanup until final information is received. In combination with these amendments, a new section 69 has been established that provides additional offsite compliance options. That section is discussed below. Noting the ability of a qualifying local program to establish a more stringent standard provides clarity to the reader. This ability is set out in the Stormwater Management Act. Relocating the language allowing for application of the water quality criteria to each drainage area of a site to section 65 simply places that language with other compliance-type provisions for clarity purposes.

	Unless a site drains to more than one hydrologic unit code (HUC) (in which case the requirements are applied independently within each HUC), the water quality criteria would be applied to the site as a whole, although a local program has the discretion to allow for application of the criteria to each individual drainage area of a site. Finally, the proposed section noted that where a total maximum daily load (TMDL) wasteload allocation (WLA) has been assigned to stormwater discharges from construction activities, the construction site operator must install measures to meet the WLA in compliance with the terms of the General Permit for Discharges of Stormwater from Construction Activities. This note is intended primarily as a reference, as TMDL WLA requirements are put in place pursuant to the Clean Water Act and other VSMP permit regulations (including the General Permit).	2) Redevelopment.* The phosphorus reduction requirement for redevelopment projects that disturb less than one acre was relaxed to a requirement that the post-development load be reduced to an amount at least 10% below the predevelopment load. Redevelopment projects that are greater than or equal to one acre in land disturbance continue to be subject to the proposed 20% reduction requirement. In any case, the post-development load of a redevelopment project is not required to be reduced to below the applicable standard for a similarly-situated new development project unless a more stringent standard has been established by a qualifying local program. Other amendments to the final regulation include a clarifying amendment in the opening paragraph to specify that the requirements of this section are intended to control stormwater pollutants, and removal from that paragraph of language allowing for the local program to have discretion to allow for application of the criteria to each drainage area of a site (however, this language is simply relocated to section 65). Finally, a clarifying statement was added in subsection 5 that provides that nothing in this section prohibits a qualifying local program from establishing a more stringent standard.	

		The TMDL provisions of this section have been retained as proposed.	
4VAC50-60-65	In place of the performance-based and technology-based criteria of the existing regulations, this proposed section provided that compliance with the water quality criteria contained in section 63 is determined by utilizing the Virginia Runoff Reduction Method. Through use of a spreadsheet incorporated by reference into the regulations, the Method seeks to reduce both runoff and pollutants from the site. Similar to the current approach, compliance is ultimately achieved through the implementation of BMPs on the site. The Method and the proposed regulations, however, allowed for an expanded and innovative set of practices. Efficiencies for various types of BMPs were also updated based on today's science. The list of available BMPs will continue to be augmented through the further development of the Virginia Stormwater BMP Clearinghouse website. The Clearinghouse will be staffed by the Department (and Virginia Tech's Virginia Water Resource Research Center) and an advisory committee on a continual basis, and will allow for the submission and approval of new designs and efficiencies for stormwater BMPs. Overall, this was intended to allow greater flexibility for developers and better site planning and design. If, however, a particular type of BMP is unsuitable for use in a locality due to soil types, etc., subsection D did allow for use limitations to be put in place with justification to the Department. In the event that a qualifying local program desires to do so, proposed section 65 additionally allowed compliance to be achieved through the use of another methodology that is demonstrated to achieve equivalent or more stringent results and is approved by the Board. This section provided other compliance methods, as well. In the event that a comprehensive watershed stormwater management plan has been adopted	While retaining the intent of the proposed language, this section was revised in several ways. First, the BMPs found in Table 1 and their efficiencies have been updated based on updated information received from the Center for Watershed Protection and the Chesapeake Stormwater Network. Secondly, language from proposed section 63 allowing for a local program to allow the application of the water quality criteria to each drainage area of the site if certain conditions are met was relocated to this section. Other grammatical and clarifying revisions were also made to the language of this section. Finally, the language that had been found in subsections F, G, and H of the proposed regulations has been deleted, as offsite opportunities for compliance (including those that had been found in subsections F and G) have been consolidated in new section 69 (discussed below), and exceptions (which were discussed in subsection H) are addressed in section 122. A reference to new section 69 has been included in the final regulations in subsection G.	Updated information has been received related to BMP efficiencies, thus necessitating further updates to Table 1. A number of requests for clarification were made during the public comment period, thus requiring the minor clarifying revisions made in different places throughout this section. Relocation of the language allowing for the water quality criteria to be applied to each drainage area of a site in certain circumstances places this language with other like concepts dealing with compliance with the requirements of section 63. Finally, confusion was expressed during the public comment period as to what types of offsite compliance options are available for use. To provide clarity, as well as to provide some additional options for offsite compliance, new section 69 has been created, and all offsite options are now found there.

	pursuant to section 96 for the watershed in which the project is located, off-site controls in accordance with the plan could be utilized for compliance (comprehensive watershed stormwater management plans will be discussed in more detail in the discussion of section 92 below). Even in the case that no comprehensive watershed stormwater management plan exists, off-site controls could be allowed by a local program assuming that certain conditions are met. Finally, an exception to the water quality requirements could be granted in certain cases through the waiver provisions of 4VAC50-60-122 (discussed in more detail below).		
4VAC50-60-66	The proposed section contained refined channel protection and flood protection criteria. The overall water quantity requirements were designed to meet the mandate of §10.1-603.4(7), which requires the replication, as nearly as practicable, of the existing predevelopment runoff characteristics and site hydrology, or improvement upon the contributing share of the existing predevelopment runoff characteristics and site hydrology if stream channel erosion or localized flooding is an existing predevelopment condition. The channel protection criteria of this section vary depending upon which type of conveyance system stormwater is being discharged to: manmade, restored, stable natural, or unstable natural. The flood protection requirements likewise vary based on the same list of systems. An exception to these requirements was contained in subsection C, which exempts certain sites based upon area and peak flow rate increase. For discharges that consist of sheet flow (i.e., stormwater discharged over a broad surface area rather than to a conveyance system), subsection D required that those discharges be evaluated and diverted to a detention facility or conveyance system if necessary to protect downstream properties or resources.	The majority of the language of the proposed regulations was retained in the final regulations. However, several revisions were made, including: 1) The addition of a statement indicating that nothing in this section prohibits a qualifying local program from adopting a more stringent standard. 2) *The revision of the condition utilized in evaluating concentrated discharges to unstable natural channels for channel protection purposes. In the proposed regulations, the “forested” condition was to be utilized. In the final regulations, this has been replaced with the “good pasture” condition, unless the pre-developed condition is forested, in which case the forested condition is utilized.* 3) *The addition of an allowance for discharges of concentrated stormwater to unstable channels from redevelopment projects of less than	Similar to concerns raised regarding the water quality technical criteria, public comments expressed the concern that the proposed water quantity criteria could cause difficulties for redevelopment and infill sites and contribute to sprawl. The concern was also expressed that the use of the forested condition in the requirements was exceedingly stringent. Based on these comments and review, the revisions to this section removed the use of the forested condition, and instead selected a relaxed, though still protective, standard of “good pasture”. A question was also raised during the public comment period as to the necessity for a downstream analysis where a site was exempted from water quantity requirements under the one percent rule. As the outcome of such an analysis would not impact what is required of an exempted site, the requirement for an analysis was explicitly removed.

		five acres or from new development projects of less than one acre to utilize the pre-developed condition of the site in determining the post-development channel protection requirements for the site, rather than the forested condition.* 4) *The revision of the condition utilized in evaluating concentrated discharges to unstable natural channels for flood protection purposes. In the proposed regulations, the "forested" condition was to be utilized. In the final regulations, this has been replaced with the "good pasture" condition, unless the pre-developed condition is forested, in which case the forested condition is utilized. 5) *The addition of an allowance for discharges of concentrated stormwater to unstable channels from redevelopment projects of less than five acres or from new development projects of less than one acre to utilize the pre-developed condition of the site in determining the post-development flood protection requirements for the site, rather than the forested condition. 6) A clarification that if a site is exempted from water quantity requirements under the "one percent rule" contained in subsection D, then no analysis under subsection H is required. 7) A clarification in subsection E that increased volumes of sheetflow may be diverted to a stormwater management facility, instead of a	A question was also raised as to why sheetflow was required to be routed to a detention facility (which is a specific type of BMP), when other BMPs could serve a similar role. This limitation was unintentional and a corrective amendment was made. Finally, other limited amendments were made to this section for simple clarification purposes.

		detention facility. 8) Other limited grammatical and clarifying amendments.	
4VAC50-60-69	This section was added to the final regulations and did not exist in the proposed regulations. However, several of the offsite options contained in section 69 (including comprehensive watershed stormwater management plans, locality pro rata fee programs, and controls installed on other properties controlled by the developer) were found in section 65 of the proposed regulations.	All offsite compliance options have been consolidated into new section 69. These include comprehensive watershed stormwater management plans, locality pro rata fee programs, controls installed on other properties controlled by the developer, nonpoint nutrient offsets, and an option for a payment to be made to the Department in place of a portion of the required onsite water quality reductions. Comprehensive watershed stormwater management plans and pro rata fee programs are established by localities to address necessary water quality and quantity reductions on a local watershed basis. Comprehensive watershed stormwater management plans are further defined in section 92 (discussed below). Requirements for pro rata fee programs are set out in section 15.2-2243 of the Code of Virginia. Adoption of these programs is optional to a locality. As they are both locally developed, these options will not be available where the Department administers a local program. Nonpoint nutrient offsets are an allowable offsite option of obtaining compliance with the water quality technical criteria. The offset program was created by HB2168 in the 2009	Numerous public comments were received expressing confusion as to the availability of offsite compliance options. To provide greater clarity, it was determined to consolidate all offsite compliance options into a single section. The comprehensive watershed stormwater management plan option existed in the proposed regulations and was simply integrated into this new section. A clarifying amendment allowing for this option to be utilized by state agencies was included, as this is existing practice under the current regulations. Pro rata fees were also included in proposed section 65 as a part of the description of comprehensive stormwater management plans, and were set out separately in this new section for clarity purposes and to recognize that they can exist independently of a true comprehensive stormwater management plan. Likewise, the option for offsite controls to be installed by the developer was included in the proposed section 65, and it has been relocated to this section with a clarifying amendment indicating that it is not available for use where a local comprehensive stormwater management plan or pro rata fee exists, unless otherwise allowed by the qualifying local program. This allows qualifying local programs to manage

		General Assembly, and did not exist at the time the proposed regulations were proposed by the Board. The requirements for the utilization of these offsets is more particularly set forth in section 10.1-603.8:1 of the Code of Virginia. The Board has also adopted guidance related to this program. The allowance for a developer who controls a second site to install controls on that site in place of onsite controls (under specified conditions) for water quality compliance purposes was found in section 65 of the proposed regulations and is included in this section, with clarifying amendments to the language indicating that this option may be utilized where no local comprehensive watershed stormwater management plan or pro rata fee exists, or where a qualifying local program otherwise elects to allow its use. *A new offsite water quality compliance option is provided in subsection B; this option will be available should the Board later establish a standard more stringent than 0.45 pounds per acre per year of phosphorus for the Chesapeake Bay watershed. This option is available only where the other offsite options (which are set forth in subsection A) are not available for use, where the price of a local pro rata fee program exceeds $23,900 per pound of phosphorus, or where a qualifying	the use of this option to ensure that the integrity of their locally-developed comprehensive watershed stormwater management plans and pro rata fee programs is preserved. The inclusion of nonpoint nutrient offsets as an option for compliance with the water quality requirements of the regulations is a requirement of the Code of Virginia following the 2009 General Assembly. Finally, the new option that will allow for a payment to be utilized for water quality compliance (following the establishment of a standard more stringent than 0.45 pounds per acre per year within the Bay watershed) has been added following concerns raised during the public comment period regarding the difficulty of compliance with standards more stringent than 0.45 pounds of phosphorus per acre per year. This is intended to be an option of last resort where no other options exist, unless a qualifying local program allows otherwise. This limitation allows for locally-developed options to be protected by the qualifying local program, as water quality controls on a local basis are believed preferable to payments that may be applied outside of the locality. However, in order to prevent a situation where a developer is forced to participate in a locally-developed program with a fee that exceeds that set in the state option, this option is also available where a pro rata fee

		local program otherwise elects to allow its use. Under this option, a payment may be made in place of achieving onsite compliance. Payment amounts shall be determined based on the nearest 0.01 of a pound of phosphorus, and are set at $15,000 per pound for sites within Urban Development Areas, and $23,900 per pound elsewhere. The Board will expend the funds collected in accordance with the requirements set out in subdivision 2. Utilization of this option is subject to several constraints—it is not available on new development sites outside of the Chesapeake Bay Watershed; new development projects disturbing one acre or greater within the Chesapeake Bay Watershed must achieve a phosphorus level of at least 0.45 pounds per acre per year on site before being allowed to make a payment; and redevelopment projects disturbing one acre or greater must achieve at least a 10% reduction on site before being allowed to make a payment. New development and redevelopment projects disturbing less than one acre may achieve all necessary phosphorus reductions through a payment. Finally, this section notes that where the Department administers a local program, only nonpoint nutrient offsets, off-site controls by the developer, and the payment option of subsection B (when it becomes available) will be available for use.	exceeds the highest threshold set by the state option. The price of $23,900 per pound of phosphorus reflects a figure cited by the US EPA as the cost of achieving reductions. A lesser fee of $15,000 per pound for sites within UDAs was selected in order to avoid disincentivizing high density growth within those areas. The guidelines for use of the funds collected are intended to guide the Board in seeking to achieve equivalent reductions through the use of the funds collected, while providing flexibility to consider various types of projects each year. Limitations on the use of the payment option were developed to ensure that onsite compliance was maximized, while still providing necessary flexibility. Small sites were noted during the public comment period as having the greatest difficulties with compliance; thus, sites of under one acre of land disturbance may achieve all necessary reductions through a payment. As the 0.45 standard is applicable under the current regulations, no payment option is provided for new development sites that would still be subject to that standard outside of the Bay Watershed (notably, by law, all of these sites either exceed one acre of land disturbance themselves, or are part of a common plan of development or sale

			that exceeds one acre in land disturbance). Finally, for redevelopment sites of one acre or greater and for new development sites that would be subject to any more stringent standard, it was intended that these sites achieve at least the current reduction standards (0.45 for new development and a 10% reduction for redevelopment) prior to allowing for use of the payment option. As the Department does not develop comprehensive stormwater management plans or pro rata fees, those options will not be available where the Department administers a local program.
4VAC50-60-70	This section was proposed to be deleted in its entirety. New water quantity criteria, including channel protection criteria, were proposed to be established in 4VAC50-60-66 (discussed above). Requirements for compliance with the Virginia Erosion and Sediment Control Law and Regulations were proposed to be relocated to new section 56 (discussed above).	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-72	This proposed new section placed design storm requirements in their own section and provided greater specificity. Prescribed design storms are the 1, 2, and 10 year 24 hour storms using the site-specific rainfall precipitation frequency data recommended by the US National Oceanic and Atmospheric Administration (NOAA) Atlas 14. NRCS synthetic 24 hour rainfall distribution and models, hydrologic and hydraulic methods developed by the US Army Corps of Engineers, or other standard methods shall be used to conduct any analyses. The Rational Method and Modified Rational Method may be utilized with the approval of the local program, however, use of these methods is proposed to be limited to drainage areas of 200 acres or less, as it is believed that this is the	This section has been retained as proposed, except for a clarifying amendment to subsection B that clarifies that existing watershed characteristics and the ultimate development condition of the subject project serve as the basis for hydrologic analyses <u>unless otherwise specified.</u>	It was noted in public comment that various provisions of the regulations require other considerations to be utilized in certain cases.

	maximum drainage area for which these methods can be reliably used.		
4VAC50-60-74	The proposed section notes the Board's encouragement of (but does not impose requirements for) stormwater harvesting to the extent that such uses of captured stormwater is permitted by other authorities. This is consistent with section 10.1-603.4(9), which was added to the Code of Virginia following the 2008 General Assembly.	No changes were made to the proposed regulations; the section was adopted as proposed.	No changes were made to the proposed regulations; the section was adopted as proposed.
4VAC50-60-76	The proposed section specifically explains that unless exempt pursuant to section 10.1-603.8(B), linear development projects must address stormwater runoff in accordance with the VSMP regulations.	No changes were made to the proposed regulations; the section was adopted as proposed.	No changes were made to the proposed regulations; the section was adopted as proposed.
4VAC50-60-80	This section was proposed to be deleted in its entirety. New water quantity criteria for all sites, including flood protection criteria, were proposed to be established in 4VAC50-60-66 (discussed above).	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-85	The proposed section placed two existing requirements into subsections (B) and (C), and added a statement of the Board's preference that construction of structures or facilities within tidal or nontidal wetlands or perennial streams is not recommended. Additionally, this section addressed the construction of structures or facilities within karst areas and karst features, neither of which are required to be considered under the existing regulations.	This section was retained as proposed, with an amendment to subsection C indicating that stormwater management wet ponds and extended detention ponds that are not subject to the Virginia Impounding Structure Regulations be engineered for structural integrity for the 100 year storm event, and an amendment to subsection D requiring a study of the geology and hydrology within a karst area prior to construction of construction of stormwater management impoundment structures or facilities in such an area.	Public comment noted that hydrologic concerns, in addition to geologic concerns, are relevant in karst areas. As some stormwater management facilities will be overtopped by 100 year storm events regardless of their spillway capacities, a requirement for a 100 year spillway capacity to be established was removed. Spillway capacity remains a consideration in determining structural integrity.
4VAC50-60-90	This section was proposed to be deleted in its entirety. Regional stormwater management plans were renamed "comprehensive watershed stormwater management plans" and were specifically addressed in section 96 (and have now been relocated to section 92).	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-92	Section 92 is a new section that was not included in the	The provisions of proposed section 96	Relocation of this section was

	proposed regulations. The contents of section 92, however, were found in proposed section 96.	have been relocated to section 92. A clarifying amendment was made to specifically allow state and federal agencies to develop comprehensive stormwater management plans.	necessary to accommodate the new sections discussed below which compose Part IIB. The establishment of comprehensive stormwater management plans by state and federal agencies is existing practice and is intended to be permitted under the new regulations as well.
4VAC50-60-93	The proposed section established a specific section for development of stormwater management plans. In addition to the concept embodied in the existing regulations [which would now be broken out as subsections (A) and (B)], an additional requirement is included that all sources of surface runoff and all sources of subsurface and groundwater flows converted to surface runoff be considered in the plan.	This section is deleted. Its contents were relocated to section 108 (discussed below).	The contents of this section related to the development of stormwater management plans, which is specifically addressed by section 108. Relocation of the language of this section to that section is believed to enhance context and understanding.
4VAC50-60-94	This section was not included in the proposed regulations.	This section has been added to the regulations and specifies that land disturbing activities that are not subject to the technical criteria of Part IIA are subject to the technical criteria of Part IIB, which is composed of the sections that follow.	The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
4VAC50-60-95	This section was not included in the proposed regulations.	This section contains the General requirements of the existing regulations.	The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
4VAC50-60-96	The proposed section contained the requirements for comprehensive watershed stormwater management plans, which have been relocated to section 92 (discussed above).	This section contains the Water quality requirements of the existing regulations. Minor amendments were made to allow use of BMPs found in Table 1 of section 65 and BMPs found on the Virginia Stormwater Management BMP Clearinghouse	The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.

		website.	
4VAC50-60-97	This section was not included in the proposed regulations.	This section contains the Stream channel erosion requirements of the existing regulations.	The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
4VAC50-60-98	This section was not included in the proposed regulations.	This section contains the Flooding requirements of the existing regulations.	The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
4VAC50-60-99	This section was not included in the proposed regulations.	This section allows water quality and, where allowed, water quantity requirements of Part IIB to be met through the offsite provisions of sections 69 and 92.	The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria. However, as offsite options are redefined in Parts IIA (including comprehensive stormwater management plans), and as existing regional stormwater management plans will cease to exist, it was determined appropriate to allow the provisions of Part IIA applicable to offsite compliance to apply to Part IIB as well.
4VAC50-60-100	This section was proposed to be deleted in its entirety. Applicability of Part IIIA was proposed to be explained in section 102.	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-102	The proposed section explained that Part IIIA of the proposed regulations establishes the minimum technical criteria and local government ordinance requirements for a “qualifying local program”, which is the proposed name of a locality-operated stormwater management	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.

	program that has been authorized by the Board to administer its responsibilities under the Virginia Stormwater Management Act and federal law and regulations.		
4VAC50-60-104	The proposed section explained that all qualifying local programs must require compliance with the provisions of Part II of the regulations and must comply with 4VAC50-60-460(L), stated that more stringent criteria established by localities will be considered by the Department in its review of state projects within that locality, and explained that nothing in Part IIIA is to be construed as giving regulatory authority over state projects to a locality.	This section was retained as proposed, with a technical amendment to specify both Part IIA and Part IIB, as Part II is now consists of these two elements.	This change tracks the splitting of Part II into a Part II A and a Part II B.
4VAC50-60-106	The proposed section set forth the administrative requirements for a qualifying local program. These include identification of various authorities who will be responsible for different portions of the program, program procedures, adoption of an ordinance, and reporting (which is further outlined in 4VAC50-60-126). The section also notes the ability of a qualifying local program to require a performance bond or other surety in accordance with the Stormwater Management Act.	The section has been retained as proposed, with a clarifying amendment indicating that procedures and policies for long-term inspection and maintenance of stormwater management facilities are not required to be included in a qualifying local program's ordinance.	While procedures and policies for long-term inspection and maintenance of stormwater management facilities are important to be developed, they are not necessarily a component of a qualifying local program's ordinance.
4VAC50-60-108	The proposed section set forth specific requirements for review of stormwater management plans by qualifying local programs. This includes not only review procedures to be employed by the qualifying local program, but also the requirements for a complete stormwater management plan, which must be signed and sealed by a professional. The section also permitted a qualifying local program to allow for a less extensive initial stormwater management plan to be submitted for initial clearing and grading activities (this is not available under the current regulations). Finally, the section contained procedures for modifying a previously-approved stormwater management plan (the current regulations simply state that no changes may be made to an approved plan without review and written approval by the locality).	The section has been retained as proposed, with several amendments: 1) Items included in section 93 of the proposed regulations dealing with development of stormwater management plans was included in subsection A, with a revision affording discretion to the qualifying local program in subdivision 2 of subsection A. 2) A note that "no more than" 50% of the required "base" fee is due at the time of plan submission. 3) A clarification in subdivision (B)(4) that electronic communication may be considered communication in writing where it is available to the applicant. 4) A note that "no more than" 50% of	Integration of the provisions of proposed section 93 into this section is believed to enhance context and clarity. Allowing qualifying local programs to have discretion in deciding whether to apply subdivision (A)(2) is believed appropriate, as circumstances may demonstrate that an alternative consideration is preferable. Amendments referencing "no more than" 50% of the required "base" fee were made to mirror amendments to Part XIII of the VSMP regulations, which are discussed in the Agency Statement associated with the ongoing regulatory action that is amending Part

		the required "base" fee is due at the time of initial plan submission, where such initial plans are allowed.	XIII. A question was raised during the public comment period as to whether electronic communication sufficed as "written" communication. The amendment to this section clarifies that electronic communication is acceptable where it is an available means of communication to the applicant.
4VAC50-60-110	This section was proposed to be deleted in its entirety. The requirement for compliance with the technical criteria contained in Part II is proposed to be relocated to new section 4VAC50-60-104.	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-112	The proposed section set forth the procedures by which a qualifying local program will be permitted to authorize coverage under the Board's General Permit for Discharges of Stormwater from Construction Activities. This will allow for operators of regulated activities to receive both Erosion and Sediment Control and Stormwater Management permits from a single locality, rather than today's practice of receiving Erosion and Sediment Control permits from the locality and Stormwater Management permit coverage from the Department. This is intended to enhance user-friendliness and efficiency for the regulated community, and meet the Board's mandate for authorization of local programs under the Virginia Stormwater Management Act.	The section has been retained as proposed, with a clarifying amendment indicating that the applicant need only submit proposed right of entry agreement or easements "where required" in accordance with 4VAC50-60-124.	Section 124 was amended to remove requirements for maintenance agreements, easements, and rights of entry for certain stormwater management facilities. The amendments to that section are discussed below.
4VAC50-60-114	The proposed section set forth requirements for site inspections by qualifying local programs to ensure compliance with the Board's regulations and to ensure the long term functionality of stormwater management BMPs. First, the section requires inspections for compliance with the General Permit for Discharges of Stormwater from Construction Activities to be conducted by the qualifying local program during construction. Following construction, the person responsible for the development project or their designated agent shall be	The section has been retained as proposed, with amendments: 1) A clarification that the qualifying local program shall have the construction record drawing and certification on file prior to the release of the portion of "any" performance bond rather than "the" performance bond. 2) An allowance for a qualifying local	A public comment noted that performance bonds are not required for all projects. Many public comments expressed the concern that the new regulations, in allowing many innovative stormwater management practices that had not been available in the past, would result in many small BMPs that were located

	responsible for submitting construction record drawings of all permanent stormwater management facilities installed on the site to the qualifying local program for use in long term inspections of the facilities. The qualifying local program or its designee will then use these record drawings in conducting long term inspections in accordance with an approved inspection program that is developed by the qualifying local program. This program will ensure that all facilities are inspected at least once every five years (note that unlike the current regulations, which require inspections annually unless an alternative inspection program is established, the proposed section requires all qualifying local programs to establish an inspection program).	program to elect to require construction record drawings for stormwater management facilities for which maintenance agreements are not required by section 124. 3) A revision that requires only those owners whose stormwater management facilities have a maintenance agreement to be required to conduct inspections. 4) A revision that requires all inspection reports from owners to be submitted to the qualifying local program (for those facilities which require owner inspections). 5) The removal of "certified" from the title "certified landscape architect". 6) *A provision allowing for a qualifying local program to develop a strategy, as described in subsection D, for addressing maintenance of stormwater management facilities which are located on, and designed to primarily treat the stormwater of, an individual residential lot. This is in place of the requirement for inspections of such facilities. 7) Other technical amendments made to accommodate the revisions described in 6) above.	on individual lots (in comparison to the past practice of larger BMPs that treat larger areas). This large number of BMPs would create a burden on the local program, who was tasked with inspecting all BMPs under the proposal. In order to provide greater flexibility, amendments have been made to Part IIIA that allow for alternative strategies to be adopted in helping ensure the long-term maintenance of these small practices. The term "certified" was removed from "certified landscape architect" due to a recent change in the Code of Virginia regarding references to the landscape architecture profession.
4VAC50-60-116	Enforcement under the Virginia Stormwater Management Act and these regulations is governed specifically by statute and this section lists all potential remedies available to a qualifying local program under the Act, providing qualifying local programs with one source to find all of the authorities that are scattered in various places in the Act. In addition, this section established a recommended schedule of civil penalties for violations, which is required to be established by the Board in accordance with §10.1-603.14(A) of the Code	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.

	of Virginia.		
4VAC50-60-118	The proposed section observes the requirements for hearings contained within the Virginia Stormwater Management Act.	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.
4VAC50-60-120	This section was proposed to be repealed in its entirety. The requirement for a locality to adopt an ordinance is proposed to be relocated to 4VAC50-60-106(B), and procedures for Department review of a qualifying local program is proposed to be contained in Part IIIC.	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-122	The proposed section would allow for an exception to be administratively granted to the technical criteria contained in Part II (including the water quality and quantity criteria). Exceptions may be granted provided that certain criteria are met (these criteria are refined from those currently included in section 140), and a record of all exceptions granted is to be maintained and reported.	This section was retained as proposed, with the following amendments: 1) A note in subsection A that exceptions can be granted to the technical criteria of both Parts IIA and IIB. 2) *A requirement that, where an exception is granted to the water quality requirements of subsection 63, all available offsite options be utilized prior to the granting of an exception. Where an exception is thereafter granted, any remaining phosphorus reductions not achieved must be achieved by a payment in accordance with subsection B of section 69 (when that payment option becomes available). In the case of an exception, the minimum on site thresholds of subsection B of section 69 do not apply.	As Part IIB was added to the regulations, and as exceptions to the technical criteria are available under the current regulations, an allowance for an exception to the Part IIB technical criteria was added to this section. Comments were received during the development of the final regulations questioning the need for an exception process given the large number of offsite options now available. While it is intended that exceptions to the water quality criteria be granted on a very limited basis, it is recognized that some situations may still necessitate an exception. As the new state payment option has been created in section 69, however, it is not intended that an exception be granted without an accompanying payment that will allow water quality improvements to be achieved off site (this provision will apply only when that option becomes available as explained in 4VAC50-60-69(B)).
4VAC50-60-124*	The requirements for ensuring ongoing maintenance of stormwater management BMPs were proposed to be relocated to this new section. Some refinements were	*This section was retained as proposed, with amendments allowing a qualifying local program to not	Many public comments expressed the concern that the new regulations, in allowing many innovative stormwater

	proposed to these requirements, including a requirement that the qualifying local program be made a party to each agreement (which will allow the program to enforce the agreement).	require maintenance agreements, right of entry agreements, and easements for stormwater management facilities that are located on, and designed to primarily treat the stormwater runoff from, an individual residential lot, provided that it is demonstrated to the satisfaction of the qualifying local program that future maintenance will be addressed through a deed restriction or other mechanism enforceable by the qualifying local program.	management practices that had not been available in the past, would result in many small BMPs that were located on individual lots (in comparison to the past practice of larger BMPs that treat larger areas). This large number of BMPs would create a burden on the local program, who was tasked with inspecting all BMPs under the proposal. In order to provide greater flexibility, amendments have been made to Part IIIA that allow for alternative strategies to be adopted in helping ensure the long-term maintenance of these small practices.
4VAC50-60-126	The proposed section would require qualifying local programs to report information pertaining to stormwater management facilities installed in their jurisdictions, inspections made during the fiscal year, number of enforcement actions undertaken, and number of exceptions applied for and the number of exceptions granted. The section would also require permit files to be maintained for three years, inspection reports to be maintained for five years, and maintenance agreements/design standards and surveys/maintenance records for stormwater management facilities to be maintained in perpetuity.	This section was retained as proposed, with amendments to substitute “construction record drawings” for “postconstruction surveys”, and to specify that maintenance records need not be maintained in perpetuity where a stormwater management facility is removed due to redevelopment of the site.	The term “construction record drawings” is used elsewhere in the regulations and using that term in this section brings the language into consistency. As a stormwater management facility may cease to exist due to redevelopment of a site in the future, it is appropriate to not require maintenance records to be maintained in perpetuity where this occurs.
4VAC50-60-128	The proposed section notes that Part IIIB (sections 4VAC50-60-128 through 4VAC50-60-154) sets forth the criteria that will be followed by the Department in administering a local stormwater management program in a locality that is not required to adopt a qualifying local program pursuant to §10.1-603.3(A), or that does not elect to adopt a qualifying local program pursuant to §10.1-603.3(B).	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.
4VAC50-60-130	This section was proposed to be deleted in its entirety. Requirements for stormwater management plans and for stormwater management plan reviews are proposed to be relocated and refined in section 4VAC50-60-108	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.

	(discussed above).		
4VAC50-60-132	The proposed section notes that a local stormwater management program administered by the Department shall, similar to a qualifying local program, require compliance with the provisions of Part II unless an exception is granted. The section also notes that the Department shall apply the provisions of the VSMP regulations when reviewing a federal project, and it finally states that nothing in the regulations shall be construed as limiting the rights of other federal and state agencies to impose stricter requirements as allowed by law.	This section was retained as proposed, with a technical amendment to specify both Part IIA and Part IIB, as Part II is now consists of these two elements.	This change tracks the splitting of Part II into a Part II A and a Part II B.
4VAC50-60-134	The proposed section relates that, when the Department administers a local stormwater management program within a locality, the Department will be the permit issuing, plan approving, and enforcement authority; and that the Department or its designee will be the plan reviewing authority and the inspection authority. The Department shall also assess and collect fees. Finally, the Department may require the submission of a reasonable performance bond or surety in accordance with the Virginia Stormwater Management Act.	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.
4VAC50-60-136	The proposed section related that the Department will follow the same plan review procedures as required of qualifying local programs by 4VAC50-60-136. The Department shall not, however, accept initial stormwater management plans, which may be accepted by qualifying local programs.	The section has been retained as proposed, with a specification that the Department will not “review or approve” initial stormwater management plans (in place of not “accept”).	The amendment was made to increase clarity.
4VAC50-60-138	The proposed section described the requirements for and process by which the Department will authorize coverage under the Board’s General Permit for Stormwater Discharges from Construction Activities. This process is similar to that required to be utilized by qualifying local programs. The section does additionally note that the Board has the authority to require projects to receive individual permits (permits whose terms are drawn to apply to a singular, particular project rather than a class of similar types of projects) pursuant to 4VAC50-60-410(B)(3).	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.

4VAC50-60-140	This section was proposed to be deleted in its entirety. The exceptions process is proposed to be refined and relocated to section 4VAC50-60-122 (discussed above).	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-142	The proposed section noted that inspections, enforcement actions, hearings, exceptions, and stormwater management facility maintenance shall be conducted by the Department when it is operating a local stormwater management program in the same manner as those tasks will be performed by a qualifying local program under the applicable sections contained in Part IIIA.	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.
4VAC50-60-150	This section was proposed to be deleted in its entirety. Requirements for stormwater management facility maintenance are proposed to be refined and relocated to section 4VAC50-60-124 (discussed above). Inspection requirements are proposed to be refined and relocated to section 4VAC50-60-114 (also discussed above).	No change was made from the proposed stage of the regulations; the section is deleted.	No change was made from the proposed stage of the regulations; the section is deleted.
4VAC50-60-154	The proposed section explained that the Department shall maintain a current database of permit coverage information for all projects. Department-operated local stormwater management programs shall also report information in the same manner as required by qualifying local programs, and records shall be kept by the Department in the same manner as is required of qualifying local programs.	The section has been retained as proposed, with an amendment removing the requirement that Department-administered local programs report to the Department, and instead specifying that the Department will compile a report on a fiscal year basis regarding the local programs that it administers.	The reporting of Department-administered local programs to management will be handled internally by the Department. It is not necessary to specify this in the regulations.
4VAC50-60-156	The proposed section noted that Part IIIC (sections 4VAC50-60-156 through 4VAC50-60-157) specifies the criteria that will be utilized by the Department in reviewing a locality's administration of a qualifying local program.	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.
4VAC50-60-157	The proposed section noted that all qualifying local programs will be reviewed at least once every five years, as required by the Stormwater Management Act. Evaluations shall be conducted according to the same criteria currently contained in 4VAC50-60-120(B), with an addition of a review of an accounting of the receipt and of the expenditure of fees received. The section	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.

	additionally describes the process by which the Board will allow for corrective action to be taken by any qualifying local program for which deficiencies are noted.		
4VAC50-60-158	The proposed section noted that Part IIID (sections 4VAC50-60-158 through 4VAC50-60-159) establishes the procedures by which the Board will authorize a locality to administer a qualifying local program.	No change was made from the proposed stage of the regulations; the section is retained as proposed.	No change was made from the proposed stage of the regulations; the section is retained as proposed.
4VAC50-60-159	The proposed section describes the procedure by which the Board will authorize a locality to administer a qualifying local program. A locality will first submit an application package, which will be reviewed for completeness within 20 calendar days. The Board will thereafter have 90 calendar days to review the application package for compliance with the Stormwater Management Act and the VSMP regulations. Any decision will be communicated to the locality. This section also notes the timeframes for qualifying local program adoption. Subsections (D) and (E) note the times during which localities should notify the Board. Finally, the section notes that for localities where no qualifying local program is adopted, the Department will administer a local stormwater management program. The Department may phase in these programs over a period of time based on the criteria noted in the section.	The section has been retained as proposed, with an amendment that lengthens the time that is allowed to determine completeness of an application from 20 to 30 days.	It was determined that additional time to determine completeness of an application package may be necessary as the volume of packages received around the same time may be significant.
DOCUMENTS INCORPORATED BY REFERENCE	The current regulations contain a number of documents that are incorporated by reference. It was proposed that three additional documents be incorporated by reference into the regulations. The first, Technical Bulletin #1—Stream Channel Erosion Control, is referenced in the proposed 4VAC50-60-66. The other two documents (Technical Memorandum—the Runoff Reduction Method and Virginia Runoff Reduction Method Worksheet) are noted in 4VAC50-60-65.	Cited versions of two of the documents (the Virginia Runoff Reduction Method Worksheet and Technical Memorandum—The Runoff Reduction Method) were updated. Also, a new document (the Virginia Runoff Reduction Method Worksheet-Redevelopment) was added to the list of documents incorporated by reference.	Where applicable, documents were updated to reflect the final version of the regulations and to make other necessary amendments. It was also determined appropriate to create a second worksheet applicable to redevelopment.

Public comment

Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.

Summary of Public Comment on the Proposed Parts I, II, and III regulatory action

During the 60-day public comment period that ran from June 22, 2009 to August 21, 2009, 3,421 comments were received on the two stormwater regulatory actions (Parts I, II, III and Part XIII). The comments included those received during the five public hearings held around the state, those submitted on Virginia's Regulatory Town Hall website, and those directly provided to the Department of Conservation and Recreation on behalf of the Board. A majority of the comments received were supportive of the proposed regulations; however, several key issues were raised that have been addressed in the final regulations.

Additionally, since the Board proposed the regulations in September of 2008, Department staff have attended well over 50 meetings with key stakeholder groups and individuals to gain additional insight into areas of concern and to discuss potential solutions. Interested citizens were also given the opportunity to provide comments to the Board regarding the draft final regulations at the Virginia Soil and Water Conservation Board's September 17, 2009 (key issues) and October 5, 2009 meetings. This process has been extremely open and responsive as we have worked hard to balance the necessary water quality improvements with potential economic concerns.

Information regarding the public comments are as follows:

- Public hearings/informational meetings were held as follows:

June 30th	Hungry Mother State Park	8 in attendance and 3 spoke
July 1st	Augusta County Government Center	48 in attendance and 22 spoke
July 7th	City of Manassas	59 in attendance and 28 spoke
July 9th	City of Hampton	62 in attendance and 22 spoke
July 14th	Virginia General Assembly Building	~165 in attendance and 60 spoke
		342 135

- During the comment period a total 3,421 public comments were received. These included:

- 2,032 from a door to door campaign
- 135 from the public hearings
- 443 from the Regulatory TownHall (Parts I, II, and III, and Part XIII)
- 171 individualized stakeholder letters
- 639 action alerts (3 groups – CBF, VCN, Realtors)
- 1 EPA

Comments received during the comment period on the proposed regulations from June 22, 2009 to August 21, 2009 are as follows:

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Stormwater Regulation Comments Parts I, II, and III

General Support

Commenter	Comment	Final Agency response following completion of both comment periods
Hidden Acres Gun; Jay Cohen; Donald Essman; John Mayeux (Why Build Green); John and Judy Mathwin; Robert Rosenthal (Virginia Council, Trout Unlimited); David Cartier; Erin May; Doug Jackson; Nora Marsh; Lawrence Baldwin, Jr.; Benjamin Ray; Selden Small (former board member of Friends of the Rappahannock); Jessica Barton; Rebecca Kurylo; Scott Olsen; Kandy Hilliard; David Pricer; Rick Estes; Christiana Bradley; Charles Rowe; Tom Van Arsdall; Bruce Dieter; Brinkley Sharpe; Emma Mitchell; Konrad Heller; Warren DeArment; D. Stiles; Peter Mitchell; Philip Maisel; Christine Abeel; Suzette Barclay; Whitney Hosey; Philip Latasa (Friends of Accotink Creek); Mr. and Mrs. John Franke; Thomson Kuhn; Jennifer Gron; Seth Craig; Els Van Wingerden; Jennifer Allen; Laurel Major; Tim Collins; Janet Wright; Jim Lynch; Erick Hagstrom; Jason Pope; Joshua Maddox; Melissa Maddox; Todd Holderman; Tyler Taylor; Susan Godfrey; Norma Vogt; Christopher Sonne (Civil &	Urge for adoption of regulations as proposed	The regulations, as revised, will significantly advance the Commonwealth's efforts to meet its water quality and Chesapeake Bay goals. As is evidenced throughout this summary, during the public comment period held on the proposed regulations and the additional comment period held on the revised final regulations, the Board and the Department heard from many different viewpoints on the proposed regulations and received an abundance of information concerning the regulations, their purposes, their benefits, and potential impacts of their implementation. Final revisions to the regulations were made through careful consideration of the thoughts and concerns that were raised. The revised regulations are believed to present a balanced approach that will improve water quality and quantity management throughout the Commonwealth.

Environmental Services, LLC); Sarah Howson; Sally Chamberlin (Friends of Bryan Park); Frank Cihlar; Charlie Kaiman; Paul Gill; Roger Petersen (LivinGreen Homes by Scandia); Eric Mens (Daughters of Suburbia); Fran Garber; Captain Mike Ostrander (James River Fishing School); Emily; Ben Sedlins; James Bingham; J. Pasay; Rachel Baker; Mallory D; Alex Hardee; Sarah Tracy-Wanck; Dana Richards; Carly; C. McCoull; Victoria Diaz-Bonilla; Frank Reyes; Elizabeth Willis; Dawn Shank (Mattaponi and Pamunkey Rivers Association); Faye Andrashko; Anne Little (Tri-County/City Soil and Water Board); Gregory Cebula (Tri-County/City Soil and Water Conservation District); Samuel Smart; Rebecca Reed; Nancy Cawood; Andrew Mueller (U.S. Fish and Wildlife Service); Lillian Kafka; Charles Hyatt; Ridgway Hall, Jr.; Deana Crumbling; Thomas Savage; Richard Kiehna; Cindy Patterson; Virginia Conservation Network Action Alert*; Zack Santulli; Beth Wilson (York County Waterways Alliance); Leslie Middleton; Joseph Thompson (Smarts Creek Enterprises, LLC); Roger Eitleman; Charles Newton; Dennis Atwood; Leslie Watson (Friends of the North Fork of the Shenandoah River); Paul Bugas		

(Department of Game and Inland Fisheries); John Gibson; Sarah Lawson (Rainwater Management Solutions); Bruce Lundeen (Shenandoah Valley Pure Water Forum); David Collins; Seth Kauffman; Roberta Savage (Rivanna Conservation Society); Dorothy Abbott; Charles Denny; Fred Bashara; Bill Dodson; Patricia Van Ohlen; Melanie Wills; Charles Frederickson; Richard Marshall; Mark Kantor; Judy Hinch; Mike Gerel (Chesapeake Bay Foundation); William Rachels; Tim Morton; Jonathan Robbins; David Bernard (Virginia Chapter of the Sierra Club); Patsy Gochenour (Caretakers of God's Creation); Robert Kulisch; Marjorie Mayfield Jackson (Elizabeth River Project); John Zeugner (Falls of the James Group, Sierra Club); Lance Courtright; Ernie Rojas; Sam Mumper; Deirde Cochran; Ed Steinbeck; Mark McNitt; Mary Ann Moxon; James Shelton (Hands Across the Lake); David and Yvonne Campbell; April Moore; Tanya Bohlke; Roger Diedrich; Mark Fedlpausch; Enos Richardson, Jr.; Mike Leonard; Mary Beth Mains (Friends of Bryan Park); Katie Peterschmidt; Raymond Vaughan; Corinne Schmidt; Rich Coffman; John Halderman (James City County Citizens' Coalition); John Enright; Charlie Loudermilk (Winchester		

TU); George Ohrstrom, Bill and Anna Pratt, Jeff Kelbe (Shenandoah Riverkeeper), Bill Street (James River Association), David Phemister (The Nature Conservancy), Andrew Fellows (Clean Water Action), George McCurrach, John Zeugner (Falls of the James Group – Sierra Club), Diana Parker (Falls of the James Group – Sierra Club), C. Brown Person, III, Amy Gould, Richard Rio, William Wiggins; Joanne Berkley (Baycave Chapter of the Chesapeake Bay Foundation); Patricia Kurpiiel (Friends of Stafford Creek); Eleanor Weca (Great Falls Trailblazers); Alan Ford; David Sligh (Upper James River Riverkeeper); Stella Koch (Audubon Naturalist Society); Robin Rentsch; Kim Hosen (Prince William Conservation Alliance); Chris Unger (Lands and Waters); David Crawford (Brand Center); Rick Parrish (Southern Environmental Law Center); Bob Hicks; Margaret Lorenz (Friends of the North Fork of the Shenandoah River); Jeanne Puricelli; Hal Wiggins; Charlotte Hughes; Margaret Garigan; Stan Oaks, Jr.; Martin Wall; Marion Cooper; Headwaters Soil and Water Conservation District Land Use Committee; Rick Shiflet (Augusta Farm Bureau Federation); Lawrence Chenkin; Hank Meyer;		

Christopher Lynt; Karen Forget (Lynnhaven River NOW); Jason Halbert; William Howard (The Downstream Project); Ed Merrifield (Potomac Riverkeeper); Christina Luman-Bailey (Hopewell City Council); Linda Dort; Wesley Stien; Mark Griffith; Chesapeake Bay Foundation Action Alert; General Public Support Comment Alert; Mac Mestayer; Robert Spiller, Jr.; Thomas Long; Matthew Hannan; Roger Diedrich; Dewey Keeton, II; Alan Raflo; Mike Hutt; Ken Smith (Virginia State Waterman's Association); Ann Jennings (Chesapeake Bay Foundation); John Lampmann; Andrew Orr; Vince Staley; Peter Fields; John Wade; Galen Canham; Dick Folger; Hylah Boyd; Betty Clapp; Tyla Matteson (York River Group of the Sierra Club); Cheryl Deutsch		
Assateague Coastkeeper, Audubon Naturalist Society, Blackwater Nottoway Riverkeeper Program, Blue Ridge Environmental Defense League, Blue Ridge River Runners, Chesapeake Bay Foundation, Civil & Environmental Services LLC, Clean Valley Council, Clean Water Action, Coastal Conservation Association Virginia, Dan River Basin Association, Downriver Canoe Company, Eastern Blue Ridge Fly Fishers, Environment Virginia,	Strongly support the Commonwealth's proactive and balanced approach, through these proposed regulations, to accelerate pollution reductions from urban runoff. The proposal to amend the Virginia Stormwater Management Program Permit Regulations to include new water quality and quantity limits will ensure that new development does not further impair Virginia's waterways, stream ecosystems, streamside property, and municipal infrastructure. We applaud DCR's dedication and commitment to regulations that utilize the best and latest science and innovation and allow Virginia to advance both its economic and environmental needs.	The revised regulations are intended to advance Virginia's water quality and quantity goals. The regulations are also the product of one of the most extensive public processes ever undertaken with regard to environmental regulations in the Commonwealth. This will continue in the future with the undertaking of a process to establish a water quality standard consistent with final Chesapeake Bay data.

Falmouth Flats Fly Fishers, Float Fishermen of Virginia, Friends of Accotink Creek, Friends of Bryan Park, Friends of Dyke Marsh, Friends of James River Park, Friends of Stafford Creek, Friends of the New River, Friends of the North Fork of the Shenandoah River, Friends of the Rappahannock, Friends of the Rivers of Virginia, Friends of the Roanoke River, Hands Across the Lake, James River Association, James River Fishing School, Ken Pendrod's Life Outdoors Unlimited, Lands and Water, Lower Susquehanna Riverkeeper, Lynnhaven River NOW, Mark Kovach Fishing Services, Massanutten Chapter of Trout Unlimited, Mid Atlantic Paddlers Association, Mossy Creek Flyfishing Shop & Outfitting Service, National Committee for the New River, Northern VA Trout Unlimited, Occoquan Watershed Coalition, Patuxent Riverkeeper, Poquoson Citizens for the Environment, Potomac Conservancy, Potomac Riverkeeper, Preserve Frederick, Rainwater Management Solutions, Rapidan Chapter of Trout Unlimited, Rivanna Conservation Society, Sassafras Riverkeeper, Scandia USA LivinGreen, Shenandoah Riverkeeper, Shenandoah Valley Network, The Nature Conservancy, Twin River		

Outfitters, Virginia Association of Biological Farming, Virginia Chapter – Sierra Club, Virginia Conservation Network, Virginia Council of Trout Unlimited, Virginia Eastern Shorekeeper, Virginia League of Conservation Voters, Winchester Trout Unlimited, York County Waterways Alliance; John Hitchingham; Justin Laughlin; Linda Muller; Emma Mitchell; Helen Sanders; Bill Micks; Matthew Bushman; Chris Fulger; Paul Sanford (American Canoe Association)		
Stewart Schwartz (Coalition for Smarter Growth, Glen Besa (Sierra Club – Virginia Chapter), Lisa Guthrie (Virginia League of Conservation Voters), Leighton Powell (Scenic Virginia), Dan Holes (Piedmont Environmental Council), Nathan Lott (Virginia Conservation Network), J.R. Tolbert (Environment Virginia)	Urge the Commonwealth of Virginia to adopt the proposed amendments to the Virginia Stormwater Management program Permit Regulations. We find the amendments are based on extensive public review and scientific study, and represent an attainable and equitable means to prevent future "post construction" stormwater pollution as forest, farms, and existing development are replaced by new development. We find that the amendments embody a fair and appropriate balance between environmental and economic considerations.	The regulations, as revised, will significantly advance the Commonwealth's efforts to meet its water quality and Chesapeake Bay goals. As is evidenced throughout this summary, during the public comment period held on the proposed regulations and the additional comment period held on the revised final regulations, the Board and the Department heard from many different viewpoints on the proposed regulations and received an abundance of information concerning the regulations, their purposes, their benefits, and potential impacts of their implementation. Revisions to the regulations were made through careful consideration of the thoughts and concerns that were raised. The revised regulations are believed to present a balanced approach that will improve water quality and quantity management throughout the Commonwealth.
Mike Gerel (Chesapeake Bay Foundation)	Based on careful consideration of current science, technology, and broad stakeholder perspectives over nearly four years of active engagement in this matter, we find the amendments to be an attainable and equitable means to prevent "post-construction" stormwater pollution from new development and redevelopment activities.	The revised regulations are intended to advance Virginia's water quality and quantity goals. The regulations are also the product of one of the most extensive public processes ever undertaken with regard to environmental regulations in the Commonwealth. This will continue in the future with the undertaking of a process to establish a water quality standard consistent

		with final Chesapeake Bay data.
Rebecca Hanmer	Programmatically, Virginia needs to adopt these new regulations not only for its own stormwater management decisions as they apply to new development and redevelopment, but also to provide a sound and consistent basis for approving, financing and overseeing local stormwater programs. Virginia's new regulations have incorporated the best science, and encourage use of the most effective stormwater management techniques. They encourage better financed and managed local programs and one-stop shopping. Thus, they offer Virginians hope that we may continue to develop without losing the green and well-watered county that we inherited and love.	The revised regulations are intended to advance Virginia's water quality and quantity goals. The regulations are also the product of one of the most extensive public processes ever undertaken with regard to environmental regulations in the Commonwealth. This will continue in the future with the undertaking of a process to establish a water quality standard consistent with final Chesapeake Bay data.
Tom Brown (Member, Virginia Association of Realtors)	We need to protect the water basins first and build homes second.	The revised regulations are intended to advance Virginia's water quality and quantity goals. The regulations are also the product of one of the most extensive public processes ever undertaken with regard to environmental regulations in the Commonwealth. This will continue in the future with the undertaking of a process to establish a water quality standard consistent with final Chesapeake Bay data.
Michael Bills (Chairman of The Nature Conservancy Board); Darwin Braden; Sarah Bell; Linda Martenson; Jared Knicley; Kate Wofford (Shenandoah Valley Network); Gina Faber (Sustainable Loudoun); Wendy Hamilton (Preserve Frederick); Daniel Nairn; Rosemary Wallinger (Shenandoah Forum); John Moore; Sara Hollberg (Valley Conservation Council); Patrick Felling (The Potomac Conservancy); Senator Creigh Deeds; Kim Sandum (Community Alliance for Preservation); Mark Zimmerman; Michael Cash; Robert Jordan; Boyd Post; Catherine Mendoza; Miguel	Urge for adoption of regulations largely as proposed [revise regulations to deal with sprawl]	The regulations, as revised, will significantly advance the Commonwealth's efforts to meet its water quality and Chesapeake Bay goals. As is evidenced throughout this summary, during the public comment period held on the proposed regulations and the additional comment period held on the revised final regulations, the Board and the Department heard from many different viewpoints on the regulations and received an abundance of information concerning the regulations, their purposes, their benefits, and potential impacts of their implementation. Revisions to the regulations were made through careful consideration of the thoughts and concerns that were raised. The revised regulations are believed to present a balanced approach that will improve water quality and quantity management throughout the Commonwealth. Many comments were received during the public comment period expressing the concern that the

Mendoza; Elizabeth Cottrell (Riverwood Technologies); John Cottrell; John Tippett (Friends of the Rappahannock); John Eckman (Valley Conservation Council); Megan Gallagher		proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
Ned Stone; Tom Fore	The state should do all possible to ensure that all new and currently existing development limits stormwater runoff and the pollution of water runoff.	It is agreed that runoff from developed lands has a substantial impact on both the quantity and quality of Virginia's waters. The Board's authority through this action extends to sites that are undergoing land disturbance (both new and redevelopment), and the regulations will assist the Commonwealth in meeting its water quality and quantity goals.
Christopher Sonne (Civil & Environmental Services, LLC);	If properly designed, many of the stormwater management practices employed will result in improved aesthetics, better site conditions, and higher property values.	It is agreed that stormwater management practices can provide a benefit to properties beyond the water quality and quantity benefits to which they are specifically targeted. The Runoff Reduction Method incorporates the availability of many different and new practices and facilities that may be utilized to achieve compliance. This broader array of options is intended, in part, to allow site designers to choose those practices and facilities that may be most beneficial to a site while still meeting regulatory requirements. Additionally, the Virginia Stormwater BMP Clearinghouse will allow additional BMPs to be approved for use on an ongoing basis, providing even greater options in the future.
Marvin Moss (Rivanna River Basin Commission)	The Commission affirms the need for taking positive action towards reducing the effects of stormwater from developed lands in the commonwealth and will continue to work within the Rivanna watershed to use the tools provided through regulatory action, education, and incentive programs to reduce harmful runoff to our streams.	The regulations are intended to advance Virginia's water quality goals. The regulations are also the product of one of the most extensive public processes ever undertaken with regard to environmental regulations in the Commonwealth.

Cathy and Terry Bond	I really hope that DCR will resist pressure from developers to weaken any regulation (Stormwater management regulations) designed to protect our waterways, especially the bay.	Amendments have been made to the regulations to respond to public comments and ensure that potential unintended consequences are avoided. The regulations, as revised, still maintain the goal of the proposal of forwarding the Commonwealth's water quality and Chesapeake Bay goals. However, as new data is currently being developed regarding the Bay, no separate standard for the Bay watershed has been adopted at this time. The adoption of such a standard will be undertaken through a separate regulatory process.
Jeff Kelbe (Shenandoah Riverkeeper)	Steams are losing their natural inhabitants, they're banks are being stripped by high flows and they are being straightened with bulldozers, filled with rip rap, it's not pretty. Once you pave over an area and the runoff begins to cause stream damage, there is little that can be done to reverse the problem.	It is recognized that Virginia's current stormwater management regulations are in need of improvement. These new regulations are intended to advance Virginia's water quality and quantity goals. The regulations are also the product of one of the most extensive public processes ever undertaken with regard to environmental regulations in the Commonwealth.
Kevin Barnes (American Society of Landscape Architects); Lynn Crump (American Society of Landscape Architects)	Focus on localized water quality and quantity solutions, waterways will experience less flooding, erosion, and sedimentation, and improved groundwater recharge and water quality.	The regulations do focus on local water quality and quantity concerns. The implementation of the Runoff Reduction Method and the revised water quantity criteria will lead to improved local conditions.

General Opposed

Doug Westmoreland (AIA); George Moore; Robert Tulloh; Joan Girone (Chesterfield Chamber of Commerce); Bill Barnett; Robert Rucks (L.F. Jennings, Inc.); R. Herwig; Clarke Jones; Lois Jones; Robert Jansen (Jansen Land Consulting, LLC); William Jones, Jr.; Tammy Farrish; Trischa Jones; Jay Lafler; Janet Bowers; Jamie Boyers; Greg Dempsy; Liston Laine; Christina Saltarelli; Keith	Opposed to regulations	Comments opposed to the regulations are noted and included in this summary document. As is evidenced elsewhere in this document, general support was also expressed by many public comments. Responses to other comments within this section and throughout this document explain reasons why these regulations were revised and adopted.

Stanley (Timmons Group); Derrick Johnson; Billy Walter (Timmons Group); Angela Smith; John Strother; Duane Snow; Bob Schrum (Chesterfield Chamber of Commerce)		
Mark Slusher	Drastically increases the existing regulations governing development that are adequate and already in place.	As revised, the regulations do not greatly increase water quality requirements. The 0.45 standard has been in place since the Board received responsibilities for stormwater management in 2005; although the revised regulations do incorporate the Runoff Reduction Method as an improved tool for determining compliance. While a more stringent water quality standard may be adopted for the Bay watershed in the future if shown necessary, revisions to the proposed regulations have incorporated flexibility for Urban Development Areas and added a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite. These new provisions will become available when a more stringent standard is adopted.
Mark Slusher	Effectively increases the scope of the Chesapeake Bay Act from all land east of I-95 to include the entire Commonwealth.	These regulations, which govern stormwater management on regulated land disturbing activities, do not expand the scope of the Chesapeake Bay Preservation Act. While stormwater management is one aspect of the Bay Act program, that program has many other components not addressed by these regulations (notably, compliance with these regulations will constitute compliance with the stormwater requirements of the Bay Act (see §10.1-603.3(I) of the Code of Virginia)). Stormwater management has been required to be addressed throughout the Commonwealth since the inception of the Virginia Stormwater Management Program (VSMP) in 2005. Thus, while the regulations do represent an advancement in stormwater management throughout the Commonwealth, they neither expand the jurisdiction of the Chesapeake Bay Preservation Act nor subject new areas of the state to stormwater management regulation.
Douglas Albertson; Jonathan Ridout; Lee Hilbert; Whitlow	The current standards, if enforced uniformly, provide a reasonable balance between growth and pollution.	While enhanced program administration and enforcement will be a benefit of the adoption of local

Landscaping, Inc.; Taylor Cantrell; Mark Slusher; Paul Johnson (Charles P. Johnson and Associates); Duane Parrott, Jr.; Greater Richmond Area Association for Commercial Real Estate; Jeffrey Collins; David Nunnally (Caroline County); Bill Hestand; Eric Rowland; Steven Worthington; Bob Shaffer; Mark Huffman; Mitchell Bode (Wilton Development Corporation)		programs under the new regulations, it was recognized that the technical criteria were also in need of review. While the current 0.45 standard for new development has been maintained, the Runoff Reduction Method has been adopted as an enhanced and more accurate mechanism for determining compliance with that standard. Additionally, current quantity requirements continue to result in damage to channels and complaints of flooding from downstream property owners.
Lee Hilbert; Edward Graham; Whitlow Landscaping, Inc.; Stefan Brooks; Taylor Cantrell; Rob Lanphear; Cory Benson (Grattan Associates); Cathy Johnson; Chris Shust; Juliet Nisley; Charlie Armstrong; Mark Slusher; Willis Blackwood (Blackwood Development); Joe Wilder (Frederick County); Charles Rotgin, Jr. (Great Eastern Management Company); Claudia Cotton (Tidewater Builder's Association); Andy Herr (Terry Petersen Residential); Dale Mullen (Louisa County); Tyler Craddock (Virginia Chamber of Commerce); Lamont Myers; Barrett Hardiman (Home Builders Association of Virginia); Daniel Campbell (Floyd County); Pete Kotarides (Tidewater Builders Association); Stephen Daves (R.W. Murray Co.); Blue Ridge Home Builders Association Board; David Clelland (Union Bank and Trust); Gena Hanks (Pulaski County); R. Cellell	Implementing regulations will dramatically affect the cost of new homes and new commercial development. Will reduce economic growth of our state and will have a far reaching negative impact on the well-being of our citizens.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005, although a revised compliance methodology has been incorporated.

Dalton (Wythe County); Selena Cuffee-Glenn (City of Suffolk); Archie Fox (Warren County); Neville Simon (City of Richmond); Realtor Action Alert; Bob Bailie; Owen Matthews (Kings Dominion); Jim Smyers; Craig Disesa; Marc Weiss; Rick; Junie West (Timmons Group); Phil; Bruce Milam; Corey Dean; Jean Depcrynski; Kevin McNulty; Duane Parrott, Jr.; Nicholas Walker; Glenn; Sarah; Jeffrey Collins; Jim Ingle (Centennial Homes); John Olivieri (Associated Development Management Corporation); John Kerber; Bonnie Johnson (Bath County); David Nunnally (Caroline County); D. Dane Poe (Lee County); Stephen Carter (Nelson County); Kenneth Eades (Northumberland County); Michael Altizer (Roanoke County); Barry Clark (Greene County); Bateman Custom Construction, LLC; Skip Eastman (Chesapeake Structural Systems); George Daily (A&E Homes, Inc.); Daniel Dreelin; Robert Burr; Mark Hassinger (WestDulles Properties); Peter Eckert (Virginia Association for Commercial Real Estate); Cynthia Couch; Chris Lupia (The Engineering Groupe); Craig Cope (Liberty Property Trust); Melanie Holloway (Holliday Properties, Inc.); Richard Dickens, Jr.; Steve Lawson (The Lawson		

Companies); Alvin Owens; Robert Duckett (Peninsula Housing & Builders Association); Ronal Fowler; Ronnie Herring (The Home Crafters); Ben Hudson (Northern Neck Homes, Inc.); Dennis Cronk; Lee Hilbert; William Garrett (W.B. Garrett, Inc.); Neil Williamson (Free Enterprise Forum); John Bumgarner (Duke Realty Corporation); Vanasse Hangen Brustlin (VHB); Tom Dillon; Michelle Wilson-Johnson (Shenandoah Valley Builders Association); Brenda Samuel; Leslie Ridout; Tony Godbot; Melinda Loeblich; Steve Thomas; Ralph Costen, Jr.; Shawn Callahan (Roanoke Regional Home Builders Association); Mike Blake (Welford Engineering); Edwin Lynch (I-95 Business Parks Management, LLC); John Powell (Virginia Association of Realtors); David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC); Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); Michael Harvey (Thomas Jefferson Partnership for Economic Development); John Easter (The Chesterfield Business Council); Steven Vermillion (Associated General Contractors of Virginia): Leon McGhee (L.T. McGhee & Co.);		

William Mattox (Grubb & Ellis); Matthew James (Virginia Economic Developers Association); Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); John Ainslie (Ainslie Group); Ken Cohen (Ainslie Group): Woody Wendell, III (Ainslie Group): Jeffrey Ainslie (Ainslie Group): Shane Sullivan (Crestline Realty Corporation): Classic Design Builders; Bruce Galbraith (WG Construction Co., Inc.); Apartment and Office Building Association of Metropolitan Washington, Associated Builders and Contractors – Virginia Chapter; Bristol Chamber of Commerce; Charlottesville Regional Chamber of Commerce; Emporia Greensville Chamber of Commerce; Fairfax Chamber of Commerce; Greater Bluefield Chamber of Commerce; Greater Richmond Chamber of Commerce; Greater Springfield Chamber of Commerce; Greater Williamsburg Chamber and Tourism Alliance; Halifax Chamber of Commerce; Hampton Roads Association for Commercial Real Estate; Hampton Roads Chamber of Commerce; Hanover Association of Businesses and Chamber of Commerce; Louisa County Chamber of Commerce; Loudoun County Chamber of Commerce; Lynchburg Regional Chamber of		

Commerce; NAIOP Northern Virginia; Northrop Grumman Shipbuilding; Petersburg Chamber of Commerce; Roanoke Regional Chamber of Commerce; Robinson Construction; Virginia Association for Commercial Real Estate; Virginia Peninsula Chamber of Commerce; Virginia Utility and Heavy Contractors Council; Daniel Dreelin; Sarah Kellam; Charles Hite; Bill Garrett; Grover Southers (Southers Concrete, Inc.); Debi Girvin (Chesterfield Business Council of the Greater Richmond Chamber of Commerce); Stuart Grattan (Grattan Associates); Rob Bradham (Greater Richmond Chamber of Commerce); Carrie Coyner; Bryant Gammon (Highmark Engineering); M.D. Marshall; Youngblood,Tyler and Associates, P.C.; Don Atkinson (Richmond Association of Realtors); George Moore; Vicki Stitzer; Taylor Goodman; Paul Hinson; Bill Barnett; Gary VanAlstyne; Frank Bradley (Bradley Properties); Jay Lafler; Janet Bowers; Carolyn Oster (Prime Design Engineering, P.C.); Eric Rowland; J. Mark Sowers; Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller &		

Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Caleb Hurst; Robert Hodous; Daun Klarevas (Christopher Consultants); Bay Design Group; Paul Anderson; Alvin Mistr, Jr.; Liston Laine; Andre Fontaine (Environmental Systems & Solutions, LLC); Steven Worthington; Vernon McClure; Billy Walter (Timmons Group); Kathleen Halpaus; Terry Jones Mark Parrott; Michael Pellis; Mitch Bowser; Paul Trapp; Mark Huffman; Richard Costello (AES Consulting Engineers); Bob Brown (Urban, Ltd.); John Nolde (The Nolde Company, Inc.); Ronald Willard, II (The Willard Companies, John Nolde, III; Susan Hadder; William Hestand (Koontz-Bryant, P.C.); Dan Jamison (Koontz-Bryant, P.C.); Meredith Ward (Valley Engineering Surveying Planning); David Mitchell; Jerry Brunk (LS); Sarah Kellam; Thomas Kellam; Timothy Cleary (Charles Ross Homes); G. Archer Marston, III; Jim Murphy; Michael Elander (Timmons Group); Mary Ellen Arch (Transurban and Greater Richmond Chamber of Commerce); Gregory Koontz (Koontz-Bryant, P.C.); Duane Snow; George Moore; Jennifer		

Scott (Hanover Association of Businesses and Chamber of Commerce); Bob Schrum (Chesterfield Chamber of Commerce)		
Thomas Bruun (Prince William County); Nikhil Deshpande (Rinker Design Associates);	Further strides in improving water quality can perhaps best be made by bringing remaining localities with deficient stormwater management programs to a higher level prior to making such significant changes.	While enhanced program administration and enforcement will be a benefit of the adoption of local programs under the new regulations, it was recognized that the technical criteria were also in need of revisions in order for water quality and quantity goals to be met. The revised regulations are believed to further these goals.
George Nyfeler; Stefan Brooks; Taylor Cantrell; Rob Lanphear; Cory Benson (Grattan Associates); Chris Shust; Charlie Armstrong; Charles Rotgin, Jr. (Great Eastern Management Company); Paul Eckert (Hampton Roads Association for Commercial Estate); Jim Smyers; Marc Weiss; David Moorman (Botetourt County); Malcolm Hines (Joyner Fine Properties); Mike Cooper; J. Glenn Muckley; Leslie Ridout; Stuart Grattan (Grattan Associates); Vernon McClure; Ivan Wu	Reject proposed stormwater regulations – unintended consequences will be devastating to the environment [sprawl]	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
Juliet Nisley; Charlie Armstrong; Jay Willer (Blue Ridge Home Builders Association); J.M. Snell; Royce Hylton (Brunk and Hylton Engineering); Andy Herr (Terry Petersen Companies); Ted Miller; Katie Hayes (Peninsula Housing and Builders Association); Barrett Hardiman (Home Builders Association of Virginia); Pete Kotarides (Tidewater Builders Association); Warren Wakeland	Makes no sense to impose such severe regulations, at a tremendous cost to businesses and residents, which provide so little benefit to the Bay.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005, although a new

(Home Building Association of Richmond); Paul Eckert (Hampton Roads Association for Commercial Estate); Owen Matthews (Kings Dominion); Sarah; S. Charles Krause (SPOTT-ON Consulting, LLC); Andy Fulgham (Atlantic Logowear); William Schooley (Clark Nexsen Architecture); Harrison Taylor (Thompson Education Direct); Cliff Bickford (BB&T); Fred Carerras; Betsy Blair (CJW Chippenham Hospital); Will Davis (Chesterfield County); Tracy Kemp Stallings (CJW Johnston Willis Hospital); Phil Hess; John Bennett (Timmons); Nancy Coggins (Priority Corporate Housing); Greg Lupsha (Keller Williams Realty); Malcolm Randolph, Jr. (CB Richard Ellis); Brenda Fisher (CB Richard Ellis); David Crawford (CB Richard Ellis); Robert Black (CB Richard Ellis); Tom Page (GS Virginia); Allen Loree (Allen Loree Homes, LLC); Neil Williamson (Free Enterprise Forum); Gray Stettinius; David Owens (Boone Homes, Inc.); Rand Sompayrac; Chris Hornung (The Silver Companies); Edwin Lynch (I-95 Business Parks Management, LLC); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance		compliance methodology has been adopted.

Solutions); Philip Abraham (The Vectre Corporation); Youngblood,Tyler and Associates, P.C.; Robert Tulloh; Frank Bradley (Bradley Properties); J. Mark Sowers; Bill Yauss (The Drees Company); Jonathan Fairbanks (Fairbanks & Franklin); Richard Collier (R.E. Collier, Inc.); Terry Jones; Mark Parrott; Mary Ellen Arch (Transurban and Greater Richmond Chamber of Commerce); Fred Norman (Chesterfield Business Council and the Greater Richmond Chamber of Commerce)		
Fred Norman; Greg Garrett; Lamont Myers; Paul Eckert (Hampton Roads Association for Commercial Estate); Blue Ridge Home Builders Association Board; John Scott (Builders FirstSource); Lee Hilbert; Tom Dillon; Brenda Samuel; F.P. Parker; Chris Hornung (The Silver Companies); Edwin Lynch (I-95 Business Parks Management, LLC); Royce Hylton (Brunk & Hylton Engineering, Inc.); Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.); Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); Steven Vermillion (Associated General Contractors of Virginia): Frank	Address the wrong sources of pollutants; address efforts to agriculture and lawn fertilization	Addressing local water quality concerns and the impairment of the Chesapeake Bay will require actions to be undertaken to address pollutant loads from all sources. This includes, without limitation, industrial facilities and wastewater treatment facilities, agriculture, developed and developing lands, and atmospheric deposition. Specific to agriculture, the Virginia Agriculture BMP Cost share Program is currently being implemented at a level greater than ever before, and regulatory programs in areas such as Combined Animal Feeding Operations (CAFOs), poultry, and biosolids are being implemented and advanced. No one source, however, can achieve reductions sufficient for the Commonwealth's water quality and Bay goals to be met. Instead, all sources must contribute.

Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); Truett Young (Stanley Martin Companies); Bryant Gammon (Highmark Engineering); M.D. Marshall; Youngblood,Tyler and Associates, P.C.; Taylor Goodman; Gary VanAlstyne; Lois Haverstrom; Robert Hodous; Paul Anderson; Jonathan Fairbanks (Fairbanks & Franklin); Steven Worthington; Mark Parrott; Paul Trapp; Mark Huffman; Mary Ellen Arch (Transurban and Greater Richmond Chamber of Commerce); Jennifer Scott (Hanover Association of Businesses and Chamber of Commerce)		
Scott Camp (Base Camp Development Corp. of Va., Inc.); Lee Hilbert; Mark Trostle; Youngblood,Tyler and Associates, P.C.; George Haw	When new regulations, especially the reduction of the current .45 criteria, are adopted, the value of our land will be greatly reduced.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005, although a new compliance methodology has been adopted.
Richard Blackwell (Blackwell Engineering)	If you want to truly stop fertilizers or try to truly have an impact on phosphorus in our area, you're going to have to eliminate the source outside this area of phosphorus [fertilizers, reuse of biosolids].	It is recognized that further efforts addressing phosphorus use would assist in addressing phosphorus removal goals. The Board's authority under the current action, however, is limited to addressing stormwater discharges from land disturbing activities. Meeting

		Virginia's water quality and Chesapeake Bay goals will require that reductions be achieved from all sources, and discharges from developing lands must be addressed as a part of this effort.
Barry Clark (Greene County)	Have a phased-in approach to the regulations to realize full impact and decide if worthwhile	Although the technical criteria do not contain a phase-in period, the regulations will not become effective immediately. Rather, they will become effective upon the adoption of a local stormwater management program within a locality, which will occur between 15 and 21 months following the effective date of these regulations (July 1, 2010). Additionally, grandfathering provisions have been included in new section 48 of the regulations. These provisions will allow certain sites a greater period of time prior to the new requirements becoming effective.
Warren Wakeland (Home Building Association of Richmond); Duane Parrott, Jr.; Corey Dean; Glenn; Sarah; Mike Blake (Welford Engineering); E. Marshall Bowden (Landvest, LLC); Glen Payton (Filterra); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Mark Trostle; M.D. Marshall; Vicki Stitzer; Liston Laine; Steven Worthington; Christina Smith; Bob Shaffer; Duane Snow; Mitchell Bode (Wilton Development Corporation)	Audit the current stormwater management programs to determine if the regulations are being fully enforced; if not, DCR should fully enforce current regulations before considering changes.	Revisions have been made to the water quality and quantity requirements of the regulations since the time of the proposal. These revisions include the adoption of a 0.45 phosphorus standard for new development. A 0.45 standard has been utilized statewide for new development since the Board received responsibilities for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Mike Flagg (Hanover County); Mark Huffman	At this time, water quality would be better served by focusing our efforts on working on delegating programs to localities to increase efficiency and reduce duplication of effort, stepping up efforts to educate the public and regulated community about how they can make a difference and the requirements of existing regulations, and improving consistency and enforcement across the state.	All of the factors cited by the comment are important components of an effective stormwater management program. Even with these administrative and outreach efforts, however, review of the existing technical criteria indicates that revisions are needed.

Jeffrey Collins; Youngblood,Tyler and Associates, P.C.	BMPs will become a financial burden on localities without providing significant additional protection to the watercourses.	BMPs do provide protection to Virginia's waters and the Chesapeake Bay. The Department contracted with the nationally-recognized Center for Watershed Protection to review the true pollutant reduction capabilities of all BMPs available for compliance with the regulations, and the assigned efficiencies reflect the result of this research. The Runoff Reduction Method, also developed with the assistance of the Center, allows for the utilization of these BMPs to achieve compliance, and additional BMPs will be available in the future through the Virginia Stormwater BMP Clearinghouse. This will provide ever-increasing options for site designers. While future maintenance of all BMPs is very important to assure that they are achieving their designed pollutant removals, revisions have been made to the regulations both in terms of which facilities require maintenance agreements and which facilities require locality inspection. As a result, BMPs that address the runoff from an individual residential lot do not require a maintenance agreement, nor are locality inspections required. Rather, these items can be addressed by other means developed by the local program. It is believed that this greatly reduces the impacts on local governments.
Stephen Carter (Nelson County); Tom Page (GS Virginia); George Moore; Lois Haverstrom; David Smith	Proposed regulations will significantly reduce ability to construct affordable housing for low to moderate income residents.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.

Joseph McClellan	Will not address the clean up of the bay; why not put reasonable goals on new development and assess the new development with fees that would be put toward a fund to fix combined sewers and provide BMPs for areas that do not have any controls?	Addressing local water quality concerns and the impairment of the Chesapeake Bay will require actions to be undertaken to address pollutant loads from all sources. This includes, without limitation, industrial facilities and wastewater treatment facilities, agriculture, developed and developing lands, and atmospheric deposition.

Delay Adoption of Part II

Frank Ballif (Southern Development Homes); Bruce Milam; Cathy Johnson; Juliet Nisley; Willis Blackwood (Blackwood Development); Jay Willer (Blue Ridge Home Builders Association); J.M. Snell; Royce Hylton (Brunk and Hylton Engineering); Charles Rotgin, Jr. (Great Eastern Management Company); Claudia Cotton (Tidewater Builder's Association); Katie Hayes (Peninsula Housing and Builders Assocation); Pete Rigby (Paziulli, Simmons and Associates); Andy Herr (Terry Petersen Residential); Tyler Craddock (Virginia Chamber of Commerce); Barrett Hardiman (Home Builders Association of Virginia); Daniel Campbell (Floyd County); Warren Wakeland (Home Building Association of Richmond); Peter Eckert (Hampton Roads Association for Commercial Real Estate); Randy Bartlett (Virginia Municipal Stormwater Association);	Encouraging the Soil and Water Conservation Board to abandon the currently proposed technical requirements in Part II of the regulation, and reconvene a Technical Advisory Committee of stakeholders to discuss alternative proposals.	The regulations reflect the product of one of the most extensive and inclusive regulatory processes directed at environmental regulations to ever occur in the Commonwealth. Over the past four years, two technical advisory committees have met to assist with the development of the regulations. In addition, a series of design charettes examining the impacts of the new water quality criteria was held, with over 300 professionals attending. During the public comment period on the proposed regulations, five public hearings were held statewide and approximately 3400 comments received and considered. An additional 30-day public comment period was held on the final regulations from October 26 – November 25. It is believed that these regulations have been vetted to an extraordinary level and that adoption at this time is appropriate.

Stephen Daves (R.W. Murray Co.); Blue Ridge Home Builders Association Board; David Clelland (Union Bank and Trust); Gena Hanks (Pulaski Board of Supervisors); R. Cellell Dalton (Wythe County); Archie Fox (Warren County); Katherine Nunez (Northampton County); Thanh Dang (City of Harrisonburg); Regina Williams (City of Norfolk); Mike Flagg (Hanover County); Realtor Action Alert; Duane Parrott, Jr.; Sarah; Jim Ingle (Centennial Homes); John Olivieri (Associated Development Management Corporation); John Kerber; Timothy Mitchell (City of Lynchburg); William Johnston (City of Virginia Beach); James Campbell (Virginia Association of Counties); Clarence Smith (Industrial Development Authority of Smyth County); David Nunnally (Caroline County); John Miniclier (Charles City County); D. Dane Poe (Lee County); Stephen Carter (Nelson County); David Moorman (Botetourt County); Barry Clark (Greene County); S. Charles Krause (SPOTT-ON Consulting, LLC); Andy Fulgham (Atlantic Logowear); William Schooley (Clark Nexsen Architecture); Harrison Taylor (Thompson Education Direct); Cliff Bickford (BB&T); Fred Carerras; Betsy Blair (CJW Chippenham		

Hospital); Will Davis (Chesterfield County); Tracy Kemp Stallings (CJW Johnston Willis Hospital); Phil Hess; John Bennett (Timmons); Nancy Coggins (Priority Corporate Housing); Greg Lupsha (Keller Williams Realty); Malcolm Randolph, Jr. (CB Richard Ellis); Brenda Fisher (CB Richard Ellis); David Crawford (CB Richard Ellis); Robert Black (CB Richard Ellis); Bateman Custom Construction, LLC; Skip Eastman (Chesapeake Structural Systems); George Daily (A&E Homes, Inc.); John Scott (Builders FirstSource); Daniel Dreelin; Robert Burr; Mark Hassinger (WestDulles Properties); Peter Eckert (Virginia Association for Commercial Real Estate); Cynthia Couch; Chris Lupia (The Engineering Groupe); Craig Cope (Liberty Property Trust); Melanie Holloway (Holliday Properties, Inc.); Richard Dickens, Jr.; Steve Lawson (The Lawson Companies); Alvin Owens; Robert Duckett (Peninsula Housing & Builders Association); William Rucker; Tom Page (GS Virginia); Ronald Fowler; Ronnie Herring (The Home Crafters); Allen Loree (Allen Loree Homes, LLC); Ben Hudson (Northern Neck Homes, Inc.); Dennis Cronk; Mike Cooper; Mark Rinaldi; Lee Hilbert; William Garrett (W.B. Garrett, Inc.); Neil		

Williamson (Free Enterprise Forum): John Bumgarner (Duke Realty Corporation); Vanasse Hangen Brustlin (VHB); Michelle Wilson-Johnson (Shenandoah Valley Builders Association); Brenda Samuel; Hugh Woodle; Tony Godbolt; Melinda Loeblich; Shelby Perkins; Gray Stettinius; Steve Thomas; Ralph Costen, Jr.; Stephen Barcena (Baseline Inc. Land Surveying); David Fahy; Shawn Callahan (Roanoke Regional Home Builders Association); Mike Blake (Welford Engineering); David Owens (Boone Homes, Inc.); Rand Sompayrac; Nikhil Deshpande (Rinker Design Associates, P.C.); Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); John Powell (Virginia Association of Realtors); E. Marshall Bowden (Landvest, LLC); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Steve Pandish (William H. Gordon Associates, Inc.); Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); Michael Harvey (Thomas Jefferson Partnership for Economic Development); John Easter (The Chesterfield Business Council); Mark Bissette (Hampton Roads Utility and Heavy Contractors Association);		

Tom Page (GS Virginia); Robin Miller (Miller & Associates); David Williams (Gubb & Ellis); William Mattox (Grubb & Ellis); Matthew James (Virginia Economic Developers Association); Frank Beale (PGC Properties, LLC); Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); Philip Abraham (The Vectre Corporation); John Conrad (Miller and Smith); John Ainslie (Ainslie Group); Ken Cohen (Ainslie Group): Woody Wendell, III (Ainslie Group): Jeffrey Ainslie (Ainslie Group): Shane Sullivan (Crestline Realty Corporation): Classic Design Builders; Bruce Galbraith (WG Construction Co., Inc.); Apartment and Office Building Association of Metropolitan Washington, Associated Builders and Contractors – Virginia Chapter; Bristol Chamber of Commerce; Charlottesville Regional Chamber of Commerce; Emporia Greensville Chamber of Commerce; Fairfax Chamber of Commerce; Greater Bluefield Chamber of Commerce; Greater Richmond Chamber of Commerce; Greater Springfield Chamber of Commerce; Greater Williamsburg Chamber and Tourism Alliance; Halifax Chamber of Commerce; Hampton Roads Association for Commercial Real Estate;		

Hampton Roads Chamber of Commerce; Hanover Association of Businesses and Chamber of Commerce; Louisa County Chamber of Commerce; Loudoun County Chamber of Commerce; Lynchburg Regional Chamber of Commerce; NAIOP Northern Virginia; Northrop Grumman Shipbuilding; Petersburg Chamber of Commerce; Roanoke Regional Chamber of Commerce; Robinson Construction; Virginia Association for Commercial Real Estate; Virginia Peninsula Chamber of Commerce; Virginia Utility and Heavy Contractors Council; Daniel Dreelin; Sarah Kellam; Charles Hite; Bill Garrett; Grover Southers (Southers Concrete, Inc.); Bruce Reese (Fredericksburg Builders Association); Bryan Stevenson; Michael Newsome; Don Atkinson (Richmond Association of Realtors); Gary VanAlstyne; Carolyn Oster (Prime Design Engineering, P.C.); Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt		

Companies); Caleb Hurst; Keith Stanley (Timmons Group); Richard Collier (R.E. Collier, Inc.); Andrew Gould (Timmons Group); Michael Pellis; Bob Brown (Urban, Ltd.); John Nolde (The Nolde Company, Inc.); Ronald Willard, II (The Willard Companies, John Nolde, III; Susan Hadder; William Hestand (Koontz-Bryant, P.C.); Dan Jamison (Koontz-Bryant, P.C.); Meredith Ward (Valley Engineering Surveying Planning); David Mitchell; Jerry Brunk (LS); Sarah Kellam; Thomas Kellam; Timothy Cleary (Charles Ross Homes); G. Archer Marston, III; Jim Murphy; Michael Elander (Timmons Group); Fred Norman (Chesterfield Business Council and the Greater Richmond Chamber of Commerce); Gregory Koontz (Koontz-Bryant, P.C.); George Moore; Jennifer Scott (Hanover Association of Businesses and Chamber of Commerce); Jeff Geiger; Bryan Mitchell (Townes Site Engineering)		

Request Postponement of Regulations

Larry Howdyshell (Augusta County Board of Supervisors Chairman); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Steven	Request postponement of regulations due to economic conditions and financial impacts of regulations on development.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of

Vermillion (Associated General Contractors of Virginia):		implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.

BMP Clearinghouse and Stormwater Handbook

Andy Herr (Terry Petersen Residential); Jimmie Jenkins (Fairfax County); Pete Kotarides (Tidewater Builders Association); Randy Bartlett (Virginia Municipal Stormwater Association); Coleman Speece (Virginia Association of Planning District Commissions); Lalit Sharma (City of Alexandria); Mike Flagg (Hanover County); Leonard Sandridge (University of Virginia); William Johnston (City of Virginia Beach); James Campbell (Virginia Association of Counties); Amar Dwarkanath (City of Chesapeake); Normand Goulet (Northern Virginia Regional Commission); Sanford Wanner (James City County); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Ted Miller (Kimley-Horn and Associates, Inc.); Debra Brand (Jefferson Lab)	Regulations should be delayed until BMP design specifications are finalized; unable to complete a thorough, comprehensive review of proposed regulations.	The draft BMP standards and specifications were posted on the Virginia Stormwater Management BMP Clearinghouse website in order to allow for consideration and comment on the standards and specifications during the public comment period on the proposed regulations and the public comment period held on the final regulations.

Bruce Goodson (Hampton Roads Planning District Commission)	Full impact of regulations cannot be evaluated without all associated references available for review as well; allow at least 1 year from the approval date of the proposed regulations to the effective date for full review and field verification of the BMP design specifications as well as the proposed water quantity criteria.	The references associated with these regulations were available for review during the public comment period on the proposed regulations and the public comment period on the final regulations. Draft BMP standards and specifications were posted on the Virginia Stormwater Management BMP Clearinghouse website in order to allow for consideration and comment on the standards and specifications. Likewise, the Virginia Stormwater Management Handbook draft revisions were posted to the Department's website to allow for review. Secondly, there will be a period of time following the adoption of the final regulations prior to their becoming effective. Section 10.1-603.3 of the Code of Virginia specifies that these regulations cannot become effective prior to July 1, 2010. Following that date, localities have 15 to 21 months to develop qualifying local programs (likewise, the Department will not begin to implement local programs in non-adopting localities until this time). The new technical criteria of Part II will not become applicable until such time as a local program is operating within a locality.
Jimmie Jenkins (Fairfax County); Randy Bartlett (Virginia Municipal Stormwater Association); Diane Hoffman (Northern Virginia Soil and Water Conservation District); Victoria Greenfield (Arlington County);	Due to concerns, recommend a phased or iterative approach to more stringent standards; initial phase all jurisdictions comply with current standards (0.45 and 10%) and adopt the more stringent criteria as science and technology evolve; would allow time for more study and data gathering on the methodology and long-term effectiveness of practices.	The 0.45 standard for new development has been adopted in the final regulations. The need for an enhanced standard for the Chesapeake Bay watershed will be addressed through a future regulatory action.
Jimmie Jenkins (Fairfax County)	Or implement a 2-part design; first part requires reduction to 0.45 lbs/acre/year and use of BMPs that require maintenance agreements; second part requires BMPs (smaller on-lot facilities) that would not be subject to maintenance agreements; since no maintenance agreements for second part, localities would not be required to assume responsibility for enforcement of the inspection and maintenance of BMPs.	While a two-part process is not anticipated, revisions have been made that clarify that maintenance agreements are not required for BMPs that are located on and treat individual residential lots, and that regular inspections are not required for these BMPs. Long term maintenance of these BMPs must still be addressed through an alternative method developed by the local program (for example, education and outreach, periodic inspections, etc.).
Leonard Sandridge (University of	Encourages DCR to elaborate on approved technologies	The references associated with these regulations were

Virginia)	under the current regulations such that information is available for these BMPs under the proposed regulations.	available for review during the public comment period on the proposed regulations and the public comment period held on the final regulations. Draft BMP standards and specifications were posted on the Virginia Stormwater Management BMP Clearinghouse website in order to allow for consideration and comment on the standards and specifications. Likewise, the Virginia Stormwater Management Handbook draft revisions were posted to the Department's website to allow for review.
Keith Oster (Prime Design Engineering)	Many examples of counterintuitive application of alternative stormwater management systems that appear sound, but in application will be far worse for the Chesapeake Bay.	The regulations are the result of a four year public participatory process that fully examined strategies for addressing the Chesapeake Bay and the Commonwealth's water quality and quantity goals. As a part of this process, the nationally-recognized Center for Watershed Protection was contracted to review nationwide BMP data and to make recommendations to the Department. The regulations represent the result of this process, and the practices included represent the advice of the Center, as reviewed by the Department, to achieve the necessary reductions.
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council	Strongly recommend representation from the turfgrass industry on the BMP Clearinghouse Committee.	Appointments are made to the BMP Clearinghouse Committee are made as vacancies occur. Specific recommendations for appointments can be made to the Department.
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil	Recommend development of a supplement to the handbook that specifically addresses the management of runoff on sites with turf-intensive uses such as golf courses.	The Department has met with representatives of the turfgrass industry and recognizes the request. Development of such guidance may be considered in the future.

Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council)		
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council)	Consider development of an alternative list of management practices for turf-intensive uses, including providing credit for ongoing BMPs, nutrient management planning and implementation, integrated pest management planning, water efficient golf course development and other similar practices.	The Department has met with representatives of the turfgrass industry and recognizes the request. Development of such guidance may be considered in the future.
Glenn Telfer	Recommended BMPs are an improvement over the existing BMPs, but need to address minor innovations in modifying the measures; have been told by reviewers – never seen it before and won't allow it-.	The regulations are the result of a four year public participatory process that fully examined strategies for addressing the Chesapeake Bay and the Commonwealth's water quality and quantity goals. As a part of this process, the nationally-recognized Center for Watershed Protection was contracted to review nationwide BMP data and to make recommendations to the Department. The regulations represent the result of this process, and the practices included represent the advice of the Center, as reviewed by the Department, to achieve the necessary reductions. Other BMPs will continue to be approved for use over time through the Virginia Stormwater BMP Clearinghouse.

Runoff Reduction Method

Christopher Sonne (Civil &	Beauty of proposed runoff reduction method is the flexibility	It is agreed that the Runoff Reduction Method is

Environmental Services, LLC);	and diversity in design it allows. Approach will encourage thoughtful, competent design and will penalize (through higher development costs) poor design, lazy engineering and bad sites.	intended to promote thoughtful site design and provide flexibility through increased BMP selection.
Mark Graham (Albemarle County); Glenn Brooks	Far too complicated; development in UDAs or other intensely developed areas require more ability to make judgment calls; less time in the office negotiating with developers means less time in the field inspecting.	The Runoff Reduction Method has been developed and tested through charrettes involving over 300 design professionals. These charettes have shown that the Runoff Reduction Method is not overly complicated and is understandable by the consulting community.
Karl Mertig	Evaluate the runoff reduction method to more fairly address the actual impacts of runoff volume on the receiving waters into which they are discharged.	The Runoff Reduction Method provides a treatment volume for phosphorus. In addition, the Runoff Reduction Method allows for the modification of runoff curve numbers, which directly impacts the adequacy of receiving channels.
Peter Eckert (Hampton Roads Association for Commercial Real Estate); Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.);	The spreadsheets require green roofs, pervious parking (including the grass portion), and wet ponds to be counted as impervious surfaces. All vegetated and water areas should be considered pervious.	The Runoff Reduction Method initially requires green roofs, pervious parking, and wet ponds to be counted as impervious surfaces. However, the Method credits each practice as a BMP and assigns a volume reduction and pollutant reduction for each.
Mike Flagg (Hanover County)	Spreadsheet is of limited value as it is rigid and is not flexible enough to be utilized in many real world situations.	The Runoff Reduction Method has been developed and tested through charrettes involving over 300 design professionals. These charettes have shown that the Runoff Reduction Method is not overly complicated and is understandable by the consulting community, and that it has applicability to real world situations.
Greater Richmond Area Association for Commercial Real Estate; William Rucker; Shelby Perkins; Philip Abraham (The Vectre Corporation); Roger Rodriguez (International Council of Shopping Centers, Inc.); Greater Richmond Area Association for Commercial Real Estate Legislative Committee; Steve Weinstock (International Council of Shopping Centers);	Regulations consider any conversion of woods to parks, ballfields, yards and open spaces, to be "managed turf"; will be deemed to be between 20-25% impervious requiring more BMPs just for them, making it more expensive to develop.	Managed turf is recognized as a significant contributor of pollutant loadings and must be accounted for to meet the objectives of the regulations. While the Runoff Reduction Method does assign higher runoff coefficients to managed turf, the Method also provides for volume reduction related to the BMPs implemented to reduce pollutant discharges. The correlation of increased runoff coefficients to 20-25% impervious cover suggested by the comment is incorrect. Impervious cover has been assigned a runoff coefficient of 0.95, while turf ranges from 0.15 to 0.25 depending on soil types.

John Schwartz (HaveSiteWillTravel. Ltd); Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies)		
Leonard Sandridge (University of Virginia)	What areas are specifically included in managed turf (is this just mowed grass?); are mulched areas primarily made up of flowers, shrubs, and trees categorized as forest/open space? What is the minimum tree density that qualifies as forested land? How should turf areas with a large number of trees planted throughout it be categorized? Runoff from these areas will be significantly less than a completely open turf area. Could a turf area with engineered soils having a high infiltration rate be categorized as a BMP and not a source of phosphorus?	The technical memo associated with the Runoff Reduction Method contains discussion of the topics raised by the comment. It is available on the Department's website at: http://www.dcr.virginia.gov/lr2f.shtml
Leonard Sandridge (University of Virginia)	Runoff reduction method does not take into consideration the way in which the turf is managed; unclear from technical memo if the runoff coefficients strictly account for increased grading, site disturbance and soil compaction or if it is also partly to account for the effects of high nutrient runoff from intensively managed areas with fertilizer application; have implemented strict nutrient management plans for turf areas.	The Runoff Reduction Method does take into account both the activities at the site during construction and practices that result following construction, as well as long-term maintenance of turf areas, in establishing the runoff coefficient for managed turf.
Leonard Sandridge (University of Virginia)	Will the final runoff reduction method spreadsheets enable acceptable BMPs not listed in Table 1 to be manually inputted?	As additional BMPs are added to the Stormwater BMP Clearinghouse website, the Runoff Reduction Method spreadsheet will be modified to allow for their use.
Leonard Sandridge (University of Virginia)	Recommends expansion on the list of non-volume reducing BMPs that can be implemented on a constrained site to meet the proposed water quality criteria requirements.	Additional BMPs will be submitted and approved on an ongoing basis through the Virginia Stormwater BMP Clearinghouse.
Leonard Sandridge (University of	Would be helpful if the worksheet format were modified to	The Runoff Reduction Method spreadsheet, as revised,

Virginia); Youngblood,Tyler and Associates, P.C.	incorporate added flexibility for the end-user (only allows for two drainage areas leading to redundancies).	allows for five drainage areas. Further modification to enhance user-friendliness will be considered.
Mike Gerel (Chesapeake Bay Foundation)	CBF suggests some small changes to the tools supporting the amendments to permit the use of urban nutrient management plans (NMP) as a BMP on development sites. An appropriate specification should be developed for creating an urban NMP and the Virginia Runoff Reduction Method should also be amended to provide phosphorus and nitrogen reductions justified by current research for sites planning to implement an NMP.	As nutrient management plans are not required by law for most projects at this point, and as assurance of their long-term implementation on a largely voluntary basis is uncertain, it has been determined not to include them as a BMP in the regulations at this time. BMPs may be approved for use over time through the Virginia Stormwater BMP Clearinghouse, so practices such as this may be considered for use in the future if determined appropriate.
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council)	Recommend further guidance or refinement of the existing guidance on the application of open space versus turf crediting for turf-intensive uses such as golf courses; many different cover and grass types may cause confusion without further specific guidance.	The Department has met with representatives of the turfgrass industry and recognizes the request. Development of additional guidance and refinements of existing turf credits, if shown necessary, may be considered in the future.
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council)	Consider how runoff reuse practices could be adapted to provide the appropriate crediting for a golf course.	Rainwater harvesting is permitted and encouraged under the regulations. Table 1, contained in section 65, provides efficiencies for the use of volume reduction practices, including rainwater harvesting practices.

Michael Bumbaco (Kerr Environmental Services Corp.)	In the land cover guidance for the impervious cover paragraph of the spreadsheet should be revised to state since green roofs do not reduce pollutant load and constructed wetlands and wet ponds do not provide runoff reduction, include these areas as impervious in the pollutant load calculations but pervious in the channel and flood protection calculations; pervious pavement can handle up to the 10-year design storm flows and should be included as pervious areas.	The Runoff Reduction Method initially requires green roofs, pervious parking, and wet ponds to be counted as impervious surfaces. However, the Method credits each practice as a BMP and assigns a volume reduction and pollutant reduction for each. .
Youngblood,Tyler and Associates, P.C.	Why does all disturbed area, including grassed yards or turf, have to be managed for stormwater runoff? Why do undisturbed areas have to be in common area or preservation areas in order to receive credit?	Managed turf is recognized as a significant contributor of pollutant loadings and must be accounted for to meet the objectives of the regulations. While the Runoff Reduction Method does assign higher runoff coefficients to managed turf, the Method also provides for volume reduction related to the BMPs implemented to reduce pollutant discharges.
Youngblood,Tyler and Associates, P.C.	Can a project receive credit for off-site drainage area that is treated by on-site facilities? There is currently no provision in the spreadsheet for doing so.	All stormwater runoff that flows across the site must be accounted for. Treating runoff that originates from off of the site cannot be used as a substitute for meeting water quality and quantity requirements with regard to the runoff originating from the site.
Bay Design Group	Runoff coefficient for new pavement/impervious area is different from VDOT and the rational method.	As a part of this regulatory action, the Department contracted with the Center for Watershed Protection to develop the Runoff Reduction Method and to review national data on BMPs and their efficiencies. The composition of the Method and the available BMPs and their standards reflects the Center's work, with input from the Department. The Method has been tested and refined through charrettes involving over 300 design professionals.
Richard Costello (AES Consulting Engineers)	Significant number of technical solutions proposed to be widely used by these regulations are unproven.	As a part of this regulatory action, the Department contracted with the Center for Watershed Protection to develop the Runoff Reduction Method and to review national data on BMPs and their efficiencies. The composition of the Method and the available BMPs and their standards reflects the Center's work, with input from the Department. The Method has been tested and refined through charrettes involving over 300 design

		professionals.

Costs and the economic analyses

Michael Bills (Chairman of The Nature Conservancy Board); Martin Tillett; Sandra Howson; Dawn Shank (Mattaponi and Pamunkey Rivers Association); Nancy Cawood; Leslie Watson (Friends of the North Fork of the Shenandoah River); Roberta Savage (Rivanna Conservation Society); Roger Diedrich; Mark Fedlpausch; Mary Beth Mains (Friends of Bryan Park); John Halderman (James City County Citizen's Coalition); David Crawford (Brand Center); John Lampmann; Linda Muller; Paul Sanford (American Canoe Association); Galen Canham	Less expensive and fairer to deal with this problem as proposed than cleaning up these pollutants afterwards.	It is agreed that the costs of retrofitting at a later date to meet needed pollutant reductions is more expensive than implementing control measures prior to completion of a land disturbing activity.
Cliff Bickford; Joe Wilder (Frederick County); Andy Herr (Terry Petersen Residential); Warren Wakeland (Home Building Association of Richmond); Mike Flagg (Hanover County); Sarah; Hugh Woodle; E. Marshall Bowden (Landvest, LLC); Steve Pandish (William H. Gordon Associates, Inc.); Mark Trostle; Shawn Smith	The economic impact analysis doesn't show the program is feasible, only that there are a lot of costs that are not predictable. As presented, the costs seem to far outweigh the benefit.	It is believed that revisions to the regulations have greatly reduced potential cost impacts. In addition, this regulatory action has important benefits which outweigh its costs. As the Agency Statement on the proposed regulations describes in greater detail, improved water quality will have positive impacts on commercial and recreational fisheries, aquaculture, and tourism. Downstream properties and interests will additionally benefit from greater channel and flood protection.
Thomas Bruun (Prince William County)	Does not adequately address the increased costs associated with implementation of the proposed regulations; true costs can be determined only after applying the runoff-reduction method techniques from the beginning and determining if the site layout has implication on the marketability of the parcel for the proposed use.	It is agreed that the Runoff Reduction Method should be considered during the initial planning stages of a project, as best management practices can be properly designed and located to reduce cost impacts and to preserve marketability of a parcel. As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of

		a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005.
Willis Blackwood (Blackwood Development); Dave Anderson	Does not clearly address total cost of implementation, including but not limited to, lost jobs, incremental construction cost, lost land value, and lost revenue to, local, state, and federal governments.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Sarah Lawson (Rainwater Management Solutions)	If truly assess costs, potential cost of not regulating stormwater better will outweigh the costs of these potential regulations; regulations not cost prohibitive.	Revisions have been made to the regulations that will reduce potential costs, and this regulatory action does have important benefits which outweigh its costs. As the Agency Statement on the proposed regulations describes in greater detail, improved water quality will have positive impacts on commercial and recreational fisheries, aquaculture, and tourism. Downstream properties and interests will additionally benefit from greater channel and flood protection.
Greg Johnson; Allen Loree (Allen Loree Homes LLC); Jeff Collins (Townes Site Engineering); Bruce Reese (Fredericksburg Builders Association); David Lesser; Dennis Dineen; Michael Newsome; A. Condlin: Jeanne Puricelli; Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.);	Cost has to be equitably shared [agriculture, developers, builders, sanitary facilities, etc.]	It should be noted that other sources are undertaking major efforts to improve water quality. The Commonwealth has directed approximately $1 billion toward the upgrade of its sewage treatment plants, and the Virginia Agricultural BMP Cost-share Program has received greater funding than ever before. In addition, regulatory programs that apply to certain types of agricultural operations (for example, concentrated animal feeding operations, poultry litter, and biosolids

Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Headwaters Soil and Water Conservation District Land Use Committee; Rick Shiflet (Augusta Farm Bureau Federation); Shawn Smith; Jonathan Fairbanks (Fairbanks & Franklin); David Smith; Michael Pellis; Richard Costello (AES Consulting Engineers); John Bennett (Timmons Group); Douglas Brown (Downtown Properties); Gregory Koontz (Koontz-Bryant, P.C.)		application) continue to be developed and improved. All sources must contribute to achievement of Virginia's water quality goals.
Benjamin Ray; Rebecca Kurylo; John Tippett (Friends of the Rappahannock); Peter Fields	The regulations may be more expensive, but costs are similar to current regulations that already exist in some localities. Stafford County and the City of Fredericksburg have shown that low impact development works.	It is recognized that there are localities that have adopted stormwater management requirements that are more stringent than those imposed by these regulations. It is notable that these requirements have not been reported to hinder development within these localities.
Kate Wofford (Shenandoah Valley Network); Wendy Hamilton (Preserve Frederick)	Proposed regulations will ensure that stormwater control costs are predictable and consistent for developers.	It is agreed that the regulations will establish the minimum requirements for complying with the water quality and quantity criteria. This will ensure that costs are predictable for developers.
Roger Petersen (LivinGreen Homes by Scandia)	Costs may be higher initially but will decrease as the measures and methods of installation become more mainstream.	It is agreed that costs will decrease as experience is gained in implementing the Runoff Reduction Method to achieve water quality and quantity goals.
Juliet Nisley; Andy Herr (Terry Petersen Companies; Barrett Hardiman (Home Builders Association of Virginia); Pete Kotarides (Tidewater Builders Association); Warren Wakeland (Home Building Association of Richmond); Mike Flagg (Hanover County); Junie West (Timmons Group); Sarah; James Campbell (Virginia Association of Counties); John Hudgins (York County); Sanford Wanner (James City County); S. Charles Krause (SPOTT-ON Consulting, LLC); Andy Fulgham	Engineers estimate development costs will at least triple under any development scenario, and in some cases the costs could be five times higher [or significantly more].	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility

(Atlantic Logowear); William Schooley (Clark Nexsen Architecture); Harrison Taylor (Thompson Education Direct); Cliff Bickford (BB&T); Fred Carerras; Betsy Blair (CJW Chippenham Hospital); Will Davis (Chesterfield County); Tracy Kemp Stallings (CJW Johnston Willis Hospital); Phil Hess; John Bennett (Timmons); Nancy Coggins (Priority Corporate Housing); Greg Lupsha (Keller Williams Realty); Malcolm Randolph, Jr. (CB Richard Ellis); Brenda Fisher (CB Richard Ellis); David Crawford (CB Richard Ellis); Robert Black (CB Richard Ellis); Brenda Samuel; Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); John Easter (The Chesterfield Business Council); Mark Bissette (Hampton Roads Utility and Heavy Contractors Association); Steven Vermillion (Associated General Contractors of Virginia): Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); David Smith; Bob Shaffer; Paul Trapp; Richard Costello (AES Consulting Engineers); John Bennett (Timmons Group); Fred Norman (Chesterfield Business Council and the Greater Richmond Chamber of Commerce		for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.

Wilkie Chaffin (Virginia Association of Soil and Water Conservation Districts)	DCR must have scientific data to support increased cost and commit to an on-going education program to ensure adequate understanding and technical capacity to local staffs and the development community.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted. Finally, it is recognized that ongoing education and outreach is necessary, and the Department is committed to providing those necessary services.
Wilkie Chaffin (Virginia Association of Soil and Water Conservation Districts)	Large incremental increased expense for the benefit must be recognized since the easy components of pollution have been achieved with existing programs; large incremental increased expense justified for the benefit achieved?	Addressing the impairment of the Chesapeake Bay will require actions to be undertaken to address pollutant loads from all sources. This includes, without limitation, industrial facilities and wastewater treatment facilities, agriculture, developed and developing lands, atmospheric deposition. While it is recognized that pollutant reductions can be initially achieved at lesser costs in other areas, the Commonwealth's water quality and Bay goals cannot be met unless all sources are addressed.
Bruce Goodson (Hampton Roads Planning District Commission); Regina Williams (City of Norfolk);	Regional cost-benefit analysis found that it was 30 times more expensive to remove 1 pound of phosphorus from redevelopment projects than new development projects.	Revisions have been made to the water quality and quantity requirements of the regulations to provide additional flexibility for smaller redevelopment sites, which were the areas where most difficulty was noted.
Bruce Goodson (Hampton Roads Planning District Commission)	"Higher phosphorus control costs in high density developments create financial disincentives that may work at cross purposes with larger watershed objectives" according to the Department of Planning and Budget.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new

		development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Randy Bartlett (Virginia Municipal Stormwater Association)	Compared to after-the-fact remedial efforts, using effective stormwater design at the time of a new development makes sense.	It is agreed that the costs of retrofitting at a later date to meet needed pollutant reductions is more expensive than implementing control measures prior to completion of a land disturbing activity.
Malcolm Kerley (Virginia Department of Transportation)	Foresee major impacts to its operations in attempting to comply with the proposed water quality and quantity technical criteria; impacts will be in the form of additional manpower and financial obligations on our design, construction and maintenance program areas.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Owen Matthews (Kings Dominion)	Could significantly impact capital expenditure decisions by developers and more significantly local businesses trying to grow their businesses; reduced capital expenditures within the private sector will reduce state revenues.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction

		Method and enhance water quantity criteria have been adopted.
Robert Connelly	Make sure agency is aware of the final construction cost to the developer/municipality; try to be more practical with where the greatest improvements in water quality are the least expensive.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake)	Many unknown costs and potentially very high costs to implement the proposed regulations; unknown whether the implementation will provide significant improvements in water quality.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted. This regulatory action also has important benefits which outweigh its costs. As the Agency Statement on the proposed regulations describes in greater detail, improved water quality will have positive impacts on commercial and recreational fisheries, aquaculture, and

		tourism. Downstream properties and interests will additionally benefit from greater channel and flood protection.
Clarence Smith (Industrial Development Authority of Smyth County):	Examples used [to determine costs] were drawn mainly from the eastern part of Virginia, so costs in Southwest Virginia would no doubt be higher due to our mountainous terrain.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Dave Norris (City of Charlottesville); Gregory Koontz (Koontz-Bryant, P.C.)	Concern of the development community with the increased cost of development, especially in urban infill areas; would like to see DCR support General Assembly action for things such as tax credits for the use of BMPs that achieve the standards proposed in the regulations.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Delegate Beverly Sherwood	Important to address changes to protect state waterways, however, proposed regulations are far-reaching and fiscal impact is great; fear that restrictive regulations would be another unfunded mandate during economic	As revised, it is not believed that cost impacts of the regulations will be as great as noted by public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal,

	downturn; hope that a more moderate approach will be consider that addresses the economic future of Virginia and localities.	along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Mike Gerel (Chesapeake Bay Foundation)	The amendments will help reduce long-term costs by preventing new development pollution from flowing into public water supplies, MS4s, or waterways, and adding to water treatment, maintenance, and restoration costs that are already borne by the locality (and often, the local taxpayer). The amendments can help maintain or create healthier water bodies that increase property values and offer important recreational and subsistence fishing, outdoors recreation, aesthetic, and cultural benefits for urban communities.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by other public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.
Bill Street (James River Association)	In an effort to contribute to the understanding of the implementation of the proposed regulations, JRA contracted with Williamsburg Environmental Group to apply the new regulations and associated methodology to a number of real world examples of development projects. The analysis and results produced by WEG have provided several insights and conclusions. The results re-affirm that the proposed rules are technically sound and attainable across a variety of different types of development. For each site examined by WEG, compliance was	The WEG analysis is recognized and is included as a part of the economic analysis contained in the Agency Statement associated with the proposed regulations.

	achieved on-site. The results identified some situations where the new regulations did not require major changes to stormwater facilities and others where they did. It will require greater effort and investment to reduce stormwater pollution. Achieving the greater water quality benefits of the proposed regulations will require, in many cases, greater investment in stormwater facilities, but adjustment to the implementation tools has the potential to control costs without sacrificing water quality.	
David Phemister (The Nature Conservancy)	The amendments will indeed add cost to certain development projects. At the same time, however, we believe it is essential that the legitimate questions about costs are not allowed to morph into unsupported and unfounded assertions that the costs with be financially prohibitive or worse, represent a threat to the very health of Virginia's economy. Independent analysis o f the technical feasibility and costs of the proposed regulations demonstrate that for most sites, reductions could be achieved on site and costs were manageable and remained a small part of a project's overall expenses.	As revised, it is not believed that cost impacts of the regulations will be as great as noted by other public comments on the proposed regulations. The Agency Statement associated with the proposed regulations includes discussion of the economic impacts of the proposal, along with site examples that relate the costs of implementation. These costs have been further reduced through the adoption of a 0.45 pounds of phosphorus per acre per year statewide standard for new development, which is the same standard that has been utilized statewide since the Board received responsibility for stormwater management in 2005. Enhanced compliance methodology through the Runoff Reduction Method and enhance water quantity criteria have been adopted.

Sprawl

Frank Ballif (Southern Development Homes); Charlie Armstrong; Jay Willer (Blue Ridge Home Builders Association); Karl Mertig; Barrett Hardiman (Home Builders Association of Virginia); Warren Wakeland (Home Building Association of Richmond); Stephen Daves (R.W. Murray Co.); Normand Goulet (Northern Virginia Regional Commission); Gena Hanks	Unintended consequence of this regulation will be to push development out to where land is cheaper and offers opportunities for large lot developments.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites,

(Pulaski Board of Supervisors); R. Cellell Dalton (Wythe County); Coleman Speece (Virginia Association of Planning District Commissions); Selena Cuffee-Glenn (City of Suffolk); Archie Fox (Warren County); Mike Flagg (Hanover County); Realtor Action Alert; Senator Creigh Deed; Phil; Kevin McNulty; Nicholas Walker; Sarah; Greater Richmond Area Association for Commercial Real Estate; Joan Comanor (Lord Fairfax Soil and Water Conservation District); Jeffrey Collins; Jim Ingle (Centennial Homes); John Olivieri (Associated Development Management Corporation); Timothy Mitchell (City of Lynchburg); William Johnston (City of Virginia Beach); James Campbell (Virginia Association of Counties); John Hudgins (York County); Bonnie Johnson (Bath County); David Nunnally (Caroline County); John Miniclier (Charles City County); D. Dane Poe (Lee County); Sanford Wanner (James City County); Stephen Carter (Nelson County); David Moorman (Botetourt County); Kenneth Eades (Northumberland County); Michael Altizer (Roanoke County); Barry Clark (Greene County); S. Charles Krause (SPOTT-ON Consulting, LLC); Andy Fulgham (Atlantic Logowear); William Schooley (Clark Nexsen Architecture); Harrison Taylor (Thompson Education Direct); Cliff Bickford (BB&T); Fred Carerras; Betsy Blair (CJW Chippenham Hospital); Will Davis (Chesterfield County); Tracy Kemp Stallings (CJW Johnston Willis Hospital); Phil Hess; John Bennett (Timmons); Nancy Coggins (Priority Corporate Housing); Greg Lupsha (Keller Williams Realty); Malcolm Randolph, Jr. (CB Richard Ellis); Brenda Fisher (CB Richard Ellis); David Crawford (CB Richard Ellis); Robert Black (CB Richard Ellis); John Kerber; Bateman Custom Construction, LLC; Skip Eastman (Chesapeake Structural		redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.

Systems); George Daily (A&E Homes, Inc.); Daniel Dreelin; Robert Burr; Mark Hassinger (WestDulles Properties); Peter Eckert (Virginia Association for Commercial Real Estate); Cynthia Couch; Chris Lupia (The Engineering Groupe); Craig Cope (Liberty Property Trust); Melanie Holloway (Holliday Properties, Inc.); Richard Dickens, Jr.; Steve Lawson (The Lawson Companies); Alvin Owens; Robert Duckett (Peninsula Housing & Builders Association); William Rucker; Ronald Fowler; Ronnie Herring (The Home Crafters); Ben Hudson (Northern Neck Homes, Inc.); Dennis Cronk; Mike Cooper; Mike Rinaldi; William Garrett (W.B. Garrett, Inc.); Neil Williamson (Free Enterprise Forum): J. Glenn Muckley; John Bumgarner (Duke Realty Corporation); Vanasse Hangen Brustlin (VHB); Tom Dillon; Michelle Wilson-Johnson (Shenandoah Valley Builders Association); Brenda Samuel; Keith Oster (Prime Design Engineering): Leslie Ridout; Jeff Collins (Townes Site Engineering); Melinda Loeblich; Gray Stettinius; Steve Thomas; Ralph Costen, Jr.; David Fahy; Shawn Callahan (Roanoke Regional Home Builders Association); David Owens (Boone Homes, Inc.); Nikhil Deshpande (Rinker Design Associates, P.C.); Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Chris Hornung (The Silver Companies); David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC); Brian Gordon (Apartment and Office Building Association of Metropolitan Washington); Barbara Fried; Dave Anderson; Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); Michael Harvey (Thomas Jefferson Partnership for Economic Development); Mark Bissette (Hampton Roads		

Utility and Heavy Contractors Association); Steven Vermillion (Associated General Contractors of Virginia): Robin Miller (Miller & Associates); John Cogbill, III; Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); Philip Abraham (The Vectre Corporation); Roger Rodriguez (International Council of Shopping Centers, Inc.); Greater Richmond Area Association for Commercial Real Estate Legislative Committee; John Conrad (Miller and Smith); John Ainslie (Ainslie Group); Ken Cohen (Ainslie Group): Woody Wendell, III (Ainslie Group): Jeffrey Ainslie (Ainslie Group): Shane Sullivan (Crestline Realty Corporation): Classic Design Builders; Bruce Galbraith (WG Construction Co., Inc.); Apartment and Office Building Association of Metropolitan Washington, Associated Builders and Contractors – Virginia Chapter; Bristol Chamber of Commerce; Charlottesville Regional Chamber of Commerce; Emporia Greensville Chamber of Commerce; Fairfax Chamber of Commerce; Greater Bluefield Chamber of Commerce; Greater Richmond Chamber of Commerce; Greater Springfield Chamber of Commerce; Greater Williamsburg Chamber and Tourism Alliance; Halifax Chamber of Commerce; Hampton Roads Association for Commercial Real Estate; Hampton Roads Chamber of Commerce; Hanover Association of Businesses and Chamber of Commerce; Louisa County Chamber of Commerce; Loudoun County Chamber of Commerce; Lynchburg Regional Chamber of Commerce; NAIOP Northern Virginia; Northrop Grumman Shipbuilding; Petersburg Chamber of Commerce; Roanoke Regional Chamber of Commerce; Robinson Construction; Virginia Association for		

Commercial Real Estate; Virginia Peninsula Chamber of Commerce; Virginia Utility and Heavy Contractors Council; Daniel Dreelin; Sarah Kellam; Charles Hite; Bill Garrett; Grover Southers (Southers Concrete, Inc.); Ronald Roark (Nottoway County); Truett Young (Stanley Martin Companies); Bruce Reese (Fredericksburg Builders Association); David Lesser; Mark Trostle; Carrie Coyner; Bryant Gammon (Highmark Engineering); M.D. Marshall; Youngblood,Tyler and Associates, P.C.; Doug Westmoreland (AIA); Don Atkinson (Richmond Association of Realtors); George Moore; Taylor Goodman; Joan Girone (Chesterfield Chamber of Commerce); Gary VanAlstyne; Frank Bradley (Bradley Properties); Steve Weinstock (International Council of Shopping Centers); John Schwartz (HaveSiteWillTravel. Ltd); Robert Jansen (Jansen Land Consulting, LLC); Lois Haverstrom; Janet Bowers; Carolyn Oster (Prime Design Engineering, P.C.); Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Daun Klarevas (Christopher Consultants); Paul Anderson; Valerie Long; Bill Yauss (The Drees Company); Alvin Mistr, Jr.; Shawn Smith; Emmett Hanger (Rappahannock River Basin Commission); George Haw; Jonathan Fairbanks (Fairbanks & Franklin); Steven Worthington; David Smith; Michael Pellis; Paul Trapp; Ivan Wu; Mark Huffman; Richard Costello (AES Consulting Engineers); John		

Bennett (Timmons Group); Bob Brown (Urban, Ltd.); John Nolde (The Nolde Company, Inc.); Ronald Willard, II (The Willard Companies, John Nolde, III; Susan Hadder; William Hestand (Koontz-Bryant, P.C.); Dan Jamison (Koontz-Bryant, P.C.); Meredith Ward (Valley Engineering Surveying Planning); David Mitchell; Jerry Brunk (LS); Sarah Kellam; Thomas Kellam; Timothy Cleary (Charles Ross Homes); G. Archer Marston, III; Jim Murphy; Michael Elander (Timmons Group); Thomas Jordan; Fred Norman (Chesterfield Business Council and the Greater Richmond Chamber of Commerce; Will Shumate; Bryan Mitchell (Townes Site Engineering); Mitchell Bode (Wilton Development Corporation)		
Frank Ballif (Southern Development Homes); Mark Slusher; Willis Blackwood (Blackwood Development); Jay Willer (Blue Ridge Home Builders Association); J.M. Snell; Charles Rotgin, Jr. (Great Eastern Management Company); Andy Herr (Terry Petersen Residential); Bruce Goodson (Hampton Roads Planning District Commission); Tyler Craddock (Virginia Chamber of Commerce); Barrett Hardiman (Home Builders Association of Virginia); Daniel Campbell (Floyd County); Pete Kotarides (Tidewater Builders Association); Warren Wakeland (Home Building Association of Richmond); Sarah; James Campbell (Virginia Association of Counties); Neil Williamson (Free Enterprise Forum): Tom Dillon; Brenda Samuel; David Owens (Boone Homes, Inc.); Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Brian Gordon (Apartment and Office Building Association of Metropolitan Washington); Barbara Fried; Robin Miller (Miller & Associates); John Conrad (Miller and Smith); Donald Rissmeyer (Virginia Section	Development within a UDA [urban development area] under this regulation would be extremely expensive, and would likely eliminate the option for affordable housing.	It is notable that the final regulations adopt a 0.45 phosphorus standard. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005. However, recognizing that it may be necessary to adopt a more stringent standard for the Chesapeake Bay watershed in the future, a revision has been made to the regulations to specifically allow a qualifying local program to adopt a water quality standard of no greater than 0.45 pounds per acre per year of phosphorus that will be applicable within an Urban Development Area in the event that a more stringent standard is adopted in the future for the Chesapeake Bay watershed. This revision can be found in section 63. This allowance is intended to promote development within UDAs, and to reduce hurdles to high density development in those areas. Additionally (and likewise available upon the adoption of a more stringent standard), a new offsite option for compliance has been created in section 69, which would allow a payment to be made in order to achieve necessary reductions. These two new provisions within the regulations are believed to help

American Society of Civil Engineers Stormwater Technical Committee); Youngblood,Tyler and Associates, P.C.; Valerie Long; David Smith; Keith Stanley (Timmons Group); John Bennett (Timmons Group); George Moore		address the concerns raised during the public comment period regarding challenges faced by development within UDAs under a standard more stringent than the adopted 0.45.
Sarah Bell; Linda Martenson; Kate Wofford (Shenandoah Valley Network); Wendy Hamilton (Preserve Frederick); Rosemary Wallinger (Shenandoah Forum); Wilkie Chaffin (Virginia Association of Soil and Water Conservation Districts); Kim Sandum (Community Alliance for Preservation); Matthew Hannan	Create incentives for development to occur in towns and cities instead of converting farmland and forestland.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
Jared Knicley	Need to ensure that regulations are not overbearing on brownfield/greyfield developers; maybe some sort of sliding scale, perhaps relating to impervious ground surface area (parking lots and sidewalks) of the predevelopment site would fit.	It is notable that the final regulations adopt a 0.45 phosphorus standard. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005.
Richard Souter (WVS Companies); Greater Richmond Area Association for Commercial Real Estate	Not all developments are the same in regard to phosphorus generation, and that a blanket regulatory approach to the treatment of phosphorus unjustly adds a significant cost to urban developments.	It is notable that the final regulations adopt a 0.45 phosphorus standard. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005. However, recognizing that it may be necessary to adopt a more stringent standard for the Chesapeake Bay watershed in the future, a revision has been made to the regulations to specifically allow a qualifying local

		program to adopt a water quality standard of no greater than 0.45 pounds per acre per year of phosphorus that will be applicable within an Urban Development Area in the event that a more stringent standard is adopted in the future for the Chesapeake Bay watershed. This revision can be found in section 63. This allowance is intended to promote development within UDAs, and to reduce hurdles to high density development in those areas. Additionally (and likewise available upon the adoption of a more stringent standard), a new offsite option for compliance has been created in section 69, which would allow a payment to be made in order to achieve necessary reductions. These two new provisions within the regulations are believed to help address the concerns raised during the public comment period regarding challenges faced by development within UDAs under a standard more stringent than the adopted 0.45.
Gina Faber (Sustainable Loudoun); Rob Lanphear; Sally Thomas (Albemarle County Board of Supervisors); Andy Herr (Terry Petersen Residential); Joan Comanor (Lord Fairfax Soil and Water Conservation District); Margaret Lorenz (Friends of the North Fork of the Shenandoah River)	Steps should be taken to protect Smart Growth policies, such as infill development.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
George Nyfeler; Thomas Bruun (Prince William County); Charlie Armstrong; Willis Blackwood (Blackwood Development); Karl Mertig; Andy Herr (Terry Petersen Residential); Tyler Craddock (Virginia Chamber of Commerce);	Costs to land developers will be mitigated by opting for lower-density land development in green areas over the very types of projects we should be incentivizing: high-density development or redevelopment.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result.

Barrett Hardiman (Home Builders Association of Virginia); Pete Kotarides (Tidewater Builders Association); Warren Wakeland (Home Building Association of Richmond); Stephen Daves (R.W. Murray Co.); Blue Ridge Home Builders Association Board; Charles Rotgin, Jr. (Great Eastern Management Company); Gena Hanks (Pulaski Board of Supervisors); R. Cellell Dalton (Wythe County); Coleman Speece (Virginia Association of Planning District Commissions); Selena Cuffee-Glenn (City of Suffolk); Archie Fox (Warren County); Regina Williams (City of Norfolk); Sarah; Barry Clark (Greene County); Neil Williamson (Free Enterprise Forum); Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Chris Hornung (The Silver Companies); Dave Anderson; Mark Bissette (Hampton Roads Utility and Heavy Contractors Association); Steven Vermillion (Associated General Contractors of Virginia): Robin Miller (Miller & Associates); Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); Philip Abraham (The Vectre Corporation); Ronald Roark (Nottoway County); David Lesser; Bryant Gammon (Highmark Engineering); Youngblood,Tyler and Associates, P.C.; Doug Westmoreland (AIA); George Moore; Taylor Goodman; Frank Bradley (Bradley Properties); Robert Jansen (Jansen Land Consulting, LLC); Lois Haverstrom; Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt		However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.

Companies); Daun Klarevas (Christopher Consultants); Paul Anderson; Valerie Long; Alvin Mistr, Jr.; Shawn Smith; David Smith; Paul Trapp; Ivan Wu; Richard Costello (AES Consulting Engineers); John Bennett (Timmons Group); Thomas Jordan; Will Shumate		
George Nyfeler	Will prevent the protecting of green space, the limiting of unnecessarily long-length infrastructure needs and the redevelopment of inner cities.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
Daniel Nairn; Kevin McNulty	Can the regulations be written to provide stricter limits on low-density development: Can phosphorus levels be determined on a per-unit or per-capita basis rather than per-acre basis?	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
Dale Mullen (Louisa County); Selena Cuffee-	Create separate standards for UDAs that	It is notable that the final regulations adopt a 0.45

Glenn (City of Suffolk)	would effectively result in an incentive to better planning practices across the state.	phosphorus standard. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005. However, recognizing that it may be necessary to adopt a more stringent standard for the Chesapeake Bay watershed in the future, a revision has been made to the regulations to specifically allow a qualifying local program to adopt a water quality standard of no greater than 0.45 pounds per acre per year of phosphorus that will be applicable within an Urban Development Area in the event that a more stringent standard is adopted in the future for the Chesapeake Bay watershed. This revision can be found in section 63. This allowance is intended to promote development within UDAs, and to reduce hurdles to high density development in those areas. Additionally (and likewise available upon the adoption of a more stringent standard), a new offsite option for compliance has been created in section 69, which would allow a payment to be made in order to achieve necessary reductions. These two new provisions within the regulations are believed to help address the concerns raised during the public comment period regarding challenges faced by development within UDAs under a standard more stringent than the adopted 0.45.
Bruce Goodson (Hampton Roads Planning District Commission)	Add a provision for localities to grant a waiver for properties contained within the locally designated UDAs.	It is notable that the final regulations adopt a 0.45 phosphorus standard. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005. However, recognizing that it may be necessary to adopt a more stringent standard for the Chesapeake Bay watershed in the future, a revision has been made to the regulations to specifically allow a qualifying local program to adopt a water quality standard of no greater than 0.45 pounds per acre per year of phosphorus that

		will be applicable within an Urban Development Area in the event that a more stringent standard is adopted in the future for the Chesapeake Bay watershed. This revision can be found in section 63. This allowance is intended to promote development within UDAs, and to reduce hurdles to high density development in those areas. Additionally (and likewise available upon the adoption of a more stringent standard), a new offsite option for compliance has been created in section 69, which would allow a payment to be made in order to achieve necessary reductions. These two new provisions within the regulations are believed to help address the concerns raised during the public comment period regarding challenges faced by development within UDAs under a standard more stringent than the adopted 0.45.
Normand Goulet (Northern Virginia Regional Commission); Coleman Speece (Virginia Association of Planning District Commissions); Michael Harvey (Thomas Jefferson Partnership for Economic Development); David Lesser; Sterling Rives (Hanover County); Carrie Coyner; Valerie Long	Should consider existing and future local government comprehensive plans.	It is notable that the final regulations adopt a 0.45 phosphorus standard. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005. However, recognizing that it may be necessary to adopt a more stringent standard for the Chesapeake Bay watershed in the future, a revision has been made to the regulations to specifically allow a qualifying local program to adopt a water quality standard of no greater than 0.45 pounds per acre per year of phosphorus that will be applicable within an Urban Development Area in the event that a more stringent standard is adopted in the future for the Chesapeake Bay watershed. This revision can be found in section 63. This allowance is intended to promote development within UDAs, and to reduce hurdles to high density development in those areas. Additionally (and likewise available upon the adoption of a more stringent standard), a new offsite option for compliance has been created in section 69, which would allow a payment to be made in order to achieve necessary reductions. These two new

		provisions within the regulations are believed to help address the concerns raised during the public comment period regarding challenges faced by development within UDAs under a standard more stringent than the adopted 0.45.
Mike Flagg (Hanover County)	More consideration should be given to incentives to encourage compact and contiguous development and to promote redevelopment of existing areas; example would be basing allowable pollutant loads on the intensity of use rather than the acreage of use.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.
David Slutzky; Chris Hornung (The Silver Companies); David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC); Dave Anderson; Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); Youngblood,Tyler and Associates, P.C.; Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Richard Costello (AES Consulting Engineers); Will Shumate	Will potentially result in some higher-density growth area properties becoming economically non-viable, which in turn increased the relative appeal of rural area development opportunities where development expenses would be lower.	Many comments were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. It is not believed that the revised regulations will have such a result. However, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.

Mike Gerel (Chesapeake Bay Foundation)	There is simply no evidence that these amendments, or any stormwater regulations, alone cause urban sprawl. Land use decisions and other local factors play a far more significant role in determining the viability of a local project. Yet, a wide variety of provisions are included in the existing stormwater regulations, the amendments, or related tools and programs that help ensure that the cost of compliance with the amendments is not a disincentive for redevelopment, revitalization of blighted neighborhoods, or creating high density or affordable housing.	It is agreed that many factors contribute to sprawl, and that stormwater considerations alone would not cause sprawl in the absence of other factors. Many comments, however, were received during the public comment period expressing the concern that the proposed regulations may have the unintended consequence of contributing to sprawl. While it is not believed that the revised regulations will have such a result, in the event that a more stringent water quality standard is adopted in the future, revisions were made to the regulations to ease compliance for small sites, redevelopment sites, and development within Urban Development Areas under such a standard. Additionally, a new offsite option allowing for a payment to be made in place of achieving all necessary phosphorus reductions onsite has been created and included in new section 69, also for use in the future should a more stringent standard be adopted.

Offsets

Sally Thomas (Albemarle County Board of Supervisors)	Urge an easy offsite trading program for nutrient offsets; keep the requirements high, but have offsets built into the development plans; possibly have a state fund set up to receive these offset funds without lowering the standards that are in the proposed regulations.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Ted Miller; David Johnson (Advantus Strategies, LLC): David Anderson (Advantus	Suggest adoption of a sort of in lieu of fee where the development community can pay.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance.

Strategies, LLC); Barbara Fried		First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a “buy down” option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Andy Herr (Terry Petersen Residential); Pete Kotarides (Tidewater Builders Association); Will Shumate	Any attempt to implement these regulations must include a strong nutrient trading or offset credit program; state institute an offset program with a reasonable and fixed cost to developers to create a "safe harbor"; use funds for agriculture.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a “buy down” option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Dale Mullen (Louisa County)	Consider allowing developers to exceed the stringent water quality standards set in the new regulations if they pay a penalty; use funds for agriculture.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a “buy down” option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary

		reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Bruce Goodson (Hampton Roads Planning District Commission); J. Thomas Gale (Roudabush, Gale & Associates, Inc.)	Allow consideration for special circumstances (small sites, especially redevelopment sites) to utilize offset program management by the state to collect funds for water quality improvement projects.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69. With specific regard to small sites and redevelopment sites, note also that the "buy down" option contains greater flexibility for some of these sites than it does for others.
Jimmie Jenkins (Fairfax County); Jeff Geiger	Offsets and monetary contributions do not provide sufficient relief.	The water quality and quantity requirements of the regulations in sections 63 and 66 have been revised to provide greater flexibility. This, in addition to the additional offsite option allowing for a payment to be made to achieve a portion of a site's pollutant reduction requirements (under current standards through the nonpoint nutrient offset program and under future standards through both offsets and the "state buy down"), are believed to address concerns related to difficulties and costs of compliance.
Jimmie Jenkins (Fairfax County)	Offsets don't address impacts to local streams; monetary contributions delay installation of facilities until such time as there	While it is recognized that there are geographic and timing concerns associated with an offsite option for compliance, note that the "buy down" option contained in

	is sufficient money accumulated to go forward with the project.	section 69 that will become available in the future does not permit all pollutant reductions to be achieved offsite, except in the cases of sites less than one acre. Additionally, the language of that section indicates that it will be the Board's preference to use any funds obtained to purchase existing credits where available, and to obtain reductions within the same watershed as where the payment originated from. Finally, as discussed in responses to other comments below, qualifying local programs will have latitude over the availability of these offsite options.
Peter Eckert (Hampton Roads Association for Commercial Real Estate); Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.); David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC)	Encourage the establishment of statewide stormwater trust fund to receive moneys and facilitate the construction of stormwater projects when pollutant removal requirements cannot be met on a site; should only be available until such time that private entrepreneurial offset businesses are established or localities established their own pro-rata share programs.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Randy Bartlett (Virginia Municipal Stormwater Association)	Support flexibility at local government level to provide for appropriate use of offsite measures, including as allowed in 4VAC50-60-65.	To further expand and clarify offsite options for compliance, a new section 69 has been added to the regulations dealing exclusively with offsite compliance. A qualifying local program will have the opportunity to determine which of these options is available in its jurisdiction, as both comprehensive watershed stormwater management plans and pro rata fees are available only if developed by the qualifying local program. Off-site controls implemented by the developer may only be utilized if no comprehensive stormwater management plan or pro rata fee program has been established. Nonpoint nutrient offsets, by §10.1-603.8:1, must be allowed by a locality in order to

		be available. Finally, the new state "buy down" option, when it becomes available, is only available if no other offsite options are available, if the payment required by a local program exceeds the threshold set by the section establishing the buy down, or if the qualifying local program allows.
Charles Rotgin, Jr. (Great Eastern Management Company); Richard Jacobs (Culpeper Soil and Water Conservation District); Emmett Hanger (Rappahannock River Basin Commission);	Need a feasible and effective offsite trading mechanism.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Regina Williams (City of Norfolk)	An offsite pollutant load reduction alternative or offset that has been proposed in lieu of on-site controls is not feasible for urban localities such as Norfolk.	It is recognized that local considerations are of great importance in evaluating offsite options for compliance. To further expand and clarify offsite options, a new section 69 has been added to the regulations dealing exclusively with offsite compliance. A qualifying local program will have the opportunity to determine which of these options is available in its jurisdiction, as both comprehensive watershed stormwater management plans and pro rata fees are available only if developed by the qualifying local program. Off-site controls implemented by the developer may only be utilized if no comprehensive stormwater management plan or pro rata fee program has been established. Nonpoint nutrient offsets, by §10.1-603.8:1, must be allowed by a locality in order to be available. Finally, the new state "buy down" option, when it becomes available, is only available if no other offsite options are available, if the price of a local program exceeds the threshold set by

		the buy down program, or if the qualifying local program allows.
June Barrett-McDaniels (Aquarius Engineering)	Require 20% redevelopment standard but allow municipalities to develop watershed retrofitting plans and allow payment into the retrofitting fund for that watershed.	Section 69 of the regulations allows localities to develop pro rata fee programs and comprehensive stormwater management plans that may allow the water quality and/or quantity requirements of the regulations to be met through watershed plans.
Senator Creigh Deeds	Could allow developers to earn credits for helping farmers implement best management practices, provide additional state funding for existing stream mitigation programs run by localities, or provide competitive tax credits to help developers meet or exceed the 20% reduction target for redeveloped properties.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Joan Comanor (Lord Fairfax Soil and Water Conservation District)	Nutrient trading was mentioned, but little detail was provided.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.

David Slutzky; Valerie Long	Developers should have 5 options for achieving phosphorus reductions: (1) achieve as much as possible on-site; (2) purchase credits directly from agricultural sources; (3) purchase credits from agricultural credit brokers; (4) make a payment to the locality; and (5) make a contribution to a DCR controlled tax-credit program; should be applied to actual on the ground projects and located in same tributary as the on-site property.	To further expand and clarify offsite options for compliance, a new section 69 has been added to the regulations dealing exclusively with offsite compliance. A qualifying local program will have the opportunity to determine which of these options is available in its jurisdiction, as both comprehensive watershed stormwater management plans and pro rata fees are available only if developed by the qualifying local program. Off-site controls implemented by the developer may only be utilized if no comprehensive stormwater management plan or pro rata fee program has been established. Nonpoint nutrient offsets, by §10.1-603.8:1, must be allowed by a locality in order to be available. Finally, the new state "buy down" option, when it becomes available, is only available if no other offsite options are available, or if the qualifying local program allows.
William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake); Normand Goulet (Northern Virginia Regional Commission)	Has significant local implications	It is recognized that local considerations are of great importance in evaluating offsite options for compliance. To further expand and clarify offsite options, a new section 69 has been added to the regulations dealing exclusively with offsite compliance. A qualifying local program will have the opportunity to determine which of these options is available in its jurisdiction, as both comprehensive watershed stormwater management plans and pro rata fees are available only if developed by the qualifying local program. Off-site controls implemented by the developer may only be utilized if no comprehensive stormwater management plan or pro rata fee program has been established. Nonpoint nutrient offsets, by §10.1-603.8:1, must be allowed by a locality in order to be available. Finally, the new state "buy down" option, when it becomes available, is only available if no other offsite options are available, if the price of a local program exceeds the threshold set by the buy down program, or if the qualifying local program allows.
John Hudgins (York County)	Requirement that offsets must be within the same tributary or HUC code or within the next	References to achieving reductions within the downstream HUC code have been changes to within the

	downstream code will not work for some Hampton Roads areas that have no downstream area because they drain to the Chesapeake Bay.	upstream HUC code. It is believed that this addresses the concern raised by the comment.
Amar Dwarkanath (City of Chesapeake)	Local programs should have the ability to develop a robust pro-rata fee or offset program through these regulations, regardless of whether there is a comprehensive watershed management plan in place.	The pro-rata fee component of the offsite compliance options contained in new section 69 has been set out separately from the comprehensive stormwater management plan option; therefore, it is available for use by a locality separately from the comprehensive stormwater management plan option.
Dave Norris (City of Charlottesville)	Use of off-site credits in lieu of on-site best management practices for compliance with water quality criteria requirements is a positive inclusion; should be further developed to provide guidance for those communities that may not have available land for off-site improvements within their jurisdiction.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Millard Stith (Chesterfield County)	Should allow maximum flexibility for developers to use alternative compliance methods, such as transferring the balance of pollution reduction offsite between different development types, different land-use practices, and pollutant sources from point to nonpoint discharges and between geographic locations.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant

		reductions in accordance with the framework established by section 69.
Millard Stith (Chesterfield County)	Regulations should be revised to allow the county to recognize landowners who have developed under the county's Upper Swiftcreek reservoir standards and to allow such landowners to credit their other projects with the difference in phosphorus loadings from the 0.22 to 0.28.	As noted in the above comments, to further expand and clarify offsite options for compliance, a new section 69 has been added to the regulations dealing exclusively with offsite compliance. Among the options contained in section 69 is the ability for qualifying local programs to adopt comprehensive stormwater management plans, whereby the water quality and/or quantity objectives of the regulations may be achieved on a watershed basis. This may include differential levels of pollutant reduction achievement on different types of sites that are located in the area covered by the plan.
Glenn Brooks	Need to see a more specific regulation and a sample plan for allowing off-site reductions.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Mike Gerel (Chesapeake Bay Foundation)	CBF agrees with the statements in the Virginia Tech study that the flexibility for developers to acquire water quality and/or quantity reductions off site is an "important and critical feature of the [amendments]" and "offer[s] opportunities to lower costs and enhance benefits to affected watersheds if properly implemented." CBF and others in the conservation community have supported the ability for developers to acquire reductions off site at reduced costs at a scope and scale	It is agreed that that addition of the nutrient offsets program adds flexibility for achieving offsite compliance. The Board has adopted guidance for use in the administration of the offsets program.

	that is realistic and maximizes restoration and protection of water quality.	
Bill Street (James River Association); Mike Gerel (Chesapeake Bay Foundation)	Would support the development of additional off-site compliance tools to ensure that such options are readily available in accordance with specified criteria. The availability of stormwater nutrient offsets provides additional compliance flexibility and should reduce costs considerably for certain types of projects.	It is agreed that that addition of the nutrient offsets program adds flexibility for achieving offsite compliance. The Board has adopted guidance for use in the administration of the offsets program. As discussed in the responses to other comments, several other off-site options are also available for use.
David Phemister (The Nature Conservancy)	Offsets must be used as a cost containment measure for achieving compliance rather than a mechanism for shifting wholesale responsibility for phosphorus reductions from development to other sectors (agriculture, for example).	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.
Chris Hornung (The Silver Companies)	Offset program needs to include the following (1) streamlined approval process; (2) statewide offset cost backstop for the initial years of the program to prohibit credit brokers from monopolizing the market; (3) provide more credit to costly urban retrofit projects; and (4) clear guidance to all local jurisdictions.	The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a "buy down" option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework

		established by section 69.
Shannon Varner (Troutman Sanders)	Conform its regulations to HB2168 and promote the use of offsets; should incorporate provisions relating to offsets consistent with that legislation and should be designed to encourage opportunities for their use.	The regulations have been revised to explain that nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. It is believed that the inclusion of this offsite option in the new section 69, which deals specifically with offsite options, has been done in a manner consistent with the Code of Virginia.
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council)	Consider the application of nutrient reduction offsets to existing turf-intensive uses that provide for nutrient management plan implementation.	The Virginia Stormwater Management BMP Clearinghouse may, on an ongoing basis, consider the approval of additional BMPs for use in complying with the regulations. At this time, it is not believed appropriate to add voluntary nutrient management to the list of BMPs included in these regulations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group)	Recommend developing technical and administrative implementation guidance for innovative structural and non-structural practices that can be used for an urban offset program, including watershed and BMP retofits, stream restoration, urban nutrient management, pollution prevention, etc.	The Virginia Stormwater Management BMP Clearinghouse may, on an ongoing basis, consider the approval of additional BMPs for use in complying with the regulations.
Andrew Gould (Timmons Group)	Allow a developer to meet 80%-90% of phosphorus removal requirement on site, then allow locality to accept payment into a local watershed restoration fund to off-set remaining phosphorus removal requirement; any projects funded should remain in original jurisdiction	The proposed regulations did contain provisions allowing for offsite compliance to be achieved through locally-developed comprehensive stormwater management plans, pro rata fees, and offsite areas that were controlled by the developer. The revised regulations, in section 69, now allow for two additional offsite options for water quality compliance. First, nonpoint nutrient offsets may be purchased in accordance with §10.1-603.8:1 of the Code of Virginia. Secondly, a “buy down” option has been created. While this option will not be available under the adopted 0.45 phosphorus standard, it will become available upon the adoption of a more stringent standard for the Chesapeake Bay watershed through a future regulatory action. It will allow for a portion of the necessary

		reductions for a site to be achieved by a payment in the event that no other offsite options are available. The funds will be deposited to the Stormwater Management Fund, and used thereafter to achieve pollutant reductions in accordance with the framework established by section 69.

Grandfathering

Willis Blackwood (Blackwood Development); Mike Flagg (Hanover County); Hans Klinger; David Lesser; Lisa Anna Hawkins (Lenhart Obsenshain PC); Valerie Long ; Alvin Mistr, Jr.	Significant issue that has not yet been addressed; critical regardless of the specifics of the proposed regulations; landowners and developers have invested significant time and money into zoning analysis and modifications, site and subdivision plans, construction of infrastructure, etc. all based on a certain financial proforma established at the conception of the specific project.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Charles Rotgin, Jr. (Great Eastern Management Company); David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC)	Reflect the important provision to "grandfather" those developments that have survived, secured local governmental approvals and have met the state standard for "vesting".	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Andy Herr (Terry Petersen Residential); Selena Cuffee-Glenn (City of Suffolk); Youngblood,Tyler and Associates, P.C.; Ted Miller (Kimley-Horn and Associates, Inc.); M. Jarvis (Keystone Builders Resource Group)	Master plan developments or preliminary plans that have been approved must not be subject to these provisions.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Wilkie Chaffin (Virginia Association of Soil and Water Conservation Districts); Jimmie Jenkins (Fairfax County); Randy Bartlett (Virginia Municipal Stormwater Association); Katherine Nunez (Northampton County); Regina Williams	Supports the need for provision.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain

(City of Norfolk); James Campbell (Virginia Association of Counties); Sanford Wanner (James City County); Glenn Brooks; Nikhil Deshpande (Rinker Design Associates, P.C.); Chris Hornung (The Silver Companies); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group)		subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Bruce Goodson (Hampton Roads Planning District Commission); William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake)	Need to address how master plan developments that have been approved under a stormwater master plan concept and are in various stages of completion will be handled; needs to be language that addresses projects which have been approved under current criteria but have not yet started construction when new criteria becomes effective (should be allowed to be constructed as initially approved).	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Barrett Hardiman (Home Builders Association of Virginia); Pete Kotarides (Tidewater Builders Association); Allen Loree (Allen Loree Homes LLC); Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Mark Bissette (Hampton Roads Utility and Heavy Contractors Association)	Include significant protections for projects with submitted preliminary plans; have flexibility to have projects approved and vested as whole projects, and to be able to permit phases individually rather than all at once.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
David Slutzky; Barbara Fried; Lisa Anna Hawkins (Lenhart Obsenshain PC); Valerie Long	Resolved if regulations state clearly that development or land disturbance which is part of any approved zoning or plan of development as to which a landowner's right is vested under §15.2-2307 as of January 1, 2009 shall be vested with respect to these stormwater management and water quality standards.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Leonard Sandridge (University of Virginia)	Requests details on the effective date for land disturbing projects to comply with the proposed regulation; request state agency and/or project-specific effective dates be	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering

	negotiated with DCR; suggests that any project with an approved preliminary design prior to the promulgation of the new stormwater management regulations continue design in accordance with codes in effect during the preliminary design phase.	provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
John Hudgins (York County)	Has not be formally included or detailed in current drafts	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Dave Norris (City of Charlottesville)	Any site plan approved prior to the adoption of these regulations by the Board this fall, not be subject to these regulations for the life of that site plan; developer would have the five years allowed under state law to begin work on that plan.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Millard Stith (Chesterfield County)	Exempt a project from the new water quality performance criteria if the locality is in receipt of a preliminary subdivision plat, site plan or similar development plan which includes sediment and erosion control or stormwater management plans that were developed prior to the effective date of the regulations.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Mike Gerel (Chesapeake Bay Foundation), David Phemister (The Nature Conservancy)	Agrees that project “grandfathering” or “vesting” is a legitimate issue that should be addressed. Would be amenable to inclusion of a narrowly drawn policy on project grandfathering that: (1) Limits such an exemption to long-term projects that as a part of normal business practice finalize approvals and financial arrangements with localities well in advance of starting construction on the	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.

	entire project; (2) Only exempts projects that received formal approval of a stormwater concept plan or equivalent by the permit-issuing authority on or before the final amendments are published in the Virginia Register; and (3) Expires if the stormwater concept plan is not implemented after some reasonable time period after the amendments' publication date.	
Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.)	Grandfather phased developments that have secured zoning, rezoning, or planned unit development approvals, so long as those efforts included an approved stormwater management master plan and the grandfathering is compliant with existing state code.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Tom Page (GS Virginia)	Grandfathering should include previously zoned projects	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
John Cogbill, III	Believe projects should be entitled to operate under the existing stormwater regulations provided they have obtained local government approval of their land use (zoning, conditional use permit, special use permit, variance, etc.) and they have filed for and timely obtained their construction general permit. After expiration of current general permit, hope that owners could obtain another general permit that would provide for a phased implementation of the more stringent phosphorus loading requirements; would have until 2019 to fully comply with 0.28.	In response to numerous comments received requesting that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.
Monte Lewis (E.D. Lewis & Associates)	Need to address grandfathering provisions	In response to numerous comments received requesting

	where a BMP has been built with the first phase and how to handle all future phases of the development.	that grandfathering provisions be included in the regulations, a new section 48 has been added to the regulations. This section provides grandfathering provisions that will allow particular sites to remain subject to existing regulations for a period of time. The language of that new section should be consulted for application to particular cases.

4VAC50-60-10 Definitions

Thomas Lera (Virginia Cave Board Chairman); Shelby Hertzler	Define "karst area" – any land area predominately underlain at the surface or shallow subsurface by limestone, dolomite, or other soluble bedrock regardless of any obvious surficial karst features.	The requested definition has been added to section 10.
Thomas Bruun (Prince William County)	"Natural stormwater conveyance system" – appears that the flood control requirements for the 10-year frequency storm has been weakened [by including the entire floodplain].	The existing definition is believed to be appropriate as it relates to natural stormwater conveyance systems. No change has been made.
Thomas Bruun (Prince William County); Leonard Sandridge (University of Virginia); Anthony Romanello (Stafford County): Hans Klinger	Definitions of "stable" and "unstable" channels very subjective; leads to ambiguity in the interpretation of the regulations.	The existing definitions are believed to be appropriate. While it is recognized that some judgment will be necessary in interpretation, a rigid definition of these terms is not believed appropriate due to the natural, stable fluctuation and shifting of channels over time.
Morgan Butler and Rick Parrish (Southern Environmental Law)	Define "urban development area" using the same language as §15.2-2223.1	The requested definition has been added to section 10.
Darian Musick	Definition of linear development – water and sewer lines should be included in the definition of linear projects as they are not materially different from gas and pipeline construction with respect to stormwater management issues.	A revision has been made to the definition to include water and sewer lines.
Robert Jordan; Leonard Sandridge (University of Virginia); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Define "runoff reduction method"	The Runoff Reduction Method is incorporated by reference into the regulations and its supporting documents are believed to sufficiently describe it. No definition has been added.
Pete Rigby (Paziulli, Simmons and Associates)	Definition of "state waters" continues to contain groundwater; don't think this regulates groundwater.	This definition is consistent with the definition of this term found in the VA State Water Control Law, §62.1-44.3. It is appropriate to retain this definition. Specifics

		as to what types of discharges are regulated by the stormwater program are set out in other provisions of these regulations.
Bruce Goodson (Hampton Roads Planning District Commission)	Definition of "adequate channel": isolated non-tidal wetlands do not contain an outfall; if enough rain falls, there will be flooding onto adjacent properties; if keep term wetland in definition, exclude isolated wetlands.	This definition has been revised to include specific conditions related to the discharge of stormwater into wetland.
Jimmie Jenkins (Fairfax County); Neville Simon (City of Richmond)	Definition of "adequate channel": because wetlands do not have bed or banks or have multiple braided channels, how can this definition be applied to wetlands?	This definition has been revised to include specific conditions related to the discharge of stormwater into wetland.
Jimmie Jenkins (Fairfax County)	Definition of "channel": not consistent with §10.1-604.	Section 10.1-604 of the Dam Safety Act does refer to “channels” differently from these regulations. The term “channel” is used differently within those regulations, and usage of the same definition in the context of the stormwater regulations would not sufficiently convey the meaning intended in these regulations.
Jimmie Jenkins (Fairfax County); Neville Simon (City of Richmond)	Definition of "drainage area": delete as is not needed and contradicts the common usage of this term.	The term “drainage area” is used in several locations within these regulations and is believed necessary. The definition utilized has been revised.
Jimmie Jenkins (Fairfax County)	Definition of "flood fringe": replace the reference to the 100-year discharge with base flood; is incorrect to say that water in the flood fringe is standing rather than flowing; there is enough conveyance in the flood fringe that if it were filled the flood elevation would rise by one foot; if it were truly standing water, it would have no impact on flood elevation.	The referenced definition has been revised.
Neville Simon (City of Richmond);	Definition of "flood fringe": should replace rather than with or because you can have flowing water and standing water in the flood fringe area of a floodplain.	The referenced definition has been revised.
Jimmie Jenkins (Fairfax County)	Definition of "natural stream": how much restoration can occur in a natural stream before it stops being a natural stream?	The definition of this term has been revised to indicate that restorations utilizing natural channel design concepts may be considered natural streams.
Jimmie Jenkins (Fairfax County)	Definition of "point of discharge": revise to add the word concentrated.	The requested revision has been made.

Jimmie Jenkins (Fairfax County)	Definition of "pollutant discharge": what does the phrase in a diffuse manner mean?	The phrase “in a diffuse manner” has been removed from the definition and is not necessary.
Jimmie Jenkins (Fairfax County)	Definition of "runoff characteristics": delete everything after the word flow duration.	The referenced wording has been retained. The intent of the retained wording is to describe channel characteristics that may be influenced by the factors listed in the initial portion of the definition.
Jimmie Jenkins (Fairfax County)	Definition of "site": potential for arguments related to Chesapeake Bay Resource Protection Area requirements from this change in definition; areas are included in plotted lots and subject to local control.	The proposed definition has been retained following consultation with the Division of Chesapeake Bay Local Assistance.
Jimmie Jenkins (Fairfax County)	Definition of "stable": suggest adding a reference to the natural range of variability.	The definition has been retained as proposed. It is believed that the maintenance of the dimension, pattern and profile “over time” indicates that there is a natural range of variability.
Jimmie Jenkins (Fairfax County); Neville Simon (City of Richmond)	Definition of "stormwater conveyance system": delete reference to land-disturbing activity.	The reference to “land disturbing activity” is believed to be appropriate within the context of these regulations and has been retained.
Jimmie Jenkins (Fairfax County)	Definition of "unstable": delete.	Inclusion of the definition of “unstable” is appropriate. While it is recognized that some judgment will be necessary in interpretation, a rigid definition of these terms is not believed appropriate due to the natural, stable fluctuation and shifting of channels over time.
Katherine Nunez (Northampton County)	Definitions are not clear and in some cases confuse the point; insufficient definitions associated with small development, medium-sized development and large development as well as distinguishment between residential, commercial and industrial development within those three sized categories.	Revisions to proposed definitions have been made in an effort to increase clarity. With regard to definitions of “large” and “small” construction activity, these definitions are those utilized in the Code of Federal Regulations and it is believed inappropriate to alter them.
Christine Porter (Department of the Navy)	Definition of "prior developed lands": could be confusing to apply to larger projects that might involve significant areas of both undeveloped and previously developed lands; under all circumstances, if any portion of a project involves development on previously developed land and any impervious area is altered, is the whole project then treated as a land disturbance on "prior developed lands"	The water quality criteria of 4VAC50-60-63 require the new development and development on prior developed lands standards to be applied to the “site” of a land disturbing activity. The definition of “site” includes an area of a parcel that is designated as the “site”. In the case of projects that involve both new development and development on prior developed lands, the different areas of the overall parcel may be designated as new development sites and sites involving development on

	and required to meet the water quality criteria requirements for that category verses new development?	prior developed lands as appropriate.
Christine Porter (Department of the Navy)	Confusing regarding how federal facilities fit under the definitions of "local stormwater management plan", "local program" and "stormwater management program"; current understanding is that DCR will need to get approval from the Board to run the stormwater management program (approving permits, collecting fees, enforcing violations, etc.) for DOD facilities?	DCR will retain the issuance of coverage of permit coverage for federal facilities. Where federal facilities are MS4s, those facilities will administer their own stormwater management programs in accordance with MS4 permit requirements; however, DCR will still be the permit-issuing authority for land disturbing activities on those facilities.
Mike Flagg (Hanover County)	Recommend following definition for "channel": means a natural stream, wetland, manmade watercourse, or other natural or manmade structure that conducts continuously or periodically stormwater.	The requested changes have not been made. While a wetland may be considered an “adequate channel” per the definition of that term in section 10, it is not desired to consider a wetland a “channel”. It is also not intended to remove the requirement that a channel have a defined bed and banks.
Mike Flagg (Hanover County)	Definition of "comprehensive stormwater management plan": …that specifies how the water quality or quantity	The definition of “comprehensive stormwater management plan”, as well as complimenting language in section 69, has been amended to provide the clarity requested by the comment.
Mike Flagg (Hanover County)	Definition of "direct discharge": should read means the discharge of a pollutant directly to a state water.	Discharges from a site may not be directly to a state water. Rather, a discharge may cross another site to reach a state water, or be through an MS4 conveyance system, etc. and still be considered a direct discharge. The requested amendment has not been made.
Mike Flagg (Hanover County)	Definition of "drainage area": remove word outlet.	The requested amendment has been made.
Mike Flagg (Hanover County); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "flood fringe": is this needed? What is meant by 100-year discharge? Should this be left to FEMA?	An amendment has been made to the definition of flood fringe that is believed to address the concerns raised by the comment.
Mike Flagg (Hanover County)	Definition of "floodplain": is this needed? Should this be left to FEMA?	The term “floodplain” is used in defining the various types of stormwater conveyance systems and it is believed necessary to retain the definition.
Mike Flagg (Hanover County)	Definition of "floodway": is this needed? What is meant by base flood – 100 year storm? Should this be left to FEMA?	The term “floodway” is used in defining the various types of stormwater conveyance systems and it is believed necessary to retain the definition.

Mike Flagg (Hanover County)	Definition of "runoff characteristics": time of concentration should be eliminated.	Time of concentration is necessary to include in this definition, as it provides a means of predicting volume and duration. The requested amendment has not been made.
Mike Flagg (Hanover County)	Definition of "runoff volume": strike the words of a land disturbing activity.	It is believed that the proposed amendment may cause confusion. The regulations apply to land disturbing activities, and it is believed appropriate to retain that term within this definition.
Mike Flagg (Hanover County)	Definition of "site hydrology": should read means the movement of water on, across, through, and off the site.	The referenced wording has been retained. The intent of the retained wording is to describe characteristics that may influence the flow of water on, across, through, and off the site.
Mike Flagg (Hanover County)	Definition of "small construction activity": should be amended to only apply to sites greater than or equal to one acre.	The requested amendment has not been made. The VSMP regulations extend coverage to land disturbing activities that are equal to or greater than 2,500 square feet in all areas of the jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations.
Mike Flagg (Hanover County)	Definition of "stable": no channel could be deemed stable as stable channels do change dimension, pattern and profile over time. New definition is needed.	The definition has been retained as proposed. It is believed that the maintenance of the dimension, pattern and profile “over time” indicates that there is a natural range of variability.
Mike Flagg (Hanover County)	Definition of "stormwater conveyance system": strike the words either within or downstream of the land disturbing activity.	The reference to “within or downstream of the land disturbing activity” is believed to be appropriate within the context of these regulations and has been retained.
Mike Flagg (Hanover County)	Definition of "water quality volume": should be kept and utilized in any new standard that is adopted unless there is a definitive reason not to. Request that staff provide additional information about the increase in pollution treatment associated with the doubling of the standard.	The term “water quality volume” is not used in the regulations and therefore was deleted. The treatment standard has not been doubled, as the new regulations relate to the runoff of one inch of rain over the entire site of the land disturbing activity. The Runoff Reduction Method calculates a treatment volume based on soil types and land cover conditions.
Leonard Sandridge (University of Virginia)	Define "runoff volume reduction"	The term “runoff volume reduction” does not need to be defined in these regulations, rather, it should be noted that this term is described in the Runoff Reduction Method.
Leonard Sandridge (University of Virginia)	Define "managed turf"	The term “managed turf” does not need to be defined in these regulations, rather, it should be noted that this term is described in the Runoff Reduction Method.

David Nunnally (Caroline County)	Construction activity: does this term include construction of agricultural buildings or other structures?	The term construction activity includes all regulated activities under the Virginia Stormwater Management Act. While §10.1-603.8 of the Code of Virginia includes exemptions from the Act related to agricultural activities, farm buildings and structures in many cases are not exempt.
David Nunnally (Caroline County)	Development: does this term include construction of agricultural buildings or other structures?	The term development includes all regulated activities under the Virginia Stormwater Management Act. While §10.1-603.8 of the Code of Virginia includes exemptions from the Act related to agricultural activities, farm buildings and structures in many cases are not exempt.
David Nunnally (Caroline County)	How does the SWM program relate to other existing programs, namely, E&S, especially, in that the definitions are not coordinated? For example, DCR has long held that barns and other agricultural structures are regulated land disturbing activities under the E&S program. SWM appears to exempt these structures. If that is the case, should the locality exempt a proposed agricultural project from SWM and regulate it under E&S (and MS-19)?	As explained in the above comments, barns and other agricultural structures may be regulated by the VSMP program, as they are by the ESC program. The Department interprets agricultural exemptions across these two programs similarly.
David Nunnally (Caroline County)	Discharge: Does this term include stormwater that is infiltrated prior to leaving the parcel or site?	The definition of the term “discharge” references the definition of “discharge of a pollutant”, which addresses discharges to surface waters and does not include stormwater that is infiltrated.
David Nunnally (Caroline County)	Facilities or equipment: does this term include agricultural buildings or other structures?	As explained in the above comments, agricultural buildings and structures may be regulated by the VSMP program.
David Nunnally (Caroline County)	Illicit discharge: why is this term specific to only municipal storm sewers? Should this term apply to discharges to surface waters, generally?	The term “illicit discharge” relates to a specific component of the MS4 program. Changing this definition would impact that program and is not necessary for these regulations.
David Nunnally (Caroline County)	Impervious cover: does this term include lawn areas or other similar landuses? As is, this definition could apply to any landuse or surface cover that has a runoff coefficient less than total infiltration.	As lawn areas or similar land uses do not significantly impede or prevent natural infiltration, they are not considered impervious surface. The definition does not require that pervious surfaces achieve total infiltration.
David Nunnally (Caroline County); Alan Wood (American Electric Power);	Land disturbance or land-disturbing activity: this definition is not consistent with other code	While similar, the definitions of “land disturbing activity” found in the Code of Virginia for the ESC and VSMP

	uses, namely, E&S. What is the plan of action to reconcile this inconsistency?	programs are different (see §§10.1-560 and 10.1-603.2). A legislative change would be necessary to make the two definitions identical, and it is not desired at this time to pursue such a change.
David Nunnally (Caroline County)	Linear development project: does this term include any road project, driveway, subdivision road, logging access road, etc? What is meant by 'highway'?	The term does not include driveways, logging access roads, or subdivision roads prior to acceptance into the VDOT system. The term "highway" has historically been considered to include projects designed and constructed by VDOT.
David Nunnally (Caroline County)	Point of discharge: should include 'from the site or parcel' to distinguish from infiltration or other similar situations.	Infiltration is not discharge or release of stormwater, and therefore the term "point of discharge" does not apply to infiltration. As the point of discharge to a stormwater conveyance system may be on the site, it is not believed appropriate to specify that it must be "from the site or parcel".
David Nunnally (Caroline County)	Point Source: why are concentrated discharges from agricultural activities (specifically, irrigation flows or stormwater runoff)?	The definition of the term "point source" is copied from the definition of that term found in section 502 of the Clean Water Act. As the VSMP is also a federal NPDES program, changes to that definition are not believed to be appropriate.
David Nunnally (Caroline County)	Stable: this term is too vague. Virtually all streams are subject to erosion and may change significantly over time. Suggest adding a reference to storm frequency or other measure.	The definition has been retained as proposed. It is believed that the maintenance of the dimension, pattern and profile "over time" indicates that there is a natural range of variability.
David Nunnally (Caroline County)	Wetlands: should include code references regarding wetland determinations, etc., or as determined by DEQ or USACOE.' As proposed, this term could be're-interpreted' liberally (that is, not consistent with existing wetland programs).	The definition utilized is identical to that found in the State Water Control Law, §62.1-44.3.
Amar Dwarkanath (City of Chesapeake)	Recommend that septic tank lines and drainfields be exempt activities under the definition of land disturbance or land disturbing activities, unless included in an overall plan relating to construction of the building(s) to be served by these facilities; consistent with E&S.	Exemptions from the VSMP program are established in the Stormwater Management Act, Code of Virginia §10.1-603.1 et seq., and the regulations cannot expand or contract these exemptions. It is notable that most septic tank and drainfield projects do not exceed one acre of land disturbance, meaning that in many areas of the state, these projects are exempt due to size.
James Edmonds (Loudoun County)	Definition of "adequate channel": requirement	Revisions to the definition of adequate channel have

	for defined bed and banks needs to be emphasized; recommend that language be added to explain that these are wetlands with well-defined conveyance channels.	been made to clarify how this term relates to wetlands.
James Edmonds (Loudoun County)	Definition of "development": only refers to facilities or structures; with managed turf areas requiring treatment, forest areas could be cleared and new areas of managed turf created, but no development (or redevelopment) would have occurred; include such scenarios in definition.	An amendment has been made to the definition that addresses the concern raised by the comment.
James Edmonds (Loudoun County)	Definition of "drainage area": refers to land and water area; smaller drainage areas may not contain bodies of water; modify the wording to state land and/or water area.	An amendment has been made to the definition that addresses the concern raised by the comment.
James Edmonds (Loudoun County)	Definition of "drainage area": on a land-disturbing site is too limiting; recommend that this part of the be omitted.	An amendment has been made to the definition that addresses the concern raised by the comment.
Tom Carr (City of Roanoke); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "predevelopment": refers to conditions that exist at the time that plans are submitted; city allows a five-year window for redevelopment sites so that property owners that demolish and unsafe/unsightly building and cleaning up a property are not penalized; new definition would eliminate this option and be a disincentive to redevelopment..	Clarifying language has been added to the definition to explain that conditions at the time prior to the demolition of an existing structure can be considered the predevelopment condition.
Andrea Wortzel (Mission H2O)	No definitions of rainwater or stormwater harvesting.	Descriptions of rainwater harvesting practices are included in the Runoff Reduction Method and Virginia Stormwater BMP Clearinghouse.
Alan Wood (American Electric Power)	Definition of "adequate channel": use of watercourse or wetland confuses the intent; believe the intent is that the channel be sufficient to convey a designed storm without overtopping.	The definition of adequate channel has been revised to more clearly discuss the application of that term to wetlands.
Alan Wood (American Electric Power)	Definition of "development": do not believe post-construction controls should apply to utility poles or similar structures.	While utility projects are considered development, certain linear projects are exempt from the VSMP regulations pursuant to §10.1-603.8 of the Code of Virginia. Non-exempt projects must comply with the requirements of the regulations.

Alan Wood (American Electric Power); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "impervious cover": believe intent of "gravel surfaces that is or may become compacted" applies to road beds in which a well-graded stone size is used; request clarification to what may constitute a gravel surface that may become compacted and request that utility electrical substations using stone cover be specifically excluded.	The definition of impervious cover has been retained. While the intent for gravel surfaces for substations is for those surfaces to not become compacted, it has been observed that the subsurface does become compacted, and thus creates an impervious surface.
Alan Wood (American Electric Power)	Unclear reason for including the definitions for "natural channel design concept", "natural stormwater conveyance system: and "natural stream" which are regulated and defined by other agencies.	These terms are important to define for specific use in section 66, which applies to water quantity requirements. It is not intended that these definitions have application in other programs not included in these regulations.
Alan Wood (American Electric Power); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "prior developed lands" assumes that all of the referenced facilities have impervious surfaces; not always the case; many of these facilities regulated under other NPDES permits and subject to monitoring requirements.	These regulations do not apply to post-construction discharges that require separate permitting under the VPDES program. In addition, the design criteria of these regulations do not require separate monitoring for water quality or water quantity.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "adequate channel": should be expanded to include a flood prone area within the definition of channel to encourage sustainable drainage conveyances and/or natural channel design approaches, and to provide a fail-safe for the failure of the engineered channel that will occur at some return interval.	The second portion of the definition of adequate channel, which specifies that erosive damage not occur to the bed, banks, or overbank sections, allows for the flood area to be considered and addresses natural channel design approaches.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "channel": should also recognize an associated flooding or inundation zone to acknowledge that the range of flooding is greater than that which designs are held to.	This definition seeks to define solely the term “channel”. While floodplain-related concepts are included elsewhere, the proposed definition is believed appropriate for this term.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Debra Brand (Jefferson Lab)	Definitions section no longer contains definitions of BMPs; yet Table 1 data is very specific to a particular set of BMPs; where do these definitions appear so that we can differentiate one from the other?	Descriptions of the practices contained in Table 1 can be found on the Virginia Stormwater BMP Clearinghouse website and in the Technical Memo associated with the Runoff Reduction Method.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater	Definition of "floodplain": should reference the FEMA defined FIRM floodplain as well as	The term “floodplain” is further defined by reference to the definition of “floodway”. “Floodway” is defined as

Technical Committee)	a storm event or another engineering based floodplain study.	"the channel of a river or other watercourse and the adjacent land areas, usually associated with flowing water, that must be reserved in order to discharge the 100 year storm event without cumulatively increasing the water surface elevation more than one foot or as otherwise designated by the Federal Emergency Management Agency."
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "natural stream": can usually be better defined by an average rainfall season?	The definition of "natural stream" utilized in the regulations is believed to be appropriate for the purposes of the regulations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Definition of "stable": does this cover channels where previous erosion occurred but does not appear to be getting worse?	The situation posed by the comment may be considered a stable channel, if the channel has developed dimension, pattern, and profile characteristics which remain stable over time.
Michael Bumbaco (Kerr Environmental Services Corp.)	Definition of "small construction activity": conform to CBPA Act; at the end of the second sentence add or within jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations equal to or greater than 2,500 square feet and less than five acres.	The definition, as written, is believed to be in compliance with the Stormwater Management Act and not to conflict with the Chesapeake Bay Preservation Act. No change has been made.
Debra Brand (Jefferson Lab)	What happened to the regional stormwater management system? What will happen to projects underway?	Regional stormwater plans have been renamed "comprehensive watershed stormwater management plans". They are described in sections 69 and 92. Existing plans may need to be revised and will need to be approved by the Board as achieving sufficient reductions in compliance with the new regulations.
Debra Brand (Jefferson Lab)	What is the difference between an individual permit and a general permit?	An individual permit is developed for a single site on a case by case basis. A general permit is a permit that is issued by the Board through regulation and intended to have application across many different sites that are similar in nature. Use of the general permit structure allows for greater efficiencies for both the permitting authority and the permittee.

4VAC50-60-20 Purposes

David Nunnally (Caroline County)	The clause "including but not limited to	This section simply states the purposes of the VSMP

	stormwater management standards" should be deleted as it could be interpreted to authorize virtually any requirement(s). "[C]omponents of a stormwater management program" is sufficient.	regulations overall and the phrase "stormwater management standards" is a reference to the Board's authority under §10.1-603.4(6) to "[e]stablish statewide standards for stormwater management…" As is made clear in both the Stormwater Management Act and throughout the regulations, localities retain the ability to adopt more stringent requirements. No change to the language of section 20 has been made.

4VAC50-60-40 Authority and applicability

Katherine Nunez (Northampton County)	Appears to be language that excludes the state and its projects from adhering to these regulations; excluding agricultural operations appears to be inconsistent with the problem as a whole.	State agency projects are subject to the technical criteria. Section 40 of the proposed regulations made this clear. Portions of the language of proposed section 40 have been placed in new section 45; however, state agency projects still remain subject to the technical criteria. Additionally, the requirements of Part IV of the VSMP regulations specifically address state agency projects. Part IV is not open to revision in this regulatory action. The VSMP regulations address stormwater runoff from land disturbing activities and municipal separate storm sewer systems. Agricultural discharges are not regulated through the VSMP program, but are addressed through other programs (both voluntary and regulatory) administered by DCR and the Virginia Department of Environmental Quality.
Sanford Wanner (James City County); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Alan Ford	Imperative that state projects be held to the same standards as other public and private developers.	State agency projects are subject to the technical criteria. Section 40 of the proposed regulations made this clear. Portions of the language of proposed section 40 have been placed in new section 45; however, state agency projects still remain subject to the technical criteria. Additionally, the requirements of Part IV of the VSMP regulations specifically address state agency projects. Part IV is not open to revision in this regulatory action.
Leonard Sandridge (University of Virginia)	Requests details on the effective date for land disturbing projects to comply with the	In general, the technical criteria become effective upon the adoption of a local stormwater management

	proposed regulation; request state agency and/or project-specific effective dates be negotiated with DCR; suggests that any project with an approved preliminary design prior to the promulgation of the new stormwater management regulations continue design in accordance with codes in effect during the preliminary design phase.	program within a locality. This will occur between 15 and 21 months following the effective date of these regulations (July 1, 2010). As to state projects, however, the technical criteria become effective upon the adoption of a new Construction General Permit by the Board which implements the new technical criteria. This new permit will be developed through a public process that will commence following the adoption of these regulations, and will become effective at some time prior to the beginning of the adoption of local stormwater management programs. Additionally, the regulations do contain grandfathering provisions for certain types of projects. These grandfathering provisions can be found in section 48 of the regulations.
David Nunnally (Caroline County)	Use of land disturbing activity needs to be consistent with erosion and sediment control.	While similar, the definitions of “land disturbing activity” found in the Code of Virginia for the ESC and VSMP programs are different (see §§10.1-560 and 10.1-603.2). A legislative change would be necessary to make the two definitions identical, and it is not desired at this time to pursue such a change.
David Nunnally (Caroline County)	All regulations, criteria, standards, etc. should be developed using a public process, including APA, Townhall notices, etc., to ensure all parties are afforded access, notice, input, etc.	The Department and Board take pride in the public processes associated with the development of regulations and guidance. As noted elsewhere in this document, these regulations are the product of an approximately four year public process that included assistance from a Technical Advisory Committee that met continuously during the development of the regulations. Revisions to the Virginia Stormwater Management Handbook have likewise been undertaken with the assistance of a Handbook TAC, and the Virginia Stormwater BMP Clearinghouse also has its own TAC.
Brooks Smith (Hunton & Williams); Alan Wood (American Electric Power)	Do not believe that DCR's proposed regulations are necessary or appropriate when a manufacturing or industrial facility is already subject to DEQ's permitting requirements; believe DCR should allow facilities to implement site-specific stormwater pollution prevention plans covering both the industrial and construction activities;	DEQ’s industrial stormwater program does address stormwater management associated with the operation of an industrial facility; however, it does not address stormwater runoff associated with construction activities. Thus, a VSMP permit is necessary even where a facility, once completed, will be covered under the DEQ program. A site-specific stormwater management plan and Stormwater Pollution Prevention Plan is developed

	precedent in DCR's approach to linear development plans.	for each site, and it is recognized that industrial facilities may have different considerations and treatment options that can be addressed in the SWPPP (for example, stormwater runoff that is fully captured and routed to a municipal wastewater treatment facility is not required to receive treatment onsite through BMPs, and is exempt from regulation pursuant to §10.1-603.8 of the Code of Virginia).
Eric Spurlock (Virginia Golf Course Superintendents Association); Rick Viancour (Virginia Turfgrass Council); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Dick Johns (Middle Atlantic Section of Professional Golfers' Association); Katie Frazier (Virginia Agribusiness Council)	Provide written clarification that stripping and replacing sod and other golf course maintenance and upkeep practices which do not result in changes to the footprint of those land surfaces is considered maintenance and are therefore exempt from the requirements of the construction general permit.	Exemptions to the regulations can be found in §10.1-603.8 of the Code of Virginia and in the definition of "small construction activity" found in section 10 of the regulations. That definition specifies that "[s]mall construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility".
Alan Wood (American Electric Power)	No mention of who will review annual standard and specifications for linear projects; request that annual standards and specification program continue to be implemented through DCR.	The Department, on behalf of the Board, will continue to review annual standards and specifications. This practice is not included in the regulations, as it is a provision of law found in §10.1-603.8(C).
Alan Wood (American Electric Power)	Believe that control of the quality and quantity of stormwater discharges from construction sites can only apply during the construction period and that discharges during the post-construction period can only be regulated in accordance with the industry-specific requirements of the NPDES program.	Post-construction discharges that require an industrial stormwater permit are governed by the industrial stormwater program that is administered by DEQ. Discharges associated with construction activity, however, are governed by the VSMP regulations. A condition of VSMP regulations is that post-construction measures be implemented prior to the termination of VSMP permit coverage (and thus prior to the stabilization of the site) that will effectively manage the quality and quantity of stormwater from the post-construction condition of the site. Requirements for the long-term maintenance of these measures are not a permit term, but are instead included in enforceable maintenance agreements.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Dick	Consider further guidance to reduce permit overlap and clarify roles and responsibilities in instances where a VPA or VPDES discharge permit or other similar permit affecting golf	The Department has met with representatives of the turfgrass industry and will consider the issuance of guidance related to golf course management considerations in the future.

Johns (Middle Atlantic Section of Professional Golfers' Association)	course water and nutrient management has been developed and integrated into a golf course management plan.	
Mark Trostle	Like to know why certain county projects are exempt; hardly seems fair for a road or municipal project to be able to consider whether or not they want to apply those more stringent standards	County projects that meet the thresholds of the regulation are not exempt from the technical criteria of the regulations, nor are state agency projects.

4VAC50-60-53 General objectives

Thomas Bruun (Prince William County)	By including "state designated use" water quality standards, have transferred the entire burden of TMDL over to localities.	It is not believed that the statement in section 53 related to an objective of the stormwater program being the support of state designated uses has the effect of transferring the entire burden of TMDLs to localities. This statement simply states one goal of the technical criteria that are applicable to land disturbing activities regulated under the VSMP program.
David Nunnally (Caroline County)	This section should be revised such that the goals and objectives are not interpreted (and enforced) as 'requirements.	This language was developed using the phrase “in accordance with the requirements of this part” and using the term “objectives” to indicate that the specific statements of this section are goals of the regulations, and not separate requirements.

4VAC50-60-56 Applicability of other laws and regulations

David Nunnally (Caroline County	The application of 'other laws, etc.' should be coordinated/consolidated/streamlined to eliminate and minimize redundancy and non-productive duplication of effort.	The Department is aware of the need to coordinate program administration and review to the extent practicable, and efforts are and will be made to further coordinate its programs (ESC, VSMP, and CBPA) and program reviews in order to prevent duplication of efforts.

4VAC50-60-63 Water quality requirements

Frank Ballif (Southern Development Homes); Willis Blackwood (Blackwood Development); Joe Wilder (Frederick County); Andy Herr	Significant concerns with both the methodology behind the creation of the new technical requirements and the costs and	The final regulations adopt a 0.45 standard for new development statewide. The 0.45 standard has been in use since the Board received responsibility for

(Terry Petersen Residential); Jimmie Jenkins (Fairfax County); Barrett Hardiman (Home Builders Association of Virginia); Warren Wakeland (Home Building Association of Richmond); Paul Eckert (Hampton Roads Association for Commercial Estate); Selena Cuffee-Glenn (City of Suffolk); Gena Hanks (Pulaski County); R. Cellell Dalton (Wythe County); Archie Fox (Warren County); Sarah; William Johnston (City of Virginia Beach); Bonnie Johnson (Bath County); Sanford Wanner (James City County); Barry Clark (Greene County); S. Charles Krause (SPOTT-ON Consulting, LLC); Andy Fulgham (Atlantic Logowear); William Schooley (Clark Nexsen Architecture); Harrison Taylor (Thompson Education Direct); Cliff Bickford (BB&T); Fred Carerras; Betsy Blair (CJW Chippenham Hospital); Will Davis (Chesterfield County); Tracy Kemp Stallings (CJW Johnston Willis Hospital); Phil Hess; John Bennett (Timmons); Nancy Coggins (Priority Corporate Housing); Greg Lupsha (Keller Williams Realty); Malcolm Randolph, Jr. (CB Richard Ellis); Brenda Fisher (CB Richard Ellis); David Crawford (CB Richard Ellis); Robert Black (CB Richard Ellis); William Rucker; Hans Klinger; Tom Dillon; Shawn Callahan (Roanoke Regional Home Builders Association); Rand Sompayrac; Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Chris Hornung (The Silver Companies); Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Brian Gordon (Apartment and Office Building Association of Metropolitan Washington); Glen Payton (Filterra); John Easter (The Chesterfield Business Council); Mark Bissette	efficiencies related to those proposed standards.	stormwater management in 2005. As to methodology, the Runoff Reduction Method was developed through the TAC process and one of the most extensive environmental regulatory processes in memory. Implications of the new requirements for sites was tested through design charettes attended by over 300 design professionals, and economic impact assessments were conducted by the Department and others.

(Hampton Roads Utility and Heavy Contractors Association); Frank Beale (PGC Properties, LLC); Frank Beale (Invincia Insurance Solutions); John Conrad (Miller and Smith); Monte Lewis (E.D. Lewis & Associates); Ronald Roark (Nottoway County); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Truett Young (Stanley Martin Companies); David Lesser; Youngblood,Tyler and Associates, P.C.; Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Alvin Mistr, Jr.; Shawn Smith; David Smith; Andrew Gould (Timmons Group); Bob Shaffer; Mitch Bowser; Fred Norman (Chesterfield Business Council and the Greater Richmond Chamber of Commerce); Joe Lerch (Virginia Municipal League); Jeff Geiger		
Frank Ballif (Southern Development Homes); Gary Earp (Tazewell County); Clegg Williams; Tyler Craddock (Virginia Chamber of Commerce); Barrett Hardiman (Home Builders Association of Virginia); Warren Wakeland (Home Building Association of Richmond); Stephen Daves (R.W. Murray Co.); Corey Dean; Sarah; John Olivieri (Associated Development Management Corporation); Jim Ingle (Centennial Homes); John Kerber; Clarence Smith (Industrial Development Authority of Smyth County); Tom Carr (City of Roanoke); John Kerber; Bateman Custom	The application of a water quality standard based on Chesapeake Bay models is inappropriate for statewide application. Will significantly hurt economic development efforts	The water quality criteria requirement has been revised from 0.28 pounds per acre per year to 0.45 pounds per acre per year. Although the revised regulations do incorporate a revised compliance methodology related to this standard, this level of phosphorus removal has been in use statewide since the Board received responsibility for stormwater management in 2005. Any needed additional standard for the Chesapeake Bay watershed will be addressed through a future regulatory action.

Construction, LLC; Skip Eastman (Chesapeake Structural Systems); George Daily (A&E Homes, Inc.); Daniel Dreelin; Robert Burr; Mark Hassinger (WestDulles Properties); Peter Eckert (Virginia Association for Commercial Real Estate); Cynthia Couch; Chris Lupia (The Engineering Groupe); Craig Cope (Liberty Property Trust); Melanie Holloway (Holliday Properties, Inc.); Richard Dickens, Jr.; Alvin Owens; Robert Duckett (Peninsula Housing & Builders Association); William Rucker; Ronnie Herring (The Home Crafters); Ben Hudson (Northern Neck Homes, Inc.); Ben Hudson (Northern Neck Homes, Inc.); William Garrett (W.B. Garrett, Inc.); John Bumgarner (Duke Realty Corporation); Vanasse Hangen Brustlin (VHB); Michelle Wilson-Johnson (Shenandoah Valley Builders Association); Jeff Collins (Townes Site Engineering); Melinda Loeblich; Shelby Perkins; Steve Thomas; Ralph Costen, Jr.; David Fahy; Shawn Callahan (Roanoke Regional Home Builders Association); Rand Sompayrac; Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Robert Kerr (Kerr Environmental Services Corp.): Mike Bumbaco (Kerr Environmental Services Corp.); David Johnson (Advantus Strategies, LLC); David Anderson (Advantus Strategies, LLC); Brian Gordon (Apartment and Office Building Association of Metropolitan Washington); Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); Alan Wood (American Electric Power); John Easter (The Chesterfield Business Council); Mark Bissette (Hampton Roads Utility and Heavy Contractors Association); Steven Vermillion (Associated General Contractors of Virginia); Bruce Galbraith (WG Construction Co., Inc.);		

Apartment and Office Building Association of Metropolitan Washington, Associated Builders and Contractors – Virginia Chapter; Bristol Chamber of Commerce; Charlottesville Regional Chamber of Commerce; Emporia Greensville Chamber of Commerce; Fairfax Chamber of Commerce; Greater Bluefield Chamber of Commerce; Greater Richmond Chamber of Commerce; Greater Springfield Chamber of Commerce; Greater Williamsburg Chamber and Tourism Alliance; Halifax Chamber of Commerce; Hampton Roads Association for Commercial Real Estate; Hampton Roads Chamber of Commerce; Hanover Association of Businesses and Chamber of Commerce; Louisa County Chamber of Commerce; Loudoun County Chamber of Commerce; Lynchburg Regional Chamber of Commerce; NAIOP Northern Virginia; Northrop Grumman Shipbuilding; Petersburg Chamber of Commerce; Roanoke Regional Chamber of Commerce; Robinson Construction; Virginia Association for Commercial Real Estate; Virginia Peninsula Chamber of Commerce; Virginia Utility and Heavy Contractors Council; Daniel Dreelin; Sarah Kellam; Charles Hite; Bill Garrett; Grover Southers (Southers Concrete, Inc.); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Youngblood,Tyler and Associates, P.C.; A. Condlin; Taylor Goodman; Joan Girone (Chesterfield Chamber of Commerce); Bill Barnett; Robert Jansen (Jansen Land Consulting, LLC); Lois Haverstrom; Bay Design Group; Shawn Smith; David Smith; Andrew Gould (Timmons Group); Bob Brown (Urban, Ltd.); John Nolde (The Nolde Company, Inc.); Ronald Willard, II (The Willard Companies, John Nolde, III; Susan Hadder; William		

Hestand (Koontz-Bryant, P.C.); Dan Jamison (Koontz-Bryant, P.C.); Meredith Ward (Valley Engineering Surveying Planning); David Mitchell; Jerry Brunk (LS); Sarah Kellam; Thomas Kellam; Timothy Cleary (Charles Ross Homes); G. Archer Marston, III; Jim Murphy; Michael Elander (Timmons Group); Will Shumate		
Rebecca Kurylo; Mark Feldpausch; Senator Creigh Deeds; Robert Jordan; Ed Steinbeck; Corinne Schmidt; Stewart Schwartz (Coalition for Smarter Growth, Glen Besa (Sierra Club – Virginia Chapter), Lisa Guthrie (Virginia League of Conservation Voters), Leighton Powell (Scenic Virginia), Dan Holes (Piedmont Environmental Council), Nathan Lott (Virginia Conservation Network), J.R. Tolbert (Environment Virginia); Mike Gerel (Chesapeake Bay Foundation); Rebecca Hanmer; Ann Jennings (Chesapeake Bay Foundation)	P standard based on meeting Virginia's water quality standards for the Bay and its tributaries using the science of the Chesapeake Bay cleanup effort, which is considered the best in the world.	The 0.28 standard was based on the Tributary Strategies, which represented the best science available at the time of its development. However, recent data released by EPA has suggested that this might not be the appropriate standard to be achieved to meet Bay goals. This data is not yet final; however, it was not deemed appropriate to adopt a separate standard for the Bay watershed at this time. Rather, a separate regulatory action will be conducted to address the standard for the Bay watershed when new Bay data is finalized and released.
Rebecca Hanmer	Adoption of the water quality standard for total phosphorus of 0.28lb/ac/yr is appropriate and necessary to bring Virginia's stormwater program into line explicitly with the Commonwealth's water quality standards for Chesapeake Bay tidal waters and tributaries.	The 0.28 standard was based on the Tributary Strategies, which represented the best science available at the time of its development. However, recent data released by EPA has suggested that this might not be the appropriate standard to be achieved to meet Bay goals. This data is not yet final; however, it was not deemed appropriate to adopt a separate standard for the Bay watershed at this time. Rather, a separate regulatory action will be conducted to address the standard for the Bay watershed when new Bay data is finalized and released.
Rebecca Hanmer	In the first line of 4VAC50-60-63, reference is made to "control of nonpoint source pollution". This is probably an inadvertent error, which should be corrected. Urban stormwater discharges are "point sources" under the Clean Water Act, and this regulation applies to point sources.	An amendment has been made that addresses the concern of the comment.

Thomas Bruun (Prince William County)	Concur with the intent of numeric water quality standard as a goal only, not as a site-specific requirement for each development; Recommend a tiered approach for some period within an interim somewhat higher cap before mandating the 0.28 standard.	The 0.45 pounds per acre per year phosphorus standard is a design standard, meaning that the site's design must take into account measures that are calculated to achieve the standard. Monitoring of actual discharges from the site is not required. The 0.28 standard was based on the Tributary Strategies, which represented the best science available at the time of its development. However, recent data released by EPA has suggested that this might not be the appropriate standard to be achieved to meet Bay goals. This data is not yet final; however, it was not deemed appropriate to adopt a separate standard for the Bay watershed at this time. Rather, a separate regulatory action will be conducted to address the standard for the Bay watershed when new Bay data is finalized and released.
Mike Gerel (Chesapeake Bay Foundation); Dennis Dineen; Richard Jacobs (Culpeper Soil and Water Conservation District): David Crawford (Brand Center)	Independent analysis by private engineering firms and individual designers at the charrettes definitely demonstrated that the technical criteria are attainable on site for a broad range of residential, commercial, mixed use, and redevelopment projects.	It is recognized that the charrette process demonstrated that the new water quality criteria are achievable. Revisions have been made to the regulations where necessary to address sites where special concerns were noted.
David Phemister (The Nature Conservancy)	Stormwater pollution is a critical concern for Virginia's so-called "Southern Rivers", including the Clinch and Powell Rivers in Southwest Virginia, the Roanoke in the southern Piedmont, and the Blackwater, Meherrin, and Nottoway Rivers of the Chowan Basin. While these rivers are far less known to many Virginians than the iconic tributary strategies of the Chesapeake Bay, they are no less valuable. In fact, some of these systems, most notably the Clinch-Powell, support world-renowned populations of freshwater fish and mussels, and all provide drinking water, recreational opportunities, and economic value to the communities through which they flow.	It is recognized that non-Bay regions of the state likewise have great need for water quality protection. The regulations, with the introduction of the Runoff Reduction Method, will result in greater water quality protection for non-Bay areas than has ever been experienced in the past. The use of local programs will likewise accelerate regulatory compliance and oversight, and will also contribute to greater water quality protection in all areas of the state.

Thomas Bruun (Prince William County); Jonathon Jackson; Willis Blackwood (Blackwood Development); Barrett Hardiman (Home Builders Association of Virginia); Warren Wakeland (Home Building Association of Richmond); Randy Bartlett (Virginia Municipal Stormwater Association); Selena Cuffee-Glenn (City of Suffolk); Sarah; James Campbell (Virginia Association of Counties); David Nunnally (Caroline County); John Miniclier (Charles City County); Amar Dwarkanath (City of Chesapeake); Sanford Wanner (James City County); Tom Carr (City of Roanoke); Kenneth Eades (Northumberland County); Michael Altizer (Roanoke County); James Holley (City of Portsmouth); Nikhil Deshpande (Rinker Design Associates, P.C.); Laszlo Eszenyi (Heavy Construction Contractors Association of Northern Virginia); Mark Bissette (Hampton Roads Utility and Heavy Contractors Association); Steven Vermillion (Associated General Contractors of Virginia); Robin Miller (Miller & Associates); Philip Abraham (The Vectre Corporation); John Conrad (Miller and Smith); Monte Lewis (E.D. Lewis & Associates); Bruce Reese (Fredericksburg Builders Association); David Lesser; Youngblood,Tyler and Associates, P.C.; Lois Haverstrom; Kevin McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Daun Klarevas (Christopher Consultants); Shawn Smith; David Smith; Ted Miller (Kimley-Horn	20% redevelopment standard poses serious practical constraints for many redevelopment sites.	Revisions have been made to the redevelopment standards to provide additional flexibility. Now, section 63 applies a 20% reduction to projects occurring on prior developed lands that disturb greater than or equal to one acre. Redevelopment projects disturbing less than one acre must achieve a 10% reduction, which is the same level required by the current regulations.

and Associates, Inc.); Glenn Telfer; Will Shumate		
Robert Jordan	Require more than 20% for redevelopment; Tributary strategies calls for 44%.	It is recognized that the Tributary Strategies called for a greater phosphorus reduction from redevelopment projects than is included in the regulations. In the interest of not discouraging redevelopment (and not promoting sprawl), however, it was believed appropriate to establish a more modest redevelopment standard. The 20% reduction required for projects equal to or greater than one acre still represents a doubling of the current 10% standard.
Pete Rigby (Paziulli, Simmons and Associates); Malcolm Kerley (Virginia Department of Transportation)	Difficult to meet standards for linear projects.	It is believed that linear projects that constitute new development should be able to meet the required phosphorus reduction standards, as right of ways can be adjusted to allow for BMP installation. Linear projects that are redevelopment are likewise believed able to meet the required redevelopment reduction standards.
Nikhil Deshpande (Rinker Design Associates)	TMDL requirement is not clearly stated and therefore will lead to uncertainty and confusion.	The TMDL requirement of section 63 (4) simply references a TMDL WLA that may be assigned with regard to construction activities and thus apply to the site. The VSMP regulations do not govern the establishment of TMDL WLAs, and thus, the Board does not have the authority to determine the specific requirements of a TMDL WLA. For the purposes of these regulations, a brief reference to the requirements of TMDL WLAs is appropriate.
Dale Mullen (Louisa County)	A pervious area threshold be added to the regulations so projects with a certain amount of previous areas are exempt of certain requirements related to water quality; may reduce engineering costs and expedite certain projects.	By not establishing threshold requirements for pervious or impervious cover, freedom is allowed through the site design process for the site designer to determine how to effectively meet the water quality requirements of the regulations. Sites with greater levels of pervious cover will achieve compliance more easily than other sites, and demonstration of compliance is not believed to be difficult.
Bruce Goodson (Hampton Roads Planning District Commission); William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake); James Holley (City of Portsmouth); Monte Lewis (E.D. Lewis &	Retain the existing requirement to decrease the phosphorus for redevelopment projects by 10% of the existing load.	While it is important that improvements be made on redevelopment projects (in fact, the Tributary Strategies indicated a need for a greater reduction from these sites than is included in the regulations), revisions have been made to the redevelopment standards to provide

Associates); Joe Lerch (Virginia Municipal League)		additional flexibility. Now, section 63 applies a 20% reduction to projects occurring on prior developed lands that disturb greater than or equal to one acre. Redevelopment projects disturbing less than one acre must achieve a 10% reduction, which is the same level required by the current regulations.
Jimmie Jenkins (Fairfax County)	Do not support the use of the Chesapeake Bay Model to develop water quality standards; don't believe a stringent phosphorus load requirement for new development is appropriate.	The 0.28 standard was based on the Tributary Strategies, which represented the best science available at the time of its development. However, recent data released by EPA has suggested that this might not be the appropriate standard to be achieved to meet Bay goals. This data is not yet final; however, it was not deemed appropriate to adopt a separate standard for the Bay watershed at this time. Rather, a separate regulatory action will be conducted to address the standard for the Bay watershed when new Bay data is finalized and released.
Jimmie Jenkins (Fairfax County)	Alternative requirements should be provided for small projects between 2,500 and 1 acre; one option would be retain current requirement that water quality controls are not required unless aggregate imperviousness area is 16% or greater or exceeds locally computer average impervious cover.	The 0.45 standard has been adopted for use statewide. Additional flexibility has also been added for small redevelopment projects, where the most concerns were noted.
Jimmie Jenkins (Fairfax County)	Not clear how compliance with WLAs will work in practice with construction sites during construction. Does locality have to require the operator to meet the WLA?	Once a WLA has been established for construction activities, any activities covered by that WLA must address the WLA. Compliance with WLAs will be required by the local program authority, which can be either the Department or a locality that adopts a qualifying local program.
Warren Wakeland (Home Building Association of Richmond); Sarah; David Smith	0.28 standard would make new construction overly costly for financially-strapped local governments and essentially stop commercial construction, doing permanent damage to economic development efforts statewide; smallest of elementary schools built on 20 acres would need almost 35 acres.	The 0.28 standard has not been adopted; rather, a 0.45 standard has been adopted for use statewide. The 0.28 standard was based on the Tributary Strategies, which represented the best science available at the time of its development. However, recent data released by EPA has suggested that this might not be the appropriate standard to be achieved to meet Bay goals. This data is not yet final; however, it was not deemed appropriate to

		adopt a separate standard for the Bay watershed at this time. Rather, a separate regulatory action will be conducted to address the standard for the Bay watershed when new Bay data is finalized and released.
June Barrett-McDaniels (Aquarius Engineering)	Revise the current regulations to require that all impervious areas be treated in accordance with established methodology; methodology could include methodologies defined in the BMP Clearinghouse but should be tailored by each community to determine the feasibility of each method.	The Runoff Reduction Method does require that impervious cover on regulated land disturbing activities be considered in determining the site's compliance with the requirements of the regulations. Existing impervious cover not associated with a regulated land disturbing activity is beyond the scope of the Board's authority in this regulatory action.
June Barrett-McDaniels (Aquarius Engineering)	Return to the keystone pollutant idea is a step backward; return to the technology based criteria and continue to develop pollutant removal data to update the methodology outlined in the BMP Clearinghouse information.	Using phosphorus as an indicator pollutant is consistent with the requirements of the current regulations and is appropriate. Data backs up the fact that the utilization of practices designed to treat for phosphorus additionally remove other pollutants associated with stormwater runoff. BMP efficiencies are provided on the Virginia Stormwater Management BMP Clearinghouse website.
Malcolm Kerley (Virginia Department of Transportation); Nikhil Deshpande (Rinker Design Associates, P.C.); Gary Rhodes (Greater Richmond Chamber of Commerce); Kim Scheller (Greater Richmond Chamber of Commerce); George Moore; Taylor Goodman; Carolyn Oster (Prime Design Engineering, P.C.)	Regardless of type of development, technical criteria will require construction of more stormwater management facilities than required by current regulations and those facilities will be more maintenance intensive.	The Runoff Reduction Method addresses stormwater quality and quantity through BMPs. The implementation of the various BMPs is site-specific and can be tailored by the site designer to utilize differing numbers and sizes of BMPs in order to achieve compliance. While use of the Runoff Reduction Method will necessitate a different approach to site design than has been utilized in the past, it will not necessarily result in greater numbers of BMPs on an individual site, especially given the revised standard for new development that was adopted.
Peter Eckert (Hampton Roads Association for Commercial Real Estate); Robert Kerr (Kerr Environmental Services Corp.); Mike Bumbaco (Kerr Environmental Services Corp.); Monte Lewis (E.D. Lewis & Associates); J. Thomas Gale (Roudabush, Gale & Associates, Inc.)	No provisions for infill lots, redevelopment and sites smaller than 5 acres.	It is notable that the final regulations adopted a 0.45 standard for new development activities across the state. This standard has been in use since the Board received responsibilities for stormwater management in 2005. Additionally, a relaxed standard was adopted for small redevelopment activities.
Charles Rotgin, Jr. (Great Eastern Management Company); Neil Williamson (Free Enterprise Forum): David Lesser; Kevin	Creating very difficult barriers for new and renovated public infrastructure – schools, libraries, fire and police facilities.	The regulations do not impose burdens upon the construction of public facilities separate from the requirements for all other facilities, especially given the

McFadden (The Rebkee Co.); Alan Nusbaum (Nusbaum Realty Co.); Mark Slusher (TGM Realty Investors, Inc.); Willis Blackwood (Blackwood Development Co.); Robert Miller (Miller & Associates); Daniel Schmitt (H.H. Hunt Properties); H. Leon Shadowen, Jr. (Brandywine Realty Trust); Russell Aaronson (Gray Land & Development Co.); Alan Lingerfelt (The Lingerfelt Companies); Robert Hodous; David Smith		revised water quality criteria contained in the final regulations. While it is not believed that the regulations will create difficult barriers to development, revisions have been made to the proposal to provide additional flexibility. These include revised water quality and quantity criteria, and allowances for further flexibility in the event that more stringent standards are adopted in the future.
Joan Comanor (Lord Fairfax Soil and Water Conservation District); Kevin Barnes (American Society of Landscape Architects); Lynn Crump (American Society of Landscape Architects)	Support the provision that stormwater management be applied statewide.	Stormwater management has been required to be addressed statewide since the VSMP program was created and authorized to be administered under the federal NPDES program in 2005.
David McGuigan (U.S. Environmental Protection Agency)	Finds that the 20% redevelopment standard may be inadequate	Virginia's Tributary Strategies did indicate a need for a greater phosphorus reduction from redevelopment activities, and it is believed that future data may likely continue to show such a reduction to be necessary. However, in light of the policy concern to not discourage redevelopment and thus encourage sprawl, the requirement for a 20% reduction has been selected to be applied to some redevelopment activities. This does still represent an increased requirement from the current 10% requirement.
Leonard Sandridge (University of Virginia)	BMPs will need to be sized larger to reduce TP to a stricter standard, but also to treat landscape-managed turf areas and to treat runoff from a larger storm event; may not be possible on constrained sites.	The Runoff Reduction Method provides both a phosphorus removal efficiency and may provide a runoff volume reduction for BMPs. If appropriate BMPs are selected, the runoff volume to be treated can be reduced.
Leonard Sandridge (University of Virginia)	Adding managed turf will have a significant impact on the size of BMPs for institutions that maintain large turf areas for athletics and other purposes.	Managed turf is recognized as a significant contributor of pollutant loadings and must be accounted for to meet the objectives of the regulations. The Runoff Reduction Method provides both a phosphorus removal efficiency and may provide a runoff volume reduction for BMPs. If appropriate BMPs are selected, the runoff volume to be treated can be reduced.
David Nunnally (Caroline County)	Section 3. How do you reconcile this section versus 4VAC50-60-53 General Requirements, and the statement that	As noted in the responses to comments on section 53, that section states the goals and objectives of the technical criteria. The specific requirements set forth in

	controls used shall be employed in a manner that minimizes impacts..."?	other sections, including section 63, govern.
David Nunnally (Caroline County)	Section 4. TMDL requirements (generally) should be developed and implemented separately, not in this regulation, at this time.	TMDL requirements are not sought to be established in this regulation. Section 4 simply points out that, as required under the VSMP and NPDES programs, should a TMDL WLA impose additional requirements beyond these regulations, those additional requirements must be met.
James Edmonds (Loudoun County)	Breaking down the treatment areas of the site by HUC's is too confusing and unnecessary; option for the locality to apply the performance criteria to individual drainage areas or planning areas within the development site is more important and will give better results; provide rules or guidelines regarding when the site must be divided into smaller drainage areas for pollutant discharge analysis.	Section 65 allows the local program the discretion to apply the water quality criteria to each drainage area of the site. However, when the site drains to more than one HUC, reductions must be achieved in each HUC. This requirement protects water quality in each HUC that the site discharges to.
James Edmonds (Loudoun County)	0.28, combined with the requirement to treat managed turf areas, will be more difficult to meet on many commercial and industrial sites without significant loss of development area; undisturbed or replanted buffer areas will need to be expanded to a degree that is significantly larger than mandated by the county's zoning requirements.	Managed turf is recognized as a significant contributor of pollutant loadings and must be accounted for to meet the objectives of the regulations. The Runoff Reduction Method provides both a phosphorus removal efficiency and may provide a runoff volume reduction for BMPs. If appropriate BMPs are selected, the runoff volume to be treated can be reduced. It is additionally of note that the revised regulations did not adopt the 0.28 standard.
Millard Stith (Chesterfield County)	Regulations should allow a locality to set different performance criteria for different types of land uses provided that the overall phosphorus load within a watershed averages to 0.28 lbs/acre/year.	It is of note that the revised regulations, in section 63, did not adopt the 0.28 standard. The revised regulations do allow localities to adopt more stringent standards than those adopted by the Board. Finally, the regulations do allow for the establishment of a comprehensive watershed stormwater management plan by a locality, which can address pollutant reductions on a watershed-wide basis.
Sanford Wanner (James City County)	Concern about requiring stormwater management for projects that do not add impervious cover, but convert land cover from forest to grass such as utility projects.	To the extent that projects such as those that are cited by the comment are covered by the Virginia Stormwater Management Act, they must obtain VSMP permit coverage and address stormwater management.

		Projects that will not result in additions of impervious cover, however, will more easily achieve compliance with regulatory requirements than other projects.
Tom Carr (City of Roanoke)	Improper to use phosphorus as the key indictor when it is not the key pollutant in a highly urbanized, compact city.	Through the regulatory process, the Department and the technical advisory committee reviewed the continued use of phosphorus as a basis for pollutant reduction requirements. The decision was made to retain the use of phosphorus as the indicator pollutant. Data shows that practices employed to obtain phosphorus removal will also achieve removal of other pollutants associated with stormwater discharges.
Tom Carr (City of Roanoke)	Should be a site specific review of stormwater technical criteria for previously developed sites that would allow for innovative rather than prescriptive BMP design and implementation; needed to ensure that both the environmental clean-up and stormwater pollution prevention goals of these projects are addressed in a comprehensive and maximally beneficial manner.	The Department and the technical advisory committee reviewed site-specific data related to pollutant loadings associated with stormwater runoff. The implementation of BMPs to control stormwater runoff pollutant loadings is not contrary to environmental clean up goals and policies.
Mike Flagg (Hanover County)	Simple projects should necessitate simple plans and streamlined regulatory compliance requirements; develop streamlined regulatory process for simple projects.	While no separate planning process has been developed for smaller and simpler projects, the regulations have been amended to provide greater flexibility for small new development and redevelopment projects, as well as other sites. These include relaxed water quality and quantity requirements in sections 63 and 66.
Glenn Brooks; Mark Bissette (Hampton Roads Utility and Heavy Contractors Association); Robin Miller (Miller & Associates); Roger Rodriguez (International Council of Shopping Centers, Inc.); Greater Richmond Area Association for Commercial Real Estate Legislative Committee; John Conrad (Miller and Smith); Monte Lewis (E.D. Lewis & Associates); Youngblood,Tyler and Associates, P.C.; Paul Hinson; Steve Weinstock (International Council of Shopping Centers); John Schwartz (HaveSiteWillTravel. Ltd); Paul	Requirements appear impossible to meet with some types of development; existing regulations already a challenge to meet on commercial and high-density residential sites [also mixed use].	In addition to the adoption of a 0.45 statewide standard for new development, revisions have been made to the regulations to allow greater flexibility for sites where special concerns have been noted.

Anderson; Valerie Long; Shawn Smith; David Smith; Ivan Wu		
T. R. Collier (Maximum Engineering, Inc.)	Suggest implementation of the new best-management practices but keeping the 0.45 limit.	Revisions have been made to the regulations that will retain the 0.45 phosphorus standard for new development projects statewide. Any needed more stringent standard for the Chesapeake Bay watershed will be addressed through a future regulatory action.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Use of the term WLA is unclear; seems unrealistic that given the temporary and distributed nature of construction activities to that the discharges could be regulated on a broad nonpoint source basis; needs significant clarification to ensure its correct interpretation and application.	WLAs are assigned to point sources as a part of the TMDL process and must be met in accordance with federal regulations (note that the VSMP program is also a federal NPDES program). The regulations include a statement regarding TMDLs to ensure that operators are aware that more stringent requirements may be imposed by TMDLs.
Paul Hinson	Increasing our use of manufactured BMPs that are constructed out of site; much easier to ignore required maintenance if BMP is not visible.	The regulations include requirements that will help ensure that all stormwater management facilities are maintained over time. The assigned efficiencies for BMPs is developed with the assistance of the technical advisory committee for the Virginia Stormwater BMP Clearinghouse, which considers efficiency and maintenance concerns over time.
Glenn Telfer	Exemptions or modifications to the phosphorus removal requirement for project that discharge to combined sewers?	Discharges to combined sewers are specifically exempt from the regulations pursuant to §10.1-603.8(B)(6) of the Code of Virginia.

4VAC50-60-65 Water quality compliance

Ned Stone	Modification of parking lots to allow water permeation, the creation of permeable buffer areas around new development, the forbidding of new large impervious surfaces, the channeling of unavoidable runoff into permeable areas should be included in the regulations.	The regulations establish design criteria for runoff leaving the site without prescribing what specific practices must be employed on the site. This preserves flexibility for the regulated community to implement environmentally sensitive designs while maintaining site viability.
Ned Stone	The development of necessary engineering calculations to estimate the effectiveness of runoff-limitation features, quantitative measures of this effectiveness should be included.	The Runoff Reduction Method contains the necessary engineering calculations to determine runoff treatment volume and the resulting pollutant reductions necessary to meet the targeted pollutant loading.

Cynthia Horen; Leonard Hughes	Any proposed renovation or construction near waterways needs to include appropriate mitigation towards the water's edge (as in: maintaining 100' of marsh/resident trees and shrubs/no lawn to the river/stream bank).	The Runoff Reduction Method encourages the maintenance of existing vegetation and the use of new vegetation to minimize runoff and protect waters. Other programs, including the Chesapeake Bay Preservation Act regulations, additionally provide protection for streams.
Thomas Bruun (Prince William County)	Assigned pollutant removal efficiencies strongly lean towards implementing nonstructural BMPs; county is skeptical about the costs and long-term performance record of these nonstructural BMPS; requests DCR to revise the BMP efficiency table to reflect the true documented long-term pollutant removal efficiencies.	As a part of this regulatory action, the Department contracted with the Center for Watershed Protection to evaluate the efficiencies of BMPs. Based on the review of national data related to BMP efficiencies, the assigned efficiencies of the BMPs in the regulations were revised as a part of this regulatory process. The Department has additionally established the Virginia Stormwater Management BMP Clearinghouse to continue to review BMP efficiencies on an ongoing basis.
Thomas Bruun (Prince William County)	Northern Virginia will be at a disadvantage because of the limitations (soil permeability, shallow rock, higher density, and high groundwater conditions) it has for incorporating LID practices as well as high land costs.	The BMPs contained in the regulations have been developed to provide sound engineering measures to provide water quality and quantity reductions. While it is recognized that various areas of the state may have limiting factors that make the use of particular BMPs disfavored, an effort has been made to provide a sufficient array of BMPs to properly address these concerns while still protecting water quality and quantity. Additional BMPs will be provided on an ongoing basis through the Virginia Stormwater Management BMP Clearinghouse.
Morgan Butler and Rick Parrish (Southern Environmental Law)	Encourage DCR to make clear that this section vests the Best Management Practice Clearinghouse Committee with the authority to consider – and the permit-issuing authority with the discretion to approve- certain smart growth projects characteristics as stormwater BMPs (examples - exceeding certain residential density per acre; incorporating shared parking lots between different uses could receive pollution minimization credits); urge DCR to make clear that it is willing to consider smart growth features of	The Runoff Reduction Method does include smart growth concepts as a means of achieving compliance with the regulations. For example, shared usage of driveways and the use of permeable pavement will reduce the treatment volume for a site.

	development projects as a type of BMP and the Clearinghouse Committee should immediately begin evaluating these types of smart growth BMPs.	
Gary Earp (Tazewell County)	Infiltration is not appropriate for areas with karst topography – removing the pollutants from the surface water and injecting it into the groundwater which is where the drinking wells are.	Karst topography may limit the use of BMPs that utilize infiltration to treat stormwater. However, it should be noted that there are other BMPs that are available for use to achieve the required water quality and quantity standards. Section 85 of the regulations includes requirements that karst features be considered in BMP selection and placement.
Charles Newton; Robert Jordan; Joan Comanor (Lord Fairfax Soil and Water Conservation District); William Latham (Shenandoah Valley Soil and Water Conservation District); John Eckman (Valley Conservation Council)	Encourage the Board to add provisions to the regulations that would require the use of best management practices designed to protect the groundwater in these karst areas; incorporate work of the Chesapeake Stormwater Network into the technical manual for stormwater or the BMP Clearinghouse.	Section 85 of the regulations allows BMP construction in karst features only after completion of a geotechnical investigation that identifies any necessary modifications to the BMP to ensure its structural integrity and maintain its water quality and quantity efficiencies. It is also anticipated that additional guidance will be included in the Virginia Stormwater Management Handbook related to karst. That guidance may incorporate the work of the Chesapeake Stormwater Network.
Seth Kauffman; John Eckman (Valley Conservation Council)	BMPs should come with recommendations for those that are suitable for karst areas and those that are improper or not suitable for karts areas.	Section 85 of the regulations allows BMP construction in karst features only after completion of a geotechnical investigation that identifies any necessary modifications to the BMP to ensure its structural integrity and maintain its water quality and quantity efficiencies. It is also anticipated that additional guidance will be included in the Virginia Stormwater Management Handbook related to karst. That guidance may incorporate the work of the Chesapeake Stormwater Network.
Mark Graham (Albemarle County)	Simplify the BMP efficiencies (20-40% impervious cover, here's a list of BMPs that work, etc.)	As a part of this regulatory action, the Department contracted with the Center for Watershed Protection to evaluate the design and efficiencies of BMPs. Based on the review of national data related to BMP efficiencies, the assigned efficiencies of the BMPs in the regulations have been revised. The Department has additionally established the Virginia Stormwater Management BMP Clearinghouse to continue to review new BMP efficiencies on an ongoing basis.
Pete Rigby (Paziulli, Simmons and	Locality limitations on types of BMPs allowed	The regulations do allow for localities to place limitations

Associates); Greater Richmond Area Association for Commercial Real Estate; William Rucker; Shelby Perkins; Nikhil Deshpande (Rinker Design Associates, P.C.); Roger Rodriguez (International Council of Shopping Centers, Inc.); Greater Richmond Area Association for Commercial Real Estate Legislative Committee; Steve Weinstock (International Council of Shopping Centers); John Schwartz (HaveSiteWillTravel. Ltd)	will severely hamper the designer.	on the use of BMPs within their jurisdictions. However, justification for any limitation must be provided to the Department. This is intended to allow a locality appropriate discretion in limiting the use of BMPs that may be inappropriate due to conditions in the locality, while providing some oversight as to the locality's exercise of that discretion.
Andy Herr (Terry Petersen Residential); Pete Kotarides (Tidewater Builders Association); Regina Williams (City of Norfolk); William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Unique physical constraints of sites will hamper the ability to comply [In Hampton Roads, infiltration will not be practical due to high groundwater table and poorly drained soils].	The BMPs contained in the regulations have been developed to provide sound engineering measures to provide water quality and quantity reductions. While it is recognized that various areas of the state may have limiting factors that make the use of particular BMPs disfavored, an effort has been made to provide a sufficient array of BMPs to properly address these concerns while still protecting water quality and quantity. Additional BMPs will be provided on an ongoing basis through the Virginia Stormwater Management BMP Clearinghouse.
Andy Herr (Terry Petersen Residential); Pete Kotarides (Tidewater Builders Association)	Specifications of "wet pond' would make it impractical to implement in the coastal plain; wet pond specifications lack good science behind them; affects and impacts of groundwater interaction are highly suspect at best.	The BMPs contained in the regulations have been developed to provide sound engineering measures to provide water quality and quantity reductions. While it is recognized that various areas of the state may have limiting factors that make the use of particular BMPs disfavored, an effort has been made to provide a sufficient array of BMPs to properly address these concerns while still protecting water quality and quantity. Additional BMPs will be provided on an ongoing basis through the Virginia Stormwater Management BMP Clearinghouse.
Bruce Goodson (Hampton Roads Planning District Commission)	Expand the toolbox of BMPs within urbanized areas to include smart growth BMPs as described in the EPA publication "Using Smart Growth Techniques as Stormwater Best Management Practices".	The Runoff Reduction Method does include smart growth concepts as a means of achieving compliance with the regulations. For example, shared usage of driveways and the use of permeable pavement will reduce the treatment volume for a site.
Bruce Goodson (Hampton Roads Planning District Commission); Regina Williams (City of	Adopt a stormwater design supplement for the coastal plain that accounts for the	Modifications have been provided for the BMPs found on the Virginia Stormwater Management BMP

Norfolk); William Johnston (City of Virginia Beach); Amar Kwarkanath (City of Chesapeake); James Holley (City of Portsmouth)	physical constraints, allows for deviations from the BMP specifications and technical criteria, and provides guidance on BMPs effective in removing bacteria and other pollutants of concern.	Clearinghouse related to design and efficiencies within the coastal plain.
Bruce Goodson (Hampton Roads Planning District Commission); Normand Goulet (Northern Virginia Regional Commission)	Allow BMP use limitations through written justification to the department of by and existing local ordinance and associated documents such as a Public Facilities Manual.	The regulations do allow for localities to place limitations on the use of BMPs within their jurisdictions. Justification for any limitation must be provided to the Department. This is intended to allow a locality appropriate discretion in limiting the use of BMPs that may be inappropriate due to conditions in the locality, while providing some oversight as to the locality's exercise of that discretion.
Bruce Goodson (Hampton Roads Planning District Commission); William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake); Glenn Brooks; Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group)	Remove Table 1 from the proposed regulations and simply reference the Clearinghouse and Handbook or include Table 1 in the Clearinghouse.	As the Virginia Stormwater Management BMP Clearinghouse website may change over time and is not incorporated by reference into the regulations, Table 1 must remain in the regulations in order to provide a fixed suite of BMPs and efficiencies that may be utilized to achieve compliance. The Clearinghouse may approve additional appropriate BMPs for use on an ongoing basis.
Bruce Goodson (Hampton Roads Planning District Commission)	Should allow the use of nutrient management plans as a BMP to the spreadsheet to allow certain types of development to reduce nutrient pollution through the use of nonstructural BMPs.	The Virginia Stormwater Management BMP Clearinghouse may, on an ongoing basis, consider the approval of additional BMPs for use in complying with the regulations. At this time, it is not believed appropriate to add voluntary nutrient management to the list of BMPs included in these regulations.
Jimmie Jenkins (Fairfax County)	Concerned about moving forward with heavy reliance on practices whose long-term effectiveness is unknown and that localities will be held accountable through their MS4 permits if the methodology and the effectiveness of some of the practices are revised over time; concerned that effectiveness of county's water quality efforts rely so heavily on individual property owners.	As a part of this regulatory action, the Department contracted with the Center for Watershed Protection to evaluate the efficiencies of BMPs. Based on the review of national data related to BMP efficiencies, the assigned efficiencies of the BMPs in the regulations have been revised. The Department has additionally established the Virginia Stormwater Management BMP Clearinghouse to continue to review BMP efficiencies on an ongoing basis.
Jimmie Jenkins (Fairfax County); Nikhil Deshpande (Rinker Design Associates, P.C.)	Be careful about requiring BMPs that won't work locally.	The regulations do allow for localities to place limitations on the use of BMPs within their jurisdictions. However, justification for any limitation must be provided to the

		Department. This is intended to allow a locality appropriate discretion in limiting the use of BMPs that may be inappropriate due to conditions in the locality, while providing some oversight as to the locality's exercise of that discretion.
Jimmie Jenkins (Fairfax County)	Offsite control should be within the same watershed designated by the locality; amend requirement to allow localities to designate the areas in which off-site controls must be located.	Section 92(A)(1) allows localities that develop comprehensive stormwater management plans to designate the watershed in which offsite controls must be located.
Jimmie Jenkins (Fairfax County)	Paragraph H should be deleted or parallel provisions included in the other major sections of Part II.	Paragraph H has been deleted. Exceptions remain available under section 122 of the regulations.
Vincent Poling (Shenandoah County)	Concern with karst subsurface topography; substructure leads to rapid interchange of surface and groundwater and leaves our water resources particularly susceptible to impairment; potential to be a major contributor of contaminants into aquatic systems in karst areas; need more focused statements in this regard.	Section 85 of the regulations allows BMP construction in karst features only after completion of a geotechnical investigation that identifies any necessary modifications to the BMP to ensure its structural integrity and maintain its water quality and quantity efficiencies. It is also anticipated that additional guidance will be included in the Virginia Stormwater Management Handbook related to karst.
June Barrett-McDaniels (Aquarius Engineering)	Keep distinction between managed turf and natural areas; final regulations need to reflect the different soil types in different parts of the state.	The Runoff Reduction Method does differentiate between managed turf and natural areas. In addition, four different soil types are utilized to calculate treatment volume and required reductions.
Katherine Nunez (Northampton County)	No differential of the varying soil conditions from the Eastern Shore to the mountainous areas of the west; by assuming equitable soil conditions across the board, it downplays the uniqueness and common characteristics of poor drainage soils.	The Runoff Reduction Method utilizes four different soil types to calculate treatment volume and required reductions.
Neville Simon (City of Richmond)	Table 1 shows a very high removable rate for permeable pavement and a very low rate for extended detention ponds which is contrary to practical perceptions; re-investigate how to improve it [extended detention ponds]; important to look at existing systems and provide some improvements to them other than take on additional systems that are going	As a part of this regulatory action, the Department contracted with the Center for Watershed Protection to evaluate the efficiencies of BMPs. Based on the review of national data related to BMP efficiencies, the assigned efficiencies of the BMPs in the regulations have been revised. The Department has additionally established the Virginia Stormwater Management BMP Clearinghouse to continue to review BMP efficiencies on

	to create additional problems to communities.	an ongoing basis.
Lalit Sharma (City of Alexandria)	Localities should be allowed to accept new, innovative stormwater management BMPs and assign appropriate removal efficiencies based on best available information.	The Virginia Stormwater Management BMP Clearinghouse was established to review proposed BMP designs and efficiencies on an ongoing basis. Proposed new BMP designs may be submitted to the Clearinghouse for consideration.
Joan Comanor (Lord Fairfax Soil and Water Conservation District)	Recommend performance monitoring of stormwater management actions; no provision for post-implementation or performance monitoring to determine if the management actions (BMPs) achieve that design goal.	The standards imposed by the regulations are design standards; monitoring of BMP pollutant removals following the termination of permit coverage is not required. However, the regulations do require that the long-term maintenance of BMPs be addressed. For BMPs that treat areas other than individual residential lots, this includes a requirement for an enforceable maintenance agreement.
David McGuigan (U.S. Environmental Protection Agency)	F and G – supports the use of off-site controls to meet post-development pollutant loads, provided that the use of off-site controls does not lead to the impairment of water quality for those waters where the site discharges.	It is recognized that local considerations, including local water quality considerations, are of great importance in evaluating offsite options for compliance. To further expand and clarify offsite options, a new section 69 has been added to the regulations dealing exclusively with offsite compliance. A qualifying local program will have the opportunity to determine which of these options is available in its jurisdiction, as both comprehensive watershed stormwater management plans and pro rata fees are available only if developed by the qualifying local program. Off-site controls implemented by the developer may only be utilized if no comprehensive stormwater management plan or pro rata fee program has been established. Nonpoint nutrient offsets, by §10.1-603.8:1, must be allowed by a locality in order to be available. Finally, the new state “buy down” option, when it becomes available, is only available if no other offsite options are available, or if the qualifying local program allows. This provides the locality with the ability to determine which offsite options best fit its needs in light of all considerations, including local water quality considerations. Secondly, it is of note that section 63 specifies that where a TMDL specifies a need for greater reductions than those required by these regulations, the TMDL

		must be addressed. TMDL requirements may thus require that greater reductions be achieved on site where necessary.
David McGuigan (U.S. Environmental Protection Agency)	H - concerns regarding the waiver provisions in Part III (see comments regarding 4VAC50-60-122)	The exceptions provision of section 122 has been amended to specifically require that where an exception is granted to the water quality criteria, all available offsite options must first be utilized, and should other offsite options be unavailable, any necessary reductions must nonetheless be achieved through a payment in accordance with the "buy down" provision of section 69 (after such time as that . This should further limit the use of exceptions and additionally ensure that reductions not achieved on site are compensated for.
Leonard Sandridge (University of Virginia); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Recommends that DCR verify that the table of BMP removal efficiencies is consistent with other supporting documentation; encourages DCR to obtain interagency support for rainwater harvesting and other approved technologies.	The efficiencies in Table 1 have been revised and are consistent with supporting documentation. These efficiencies were developed through the assistance of the Center for Watershed Protection, and are based on the best BMP data available. The regulations do support rainwater harvesting as a technique to meet water quality and quantity requirements and the Department will continue to work with other agencies to promote this practice.
Leonard Sandridge (University of Virginia)	Encourages DCR to work with DEQ to remove or reduce the regulatory hurdles for utilizing infiltration practices; implementation of the infiltration practice that is suitable for site conditions at UVA would likely require a groundwater injection permit.	While more information would be necessary to determine whether a groundwater injection permit is required in the situation posed by the comment, the Department will continue to work with other agencies to reduce regulatory hurdles, if found to be necessary, to infiltration practices.
David Nunnally (Caroline County)	Section A. The provision to allow an alternative method is well-intended provision, but experience with a similar provision in the E&S program was severely limited, if not rendered useless, by DCR policy (e.g., the alternative inspection provision). Recommend adding a requirement for a public process for policy(s).	In the ESC program, the Board has established guidelines for an Alternative Inspection Program. All AIPs that have met the Board's minimum requirements have been approved. The Board has an established policy for public participation in the establishment of policies related to regulatory actions.
David Nunnally (Caroline County); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical	Section B. What is the process for submitting an alternative BMP to the BMP Clearinghouse? What is response/review	The BMP Clearinghouse Committee is presently developing guidelines for the submission and approval of alternative BMPs. These guidelines will be made

Committee)	time?	publicly available upon their completion.
David Nunnally (Caroline County)	Section D. Why does a locality have to submit 'limitations' to DCR? What is the difference between a 'limitation' and a decision by the locality that a proposed BMP is not acceptable (ref.: 4VAC50-60-53 and others)? Also, a locality may have 'use limitations' for specific BMPs in documents other than SWM. (For example, E&S, CBPA, Zoning, Subdivision, etc.). This provision is over-reaching. Recommend deleting this section.	While it is recognized that qualifying local programs need to be afforded discretion in determining whether BMPs are suitable for use within their jurisdictions, a substantial amount of comment through the TAC and public comment processes was also received that localities not be permitted to limit the use of BMPs within their jurisdictions. The language of the regulations is intended to strike a balance of allowing local discretion over the use of BMPs, while still requiring these limitations to be submitted to the Department. Limitations may take the form of disallowing the use of a practice, or placing restrictions or conditions upon the use of a practice.
David Nunnally (Caroline County)	Section E. Why does a locality have to establish 'guidelines' for activity on part of a site and provide these guidelines to DCR? If the plan for the activity satisfies the program requirements, why this additional requirement for the locality? Recommend deleting this section.	This subsection gives flexibility to qualifying local programs in reviewing stormwater management plans. The requirement for any guidance developed to be provided to the Department is included so that the Department may be aware of any such policy or procedure.
James Edmonds (Loudoun County)	Rooftop disconnection – allowing a 25-50% runoff reduction is unrealistic; residential subdivisions with smaller lots the gutter outfall is very close to an efficient conveyance system; commercial/industrial settings runoff drainage will most likely move across a paved lot in concentrated form, which will not result in enough runoff reduction to provide such a large credit.	The standards and specifications for rooftop disconnection include minimum criteria for that practice that, based on the data available, indicate the efficiencies included in the table. Any practice must meet those minimum criteria to be credited with the assigned efficiency.
James Edmonds (Loudoun County)	Permeable pavement 1 and bioretention 1 – onsite soils are not typically optimum for infiltration measures; how can the removal of total phosphorus via pollutant treatment (25%) for bioretention not be greater than that for the permeable pavement?	The standards and specifications for permeable pavement and bioretention include minimum criteria for those practices that, based on the data available, indicate the efficiencies included in the table. Any practice must meet those minimum criteria to be credited with the assigned efficiency.
James Edmonds (Loudoun County)	Grass channel 1 and grass channel 2 – pollutant removal rates applied to both of	The standards and specifications for the practices cited by the comment include minimum criteria for those

	these measures are higher than that for extended detention ponds; grass channel 2 is afforded a rate higher than the current minimum standard for an enhanced vegetated swale even though the new standard has no required engineered media or check dams; actual minimum infiltration rate for the channel soils is also not a mandatory part of either design; simple grass channels are typically designed to be an efficient conveyance system for removing runoff – not a BMP that promotes a significant amount of ponding, infiltration, and vegetative uptake; recommend efficiency and design parameters be re-evaluated.	practices that, based on the data available, indicate the efficiencies included in the table. Any practice must meet those minimum criteria to be credited with the assigned efficiency. It is also of note that the Center for Watershed Protection was hired during the TAC process to review nationwide data on BMP efficiencies and evaluate the efficiencies assigned by the regulations. The efficiencies included in the table are the result of the Center's work and reflect the best science available.
James Edmonds (Loudoun County)	Sheet flow to conserved open space 1 and 2 – areas should not be credited with such high total removal rates (50% to 75% respectively); difficulty in promoting and maintaining sheet flow, along with the realistic potential for the open space to remove pollutants need to be considered; not only impractical to try to provide a measure to promote sheet flow with large discharges, but is also follows that such flows will not move large distances through conserved open space without concentrating and creating undue scour and ponding.	The standards and specifications for the practices cited by the comment include minimum criteria for those practices that, based on the data available, indicate the efficiencies included in the table. Any practice must meet those minimum criteria to be credited with the assigned efficiency. It is also of note that the Center for Watershed Protection was hired during the TAC process to review nationwide data on BMP efficiencies and evaluate the efficiencies assigned by the regulations. The efficiencies included in the table are the result of the Center's work and reflect the best science available.
James Edmonds (Loudoun County)	Section G.4: not appropriate for site-specific stormwater quality treatment; strategy totally contradicts the goal of treating/removing pollutants close to the source; maintenance agreements will become significantly more difficult and confusing if a BMP is located in another locality.	Section 65 (G)(4) has been deleted; however, the language has been relocated to new section 69. It has additionally been modified, and now states "Offsite stormwater management facilities must be located within the HUC or within the upstream HUCs in the local watershed that the land disturbing activity directly discharges to or within the same watershed, as determined by the local program."
Millard Stith (Chesterfield County)	Regulations do not define or clarify what constitutes offsite controls and should be revised to specify exactly what is permitted by this provision.	Offsite treatment options under the regulations have been consolidated in section 69. The language of that section has been amended to provide clarity where necessary.

Tom Carr (City of Roanoke)	Proposal to require the use of various BMPs to reduce phosphorus, while completely ignoring significant TMDL pollutants, is at best inefficient.	The regulations do not ignore TMDL pollutants. Section 63 contains a specific provision requiring that TMDL WLAs be addressed. Even in the absence of a TMDL WLA, it is of note that data demonstrates that phosphorus is an indicator pollutant, and that practices targeted to achieve phosphorus removal also remove other pollutants associated with stormwater.
Nikhil Deshpande (Rinker Design Associates, P.C.)	Phosphorus removal efficiency of several established practices has been reduced significantly, there is no data to show that these current practices are ineffective and require such drastic reduction in removal efficiency.	As a part of the development of the regulations, the Department contracted with the nationally-recognized Center for Watershed Protection to review nationwide data on BMP performance and to recommend revisions to the efficiencies associated with each type of BMP. The efficiencies included in Table 1, as revised, represent the Center's findings and reflect the best available data.
Nikhil Deshpande (Rinker Design Associates, P.C.)	Open space on site has 100% phosphorus removal efficiency; open space also generates a phosphorus load which would require treatment; reduces the incentive to conserve open space on site.	The Runoff Reduction Method recognizes the different land cover conditions that may be present on land that is considered to be open space. In each case, however, the Method encourages the conservation of open space on site.
David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC)	Offsite controls should be allowed within adjacent upstream HUC's as controls implemented above the land disturbing zone will improve the water quality for that area as well as in the downstream HUCs.	Revisions have been made to the regulations to allow controls within the upstream HUC.
David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC)	Corresponding nitrogen credit for BMPs should be assigned.	The Runoff Reduction Method will calculate nitrogen reductions achieved on a site in addition to the required phosphorus reductions.
T. R. Collier (Maximum Engineering, Inc.)	Unclear if the minimum standards of 4VAC50-30-40 are affected by the proposed changes; specifically the minimum storage volume for a detention structure of 134 cubic yards per acre of drainage area is a water quality issue; if minimum storage volume is required, it should be based on the disturbed drainage area, not total drainage area.	The Virginia Erosion and Sediment Control Regulations are a separate set of regulations under the Board's authority, and a separate regulatory action will be necessary before any changes to those regulations are effected. While no changes have been made at this time, it is intended to amend the ESC regulations in the future to bring them into conformity with these regulations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater	Draft sizing criteria for the BMPs appear to increase the overall size in excess of the	As a part of the development of the regulations, the Department contracted with the nationally-recognized

Technical Committee); Doug Beisch (Williamsburg Environmental Group)	expected increase in performance; sizing criteria, including the surface and subsurface (soil) storage volume are overly conservative in some instances.	Center for Watershed Protection to review nationwide data on BMP performance and to recommend revisions to the efficiencies and designs associated with each type of BMP. The sizing criteria represents the Center's findings and recommendations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Does the suggested watershed areas draining to extended detention, wet pond and constructed wetland increase?	As a part of the development of the regulations, the Department contracted with the nationally-recognized Center for Watershed Protection to review nationwide data on BMP performance and to recommend revisions to the efficiencies and designs associated with each type of BMP. The sizing criteria represents the Center's findings and recommendations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Need to specify what level of HUC code watershed is required; recommend using large watersheds to allow cities to implement BMP banking programs that are feasible and not constrained.	The term "Hydrologic Unit Code" or "HUC" is defined in section 10 of the regulations, and refers to the 6th order. As to comprehensive stormwater management plans, note that section 92 does provide flexibility for localities developing such plans to use a locally-designated watershed.
Debra Brand (Jefferson Lab)	How handle a regional pond that was built for a 10 year development but the removal efficiency has now been changed?	Efficiencies for existing stormwater management BMPs do not change unless further new development or redevelopment occurs within the treatment area of the BMP. At that time, modifications to the pond may be required to improve its efficiencies to meet the new regulations, or additional BMPs may be necessary.
Pete Moxon	Pervious concrete is a major tool that can filter excess water; regulations should strongly support this and encourage its use whenever feasible.	The regulations encourage the use of pervious concrete and its use is reflected in the Runoff Reduction Method and in Table 1 of section 65.

4VAC50-60-66 Water quantity

Thomas Bruun (Prince William County)	Proposed method for computing the post development peak discharge is very conservative and this leads to excessive runoff detention and/or volume control.	Revisions have been made to the most stringent water quantity requirements of the proposed regulations (discharges to unstable channels) that ease the condition that is utilized in the calculation of the peak discharge (i.e., "forested" condition to "good pasture" condition).
Thomas Bruun (Prince William County)	DCR has not undertaken adequate studies to verify whether the channels designed with this	The proposed methodology for channel stability is based upon the observation that streams develop stable

	conservative approach will actually result in higher channel stability; defer the application of new computational method for post development peak discharge until adequate field studies are undertaken to document its effectiveness.	channels under undeveloped conditions. Therefore, relating post-development peak flow rates and volumes to undeveloped conditions promotes channel stability.
Thomas Bruun (Prince William County)	Regulations do not address what happens if downstream channel improvements are necessary and the developer is unable to obtain the offsite easements needed.	Downstream channel improvements are not required by the regulations. The regulations instead specify on-site requirements for peak flow rates for discharges to unstable channels. Section 66(H) does provide for alternatives for necessary downstream analysis conducted as a part of evaluating a site for compliance with water quantity requirements.
Morgan Butler and Rick Parrish (Southern Environmental Law), Mike Gerel (Chesapeake Bay Foundation), Stewart Schwartz (Coalition for Smarter Growth, Glen Besa (Sierra Club – Virginia Chapter), Lisa Guthrie (Virginia League of Conservation Voters), Leighton Powell (Scenic Virginia), Dan Holes (Piedmont Environmental Council), Nathan Lott (Virginia Conservation Network), J.R. Tolbert (Environment Virginia), Jeff Kelbe (Shenandoah Riverkeeper), Bill Street (James River Association), David Phemister (The Nature Conservancy); Margaret Lorenz (Friends of the North Fork of the Shenandoah River); Ed Merrifield (Potomac Riverkeeper)	Subsection (A)(4): For redevelopment in an urban development area (UDA), development on prior developed lands within an UDA that will discharge to unstable natural stormwater conveyance systems would be required to improve upon an energy balance that is based on the site's runoff characteristics under the "pre-developed" condition rather than the forested condition.	Subdivision (B)(4) has been revised. All discharges to unstable channels are now required to be reduced to the good pasture condition, rather than the forested condition (unless the pre-developed condition was the forested condition). Additionally, the requirement for small sites (less than one acre for new development and less than five acres for redevelopment) has been relaxed to simply require that the post development peak flow rate be less than the pre development peak flow rate in order to ease compliance for, and promote, infill and redevelopment. These new standards apply both inside and outside of Urban Development Areas.
Morgan Butler and Rick Parrish (Southern Environmental Law), Mike Gerel (Chesapeake Bay Foundation), Stewart Schwartz (Coalition for Smarter Growth, Glen Besa (Sierra Club – Virginia Chapter), Lisa Guthrie (Virginia League of Conservation Voters), Leighton Powell (Scenic Virginia), Dan Holes (Piedmont Environmental Council), Nathan Lott (Virginia Conservation Network), J.R. Tolbert (Environment Virginia), Jeff Kelbe (Shenandoah Riverkeeper), Bill Street (James River Association), David Phemister (The	Subsection (B)(4): For redevelopment in an urban development area (UDA), development on prior developed lands within an UDA would be required to improve upon a peak flow that is based on the site's pre-development conditions rather than the forested condition. Change the phrasing "shall not exceed" to "is less than", and dropping the words "based on the forested conditions" at the end of the sentence.	Subdivision (B)(4) has been revised. All discharges to unstable channels are now required to be reduced to the good pasture condition, rather than the forested condition (unless the pre-developed condition was the forested condition). Additionally, the requirement for small sites (less than one acre for new development and less than five acres for redevelopment) has been relaxed to simply require that the post development peak flow rate be less than the pre development peak flow rate in order to ease compliance for, and promote, infill and redevelopment. These new standards apply both inside and outside of Urban Development Areas.

Nature Conservancy); Margaret Lorenz (Friends of the North Fork of the Shenandoah River); Ed Merrifield (Potomac Riverkeeper)		
Pete Rigby (Paziulli, Simmons and Associates); Greater Richmond Area Association for Commercial Real Estate; William Rucker; Shelby Perkins; Nikhil Deshpande (Rinker Design Associates, P.C.); Glen Payton (Filterra); Philip Abraham (The Vectre Corporation); Roger Rodriguez (International Council of Shopping Centers, Inc.); Greater Richmond Area Association for Commercial Real Estate Legislative Committee; Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Do not support the new proposal to control the 1 inch, rather than the first ½ of runoff in current standard.	The regulations do not require the control of 1 inch of runoff. Rather, the regulations require that 1 inch of rainfall be addressed. This may not result in an increased treatment volume for all projects.
Andy Herr (Terry Petersen Residential); Jeffrey Collins; David Slutzky; Nikhil Deshpande (Rinker Design Associates, P.C.); Mark Bissette (Hampton Roads Utility and Heavy Contractors Association); Youngblood,Tyler and Associates, P.C.; Bryan Mitchell (Townes Site Engineering)	Water quantity standard will have perhaps even greater impact on development costs [than water quality requirements]; will greatly increase size of BMPs resulting in increased costs and loss of developable land.	The Runoff Reduction Method incorporates quality efficiencies, as well as water quantity reductions for BMPs. The application of good design principles and suitable BMPs will assist in meeting water quantity requirements without loss of developable land and at a cost that is likely less than cited by the comment.
Jimmie Jenkins (Fairfax County)	Explicit provisions allowing the use of off-site controls to meet water quantity requirements should be included in the regulations.	Revisions have been made to the regulations to include a new section (section 69) devoted fully to off-site options for compliance.
Jimmie Jenkins (Fairfax County)	Flood protection – natural stormwater conveyance systems will almost never have the capacity to contain the 10-year storm within the channel banks (i.e. no flooding); criteria very misleading and the allowed 10-year discharge will always be based on forested conditions.	The flood protection criteria do not require the 10-year storm to be confined within the channel banks. Rather, what is required is that the 10-year storm be confined within the natural stormwater conveyance system, which includes the main channel and the flood way and flood fringe (which form the floodplain).
Jimmie Jenkins (Fairfax County)	Flood protection – since the natural stormwater conveyance system is defined as including the floodplain, the requirement in paragraph 3 that the post-development peak flow rate from the 10-year storm be confined within the system is meaningless.	The requirement of paragraph 3 is not meaningless. It requires that discharges following construction not worsen flooding conditions by causing flooding outside of the existing floodplain for the system.

Jimmie Jenkins (Fairfax County)	Paragraph E – revise this requirement to explicitly state that an alternative sheet flow also can be reduced or diverted to other treatment practices such as amended soil, reforested areas, bioretention areas, etc.	A revision has been made to subsection E that allows for sheet flow to be diverted to a stormwater management facility, which is believed to address the request of the comment.
Jimmie Jenkins (Fairfax County)	Paragraph H – delete the reference to Technical Bulletin 1 and provide sufficient guidance within the regulations for the extent of downstream review.	No revision is necessary, as Technical Bulletin 1 does provide the necessary guidance for determining downstream adequacy.
Barrett Hardiman (Home Builders Association of Virginia); Amar Dwarkanath (City of Chesapeake); Youngblood,Tyler and Associates, P.C.; Bay Design Group	Most projects will not meet the quantity standards.	The water quantity requirements of the regulations are achievable. The Runoff Reduction Method incorporates quality efficiencies, as well as water quantity reductions for BMPs. The application of good design principles and suitable BMPs will assist in meeting water quantity requirements of the regulations.
Barrett Hardiman (Home Builders Association of Virginia)	Makes the assumption that the default design standard is to match the peak flow rate of forest land in good condition; this should be a last resort approach in circumstances where streams are already badly eroded.	Revisions have been made to the regulations. All discharges to unstable channels are now required to be reduced to the good pasture condition, rather than the forested condition (unless the pre-developed condition was the forested condition). Additionally, the requirement for small sites (less than one acre for new development and less than five acres for redevelopment) has been relaxed to simply require that the post development peak flow rate be less than the pre development peak flow rate in order to ease compliance.
Barrett Hardiman (Home Builders Association of Virginia)	Burden is placed on permittee to show that the stream is not unstable; burden should be on the permitting authority to show that the stream is unstable before requiring a return to forested conditions.	Initial analysis of a site and the channel that is being discharged into is the responsibility of the site operator, and not the permitting authority. This is consistent with current practice under the Virginia Erosion and Sediment Control Law and Regulations.
Christine Porter (Department of the Navy)	Only exception to the requirements is a one percent rule; DOD facility's storm drains usually only receive stormwater drainage from facility property versus drainage from surrounding areas; project typically not eligible for exception; request a more reasonably attainable exception.	The one percent rule applies to the point of discharge from the site and incorporates drainage areas to waters beyond the boundaries of a facility. Discharges to some waters from a DOD facility may be eligible for the exception provided by the one percent rule.
Mike Flagg (Hanover County)	Only incremental changes be made to	The water quantity criteria, as revised, are believed

	existing water quantity standards at this time; recommendations include – (1) where predeveloped conditions are utilized, they be defined as a forested site in good condition, (2) significantly lower default permissible velocities for the various soil and channel substrates found in the E&S Handbook and (3) unify interpretations of MS-19 to prevent channel erosion and appropriately apply the 1% rule in project evaluations.	appropriate. These criteria are intended to be utilized in a later revision of MS19 of the Virginia Erosion and Sediment Control Regulations to create a uniform standard.
Mike Flagg (Hanover County); David Nunnally (Caroline County)	Technical bulletin 1 and the proposed regulations are not coordinated or consistent.	The directions related to downstream channel adequacy determinations contained in Technical Bulletin #1 is consistent with the requirements of the regulations.
Leonard Sandridge (University of Virginia); Anthony Romanello (Stafford County)	Recommends that DCR develop guidance on the procedures for determining whether natural channels are "stable" or "unstable", or prepare a watershed-wide channel survey of streams that identifies unstable channels.	The Department recognizes that outreach may be necessary for assistance with regulatory implementation and is prepared to provide such assistance with considerations such as that raised by the comment.
Leonard Sandridge (University of Virginia)	Recommends that DCR develop provisions for redevelopment of highly developed sites that contribute runoff to unstable channels by requiring these projects to reduce the peak rate of stormwater runoff to a more achievable level, perhaps by 25% compared to the pre-developed conditions as recommended by the USGBC's LEED rating system or by 20% similar to the proposed 20% redevelopment standard for water quality.	Water quantity requirements for discharges to unstable channels have been amended. First, the requirement for such discharges to be reduced to the “forested” condition has been revised to the “good pasture” condition (unless the pre-existing condition was forested). Secondly, for redevelopment sites of less than 5 acres, as well as new development sites of less than an acre, the requirement has been further reduced from “good pasture” conditions to a level less than the pre-development condition of the site. This is intended to ease compliance for these types of sites.
Leonard Sandridge (University of Virginia)	Recommends that DCR develop clarifying guidance on the procedures for determining whether localized flooding occurs in natural channels; also suggests localities fund channel analyses and DCR prepares a watershed-wide channel survey of streams that identifies the channels where localized flooding exists.	The Department recognizes that outreach may be necessary for assistance with regulatory implementation and is prepared to provide such assistance with considerations such as that raised by the comment.
Leonard Sandridge (University of Virginia)	Recommends that a system be established between DCR and localities to share	Localities are required to identify the 100 year floodplains as a part of the NFIP program. In addition,

	information on natural and restored systems so that the channel and flood protection requirements are less ambiguous.	restored systems would be required to obtain appropriate environmental permits, which have a public notification process. Therefore, DCR and the qualifying local programs should be aware of restored channels within a locality.
Leonard Sandridge (University of Virginia)	Recommends DCR provide clearer guidance for defining the point of analysis; should the point of analysis be where the stormwater flow discharges from the project site or university property or the final point of discharge even if it is a great distance downstream from the project site.	It is believed that the comment is referring to "point of discharge", which is defined as the point at which concentrated stormwater is released. This is the point where stormwater is released to a stormwater conveyance system, which may be on or off site.
William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake)	Concerned that the regulations set an impossible standard for developers to meet volume requirements in downstream channels especially in light of infiltration BMP limitations in the coastal plain; additionally developers cannot make improvements to a downstream channel if there is no easement.	Downstream channel improvements are not required by the regulations. The regulations instead specify on-site requirements for peak flow rates for discharges to unstable channels. Section 66(H) does provide for alternatives for necessary downstream analysis conducted as a part of evaluating a site for compliance with water quantity requirements.
Victoria Greenfield (Arlington County)	In drainage areas where stream restoration projects have been completed, we would like authority for local governments to apply quantity control criteria even when the proposed project drainage area is below the one percent threshold so that incremental increases in impervious area do not cumulatively threaten the integrity of the stream restoration project and negate the substantial investments.	Language has been added to section 66 specifying that nothing in that section prohibits a locality from adopting a more stringent standard.
Victoria Greenfield (Arlington County)	We believe local governments should retain the right to approve the circumstances under which a developer may construct conveyance systems to divert flow from adjacent properties into stormwater conveyance system, rather than constructing additional on-site measures.	Language has been added to section 66 specifying that nothing in that section prohibits a locality from adopting a more stringent standard.
David Nunnally (Caroline County)	Section B.1. How is peak flow rate related to erosion of the stream/channel system? Typically, the determining factor is a	Peak flow rate and velocity are closely related. If the area of a channel is known, peak velocity can be calculated from peak flow rate.

	permissible velocity for the channel lining material. Does DCR plan to establish permissible velocity values? Or is there an existing document (i.e., VESCH, SW Handbook, VDOT Drainage Manual, etc.)?	
David Nunnally (Caroline County)	Section B.2. What are the design parameters and standards for a 'restored stormwater conveyance system'? 2-yr velocity and 10-yr capacity?	As defined, a “restored stormwater conveyance system" means a stormwater conveyance system that has been designed and constructed using natural channel design concepts, including the main channel, floodway, and flood fringe. “Natural channel design concepts" means the utilization of engineering analysis and fluvial geomorphic processes to create, rehabilitate, restore, or stabilize an open conveyance system for the purpose of creating or recreating a stream that conveys its bankfull storm event within its banks and allows larger flows to access its floodplain.
David Nunnally (Caroline County)	Section B.3 and 4. How is a stable (or unstable) natural stormwater conveyance determined? Virtually all natural channels undergo constant erosion, and are subject to periodic natural re-construction as a result of natural rainfall events. This determination seems totally subjective. Recommend adding the phrase 'as determined by the local program authority.'	The standards set forth in section 66(B)(1-4) contain the requirements for channel protection and identify the design storms to be used in the appropriate stormwater conveyance system.
David Nunnally (Caroline County)	Section C.3 and 4. How is the channel x-section determined? Natural channels are often times quite irregular and can include severe ravine-type x-sections. Is the x-section 'as determined acceptable to the local program authority'? Similar criteria exists in E&S/MS-19 and has proven to be very subjective. What about streams with perennial flow? Is the stream x-section inclusive or exclusive of the volume occupied by perennial flow? Or 'natural' obstructions (e.g., beaver darns, debris, etc.) and 'manmade' obstructions (e.g., culverts, stream crossings, etc.) where the existing stream is already overtopping its banks?	Subsections G and H of section 66 explain that flooding and channel erosion impacts to stormwater conveyance systems shall be analyzed for each point of discharge in accordance with channel analysis guidance provided in Technical Bulletin # 1 or in accordance with more stringent channel analysis guidance established by the qualifying local program and provided to the department. Good engineering practices and calculations in accordance with department guidance shall be used to evaluate post-development runoff characteristics and site hydrology, and flooding and channel erosion impacts.

David Nunnally (Caroline County)	Section E. How do you determine 'increased volumes of sheet flow that will cause or contribute to erosion, sedimentation, or flooding...'? Similar criteria exist in E&S/MS-19 and has proven to be very subjective. Recommend adding the phrase 'as determined by the local program authority.'	Subsection G provides that good engineering practices and calculations in accordance with department guidance shall be used to evaluate post-development runoff characteristics and site hydrology, and flooding and channel erosion impacts. It is recognized that the local program will need to exercise some judgment in making this determination, and the Department is available to provide technical assistance where necessary.
David Nunnally (Caroline County)	Section F. What is meant by 'utilizing other hydrologic conditions'? This section seems to overrule the previous criteria that require 'forested or pasture, good condition.' Why does any local criteria have to be provided to DCR? This requirement may be prohibitive in administering the program properly, especially in that natural (existing, predevelopment, etc.) are virtually infinitely variable. As such, the local program needs to be able to act accordingly, not be encumbered by this bureaucracy. This is unnecessary and intrudes on the locality's ability to govern and protect its citizens and resources.	This section allows for the actual conditions of the site to be utilized for computational purposes where the predevelopment condition of the site is relevant (such as provisions that require the postdevelopment peak flow rate and/or volume to be simply less than they were predevelopment). It does not overrule requirements for the postdevelopment condition to meet forested or other specifically-enumerated conditions where those requirements are applicable.
David Nunnally (Caroline County)	Section G. This section seems to overrule the previous criteria that require predevelopment runoff coefficient based on 'forested or pasture, good condition.' What level of detail or criteria is required in order to 'verify predevelopment runoff conditions'? Would a locality have to maintain documentation such as predevelopment inspection reports, photos, etc? This section provides good guidance, but should not be included and possibly interpreted as a regulatory requirement.	This section allows for the actual conditions of the site to be utilized for computational purposes where the predevelopment condition of the site is relevant (such as provisions that require the post-development peak flow rate and/or volume to be simply less than they were predevelopment). It does not overrule requirements for the post-development condition to meet specifically-enumerated conditions where those requirements are applicable.
David Nunnally (Caroline County)	Section H. The first sentence should include section D. 1 and 2. (1% rule), since the 1% rule assumes that the site is too small to create significant problems or impacts. Sites that qualify under the 1% rule should not be	Clarifying language has been added to subsection D explaining that the analysis is not required where the one percent rule applies.

	burdened by having to do a channel analysis. Requiring the analysis without utilizing the results simply wastes money (both the owner's money and adds cost to the locality's review).	
David Nunnally (Caroline County)	It is interesting how TB1 treats an 'inadequate channel section.' It simply says the owner or responsible party should be identified. What happens after that? Does that imply that the regulations authorize the locality to require remedial measures or other actions? In many situations, the inadequacy is caused by road culvert (VDOT). Does TB1 imply that VDOT should have to upgrade the culvert? If so, this 'improvement' allows an increase flow onto downstream sections, which is inconsistent with the program and channel protection. Or does the inadequate channel section become the discharge controlling measure?	Technical Bulletin #1 is utilized in the regulations solely for purposes of downstream analysis. The regulations themselves contain the requirements for channel protection.
David Nunnally (Caroline County)	What is the 'department guidance' referred to in last sentence of first paragraph? This `guidance' should be specified.	The term “department guidance” in this paragraph means the Runoff Reduction Method, Technical Bulletin #1, the Virginia Stormwater Management Handbook, and other Department guidance relevant to the various considerations raised under that subsection.
David Nunnally (Caroline County)	The downstream channel analysis should be required only when there is a proposed increase in runoff. The analysis procedure is too subjective and there are too many natural and manmade variables that the results are not reliable. The channel analysis results often over estimate the capacity, thereby, encouraging an increase in discharge, rather than maintaining predevelopment runoff characteristics.	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in section 66.
David Nunnally (Caroline County)	Recommend deleting the channel analysis requirement and TB1, or revise this section more toward a downstream assessment or survey, rather than analysis.	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in

		section 66.
James Edmonds (Loudoun County); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Section B.3 – too much emphasis is placed on infiltrating the stormwater runoff versus the physics behind the forces that cause channels to become unstable; recommend regulations mandate calculation methods for stormwater quantity analysis that are more accurate than what is typically practiced today; shear stress analysis is the better choice when evaluating the effectiveness of biotechnical designs for stabilizing eroding and/or modified channels such as goegrids, live stakes and fascines.	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in section 66.
James Edmonds (Loudoun County)	Provide additional language to clearly state that if the QV relationships are not satisfied, a channel stability analysis must be performed.	The relationships specified in (B)(3) must be met for discharges to stable stormwater conveyance systems. Subsection H additionally requires that an analysis be completed for all points of discharge.
James Edmonds (Loudoun County)	Use of more accurate hydrologic methods is also extremely important and should be addressed; improvements to channel analyses could be combined with a reasonable allowance for peak shaving via infiltration-type BMPs.	The channel protection requirements in section 66 provide an accurate methodology to address channel stability. The Runoff Reduction Method, if properly utilized, provides runoff volume reduction.
James Edmonds (Loudoun County)	Section B.4 – could be unintended consequences by crating a large lag time for stormwater discharge to reach an unstable channel and by assuming that there is no need to perform a channel analysis if "forested conditions" are achieved; an analysis, such as the shear stress evaluation, should still be required for this development scenario.	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in section 66.
James Edmonds (Loudoun County)	Procedures in B.4 were originally a means for redevelopment and infill projects to avoid the requirement for having a defined receiving channel, much less an adequate one; unfortunately, inserting the procedure into the regulations as presented allows designers on all types of projects to try to use them to avoid	Language has been added to section 66 specifying that nothing in that section prohibits a locality from adopting a more stringent standard (which is permitted in the Stormwater Management Act). A qualifying local program may use this authority to require a detailed analysis if desired and if established in accordance with the requirements of the Act.

	a detailed analysis; if necessary provision, let affected locality use their own waiver or exception procedures to address it.	
James Edmonds (Loudoun County)	Section C.3 – not clear what confined within the system means; in natural channels, storm discharges from events greater than the event that supposedly formed the well-defined part of the channel should be allowed to move into the overbank areas as long as they remain in a natural condition; implementation of this provision would mandate unnecessary detention facilities on many projects.	Section 10 defines the term “natural stormwater conveyance system” as “…the main channel of a natural stream, in combination with the floodway and flood fringe, which compose the floodplain”.
James Edmonds (Loudoun County)	Section C.4 – instead of the language requiring the 10-year pre-development discharge be maintained, stipulate that a channel capacity analysis must be performed to the point in the channel where the site discharge is only 1% of the total channel discharge; using hydrologic methods that do not disregard the impact of non-homogenous subareas and significantly different times of concentration is essential to this type of determination and should be mandated in the regulations.	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in section 66.
James Edmonds (Loudoun County)	Section E – the flow over paved areas becomes concentrated after approximately 75', while flow over pervious areas concentrates after approximately 150'; without mandated thresholds such as these, designers may argue that huge concentrated flows can be converted to sheet flow and no erosion or ponding problems will result	Section E provides guidance for addressing increased volumes of sheet flow and such increases must be evaluated for downstream impacts, erosion, sedimentation, or flooding.
James Edmonds (Loudoun County)	Section H. – B.4 and C.4 should not be options; basically methods that ignore stream channel physics and established scientific methods relating to predicting stream flow characteristics; well-prepared and documented hydrologic and hydraulic analyses should be a part of every site	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in section 66.

	development project.	
Glen Brooks	More guidance and regulation needed for the channel protection sections to work; as written does not address (1) where no downstream channel at all (2)where drainage divides change on-site as a result of the development (3) where a downstream pipe system does not overflow, but is pressurized during peak storms and was not designed for this (4) where the developer chooses an advantageous point of discharge analysis that may not reflect conditions upstream, or at multiple discharge points (5) where an adequate channel can not be obtained (6) where sheet flow is acceptable and how much and (7) where a modification or waiver would be appropriate.	The regulations do not allow concentrated discharges where there is no downstream channel. Sheet flow is permitted within the requirements of the regulations. Discharges where drainage divides change are addressed by the regulations, as flow from the point of discharge related to the land disturbing activity must be addressed. The flood protection criteria of the regulations require that the postdevelopment peak flow rate from the 10 year 24 hour storm be confined within a manmade system. The regulations require that drainage areas upstream of the site that contribute to the site's stormwater discharge be calculated and included in the site's design. All discharges from the site, whether singular or multiple, must address regulatory requirements. Sheet flow is addressed by the criteria contained in section 66(E). Exceptions to the technical criteria are governed by section 122.
Glen Brooks	If this exception (4VAC50-60-66 D) is allowed, it be applied only to limited areas of disconnected imperviousness (<2,000 square feet) or to large lot rural subdivisions (2 acre lots or greater).	The one percent rule has been retained as proposed.
Glen Brooks	When adequate channel cannot be obtained, need to be very clear on what happens; if intent is to not allow a development if the conditions are not satisfied, the regulations should be very clear and to provide specific direction.	The water quantity criteria of the regulations clearly require that discharges must be to a stormwater conveyance system in accordance with the requirements of section 66 (unless they are sheet flow, in which case they are governed by the sheet flow provision of that section).
Glen Brooks	Section G – the requirement for evidence of this refusal from an uncooperative downstream owner is often impossible to obtain.	The sufficiency of evidence cited by subsection H (which is believed to be the provision cited by the comment) is at the reasonable discretion of the local stormwater management program.
Glen Brooks	Reliance on the 1 year 24-hour storm is problematic; existing hydrologic methods do not provide data for this storm event; it must be interpolated; should provide the design storm each locality should use.	Section 72 explains that unless otherwise specified, the prescribed design storms are the one-year, two-year, and 10-year 24-hour storms using the site-specific rainfall precipitation frequency data recommended by the U.S. National Oceanic and Atmospheric Administration (NOAA) Atlas 14. In addition, that section

		specifies that the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) synthetic 24-hour rainfall distribution and models, including, but not limited to TR-55 and TR-20; hydrologic and hydraulic methods developed by the U.S. Army Corps of Engineers; or other standard hydrologic and hydraulic methods, shall be used to conduct the analyses described in this part.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group)	No studies of its [energy balance] effectiveness based either on real world data or scientific principles; recommend additional review of this method versus an analysis of the actual energy and work exerted on stream beds and banks.	The energy balance method is intended to mimic the watershed characteristics under which stable streams were formed. For the Commonwealth, streams were formed under undeveloped conditions with the energy balance representing the flow and volume that resulted in stream stability.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Section B.1 – requires the evaluation of erosion of the system, but provides no guidance on what constitutes the limits of the system or upon what is the erosion based. Is no detention required for a site that drains into a storm sewer system that drains offsite? The same question for flood protection requirements.	Technical Bulletin #1 (referenced in section 66) provides guidance on the limits of the system and evaluating stability. For channel protection, section 66(B)(1) contains the requirements for discharges to man made systems, and subsection (C)(1) of that section contains the requirements for flood protection. Detention may be required to meet these requirements.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Section B.3 and B.4 – approach is arbitrary and while it has been shown to provide a reduced discharge, it has not been shown to be based on any principle of science nor has it been shown to protect outfall channels, as it is not informed by the receiving channel.	The energy balance method is intended to mimic the watershed characteristics under which stable streams were formed. For the Commonwealth, streams were formed under undeveloped conditions with the energy balance representing the flow and volume that resulted in stream stability.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Should be some encouragement for redevelopment that occurs in the areas where the natural channel is considered unstable, specifically if conditions of the outfall get better with the redevelopment of the site; Unstable channel probably caused by previous development; can there be a stipulation where offsite detention can be completed to a previously developed site that	Revisions have been made to section 66 to specifically allow for additional flexibility for redevelopment projects that disturb less than five acres and that discharge to unstable natural channels.

	has little to no detention (within the same channel area) as credit towards the newly developed site?	
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Items B and C: three criteria are vague; what is distinction between man-made stormwater conveyance system and restored stormwater conveyance system? What measure of channel stability is to be used?	"Man made stormwater conveyance system" and "restored stormwater conveyance system" are defined in section 10 of the regulations. The term "natural stream" has been modified to clarify that a restored stormwater conveyance system that has been designed using natural channel design concepts may be considered a natural stream.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Part F: why can't the site always reflect the actual conditions of the site?	Subsection F is the minimum condition that is to be assumed if no other condition is demonstrated. The actual conditions of the site may be used provided that a demonstration of actual conditions is made and approved by the local program.
Youngblood,Tyler and Associates, P.C.; Bay Design Group	Who determines whether a channel is stable or unstable and under what site conditions is this determination made?	Determinations of channel stability are made by the consultant for the site, subject to the approval of the local program. The regulations contain guidance for reviewing and determining channel stability.
Youngblood,Tyler and Associates, P.C.	Why do the proposed regulations contradict the existing Virginia Erosion Control Manual MS-19 for stream channel protection and adequacy determination?	The Virginia Erosion and Sediment Control Regulations are a separate set of regulations under the Board's authority, and a separate regulatory action will be necessary before any changes to those regulations are effected. While no changes have been made at this time, it is intended to amend the ESC regulations in the future to bring them into conformity with these regulations.
Youngblood,Tyler and Associates, P.C.;	The concept of detaining on-site flow volume to forested conditions for sites that were not forested prior to the development is extreme. What is the basis for this requirement as opposed to detaining the post development conditions to the pre-development conditions?	The requirement for discharges to unstable natural channels to be reduced to forested levels has been amended; now, such discharges must meet "good pasture" conditions. The intent is to protect channels to the conditions under which they were formed, and to improve upon existing conditions where channel erosion exists.
Bay Design Group	Are pipes and culverts to be designed with the rational method of SCS/TR55? Many drainage areas are less than one acre and the TR55 method is not compatible with small areas; whole site is to be analyzed with TR55;	Section 72(C) makes it clear that other standard hydrologic and hydraulic methods may be utilized to conduct analyses where they may be appropriate.

	rational method and TR55 give significantly different flow numbers; will cause a discrepancy in the flow numbers coming from pipes versus the whole site analysis;	
Andrew Gould (Timmons Group)	Energy balance approach is unnecessarily burdensome; James City County approach (1-year 24-hour storm on site and releases it over 24 hours) should be considered in lieu of the energy balance approach.	The water quantity requirements of the regulations were developed with the assistance of a technical advisory committee and a special subcommittee established to address this topic specifically. It was determined through this process to adopt the approach specified in section 66.

4VAC50-60-72 Design storms and hydrologic methods

Jimmie Jenkins (Fairfax County)	B is inconsistent with prior requirements to utilize good forested conditions for certain analyses.	The language of section 72 has been clarified to recognize that other conditions may be otherwise specified by the regulations.
James Edmonds (Loudoun County)	Use of rational method needs additional limitations; allowance of a 200-acre drainage area with the rational method (the county allows a maximum of 20 acres) is not consistent with the proposed regulations' emphasis on treating volume – not just peak discharge.	The regulations were developed with the assistance of a technical advisory committee over a four year process. This point was specifically discussed at length during the TAC process and the regulations represent the results of that discussion.
Glen Payton (Filterra); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Use of NRCS rainfall distribution and models should be expanded to Proprietary BMPs, including calculation of routed volumes for compliance with treatment volume requirements.	The technical advisory committee for the Virginia Stormwater Management BMP Clearinghouse is developing a protocol for review and approval of efficiencies associated with phosphorus removal and flow reduction for proprietary BMPs. Once the protocol has been approved, proprietary BMPs can be added to the website for use in compliance with the regulations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	In most areas, rainfall data is available and in some areas there are also flow records; whenever possible, these data should be utilized in the determination of design storms.	The regulations are the product of an over four year long regulatory process. Based on analysis, consideration, and discussion during this process, the provisions of section 72 were selected.

4VAC50-60-74 Stormwater harvesting

Corey Simonpierti (ACF Environmental); Emmett Hanger (Rappahannock River Basin Commission);	Would be beneficial if guidance on how the detention volume could be converted to a harvesting system. 2 simple alternatives include (1) identify a percentage of the detention volume that may be converted to harvesting or (2) identify a ratio at which detention volume may be converted to harvesting. Primary benefit of inserting this language would be to strengthen the stance on encouraging stormwater reuse and ensuring consistent application throughout Virginia.	The use of harvested stormwater is site-specific. The regulations do give credit for stormwater harvesting practices, as it reduces the volume of stormwater that needs to be addressed for both quantity and quality purposes. At this time, it is not believed to be appropriate to set requirements related to the use of stormwater harvesting.
Andrea Wortzel (Mission H2O)	Stormwater harvesting for reuse is an important concept; more details about how such projects would be regulated is necessary; important to differentiate between consumptive reuse and reuse that may result in a return flow; sufficient analysis to consider and evaluate the downstream impacts of such projects should be included.	The regulations encourage stormwater harvesting as a method of stormwater management. Efficiencies are assigned for this practice in accordance with the different types of uses that may be made of harvested stormwater. Additional information concerning stormwater harvesting will be found on the Virginia Stormwater Management BMP Clearinghouse website.
Andrea Wortzel (Mission H2O)	To truly encourage, incentives must be provided; reduced permit fees; reduce permit processing time	The regulations do encourage stormwater harvesting. As revised, Table 1 provides efficiencies up to 90% for utilization of stormwater harvesting as a stormwater management practice.

4VAC50-60-76 Linear development projects

Alan Wood (American Electric Power)	Strongly disagree with the requirement to install post-construction stormwater BMPs following completion of linear electric utility line projects, unless exempted by § 10.1-603.8.B; § 10.1-603.8.B may not always be achieved for electric utility lines; installing a post-construction BMP from a vegetated tower site is unreasonable and does not offer any environmental benefit..	Unless exempted by law, stormwater discharges from construction activities must comply with the regulations. However, the Runoff Reduction Method may specify that post-construction BMPs are not necessary for projects such as that cited by the comment.

4VAC50-60-85 Stormwater management impoundment structures or facilities

Thomas Lera (Virginia Cave Board Chairman)	Change the wording of subsection D to "construction of stormwater management impoundment structures or facilities may occur in karst areas only after a study of the geology and hydrology of the area has been conducted to determine if the presence or absence of karst features that could potentially be impacted by stormwater runoff and BMP placement.	The language of subsection D has been amended to require a study of hydrology in addition to geology. It is believed that the existing language sufficiently addresses the concerns of the remainder of the comment and no further changes have been made.
Thomas Lera (Virginia Cave Board Chairman)	Separate out subsections E and F. "E. Discharge of stormwater runoff to a karst feature shall meet the water quality criteria set out in both 4VAC50-60-63 and 4VAC50-60-66. Any Class V Underground Injection Control Well registration statements for stormwater discharges to improved sinkholes shall be included in the SWPPP. An improved sinkhole is defined as any naturally occurring karst feature that has been modified to increase the volume and/or rate of infiltration of surface water into the subsurface." Remove the following sentence – the person responsible for the land disturbing activity is encouraged to screen for known existence of heritage resources in the karst features. "F. Permanent stormwater management impoundment structures or facilities shall only be constructed in a karst area after completion of a geotechnical investigation that identifies any necessary modifications to the BMP to ensure its structural integrity and maintain its water quality and quantity efficiencies."	The existing language of subsection E reflects the intention that BMPs may only be constructed in karst features after the completion of a geotechnical investigation. Projects in karst areas must still conduct a study of the site's geology and hydrology (pursuant to subsection D) to determine whether any karst features are present. No changes have been made to subsection E.
Thomas Lera (Virginia Cave Board Chairman)	Should be a more comprehensive screening requirement through DCR's Office of Environmental Project Review for all projects	Projects that are subject to such review are defined by other state law and requiring additional projects to be reviewed would require a change in that law. All

	statewide receiving Virginia NPDES stormwater permits through Virginia DCR.	projects currently subject to review will still need to be reviewed.
Thomas Bruun (Prince William County)	Regulations require that impoundments should remain structurally sound during the 100-year storm event. Clarification that the regulations are referring to conventional geotechnical engineering practices for dam construction only.	The language of section 85(C) indicates that this requirement applies only to stormwater management wet ponds and extended detention ponds.
Jimmie Jenkins (Fairfax County)	Paragraph C – the spillway design storm requirement should reflect that the 100-year storm is a minimum design requirement.	The language of subsection C has been revised to indicate that the 100-year storm design is a minimum design standard for structural integrity. The specific requirement that the spillway be designed to pass the 100-year storm has been removed; however, this remains a consideration in ensuring the structural integrity of the BMP.
Katherine Nunez (Northampton County)	Sections A and B are very ambiguous.	Subsections A and B indicate the Department and the Board's preference that BMPs not be constructed in the situations referred to by those subsections. However, the construction of BMPs in such locations is not prohibited.
David Nunnally (Caroline County)	Section A and B. These are guidance statements, not regulatory requirements. And these `recommendations' are based (or at least, are supported by) other programs administered by other agencies and are subject to change, without regulatory revisions. Recommend deleting these sections.	The comment is correct that these two statements reflect the Board's recommendations rather than requirements. Nevertheless, it is believed important to state this policy recommendation rather than to remain silent.
David Nunnally (Caroline County)	Section C. What are the criteria for determining 'structural integrity'? Our experience with E&S program reviews has demonstrated how these statements can lead to unreasonable 'requirements' by DCR staff. Recommend deleting or revising 'to be consistent with local criteria.'	Structural integrity is determined by utilizing the methodologies specified in the Virginia Impounding Structure Regulations. Clarifying language to this effect has been added.
James Edmonds (Loudoun County)	Sections D and E – more appropriate to conduct a geophysical study versus a geotechnical study; recommend this modification	It is believed that a geotechnical study is more comprehensive than a geophysical study, and the requirement for a geotechnical study has been retained.

Glen Brooks; Bay Design Group;	Sections A and B - no point in providing recommendations in regulations.	The comment is correct that these two statements reflect the Board's recommendations rather than requirements. Nevertheless, it is believed important to state this policy recommendation rather than to remain silent.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Suggest changing the language to be not allowed without a variance, strengthening the intent of the regulation, but giving the locality an out if they feel it is appropriate.	The language of the proposed regulations has been retained.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Seems further restriction is unnecessary as impoundment structures would not be constructed within the RPA buffer	RPA buffers, which are a requirement of the regulations adopted pursuant to the Chesapeake Bay Preservation Act, do not apply statewide. In addition, variances are available under those regulations to allow construction of such a facility.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Sections D and E: guidance on detention structures in karst areas not sufficiently stringent; depending on size of karst formation, should be more restriction on use of detention, emphasizing the need for impermeable liners, etc. in these zones.	Subsection E requires that any necessary modifications to a BMP be identified following a geotechnical investigation of any karst feature.
Shelby Hertzler	Section E: "impoundment structures or facilities shall only be constructed in karst features…; this should apply to karst areas instead of specific features	Subsection D, as revised, requires that a geologic and hydrologic study be conducted prior to construction of stormwater management facilities in karst areas. The requirements of subsection E are intended to apply only where a stormwater management facility will be constructed within a karst feature. No change has been made.
Shelby Hertzler	Section E: believe person should be required to screen for natural heritage resources rather than encouraged.	This subject was discussed at length with the technical advisory committee and the determination was made to encouraged screening for heritage resources rather than require it.

4VAC50-60-93 Stormwater management plan development

Leonard Sandridge (University of Virginia)	Clarify who this section applies to; clarify what qualifies as a land disturbing activity.	Section 93 has been deleted and its components have been incorporated into section 108, where it is believed context assists with clarity of their requirements. "Land disturbing activity" is defined in section 10 and includes those activities regulated by the Virginia Stormwater

		Management Act and the Clean Water Act.
David Nunnally (Caroline County)	Section A. The SWM plan should address the entire site, as defined in these proposed regulations, not just 'to the entire land-disturbing activity.' Recommend revising accordingly.	Section 93 has been deleted and its components have been incorporated into section 108, where it is believed context assists with clarity of their requirements. The requirement for a SWM plan to address the entire land disturbing activity has been retained, as the VSMP regulations apply to land disturbing activities and not necessarily an entire site.
David Nunnally (Caroline County)	Section B. This section appears to conflict with previous sections. And in the case of phased developments or large parcel subdivisions, it may be preferable to address stormwater management on a phase-by-phase or parcel-by-parcel basis, For example, a commercial subdivision consisting of 10-20 acre parcels that could be developed over a long time period, might be better treated as individual projects. Recommend letting the local programs work with developers to determine the best way to manage projects.	Section 93 has been deleted and its components have been incorporated into section 108, where it is believed context assists with clarity of their requirements. Revisions have been made to this language that are believed to address the concerns of the comment.
David Nunnally (Caroline County)	Section C. This section is inappropriate for this regulation. There are other programs and regulations that address discharge other than stormwater runoff. It is very difficult to predict (i.e., plan for) groundwater or subsurface flows. Recommend deleting this section or revising such that a local program *may* consider these discharges, rather than *shall.*	The regulations were developed with the assistance of a technical advisory committee over a four year process. This point was specifically discussed at length during the TAC process and the regulations represent the results of that discussion.
Bay Design Group	Section B. does this apply to individual commercial site plans, such as a convenience store on a 1 acre lot?	Section 93 has been deleted, and its requirements have been moved to section 108, where it is believed that context will assist with their understanding. The language cited by the comment has been amended to allow the qualifying local program, in its discretion, to consider the entire development to be a single land disturbing activity. This will allow some flexibility to be afforded by the qualifying local program in appropriate cases.

4VAC50-60-96 Comprehensive watershed stormwater management plans

Bruce Goodson (Hampton Roads Planning District Commission)	Provision for plans to offset the cost of redevelopment are inadequate and incomplete; plans will take time and resources to develop and will not likely be complete before the regulations become effective or when the local governments are required to adopt the program; establish a TAC to develop the needed guidance and sufficient timelines for the creation of plans that encourage retrofits and increasing urban density.	It is understood that it takes time to develop comprehensive stormwater management plans; however, there are localities that currently have plans or are in the process of developing plans. These plans are only one option for compliance with the technical criteria. The technical criteria do not become effective until the adoption of a qualifying local program, which will occur 15-21 months following the effective date of these regulations (with the effective date of July 1, 2010, this is October 2011 – April 2012). This does provide some time for plan development.
Selena Cuffee-Glenn (City of Suffolk)	Concern that only limited guidance provided on watershed management plans and should be a greater emphasis placed on such plans.	Additional guidance on comprehensive stormwater management plans can be found in the publication entitled “Local Watershed Management Planning in Virginia: A Community Water Quality Approach”. This document is available from DCR.
Leonard Sandridge (University of Virginia)	Recommends that DCR clarify the intended status of already approved regional stormwater management plans under the framework of the proposed regulations; recommends that DCR clarify if this section is intended to replace section 4VAC50-60-90 and apply to "state agencies intending to develop large tracts of land such as campuses" as were previously eligible.	All comprehensive watershed stormwater management plans (including regional plans that are wished to be retained) will need to be reviewed and approved by the Board in light of the new regulatory requirements. Section 96 has been deleted and its language has been relocated to section 92. Clarifying language has been added indicating that state agencies may develop comprehensive stormwater management plans.
Leonard Sandridge (University of Virginia)	Suggests that the approved regional stormwater management plans be grandfathered such that the current credit banking system for water quality and water quantity are maintained and managed under the current methodology; new plans going forward could be developed and managed under the proposed methodology.	All comprehensive watershed stormwater management plans (including regional plans that are wished to be retained) will need to be reviewed and approved by the Board in light of the new regulatory requirements.
David Nunnally (Caroline County)	Section A. Why is it necessary to submit watershed plans to DCR? The requirement should be that the watershed plan (vs. individual site plans) will produce at least the same level of protection (or reduction, etc.). This section	Department approval of comprehensive stormwater management plans is necessary to ensure that those plans will meet the intent of the regulations and the requirements of the Stormwater Management Act and the Clean Water Act. Requiring this approval is similar

	seems to question the ability of locality to develop watershed plans. And the proposed requirement introduces another level of bureaucracy (i.e., DCR/Board watershed plan review, implementation, updates, etc.) that, in effect, discourages watershed planning. Yet, in the absence of a watershed plan, a locality is required to review and approve all plans, site by site, without review and approval by DCR, in effect, developing the same watershed, piecemeal fashion. Recommend revising Sections 1-3, as stated above.	to the Board's establishment of the general site-by-site process contained in the regulations—after approval, each individual site wishing to participate in the comprehensive watershed stormwater management plan will not be subject to the Department's review.
Joe Lerch (Virginia Municipal League)	Local programs administered by DCR should develop comprehensive watershed stormwater management plans as a complement to local comprehensive plans.	The use of comprehensive stormwater management plans is specifically allowed under sections 69 and 92 of the regulations.

General Issues

Pete Rigby (Paziulli, Simmons and Associates)	Support explicit variance of single lot development.	Single lots that are not part of a larger common plan of development or sale and that do not exceed the land disturbance thresholds of the Stormwater Management Act (meaning those sites smaller than 1 acre, or smaller than 2500 square feet in areas designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations) are exempt from these regulations. For those single lot developments that are subject to these regulations, section 63 has been revised to provide additional flexibility for small new development and redevelopment sites.
Katherine Podlweski	The new "trade-off" clause is absurd. It gives the polluters an "out", no progress in that. Let's make some new regulations stick.	Nonpoint nutrient offsets are specifically permitted to be utilized by the Stormwater Management Act and cannot be disallowed by this regulatory action. Localities that operate qualifying local programs will, however, have the option to disallow the use of offsets.
Joan Bitely (Falls Run Environmental Enthusiasts)	Urge that the necessary tax money be raised to allow improved regulations for runoff.	The VSMP program is intended to be fully funded by the permit fees established in Part XIII (currently the subject of a separate, but related regulatory action). Should localities need additional funding to address other

		stormwater issues within their jurisdictions, the Code of Virginia does provide for the local establishment of a stormwater utility fee.
Nellie Santinga	There should be some regulation on sludge.	The application of biosolids is regulated by a separate body of law and is administered by the Department of Environmental Quality. The Virginia Soil and Water Conservation Board does not have authority to regulate biosolids.
Kevin Martingayle	It appears the state has done nothing to stop or slow down the efforts to construct massive stormwater pump stations that are specifically designed to dispose of polluted stormwater by injecting it into relatively shallow waters where the pollutants undoubtedly constitute a hazard to human and marine life.	The disposal of stormwater by the methods described in the comment is beyond the scope of this regulatory action and is more specifically addressed through a locality's municipal separate storm sewer system (MS4) permit, which is governed by separate portions of the VSMP regulations.
Cynthia Horen	Ensure that homeowners, neighborhood owners associations, and rental property companies, as well as all landscaped properties, public or private, also must comply with proper use and disposal of lawn chemicals and runoff.	Regulation of fertilizer usage by property owners is beyond the Board's authority in the VSMP program. While the management of stormwater from a developed site is sought to be addressed through the post-construction requirements of the VSMP program, actual limitations on fertilizer application would need to be addressed under other authority (and may require additional authority from the General Assembly in some cases).
Bill Towler (Grove Avenue Pharmacy)	Only the use of "serious carrots" [tax incentives] will cause real and pragmatic change in the health of our environment and support from the construction community.	Tax incentives for the installation of best management practices and other stormwater considerations are beyond the scope of the Board's authority and would need to be authorized by the General Assembly.
Rebecca Reed	Review the exemption of local and state government.	State and local projects are subject to the technical criteria contained in Part II. Such projects are not exempt from stormwater management requirements.
Mike Flagg (Hanover County)	Believe regulations should clarify that it is a locality's prerogative on whether to apply these regulations to single family residences at the 2,500 square foot or 1 acre threshold. There is no requirement that the lower threshold be utilized in Chesapeake Bay Preservation Areas. Believe regulations should clarify that after a larger project that	Section 10.1-603.8(B)(3) explains that single-family residences separately built and disturbing less than one acre and not part of a larger common plan of development or sale, including additions or modifications to existing single-family detached residential structures, are exempt from the requirements of the Virginia Stormwater Management Act and thus, these regulations. However, localities subject to the

	would be covered by these regulations is complete, the individual lots can be considered as separately built for purposes of these regulations and the exemption would apply to future modifications by the property owner.	Chesapeake Bay Preservation Act (§10.1-2100 et seq.) may, at their election, regulate these single family residences where land disturbance exceeds 2,500 square feet. As this language is in the Code, it governs and it is not necessary to duplicate in the regulations.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group)	Recommend that a policy document be developed by DCR that identifies how the inconsistencies between E&S and the proposed stormwater regulations should be addressed in both the short and long-term. This will aid in reducing regulatory confusion.	ESC and stormwater management are separate programs governed by separate bodies of regulation, and both may be applicable to a project. It is anticipated that the ESC regulations will be amended in the near future to bring them into conformity with these regulations.
James Bishop	Main problem is with the lack of maintenance of existing facilities.	It is recognized that BMP maintenance is of great importance. The regulations contain provisions targeted at ensuring the long-term maintenance of stormwater management facilities.
Kevin Seaford	Please include a requirement that the soils be evaluated by a certified professional soils scientist; should provide support to the design of stormwater management features.	Section 108(B)(1)(e) requires that information related to the structural properties of soils utilized with the installation of stormwater management facilities be provided in a stormwater management plan. In addition, 108(B)(1)(h)(4) requests that a map or maps of the site show the soil types located on the area of the land disturbing activity.

Local Program Implementation

Commenter	Comment	Agency response
Larry Howdyshell (Augusta County Board of Supervisors Chairman); Barry Clark (Greene County)	DCR run program for period of years to ensure compliance and revenue stream sustainability; county to re-evaluate "opt-out" decision [or make decision] after DCR runs program for period of years.	The Stormwater Management Act specifies that localities subject to the Chesapeake Bay Preservation Act, as well as those localities requiring MS4 permits, are required to adopt qualifying local programs. Other localities may adopt such programs on a voluntary basis; absent local adoption, DCR will operate a local program within the locality.
Kate Wofford (Shenandoah Valley Network); Wendy Hamilton (Preserve Frederick);	Because localities can opt to run their own programs along with current erosion and sediment control programs, streamlined planning will occur at the local level.	A primary goal of the Stormwater Management Act is to streamline Stormwater Management and Erosion and Sediment Control by placing the administration of both programs on the local level.

Joe Wilder (Frederick County); Daniel Campbell (Floyd County); Julie Jordan (Orange County); Gena Hanks (Pulaski Board of Supervisors); R. Cellell Dalton (Wythe County); Archie Fox (Warren County); Bob Bailie; Judy Ownby (Cumberland County); Bonnie Johnson (Bath County); David Nunnally (Caroline County); John Miniclier (Charles City County); D. Dane Poe (Lee County); David Moorman (Botetourt County); Kenneth Eades (Northumberland County); Michael Altizer (Roanoke County); Michael Harvey (Thomas Jefferson Partnership for Economic Development); John Conrad (Miller and Smith); Ronald Roark (Nottoway County)	Most localities do not have the expertise to attempt to develop a program of this magnitude; Development of program is an unfunded mandate.	Part XIII of the VSMP regulations (permit fees) is being revised to compliment this regulatory action in order to develop fees sufficient to cover the costs of the administration of a stormwater management program by a locality. These regulations are not intended to be an unfunded mandate. Note also that localities that are not subject to the Chesapeake Bay Preservation Act and that do not require MS4 permit coverage may elect to not adopt a qualifying local program, and instead elect to allow DCR to operate a local program within their jurisdiction. Options for localities to work together are also provided as cost reducing mechanisms.
Julie Jordan (Orange County); William Johnston (City of Virginia Beach); James Campbell (Virginia Association of Counties); David Moorman (Botetourt County)	Request additional evaluation of full impact of requirements to localities prior to implementation to ascertain if regulations can be feasibly implemented at the local level without additional funding provisions;	The impact of the proposed regulations upon localities has been evaluated as a part of the Agency Statement on the proposed regulations. That document is available on the Virginia Regulatory Town Hall. Permit fee levels will be evaluated on a continuing basis to ensure that they are set at a level sufficient to fund the administration of a local stormwater management program, whether by a locality or DCR. In addition, revisions to Part XIII now allow for a higher fee to be established by a qualifying local program where it is shown necessary.
Normand Goulet (Northern Virginia Regional Commission); Coleman Speece (Virginia Association of Planning District Commissions); Lalit Sharma (City of Alexandria)	Concern that little progress has been made to adequately streamline program delivery and consolidate various regulatory oversight functions or to eliminate the duplication between the various permit programs such as the VSMP, the MS4, and the Construction General Permit; as well as the Chesapeake Bay regulations.	It is believed that the effect of this regulatory action will be to streamline the administration of various programs. Both Erosion and Sediment Control and Stormwater Management will now be handled at the local level, and compliance with the requirements of these regulations is deemed by law to constitute compliance with the stormwater management requirements of the

		Chesapeake Bay Preservation Act and regulations. The Construction General Permit is the mechanism by which these regulations are implemented and made effective as to regulated projects. Finally, for those localities having MS4 permits, administration of a qualifying local program is intended to help those localities meet MS4 permit requirements.
Katherine Nunez (Northampton County)	Unclear process on how multiple municipalities within a county geographic area should or would be responsive to indicating who would administer the program, i.e., the state, the county, or the town itself.	The Virginia Stormwater Management Act, § 10.1-603.3, requires localities (including counties, cities, and towns) that are located in areas subject to the Chesapeake Bay Preservation Act, as well as localities requiring MS4 permit coverage, to adopt qualifying local programs. Other localities may adopt on a voluntary basis. In either case, municipalities located within a county may adopt their own qualifying local programs, or may (with the agreement of the applicable county) become subject to the county-wide program. Where DCR administers the local stormwater management program, towns within a county will be subject to the DCR-administered program for that county; it is not intended that separate programs be developed by DCR for towns that elect not to adopt their own qualifying local programs.
Tom Carr (City of Roanoke)	Proposed regulations completely disregard the MS4s obligation to address TMDL priority pollutants under Section 1 of their permit; regulations disregard both the relevance and relatedness of other VSMP requirements, and it overemphasizes land disturbance impacts, while grossly under-recognizing others.	These regulations govern stormwater discharges from construction activities. Other portions of the VSMP regulations include the requirements for MS4 discharges. To the extent these regulations may be related to the MS4 program, they do not ignore MS4 permit requirements—the General Permit which is applicable to small MS4s, specifically in its requirements for post-construction stormwater management in new development and redevelopment, requires compliance with these regulations.
Sanford Wanner (James City County)	Unrealistic time frame associated with implementation of these new regulations.	Section 10.1-603.3 of the Code of Virginia specifies that local stormwater management programs shall be adopted by those localities require to adopt them within 15 to 21 months of the effective date of these regulations. While the Board may grant a one year extension of this timeframe in specific cases, any further extension would require a change to the Code.

Andrew Gould (Timmons Group)	Allow for flexibility at the local level to account for unique watershed characteristics and regional opportunities	Localities administering qualifying local programs will have flexibility to account for unique watershed characteristics and regional opportunities. Localities may develop comprehensive watershed stormwater management plans and pro rata fee programs targeted at addressing stormwater management on a watershed basis. Localities also may adopt more stringent criteria than that specified by these regulations where appropriate. Thirdly, §10.1-603.3 of the Code of Virginia specifically allows localities to partner with other localities, soil and water conservation districts, and other entities to carry out their responsibilities.
Andrew Gould (Timmons Group)	Look for opportunities to streamline the implementation and enforcement of local programs; reduce redundant and inefficient use of resources/	The authorization of qualifying local programs is intended to streamline program administration and provide greater efficiencies for both the permitting agency and the permittee.
Joe Lerch (Virginia Municipal League)	Allow for delegation to local governments of the VSMP general permit beginning July 1, 2010 while maintaining statutory deadline for adopting local administration of technical criteria for stormwater quality and quantity.	As the VSMP general permit is a critical component of a qualifying local program, it is not intended to authorize local programs to issue coverage under it separate from the adoption of a complete local program. Notably, a new general permit will additionally need to be established by regulation in order to recognize local administration.
Joe Lerch (Virginia Municipal League)	Local programs administered by DCR should be adopted no sooner than 15 months following the effective date of the regulation that establishes the local program; recommends same adoption schedule for all programs.	Section 10.1-603.3 of the Code of Virginia sets the timeframe for adoption of qualifying local programs; localities required to adopt such programs have between 15 and 21 months following the effective date of these regulations to adopt provided no extension is issued by the Board pursuant to that section.

4VAC50-60-102 Authority and applicability

Alan Wood (American Electric Power)	Strongly disagree with, and question the legality, of delegating the implementation of the VSMP permit program to a locality; fear inconsistent interpretation and implementation from one locality to another, especially where a common plan of development may cross multiple lines.	Authorizing localities to administer the VSMP program is an assumption and requirement of the Virginia Stormwater Management Act, §10.1-603.1 et seq. of the Code of Virginia. The regulations provide a framework for program administration and require program reviews to maintain consistency throughout the Commonwealth.

Alan Wood (American Electric Power)	Locality should not have the ability to require more stringent limitations.	The Code of Virginia, in §10.1-603.7, specifically authorizes the adoption of more stringent requirements by a locality. These regulations cannot remove that authority.

4VAC50-60-104 Technical criteria for qualifying local programs

June Barrett-McDaniels (Aquarius Engineering)	Require all MS4 municipalities to conform to the regulations for both water quality and volume control.	The Virginia Stormwater Management Act, § 10.1-603.3, requires localities that require MS4 permit coverage to adopt qualifying local programs. Qualifying local programs must require compliance with the Part II technical criteria (including both water quality and quantity).

4VAC50-60-106 Qualifying local program administrative requirements

Bruce Goodson (Hampton Roads Planning District Commission); James Campbell (Virginia Association of Counties)	Review and approval of local programs should be based on set of minimum criteria; allow local programs to develop specific program administration details (i.e. review times frames, the timing of fee collection, etc.), will allow the most efficient use of local resources.	The regulations outline the minimum criteria for qualifying local programs; program details beyond the requirements of the regulations are left to locality development. Review timeframes are specified in the Stormwater Management Act, and the Board does not have the authority to expand these timeframes (or to allow a locality to expand these timeframes).
Jimmie Jenkins (Fairfax County); James Campbell (Virginia Association of Counties)	Inappropriate and unnecessary to require that procedures or policies for long term inspection and maintenance of stormwater management facilities by established by ordinance; requirements already included and governed by MS4 permit.	The requirement that these policies and procedures be established by ordinance has been removed.
Mike Flagg (Hanover County)	Request copy of procedures provided by the department so we can review and comment on them.	The general requirements for general permit coverage are set out in section 112 of the regulations. Additional administrative procedures may be provided in the future (for example, instructions on the utilization of the Stormwater Management Enterprise website); those procedures will be made available when developed.
David Nunnally (Caroline County)	Section A. 1. What is meant by 'identification of the authority authorizing...'? Is this a person (by name), position, department,	The “authority” may be designated by the qualifying local program, and generally may refer to the department/division that will be carrying out these

	county, etc.? Or is this a reference to the statutory authority? Recommend clarification. Are the requirements of this section to be included in a model ordinance (provided by DCR)?	responsibilities, or the position.
David Nunnally (Caroline County); Emmett Hanger (Rappahannock River Basin Commission)	Section B. Has DCR developed a model ordinance for localities to use?	The Department is in the process of developing a model ordinance, and this document will be finalized following the finalization of these regulations.
David Nunnally (Caroline County)	Section C. DCR should provide funding and technical support regarding data collection, compiling reports, etc. Reports (for DCR) should be consolidated and streamlined to eliminate duplication, redundancy, etc. This proposed annual report creates at least the third such annual report to DCR.	Complimenting this regulatory action, and as a part of the Department's overall desire to consolidate and streamline reporting, an Enterprise website is being developed that will allow for necessary data to be communicated electronically from the qualifying local program to the Department. This website may be expanded to embrace other programs in the future.

4VAC50-60-108 Qualifying local program stormwater management plan review

Pete Rigby (Paziulli, Simmons and Associates)	Impractical to deal with DCR to provide stormwater management back and forth while we're going through the public hearing process.	In localities that adopt qualifying local programs, stormwater management plan review will be conducted by the locality and DCR will not be involved in that process. For those localities that do not adopt a qualifying local program, DCR will perform plan review. The development and review of these plans is important in ensuring that the technical criteria of Part II are met by a land disturbing activity.
Jimmie Jenkins (Fairfax County)	Paragraph B.3 – requirement creates an unnecessary step in the review process and is not found in statutory review times for other types of plans. Consider replacing this requirement with a provision that allows localities to perform completeness review at their discretion.	The Stormwater Management Act does provide for a 60-day review period from the date of a "complete" plan. It is believed necessary to provide some mechanism for governing completeness determinations by qualifying local programs in order to provide certainty to land disturbing activity operators.
Mike Flagg (Hanover County)	(line 1378) Locality will approve or disapprove the stormwater management plan but not the accompanying information; information would be submitted in support of the plan.	Section 108 requires that all elements of a stormwater management plan be approved.
Mike Flagg (Hanover County)	(lines 1385-1387) suggest rewording b. to contact information including the name, address, and telephone number of the property owner or project owner, as	The existing language includes the information desired and has been retained.

	appropriate, and the parcel number of the property or properties affected.	
Mike Flagg (Hanover County)	(lines 1385-1397) suggest rewording e. to read information identifying the hydrologic characteristics and structural properties of soils as appropriate.	The existing language includes the information desired and has been retained.
Mike Flagg (Hanover County)	(line 1404) suggest rewording to read (2) receiving surface waters, drainage systems, or karst features.	The existing language includes the information desired and has been retained.
Mike Flagg (Hanover County)	(line 1408) suggest rewording to read (4) soil types, geological formations in karst areas, forest cover, and other vegetative areas.	The existing language includes the information desired and has been retained. Geologic considerations are applicable both in and outside of karst areas.
Mike Flagg (Hanover County)	(lines 1415-1416) suggest rewording to read (8) proposed improvements.	Language has been added that addresses the intent of the comment.
Mike Flagg (Hanover County)	(lines 1422-1425) is a professional always required? Some situations where a professional may not be required. Add qualifier when appropriate.	A professional is intended to be required. No change has been made.
Mike Flagg (Hanover County)	(lines 1427-1428) suggest rewording to read the applicant shall be notified within 15 days of receipt if it is determined that the plan is not complete.	The existing language includes the information desired and has been retained.
James Campbell (Virginia Association of Counties)	Recommends that localities be allowed to establish their own timeframes.	Section 10.1-603.8 of the Code of Virginia requires that plans be approved or disapproved within 60 days of receipt of a complete plan. The 15 day period for determining completeness was discussed at length with the technical advisory committee and no change to that timeframe is desired at this time.
David Nunnally (Caroline County)	Section A. Can a locality consolidate requirements for E&S, CBPA, SWM, etc. on one plan document? Does this proposed regulation allow for the plan of development process (i.e., re-zoning, subdivision, site plan, etc.)? Previous 'model SWM ordinances' contained provisions for SWM concept plans, early in the plan development process. Is the concept plan still a local option? Would a locality have to submit this local requirement to DCR/Board?	If one document contains all requirements for multiple regulations, one plan document may be utilized. Concept plans are still explicitly allowed for in section 108(C).
David Nunnally (Caroline County)	Section B. 1. a-i. This section should provide authority for a local program to require additional items and information. A note should be added that the level of detail shall be determined by the local program/plan approving authority.	This subject was discussed extensively with the technical advisory committee and great concerns were expressed by the development community with allowing for the contents of a stormwater management plan to be expanded by a qualifying local program. No amendment allowing such an expansion has been made.

David Nunnally (Caroline County)	Section B. 2. The proposed regulations (including fees, plan requirements, professional seal, etc.) create a disincentive for a small operator to obtain proper permits and to work cooperatively with the local program. This section adds significantly to the cost of a small project or land disturbing activity. Recommend amending to include project area threshold (e.g., more than 1 acre, etc.) before a professional seal is required. Additionally, it should be a local option or discretion as to whether or not a professional seal is required.	It is intended that a professional be required to sign and seal all stormwater management plans. This topic was considered and discussed with the technical advisory committee.
David Nunnally (Caroline County)	Section B. 3. a-d. Please clarify whether or not it is acceptable for a local program to conduct plan reviews according to the timeframes set out in Section B,3.c.	The timeframes established in subdivision (B)(3) are the maximum timeframes permitted for determinations of completeness and full plan review. If a local program wishes to establish a shorter timeframe for these determinations, it is acceptable.
David Nunnally (Caroline County)	What is DCR's intention to resolving conflicts and inconsistency among E&S, CBPA, and SWM? A locality is required to approve E&S plans (if meet E&S requirements) within 45 days. SWM is 60 days. CBPA requires a plan of development process, without any mandated timeframe. A plan of action to coordinate this and similar matters would greatly help localities. My preference would be to allow localities to follow a locally-approved plan of development process, without state mandated timeframes.	The timeframes established among the various programs are the maximum timeframes allowed and must be met for each program. A locality may choose to establish a review process that is shorter in time than permitted under statute and regulation if desired.
David Nunnally (Caroline County)	Section B. 4. Would this section allow a locality to deny approval based on inadequate E&S plan? These programs should be coordinated at the state level in order to reduce the burden of coordinating numerous mandated programs.	Stormwater management plan approval is based on the requirements for stormwater management plans. Likewise, ESC plan approval is based on the requirements for ESC plans. Both plans need to be approved prior to commencement of land disturbance.
David Nunnally (Caroline County)	Section B. 5. Please clarify whether or not it is acceptable for a local program to conduct plan reviews according to Section B.5? (That is, to save administrative cost by not sending a written approval, rather simply telling the applicant the plan is approved—no written approval necessary?)	Subdivision (B)(5) is a protective measure implemented to prevent local programs from delaying plan review and project approval due to non-review of stormwater management plans. A qualifying local program not reviewing plans and allowing projects to commence without plan approval would not be consistent with the requirements of the regulations. Subdivision (B)(4) requires that the applicant be notified in writing of the local program's determination. Clarifying language has

		been added allowing for the use of electronic communication related to plan review and approval.
David Nunnally (Caroline County)	Section D. This section should be consistent with existing plan review/changes procedures and timeframes in the E&S program. Why create another set of procedures?	The 60 day timeframe for review is provided by section 10.1-603.8 of the Code of Virginia. This regulation does not seek to alter that timeframe. The process set forth for plan review in these regulations was developed through a four year regulatory process and included consideration and discussion with the technical advisory committee.
Glen Brooks	Would like to remove the requirement for a narrative or be allowed to modify this requirement on a project by project basis; all useful information is on plans.	The requirement for a narrative was discussed thoroughly with the technical advisory committee that assisted with the development of the regulations and it was determined desirable to retain it as a requirement.
Glen Brooks	Would like to specifically add digital correspondence as an acceptable means of information applicants and others in writing.	Clarifying language has been added allowing for the use of electronic communication related to plan review and approval.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Why is anything beyond what can be found on public records required for the plans (like telephone numbers)?	The requirements for information to be included on plans has been kept to the minimum necessary to allow for plan and permit administration.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Why does the financially responsible party need to be identified? During construction, this responsibility should be identified with the VSMP. After construction, this would be identified with easements and/or agreements.	Identification of a financially responsible party is an important component for the proper implementation of the stormwater management plan associated with the land disturbing activity. It is important to know that facilities will be maintained on a long-term basis before they are constructed.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Why is half of the VSMP permit application due at the time of stormwater plan review; unnecessary administrative burden; should remain with the actual land disturbing activity.	Up to half of the VSMP permit fee is due at the time of stormwater plan review in order to cover the costs of the plan review that are incurred by the local program.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Section B.4: clarify that the person responsible for the land disturbing permit is not the same as the responsible land disturber.	The term “person responsible for the land disturbing activity” was chosen purposely and is not necessarily the same as “responsible land disturber” (although a RLD could also be the person responsible for the land disturbing activity in some cases).
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Section B.5: are there limits to what action can be taken in the field at the inspection phase; does the plan submitter have an option of getting the plan reviewed by DCR prior to going to construction?	A primary assumption of the regulations is that upfront plan review will occur, in contrast to today’s program. Notably, this upfront plan review will not begin until a local stormwater management program (run by either

		DCR or the locality) is adopted for a jurisdiction; however, thereafter, plans must be reviewed prior to the issuance of permit coverage.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Part D.2.: makes no mention of a time frame when the modifications can be requested; can this request be made only while the VSMP permit is active; can this request be made a year after construction is completed	Plans are an element of VSMP permit coverage, and no plan modification will be requested after termination of VSMP permit coverage by the operator. So long as permit coverage remains active, plan modifications may be requested. After permit coverage termination, a new stormwater management plan and VSMP permit coverage may be necessary for additional actions on the site.
Thomas Jordan	Does the municipality approve and review state and federal projects or only projects by private developers?	The Department, on behalf of the Board, will continue to review state and federal projects.

4VAC50-60-112 Qualifying local program authorization of coverage under the VSMP General Permit for Discharges of Stormwater from Construction Activities

Regina Williams (City of Norfolk); Bruce Goodson (Hampton Roads Planning District Commission); William Johnston (City of Virginia Beach); Amar Dwarkanath (City of Chesapeake); Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee); Doug Beisch (Williamsburg Environmental Group); Joe Lerch (Virginia Municipal League)	Separate administration of General Permit from the technical requirements; require contractors to obtain General Permit prior to land disturbance activity versus site plan review process.	The Construction General Permit is the mechanism by which the technical criteria have been made effective as to a regulated land disturbing activity under the Board's administration of the VSMP program. It is intended that compliance with the technical criteria will remain a requirement of the Construction General Permit following authorization of a qualifying local program.
Mike Flagg (Hanover County)	(lines 1516-1519) a manual method of authorizing coverage or termination of coverage must be provided for localities. The information required should be explicit in the regulation so localities know what information is required therefore the words "at a minimum" should be eliminated from the regulation.	It is intended that coverage be issued through the Stormwater Management Enterprise website being developed by the Department. This website will be made available prior to the time of qualifying local program adoption, or an alternative means will be provided. Required information for permit coverage will be made available to qualifying local programs. This information is contained not only in these regulations but in the VSMP General Permit for Stormwater Discharges

		from Construction Activities, which is another regulation of the Board's.
David Nunnally (Caroline County)	Section A.2. Replace submitted to approved by or acceptable to the local program. The Virginia Stormwater Management Act (10.1-603.3 H) authorizes a locality to issue a consolidated SWM and E&S permit that authorizes the activity to commence, thereby providing one document that clearly indicates all necessary approvals have been obtained. As proposed, a notice from the locality stating the applicant has obtained permit coverage seems to indicate a notice to commence—and that may not the case. This section should be amended and revised accordingly.	The items required to be submitted in subdivision (A)(2) are specifically noted to be "proposed". They are subject to acceptance by the local program. Secondly, it is recognized that obtaining VSMP permit coverage, by itself, may not be sufficient to allow a project to commence land disturbance. It is still important that an applicant be notified when coverage under a VSMP permit is issued, but may be noted that additional approvals may be necessary.
Rebecca Hanmer	Section A.1. refers to "an approved initial stormwater management plan" and a local program may authorize land clearance under such an "initial" plan even though DCR would not accept initial stormwater plans (proposed 4VAC50-60-136). For a locality to allow site clearance before the stormwater management plan is complete and approved runs the risk that trees (especially riparian trees) and other open land habitat are destroyed which would have been valuable for storm water management using low impact development techniques. The final regulations should contain a proviso limiting approval of "initial stormwater management plans" that authorize destruction of potentially valuable habitat for natural stormwater management before the final stormwater management plan has been approved.	The inclusion of an allowance for an approved initial stormwater management plan was a specific request of the technical advisory committee. This does not supersede the need for a full stormwater management plan prior to the commencement of activities beyond initial clearing, grading, and other activities approved by the qualifying local program. Where the Department administers a local program, this option will not be available.

4VAC50-60-114 Inspections

Ned Stone	Continuing inspections process to ensure the runoff-limitation features function as planned should be included.	Long-term inspections of stormwater management facilities are required by section 114 of the regulations to ensure that the facilities are functioning as intended. Inspections are conducted during the life of the facility by both the owner and the local program (section 114 specifies the timeframes for inspections by these entities).
Thomas Bruun (Prince William County)	For major stormwater facilities, it is appropriate to require a licensed professional. For routine inspections and cleanup	The regulations, as revised, respond to the comment in two ways. First, for stormwater management facilities

	of minor stormwater facilities, it is generally not necessary for a licensed professional. Costs of a licensed professional may deter property owner from submitting annual reports altogether.	located on and designed to treat stormwater runoff from an individual residential lot, inspections are not required (although they may be utilized at the discretion of the local program as a method for ensuring the long-term maintenance of such facilities). Secondly, for those stormwater management facilities that must be inspected, usage of a licensed professional for inspections is not required. Should the services of a licensed professional be utilized by the owner, however, the local program may use the professional's inspection as a substitute for a required inspection by the local program.
Charles Newton; William Latham (Shenandoah Valley Soil and Water Conservation District)	Clarify the provision to require regular maintenance and inspections and perhaps even include a source of funding.	It is believed that the language of the revised regulations does clearly define maintenance and inspection requirements. Section 108(B)(1)(c) requires that financially responsible parties for a stormwater management facility be identified at the time of stormwater management plan submittal. Section 124(A)(1) additionally provides the local program with the authority to address facilities that are not properly maintained and to recover the costs from the facility owner.
Joe Wilder (Frederick County); John Hudgins (York County); Jeff Collins (Townes Site Engineering)	Localities will bear the responsibility for ensuring that BMPs are maintained and remain in compliance – another financial burden on localities.	The regulations, as revised, seek to assist local programs (whether administered by DCR or a locality) with ensuring long term BMP maintenance. For stormwater management facilities located on and designed to treat stormwater runoff primarily from an individual residential lot, the regulations have been revised to allow long term maintenance to be addressed through methods other than inspections (including education and outreach). Section 108(B)(1)(c) requires that financially responsible parties for a stormwater management facility be identified at the time of stormwater management plan submittal. Section 124(A)(1) additionally provides the local program with the authority to address facilities that are not properly maintained and to recover the costs from the facility owner.
Mark Graham (Albemarle County)	Inspections should occur during construction, not just after.	Inspections are required during construction. Section 114(A) states that the project shall be inspected during

		construction for compliance with the VSMP General Permit for Discharges of Stormwater from Construction Activities.
Jimmie Jenkins (Fairfax County)	Paragraph C – terminology of "certified landscape architect" is no longer used.	The word “certified” has been removed in order to conform to current terminology.
Thanh Dang (City of Harrisonburg); William Johnston (City of Virginia Beach)	Limit the scope of required recurring inspections of residential properties and enforcement against residential property owners with smaller, decentralized stormwater management facilities.	The regulations have been revised to state that stormwater management facilities located on and designed to treat stormwater runoff primarily from an individual residential lot are not required to be inspected (although inspections may be utilized at the discretion of the local program as a method for ensuring the long-term maintenance of such facilities).
Mike Flagg (Hanover County)	Complexity of many of the BMPs is significantly increased, so more time and expertise will be required to conduct inspections both during construction and during the post-construction maintenance period.	As a compliment to this regulatory action, specifications for each BMP and checklists are being developed that provide information concerning proper BMP design, construction, and maintenance. This will provide written guidance for individuals conducting BMP inspections both during and after construction.
Mike Flagg (Hanover County)	(lines 1534-1535) certification standard as proposed will be problematic for professionals to sign unless they perform continuous full-time inspection: should be changed to certifying that based on the information available to them and to the best of their knowledge and belief the stormwater management facilities have been constructed in accordance with the approved plan.	This topic was considered and discussed during the TAC process. The certification standard as proposed is believed to be appropriate and has been retained.
Mike Flagg (Hanover County)	(lines 1535-1537) as bonds are not required the language linking the release of bonds and record drawings should be eliminated.	A revision has been made that such drawings are required prior to release of “any” bond. This addresses the situation where no bond exists.
Mike Flagg (Hanover County)	(line 1546) localities should be required to keep records of inspections that occur but not the actual inspection reports, unless the locality performs the inspections: facility owners should be able to keep inspection reports: this will reduce administrative costs to localities.	Subsection C of section 114 specifies that owner inspection reports must be kept on file only if utilized by the qualifying local program as a substitute for an inspection by the qualifying local program. Other inspection reports submitted by the owner are not required to be kept on file.
Mike Flagg (Hanover County)	(lines 1547-1548) suggest rewording to read d. a qualifying local program shall establish an inspection program with the goal that stormwater management facilities are being maintained.	The proposed wording has been retained. Notably, however, the regulations have been revised to remove the requirement that stormwater management facilities that are located on, and treat runoff primarily from, an individual residential lot be inspected by the qualifying

		local program. This will reduce the number of facilities required to be inspected.
Mike Flagg (Hanover County)	(lines 1556 to 1559) reword to read 4. demonstrated to be an enforceable inspection program that meets the intent of the regulations with the goal of ensuring that stormwater management facilities are properly maintained; mandatory 5-year cycle may not be always feasible or warranted.	The proposed wording has been retained. Notably, however, the regulations have been revised to remove the requirement that stormwater management facilities that are located on, and treat runoff primarily from, an individual residential lot be inspected by the qualifying local program. This will reduce the number of facilities required to be inspected.
David Nunnally (Caroline County)	DCR regional staff currently conducts site inspections on permitted sites. This is a duplication of effort, and creates confusion and conflicts between local and DCR directives, etc. DCR regional staff recently informed us that they will continue to inspect because these proposed regulations do include all the General Permit conditions and requirements. Is this true? Will this function continue?	While DCR will still respond to complaints and may conduct random inspections, it is intended that the qualifying local program will conduct all regular inspections within the jurisdiction that it operates. This will prevent duplication of effort.
David Nunnally (Caroline County)	Section A. What are the inspection requirements? This section refers to the VSMP General Permit, but does not state the conditions or requirements of that permit. Are the inspection requirements the same or consistent with the inspection requirements of the E&S program? These program requirements should be coordinated. Recommend revising this section accordingly.	General permit inspections during construction may be coordinated with ESC inspections. As written, the language of subsection A requires that at least one VSMP permit inspection be conducted for each project. More inspections may be conducted. Further inspection requirements may be specified in the language of the general permit
David Nunnally (Caroline County)	Section B. This section should allow a local program to determine if and the level of detail regarding as-built plans. As proposed, this section creates an unreasonable burden on small projects that have minimal permanent SWM measures.	Revisions have been made to the regulations to relax requirements related to stormwater management facilities that are located on, and treat stormwater runoff primarily from, an individual residential lot. These revisions are believed to address the concern raised by the comment.
David Nunnally (Caroline County)	Section C. This section should allow a local program to determine if and the level of detail regarding inspections of SWM BMPs. As proposed, this section creates an unreasonable burden on small projects that have minimal (or no) permanent SWM measures.	Subsection C contains details related to inspections by the owners of stormwater management facilities; not those by the qualifying local program. In addition, revisions have been made to the regulations to relax requirements related to stormwater management facilities that are located on, and treat stormwater runoff primarily from, an individual residential lot.
David Nunnally (Caroline County)	Section D. 3. What is meant by 'downstream conditions'? This is a vague term and if required by state regulation, it should be specific.	This subdivision provides for a qualifying local program to take into consideration special concerns related to particular waters in its jurisdiction, as well as other

		relevant downstream conditions that may impact decisions as to the necessary inspection schedule for a stormwater management facility. The most relevant considerations under this provision will vary across localities.
David Nunnally (Caroline County)	Section D. 4. How does a local inspection program 'demonstrate' that it is enforceable? This criteria seems more appropriate for a program review criteria rather criteria for establishing a new SWM program. Recommend revising accordingly.	The proposed language has been retained. Any local inspection program needs to be effective, and enforceability is a clear measure of effectiveness.
David Nunnally (Caroline County)	Section E. Does this requirement allow for electronic reports (and storage files)?	Electronic storage of records is acceptable. However, any electronic storage must allow for printing of reports.
Amar Dwarkanath (City of Chesapeake)	Recommend that the local programs be allowed to determine their own construction record drawing requirements; do not currently require a construction record drawing to be submitted for certain smaller, private stormwater management facilities.	Revisions have been made to the regulations to relax requirements related to stormwater management facilities that are located on, and treat stormwater runoff primarily from, an individual residential lot. These revisions are believed to address the concern raised by the comment.
Amar Dwarkanath (City of Chesapeake)	Recommend that inspection requirements or frequency be structured as a tiered approach based on relative contribution to the overall site, with some of the smaller practices being exempt from inspection requirements.	The requirement for the development of an inspection program by a qualifying local program is intended to allow priorities to be set across sites, as determined appropriate. Additionally, revisions have been made to the regulations to relax requirements related to stormwater management facilities that are located on, and treat stormwater runoff primarily from, an individual residential lot.
Glen Brooks	More detail needed regarding the as-built plans; detailed checklist, review schedule, fees and criteria for approval are necessary.	The regulations provide the necessary framework for qualifying local program development. Further guidance may be provided for areas where more information is shown to be necessary.

4VAC50-60-116 Qualifying local program enforcement

Michael Childs	Hope regulations will simplify the localities' ability to enforce requirements without having to go through 4-5 different parties.	The regulations incorporate all enforcement mechanisms available under the Stormwater Management Act.
Coleman Speece (Virginia Association of Planning District Commissions); Normand Goulet	Concern about local enforcement authority and burden of enforcing a larger, more complex program including BMPs located on private property.	The regulations incorporate all enforcement mechanisms available under the Stormwater Management Act.

(Northern Virginia Regional Commission)		
Mike Flagg (Hanover County)	Enforcement should be left as a matter for local attorneys and the courts; principles in regulations unnecessarily raise the burden of proof for localities seeking to enforce the requirements.	The regulations incorporate all enforcement mechanisms available under the Stormwater Management Act. No additions have been made to this authority, except for the development of a recommended civil penalties table that is required to be developed by the Stormwater Management Act.
Victoria Greenfield (Arlington County)	Civil charges; intent to authorize the issuing of tickets for violations of the regulations; this enforcement tool should be more clearly defined.	Civil charges are not the equivalent of issuing a ticket; rather, they are agreed-upon dispositions of an alleged violation. More information on the various enforcement tools can be found in the Virginia Stormwater Management Enforcement Handbook.
David Nunnally (Caroline County)	Section D. This section includes penalties for E&S violations. This creates another set of penalties for E&S violations, which is inconsistent with existing penalties (and authority) provided by E&S law. These programs should be consolidated or coordinated to eliminate the duplication and confusion. Please revise accordingly.	The VSMP General Permit for Discharges from Construction Activities requires that the site operator have an approved ESC plan. While lower penalties are specified in the Code of Virginia for ESC violations, the Stormwater Management Act allows for a higher penalty to be imposed for violations of the Act and its regulations (including the General Permit).
David Nunnally (Caroline County)	We recommend adding a provision such that compliance with the requirements of this program is prima face evidence and that the complaining party must show negligence in order to recover any alleged damages.	The enforcement section of the regulations does not address private actions between parties where damages are sought.
Alan Wood (American Electric Power)	Concerned that this regulation will be implemented as a source of revenue for resource-limited localities; inspection and enforcement will likely increase due to the undefined civil penalty schedule.	It is not believed that this program will be viewed as a potential revenue source for localities. Courts will independently determine appropriate penalty amounts in each case. Subsection F additionally limits the purposes for which monies recovered can be utilized.
Alan Wood (American Electric Power)	Appears that there is an initial permit fee, modification fee and maintenance fee for projects disturbing less than one acre and outside of Chesapeake Bay Act localities; understanding that VSMP general permit is only required for projects that will disturb 1.0 acre or more outside the Bay watershed.	Generally, VSMP permit coverage is only required for those sites disturbing one acre or greater outside of those areas subject to the Chesapeake Bay Act regulations. However, areas of common plan of development or sale (i.e., lots within a larger subdivision) may be regulated even though they disturb less than an acre by themselves, if the overall development exceeds the one acre threshold.
T. R. Collier (Maximum Engineering, Inc.)	Fines are widely excessive.	Courts will independently determine appropriate penalty amounts in each case. The fee schedule provided by

		the regulations is not mandatory.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Who enforces current permits once localities take over program?	Coverage under the current VSMP general permit will continue to be issued by the Department until such time as a qualifying local program is adopted for a jurisdiction. The department will continue to administer those permits unless arrangements are made for transfer of administration to the qualifying local program.
Donald Rissmeyer (Virginia Section American Society of Civil Engineers Stormwater Technical Committee)	Does the qualifying local authority collect the fees for violations for does that go to DCR?	Penalties are collected by the agency that conducts the enforcement action (which can be either the qualifying local program or the Board). Section 116 details the use of penalties recovered.

4VAC50-60-122 Qualifying local program exceptions

Pete Rigby (Paziulli, Simmons and Associates)	Variance and exception provisions incomplete and difficult to design around if you don't have justification guidelines.	Section 122(A) does provide guidelines for the granting of exceptions. It is recognized that some judgment may need to be exercised by local programs in the granting of exceptions, and the local program may develop additional guidance for exceptions in its discretion.
Ella Jordan (Albemarle County)	Ensure that a locality may include consideration of circumstances where strict application of these regulations would be inconsistent with UDAs and the locality's comprehensive plan.	It is believed that the amendments to Part II (technical criteria) will remove the need for an exception to be granted in the cases cited by the comment. In the event that more stringent standards are adopted in the future, clarifying language allowing the use of a payment to achieve compliance with such a more stringent standard through the exceptions process has been added to section 122.
Charles Rotgin, Jr. (Great Eastern Management Company)	Have latitude for local engineering departments to modify or waive certain requirements in instances where they are impractical to implement, or where the best interests of localities can otherwise be achieved.	The technical criteria of Part II have been revised to provide additional flexibility. Section 122 additionally provides guidelines for the granting of exceptions by local programs in special cases.
Jimmie Jenkins (Fairfax County)	Paragraph A – conditions required to be met for the granting of a variance are too stringent and in some cases too difficult to evaluate; recommend that proposed conditions (iii) and (iv) be replaced with conditions paralleling the requirements in the Erosion and Sediment Control regulations.	It is intended that exceptions be granted on a limited basis and that the intent of the regulations is to be upheld when an exception is granted. The criteria for an exception are similar to the criteria for exceptions under the Chesapeake Bay Preservation Area Designation and Management Regulations, which many localities have

		experience with.
David McGuigan (U.S. Environmental Protection Agency)	Need for greater specificity on when an exception is appropriate; granting of exceptions should be rare; should establish a more detailed standard so that the local program can be evaluated in the appropriate use of exceptions.	The exception requirements are based upon the requirements for exceptions under the Chesapeake Bay Preservation Act regulations. Experience with these provisions has shown that exceptions will be granted on a very limited basis.
Victoria Greenfield (Arlington County)	Would like clarity that in granting an exception, the local government can require that the developer provide a contribution that represents the full opportunity cost of not providing stormwater management onsite; would like guidance on what circumstances are considered self-imposed or self-created.	The exception requirements are based upon the requirements for exceptions under the Chesapeake Bay Preservation Act regulations. Experience with these provisions has shown that exceptions will be granted on a very limited basis. All offsite options are to be exhausted before an exception is granted, and, should a standard more stringent than 0.45 pounds per acre per year be established for new development within the Chesapeake Bay watershed, any reductions not achieved on site would need to be achieved through a payment made under the buy down option that would then be effective under section 69.
Dave Norris (City of Charlottesville)	Incredibly valuable provision [where strict application of regulations would be inconsistent with interest in promoting UDAs], but lacks guidance on how a locality would approve such a waiver while maintaining compliance with stormwater regulations	Revisions have been made to the regulations to provide additional flexibility; it is believed that this will reduce the need for exceptions. The criteria for the granting of an exception are largely based on the criteria currently utilized under the Chesapeake Bay Preservation Act regulations. Localities that are subject to those regulations have experience in administering exceptions; still, additional guidance may be issued if shown necessary.
Millard Stith (Chesterfield County)	Amend to allow substantial economic development projects providing substantial job growth or revenue benefits which do not meet the 0.28 water quality performance standards, with mitigation measures as appropriate.	Revisions have been made to the regulations to provide additional flexibility; it is believed that this will reduce the need for exceptions.
Millard Stith (Chesterfield County)	Revise to allow localities the option to refer certain exception requests to a designated board of the governing body if they wish to do so.	The “administrative process” referenced by section 122 may include referral to a designated board, if so desired by the qualifying local program.

4VAC50-60-124 Qualifying local program stormwater management facility maintenance

Jimmie Jenkins (Fairfax County); Randy Bartlett (Virginia Municipal Stormwater Association); Diane Hoffman (Northern Virginia Soil and Water Conservation District); Thanh Dang (City of Harrisonburg); Timothy Mitchell (City of Lynchburg); William Johnston (City of Virginia Beach); Victoria Greenfield (Arlington County); Amar Dwarkanath (City of Chesapeake)	Maintenance agreements should not be required for certain types of facilities (e.g. rain barrels on single-family homes) where monitoring and enforcement is problematic; maintenance would be addressed through public education.	The regulations have been revised to state that maintenance agreements are not required for stormwater management facilities located on and designed to treat stormwater runoff primarily from an individual residential lot. Such facilities may be addressed through an alternative mechanism.
Jimmie Jenkins (Fairfax County)	Paragraph A – add to the extent practicable; problematic for small sites (e.g. maintenance of on-lot BMPs by homeowners)	The regulations have been revised to state that maintenance agreements are not required for stormwater management facilities located on and designed to treat stormwater runoff primarily from an individual residential lot. Such facilities should be addressed through an alternative mechanism, however, as it is believed important that they be maintained on a long-term basis.

4VAC50-60-126 Qualifying local program reporting and recordkeeping

Mike Flagg (Hanover County)	(line 1677) department should be required to provide the format for any reporting 2 years in advance so that localities have the opportunity to change their procedures and be ready to capture information in an economical manner.	The Department is developing the Stormwater Management Enterprise Website that will provide the electronic format for general permit issuance and local qualifying program reporting. The Department plans to have the website developed and implemented prior to the approval of local qualifying programs.
Mike Flagg (Hanover County)	(lines 1683-1685) should the board decide to give localities flexibility with fees, the department should set its acreage categories desired at least 2 years in advance.	Part XIII of the regulations has been revised to provide qualifying local programs with flexibility to increase fees (the proposed regulations had already provided the allowance for a lesser fee to be established); however, the acreage tables associated with the proposed regulations have also been retained.
Mike Flagg (Hanover County)	(lines 1689-1690) we are reporting this information to the department; why must it be made available; this section should be removed.	The statement “to be made available” relates to possible interim reporting needs and requirements that may be placed upon the Department.

Mike Flagg (Hanover County)	(lines 1692-1693) what information constitutes a permit file? Why is the locality required to keep it for 3 years after termination? Localities should have the operation to deliver to the department sooner while a project is being actively closed out but no longer than 3 years after termination.	Permit files are composed of all information related to the review, approval, and administration (including inspection and enforcement) of the land disturbing activity. Maintaining permit files at the qualifying local program for some time period is important for reference purposes and also to allow those files to be available when the qualifying local program is reviewed by the Department.
Mike Flagg (Hanover County)	(line 1696) localities should only be required to keep local design standards and specifications.	All information required to be retained is necessary for proper inspection and maintenance of a stormwater management facility.
Mike Flagg (Hanover County)	(line 1697) believe the term construction record drawing is appropriate rather than post-construction surveys.	The regulations have been revised to utilize the term “construction record drawing”.
Mike Flagg (Hanover County)	(line 1697) that is the purpose of the locality keeping maintenance records in perpetuity; not necessary to the locality running the program.	The purpose of maintaining the records in perpetuity is to have a history of the stormwater management facility, including its design, construction, and maintenance. The language of the regulations has been revised to indicate that records related to a stormwater management facility must be retained in perpetuity or until a stormwater management facility is removed due to redevelopment of the site.
David Nunnally (Caroline County)	Section A. This section should be revised to coordinate the various DCR reporting requirements (i.e., SWM, E&S, CBPA, etc.). As these reports add to the administrative burden placed on the locality, only necessary data should be required. Also, DCR should report back to the locality (or localities statewide) showing how this data is being used and demonstrate its importance and necessity.	The Department is developing the Stormwater Management Enterprise Website that will provide the electronic format for general permit issuance and local qualifying program reporting. The Department plans to have the website developed and implemented prior to the approval of local qualifying programs.
David Nunnally (Caroline County)	Section B. Recommend amending such that the frequency of data reporting is the minimum necessary to ensure that the local program is functioning properly and to ensure program compliance. To help prevent arbitrary and burdensome requests, such requests should be issued under the department director's signature.	The frequency of data reporting included in the regulations is believed to be the minimum necessary. The Department is developing the Stormwater Management Enterprise Website that will provide the electronic format for general permit issuance and local qualifying program reporting, which should provide greater efficiency for qualifying local programs in reporting.
Glenn Brooks	Some exceptions are necessary in cases where facilities are removed for redevelopment, replacement or other reasons.	The language of the regulations has been revised to indicate that records related to a stormwater management facility must be retained in perpetuity or

		until a stormwater management facility is removed due to redevelopment of the site.

4VAC50-60-136 Stormwater management plan review

David Johnson (Advantus Strategies, LLC): David Anderson (Advantus Strategies, LLC)	Section C – believe the word preliminary should be substituted for the word initial.	The existing use of the term "initial" has been retained. Substituting the term "preliminary" is believed to possibly cause confusion related to other types of plans that a locality receives under other programs.

4VAC50-60-154 Reporting and recordkeeping

Jimmie Jenkins (Fairfax County)	Paragraph B – if DCR is administering the program, what information would localities have to report?	The language of paragraph B has been revised to clarify the intent that this report is compiled by the Department as to the local programs that it operates. No locality reporting is anticipated where DCR administers the local program.

4VAC50-60-157 Stormwater management program review

Jimmie Jenkins (Fairfax County)	Paragraph B.4 – an accounting of fees expended is problematic because stormwater plan reviews and inspections will be performed in conjunction with other types of plan reviews and inspections; consider deleting this requirement..	All fees collected are to be utilized for the administration of the stormwater program. It is important that these fees and their usage be accounted for in order to demonstrate that they are properly utilized.
David Nunnally (Caroline County)	The program review should be based on effectiveness (or performance-based).	The program review is intended to measure the effectiveness of a qualifying local program. It is anticipated that the Department will utilize a technical advisory committee to develop the program review procedures.
David Nunnally (Caroline County)	The proposed regulations are only general (i.e., vague) and do not provide any significant details related to the criteria to be used when conducting the review. These criteria should be developed through a public process that allows for local input. DCR staff should be authorized to make the final determination of local program compliance. In addition, there should be specific appeal process and the ability for a locality to recoup legal costs upon a	The program review is intended to measure the effectiveness of a qualifying local program. It is anticipated that the Department will utilize a technical advisory committee to develop the program review procedures.

	successful appeal of a determination by DCR staff or Board.	

4VAC50-60-159 Authorization procedures for qualifying local programs

Jimmie Jenkins (Fairfax County)	Providing a funding and staffing plan is problematic because of the ways reviews and inspections are conducted [plan reviews and inspections will be performed in conjunction with other types of plan reviews and inspections].	Utilizing staff for various purposes, both related to the stormwater program and with regard to other programs, is not prohibited. However, it is required that a locality seeking to administer a qualifying local program document how the local program will be administered, and how collected fees are intended to be utilized.
David Nunnally (Caroline County)	This section is overly burdensome and should be revised to include only fundamental requirements. As of this date, DCR has not developed a model ordinance or numerous guidance documents. Localities should not be burdened with having to prepare a staff plan and a funding plan (after all, funding is provided by the mandated fee schedule), procedure documents, etc. Recommend revising accordingly.	The requirements for submissions for qualifying local programs have been kept to the minimum necessary information and are not overly burdensome. The funding and staffing plan, which is one of very limited number of elements of a submission (as explained in section 159(c)), is necessary to demonstrate that adequate staff will be utilized in a qualifying local program, and that the fees collected will be utilized in the administration of the qualifying local program.
David Nunnally (Caroline County)	How will localities pay for services required to develop the numerous documents (ordinance, funding and staffing plans, projected permit fee study, other policies and procedures, etc.) these 'authorization procedures'? Is DCR going to provide assistance or guidance to help?	While funding for program development is not included in the fees provided under Part XIII of the regulations, the Department is considering making limited grant opportunities available to assist some localities with this expense. The Department will likewise be available to provide technical assistance during the program development process.
David Nunnally (Caroline County)	This proposed regulation creates numerous administrative requirements—and burdens on the locality and local program—yet, similar functions exist in the E&S program without these proposed administrative requirements. E&S is well established and familiar. Why create these new requirements?	The requirements contained in the regulations are necessary to ensure that effective stormwater management programs are carried out across the Commonwealth. As this is a federal NPDES program, in addition to a state program, it is necessary to provide adequate assurance that the program will be carried out properly in each jurisdiction.

4VAC50-60-9999 Documents incorporated by reference

Jimmie Jenkins (Fairfax County)	Documents should not be incorporated into regulations by	The provisions of Technical Bulletin #1 are necessary for

	reference; Technical Bulletin #1 reference should be deleted.	full compliance with portions of section 66 (water quantity) and is desired that following Technical Bulletin #1 be mandatory. Therefore, it is necessary to incorporate Technical Bulletin #1 by reference.

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Eric Eisenzopf
Lisa Parulis
Lora Danielle
Jason Christensen
Justin Henry
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Jimmy Hall
Ramon Memenza
Stephanie Dunbar
Marlene Norberg
Rene Suarez
Samuel Page
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Humairn Uzmami
Wilson Blanco
Ruth Eppnecht
Nathalie H. Ramsey
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Denora Villareal
Kenneth Olsen
Roger Smith
Joyce Wilkinson
John Gallager
Jose Vasquez
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Jose Aquinne
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Monti Kommarasy
Michael Barnes
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Jerry
DP Fendler-Merkle
Rufus Allen, Jr.

Cary Lichtman
Paul Donavan
Artin Karimian
Ronald Jones
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Glenn Martin
John Filanowski
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Mary Kathryn Cronin
Hasani Gaorble
Alicia Palumbo
Gary Walker
Pam Sheffer
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Ted Frederick
Ronnie Sabogal
Sarah Lieu
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Alex Lamanna
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Isairas Marroquin
Lawrence Ash
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Micahel Burke
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Jalila Yorsuf
Don Fear
Ceci Tramontana
R. Morris
Gediminas Naujokaitis
Greg Bringle
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Courtney Landis
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Martha Lindemann
Rosie goodnight
Richard Martin
Rodney Bonnette
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Liz Nourse
S. Lindsey Hardy
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Susan Rieder
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Bill Single

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Emery Bishop
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Pascale Chenet
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M. Noyal Zakir
Amani Ishaq
Marcia Cipriani
Lisa Gherardini
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Beth Burgess
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B Have
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Stephen Walton
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James Pearson
Matt Burruand
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Tony Muccia
Albert Bogert
Ronald Panaggio
Melanie Henderson
Tom German

Dominic Lavchenga
Nazanin Motekalemi
Douglas DeLaney
Ray Mackutt
Darwon Tolbert
Michelle Westover
Susan Ellis
Susan Moffitt
Peter Nulund
Josh Wagner
Mark Daugherty
Charlene Bennett
Margaret Bogie
Robert Garrison
Joseph Ferreira, Jr.
Jim Szymkowicz
Sonny Sikhattana
Ginny Katman
Liane Lee
David Warnick
John Collingswood
Kerrin Martin
Cyrus Sabzevari
Rachel Wagner
Jeong Park
Jill Thompson
Mike Phillips
Lisa Dugan

Dana Antayhua
Lisa Abdou
Simon Chang
Martha Reed
Steven Bartolutti
Michael Fudge
Reynold Miller
Derrick Drew
Cheng Song
Brian Hill
Allan Hunt
Hampton Hoge, Jr.
Elaine Zarnich
Patti Blue
C.S. Coney
Julie Chang
LaQuinta Atley
Patsy Mangas
Autaf Ahmed
Victoria Young
Lila Carnevale
Gerald Lyall
Samantha Cadd
Max Taheri
Marcelino Perez
Janet Sircone
Rose Rogers
Jose Flores

Andrei Bondareu
Melvin McGheis
Mark Allen
Danielle Powers
Joe An
John Vitale
Steve Minor
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Sheri Kelleher
Geniaro Sandoval
Sean Kirkhart
Jorge Levano
Jack Springer
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John Yagerline
Elizabeth Gleason
K Ginkhorskiy
Jon Casey
Carolyn Dutrow
Greg Sheperd
Pat Zimmerman
Charles Pearson
John Becker
Beth Smith
Carlos DaSilva

Matt Siragusa
Janet Garner
Richard Rach
Cynthia Glakas
Breanna Etler
Lee Abbud
Mike Woods
D. Kavanagh
Sheryl Beckwith
Anton Obernberger
Laura Wade
Ed Vigen
Courtney Turner
Jose Stuniz
Cathy Gallegos
Kumar Patel
Andrew Hing
Patricia Shelton
Noe Lougos
Kevin Brownster
Mireille Kolhof
Jane Wang
Dan Ambrose
Tahir Kazmi
Andrew Bowden
Patricia Wilson
Kokil Jain
Trish Olson

Realtors Action Alert

Lisa Kunz
Kim McClary
Tesso Derressa
Cathy Richardson
Charlotte Baber
R. Heath Spencer
B.G. Sowder
Donna Donally
Tanya Morris
Guy Gravett
Steve Childress
Kerry Kretz
Joe Tyler
R. Penrod
E. Derrick Plyler
Sheila Plyler
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Elizabeth Ridgeway
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William Brown, II
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Marvin Harris
Barton Barrett
Frank MaGann
Alfred Bahr
Sharon Snyder-Bartel

Beverly Farrar
Jennifer Rulz
Claudia Hudgens
Connie Vanderpool
Carl Burt
Henry Thrasher
Warren Jessup
M. Tuttle
Ahsan Saeed
Peter Schlossberg
Gwendalyn Cody
Champlin Buck
Patricia Buck
R. Farrar
Mary Anderson
Arnold Gale
Jean Hoffman
D. Patton
M. Williams
Dorcas Helfant-Browning
Daniel Odio
Mary Jean Thomasson
M. Cone
Linda Andrews
Carolyn Houser
JoAnn Hoover
Gloria Stutman
Shelley Duffee
Gayle Warman
Sue Smith
Janice Huddleston
Martha Casey

Summary of Public Comment on the Final Parts I, II, and III action

Following the Board's adoption of final regulations related to Parts I, II, III on October 5, 2009, the Board also immediately suspended the final regulations and called for an additional 30-day public comment period on the final Parts I, II, and III regulations as well as the final Part XIII regulations that were also adopted and suspended on that date. During this additional public comment period (held between October 26, 2009 and November 25, 2009), 207 comments were received on the combined regulatory actions.

Comments received during the comment period on the final Parts I, II, and III regulations from October 26, 2009 to November 25, 2009 are as follows:

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Stormwater Regulation Comments Parts I, II, and III

General Support

Commenter	Comment	Agency response
Kim Sandum (Rockingham County's Community Alliance for Preservation); Kate Wofford (Shenandoah Valley Network); Marirose Pratt (Southern Environmental Law Center); Rick Parrish (Southern Environmental Law Center); Assateague Coastkeeper; Audubon Naturalist Society; Blackwater Nottoway Riverkeeper Program; Cabell Brand Center, Chesapeake Bay Foundation; Civil & Environmental Services, LLC; Dan River Basin Association; Friends of Dyke Marsh; Friends of Powhatan Creek Watershed; Leslie Mitchell-Watson (Friends of the North Fork of the Shenandoah River); Friends of the Rappahannock; Friends of the Rivers of Virginia; Friends of the Roanoke River; James River Association; Lynnhaven River NOW; Patrick Felling (Potomac Conservancy); Rainwater Management Solutions; Rivanna Conservation Society; Scandia USA LivinGreen; Shenandoah Riverkeeper; The Nature Conservancy; Virginia Conservation Network; Virginia	Improved regulations are important step in the right direction for clean water; regulations are critically important to Virginia's waterways; stormwater runoff only growing source of pollution; proposed regulations represent a compromise outcome.	It is agreed that the revised regulations are an important step toward improving the Commonwealth's water quality and quantity and meeting our Chesapeake Bay goals.

Council of Trout Unlimited; Virginia League of Conservation Voters; Virginia Wilderness Committee; Wild Virginia; John Eckman (Valley Conservation Council); Thomas Schueler (Chesapeake Stormwater Network); Kim Woodell (Shenandoah Forum); Eric Beck (Hope Community Builders)		

General Opposed

Greg Koontz (Koontz-Bryant); Paul Johnson	Pollutants from existing untreated land projects and agriculture make up the vast majority of pollutants entering our streams, rivers and bays.	While it is recognized that many sources contribute to the Commonwealth's water quality problems, pollutant loads from land disturbing activities continue to increase and must be addressed along with loads from other sources. If the Commonwealth is to meet its water quality goals, all sources must be addressed.
Pete Burkhimer (Engineering Services, Inc.)	Alternative suggestion: drop regulation initiative, cut associated staff in half, use remaining staff to visit localities around state to improve existing programs, and remain as a technical resource	The Board and the Department currently provide technical assistance to localities regarding the development and implementation of a locality's stormwater management program. For localities that adopt a qualifying local program, the Department intends to continue delivering technical assistance while day to day administration of the program will be conducted by the locality.
Scott Camp	Value of land will be greatly reduced	It is not believed that these regulations will reduce land values. The Agency Statement associated with the proposed regulations includes a discussion of costs and example site plans. Additional flexibility has been included in the final regulations, reducing costs even further.
Mark Rinaldi	Have applied environmental regulations in an ill-conceived attempt to manage growth, to the result that neither is the environment adequately protected nor is growth directed and influenced to be of a form and pattern and in locations that will be sustainable long-term.	The revised regulations were not conceived or designed to manage growth. Growth is managed by planning and other land use regulation. The purpose of these regulations is to protect the water quality and quantity of the Commonwealth.
Stephen Romeo; Greg Koontz	Too many unanswered questions about science, pollutant	The regulations have been developed through an

(Koontz-Bryant); Edward Goode (Colonial Homecrafters, Inc.)	removal measures and techniques	extensive public process that examined the science behind the regulations. The Virginia Stormwater BMP Clearinghouse has been developed to continue to review pollutant removal measures and techniques over time to ensure their effectiveness and proper utilization.
Diana Parker; Carol Buckingham	Ask that go back to original proposed regulatory actions and reinstate stricter guidelines in support of our waters.	The regulations have been finally revised and do result in great improvements in stormwater management regulation in the Commonwealth. The initial water quality technical criteria contained in the proposed regulations were developed based on Virginia's Tributary Strategy goals. Since the time of the proposal, data related to Bay restoration needs has been further refined, indicating that the 0.28 standard may not be appropriate. The updated level of reduction necessary to achieve Bay goals will continue to develop over the coming months.
Jeanne Stosser (CMG Leasing, Inc.); Robert Duckett (Peninsula Housing and Builders Association); Ralph DeRosa (NTS); Michael Stonehill (Hour Homes, Inc.); Barrett Hardiman (Home Builders Association of Virginia); Action Alert*	Request that board does not reaffirm their action from October 5, 2009	Further revisions have been made to the final regulations since the time of the October 5 meeting of the Board. It is believed that the revised final regulations, and their adoption at this time, is appropriate.
Mike Barrett	The real issue is not new development it is existing development that was constructed long before the current requirements were put in place; scrap these regulations and start to work on the retrofitting legacy developments.	It is recognized that existing development does contribute to Virginia's water quality problems. However, new development is also a contributor and all sources must be accounted for in order to achieve water quality goals. Allowing new development to further contribute would create a need for that development to be retrofitted in the future at a much higher cost. Additionally, the Board's authority under the Stormwater Management Act extends only to development activities and does not allow for retrofitting of existing properties not undergoing redevelopment to be required.

Continue suspension of regulations

C. Warren Wakeland (Home	Continue suspension and bring a technical advisory	The regulations have been developed over an

Building Association of Richmond); Ralph DeRosa (NTS); Philip Abraham (Virginia Association for Commercial Real Estate); David Anderson and David Johnson (Virginia Fountainhead Alliance); Tyler Craddock (Virginia Chamber of Commerce)	committee together again to work on a regulation that makes sense	approximately four year time span and are the result of one of the most public processes to date in environmental regulations. It is not believed that a further suspension and technical advisory committee process would be beneficial.
Amar Dwarkanath (City of Chesapeake); Dwight Farmer (Hampton Roads Planning District Commission)	Continue suspension for at least another 180 days and (1) contract for additional economic analysis for the regulations as they are now amended; (2) conduct an analysis of land consumption and availability and associated impacts of the additional BMP requirement on development and redevelopment and (3) develop guidance on what constitutes a qualifying local program, a framework for local buy-down programs and a template for acceptable watershed plans.	The regulations have been developed over an approximately four year time span and are the result of one of the most public processes to date in environmental regulations. It is not believed that a further suspension and technical advisory committee process would be beneficial. The Board and the Department will continue to develop guidance and provide technical assistance for use by localities in developing a qualifying local program during the time between the effective date of the regulations and the adoption period for qualifying local programs.
David Anderson and David Johnson (Virginia Fountainhead Alliance)	Suspend all further rulemaking on the entire section 4VAC50-60 until the proposed regulations are brought into conformance with the USEPA background science that was presented to the Chesapeake Bay Program Principal Staff Committee on October 23, 2009.	The development of refined data related to Chesapeake Bay goals by USEPA is recognized and revisions were made to the regulations as a result of this ongoing process. Specifically, the 0.28 pounds per acre per year phosphorus standard, which was specifically developed from Virginia's Tributary Strategies, has not been retained. Other provisions of the regulations are not dependent upon Bay data and it is deemed appropriate to finalize those provisions at this time.

Costs and the economic analyses

Jeanne Stosser (CMG Leasing, Inc.)	Cost associated with regulations makes development in Southwest Virginia almost prohibitive; not a helpful step to encouraging recovery for the state.	The 0.45 pounds of phosphorus per acre per year standard for Southwest Virginia and other non-Bay areas has been effective since 2005, and, while adopting an enhanced compliance methodology, the final regulations keep this standard (note that the proposed regulations had imposed a 0.28 standard in these areas). The 0.45 standard has not impeded

		development in Eastern Virginia, and it is not believed that the final regulations will hamper development in Southwest Virginia.
C. Warren Wakeland (Home Building Association of Richmond); Robert Duckett (Peninsula Housing and Builders Association); Ralph DeRosa (NTS); Michael Stonehill (Hour Homes, Inc.); Bonnie Johnson (Bath County); Tyler Craddock (Virginia Chamber of Commerce); Action Alert*	Will still impose a severe burden on Virginia's economy without providing the environmental protection desired.	It is not believed that these regulations will burden Virginia's economy. The Agency Statement associated with the proposed regulations includes a discussion of costs and example site plans. Additional flexibility has been included in the final regulations, reducing costs even further. Moreover, the regulations will protect the Commonwealth's water quality and quantity at a level not previously experienced and necessary to meet our water quality and Chesapeake Bay goals.
James Campbell (Virginia Association of Counties); Darryl Fisher (Westmoreland County)	Commonwealth must assume any and all expenses imposed by these new regulations [rather than localities].	The regulations provide for fees to be collected by administering localities that are estimated to be sufficient to fully cover the costs of program administration. Even in the event that these fees are shown to be inadequate in a particular locality, the regulations allow for the fees to be raised to a level which would fully support the program.
William Street (James River Association)	Proposed changes to the regulations provide cost savings in some of the case studies; in 3 of the 6 case studies, proposed changes to the regulations and associated methodology resulted in decreased cost of compliance, and in the other 3, the cost of compliance remained the same. The cost of compliance decreased 33% for commercial sites and 37% for residential sites with the proposed changes.	It is agreed that the utilization of the Runoff Reduction Method and new BMPs can greatly decrease compliance costs for both commercial and residential sites.
Annie Mickens (Crater Planning District Commission)	Program is too complex to impose when localities are being forced to retrench rather than add new responsibilities and requirements; implementation should be delayed during of severe economic constraints.	The new regulations will be implemented according to a schedule set forth in §10.1-603.3 of the Code of Virginia. This schedule allows localities a period of 15 to 21 months following the effective date of these regulations to develop and receive Board approval for local programs. The Department will assist localities during this period of time and is also considering making limited grant funding available to assist localities if such funding is available to the Department. Finally, the fees established by the regulatory action amending Part XIII of the Board's regulations will provide permit fees

		sufficient to cover the costs of program administration for adopting localities.
Terence Elkins (James City County Citizens Coalition)	New regulations will not lead to increased costs due to availability of new techniques; saving money for developments now will lead to greater costs incurred in the future.	It is agreed that the utilization of the Runoff Reduction Method and new BMPs can greatly decrease compliance costs for both commercial and residential sites. It is further agreed that not achieving pollutant reductions at the time of development will lead to a need for more expensive retrofits to be conducted in the future.

Sprawl

Terence Elkins (James City County Citizens Coalition)	No support for the assumption that improved regulations will lead to sprawl.	The revised regulations were not conceived or designed to manage growth. Growth is managed by planning and other land use regulation. The purpose of these regulations is to protect the water quality and quantity of the Commonwealth.

Chesapeake Bay TMDL (Total Maximum Daily Load)

James Campbell (Virginia Association of Counties)	A state standard that differs from a federal standard will impose major administrative complications on local governments; differing standards are likely to have major financial impacts	It is recognized that the science related to Chesapeake Bay restoration efforts has continued to evolve over recent time. The Department has been in active discussions with EPA to help ensure that there will not be conflicting federal and state standards, and the regulations have been revised as a result. Specifically, the 0.28 pounds per acre per year phosphorus standard has been restored to the original, existing 0.45 standard in reaction to recent EPA Bay data.
James Campbell (Virginia Association of Counties)	Any new technical criteria, local caps or other requirements on local governments, whether related to new development, redevelopment or existing development, must have sound scientific justifications	It is recognized that a scientific basis is necessary for regulatory requirements. The Department and the Board believe that the final regulations are based on sound science.
James Campbell (Virginia Association of Counties); David Anderson and David Johnson (Virginia Fountainhead Alliance); Tyler Craddock (Virginia	A technical advisory committee needs to be formed to take into account scientific justifications, cost-effective, manageable and affordable at the local level as Bay TMDL is developed.	It is recognized that additional public processes may be necessary as further data related to the Bay is obtained. As may be shown necessary, the Board is prepared to engage in further discussions and actions over time to make any necessary adjustments to the regulations.

Chamber of Commerce)		The final regulations as adopted are, however, believed to be appropriate at this time.
Steven Herzog (Hanover County); David Anderson and David Johnson (Virginia Fountainhead Alliance); Tyler Craddock (Virginia Chamber of Commerce)	How do the recently released preliminary load allocations for the Bay States impact the loading requirements required in these regulations? The new load allocations significantly increase the loading goals for phosphorus while decreasing those for nitrogen for the portions of Virginia that contribute runoff to the Chesapeake Bay.	It is recognized that the science related to Chesapeake Bay restoration efforts has continued to evolve over recent time. The Department has been in active discussions with EPA to help ensure that there will not be conflicting federal and state standards, and the regulations have been revised as a result. Specifically, the 0.28 pounds per acre per year phosphorus standard has been restored to the original, existing 0.45 standard in reaction to recent EPA Bay data.

4VAC50-60-10 Definitions

Andrew M. Scherzer and Thomas Balzer; Balzer and Associates, Inc.	Is the base flood in the definition of floodway and floodplain referring to the 100-year event?	The base flood is recognized to be the 100-year storm. The floodplain is the area inundated by water from the 100-year storm. Further amendments to the regulations have been made to give clarity.
Andrew M. Scherzer and Thomas Balzer; Balzer and Associates, Inc.	In regards to the flood fringe, what agency will approve and/or establish the limits of the flood fringe?	The locality establishes the limits of the floodplain as part of the National Flood Insurance Program, which includes the floodway and flood fringe areas.
Andrew M. Scherzer and Thomas Balzer; Balzer and Associates, Inc.	Clarification as to the Natural Stream Conveyance System is needed.	The term "natural stream conveyance system" is not found in the regulations. The regulations do, however, provide a definition for "natural stormwater conveyance system." This definition, in light of the explanation of the term "floodplain" given above, provides information on how to delineate a natural stormwater conveyance system.
Mike Bumbaco (Kerr Environmental Services)	In the definition of “development” the following phrase was added to the end of the definition [or the clearing of land for nonagricultural or nonsilvicultural purposes]. We suggest that the legal validity of this statement be checked thoroughly with regards to conflict with other laws and regulations of the Commonwealth of Virginia.	The phrase was added for clarity purposes as this term applies within these regulations. It is not believed to be in conflict with any other applicable definitions and does not attempt to override any other definitions of the term found in the Code of Virginia.
Ellen Gilinsky (Virginia Department of Environmental Quality)	Stormwater harvesting is not defined in the regulation; we believe that is should be so that the public understands what this term encompasses and in particular understands that this is a way to reclaim and reuse stormwater.	Considerable information has been developed on the issue of stormwater harvesting by the Department and may be found on the new BMP Clearinghouse that has been developed to accompany the regulations and provides design specifications for the development of

		allowable BMPs. In addition to the rainwater harvesting design specifications, an extensive cistern design Excel spreadsheet has also been developed. This information may be found at http://www.vwrrc.vt.edu/swc/NonProprietaryBMPs.html.
Terence Elkins (James City County Citizens Coalition)	We object to your removal of the terms "shallow marsh, stormwater detention basin or detention basin, stormwater extended detention basin or extended detention basin, and stormwater extended detention basin enhanced or extended detention basin enhanced" and any reference thereof, and deleting more innovative Best Management Practices (BMPs) from the entirety of the legislation. It is imperative that these BMPs be included in order to provide state recognition to the technologies that are most effective at managing and mitigating the negative effects of storm events. Including these BMPs would legitimize their implementation and thus the stormwater management programs of localities whose inclusion of said BMPs is done as a way to enact more stringent environmental standards.	The Virginia Stormwater Management BMP Clearinghouse has been developed in coordination with this regulatory action to review and approve designs and standards for new and innovative BMPs on an ongoing basis, and descriptions of all BMPs will be found on the Clearinghouse website. Removal of the definitions for BMPs from these regulations does not limit BMP availability; on the contrary, more BMPs will be available under the new regulations than ever before.

4VAC50-60-48 Grandfathering

Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	Can a project be granted a permit if construction plans are not approved by the local agency in order to guarantee grandfathering.	Coverage under the current VSMP General Permit for Discharges of Stormwater from Construction Activities can be obtained prior to local plan approval. Statement #12 on the VSMP general permit registration statement states that "A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General VSMP Permit for Discharges of Stormwater from Construction Activities prior to submitting this Registration Statement." The SWPPP can be developed and reference the erosion and sediment control plan, the stormwater management plan and other plans to be approved by the locality. However, Section II of the General Permit (4VAC50-60-1170) states, in subdivision (A)(3), that where an erosion and sediment control plan is being incorporated by reference, such plan "must be approved by the locality in

		which the construction activity is to occur or by another appropriate plan approving authority authorized under the Virginia Erosion and Sediment Control Regulations (4VAC50-30) prior to the commencement of land disturbance."
Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	In the grandfathering section, what is the definition of specific use or density? If a statement is not included in the zoning that specifically states the density or use will the project meet grandfathering conditions? What happens if zoning for a project changes will it remain grandfathered?	The language utilized in section 48 (Grandfathering) largely mirrors the language contained in the Code of Virginia's vesting statute (§15.2-2307) and is intended to have a similar meaning. Projects that are determined to be vested by local governments under that Code section would meet the vesting-related requirements of section 48. In addition, projects would need to obtain VSMP permit coverage by July 1, 2010. As is specifically noted in subsection B, in the event that the qualifying significant affirmative governmental act or the VSMP permit is subsequently modified or amended in a manner such that there is no increase in the amount of phosphorus leaving the site through stormwater runoff, and such that there is no increase in the volume or rate of runoff, the grandfathering shall continue as before.
Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	How does grandfathering work for common plans of development.	Subsection C of section 48 (Grandfathering) specifies that "[w]here a land-disturbing activity is part of a common plan of development or sale that has obtained VSMP general permit coverage from the department prior to July 1, 2010, the land-disturbing activity will be subject to the technical criteria of Part II B. The registration statement shall include the permit coverage number for the common plan of development or sale for which association is being claimed." Permit coverage termination by the larger project of which a second land disturbing activity is a part does not prevent the operator of the second activity from obtaining coverage under this subsection and such site shall remain subject to the technical criteria under which the common plan of development or sale was approved.
Greg Koontz (Koontz-Bryant); Philip Abraham (Virginia Association for Commercial Real Estate)	Projects that have been zoned and are in early stages of development are at substantial risk with the current grandfathering even though substantial amounts of money are spent just to obtain zoning.	The grandfathering provisions of section 48 have been established to mirror, to a great extent, the vesting law of the Commonwealth that applies to all projects with regard to locality zoning ordinances. It is believed that this approach provides land developers with a

		predictable and reasonable approach to grandfathering of existing projects.
C. Warren Wakeland (Home Building Association of Richmond); Robert Duckett (Peninsula Housing and Builders Association); Barrett Hardiman (Home Builders Association of Virginia); Action Alert*	Does not provide any real protection for projects where large investments have been made for permits that have not been secured; poses an undue burden on projects still in the works.	The grandfathering provisions of section 48 have been established to mirror, to a great extent, the vesting law of the Commonwealth that applies to all projects with regard to locality zoning ordinances. It is believed that this approach provides land developers with a predictable and reasonable approach to grandfathering of existing projects. The additional requirement for a project to obtain and maintain VSMP permit coverage is not an onerous requirement; rather, it simply requires the submission of a registration statement and the required fee to the Department.
Keith White (Henrico County)	Based on explanations of the "grandfathering" provisions, it seems as if the language in §4VAC50-60-48 doesn't have a significant impact to projects conducted in Henrico. Our understanding is that projects approved by Henrico (or any other locality with current programs adopted in accordance with the SWM law and regulations) before or after July 1, 2010 will not be expected to comply with the new regulations until such time that the County revises its local program to include the new regulatory provisions. This "transition" was established to eliminate the need for a project to attempt the probably impossible task of satisfying both programs. And since our program will not be revised until sometime after July 1, 2010, this means projects will be submitted after July 1, 2010 that will require VSMP permit coverage issued by DCR (until Henrico becomes the permit-issuing authority). And these permits will be issued based on the current local program, not the new regulatory provisions. We are receiving many questions about grandfathering and this transition period and ask that you confirm or correct our understanding of the issue.	Even after the final adoption of the regulations, until a qualifying local program is adopted in a jurisdiction, VSMP permit coverage will still be obtained from the Department, and the technical criteria applicable to a project that receives coverage from the Department will be that referenced by the current VSMP General Permit for Discharges of Stormwater from Construction Activities until its expiration on June 30, 2014.
Daun Klarevas (Christopher Consultants, Ltd.)	Does an approved preliminary plan suffice? Or does the final site plan need to be approved by July 1, 2010 or does it just need to be submitted for review to the locality by July 1, 2010?	Subsection B of section 48 specifically includes "the governing body or its designated agent has approved a preliminary subdivision plat, site plan, or plan of development for the landowner's property and the

	What if the plan is part of a phased project, does only one part of the phase need to be approved or the entire phased project? Or would an overall Stormwater Management Plan for the phased project cover the entire project while the other phases are being developed?	applicant diligently pursues approval of the final plat or plan within a reasonable period of time under the circumstances" in its list of items deemed to constitute a significant governmental act. The final site plan itself would not need to be approved by July 1, 2010. For phased projects, the entire project does not need to have an approved plan, however, VSMP permit coverage for the entire project must be obtained by July 1, 2010 and maintained thereafter.
Robert Duckett (Peninsula Housing and Builders Association); Barrett Hardiman (Home Builders Association of Virginia); Lamont Myers	The requirement to obtain a VSMP permit to maintain grandfathered status appears to circumvent the General Assembly's intent to respond to the current economic crisis [related to amendments to §15.2-2209.1]	The grandfathering provisions of section 48 allow for grandfathering of projects until June 30, 2014, and so long as permit coverage is maintained, until June 30, 2019. These dates are not believed to conflict with provisions of §15.2-2209. The requirement for a permit to be obtained can be fulfilled by the filing of a registration statement and the required fee.
Mark Ayles (Hughes Associates Architects)	Allow projects nearing completion design wise and those that are under construction to be grandfathered.	The grandfathering provisions of section 48 are believed to provide adequate relief to projects that meet its requirements. These requirements largely mirror the requirements of the existing state vesting requirements, with an additional requirement that permit coverage be obtained by the filing of a registration statement and the required fee.
Barrett Hardiman (Home Builders Association of Virginia)	Request that the grandfathering provisions take effect upon approval of a preliminary plan and remain in effect in perpetuity.	The grandfathering provisions of section 48 are believed to provide adequate relief to projects that meet its requirements. These requirements largely mirror the requirements of the existing state vesting requirements, with an additional requirement that permit coverage be obtained by the filing of a registration statement and the required fee. As the VSMP program is also a federal NPDES program, regulated activities must come into compliance with new standards. The phased-in approach adopted by the regulations is believed to be appropriate.
Philip Abraham (Virginia Association for Commercial Real Estate); Lamont Myers	Remove requirement to obtain a VSMP permit.	As the VSMP program is also a federal NPDES program, regulated activities must come into compliance with new standards. The phased-in approach adopted by the regulations is believed to be appropriate.

Patrick Felling (Potomac Conservancy)	Allows a very gradual adjustment by the development community; ten year reprieve is granted to ongoing projects under the provisions.	The grandfathering provisions have been retained. As the VSMP program is also a federal NPDES program, regulated activities must come into compliance with new standards. The phased-in approach adopted by the regulations is believed to be appropriate.
Jon Capacasa (U.S. Environmental Protection Agency)	Projects that are currently operating under existing approved permits can be grandfathered, so long as the department can demonstrate that such projects continue to comply with federal requirements; currently proposed grandfathering clause has significantly expanded the grandfathering universe, so that it must ensure that it is consistent with federal regulatory requirements.	The grandfathering provisions of section 48 have been retained. While it is recognized that all regulated activities must come into compliance with new standards, the timeframes set forth in section 48 are believed to be a reasonable approach to phasing in requirements for existing projects. It is notable that these projects must still meet the requirements of Part IIB, which include water quality requirements that equate to a 0.45 pounds per acre per year phosphorus standard.
Jeffrey Sitler (University of Virginia)	Recommends clarification in sections B and C if reference should be made to the general permit for the discharges of stormwater from construction activities or if these sections can apply for the general permit for discharges of stormwater from small municipal separate storm sewer systems.	Subsections B and C require projects to obtain permit coverage. As land disturbing projects can obtain coverage either under the General Permit for Discharges of Stormwater from Construction Activities or an individual permit, it is not believed advisable to specifically require coverage under the General Permit. Land disturbing activities are not eligible for coverage under the MS4 General Permit.
Jeffrey Sitler (University of Virginia)	Concerned about linking the grandfathering conditions to a requirement for having obtained VSMP general permit coverage; have projects that we would like grandfathering, but are concerned they will not meet the proposed grandfathering criteria simply by not having a VSMP permit issued for the project or for the entire plan of development.	Permit coverage be obtained by the filing of a registration statement and the required fee. Plan requirements can be met at a later time so long as they are approved prior to the commencement of land disturbance.
Jeffrey Sitler (University of Virginia)	Can small projects (i.e., those less than one acre) be grandfathered if they have approved stormwater management plans but no VSMP permit; most of the campus is covered under a regional stormwater management plans, we address stormwater impacts below the one acre threshold to ensure that we are properly tracking the capacity in our regional stormwater management facilities.	All projects seeking to be grandfathered must obtain coverage under a VSMP permit. Permit coverage can be obtained by the filing of a registration statement and the required fee.
Jeffrey Sitler (University of Virginia)	Being a state agency, we do not seek plan approvals from the localities, so we are uncertain how to interpret	Clarifying language has been added to section 48 to give examples (though not exhaustive) of significant

	"significant affirmative governmental acts" in our situation; does being granted state funds qualify or have plans reviewed by DCR?	governmental acts as they apply to state projects.

4VAC50-60-50. General

Terence Elkins (James City County Citizens Coalition)	No greater measure exists for the degree of the department's capitulation than the total elimination of this section. So now it is okay to "(J) Construct stormwater management impoundment structures within a Federal Emergency Management Agency (FEMA) designated 100-year floodplain." No need for "(K) Natural channel characteristics to be preserved to the maximum extent practicable." No need for "(I). All stormwater management facilities to have an inspection and maintenance plan that identifies the owner and the responsible party for carrying out the inspection and maintenance plan."	While section 50 has been repealed, review of the regulatory language reveals that its requirements have been relocated elsewhere. Item (J) is now addressed in 4VAC50-60-85(B). The protection of channels has been heightened to a level much greater than before with the new water quantity criteria of section 66. Finally, long term maintenance and inspection of BMPs has been more fully described than had been done previously in Part III of the regulations, notably sections 114 and 124.

4VAC50-60-56 Applicability of other laws and regulations

John Keifer (City of Norfolk); Amar Dwarkanath (City of Chesapeake); Randy Bartlett (Virginia Municipal Stormwater Association); Dwight Farmer (Hampton Roads Planning District Commission)	Ensure regulations are consistent with MS4 permits and also with that future permit requirements be consistent with these regulations.	It is intended that MS4 permit requirements be consistent with the requirements of these regulations. The full development of MS4 permit requirements, however, also depends upon a determination that those permits will adequately protect water quality. This determination is made jointly with EPA and future discussions will be necessary to develop and refine MS4 permit requirements.

4VAC50-60-63 Water quality requirements

Joe Lerch (Virginia Municipal League); Bonnie Johnson (Bath County)	Should have one statewide standard of 0.45 lbs. for phosphorus, regardless of land area disturbed.	The regulations have been revised to utilize a 0.45 standard statewide. This standard has been in place since the Board received responsibilities for stormwater management in 2005. A revised compliance methodology through the Runoff Reduction Method has also been adopted.
Joe Lerch (Virginia Municipal	Support the reduced standard for redeveloped sites less	The standards applicable to sites of less than one acre

League); John Keifer (City of Norfolk); Randy Bartlett (Virginia Municipal Stormwater Association); Jeffrey Sitler (University of Virginia)	than one acre.	have been retained.
Joe Lerch (Virginia Municipal League)	Support ability of local governments to allow for a phosphorus standard between 0.28 and 0.45 in the urban development areas.	As the 0.28 phosphorus standard has not been retained, the allowance for a standard to be developed for UDAs between 0.28 and 0.45 is no longer necessary. However, this language has been retained in form for use in the case that a more stringent standard is developed in the future.
John Keifer (City of Norfolk)	Support 0.45 standard for newly developed sites of less than one acre.	The standards applicable to sites of less than one acre have been retained.
C. Warren Wakeland (Home Building Association of Richmond); Robert Duckett (Peninsula Housing and Builders Association); Action Alert*	Support the removal of statewide standard	The water quality requirements of the regulations have been further revised to utilize a statewide standard of 0.45 pounds of phosphorus per acre per year. This standard has been utilized since the Board received responsibilities for stormwater management in 2005. A revised compliance methodology through the Runoff Reduction Method has also been adopted.
C. Warren Wakeland (Home Building Association of Richmond); Robert Duckett (Peninsula Housing and Builders Association); Barrett Hardiman (Home Builders Association of Virginia); Philip Abraham (Virginia Association for Commercial Real Estate); David Anderson and David Johnson (Virginia Fountainhead Alliance); Tyler Craddock (Virginia Chamber of Commerce); Action Alert*	Have yet to provide any evidence that 0.28 standard is necessary through science and the inability to prove the validity of the standard	Though the 0.28 standard was based on Virginia's Tributary Strategies, this requirement has been removed due to the receipt of further data related to Bay restoration. A statewide standard of 0.45 has been adopted. This standard has been utilized since the Board received responsibilities for stormwater management in 2005. A revised compliance methodology through the Runoff Reduction Method has also been adopted.
Steven Herzog (Hanover County)	The word "distributing" should be changed to "disturbing" in the first sentence of subsection 2(a).	The typographical error has been corrected.
Barrett Hardiman (Home Builders Association of Virginia)	If 0.28 standard is kept, then the board should make the 0.45 standard mandatory within an urban development area, removing the requirement for application from the locality for a less stringent standard.	The water quality requirements of the regulations have been further revised to utilize a statewide standard of 0.45 pounds of phosphorus per acre per year. This standard has been utilized since the Board received

		responsibilities for stormwater management in 2005. A revised compliance methodology through the Runoff Reduction Method has also been adopted.
James Shelton	Southern rivers should be protected from excess runoff; regulations should not exempt areas outside the Chesapeake Bay watershed.	The regulations do not exempt areas outside of the Chesapeake Bay watershed. These areas have been subject to regulation since the Board received responsibility for stormwater management in 2005. Under the final regulations, these areas are subject to the same water quality requirements as areas in the Bay watershed.
David Anderson and David Johnson (Virginia Fountainhead Alliance); Tyler Craddock (Virginia Chamber of Commerce)	Unclear why the board would include the 0.45 standard in the regulation; has never had the full force and effect of law.	The 0.45 standard has been in place since the Board received responsibilities for stormwater management in 2005, and was additionally made applicable through the Chesapeake Bay Preservation Act regulations in 1989. It has had the full force and effect of law throughout this time.
Jon Capacasa (U.S. Environmental Protection Agency)	Concerned that by allowing local qualifying programs to establish relaxed phosphorus limits in the Bay watershed, it will preclude the attainment of water quality goals; local program must demonstrate to the board that the proposed limit is consistent with local and tributary water quality requirements when considering the jurisdiction as a whole; any relaxation in urban areas must be compensated with either more stringent limits in other areas or through the use of offsite controls or allowances.	The water quality requirements of the regulations have been further revised to utilize a statewide standard of 0.45 pounds of phosphorus per acre per year. No provision for relaxation of this standard in a UDA is currently in force. This standard has been utilized since the Board received responsibilities for stormwater management in 2005.
Jon Capacasa (U.S. Environmental Protection Agency)	2(c); in order to meet or maintain water quality standards, it may be necessary to implement a stricter redevelopment standards; in cases where P levels of existing conditions are extremely high, the proposed regulations do not require a proportionate level of reduction to meet some reasonable standard; should specify criteria for exceeding the 20% reduction	The 20% reduction for redevelopment projects represents a doubling of the current 10% requirement and is deemed to be a reasonable step toward achieving improvements on redevelopment sites.
Terence Elkins (James City County Citizens Coalition)	Do not support separate standard for UDA areas.	The water quality requirements of the regulations have been further revised to utilize a statewide standard of 0.45 pounds of phosphorus per acre per year. No provision for relaxation of this standard in a UDA is currently in force. This standard has been utilized since the Board received responsibilities for stormwater management in 2005.

Terence Elkins (James City County Citizens Coalition)	Perplexed by the decision to relax the water quality standard in non-Bay areas.	The 0.28 pounds per acre per year phosphorus standard contained in the proposed regulations had been developed based upon what the Tributary Strategies showed to be necessary for Virginia to meet its Chesapeake Bay goals. While it is recognized that this standard could have led to improved water quality in the Southern Rivers as well, there was no evidence to demonstrate that it was the proper level of reduction for non-Bay areas. Therefore, the existing 0.45 standard was retained. This standard will continue to be evaluated over time in relation to actual needs of the non-Bay regions of the Commonwealth.

4VAC50-60-65 Water quality compliance

Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	What items of a BMP may be limited by a local jurisdiction?	Subsection D of section 65 allows for qualifying local programs to establish limitations on the use of specific BMPs. This is intended to allow localities to disallow or place limitations upon the use of certain BMP types where local soil conditions, high water table, etc., make those BMPs unsuitable for use. It does not allow for a modification of the efficiency assigned to the BMPs contained in Table 1.
Steven Herzog (Hanover County)	Table 1: We are uncertain where footnote 2 applies. It appears that the intent is for footnote 2 to apply everywhere that footnote1 applies.	Footnote 2 does not apply everywhere that footnote 1 applies. Corrections have been made to Table 1 to indicate where footnote 1 and other footnotes apply.
Terry Siviter (Filterra Stormwater Bioretention Systems)	The proposed Treatment Volume of 1" of runoff should be dropped in deference to the existing definition of Water Quality Volume for purposes of sizing stormwater quality treatment systems, namely treatment of 90% of the annual runoff volume, and/or the first 1/2" of runoff. There is not sufficient scientific basis demonstrating that 1" Treatment Volume is required to meet the Commonwealth's stormwater quality objectives.	The proposed treatment volume is one inch of rainfall, not one inch of runoff. One inch of rainfall is nearly equivalent to one half inch of runoff based on impervious acreage. No amendments have been made.
Terry Siviter (Filterra Stormwater Bioretention Systems)	The Runoff Reduction Method is the design tool used for calculating Total Phosphorus removal from BMPs. This design tool provides a calculation method for treatment-train systems using runoff reduction as the method for removing Total Phosphorus in the entire treatment-train	The Virginia Stormwater Management BMP Clearinghouse technical advisory committee is evaluating procedures for the use of manufactured BMPs, either singularly or in treatment trains.

	system. The Runoff Reduction Method design tool should be modified to allow determination of Total Phosphorus removal in the entire treatment-train system using the individual Total Phosphorus removal rates of each component of the treatment train. Therefore, for a treatment-train system composed of BMPs that have ZERO runoff reduction yet have a specific Total Phosphorus removal rate, one can calculate the cumulative reduction in Total Phosphorus as the stormwater runoff is processed by successive BMPs linked in series fashion. Total Phosphorus removal rates would be established by the BMP Clearinghouse Committee for such treatment-train systems.	
Terry Siviter (Filterra Stormwater Bioretention Systems)	Any existing VA DCR approval of stormwater quality BMPs (both public domain and proprietary) that is current as of the adoption date of these regulations should be grandfathered.	BMPs, including manufactured BMPs, having existing approval will need to be evaluated and re-approved by the Virginia Stormwater Management BMP Clearinghouse technical advisory committee.
Darryl Fisher (Westmoreland County)	Request that requirements be further studied to determine if standardized best management practices for single family and other small development and redevelopment projects can be used as an alternative to individually engineered designs.	Many single family residences are exempt from the VSMP regulations pursuant to §10.1-603.8 of the Code of Virginia. For those not exempt, it is believed important to retain the same standards as is applied to other projects, as these regulations govern permanent stormwater management on a site (in contrast to Erosion and Sediment Control requirements, which address only activities on the site during the construction process).

4VAC50-60-66 Water quantity

Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	For the good pasture condition, where can the coefficient of runoff be found?	Information related to the coefficient of runoff (C-factor) for pasture condition for use in the rational or modified rational method is presently available in Chapter 4 the current Stormwater Management Handbook and will continue to be included in the revised handbook.
Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	“Good engineering practices and calculations” as used in the regulations needs definitive guidance as to what it entails.	“Good engineering practices and calculations” is a term of art recommended by the engineers on the technical advisory committee that assisted with the development of the regulations. This phrase traditionally refers to the body of engineering methods commonly used in the

		practice of engineering. The specific methods applicable to stormwater management are set forth and explained in the current stormwater management handbook and will continue to be included in the new handbook. Additionally, the specific BMP design standards are available on the BMP Clearinghouse.
Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	Under the 1% rule, how is undeveloped land upstream of the project handled? Is it at a future developed rate based on a local comprehensive plan? How does Technical Bulletin #1 apply?	The 1% rule is based on the existing conditions (not the future developed rate) of the watershed to include the developed conditions of the proposed project at the point of stormwater discharge. As is indicated by subsection H of section 66, Technical Bulletin #1 is to be followed in determining flooding and channel erosion impacts to stormwater conveyance systems at the points of discharge. It is not utilized in determining whether the one percent rule is applicable to a site.
Joe Lerch (Virginia Municipal League); Jeffrey Sitler (University of Virginia)	Support revision to the water quantity standards for discharges into an unstable channel.	The amendment made to requirements for discharges to unstable channels is believed to strike a balance between water quantity protection and reasonableness for channel protection. Support for this amendment is noted.
Amar Dwarkanath (City of Chesapeake)	Consideration should be given to coastal plain areas that can not use infiltration best management practices to meet the requirements of 4VAC50-60-66; recommend a coastal plain guidance or supplement be adopted.	While the use of infiltration BMPs may be limited in the selected areas of the coastal plain, the Virginia Stormwater BMP Clearinghouse website contains additional BMPs that are effective in the coastal plain. Land disturbing projects that properly implement BMPs can comply with the water quality and quantity requirements of the regulations.
Keith White (Henrico County)	Section 4VAC50-60-66.B.4 of the final regulations includes language (lines 1219 through 1221) that reads: However, in the case that the pre-developed condition is forested, both the peak flow rate and the volume from the developed site shall be held to the forested condition. In previous discussions (most recently at the VAMSA meeting on October 22, 2009), this provision was explained to require the energy balance evaluation (Qpost x Volumepost ≤ Qpre x Volumepre) back to the forested condition instead of the good pasture condition if the pre-	Amendments have been made to the language of section 66 of the regulations to provide clarity regarding the energy balance equation.

	developed condition was forested. However, the regulatory language clearly requires control of both Qpost and Volumepost, not just the product of the two (the energy balance concept). Providing controls such that Qpost ≤ Qforested and Volumepost ≤ Volumeforested is much more restrictive than the energy balance requirement (it requires extreme detention as well as extreme volume reduction). Based on statements by DCR staff during previous discussions of this language, it does not seem this was the intent. Therefore, we ask this language be revised to reflect the expressed intent – that in the case the pre-developed condition is forested, a forested condition will be used instead of a good pasture condition in the equation on line 1212 of the regulation.	
John Matusik (The Engineering Groupe, Inc.)	On page 29 of 60 lines 1232 and 1233 there is the definition "Q(Developed) = The allowable peak flow rate from the developed site. Such peak flow rate must be less than Q(Predeveloped). Additionallly on page 30 of 60 lines 1237 and 1238 the definition given is "RV(Developed) = The volume of runoff from the developed site. Such volume must be less than RV (Pre-Developed)." Unless I'm missing something I don't understand how the developed discharge and the developed volume are less than the pre-developed discharge and volume. The only way the Q(developed) is less than Q(predeveloped) is if the Q(developed) is the unknown quantity and the equation is re-written as Q(Developed) = Q(Predeveloped) * [RV(Predeveloped/RV(developed)]. The ratio of RV(prevdeveloped)/RV(developed) is less than 1 and when multiplied by Q(predeveloped) would result in the Q(developed) value less than Q(developed). However, as written, there would be confusion. I suggest different wording in lines 1232, 1233, 1237, 1238.	Amendments have been made to the language of section 66 of the regulations to provide clarity regarding the energy balance equation.
Steven Herzog (Hanover County)	**B.4.:** The sentence "However, in the case that the predeveloped condition is forested, both the peak flow rate and the volume of runoff from the developed site shall be held to the forested condition." is not consistent with the	An amendment has been made to subdivision (B)(4) to clarify the intent of that language in a matter similar to the suggestion made by the comment.

	other sections of the regulation and is incorrect. We believe that the following language "However, in the case that the predeveloped condition is forested, forest in good condition rather than pasture in good condition should be utilized in the formulas above." is the intent and that the language should be modified to reflect this. **B.5.:** The definition of RV developed should have the words "Such volume must be less than RV pre-developed." removed. This language contrary to the methodology being utilized whose purpose is to balance runoff rate with runoff volume.	The language in subdivision (B)(5) that is cited by the comment has been removed.
Terence Elkins (James City County Citizens Coalition)	(D) (2): By exempting from sections A and B of this regulation "any development of the site resulting in an increase in the peak flow rate from the one-year 24-hour storm that is less than 1.0% of the existing peak flow rate from the one-year 24-hour storm generated by the total watershed area draining to that point of discharge," you obviously encourage piecemeal development and sprawl rather than clustering. Further, the assumption that both pre and post development flows can be predicted accurately to a resolution of two significant figures (1.0%) is false. As multiple values of predicted flow rates for both pre and post development may be given, an obvious conflict of interests arises when considering which values are ultimately chosen. Setting an exemption value of 1.0% only creates incentives for engineering firms to predict pre and post development flows using the most generous values in order to minimize the difference between them, thus creating an exemption status that does not reflect the true ecological impact of the development.	The one percent rule has historically been utilized in the Erosion and Sediment Control program (which governs water quantity) and piecemeal development has not been experienced as a result. It is not believed that the inclusion of the one percent rule in these regulations will lead to sprawl or piecemeal development.
Terence Elkins (James City County Citizens Coalition)	(B) (4) (a) We oppose changing the runoff threshold in this formula (and in all subsequent references) from "forested" to "good pasture." Good pasture land is only 60% as effective as forested land at retaining water, and peak runoff from "good pasture" is 2 to 3 times higher than from forested land. For the DCR to blithely reduce this standard is irresponsible. In addition to providing an increased function of water retention, forested land also has a greater capacity and effectiveness in sequestering carbon dioxide	The change from forested condition to good pasture condition averages less than a 10% change in runoff curve numbers, as used in the NRCS TR-55 runoff calculation method. For example, using Table 2.1 of TR-55, one inch of rainfall on B soils has no change in runoff value between forested and good pasture conditions.

	and nitrogen that would otherwise be released into the atmosphere and surrounding waterways, respectively. Runoff into unstable natural channels should be held to higher, not lower, standards. This is all the more so because the standard uses a one-year, 24-hour storm as a determinant, and that is a very low (just 2.9 inches) threshold. (C) (4) (a) We again object to the change from "forested" to "good pasture." Flood prevention is not an area in which to compromise.	
Terence Elkins (James City County Citizens Coalition)	(C) (4) (b) We note that the threshold that the DCR uses in this section on flood control is a 10-year 24-hour storm. Why do you use the ten-year storm in flood prevention, where it should be lower (i.e. a one or two-year storm) and a one-year storm in limiting runoff in Section (B), where it should be higher?	The 10 year storm has historically been utilized for flood protection purposes and is also used by many other states. It has proven to be an appropriate standard. While the 2 year storm has historically been utilized for channel protection, experience has shown that the 1 year storm is a more appropriate standard for channel forming flows.
Terence Elkins (James City County Citizens Coalition)	(G) We object to your removal of language permitting municipalities to enforce more stringent standards. Localities must have authority to impose good engineering practices that meet or exceed the standards set by the Virginia Stormwater Management Handbook.	Section 66(A) notes that "Nothing in this section shall prohibit a qualifying local program from establishing a more stringent standard." This language applies to all of section 66, including subsection G.

4VAC50-60-69 Offsite compliance options

John Keifer (City of Norfolk); Amar Dwarkanath (City of Chesapeake); Dwight Farmer (Hampton Roads Planning District Commission)	Request that the board require utilization of local buy-down program where one has been established	It is not believed to be appropriate to require that a local buy down option be utilized in these regulations. However, it is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will encourage the use of local options.
John Keifer (City of Norfolk)	Cost of urban stormwater retrofits is higher than the current limit of $23,900.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will allow for further consideration of the $23,900 limit in the current language, although that figure is believed to be an appropriate average based upon current data.
J. Curtis Bradley	Appears to (1) limit the flexibility in administration needed	It is of note that the final regulations suspend the use of

	by qualifying local programs and (2) to limit or cap the responsibility for phosphorus removal at $15,000 in urban development areas and $23,900 in other areas without regard for the actual cost of removal. Suggestions: (1) in paragraph A specify that the qualifying local program shall determine which of the options 1 through 4 shall be used; (2) in paragraph B make payment of a fee in lieu of the options in paragraph A entirely a local option and (3) in paragraph B remove the $15,000/$23,900 caps and enable the local qualifying program to set fees a the level appropriate to remove the required phosphorus for that jurisdiction.	the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will encourage the use of local options and allow for further consideration of the limits in the current language.
C. Warren Wakeland (Home Building Association of Richmond); Robert Duckett (Peninsula Housing and Builders Association); Barrett Hardiman (Home Builders Association of Virginia); Action Alert*	Do not provide adequate alternatives for projects that cannot meet the new runoff criteria onsite; must be made available for any portion of the pollutant mitigation	As the water quality requirements have been amended to a statewide standard of 0.45 pounds per acre per year, it is believed that on site compliance will be more easily achieved and the state buy down option will not be available at this time. Other offsite options remain available and it is believed that these options, coupled with a less stringent requirement, provide sufficient relief.
Amar Dwarkanath (City of Chesapeake); Randy Bartlett (Virginia Municipal Stormwater Association); Dwight Farmer (Hampton Roads Planning District Commission)	Where a local buy-down program does not exist, the state should invest buy-down revenue near the location of the land disturbing activity.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will allow for further consideration of the use of funds generated when the buy down option does become available.
Amar Dwarkanath (City of Chesapeake); Dwight Farmer (Hampton Roads Planning District Commission)	Buy-down programs should be based on regional cost figures rather than a flat fee approach and should not be subject to this cap ($23,900 is essential a cap for local program buy down option).	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will allow for further consideration of the $23,900 limit in the current language, although that figure is believed to be an appropriate average based upon current data.
Randy Bartlett (Virginia Municipal Stormwater Association); Victoria Greenfield (Arlington County);	Clarify that local governments can require on-site controls for some or all of the pollutant reductions required for a given development project, including when (1) a water quality impairment exists, (2) a TMDL is in place, or (3) an MS4 permit requires retrofitting targets within a locality.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This effectively places the use of offsite controls within the discretion of the qualifying local program.

Randy Bartlett (Virginia Municipal Stormwater Association)	Recommends (1) making availability of state buy down payment a local option and (2) in any case eliminating the $23,900 ceiling on the local phosphorus removal fee.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This effectively places the use of offsite controls within the discretion of the qualifying local program and will allow for further consideration of the $23,900 limit in the current language, although that figure is believed to be an appropriate average based upon current data.
Randy Bartlett (Virginia Municipal Stormwater Association)	If don't remove $23,900 cap, insert the following: "D. From time to time but at least once every three years, the department shall report to the board on the cost of implementing urban BMPs in Virginia. In preparing such a report, the department shall consider information reasonably available from qualifying local programs in addition to other information available to the department. Wherever the board finds that such costs exceed $23,900 per pound of phosphorus, the board shall amend subsection B accordingly".	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will allow for further consideration of the $23,900 limit in the current language, although that figure is believed to be an appropriate average based upon current data.
Randy Bartlett (Virginia Municipal Stormwater Association)	The 50% minimum in 69 B.2.b.i should be replaced with a goal of investing 100% of buy down revenue in the local area. Where opportunities are not available, then and only then would the funds be released for investment in other areas.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will allow for further consideration of the use of funds generated when the buy down option does become available.
Randy Bartlett (Virginia Municipal Stormwater Association); Victoria Greenfield (Arlington County);	Recommends that at least the 0.45 standard for sites less than 1 acre be retained, and instead allow the locality the option, at its discretion, of waiving this requirement (in which case the buy down option could be used as described in current 69 B.3.b)	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. Unless local offsite options are utilized, this will require the achievement of 0.45 pounds per acre per year of phosphorus on all sites at this time.
Randy Bartlett (Virginia Municipal Stormwater Association)	Insert "for purposes of water quality standards, TMDL and MS4 permits compliance, reductions accomplished through the use of revenue from such payments shall be credited to the locality where the land disturbing activity occurred" and the end of B.2.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed.
Keith White (Henrico County)	Section 4VAC50-60-69.B.3 provides for several stormwater quality compliance options with respect to payments to the	Similar conditions could be appropriate for inclusion in a comprehensive stormwater management plan or pro

	Virginia Stormwater Management Fund (partial payment for new development disturbing greater than or equal to one acre, complete payment for new development disturbing less than one acre of disturbance, partial payment for development on prior developed lands disturbing greater than or equal to one acre, and complete payment for development on prior developed lands disturbing less than one acre). Given that these compliance options are allowed when payments are made to the state fund, we feel inclusion of any or all of these options would also be acceptable options in a local comprehensive watershed management program when a local pro rata fee / fund is available. Is this an appropriate conclusion?	rata program. Any such plan must be approved by the Board prior to its implementation.
Keith White (Henrico County)	Based on our reading of the language in §4VAC50-60-69.B , it appears that if the local in lieu fee for stormwater quality compliance exceeds $23,900 per pound (either within or outside a UDA), a developer can make payment to the state fund at $15,000 per pound in a UDA or $23,900 per pound if located outside a UDA. If this is the case, this language creates a "cap" on local charges even though projects resulting in equivalent water quality benefit may cost more than that. Is our understanding of this provision correct?	When it becomes effective (upon the adoption of a standard more stringent than the 0.45 standard in the final regulations) The buy down option of section 69 is available, with conditions, where no other offsite options are available, where the fee established by a qualifying local program to offset a pound of phosphorus removal onsite exceeds $23,900, or where a qualifying local program otherwise elects to allow its use. The commenter correctly understands the availability of the buy down option in light of a locally-established pro rata fee.
Shannon Varner (Troutman Sanders on behalf of the Chesapeake Bay Nutrient Land Trust)	All of the offsite options in proposed subsection A and B fail to protect water quality except offsets. When offsets are available they should be given priority, otherwise nutrients will continue to enter state waters unabated.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. Offsets remain available and the priority given to them is explained in the Code of Virginia.
Shannon Varner (Troutman Sanders on behalf of the Chesapeake Bay Nutrient Land Trust)	Proposed state buy-down prioritizes future projects with potentially little nutrient reduction per dollar spent.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed.
Shannon Varner (Troutman Sanders on behalf of the Chesapeake Bay Nutrient Land	The buy down fee should be a minimum with flexibility to meet nutrient reduction needs; if anything, the $15,000 figure should be set as a minimum with a great degree of	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the

Trust)	flexibility to increase that fee as DCR gains experience with the program.	Chesapeake Bay Watershed. This will allow for further consideration of fee amounts.
Shannon Varner (Troutman Sanders on behalf of the Chesapeake Bay Nutrient Land Trust)	Default buy down provisions should be applicable to nonpoint nutrient offsets as well; subsection B 3 would allow default buy down on certain projects without examination of on-site controls; guidance on nonpoint nutrient offsets should be amended to allow this same default provision.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. While the existing provisions of the buy down program are believed appropriate, this will allow for additional consideration and any necessary amendments could be made through a future regulatory action.
Shannon Varner (Troutman Sanders on behalf of the Chesapeake Bay Nutrient Land Trust)	Move immediately to develop criteria for determining whether other offsite options are substantially equivalent to offsets as required by HB2168.	It is recognized that there must be a determination as to whether other offsite options are substantially equivalent to nonpoint nutrient offsets. The recommendation is recognized, but is believed to be more appropriately addressed through a separate action of the Board rather than within this regulatory action.
Barrett Hardiman (Home Builders Association of Virginia)	Offset options offered are less comprehensive than what is currently available under the present stormwater regulation. Statewide offset option is one of last resort; could result in price gouging from private providers and local governments and/or the loss of useable acreage in another parcel of developable land owned by the developer.	The offsite options contained in section 48 include all options available under the current regulations, with the addition of nonpoint nutrient offsets. If a standard more stringent than 0.45 pounds per acre per year of phosphorus is adopted by a future regulatory action of the Board, the buy down option will also become available.
Jon Capacasa (U.S. Environmental Protection Agency)	When a permittee can demonstrate that BMP utilization to meet design loads is not feasible, EPA supports the use of offsite controls to meet post-development pollutant loads, provided that the use of offsite controls does not lead to the impairment of local water quality; credits for offsite controls can only be generated after the installation of required baseline BMPs necessary to meet water quality objectives.	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. While the existing language is believed to protect water quality, this will allow for further consideration of many aspects of the buy down program, and needed adjustments could be made through a future regulatory action.
Terence Elkins (James City County Citizens Coalition)	Buy Down: We strenuously object to this section in its entirety. This capitulation gives developers the opportunity to build in ecologically sensitive, hard-to-mitigate areas and then simply pay a fee to mitigate a less sensitive area that is easier and cheaper to work. This works in direct opposition to common sense and to the goals of the enabling legislation. This is also another instance where the consistent application of regulations across jurisdictions	It is of note that the final regulations suspend the use of the state buy down option until such time as more stringent standard is adopted for sites within the Chesapeake Bay Watershed. This will allow for further consideration of many aspects of the buy down program, and needed adjustments could be made through a future regulatory action.

	for the purpose of greater environmental integrity is completely undermined, resulting in the ability of developers to shop for the jurisdiction with the most lenient development codes. It will place the burden upon jurisdictions and pressures them to lower their environmental standards in an attempt to secure development projects. Finally, it creates a management nightmare and encourages opacity in government. Assuming the DCR will pursue this despite its obvious shortcomings, our group has the following objections to specific revisions: (A)(4)c. This section should be deleted. In reality, new development adds more nutrients into the bay unless the development utilizes a nutrient management plan and a stormwater management plan that includes infiltration-type LIDs. If DCR insists on keeping this section, it must require a nutrient management program and require the development to minimize offsite runoff with onsite LID features. (B)(1) $15,000 per pound of phosphorous over the .28 threshold is woefully inadequate when measured against the economic loss of the Chesapeake Bay. (B)(2) If the DCR is going to permit continued pollution of our watersheds, at least let the fees collected remain in the affected jurisdiction, since the responsibility for mitigating the damage will ultimately fall there.	

4VAC50-60-72 Design storms and hydrologic methods

Terry Siviter (Filterra Stormwater Bioretention Systems)	Use of NRCS rainfall distribution and models should be expanded to Proprietary BMPs, including calculation of Routed Volumes for compliance with Treatment Volume requirements. For high-flow proprietary BMPs, such Routed Volumes are a small fraction of the Treatment Volume and therefore require significantly smaller physical storage volume. The allowance of these calculation methods should include but are not limited to NRCS TR-55 methods described in Chapters 2, 4, 5 and 6, and Equations 2-1 through 2-5, Equations 4-1, Equations 6-1 through 6-3,	The Virginia Stormwater Management BMP Clearinghouse is developing procedures applicable to the use of manufactured BMPs. This comment will be considered by the Clearinghouse technical advisory committee.

	Figure 2-1, Exhibit 4-II and Figure 6.1.	

4VAC50-60-74 Stormwater harvesting

Ellen Gilinsky (Virginia Department of Environmental Quality)	When you refer to being consistent with federal, state and local regulatory authorities - that seems vague. We are not aware of any federal laws or regulations, or local ordinances adopted in Virginia that relate directly to the reclamation and reuse of stormwater. At the state level, design specifications and treatment standards for rainwater harvesting systems are included in the Construction and Professional Services Manual published by the Virginia Department of General Services, Division of Engineering and Buildings. This manual, however, does not address the reclamation and reuse of all types of stormwater and applies only to state construction projects. The Water Reclamation and Reuse Regulation, 9VAC25-740, addresses the reclamation and reuse of domestic, municipal or industrial wastewater, and sewage, but specifically excludes gray water and by definition would exclude the reclamation and reuse of stormwater. Therefore, we believe it is important for the DCR regulation to address regulatory standards and operational requirements for the reclamation and reuse of stormwater that are protective of state waters and public health, and minimize the direct discharge of pollutants into state waters.	The Department has developed extensive BMP design specifications for rainwater harvesting BMPs. However, as also noted, we do not have sufficient authority to prescribe any operational requirements concerning the reuse of the captured stormwater. The regulations as developed, suggest potential uses of the stormwater and include a non-exhaustive list of example uses for harvested stormwater, including landscape irrigation systems, fire protection systems, flushing water closets and urinals, and other water handling systems, much of it modeled after DGS's standards on rainwater harvesting systems. Additionally, the intent here is not to reference any other body's standards for using harvested stormwater; rather, the intent is essentially that the Board encourages stormwater harvesting so long as no other authority prohibits the use of stormwater for these purposes-i.e., that no other federal, state, or local agency having jurisdiction over a project has prohibited harvested stormwater from being utilized for a desired purpose. Further, the Department of Health, the Department of Housing and Community Development, DCR, and others are in discussions regarding the reconciliation of their regulations to facilitate the use of rainwater harvesting.
Ellen Gilinsky (Virginia Department of Environmental Quality)	How are you thinking of ensuring compliance with this section - i.e., is this something that would be part of a stormwater permit?	A developer is required to meet the new water quality and quantity standards embodied in the regulations. A developer will be allowed to utilize a suite of BMPs to achieve these reductions. The BMPs selected by the developer have specified nutrient removal efficiencies when built to the design specifications. At the end of the day, a developer must meet his required water quality and quantity reductions through the implementation of these BMPs, as they are included in the Stormwater Pollution Prevention Plan (SWPPP) that is developed as

		a permit requirement. During construction, site inspections will ensure that the BMPs are being constructed properly and post construction requirements for inspections and BMP maintenance have also been included in the regulations.

4VAC50-60-92 Comprehensive watershed stormwater management plans

Keith White (Henrico County)	In developing a local comprehensive watershed management program, localities may want to submit concepts and ideas to DCR for conceptual "buy-in" before spending time and resources to fully develop the details ultimately needed for implementation. This is especially true for program provisions that take advantage of the provisions in §4VAC50-60-69.A.1 and 2 that allow for offsite reductions and pro rata payments. In the past, state agencies have been reluctant to formally review and provide comments for draft proposals. Instead, formal review was delayed until local adoption. Given the complexity of the regulations and the wide variations in local program components, is there (or will there be) an interim DCR review process that localities can take advantage of to make the best use of our time and resources?	Localities may submit draft comprehensive watershed management programs to DCR for review and comment. However, DCR staff will review the draft comprehensive watershed management plans in order of receipt and on an as time is available basis. DCR staff cannot guarantee a set review time limit for submitted plans.
David Nunnally (Caroline County)	Comprehensive watershed plans should be reviewed and approved by the locality. Perhaps Board approval would be appropriate for multi-jurisdictional swm plans or other similar large scale plans. However, as proposed, Board approval would be required for even the smallest 'regional' coordination of swm protection. This section, as proposed, imposes the unreasonable burden of obtaining Board approval of regional or watershed plans. The details of this proposed requirement are not provided (for example, timeline for review/approval, plan requirements, etc.). The seemingly simple act of submitting such plans to DCR for review creates significant inefficiency. In addition, the proposed amendment requires	Comprehensive watershed stormwater management plans are intended to be reviewed by the Board prior to implementation to ensure that results equivalent to those required by the regulations will be achieved. These plans can be approved prior to a development being proposed or contemporaneously with several developments being proposed. The review and approval process is not believed to be an unreasonable requirement.

	SWC Board approval if any there are any changes in land use (again, a vague term that is subject to interpretation). The Virginia SWM Act and Regulations do not appear to provide any procedures, etc. for Board approval of regional plans. This requirement appears to be in conflict with the Virginia SWM Act, specifically 10.1-603.3.E.3 and H (coordination of the permitting process, locally), 10.2-603.8 (encourages development of regional and watershed approaches), and 10.1-603.7 (includes provisions for regional and watershed studies). Should DCR have concerns that a locally approved plan or regional/watershed plan is inconsistent, the local swm review provides the proper review and analysis. And on a more day-to-day basis, DCR staff should endeavor to create a working relationship with the local programs, to provide technical assistance and advice, rather than this proposed requirement. Local swm programs are authorized to approve and administer the swm program for individual projects within a given region or watershed. Localities (and property owners, developers, etc.) should not be burdened for coordinating and cooperating, effectively and efficiently, in the local program.	
Jeffrey Sitler (University of Virginia)	Already have 2 approved regional stormwater management plans; facilities were installed and documented excess water quality and quantity treatment capacity for future projects; how will proposed regulations affect the current credit system that has been established under our current plans; very difficult to correlate the current and proposed methodologies for calculating water quality and quantity compliance; suggests that approve regional stormwater management plans be grandfathered such that the approved current credit banking system for water quality and water quantity are maintained and managed under the current methodology.	Existing regional stormwater management plans will need to be reviewed and approved by the Board as comprehensive stormwater management plans. Once approved, they may be utilized.

4VAC50-60-99. Regional (watershed-wide) stormwater management plans

David Nunnally (Caroline County)	This section refers to 4VAC50-60-92 which burdens the planning process by requiring Board approval of the regional plan, as well as "any amendments" to the plan, rather than allowing local program approval and implementation as currently authorized under existing regulation (ref 4VAC50-60-90). Development projects that are in the planning process (or 'significant affirmative government act') should be allowed to proceed, as planned, with local approval, without the having to obtain Board approval. In addition, the administrative procedures (for example, plan review timelines, plan details, etc.) for such Board approval are not provided	Comprehensive stormwater management plans utilized by qualifying local programs must be approved by the Board, either during its review and authorization of a qualifying local program or thereafter. Older regional plans are not intended to be utilized after the approval of a qualifying local program unless they have been approved by the Board. Grandfathered projects may utilize comprehensive stormwater management plans that are approved, as well as the additional offsite options available in section 69.

Part III General Issues

John Keifer (City of Norfolk)	Suggest setting a specified date for all of the local approved programs to go into effect; different implementation dates will have a detrimental affect on development in our community	The implementation dates for qualifying local programs is set out in the Code of Virginia (§10.1-603.3) and the Board does not have the authority to alter this schedule absent further legislation.
Andrew M. Scherzer and Thomas Balzer; Balzer and Associates, Inc.	If a locality has a policy that is in conflict with the regulations, how is that handled?	In accordance with Part IIID of the regulations, localities seeking to adopt qualifying local programs will submit application packages for review that must demonstrate compliance with the requirements of the regulations before the Board's approval may be obtained. In addition, the application packages must identify areas in which the locality is proposing to be more restrictive than the proposed regulations, as permitted (with conditions) by §10.1-603.7 of the Code of Virginia. The Board will review the application package and, if the proposed program complies with the regulatory requirements, authorize a locality to administer a qualifying local program. As noted above, qualifying local programs are authorized by the regulations to limit the use of specific BMPs in appropriate cases. In such cases, other BMPs could be utilized by the operator to meet water quality and quantity requirements.

4VAC50-60-108 Qualifying local program stormwater management plan review

Steven Herzog (Hanover County)	**A.3.:** This section is problematic for several reasons. First, water from infiltration type BMP's, which are required/encouraged by these regulation, will often come to the surface and become surface runoff. How is this to be addressed? Second, the methods required by the regulations address stormwater runoff from storm events, not surface flow from all sources. The regulations provide no guidance on how subsurface flows being converted to surface flows should have handled. Third, water from cisterns and other rain capturing devices is intended to be placed on the surface at a later date, normally for irrigation purposes. It seems wasteful to have to address issues such as this in the plan. We would recommend deleting this section or limiting its scope to an area of particular regulatory concern. We are uncertain what the area of concern is and so are not in a position to suggest language at this time.	The storage capacity of an infiltration BMP and runoff occurring after the BMP has filled is accounted for in runoff calculations. Stormwater that flows through an underdrain of an infiltration practice to the conveyance system typically occurs after the conclusion of a storm event. The language utilized in this subdivision relates to instances where subsurface flows are purposely converted to surface runoff, such as through pumping to protect basements and foundations during storm events.

4VAC50-60-112 Qualifying local program authorization of coverage under the VSMP General Permit for Discharges of Stormwater from Construction Activities

Joe Lerch (Virginia Municipal League)	Separate the administration of the VSMP General Permit for Discharges of Stormwater from Construction Activities from the technical requirements to treat the discharge from post-construction stormwater runoff.	The Construction General Permit is the mechanism by which the technical criteria have been made effective as to a regulated land disturbing activity under the Board's administration of the VSMP program. It is intended that compliance with the technical criteria will remain a requirement of the Construction General Permit following authorization of a qualifying local program.

4VAC50-60-114 Inspections

Randy Bartlett (Virginia Municipal Stormwater Association)	Supports allowing the local program develop a strategy with alternative methods for addressing maintenance of BMPs on individual lots; also supports the clarification that local governments may continue in their discretion to require maintenance agreements to ensure long-term BMP performance, even where an alternative to routine	Additional flexibility for maintenance agreement and long term inspection requirements for stormwater management BMPs located on and designed to primarily treat the runoff from an individual residential lot is deemed appropriate and support for the amendments is noted.

	inspections is used.	
Steven Herzog (Hanover County)	D.: We would recommend that the language be changed to read "A qualifying local program shall develop a strategy for addressing maintenance of stormwater management facilities designed primarily to treat stormwater runoff on an individual residential lot. …" It appears to us that the language as currently drafted might require that drainage divides follow individual lot lines, which is often not the case, for this section to apply. We don't believe that this is the intent of this section.	The requested amendment has been made.

4VAC50-60-122 Qualifying local program exceptions

Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	What is the appeal process to a decision of a local program?	As with other decisions of the Board or a qualifying local program, determinations as to requests for variances are subject to the hearings and appeals provisions of §§10.1-603.12:6, 603.12:7, and 603.13 of the Code of Virginia (please review these sections for greater detail). These sections of the Stormwater Management Act give any permit applicant or permittee who is aggrieved by any action of the permit issuing authority or Board a right to a formal hearing provided the conditions of those sections are met. Judicial review of permit and enforcement decisions is also provided.
Jon Capacasa (U.S. Environmental Protection Agency)	There is a need for greater specificity as to when an exception is appropriate to ensure that the permit satisfies the requirements of 40 C.F.R. §122.44(s), both as to small construction activity and other construction activity; should establish a more detailed standard so that the local program can be evaluated with regard to the appropriate use of exceptions and in reference to 40 C.F.R. §122.44(s).	Similar conditions for the granting of an exception have been utilized historically under the Chesapeake Bay Preservation Act program and the Department and localities have experience with these conditions. The exception criteria will not allow for all requirements to be ignored by a site (any exception must be the minimum necessary to afford relief), and all offsite options must be utilized before any exception to a portion of the water quality technical criteria may be granted. It is believed based on historical experience that exceptions will be granted on a very limited basis, and that the maximum achievable onsite will still be required even where an exception is considered appropriate.

4VAC50-60-124 Qualifying local program stormwater management facility maintenance

Keith White (Henrico County)	The final regulations address our concern related to required inspections of BMPs on individual lots. However, the language in §4VAC50-60-124.A.2 that reads …provided that it is demonstrated to the satisfaction of the qualifying local program that future maintenance of such facilities will be addressed through a deed restriction or other mechanism enforceable by the qualifying local program" still implies that the locality would be responsible for enforcing long term maintenance of these facilities. When we discussed this at the VAMSA meeting on October 22, 2009, it was indicated that was not the intent and that the language was a way to "enable" localities to enforce maintenance if they choose. It was also stated that this would not be an issue of consistency during future program reviews if the locality chose not to pursue maintenance of BMPs on individual lots. Based on our discussion, we ask that either this language be revised to clarify the intent (to provide localities the enabling authority to enforce future maintenance of these BMPs but not require that we do so) or provide a response that this issue was discussed and it is not the intent of the regulation to require localities pursue future maintenance of these BMPs.	Additional language has been added to section 124 to clarify that taking enforcement on these BMPs will be at the discretion of the qualifying local program, and not mandatory upon the qualifying local program.
Steven Herzog (Hanover County)	A.2.: We would recommend that the language be changed to read "…stormwater management facilities designed primarily to treat stormwater runoff on an individual residential lot, provided it is demonstrated …". It appears to us that the language as currently drafted might require that drainage divides follow individual lot lines, which is often not the case, for this section to apply. We don't believe that this is the intent of this section.	The requested amendment has been made.
Terry Siviter (Filterra Stormwater Bioretention Systems)	Annual maintenance requirements of BMP's (both public domain and proprietary) should be included in these regulations. They should be enforced at both local and state levels. What is the purpose of installing these BMP's if they do not perform as designed over time due to poor or	The regulations require maintenance agreements and long term inspections for most BMPs. BMPs located on and designed to primarily treat the runoff from an individual residential lot may be addressed by a qualifying local program through a separate strategy.

	no maintenance.	Local oversight of long term maintenance will be evaluated by the Board in its review of a qualifying local program.

4VAC50-60-136 Stormwater management plan review

Andrew M. Scherzer and Thomas Balzer (Balzer and Associates, Inc.)	We are of the opinion that the Department should review initial plans, or give the consultants the ability to discuss preliminary plans with department staff.	Subsection C of section 136 states that the Department "shall not review or approve initial stormwater management plans". In this context, "initial stormwater management plans" refers to plans that may be generally regarded as clearing and grading plans. Certain localities allow land disturbance to begin upon approval of these types of plans, without the full submission of a complete stormwater management plan that covers the projected conditions of the site. The prohibition against the Department reviewing or approving initial stormwater management plans prevents this practice (approval of clearing and grading plans, commencement of land disturbance, and then submission of a full stormwater management plan after land disturbance has begun) from occurring where the Department administers the local stormwater management program. The proposed wording does not prohibit consultation between the Department and engineers and consultants during the development of stormwater management plans. This practice can be beneficial, as you note, and section 136 does not prevent this from occurring.

Commenters via Action Alert

Timothy Smits
Lisa Smits
Amanda Shultz
Roy Beckner, Jr.
F. Gary Garczynski (National Capital Land & Development Company)
Cindy Stackhouse (Virginia Association of Realtors)
Kevin McNulty (LifeStyle Builders and Developers, Inc.)
Joseph Jacobs (Elm Street Development)
Betty Tolson
James Owens (Harvey Lindsay Commercial Real Estate)
Wendell Gibson, Inc.
Top of Virginia Building Association (30 signatures)
Logene Drexler
Lisa Oglesby
Shields Construction Company, Inc.
Phillips Construction. LLC.
William Luttrell
Dwayne Smith
Bonnie Newsome
Wanda Witchey
Jeanne Albert
Giles Henry, Jr.
Bob Williams (Tricord Incorporated)
William Witt (WB&E Construction, Inc.)
Matt Winkler
Joe Annarino
David Lesser (DML Development LLC)
Ihsane Mouak
Franklin Wilsons (McKinney & Company)
Lee Hilbert
Mark Caskey (Caskey Construction Company)
George Phelps (Napolitano)
James Gresock (S.L. Nusbaum Realty Company)
Lisa Phillips
Shawn Smith
Ainslie Group
Tup Purcell (C.T. Purcell Excavating, Inc.)
James Bonnell
Kevin Montague
Robert Mullins
J. Alexander Boone (Boone Homes, Inc.)
Greg Richardson (Crestline Homes, LLC)
Yvonne Whitelaw
Ruby Ainslie
John Ainslie
Denise Russell
James Ingle
Russell Willis, III (Design Craft Homes)
Jeff Ellis (Pella Windows and Doors)
Lisa May
Bob Miller (MSA)
Stephen Brewer (Wilcox & Savage)
Sherman Patrick, Jr. (Compton & Duling, L.C.)
Mark Simms
Tracy White
Scott Smith (Draper Aden Associates)
Dean Stone (Stone Engineering, Inc.)
David Reel
Nancy Youngblood (Youngblood Properties, LLC)
Evan Bryant
Charlie King
Tom Crouthamel
Scott Sleeme
Ed Kimple (Thalhimer)
Tim Boone (National Asphalt Manufacturing Corporation)
G.L. Robinson (Burton & Robinson, Inc.)
Janet Turner (Mitchell Homes, Inc.)
Kyle Hoffer (Mitchell Homes, Inc.)
Guy Lowry

Ben Hudson (Northern Neck Homes, Inc.)
Thomas McMahon (McMahon Homes, Inc.)
John Knibb (Divaris Real Estate, Inc.)
Pete Kotarides (Tidewater Builders Association)
Mike Woolwine (Hughes Architects)
Daniel Plucinik
Suzanne Waterfield
Carla Coffey (Arcadia Building Company)
Estevan Segura (FlagStaffers, LLC)
Jerry Brown (Brandonbilt Foundations, Inc.)
Steve Lawson (The Lawson Companies)
Heather FitzGerald (Rent-A-Crane, Inc.)
Allen Harrison (Battlefield Homes, Inc.)
Laszlo Eszenyi (The Heavy Construction Contractors Association of Northern Virginia)
Joe Quetsch (Quarles Energy Services)
Harvey Gold (Fredericksburg Area Builders Association)
Tracy Meade
George Duffield (Duffield Hauling, Inc.)
Rhonda Allison
John Scott
Ollin Toler
Ginger Slavic
Sandra Cousins (Mitchell Homes, Inc.)
George Bryant (Koontz-Bryant)
Alan Nash
Tom Lovegrove (BAyview Construction Company)
Richard Entsminger
James Gresock (S.L. Nusbaum Realty Company)
John Olivieri
J. Lohr
Meredith Ward (Valley Engineering)
George Rhodes
Frank Gibson (Virginia Craft Homes, Inc.)
Richard Costello (AES Consulting Engineers)
Paula McCarty
Gregory Taylor (Parker Design Group)
Vincent Haynie (Ingram Bay Contracting, Inc.)
Susan Hadder
David Fahy
F. Craig Reed (Read Commercial Properties)
Edwin Sompayrac
Mark Trostle (Richmond American Homes of Virginia)
Peter Eckert
David Blalock, Jr. (FSK Property Management)
Jamie Clark (Grubb & Ellis/Harrison & Bates)
Scott Dearnley
John Leitch (Grubb & Ellis/Harrison & Bates)
Bill Ledbetter (Roudabush, Gale and Associates)
Bruce Milam (Grubb & Ellis/Harrison & Bates)
William Missell (Rinker Design Associates, P.C.)
David Milstead
Seth Turner (Heritage Construction Company, LLC)
Fred Corbett
Robert Wells
Christopher Wells
Kenneth Wells
Jon Anderson (Evergreen Homecrafters, LLC)
Jay Rowe
Thomas Kellam
Sarah Kellam
Skip Eastman (Chesapeake Structural Systems, Inc.)
Dana Walker
Hyde Benton
Clay Grogan (Parker Design Group)
Mark Richardson
Tom Page (GS Virginia)
Jeffrey Huentelman (LPS)

14 signatures were not clearly legible.

All changes made in this regulatory action

Please detail all changes that are being proposed and the consequences of the proposed changes. Detail new provisions and/or all changes to existing sections.

The following chart provides a summarization of the changes to the existing regulations:

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
4VAC50-60-10		Section 10 contains definitions that apply throughout the regulations.	Newly defined terms are added to this section, including: 1) ”Act”: to be defined as the VA Stormwater Management Act (§10.1-603.1 et seq.). 2) “Comprehensive stormwater management plan”: new term used in section 92 and section 69; similar to the concept of a “regional (watershed wide) plan” utilized in the current regulations. 3) “Drainage area”: term is utilized in other definitions, and in sections 63, 72, 108, and 114. 4) “Flood fringe”: utilized in other terms that are relevant to section 66. 5) “Floodplain”: utilized in other terms that are relevant to section 66. 6) “Floodway”: utilized in other terms that are relevant to section 66. 7) “Karst features”: used in other terms in section 10, in section 85, section 108, and section 126. 8) “Manmade stormwater conveyance system”: utilized in other terms and section 66. 9) “Natural channel design concepts”: utilized in other terms that are relevant to section 66. 10) “Natural stormwater conveyance system”: utilized in other terms and in section 66. 11) “Natural stream”: utilized in the definition of “channel”. 12) “Peak flow rate”: utilized in other terms and in section 66. 13) “Point of discharge”: utilized throughout section 66. 14) “Pollutant discharge”: as amended, intended to replace the current

			term “nonpoint source pollutant runoff load” or “pollutant discharge”. Utilized in various sections of the greater body of VSMP regulations. 15) “Prior developed lands”: utilized in section 63 and section 69. 16) “Qualifying local stormwater management program” or “qualifying local program”: term used in various places throughout Parts II and III, especially Part IIIA. 17) “Restored stormwater conveyance system”: term used in section 66. 18) “Runoff characteristics”: term used in other definitions and in section 66. 19) “Runoff volume”: defined as the volume of water that runs off the site of a land disturbing activity from a prescribed design storm. 20) “Site hydrology”: term utilized in section 66. 21) “Stable”: term is used in the definition of “unstable” and in section 66. 22) “Stormwater conveyance system”: term is used in other definitions and in section 66. 23) “Stormwater management standards”: term used in sections 20 and 40. 24) “Unstable”: term is used in section 66. 25) “Virginia Stormwater Management Handbook”: term is used in section 66. 26) “Chesapeake Bay Watershed”: term is used in section 63. 27) “Karst area”: term is used in other definitions in section 10 and in section 85. 28) “Urban Development Area” or “UDA”: term is used in section 63 and section 69. Amendments are made to the definitions of existing terms, including: 1) “Adequate channel”: to add clarity. 2) “Best management practice” or “BMP”: to align the title of the definition with other terms in section 10. 3) “Channel”: to add clarity. 4) “Development”: to add clarity; also does remove the requirement that residential activities result in three or more dwelling units to be considered development. 5) “Environmental Protection Agency” or “EPA”: to align the title of the definition with other terms in section 10. 6) “Facility or activity”: delete the word “program”, as it is already the last word represented by the letter P in “VSMP”.

			7) “Flooding”: addition of the word “thereby” for clarity purposes. 8) “Impervious cover”: addition of the word “conventional” in two places; changes to the language concerning gravel to include gravel surfaces that may become compacted within the definition. 9) “Land disturbance”: amendment to abbreviate “federal Clean Water Act” as “CWA”. 10) “Local stormwater management program” or “local program”: added language to specify that the Department may administer a local program in some cases, to add plan review to the list of items included in a local program, and to remove the discussion of ordinance contents, as the Department will not utilize an ordinance and the definition otherwise provides for use of an ordinance by a locality operating a local program. 11) “Major municipal separate storm sewer outfall” or “major outfall”: to align the title of the definition with other terms in section 10. 12) “Municipal Separate Storm Sewer System Management Program” or “MS4 Program”: deletion of “Virginia Stormwater Management”, as the term “Act” is now proposed to be defined. 13) “National Pollutant Discharge Elimination System” or “NPDES”: to align the title of the definition with other terms in section 10. 14) “Owner”: addition of “or pollutants” to add clarity. 15) “Permit-issuing authority”: removal of description of the responsibility of a permit issuing authority, as these responsibilities are described more fully in proposed Parts IIIA and IIIB. Addition of “with a qualifying local program” to clarify which localities may be permit-issuing authorities. 16) “Pre-development”: changes the time for determining a pre-development land condition to the time of plan submittal, rather than the current time of plan approval. 17) “Privately owned treatment works” or “PVOTW”: to align the title of the definition with other terms in section 10. 18) “Publicly owned treatment works” or “POTW”: to align the title of the definition with other terms in section 10. 19) “Site”: amendments are proposed for clarification, including additional language regarding lands that have frontage on tidal waters. 20) “Stormwater management plan”: proposed amendment simply indicates that a plan could consist of more than one document. 21) “Stormwater Management Program”: amendment would delete “Virginia Stormwater Management”, as the term “Act” is now proposed to be defined. 22) “Virginia Stormwater Management Program” or “VSMP”: to align the

			title of the definition with other terms in section 10, and to utilize the abbreviated terms for the federal Clean Water Act and the Virginia Stormwater Management Act. 23) "Virginia Stormwater Management Program permit" or "VSMP permit": to align the title of the definition with other terms in section 10. 24) "Water quality standards": to utilize the abbreviated terms for the federal Clean Water Act and the Virginia Stormwater Management Act. 25) "Watershed": amendments are proposed to clarify the interaction of this definition in situations involving karst. 26) "Linear development project": to clarify that sewer and water line projects fit within the meaning of this term. Terms are deleted due to their no longer being used in the regulations, including: 1) "Aquatic bench": a component of a stormwater pond; term is not useful in the regulations and the concept will be included in the VA Stormwater Management Handbook if necessary. 2) "Average land cover condition": formerly had relevance to water quality treatment requirements, but is not utilized by the new proposed Runoff Reduction Method. 3) "Bioretention basin": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 4) "Bioretention filter": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 5) "Grassed swale": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 6) "Infiltration facility": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 7) "Nonpoint source pollutant runoff load" or "pollutant discharge": "nonpoint source pollutant runoff load" is no longer utilized; a new definition is proposed to be created for "pollutant discharge". 8) "Regional (watershed wide) stormwater management facility" or "regional facility": term is not utilized in the regulations. 9) "Regional (watershed wide) stormwater management plan" or "regional plan": term has been replaced with "comprehensive stormwater

			management plan". 10) "Sand filter": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 11) "Shallow marsh": a component of an extended detention basin; term is not useful in the regulations and the concept will be included in the VA Stormwater Management Handbook if necessary. 12) "Stormwater detention basin" or "detention basin": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 13) "Stormwater extended detention basin" or "extended detention basin": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 14) "Stormwater extended detention basin enhanced" or "extended detention basin-enhanced": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 15) "Stormwater retention basin" or "retention basin": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 16) "Stormwater retention basin I" or "retention basin I": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 17) "Stormwater retention basin II" or "retention basin II": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 18) "Stormwater retention basin III" or "retention basin III": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 19) "Vegetated filter strip": a type of best management practice. All BMPs are proposed to either be listed in section 65 of the regulations or included on the Virginia Stormwater BMP Clearinghouse. 20) "Water quality volume": term is no longer used in the regulations.
4VAC50-60-20		This section sets out the overall purposes of the	Additional language is added to this section describing generally the

		Virginia Stormwater Management Program (VSMP) Permits regulations.	concept of a "qualifying local program" (which is further defined in Part IIIA) and Board procedures related to stormwater management programs.
4VAC50-60-30		This section lists the entities and projects that are subject to the Board's regulations pursuant to the Code of Virginia.	Clarifying language is added specifying that the Board's regulations apply to the Department in its oversight of locally administered programs or in its own administration of a local program and to an entity that establishes an MS4 program. Language is also added to note that some land disturbing activities are specifically exempted from the Board's regulations by the Code of Virginia.
4VAC50-60-40		The current language simply states that Part II specifies the technical criteria for stormwater management programs and land disturbing activities.	Greater explanatory language is added to set forth the Board's authority for the requirements of Part IIA under the Virginia Stormwater Management Act.
	4VAC50-60-45	The current applicability language of Part II is found in section 40 (described above).	Greater explanatory language is added to relate the applicability of the technical criteria established in Part IIA, and to specify that this technical criteria shall not take effect until a local program is approved by the Board, or in accordance with an implementation schedule for a state agency.
	4VAC50-60-48	The current regulations contain no provision for grandfathering of projects that were in progress as of its effective date.	This section indicates that all projects that receive permit coverage prior to the adoption of a qualifying local program will be held to the technical criteria contained in the existing general permit. It additionally adds a provision in subsection B that specifies that if certain criteria are met, certain land disturbing activities can remain subject to the existing technical criteria (Part IIB) until June 30, 2019. Projects which continue beyond this date would then need to come into compliance with the new technical criteria in Part IIA thereafter. Subsection C specifies that where a land disturbing activity is part of a common plan of development or sale that received permit coverage prior to July 1, 2010, the land disturbing activity will be subject to the existing technical criteria found in Part IIB. Finally, subsection D provides grandfathering provisions for projects with governmental bonding or private financing.
4VAC50-60-50		The current section sets forth general requirements related to Part II of the regulations, including measurement points, design storms, assumptions to be made in computations, requirements for compliance with other applicable regulations, and other requirements.	This section is deleted. Most of the provisions of the current section are proposed to be incorporated into other sections of the regulations where similar provisions are located. A new section 53 (explained below) is proposed to describe a general requirement of Part IIA.
	4VAC50-60-	The current general requirements of Part II are	This new section sets forth the goals and objectives of Part IIA, and also

	53	set forth in section 50 (described above).	specifies that all control measures must be employed in a manner which minimizes impacts on receiving state waters. More specific requirements are set forth in later sections within Part IIA.
	4VAC50-60-56	The current section 50 (described above) contains a statement that land disturbing activities shall comply with the Virginia Erosion and Sediment Control Law and Regulations.	This new section separately sets out the concept that nothing in these regulations limits the applicability of other laws and regulations (not just the Erosion and Sediment Control Law and Regulations), nor do they limit the ability of other agencies to impose more stringent requirements as allowed by law. Separately setting this information out in its own section is intended to increase clarity concerning the interaction of these regulations and other laws, regulations, and authorities.
4VAC50-60-60		This existing section sets forth the water quality requirements for land disturbing activities. Compliance with those requirements may be met by employing either the technology-based or the performance-based criteria. Both criteria utilize BMPs contained in Table 1 within the section for compliance, although other BMPs may be allowed at the discretion of the local program administrator or the Department. The performance-based criteria is conducted by comparing the calculated post-development pollutant (phosphorus) load to the calculated pre-development load based on the average land cover condition or existing site conditions. The average land cover condition equates to 16% impervious cover on the site, or a loading of .45 lbs. per acre per year of phosphorus. Localities do have the ability to establish other values (and thus higher or lower loadings) for the average land cover condition based on an actual calculation of conditions within their jurisdictions. Required reductions are achieved through implementation of BMPs contained in the existing Table 1 associated with this section. Application of the performance-based method involves the evaluation of 4 situations set forth in subsection B and results in a requirement to reduce pollutant loadings. This requirement can	This section is deleted in its entirety. New water quality criteria and compliance methods are established in 4VAC50-60-63 and 4VAC50-60-65 (both discussed below).

		be no required reduction for those sites where the post-developed condition will not exceed the average land cover condition. For sites where the pre-developed condition was less than the average land cover condition, and the post-developed condition exceeds that level, it is required that the post-developed pollutant discharge not exceed the pollutant discharge based on the average land cover condition (or .45, if no other level has been established). Thirdly, for sites where both the pre-development and post-development condition exceed the average land cover condition (typically redevelopment scenarios vs. development on greenfields for the first two situations), it is required that the post-development pollutant loading not exceed the pollutant discharge based on existing conditions less 10%, or the pollutant loading based on the average land cover condition, whichever is greater (in summary, the load must be reduced to 10% below the pre-redevelopment loading, but in no case would be required to be less than .45 lbs. per acre per year of phosphorus, unless a locality has established a different land cover value). Finally, for sites that are already treated by BMPs prior to development, it is required that the post-development pollutant loading not exceed the pre-development pollutant loading. The Technology-Based criteria is also available for use. This criteria requires that a BMP be selected from Table 1 utilizing the percent impervious cover of the site, and using it to treat the post-developed stormwater runoff from the impervious cover on the site.	
	4VAC50-60-63	Current water quality requirements for land-disturbing activities are set out in 4VAC50-60-60 (described above).	This new section revises the water quality criteria required to be met by land-disturbing activities. Rather than the current performance-based and technology-based methods, compliance will be achieved in accordance with the methods set out in new section 65 (discussed

			below). Under this section, new development projects (those other than projects occurring on prior developed lands, discussed below) must achieve a phosphorus loading of 0.45 lbs. per acre per year. As new data is being developed regarding necessary pollutant reductions related to the Chesapeake Bay, this standard applies statewide and a separate regulatory action will be undertaken to address standards for the Bay watershed in the future. Should such an action result in a more stringent standard being adopted within the Bay watershed, then within Urban Development Areas, a qualifying local program may establish a standard of no greater than 0.45 pounds per acre per year to be applied to projects that disturb greater than or equal to one acre, based upon factors set forth in subdivision (1)(a). Projects occurring on prior developed lands (as defined in 4VAC50-60-10) and disturbing greater than or equal to one acre are required to reduce phosphorus loads to a level that is at least 20% below the pre-development loading. The total phosphorus load of a project on prior developed lands and disturbing less than one acre shall be reduced to an amount at least 10% below the pre-development loading. In either case, however, in no case would the load be required to be reduced to less than the applicable standard for new development unless a more stringent standard is established by a qualifying local program. The 0.45 standard is intended to retain the approximate standard applied to these projects today. The 20% reduction for redevelopment projects is actually a lesser standard than is needed to meet those goals; however, it represents a marked improvement from the existing 10% reduction while having the intent of not discouraging redevelopment or encouraging sprawl. Finally, the section notes that where a total maximum daily load (TMDL) wasteload allocation (WLA) has been assigned to stormwater discharges from construction activities, the construction site operator must install measures to meet the WLA in compliance with the terms of the General Permit for Discharges of Stormwater from Construction Activities. This note is intended primarily as a reference, as TMDL WLA requirements are put in place pursuant to the Clean Water Act and other VSMP permit regulations (including the General Permit).

	4VAC50-60-65	Current methodologies for complying with water quality criteria (i.e., the performance-based and technology-based criteria) are contained in section 60 of the current regulations (discussed above).	In place of the performance-based and technology-based criteria, this new section provides that compliance with the water quality design criteria contained in section 63 is determined by utilizing the Virginia Runoff Reduction Method. Through use of a spreadsheet incorporated by reference into the regulations, the Method seeks to reduce both runoff and pollutants from the site. Similar to the current approach, compliance is ultimately achieved through the implementation of BMPs on the site. The Method and the new regulations, however, allow for an expanded and innovative set of practices. Efficiencies for various types of BMPs have also been updated based on today's science. The list of available BMPs will continue to be augmented through the further development of the Virginia Stormwater BMP Clearinghouse website. The Clearinghouse will be staffed by the Department (and Virginia Tech's Virginia Water Resource Research Center) and an advisory committee on a continual basis, and will allow for the submission and approval of new designs and efficiencies for stormwater BMPs. Overall, this allows greater flexibility for developers and better site planning and design. If, however, a particular type of BMP is unsuitable for use in a locality due to soil types, etc., subsection D does allow for limitations to be put in place with justification to the Department. In the event that a qualifying local program desires to do so, section 65 additionally allows compliance to be achieved through the use of another methodology that is demonstrated to achieve equivalent or more stringent results and is approved by the Board. Unless a site drains to more than one hydrologic unit code (HUC) (in which case the requirements are applied independently within each HUC), the water quality criteria are applied to the site as a whole, although a local program has the discretion to allow for application of the criteria to each individual drainage area of a site. The section also notes that offsite alternatives for compliance are available in section 69.
	4VAC50-60-66	Various water quantity requirements are contained within the existing regulations, primarily within sections 70 (stream channel erosion) and 80 (flooding). Both sections are discussed in more detail below.	This proposed new section contains refined channel protection and flood protection criteria. The overall water quantity requirements are intended to meet the mandate of §10.1-603.4(7), which requires the replication, as nearly as practicable, of the existing predevelopment runoff characteristics and site hydrology, or improvement upon the contributing

			share of the existing predevelopment runoff characteristics and site hydrology if stream channel erosion or localized flooding is an existing predevelopment condition. The channel protection criteria of this section vary depending upon which type of conveyance system stormwater is being discharged to: manmade, restored, stable natural, or unstable natural. The flood protection requirements likewise vary based on the same list of systems. An exception to these requirements is contained in subsection D, which exempts certain sites based upon area and peak flow rate increase. For discharges that consist of sheet flow (i.e., stormwater discharged over a broad surface area rather than to a conveyance system), subsection E requires that those discharges be evaluated and diverted to a detention facility or conveyance system if necessary to protect downstream properties or resources.
	4VAC50-60-69	The current regulations allowed for development of regional (watershed-wide) stormwater management plans in section 96. No other offsite compliance options were explicitly included in the regulations.	In response to numerous public comments expressing a greater need for offsite compliance options, as well as confusion as to which offsite options are available, all offsite compliance options have been consolidated into this section. These include comprehensive watershed stormwater management plans, locality pro rata fee programs, controls installed on other properties controlled by the developer, nonpoint nutrient offsets, and an option for a payment to be made to the Department in place of a portion of the required onsite water quality reductions. Comprehensive watershed stormwater management plans and pro rata fee programs are established by localities to address necessary water quality and quantity reductions on a local watershed basis (state agencies may also develop comprehensive stormwater management plans). Comprehensive watershed stormwater management plans are further defined in section 92 (discussed below). Requirements for pro rata fee programs are set out in section 15.2-2243 of the Code of Virginia. Adoption of these programs is optional to a locality. As they are both locally developed, these options will not be available where the Department administers a local program. Nonpoint nutrient offsets are an allowable offsite option of obtaining compliance with the water quality technical criteria. The offset program was created by HB2168 in the 2009 General Assembly, and did not exist

			at the time the proposed regulations were proposed by the Board. The requirement for the utilization of these offsets is more particularly set forth in section 10.1-603.8:1 of the Code of Virginia. The Board has also adopted guidance related to this program. The allowance for a developer who controls a second site to install controls on that site in place of onsite controls (under specified conditions) for water quality compliance purposes was found in section 65 of the proposed regulations and is included in this section, with clarifying amendments to the language indicating that this option may be utilized where no local comprehensive watershed stormwater management plan or pro rata fee exists, or where a qualifying local program otherwise elects to allow its use. In the event that a standard more stringent that 0.45 pounds of phosphorus per acre per year is established for the Chesapeake Bay watershed in the future, a new offsite water quality compliance option is provided in subsection B. This option will be available only where the other offsite options (which are set forth in subsection A) are not available for use, where the price of a local pro rata fee program exceeds $23,900 per pound of phosphorus (a figure cited by the US EPA as the cost of achieving reductions), or where a qualifying local program otherwise elects to allow its use. Under this option, a payment may be made in place of achieving onsite compliance. Payment amounts shall be determined based on the nearest 0.01 of a pound of phosphorus, and are set at $15,000 per pound for sites within Urban Development Areas (in order to avoid disincentivizing high density growth in these areas), and $23,900 per pound elsewhere. The Board will expend the funds collected in accordance with the requirements set out in subdivision 2. Utilization of this option is subject to several constraints—it is not available on new development sites outside of the Chesapeake Bay Watershed; new development projects disturbing one acre or greater within the Chesapeake Bay Watershed must achieve a phosphorus level of at least 0.45 pounds per acre per year on site before being allowed to make a payment; and redevelopment projects disturbing one acre or greater must achieve at least a 10% reduction on site before being allowed to make a payment. New development and redevelopment projects disturbing less than one acre may achieve all necessary phosphorus reductions through a payment.

			The limitations on the use of the payment option were developed to ensure that onsite compliance was maximized, while still providing necessary flexibility. Small sites were noted during the public comment period as having the greatest difficulties with compliance; thus, sites of under one acre of land disturbance may achieve all necessary reductions through a payment. Finally, for redevelopment sites of one acre or greater and for new development sites that will be subject to an enhanced standard, it was intended that these sites achieve at least the current reduction standards (0.45 for new development and a 10% reduction for redevelopment) prior to allowing for use of the payment option. Finally, this section notes that where the Department administers a local program, only nonpoint nutrient offsets, off-site controls by the developer, and the payment option of subsection B (when it becomes available) will be available for use.
4VAC50-60-70		This existing section sets forth requirements for channel protection. A primary requirement of the section is compliance with MS19 of the Virginia Erosion and Sediment Control Regulations. It also requires that properties and receiving waterways downstream of any land disturbing activity be protected from erosion and damage due to changes in runoff rate of flow and hydrologic characteristics, including but not limited to changes in volume, velocity, frequency, duration, and peak flow rate of stormwater runoff in accordance with the minimum design standards set out in the section.	This section is deleted in its entirety. New water quantity criteria, including channel protection criteria, are established in 4VAC50-60-66 (discussed above). Requirements for compliance with the Virginia Erosion and Sediment Control Law and Regulations are relocated to new section 56 (discussed above).
	4VAC50-60-72	Current design storm specifications are contained in section 4VAC50-60-40(B), and are defined as either a 24 hour storm using the rainfall distribution recommended by the U.S. Dept. of Agriculture's Natural Resources Conservation Service (NRCS) when using NRCS methods or as the storm of critical duration that produces the greatest required storage volume at the site when using a design method such as the Modified Rational Method.	This section places design storm requirements in their own section and provides greater specificity. Prescribed design storms are the 1, 2, and 10 year 24 hour storms using the site-specific rainfall precipitation frequency data recommended by the US National Oceanic and Atmospheric Administration (NOAA) Atlas 14. NRCS synthetic 24 hour rainfall distribution and models, hydrologic and hydraulic methods developed by the US Army Corps of Engineers, or other standard methods shall be used to conduct any analyses. The Rational Method and Modified Rational Method may be utilized with the approval of the local program; however, use of these methods is proposed to be limited

			to drainage areas of 200 acres or less, as it is believed that this is the maximum drainage area for which these methods can be reliably used.
	4VAC50-60-74	The current regulations contain no information regarding stormwater harvesting.	This section notes the Board's encouragement of (but does not impose requirements for) stormwater harvesting to the extent that such uses of captured stormwater is permitted by other authorities. This is consistent with section 10.1-603.4(9), which was added to the Code of Virginia following the 2008 General Assembly.
	4VAC50-60-76	The current regulations do not specifically address linear development projects.	This proposed new section specifically explains that unless exempt pursuant to section 10.1-603.8(B), linear development projects must address stormwater runoff in accordance with the VSMP regulations.
4VAC50-60-80		The existing section contains provisions related to flood protection. A specific requirement is that the 10-year post-developed peak rate of runoff from the development site shall not exceed the 10-year pre-developed peak rate of runoff.	This section is deleted in its entirety. New water quality criteria for all sites, including flood protection criteria, are proposed to be established in 4VAC50-60-66 (discussed above).
	4VAC50-60-85	The current regulations contain several provisions related to construction of stormwater management impoundment structures and facilities. These provisions are located in 4VAC50-60-50(D), (E), and (J).	This section places two existing requirements into subsections (B) and (C), and adds a statement of the Board's preference that construction of structures or facilities within tidal or nontidal wetlands or perennial streams is not recommended. Additionally, this section addresses the construction of structures or facilities within karst areas and karst features, neither of which are required to be considered under the existing regulations.
4VAC50-60-90		This section describes the requirements for regional (watershed-wide) stormwater management plans, which enable localities and state agencies to treat multiple projects within a watershed through singular, or fewer, best management practices rather than addressing stormwater management on each individual site.	This section is deleted in its entirety. A new section describing and establishing requirements for comprehensive watershed stormwater management plans is inserted at 4VAC50-60-92 (described below).
	4VAC50-60-92	The existing regulations contain a description of a regional (watershed-wide) stormwater management plan in 4VAC50-60-90 (repealed as described above).	This section renames a regional (watershed-wide) stormwater management plan, calling it instead a "comprehensive watershed stormwater management plan." Such plans would now require the approval of the Department. They may be developed by localities or by state or federal agencies.
	4VAC50-60-94	The applicability of the current technical criteria is found in section 40 (repealed as described above).	This section specifies that land disturbing activities that are not subject to the technical criteria of Part IIA are subject to the technical criteria of Part IIB, which is composed of the sections that follow. The inclusion of

			grandfathering provision in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
	4VAC50-60-95	The general requirements of the current regulations are found in section 50 (repealed as described above).	This section contains the general requirements of the existing regulations. The inclusion of grandfathering provision in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
	4VAC50-60-96	The water quality requirements of the current regulations are found in section 60 (repealed as described above).	This section contains the water quality requirements of the existing regulations. Minor amendments were made to allow use of BMPs found in Table 1 of section 65 and BMPs found on the Virginia Stormwater Management BMP Clearinghouse website. The inclusion of grandfathering provision in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
	4VAC50-60-97	The stream channel erosion requirements of the existing regulations are found in section 70 (repealed as described above).	This section contains the stream channel requirements of the existing regulations. The inclusion of grandfathering provision in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
	4VAC50-60-98	The flooding requirements of the existing regulations are found in section 80 (repealed as described above).	This section contains the flooding requirements of the existing regulations. The inclusion of grandfathering provision in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria.
	4VAC50-60-99	The current regulations allow for development of regional (watershed-wide) stormwater management plans in section 90 (repealed as described above). No other offsite options for compliance were expressly noted.	This section allows water quality and, where allowed, water quantity requirements of Part IIB to be met through the offsite provisions of new sections 69 and 92. The inclusion of grandfathering provisions in new section 48 necessitated the retention of the current technical criteria within the regulations. Therefore, a Part IIB was created that includes the current technical criteria. However, as offsite options are redefined in Parts IIA (including comprehensive stormwater management plans), and as existing regional stormwater management plans will cease to exist, it was determined appropriate to allow the provisions of Part IIA applicable to offsite compliance to apply to Part IIB as well.
4VAC50-60-100		This section specified the applicability to the existing Part III.	This section is deleted in its entirety. The applicability statements have been incorporated into new sections 4VAC50-60-102, 128, 156, and 158.
	4VAC50-60-		This new section explains that Part IIIA of the proposed regulations

	102		establishes the minimum technical criteria and local government ordinance requirements for a "qualifying local program", which is the proposed name of a locality-operated stormwater management program that has been authorized by the Board to administer its responsibilities under the Virginia Stormwater Management Act and federal law and regulations.
	4VAC50-60-104	Existing section 4VAC50-60-110 requires that local programs comply with the various requirements of Part II of the regulations, states that more stringent criteria established by localities may be considered by the Department in its review of state projects within that locality, and explains that nothing in Part III is to be construed as giving regulatory authority over state projects to a locality.	This new section explains that all qualifying local programs must require compliance with the provisions of Parts IIA and IIB as applicable of the regulations and must comply with 4VAC50-60-460(L), states that more stringent criteria established by localities will be considered by the Department in its review of state projects within that locality, and explains that nothing in Part IIIA is to be construed as giving regulatory authority over state projects to a locality.
	4VAC50-60-106		This new section sets forth the administrative requirements for a qualifying local program. These include identification of various authorities who will be responsible for different portions of the program, program procedures, adoption of an ordinance, and reporting (which is further outlined in 4VAC50-60-126). The section also notes the ability of a qualifying local program to require a performance bond or other surety in accordance with the Stormwater Management Act.
	4VAC50-60-108	Current requirements regarding stormwater management plan review by locality-run stormwater management plans are contained in 4VAC50-60-130 (discussed below).	This new section sets forth specific requirements for review of stormwater management plans by qualifying local programs. This includes not only review procedures to be employed by the qualifying local program, but also the requirements for a complete stormwater management plan, which must be signed and sealed by a professional. The section also permits a qualifying local program to allow for a less extensive initial stormwater management plan to be submitted for initial clearing and grading activities (this is not available under the current regulations). Finally, the section contains procedures for modifying a previously-approved stormwater management plan (the current regulations simply state that no changes may be made to an approved plan without review and written approval by the locality).
4VAC50-60-110		This existing section sets forth the technical criteria for local programs under the current regulations. Requirements include compliance with the existing technical criteria contained in the various sections of Part II.	This section is deleted in its entirety. The requirement for compliance with the technical criteria contained in Part II is proposed to be relocated to new section 4VAC50-60-104.

	4VAC50-60-112	Local governments currently do not have the ability to authorize coverage under the VSMP General Permit for Discharges of Stormwater from Construction Activities, which is the permit received by operators of regulated activities.	This new section sets forth the procedures by which a qualifying local program will be permitted to authorize coverage under the Board's General Permit for Discharges of Stormwater from Construction Activities. This will allow for operators of regulated activities to receive both Erosion and Sediment Control and Stormwater Management permits from a single locality, rather than today's practice of receiving Erosion and Sediment Control permits from the locality and Stormwater Management permit coverage from the Department. This is intended to enhance user-friendliness and efficiency for the regulated community, and meet the Board's mandate for authorization of local programs under the Virginia Stormwater Management Act.
	4VAC50-60-114	Current requirements for inspections both during and post-construction are contained in section 4VAC50-60-150. These requirements are for stormwater management facilities to be made on a regular basis during construction, and for post-construction inspections to be made on a regular basis or according to an alternative inspection program developed by the local program.	This new section sets forth requirements for site inspections by qualifying local programs to ensure compliance with the Board's regulations and to ensure the long term functionality of stormwater management BMPs. First, the section requires inspections for compliance with the General Permit for Discharges of Stormwater from Construction Activities to be conducted by the qualifying local program during construction. Following construction, the person responsible for the development project or their designated agent shall be responsible for submitting construction record drawings of all permanent stormwater management facilities installed on the site for which a maintenance agreement is required under section 124 (discussed below) to the qualifying local program for use in long term inspections of the facilities. The qualifying local program or its designee will then use these record drawings in conducting long term inspections in accordance with an approved inspection program that is developed by the qualifying local program. This program will ensure that all facilities are inspected at least once every five years (except for those facilities for which a maintenance agreement is not required, which may be addressed by another method pursuant to subsection D).
	4VAC50-60-116	The current regulations do not include provisions for enforcement by a local program.	Enforcement under the Virginia Stormwater Management Act and these regulations is governed specifically by statute and this section lists all potential remedies available to a qualifying local program under the Act, providing qualifying local programs with one source to find all of the authorities that are scattered in various places in the Act. In addition, this section establishes a recommended schedule of civil penalties for violations, which is required to be established by the Board in accordance with §10.1-603.14(A) of the Code of Virginia.
	4VAC50-60-118	The current regulations do not mention the availability of hearings, although requirements	This new section observes the requirements for hearings contained within the Virginia Stormwater Management Act.

		for hearings are established in the Stormwater Management Act.	
4VAC50-60-120		This section sets forth the requirements for a stormwater management ordinance that could be adopted by a locality and sets out the procedures by which the Department will periodically review a locality-operated stormwater management program.	This section is deleted in its entirety. The requirement for a locality to adopt an ordinance is proposed to be relocated to 4VAC50-60-106(B), and procedures for Department review of a qualifying local program is proposed to be contained in Part IIIC.
	4VAC50-60-122	Current section 4VAC50-60-140 (discussed below) allows for exceptions to be granted from the requirements of the VSMP regulations.	This new section allows for an exception to be administratively granted to the technical criteria contained in Parts II A and IIB (including the water quality and quantity criteria). Exceptions may be granted provided that certain criteria are met (these criteria are refined from those currently included in section 140), and a record of all exceptions granted is to be maintained and reported. Where an exception is granted to the water quality requirements of subsection 63, all available offsite options must be utilized prior to the granting of an exception. Where an exception is thereafter granted, any remaining phosphorus reductions not achieved must be achieved by a payment in accordance with subsection B of section 69. In the case of an exception, the minimum on site thresholds of subsection B of section 69 do not apply.
	4VAC50-60-124	Current requirements for ensuring that stormwater management BMPs will be maintained on an ongoing basis are contained in section 4VAC50-60-150 (discussed below).	The requirements for ensuring ongoing maintenance of stormwater management BMPs are relocated to this new section. Some refinements are proposed to these requirements, including a requirement that the qualifying local program require an agreement for each stormwater management facility (where specified). Maintenance agreements, at the discretion of the qualifying local program, are not required for stormwater management facilities designed to treat stormwater runoff primarily from an individual residential lot on which they are located, provided it is demonstrated to the satisfaction of the qualifying local program that future maintenance of those facilities will be addressed through a deed restriction or other mechanism enforceable by the qualifying local program.
	4VAC50-60-126	Current sections 4VAC50-60-120 and 4VAC50-60-150 contain requirements for the keeping of reviewed plans and stormwater management facility inspection reports by locality-operated stormwater management programs.	This new section requires qualifying local programs to report information pertaining to stormwater management facilities installed in their jurisdictions, inspections made during the fiscal year, number of enforcement actions undertaken, and number of exceptions applied for and the number of exceptions granted. The section also requires permit files to be maintained for three years, inspection reports to be maintained for five years, and maintenance agreements/design

			standards and construction record drawings/maintenance records for stormwater management facilities to be maintained in perpetuity, or until a stormwater management facility is removed due to redevelopment of the site.
	4VAC50-60-128	Currently, the Department does not administer a local stormwater management program in any locality in the Commonwealth. Rather, the Department only administers the Board's General Permit for Discharges of Stormwater from Construction Activities across the state. The Department's duties include the issuance of coverage under the General Permit, project inspections, and enforcement. As required by §10.1-603.3(C), under the proposed regulations, the Department will administer a local stormwater management program in any locality that does not adopt its own qualifying local program. Part IIIB of the proposed regulations (sections 4VAC50-60-128 through 4VAC50-60-154) establishes the procedures that will be followed by the Department in administering a local program. These procedures are nearly identical to those that are required of qualifying local programs; distinctions will be noted where they occur.	This section notes that Part IIIB (sections 4VAC50-60-128 through 4VAC50-60-154) sets forth the criteria that will be followed by the Department in administering a local stormwater management program in a locality that is not required to adopt a qualifying local program pursuant to §10.1-603.3(A), or that does not elect to adopt a qualifying local program pursuant to §10.1-603.3(B).
4VAC50-60-130		This existing section sets forth the requirements for stormwater management plans and the requirements for stormwater management plan review by localities administering stormwater management plans under the current regulations.	This section is deleted in its entirety. Requirements for stormwater management plans and for stormwater management plan reviews are proposed to be relocated and refined in section 4VAC50-60-108 (discussed above).
	4VAC50-60-132	See the note accompanying 4VAC50-60-128	This section notes that a local stormwater management program administered by the Department shall, similar to a qualifying local program, require compliance with the provisions of Parts IIA and IIB as applicable unless an exception is granted. The section also notes that the Department shall apply the provisions of the VSMP regulations when reviewing a federal project, and it finally states that nothing in the regulations shall be construed as limiting the rights of other federal and state agencies to impose stricter requirements as allowed by law.

	4VAC50-60-134	See the note accompanying 4VAC50-60-128	This section relates that, when the Department administers a local stormwater management program within a locality, the Department will be the permit issuing, plan approving, and enforcement authority; and that the Department or its designee will be the plan reviewing authority and the inspection authority. The Department shall also assess and collect fees. Finally, the Department may require the submission of a reasonable performance bond or surety in accordance with the Virginia Stormwater Management Act.
	4VAC50-60-136	See the note accompanying 4VAC50-60-128	This section relates that the Department will follow the same plan review procedures as required of qualifying local programs by 4VAC50-60-136. The Department shall not, however, review or approve initial stormwater management plans, which may be accepted by qualifying local programs.
	4VAC50-60-138	See the note accompanying 4VAC50-60-128	This section describes the requirements for and process by which the Department will authorize coverage under the Board's General Permit for Stormwater Discharges from Construction Activities. This process is similar to that required to be utilized by qualifying local programs. The section does additionally note that the Board has the authority to require projects to receive individual permits (permits whose terms are drawn to apply to a singular, particular project rather than a class of similar types of projects) pursuant to 4VAC50-60-410(B)(3).
4VAC50-60-140		This section sets forth the procedures by which a locality-operated stormwater management program may issue an exception to the requirements of the regulations.	This section is deleted in its entirety. The exceptions process is proposed to be refined and relocated to section 4VAC50-60-122 (discussed above).
	4VAC50-60-142	See the note accompanying 4VAC50-60-128	This section notes that inspections, enforcement actions, hearings, exceptions, and stormwater management facility maintenance shall be conducted by the Department when it is operating a local stormwater management program in the same manner as those tasks will be performed by a qualifying local program under the applicable sections contained in Part IIIA.
4VAC50-60-150		This existing section describes the requirements for long term maintenance of stormwater management facilities, as well as the requirements for inspections of facilities by a locality-operated stormwater management program both during and post-construction.	This section is deleted in its entirety. Requirements for stormwater management facility maintenance are refined and relocated to section 4VAC50-60-124 (discussed above). Inspection requirements are refined and relocated to section 4VAC50-60-114 (also discussed above).
	4VAC50-60-154	See the note accompanying 4VAC50-60-128	This section explains that the Department shall maintain a current database of permit coverage information for all projects. The

			Department shall compile a report on the local programs that it administers on a fiscal year basis, and records shall be kept by the Department in the same manner as is required of qualifying local programs.
	4VAC50-60-156	Although the Department does not currently review locally operated stormwater management programs (except for those programs administered to achieve compliance with the requirements of an MS4 permit), criteria for review of a local program by the Department is contained in section 4VAC50-60-120(B). Such review is to consist of a personal interview between Department staff and the local program administrator or his designee, a review of local ordinances and other documents, a review of plans approved by the local program, an inspection of regulated activities within the jurisdiction, and a review of enforcement actions undertaken by the locality.	This section notes that Part IIIC (sections 4VAC50-60-156 through 4VAC50-60-157) specifies the criteria that will be utilized by the Department in reviewing a locality's administration of a qualifying local program.
	4VAC50-60-157	See the note accompanying 4VAC50-60-156	This section notes that all qualifying local programs will be reviewed at least once every five years, as required by the Stormwater Management Act. Evaluations shall be conducted according to the same criteria currently contained in 4VAC50-60-120(B), with an addition of a review of an accounting of the receipt and of the expenditure of fees received. The section additionally describes the process by which the Board will allow for corrective action to be taken by any qualifying local program for which deficiencies are noted.
	4VAC50-60-158	The current regulations were adopted prior to the complete adoption of the Stormwater Management Act by the General Assembly, which established the requirement for certain localities to adopt qualifying local programs and for others to have the option to adopt qualifying local programs. The Act likewise requires the Board to establish procedures for authorization of qualifying local programs. As these requirements were not in place in the Code of Virginia at the time of the adoption of the current regulations, the current regulations do not include authorization procedures.	This section notes that Part IIID (sections 4VAC50-60-158 through 4VAC50-60-159) establishes the procedures by which the Board will authorize a locality to administer a qualifying local program.

	4VAC50-60-159	See the note accompanying 4VAC50-60-158	This section describes the procedure by which the Board will authorize a locality to administer a qualifying local program. A locality will first submit an application package, which will be reviewed for completeness within 30 calendar days. The Board will thereafter have 90 calendar days to review the application package for compliance with the Stormwater Management Act and the VSMP regulations. Any decision will be communicated to the locality. This section also notes the timeframes for qualifying local program adoption. Subsections (D) and (E) note the times during which localities should notify the Board. Finally, the section notes that for localities where no qualifying local program is adopted, the Department will administer a local stormwater management program. The Department may phase in these programs over a period of time based on the criteria noted in the section.
Documents Incorporated by Reference		A number of documents useful for compliance with the regulations are currently incorporated by reference into the regulations.	Four additional documents are incorporated by reference into the regulations. The first, Technical Bulletin #1—Stream Channel Erosion Control, is referenced in the proposed 4VAC50-60-66. The other three documents (Technical Memorandum—the Runoff Reduction Method and associated addendums, the Virginia Runoff Reduction Method Worksheet, and the Virginia Runoff Reduction Method Worksheet-Redevelopment) are noted in 4VAC50-60-65.

Regulatory flexibility analysis

Please describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

It is recognized that many of the development interests that will be affected by the regulations are small businesses. As discussed in the economic analysis completed on the proposed regulations, these regulations were developed to impose the minimum burden necessary while still allowing the Board to meet its mandate under the Stormwater Management Act and for the achievement of Virginia's water quality and quantity goals. The final regulations have been modified to provide additional flexibility with the technical standards. This includes revisions to the water quantity standards to assist with developer compliance such as amending the water quality criteria from a statewide 0.28 standard to a much more lenient 0.45 standard. Additionally, several significant offsite compliance methodologies have been made available to attain the water quality and quantity standards within Part II (see 4VAC50-60-69; offsite options). The primary compliance methodology, the Virginia Runoff Reduction Method, has also been designed to provide many options for compliance to site planners, many of which will reduce compliance costs. Cumulatively, as outlined above, a number of revisions were made to the final regulations that will lessen the requirements on small businesses as well as significantly reduce the costs from the proposed version while upholding the intent of the Stormwater Management Act and the requirements of the Clean Water Act. It is believed that the final regulations reflect the best methodologies available to achieve the requirements placed upon the Board by law and represent a reasonable balance between necessary water quality improvements and potential economic concerns.

Family impact

Please assess the impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

It is not anticipated that this regulation will have a direct impact on the institution of the family or family stability. However, the improvement of water quality and control of water quantity does have public health and safety benefits that have an indirect impact on families.