

**Virginia Soil and Water Conservation Board  
Stormwater Management Regulatory Advisory Panel  
Water Quantity Subcommittee  
January 13, 2011**

**Subcommittee Members Present**

Mike Rolband, Subcommittee Chair  
Ingrid Stenbjorn, Town of Ashland  
Judy Cronauer, Fairfax County  
Assad Ayoubi, Fairfax County  
Keith White, Henrico County  
Joe Wilder, Frederick County  
Bill Street, James River Association  
Jerry McGraner, Joyce Engineering  
Steve Herzog, Hanover County  
Daniel Proctor, Williamsburg Environmental Group  
Brian Wagner, Balzer and Associates  
Roy Mills, VDOT  
Rick Parrish, Southern Environmental Law Center  
Aislinn Creel, Timmons Group

**Others Present**

Jeff Cowan, Dewberry  
Bethany Bezak, WSSI  
Jennifer Brophy-Price

**DCR Staff**

Mike Foreman  
John McCutcheon  
Ved Malhotra

**Meeting**

Mr. Rolband called the meeting to order. A presentation by Jeff Cowan was made to the subcommittee. Mr. Cowan's presentation showed examples of some of the impacts of the revised regulations on a typical development project. The presentation is available at <http://www.dcr.virginia.gov/lr2d.shtml>.

The subcommittee discussed the draft regulations and comments that had been received. There were two issues that it was agreed would be brought forward to the RAP in addition to the draft regulations. One is that many believe the development community will call for utilizing the full revised regulations on actual development sites to determine if there are any unforeseen impacts.

Second is the issue of "re-re development" on existing sites and whether the developer has to meet continuing water quantity goals. The regulatory recommendations from the water quantity subcommittee are attached below.

#### **4VAC50-60-10. Definitions.**

The following words and terms used in this chapter have the following meanings unless the context clearly indicates otherwise. The permit issuing authority may establish an alternative definition for any of the terms defined below as part of a qualifying local program approved by DCR.

"Act" means the Virginia Stormwater Management Act, Article 1.1 (§ 10.1-603.1 et seq.) of Chapter 6 of Title 10.1 of the Code of Virginia.

"Administrator" means the Administrator of the United States Environmental Protection Agency or an authorized representative.

"Applicable standards and limitations" means all state, interstate, and federal standards and limitations to which a discharge or a related activity is subject under the Clean Water Act (CWA) (33 USC § 1251 et seq.) and the Act, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, and standards for sewage sludge use or disposal under §§ 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.

"Approval authority" means the Virginia Soil and Water Conservation Board or its designee.

"Approved program" or "approved state" means a state or interstate program that has been approved or authorized by EPA under 40 CFR Part 123 (2000).

"Average monthly discharge limitation" means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

"Average weekly discharge limitation" means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

"Best management practice or "BMP" means schedules of activities, prohibitions of practices, including both structural and nonstructural practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities.

"Board" means the Virginia Soil and Water Conservation Board.

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

~~"Channel" means a natural stream or manmade watercourse with defined bed and banks that conducts continuously or periodically flowing water.~~

"Chesapeake Bay watershed" means all land areas draining to the following Virginia river basins: Potomac River Basin, James River Basin, Rappahannock River Basin, Chesapeake Bay and small coastal basins, and York River Basin.

"Common plan of development or sale" means a contiguous area where separate and distinct construction activities may be taking place at different times on different schedules.

"Comprehensive stormwater management plan" means a plan, which may be integrated with other land use plans or regulations, that specifies how the water quality components, quantity components, or both of stormwater are to be managed on the basis of an entire

watershed or a portion thereof. The plan may also provide for the remediation of erosion, flooding, and water quality and quantity problems caused by prior development.

"Construction activity" means any clearing, grading or excavation associated with large construction activity or associated with small construction activity.

"Contiguous zone" means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone (37 FR 11906 June 15, 1972).

"Continuous discharge" means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

"Control measure" means any BMP, stormwater facility, or other method used to minimize the discharge of pollutants to state waters.

"Co-operator" means an operator ~~to~~ of a VSMP permit that is only responsible for permit conditions relating to the discharge for which it is the operator.

"Clean Water Act" or "CWA" means 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.

"CWA and regulations" means the Clean Water Act (CWA) and applicable regulations published in the Code of Federal Regulations promulgated thereunder. For the purposes of this chapter, it includes state program requirements.

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

"Department" means the Department of Conservation and Recreation.

"Development" means land disturbance and the resulting landform associated with the construction of residential, commercial, industrial, institutional, recreation, transportation, or utility facilities or structures or the clearing of land for nonagricultural or nonsilvicultural purposes.

"Direct discharge" means the discharge of a pollutant.

"Director" means the Director of the Department of Conservation and Recreation or his designee.

"Discharge," when used without qualification, means the discharge of a pollutant.

"Discharge of a pollutant" means:

1. Any addition of any pollutant or combination of pollutants to state waters from any point source; or
2. Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into surface waters from: surface runoff that is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned

by a state, municipality, or other person that do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect discharger.

"Discharge Monitoring Report" or "DMR" means the form supplied by the department, or an equivalent form developed by the operator and approved by the board, for the reporting of self-monitoring results by operators.

"Draft permit" means a document indicating the board's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. A notice of intent to terminate a permit, and a notice of intent to deny a permit are types of draft permits. A denial of a request for modification, revocation and reissuance, or termination is not a draft permit. A proposed permit is not a draft permit.

"Drainage area" means a land area, water area, or both from which runoff flows to a common point.

"Effluent limitation" means any restriction imposed by the board on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into surface waters, the waters of the contiguous zone, or the ocean.

"Effluent limitations guidelines" means a regulation published by the administrator under § 304(b) of the CWA to adopt or revise effluent limitations.

"Environmental Protection Agency" or "EPA" means the United States Environmental Protection Agency.

"Existing permit" means for the purposes of this chapter a permit issued by the permit-issuing authority and currently held by a permit applicant.

"Existing source" means any source that is not a new source or a new discharger.

"Facilities or equipment" means buildings, structures, process or production equipment or machinery that form a permanent part of a new source and that will be used in its operation, if these facilities or equipment are of such value as to represent a substantial commitment to construct. It excludes facilities or equipment used in connection with feasibility, engineering, and design studies regarding the new source or water pollution treatment for the new source.

"Facility or activity" means any VSMP point source or treatment works treating domestic sewage or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the VSMP.

"Flood fringe" ~~is~~ means the portion of the floodplain outside the floodway that is usually covered with water from the 100-year storm event. This includes, but is not limited to, the flood fringe designated by the Federal Emergency Management Agency.

"Flooding" means a volume of water that is too great to be confined within the banks or walls of the stream, water body or conveyance system and that overflows onto adjacent lands, thereby causing or threatening damage.

"Floodplain" means ~~any land~~ the area adjoining adjacent to a channel, river, stream, or other water body that is susceptible to being inundated by water. ~~It includes the floodway and flood fringe areas normally~~ associated with the 100-year storm event. This includes, but is not limited to, the floodplain designated by the Federal Emergency Management Agency.

"Flood-prone area" means the component of a natural or restored stormwater conveyance system that is outside the main channel. Flood-prone areas may include, but are not limited to, the floodplain, the floodway, the flood fringe, wetlands, riparian buffers or other areas adjacent to the main channel.

"Floodway" means 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 ~~base flood~~ 100-year storm event without cumulatively increasing the water surface elevation more than one foot. This includes, but is not limited to, the floodway ~~or as otherwise~~ designated by the Federal Emergency Management Agency.

"General permit" means a VSMP permit authorizing a category of discharges under the CWA and the Act within a geographical area of the Commonwealth of Virginia.

"Hazardous substance" means any substance designated under the Code of Virginia or 40 CFR Part 116 (2000) pursuant to § 311 of the CWA.

"Hydrologic Unit Code" or "HUC" means a watershed unit established in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset.

"Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a VPDES or VSMP permit (other than the VSMP permit for discharges from the municipal separate storm sewer), discharges resulting from fire fighting activities, and discharges identified by and in compliance with 4VAC50-60-1220 C 2.

"Impervious cover" means a man-made surface composed of material that significantly impedes or prevents natural infiltration of water into soil. ~~Impervious surfaces include, but are not limited to, conventional roofs, buildings, streets, parking areas, and any conventional concrete, asphalt, or gravel surface that is or may become compacted.~~

"Incorporated place" means a city, town, township, or village that is incorporated under the Code of Virginia.

"Indian country" means (i) all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (ii) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (iii) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

"Indirect discharger" means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works (POTW)."

"Inspection" means an on-site review of the project's compliance with the permit, the local stormwater management program, and any applicable design criteria, or an on-site review to obtain information or conduct surveys or investigations necessary in the enforcement of the Act and this chapter.

"Interstate agency" means an agency of two or more states established by or under an agreement or compact approved by Congress, or any other agency of two or more states having substantial powers or duties pertaining to the control of pollution as determined and approved by the administrator under the CWA and regulations.

"Karst area" means any land area predominantly underlain at the surface or shallow subsurface by limestone, dolomite, or other soluble bedrock regardless of any obvious surface karst features.

"Karst features" means sinkholes, sinking and losing streams, caves, large flow springs, and other such landscape features found in karst areas.

"Land disturbance" or "land-disturbing activity" means a manmade change to the land surface that potentially changes its runoff characteristics including any clearing, grading, or

excavation associated with a construction activity regulated pursuant to the CWA, the Act, and this chapter.

"Large construction activity" means construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Large construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more.

"Large municipal separate storm sewer system" means all municipal separate storm sewers that are either:

1. Located in an incorporated place with a population of 250,000 or more as determined by the 1990 decennial census by the Bureau of Census (40 CFR Part 122 Appendix F (2000));
2. Located in the counties listed in 40 CFR Part 122 Appendix H (2000), except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties;
3. Owned or operated by a municipality other than those described in subdivision 1 or 2 of this definition and that are designated by the board as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under subdivision 1 or 2 of this definition. In making this determination the board may consider the following factors:
  - a. Physical interconnections between the municipal separate storm sewers;
  - b. The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in subdivision 1 of this definition;
  - c. The quantity and nature of pollutants discharged to surface waters;
  - d. The nature of the receiving surface waters; and
  - e. Other relevant factors.
4. The board may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a stormwater management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in this definition.

"Layout" means a conceptual drawing sufficient to provide for the specified stormwater management facilities required at the time of approval.

"Linear development project" means a land-disturbing activity that is linear in nature such as, but not limited to, (i) the construction of electric and telephone utility lines, and natural gas pipelines; (ii) construction of tracks, rights-of-way, bridges, communication facilities and other related structures of a railroad company; (iii) highway construction projects; (iv) construction of stormwater channels and stream restoration activities; and (v) water and sewer lines. Private subdivision roads or streets shall not be considered linear development projects.

"Local stormwater management program" or "local program" means the various methods employed by a locality or the department to manage the quality and quantity of runoff resulting from land-disturbing activities and shall include such items as local ordinances, permit requirements, policies and guidelines, technical materials, plan review, inspection, enforcement, and evaluation consistent with the Act and this chapter.

"Locality" means a county, city, or town.

"Localized flooding" refers to smaller scale flooding that may occur outside of a stormwater conveyance system. This may include high water, ponding or standing water from stormwater runoff, which is likely to cause property damage or unsafe conditions.

"Main channel" means the portion of the stormwater conveyance system that contains the base flow and small, frequent storm events.

"Major facility" means any VSMP facility or activity classified as such by the regional administrator in conjunction with the board.

"Major modification" means, for the purposes of this chapter, the modification or amendment of an existing permit before its expiration that is not a minor modification as defined in this regulation.

"Major municipal separate storm sewer outfall" or "major outfall" means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), with an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of two acres or more).

"Manmade" means constructed by man.

~~"Manmade stormwater conveyance system" means a pipe, ditch, vegetated swale, or other conveyance constructed by man.~~

"Maximum daily discharge limitation" means the highest allowable daily discharge.

"Maximum extent practicable" or "MEP" means the technology-based discharge standard for municipal separate storm sewer systems established by CWA § 402(p). MEP is achieved, in part, by selecting and implementing effective structural and nonstructural best management practices (BMPs) and rejecting ineffective BMPs and replacing them with effective best management practices (BMPs). MEP is an iterative standard, which evolves over time as urban runoff management knowledge increases. As such, the operator's MS4 program must continually be assessed and modified to incorporate improved programs, control measures, BMPs, etc., to attain compliance with water quality standards.

"Medium municipal separate storm sewer system" means all municipal separate storm sewers that are either:

1. Located in an incorporated place with a population of 100,000 or more but less than 250,000 as determined by the 1990 decennial census by the Bureau of Census (40 CFR Part 122 Appendix G (2000));
2. Located in the counties listed in 40 CFR Part 122 Appendix I (2000), except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties;
3. Owned or operated by a municipality other than those described in subdivision 1 or 2 of this definition and that are designated by the board as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under subdivision 1 or 2 of this definition. In making this determination the board may consider the following factors:
  - a. Physical interconnections between the municipal separate storm sewers;

- b. The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in subdivision 1 of this definition;
  - c. The quantity and nature of pollutants discharged to surface waters;
  - d. The nature of the receiving surface waters; or
  - e. Other relevant factors.
4. The board may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a stormwater management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in subdivisions 1, 2 and 3 of this definition.

"Minor modification" means, for the purposes of this chapter, minor modification or amendment of an existing permit before its expiration for the reasons listed at 40 CFR 122.63 and as specified in 4VAC50-60-640. Minor modification for the purposes of this chapter also means other modifications and amendments not requiring extensive review and evaluation including, but not limited to, changes in EPA promulgated test protocols, increasing monitoring frequency requirements, changes in sampling locations, and changes to compliance dates within the overall compliance schedules. A minor permit modification or amendment does not substantially alter permit conditions, substantially increase or decrease the amount of surface water impacts, increase the size of the operation, or reduce the capacity of the facility to protect human health or the environment.

"Municipal separate storm sewer" means a conveyance or system of conveyances otherwise known as a municipal separate storm sewer system, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains:

1. Owned or operated by a federal, state, city, town, county, district, association, or other public body, created by or pursuant to state law, having jurisdiction or delegated authority for erosion and sediment control and stormwater management, or a designated and approved management agency under § 208 of the CWA that discharges to surface waters;
2. Designed or used for collecting or conveying stormwater;
3. That is not a combined sewer; and
4. That is not part of a publicly owned treatment works.

"Municipal separate storm sewer system" or "MS4" means all separate storm sewers that are defined as "large" or "medium" or "small" municipal separate storm sewer systems or designated under 4VAC50-60-380 A 1.

"Municipal Separate Storm Sewer System Management Program" or "MS4 Program" means a management program covering the duration of a permit for a municipal separate storm sewer system that includes a comprehensive planning process that involves public participation and intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA and regulations and the Act and attendant regulations, using management practices, control techniques, and system, design and engineering methods, and such other provisions that are appropriate.

"Municipality" means a city, town, county, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial wastes, or other

wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the CWA.

"National Pollutant Discharge Elimination System" or "NPDES" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under §§ 307, 402, 318, and 405 of the CWA. The term includes an approved program.

"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.

~~"Natural stormwater conveyance system" means the main channel of a natural stream, in combination with the floodway and flood fringe, which compose the floodplain.~~

"Natural stream" means a tidal or nontidal watercourse that is part of the natural topography. It usually maintains a continuous or seasonal flow during the year and is characterized as being irregular in cross-section with a meandering course. Constructed channels such as drainage ditches or swales shall not be considered natural streams ; however, channels designed utilizing natural channel design concepts may be considered natural streams.

"New discharger" means any building, structure, facility, or installation:

1. From which there is or may be a discharge of pollutants;
2. That did not commence the discharge of pollutants at a particular site prior to August 13, 1979;
3. Which is not a new source; and
4. Which has never received a finally effective VPDES or VSMP permit for discharges at that site.

This definition includes an indirect discharger that commences discharging into surface waters after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a site for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979.

"New permit" means, for the purposes of this chapter, a permit issued by the permit-issuing authority to a permit applicant that does not currently hold and has never held a permit of that type, for that activity, at that location.

"New source," means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

1. After promulgation of standards of performance under § 306 of the CWA that are applicable to such source; or
2. After proposal of standards of performance in accordance with § 306 of the CWA that are applicable to such source, but only if the standards are promulgated in accordance with § 306 of the CWA within 120 days of their proposal.

"Nonpoint source pollution" means pollution such as sediment, nitrogen and phosphorous, hydrocarbons, heavy metals, and toxics whose sources cannot be pinpointed but rather are washed from the land surface in a diffuse manner by stormwater runoff.

"Operator" means the owner or operator of any facility or activity subject to the VSMP permit regulation. In the context of stormwater associated with a large or small construction activity, operator means any person associated with a construction project that meets either of the following two criteria: (i) the person has direct operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications or (ii) the person has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions (i.e., they are authorized to direct workers at a site to carry out activities required by the stormwater pollution prevention plan or comply with other permit conditions). In the context of stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s), operator means the operator of the regulated MS4 system.

"Outfall" means, when used in reference to municipal separate storm sewers, a point source at the point where a municipal separate storm sewer discharges to surface waters and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and are used to convey surface waters.

"Overburden" means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally occurring surface materials that are not disturbed by mining operations.

"Owner" means the Commonwealth or any of its political subdivisions including, but not limited to, sanitation district commissions and authorities, and any public or private institution, corporation, association, firm or company organized or existing under the laws of this or any other state or country, or any officer or agency of the United States, or any person or group of persons acting individually or as a group that owns, operates, charters, rents, or otherwise exercises control over or is responsible for any actual or potential discharge of sewage, industrial wastes, or other wastes or pollutants to state waters, or any facility or operation that has the capability to alter the physical, chemical, or biological properties of state waters in contravention of § 62.1-44.5 of the Code of Virginia, the Act and this chapter.

"Peak flow rate" means the maximum instantaneous flow from a prescribed design storm at a particular location.

"Percent impervious" means the impervious area within the site divided by the area of the site multiplied by 100.

"Permit" means an approval issued by the permit-issuing authority for the initiation of a land-disturbing activity or for stormwater discharges from an MS4. Permit does not include any permit that has not yet been the subject of final permit-issuing authority action, such as a draft permit or a proposed permit.

"Permit-issuing authority" means the board, the department, or a locality with a qualifying local program.

"Permittee" means the person or locality to which the permit is issued, including any owner or operator whose construction site is covered under a construction general permit.

"Person" means any individual, corporation, partnership, association, state, municipality, commission, or political subdivision of a state, governmental body (including but not limited to a federal, state, or local entity), any interstate body or any other legal entity.

"Planning area" means a designated portion of the parcel on which the land development project is located. Planning areas shall be established by delineation on a master plan. Once established, planning areas shall be applied consistently for all future projects.

"Point of discharge" means a location at which concentrated stormwater runoff is released.

"Point source" means any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

"Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC § 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

1. Sewage from vessels; or
2. Water, gas, or other material that is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well if the well used either to facilitate production or for disposal purposes is approved by the board and if the board determines that the injection or disposal will not result in the degradation of ground or surface water resources.

"Pollutant discharge" means the average amount of a particular pollutant measured in pounds per year or other standard reportable unit as appropriate, delivered by stormwater runoff.

"Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that (i) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution; (ii) the discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the State Water Control Board, are "pollution" for the terms and purposes of this chapter.

"Postdevelopment" refers to conditions that reasonably may be expected or anticipated to exist after completion of the land development activity on a specific site or tract of land.

"Predevelopment" refers to the conditions that exist at the time that plans for the land development of a tract of land are submitted to the plan approval authority. Where phased development or plan approval occurs (preliminary grading, demolition of existing structures, roads and utilities, etc.), the existing conditions at the time prior to the first item being submitted shall establish predevelopment conditions.

"Prior developed lands" means land that has been previously utilized for residential, commercial, industrial, institutional, recreation, transportation or utility facilities or structures, and that will have the impervious areas associated with those uses altered during a land-disturbing activity.

"Privately owned treatment works" or "PVOTW" means any device or system that is (i) used to treat wastes from any facility whose operator is not the operator of the treatment works and (ii) not a POTW.

"Proposed permit" means a VSMP permit prepared after the close of the public comment period (and, when applicable, any public hearing and administrative appeals) that is sent to EPA for review before final issuance. A proposed permit is not a draft permit.

"Publicly owned treatment works" or "POTW" means a treatment works as defined by § 212 of the CWA that is owned by a state or municipality (as defined by § 502(4) of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant. The term also means the municipality as defined in § 502(4) of the CWA, that has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

"Qualified personnel" means a licensed professional engineer, responsible land disturber, or other person who holds a certificate of competency from the board in the area of project inspection or combined administrator.

"Qualifying local stormwater management program" or "qualifying local program" means a local program that is administered by a locality that has been authorized by the board to issue coverage under the VSMP General Permit for Discharges of Stormwater from Construction Activities (4VAC50-60-1170).

"Recommencing discharger" means a source that recommences discharge after terminating operations.

"Regional administrator" means the Regional Administrator of Region III of the Environmental Protection Agency or the authorized representative of the regional administrator.

~~"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.~~

"Revoked permit" means, for the purposes of this chapter, an existing permit that is terminated by the board before its expiration.

"Runoff coefficient" means the fraction of total rainfall that will appear at a conveyance as runoff.

"Runoff" or "stormwater runoff" means that portion of precipitation that is discharged across the land surface or through conveyances to one or more waterways.

~~"Runoff characteristics" include velocity, peak flow rate, volume, time of concentration, and flow duration, and their influence on channel morphology including sinuosity, channel cross-sectional area, and channel slope.~~

"Runoff volume" means the volume of water that runs off the site of a land-disturbing activity from a prescribed design storm.

"Schedule of compliance" means a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the Act, the CWA and regulations.

"Secretary" means the Secretary of the Army, acting through the Chief of Engineers.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of

natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Significant materials" means, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under § 101(14) of CERCLA (42 USC § 9601(14)); any chemical the facility is required to report pursuant to § 313 of Title III of SARA (42 USC § 11023); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

"Single jurisdiction" means, for the purposes of this chapter, a single county or city. The term county includes incorporated towns which are part of the county.

"Site" means the land or water area where any facility or activity is physically located or conducted, a parcel of land being developed, or a designated area of a parcel in which the land development project is located. Areas channelward of mean low water in tidal Virginia shall not be considered part of a site.

"Site hydrology" means the movement of water on, across, through and off the site as determined by parameters including, but not limited to, soil types, soil permeability, vegetative cover, seasonal water tables, slopes, land cover, and impervious cover.

"Small construction activity" means:

1. Construction activities including clearing, grading, and excavating that results in land disturbance of equal to or greater than one acre, or 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 adopted pursuant to the Chesapeake Bay Preservation Act, and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small 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. The board may waive the otherwise applicable requirements in a general permit for a stormwater discharge from construction activities that disturb less than five acres where stormwater controls are not needed based on a "total maximum daily load" (TMDL) approved or established by EPA that addresses the pollutant(s) of concern or, for nonimpaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. For the purpose of this subdivision, the pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the board that the construction activity will take place, and stormwater discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis.
2. Any other construction activity designated by the either the board or the EPA regional administrator, based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters.

"Small municipal separate storm sewer system" or "small MS4" means all separate storm sewers that are (i) owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the CWA that discharges to surface waters and (ii) not defined as "large" or "medium" municipal separate storm sewer systems or designated under 4VAC50-60-380 A 1. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highway and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

"Source" means any building, structure, facility, or installation from which there is or may be a discharge of pollutants.

~~"Stable" means, in the context of channels, a channel that has developed an established dimension, pattern, and profile such that over time, these features are maintained.~~

"State" means the Commonwealth of Virginia.

"State/EPA agreement" means an agreement between the regional administrator and the state that coordinates EPA and state activities, responsibilities and programs including those under the CWA and the Act.

"State project" means any land development project that is undertaken by any state agency, board, commission, authority or any branch of state government, including state-supported institutions of higher learning.

"State Water Control Law" means Chapter 3.1 (§ 62.1-44.2 et seq.) of Title 62.1 of the Code of Virginia.

"State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Stormwater" means precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

~~"Stormwater conveyance system" means any of the following a combination of drainage components that are used to convey stormwater discharge, either within or downstream of the land-disturbing activity. This includes:~~

~~(i) a manmade "Manmade stormwater conveyance system;" means a pipe, ditch, vegetated swale, or other stormwater conveyance system constructed by man except for restored stormwater conveyance systems;~~

~~(ii) a natural "Natural stormwater conveyance system;" means the main channel of a natural stream and the flood-prone area adjacent to the main channel; or~~

~~(iii) a restored "Restored stormwater conveyance system" means a stormwater conveyance system that has been designed and constructed using natural channel design concepts. Restored stormwater conveyance systems include the main channel and the flood-prone area adjacent to the main channel.~~

"Stormwater discharge associated with construction activity" means a discharge of pollutants in stormwater runoff from areas where land-disturbing activities (e.g., clearing, grading, or excavation); construction materials or equipment storage or maintenance (e.g., fill

piles, borrow area, concrete truck washout, fueling); or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

"Stormwater discharge associated with large construction activity" means the discharge of stormwater from large construction activities.

"Stormwater discharge associated with small construction activity" means the discharge of stormwater from small construction activities.

"Stormwater management facility" means a device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release or the velocity of flow.

"Stormwater management plan" means a document(s) containing material for describing how existing runoff characteristics will be maintained by a land-disturbing activity and methods for complying with the requirements of the local program or this chapter.

"Stormwater Management Program" means a program established by a locality that is consistent with the requirements of the Act, this chapter and associated guidance documents.

"Stormwater management standards" means the minimum criteria for stormwater management programs and land-disturbing activities as set out in Part II (4VAC50-60-40 et seq.) of this chapter.

"Stormwater Pollution Prevention Plan" or "SWPPP" means a document that is prepared in accordance with good engineering practices and that identifies potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site or its associated land-disturbing activities. In addition the document shall identify and require the implementation of control measures, and shall include, but not be limited to the inclusion of, or the incorporation by reference of, an erosion and sediment control plan, a post-construction stormwater management plan, a spill prevention control and countermeasure (SPCC) plan, and other practices that will be used to minimize pollutants in stormwater discharges from land-disturbing activities in compliance with the terms and conditions of this chapter. All plans incorporated by reference into the SWPPP shall be enforceable under the permit issued or general permit coverage authorized.

"Subdivision" means the same as defined in § 15.2-2201 of the Code of Virginia.

"Surface waters" means:

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - a. That are or could be used by interstate or foreign travelers for recreational or other purposes;
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. That are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as surface waters under this definition;

5. Tributaries of waters identified in subdivisions 1 through 4 of this definition;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in subdivisions 1 through 6 of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA and the law, are not surface waters. Surface waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other agency, for the purposes of the Clean Water Act, the final authority regarding the Clean Water Act jurisdiction remains with the EPA.

"Total dissolved solids" means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR Part 136 (2000).

"Total maximum daily load" or "TMDL" means the sum of the individual wasteload allocations for point sources, load allocations (LAs) for nonpoint sources, natural background loading and a margin of safety. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

"Toxic pollutant" means any pollutant listed as toxic under § 307(a)(1) of the CWA or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing § 405(d) of the CWA.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the operator. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

"Urban development area" or "UDA" means, as defined by § 15.2-2223.1 of the Code of Virginia, an area designated by a locality that is appropriate for higher density development due to proximity to transportation facilities, the availability of a public or community water and sewer system, or proximity to a city, town, or other developed area.

"Variance" means any mechanism or provision under § 301 or § 316 of the CWA or under 40 CFR Part 125 (2000), or in the applicable federal effluent limitations guidelines that allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of the CWA. This includes provisions that allow the establishment of alternative limitations based on fundamentally different factors or on § 301(c), § 301(g), § 301(h), § 301(i), or § 316(a) of the CWA.

"Virginia Pollutant Discharge Elimination System (VPDES) permit" or "VPDES permit" means a document issued by the State Water Control Board pursuant to the State Water Control Law authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters and the use or disposal of sewage sludge.

"Virginia Stormwater Management Act" means Article 1.1 (§ 10.1-603.1 et seq.) of Chapter 6 of Title 10.1 of the Code of Virginia.

"Virginia Stormwater BMP Clearinghouse website" means a website that contains detailed design standards and specifications for control measures that may be used in Virginia to comply with the requirements of the Virginia Stormwater Management Act and associated regulations and that is jointly created by the department and the Virginia Water Resources Research Center subject to advice to the director from a permanent stakeholder advisory committee.

"Virginia Stormwater Management Handbook" means a collection of pertinent information that provides general guidance for compliance with the Act and associated regulations and is developed by the department with advice from a stakeholder advisory committee.

"Virginia Stormwater Management Program" or "VSMP" means the Virginia program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing requirements pursuant to the CWA, the Act, this chapter, and associated guidance documents.

"Virginia Stormwater Management Program permit" or "VSMP permit" means a document issued by the permit-issuing authority pursuant to the Virginia Stormwater Management Act and this chapter authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters. Under the approved state program, a VSMP permit is equivalent to a NPDES permit.

"VSMP application" or "application" means the standard form or forms, including any additions, revisions or modifications to the forms, approved by the administrator and the board for applying for a VSMP permit.

"Wasteload allocation" or "wasteload" or "WLA" means the portion of a receiving surface water's loading or assimilative capacity allocated to one of its existing or future point sources of pollution. WLAs are a type of water quality-based effluent limitation.

"Water quality standards" or "WQS" means provisions of state or federal law that consist of a designated use or uses for the waters of the Commonwealth and water quality criteria for such waters based on such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water, and serve the purposes of the State Water Control Law (§ 62.1-44.2 et seq. of the Code of Virginia), the Act (§ 10.1-603.1 et seq. of the Code of Virginia), and the CWA (33 USC § 1251 et seq.).

"Watershed" means a defined land area drained by a river or stream, karst system, or system of connecting rivers or streams such that all surface water within the area flows through a single outlet. In karst areas, the karst feature to which the water drains may be considered the single outlet for the watershed.

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

"Whole effluent toxicity" means the aggregate toxic effect of an effluent measured directly by a toxicity test.

#### **4VAC50-60-66. Water quantity.**

A. Channel protection and flood protection shall be addressed in accordance with the minimum standards set out in this section, which are established pursuant to the requirements of subdivision 7 of § 10.1-603.4 of the Code of Virginia. Nothing in this section shall prohibit a qualifying local program from establishing a more stringent standard.

#### **4VAC50-60-66.B**

B. Channel protection. Concentrated stormwater flow shall be released into a stormwater conveyance system. Concentrated stormwater flow shall meet criteria a., b. and c. of this subsection, where applicable, from the point of discharge to a point where, following the land-disturbing activity, either (i) based on land area, the site's contributing drainage area, is less than or equal

to 1.0% of the total watershed area or (ii) based on peak flow rate, the site's peak flow rate from the one-year 24-hour storm is less than 1.0% of the existing peak flow rate from the one-year 24-hour storm prior to the implementation of any stormwater quantity control measures.

- a. Manmade stormwater conveyance systems. When stormwater from a development is discharged to a manmade stormwater conveyance system, following the land-disturbing activity, either:
  - i. the manmade stormwater conveyance system shall convey the postdevelopment peak flow rate from the two-year 24 hour storm event without causing erosion of the system (Detention or downstream improvements may be incorporated into the approved land disturbing activity to meet this criteria.) or
  - ii. the peak discharge requirements for concentrated stormwater flow to natural stormwater conveyance systems in c. shall be met.
- b. Restored stormwater conveyance systems. When stormwater from a development is discharged to a restored stormwater conveyance system that has been restored using natural channel design concepts, either:
  - i. the development shall be consistent, in combination with other stormwater runoff, with the design parameters of the restored stormwater conveyance system. (This allows for restored stormwater conveyance systems to be incorporated into the approved land disturbing activity to meet this criteria.) or
  - ii. the peak discharge requirements for concentrated stormwater flow to natural stormwater conveyance systems in c. shall be met.
- c. Natural stormwater conveyance systems. When stormwater from a development is discharged to a natural stormwater conveyance system, the maximum peak flow rate from the one-year 24 hour storm following the land-disturbing activity shall be calculated either:
  - i. in accordance with the following methodology:

$$Q_{\text{Developed}} \leq \text{I.F.} * [Q_{\text{Pre-developed}} \times RV_{\text{Pre-developed}}] \div RV_{\text{Developed}}$$

Under no condition shall  $Q_{\text{Developed}}$  be greater than  $Q_{\text{Pre-developed}}$  or shall  $Q_{\text{Developed}}$  be required to be less than that calculated by the equation  $[Q_{\text{forest}} \times RV_{\text{forest}}] \div RV_{\text{Developed}}$ , where

I.F. = Improvement Factor = 0.8 for sites >1 ac or 0.9 for sites ≤1 ac  
 $Q_{\text{Developed}}$  = The allowable peak flow rate of runoff from the developed site,  
 $RV_{\text{Developed}}$  = The volume of runoff from the site in the developed condition,

$Q_{\text{Pre-developed}}$  = The peak flow rate of runoff from the site in the pre-developed condition,

$RV_{\text{Pre-developed}}$  = The volume of runoff from the site in the pre-developed condition,

$Q_{\text{forest}}$  = The peak flow rate of runoff from the site in a forested condition, and

$RV_{\text{forest}}$  = The volume of runoff from the site in a forested condition,

or

- ii. in accordance with another methodology that is demonstrated by the local program to achieve equivalent results and is approved by the board

C. Flood protection. Concentrated stormwater flow shall be released into a stormwater conveyance system and shall meet one of the following criteria as demonstrated by use of ~~accepted~~ acceptable hydrologic and hydraulic methodologies:

1. Concentrated stormwater flow to manmade stormwater conveyance systems that currently do not experience localized flooding during the 10-year 24-hour storm event. The point of discharge releases stormwater into a ~~manmade~~ stormwater conveyance system that, following the land-disturbing activity, confines the postdevelopment peak flow rate from the 10-year 24-hour storm event within the ~~manmade~~ stormwater conveyance system. This allows for the provision of detention or downstream improvements to provide capacity as part of the project.

2. Concentrated stormwater flow to ~~restored~~ stormwater conveyance systems that currently experience localized flooding during the 10-year 24-hour storm event. The point of discharge either

- (i) confines the postdevelopment peak flow rate from the 10-year 24-hour storm event within the stormwater conveyance system to avoid the localized flooding. (This allows for the provision of detention or downstream improvements to provide capacity as part of the project.) or

- ~~(ii) releases a postdevelopment peak flow rate for stormwater into a stormwater conveyance system that (i) has been restored and is functioning as designed or (ii) will be restored. The applicant must demonstrate that the peak flow rate from the 10-year 24-hour storm following the land-disturbing activity will be confined within the system that is less than the predevelopment peak flow rate from the 10-year 24-hour storm. (Downstream stormwater conveyance systems do not require any additional analysis to show compliance with flood protection criteria if this option is utilized.)~~

3. Limits of analysis. Unless 2(ii) above is utilized to comply with the flood protection criteria, stormwater conveyance systems shall be analyzed for compliance with flood protection criteria to a point where:

- (i) the site's contributing drainage area is less than or equal to 1.0% of the total watershed area draining to a point of analysis in the downstream stormwater conveyance system;

- (ii) based on peak flow rate, the site's peak flow rate from the ten-year 24-hour storm is less than 1.0% of the existing peak flow rate from the ten-year 24-hour storm prior to the implementation of any stormwater quantity control measures; or

(iii) the stormwater conveyance system enters a mapped floodplain or other flood prone area, adopted by ordinance, of any locality.

~~3. Concentrated stormwater flow to natural stormwater conveyance systems. The point of discharge releases stormwater into a natural stormwater conveyance system that currently does not flood during the 10-year 24-hour storm and, following the land-disturbing activity, confines the postdevelopment peak flow rate from the 10-year 24-hour storm within the system.~~

~~4. Concentrated stormwater flow to natural stormwater conveyance systems where localized flooding exists during the 10-year 24-hour storm. The point of discharge releases a postdevelopment peak flow rate for the 10-year 24-hour storm that shall not exceed the predevelopment peak flow rate from the 10-year 24-hour storm based on good pasture conditions, unless the predeveloped condition is forested, in which case the peak flow rate from the developed site shall be held to the forested condition.~~

~~5. Subdivision C 4 of this subsection notwithstanding, this subdivision shall apply to concentrated stormwater flow to natural stormwater conveyance systems where localized flooding exists during the 10-year 24-hour storm from (i) a land-disturbing activity less than five acres on prior developed lands, or (ii) a regulated land-disturbing activity less than one acre for new development. The point of discharge releases a postdevelopment peak flow rate for the 10-year 24-hour storm that is less than the predevelopment peak flow rate from the 10-year 24-hour storm.~~

E. Increased volumes of sheet flow resulting from pervious or disconnected impervious areas, or from physical spreading of concentrated flow through level spreaders, must be identified and evaluated for potential impacts on down gradient properties or resources. Increased volumes of sheet flow that will cause or contribute to erosion, sedimentation, or flooding of down gradient properties or resources shall be diverted to a stormwater management facility or a stormwater conveyance system that conveys the runoff without causing down gradient erosion, sedimentation, or flooding. If all runoff from the site is sheet flow and the conditions of this subsection are met, no further water quantity controls are required.

F. For purposes of computing predevelopment runoff from prior developed sites, all pervious lands on the site shall be assumed to be in good hydrologic condition in accordance with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) standards, regardless of conditions existing at the time of computation. Predevelopment runoff calculations utilizing other hydrologic conditions may be utilized provided that it is demonstrated to and approved by the local program that actual site conditions warrant such considerations.

G. Predevelopment runoff characteristics and site hydrology shall be verified by site inspections, topographic surveys, available soil mapping or studies, and calculations consistent with good engineering practices. Guidance provided in the Virginia Stormwater Management Handbook shall be considered appropriate standards.