

Virginia		Maryland		West Virginia		Pennsylvania	
Regulation	Details	Regulation	Details	Regulation	Details	Regulation	Details
Erosion and Sediment Control Regulation (4VAC50-30)	A. Applicable Jurisdiction: All Virginia jurisdictions	Erosion and Sediment Control Regulation	A. Applicable to: All MD municipalities. Clearing and grading activities that disturb more than 5,000 square feet of land area and disturb more than 100 cubic yards of earth (agricultural and certain linear activities exempt).	Stormwater Construction General Permit (Erosion and Sediment Control)	A. Applicability – Sites disturbing more than 1 acre. <ol style="list-style-type: none"> 1 to 3 acres must provide Notice of Intent 10 days prior above 3 acres must submit a site registration application 45 days prior to commencing activity Greater than 3 acres must submit registration form and SWPPP 45 days prior to beginning construction. When the construction activity is completed and all disturbed areas are stabilized, the responsible party must submit a Notice of Termination (NOT) in order to end coverage under the General Permit. 	Erosion and Sediment Control	A. Applicability: Entire State
	B. Key Provisions		B. Key Provisions		B. Key Provisions		B. Key Provisions
	1. ESC programs administered by localities, with DCR oversight. DCR responsible for work on state and federal lands and certain interstate and intrastate activities.		1. The program is implemented by MDE through localities establishing ordinances .		1. A sediment basin must be used when the contributing drainage area is greater than five acres. Sediment basins must control the discharge in order to dewater the wet storage volume between 48 and 72 hrs. In addition the safety embankment structures requires the outlets to safely pass the peak discharge from 25 yr, 24 hr storm and still maintain at least 1 foot of freeboard.		1. NPDES Permit required for disturbed areas larger than 5 acres.
	2. Applies to land disturbances larger than 10,000 square feet. Various activities, such as utility work, drilling for oil and gas, agricultural practices (tilling, harrowsing etc) and mining, exempt.		2. Applies to land disturbances larger than 5,000 square feet or involving more than 100 cubic yards of grading. Various activities, such as Agricultural land management practices are exempt.		2. Requires sediment trap or basin that will provide a storage volume of 3,600 cubic feet per acre of area draining to the structure. Half of the volume of the basin will be in a permanent pool and half will be dry storage.		2. Must apply BMPs to minimize erosion and sediment, even if less than 5 acres
	3. 19 minimum standards		3. For sites where disturbed areas are greater than 2 acres, inspection required after installation of perimeter controls and before other grading work begins.		3. An inlet to a sediment trapping structure must be protected against erosion by the appropriate material such as riprap. For locations served by a common drainage where a detention basin providing 3,600 cubic feet of storage is not attainable, silt fences, rock check dams, sediment traps in series, or the equivalent of additional sediment and erosion controls within the project area are required in lieu of the required-size sediment basin.		3. Erosion and Sediment Control Plan required if more than 5 acres will be disturbed; other regulations apply; or High Quality or Exceptional Values water will be impacted.
	4. Stabilization required within seven days after final grade reached; temporary stabilization required within 7 days if area will be denuded more than 30 days; permanent stabilization required for areas that will remain denuded more than 1 year.		4. Establishing a maximum 20-acre grading unit for most construction sites. This will limit larger earth disturbances that are more likely to cause sediment pollution.		For each discharge design point the pre-construction peak discharge from a one year 24 hr storm in cubic feet per second and a post development peak discharge from a one year 24 hour storm in cubic feet per second shall be calculated.		4. Special design requirements for High Quality or Exceptional Value waters.
	5. Minimum storage capacity of sediment trap or sediment basin shall be 134 cubic yards (3618 cubic feet) per acre drainage area. Outfall shall maintain structural integrity for 25-year storm of 24 hour duration.		5. Improving stabilization requirements to assist in reducing erosion and sediment generation, and help establish grass in non-work areas		4. For activities upstream or discharging to Tier 2.5 and Tier 3 streams, need to provide public notice 90 days prior to start of construction and will go through the Tier 2.5 and Tier 3 anti degradation preview process. No degradation will be allowed for Tier 3 waters except for temporary short term activities .		5. For storage basins, A sediment storage zone of 1,000 cubic feet per disturbed acre is required. A dewatering zone of 5,000 cubic feet for each acre tributary to the basin is to be provided. Reductions in the dewatering zone are allowed for the factors listed below, however the minimum required dewatering zone is at least 3,600 cubic feet per acre. The dewatering zone is in addition to the sediment storage zone. No reduction in dewatering zone will be permitted in basins located in Special Protection watersheds.
	6. Adequate outfall provisions require that discharges to: natural channels do not overtop banks or cause erosion for 2-year storm; previously constructed man-made channels do not overtop banks for 10-year storm and do not increase erosion for 2-year storm; 10-year storm will be contained in pipe and storm sewer systems. If not adequate, improvements required.		6. Requiring each county and municipality in Maryland to submit a draft erosion and sediment control ordinance to MDE for review within six months and adopt an approved ordinance within one year of the regulations' adopted date. (Municipalities may adopt the erosion and sediment control ordinance of their respective county.)		5. The permit does not authorize new sources and discharges to impaired waters, unless consistent with the approved TMDL or applicable state law.		6. For sediment traps, the maximum permissible drainage area is 5.0 acres. They must have a minimum storage volume of 2,000 cubic feet for each acre of contributing drainage area (disturbed and undisturbed). 700 cubic feet/acre shall be considered sediment storage. 1,300 cubic feet/acre shall be considered settling volume.
	7. 2011 Standards and Specifications describe measures and when each is applicable.		7. As soon as slopes, channels, ditches, and other disturbed areas reach final grade they must be stabilized.				

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			8 Training Certification program is in place; certified responsible personnel must develop erosion and sediment control plan.				
Stormwater Management Regulation (4VAC50 - 60)	<p>A. Applicable to:</p> <ol style="list-style-type: none"> Every locality that administers a local stormwater management program; The department in its oversight of locally administered programs or in its administration of the Virginia Stormwater Management Program; Every MS4 program; Every state agency project regulated under the Act and this chapter; and Every land-disturbing activity regulated under § 10.1-603.8 of the Code of Virginia unless otherwise exempted in § 10.1-603.8 B. <p>B. Key Provisions:</p> <p>Until June 30, 2019, any land-disturbing activity for which a currently valid proffered or conditional zoning plan, preliminary or final subdivision plat, preliminary or final site plan or zoning with a plan of development, or any document determined by the locality as being equivalent thereto, was approved by a locality prior to July 1, 2012, and for which no coverage under the VSMP General Permit for Discharges of Stormwater from Construction Activities has been issued prior to July 1, 2014, shall be considered grandfathered</p> <ol style="list-style-type: none"> The total phosphorus load of new development projects shall not exceed 0.41 pounds per acre per year, as calculated pursuant to 4VAC50-60-65. Development on prior developed lands. <ol style="list-style-type: none"> For land-disturbing activities disturbing greater than or equal to one acre that result in no net increase in impervious cover from the predevelopment condition, the total phosphorus load shall be reduced at least 20% below the predevelopment total phosphorus load. For regulated land-disturbing activities disturbing less than one acre that result in no net increase in impervious cover from the predevelopment condition, the total phosphorus load shall be reduced at least 10% below the predevelopment total phosphorus load. For land-disturbing activities that result in a net increase in impervious cover over the predevelopment condition, the design criteria for new development shall be applied to the increased impervious area. Depending on the area of disturbance, the criteria of subdivisions a or b above, shall be applied to the remainder of the site. In lieu of subdivision c, the total phosphorus load of a linear development project occurring on prior developed lands shall be reduced 20% below the predevelopment total 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 local stormwater management program. If existing percent impervious cover is less than or equal to the average land cover condition and the proposed improvements will create a total percent impervious cover which is less than the average land cover condition, no reduction in the after development pollutant discharge is required. If existing percent impervious cover is less than or equal to the average land cover condition and the proposed improvements will create a total percent impervious cover which is greater than the average land cover condition, the pollutant discharge after development shall not exceed the existing pollutant discharge based on the average land cover condition. If existing percent impervious cover is greater than the average land cover condition, the pollutant discharge after development shall not exceed (i) the pollutant discharge based on existing conditions less 10% or (ii) the pollutant discharge based on the average land condition, whichever is greater. If existing percent impervious cover is served by an existing stormwater management BMP that addresses water quality, the pollutant discharge after development shall not exceed the existing pollutant discharge based on the existing percent impervious cover while served by the existing BMP. The existing BMP shall be shown to have been designed and constructed in accordance with proper design standards and specifications, and to be functioning properly. 	Stormwater Management Regulations	<p>A. Applicable to all counties; development that disturbs more than 5,000 square feet.</p> <p>B Key Provisions</p> <ol style="list-style-type: none"> The recharge volume, water quality volume, and channel protection storage volume sizing criteria shall be used to design BMPs according to the Design Manual. Control of the 10-year frequency storm event is required according to the Design Manual if the appropriate approving agency determines that historical flooding problems exist and downstream floodplain development and conveyance system design cannot be controlled. Site designs shall minimize the generation of stormwater and maximize pervious areas for stormwater treatment. Stormwater runoff generated from development and discharged directly into jurisdictional wetland or waters of the State of Maryland shall be adequately treated. Redevelopment must reduce pollutants by 20% New development BMPs must remove 80% sediment and 40% phosphorus Five sizing criteria for water quality, recharge, channel protection, overbank flood control, and extreme flood management are used in design of facilities 	Stormwater Construction General Permit (Stormwater Management)	<p>A. Applicability – Sites disturbing more than 1 acre.</p> <ol style="list-style-type: none"> 1 to 3 acres must provide Notice of Intent 10 days prior above 3 acres must submit a site registration application 45 days prior to commencing activity Greater than 3 acres must submit registration form and SWPPP 45 days prior to beginning construction. <p>B. Key Provisions</p> <ol style="list-style-type: none"> The SWPPP must also address the post construction storm water management plan. This includes a description of the final site stabilization measures and the storm water drainage system. <p>If site development will increase impervious surface on the project area by 15 percent or more, the plan must demonstrate that post-construction runoff for the 1-year, 24-hour storm will not exceed the pre-development rate</p>	Stormwater Management	No state-level criteria has been adopted for stormwater detention storage or other stormwater management measures and therefore must be adopted by each municipality. Typical criteria already adopted in several municipalities normally require post-development floods of a specified frequency be reduced to a predevelopment flood of the same frequency, i.e. a two-year post-development flood would be reduced to a two-year predevelopment flood. In some cases, the post-development flood to be reduced may be significantly larger than the specified release rate. For instance, there are ordinances currently in effect requiring that a five-year post-development flood be reduced to a two-year predevelopment flood. In one extreme application, a municipality is successfully administering an ordinance requiring that all floods between a five- and 100-year for post-development conditions be released at the five-year predevelopment rate (Stormwater Management Guidelines and Model Ordinances, p. 32).

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	<p>b) For technology based criteria, phosphorus removal requirement is a function of percent impervious, per Table I of the regulation</p> <p>1. Compliance with subdivision 19 of 4 VAC 50-30-40 of the Erosion and Sediment Control Regulations is required (covers protection of downstream property, adequate outfall requirements, when channel improvements are needed).</p> <p>2. Regional watershed management plans may be developed.</p> <p>3. The 10-year post developed peak runoff shall not exceed the 10-year pre-developed peak rate of runoff</p>						
MS4 Permitting/Phase I:	<p>A. Applicable to: Fairfax County</p> <p>B. Key Provisions:</p> <p>1. Required communities to propose a comprehensive Stormwater Management Program (SWMP) of structural and non-structural measures to control the discharge of pollutants from the storm sewer system to the maximum extent practicable, and to effectively prohibit non-stormwater discharges to the separate storm sewer system</p> <p>2. Required implementation of the Stormwater Management Program</p> <p>3. Required storm event monitoring to be conducted by the municipality</p> <p>4. Required the municipality to regularly assess the effectiveness of the various stormwater controls employed by the municipality</p>	MS4 Permitting/Phase I	<p>A. Applicable to: •Maryland State Highway Administration • Anne Arundel County • Baltimore City • Baltimore County • Carroll County • Charles County • Frederick County • Harford County • Howard County • Montgomery County • Prince George's County</p> <p>B. Key Provisions</p> <p>Stormwater Phase I Rule established stormwater discharge control requirements for 1 categories of industrial activity and for municipal separate storm sewer systems (MS4s) serving populations of 100,000 or greater. These regulated MS4s must obtain an NPDES permit, and develop a stormwater management program. Permittees are required to prepare watershed restoration plans.</p> <p>Water quality assessments for all watershed should include detailed water quality analysis, identification of water quality improvement opportunities, and the development and implementation of plans to control stormwater discharges. During each permit term, 10% of the community's impervious area should be restored by implementing the watershed restoration action plans. Within one year of permit issuance, restoration efforts should be implemented to restore an additional 10% of the community's impervious surface area. All restoration efforts should be monitored to determine effectiveness in improving water quality.</p> <p>GIS mapping including geologic features, land use, resources, infrastructure, and significant discharges</p> <p>Discharge characterization. Used initially to understand stormwater runoff, now used to assess effectiveness of stormwater programs.</p>	Nonpoint Source Program (DEP)	<p>Applicable to : the entire state of W. Virginia</p> <p>B. Key Provisions</p> <p>West Virginia's Nonpoint Source (NPS) Program coordinates multi-agency and non-government organizations efforts to address nonpoint pollution</p> <p>Providing assistance in the proper installation and maintenance of (BMPs);</p> <p>Supporting partners whose activities relate to nonpoint issues;</p> <p>Supporting citizen based watershed organizations;</p> <p>Restoring impaired watersheds with nonpoint abatement projects</p>	Nonpoint Source Program (DEP)	<p>Applicable to: the entire state of Pennsylvania</p> <p>B. Key Provisions</p> <p>Non point source program is done through establishment of watershed implementation plans</p> <p>Watershed Restoration Actions Strategies (WRAS's) were developed in cooperation with federal, state and local agencies, watershed-based organizations and the public for those watersheds most in need of restoration. WRAS's are described as plans to restore watersheds that do not meet clean water, natural resource and public health goals.</p>
MS4 Permitting/Phase II:	<p>A. Applicable to:</p> <p>1. City of Winchester</p> <p>2. City of Harrisonburg</p> <p>3. Others?</p> <p>B. Key Provisions:</p> <p>Regulated small municipal separate storm sewer system permit applications require the applicant to identify: (1) proposed best management practices and measurable goals for each of the "six minimum control measures" [below]; (2) the timing of the implementation of each control measure; and (3) the person or persons responsible for implementing the Stormwater Management Program.</p> <p>1. Public education and outreach on stormwater impacts</p> <p>2. Public involvement/ participation</p>	MS4 Permitting/Phase II	<p>A. Applicability: Cities and Towns greater than 1,000, within Phase I counties</p> <p>B. Key Provisions</p> <p>Phase II communities are also required to develop local programs to address six minimum management measures listed below</p> <p>1. Public education and outreach on stormwater impacts</p> <p>2. Public involvement/ participation</p>	MS4s/Phase II	<p>A. Applicability: All areas in the state of West Virginia</p> <p>B. Key Provisions</p> <p>Requires stormwater management programs that is designed to reduce the discharge of pollutants to the maximum extent practicable (MEP). The MEP standard involves applying best management practices that are effective in reducing the discharge of pollutants in stormwater runoff.</p> <p>In 2003, the West Virginia legislature enabled municipalities to form stormwater utilities in order to pay for and effectively manage stormwater. The 2008 Legislature further strengthened State Law so that municipalities can effectively enforce their stormwater ordinances.</p> <p>Controlling Runoff from New and Redevelopment</p>	MS4s/Phase II	<p>A. Applicability: All areas in Pennsylvania</p> <p>B. Key Provisions</p> <p>Requires stormwater management programs that is designed to reduce the discharge of pollutants to the maximum extent practicable (MEP)</p> <p>1. Public education and outreach on stormwater impacts</p> <p>2. Public involvement/ participation</p>

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	3. Illicit discharge detection and elimination 4. Construction site stormwater runoff control 5. Post-construction stormwater management in new development and redevelopment 6. Pollution prevention/good housekeeping for municipal operations.		3. Illicit discharge detection and elimination 4. Construction site stormwater runoff control 5. Post-construction stormwater management in new development and redevelopment 6. Pollution prevention/good housekeeping for municipal operations.		Public Education and Outreach The small MS4 general permit contains three minimum performance measures for public participation and involvement. Illicit Discharge Detection and Elimination Controlling Runoff from Construction Sites		3. Illicit discharge detection and elimination 4. Construction site stormwater runoff control 5. Post-construction stormwater management in new development and redevelopment 6. Pollution prevention/good housekeeping for municipal operations.
Chesapeake Bay Regulations	A. Applicable to: Fairfax County B. Key Provisions: 1. Establishes Chesapeake Bay Preservation areas as including Resource Protection Areas and Resource Management Areas 2. RPA defined as 100-ft buffer; buffer shall be retained if present and established if it doesn't exist. 1. Water quality criteria (phosphorus) removal requirements established in SWM regulations must be applied to Chesapeake Bay Preservation Areas. 2. Requires that development greater than 2,500 sq ft be subject to plan review in Chesapeake Bay Preservation Areas 3. Land disturbance greater than 2,500 sq ft in Chesapeake Bay Preservation Areas subject to local erosion and sediment control ordinance 4. Limits the types of activities that may occur in the RPA to water dependent, redevelopment, development in an area identified as an Intensely Developed Area, roads or driveways, flood & stormwater control structures, and limited development on parcels recorded before October 1, 1989.	Chesapeake Bay Regulations	Chesapeake Bay Critical Area – does not apply upstream of Potomac River water supply intakes. (http://www.dnr.state.md.us/criticalarea/) – DNR Perview. Is there anything in MD comparable to VA's Chesapeake Bay regulation? Primarily requires stream buffers in tidal VA Counties. Overall question on TMDLs for meeting participants – do you envision the “benthic” standard being tied back to urban stormwater, specifically, sediment? How many benthic TMDLs are there in the area?				
Tributary Strategy	A. Applicability B. Key Provisions 1. Nonpoint source efforts to focus on following areas (p. vii): a) Agricultural Best Management Practices (BMP) Acceleration b) Expansion of Nutrient Management Planning and Implementation Efforts c) The Consolidation and Strengthening of the Virginia Stormwater Management Program d) Enhancing Implementation of the Virginia Erosion and Sediment Control Program e) Strengthen Implementation of the Chesapeake Bay Preservation Act f) Enhancement of the NPS Implementation Database Tracking Systems g) Enhancing outreach, media and education efforts to reduce pollution producing behaviors	Tributary Strategy	B. Key Provisions: The implementation plan has the strategies listed below: Point sources through existing grant programs Like Biological Nutrient Removal (BNR) program, Enhanced Nutrient removal Program (ENR) etc. Urban sources • Stormwater (MDE's Stormwater management Program, MS4 permit program, MDE's small creek and estuaries restoration program, erosion and sediment control program) • Septic (Bay restoration fund, WQRLF) • Growth management (the economic GrowthResource protectionand Planning Act of 1992, smart growth, etc) Agriculture (Maryland Agriculture Cost Share Program, Cover crop Program, Soil Conservation and Watre quality Program, Nutrient Management program, Manure Transport program, EQIP,Etc) Air Deposition (Clean Air Act) Other State initiatives to address the implementation gaps	Tributary Strategy	A. Applicability 1. Potomac River Basin; many will not occur without sufficient funding B. Key Provisions (Urban Portion) 1. Voluntary Implementation of BMPs 2. Education 3. this strategy suggests implementation of stormwater management on 72% of urban lands by 2010. 4. Implementation of urban nutrient management is suggested for 33% of urban and mixed open lands by 2010. 5. Implementation of erosion and sediment controls will be implemented in full compliance with West Virginia stormwater guidelines. 6. The implementation of the EPA's NPDES Stormwater Phase II program will serve to provide an additional framework for improved stormwater management. 7. It is recommended that the WV Nutrient Management Training and Certification program be modified to include urban criteria 8. Nutrient loads from nitrogen-based runway deicers will be assessed and guidelines developed if deemed appropriate.	Tributary Strategy	A. Applicability B. Key Provisions Limiting Wastewater & Industrial Discharges Upgrading Sewer & Water Infrastructure Enhancing Stormwater Management Preserving Agriculture, Communities and Rural Environments Accelerating Dam Removals & Building Fish Passageways: Expanding the Conservation Reserve Enhancement Program (CREP) Increasing Forested Buffers & Wetlands Supporting CBF's Riparian Forest Buffer Program

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	2. For Urban:				9. Information will be provided to local governments and the development community on cost-effective ways to reduce the water quality impacts of new development.		Promoting Manure-to-Energy Programs
	a) Strategy assumes acres under Urban Nutrient Management expanded. Accomplished through cooperation with localities.						Leading the Way in Nutrient Trading
	b) Seeks to accelerate use of LID						Securing Conservation Easements for Riparian Buffers
	c) Strategy assumes all acres under development are developed with appropriate E&S						Supporting Growing Greener II