

# STORMWATER PROGRAM ADVISORY

SWPA 12-01

Date: April 5, 2012

SUBJECT: APPLICATION OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATORY REQUIREMENTS FOR USE TOTAL POST DEVELOPMENT IMPERVIOUS AREA OF THE SITE TO DETERMINE WATER QUALITY REQUIREMENTS

AUTHOR: Roy T. Mills  
State Stormwater Program Administrator

Effective October 1, 2012, all proposed VDOT regulated land disturbing activities/projects that have not begun the construction advertisement stage (e.g., Pre-Advertisement Conference (PAC) for Design/Bid/Build (D/B/B) projects or Request for Proposal (RFP) for Design/Build (D/B) projects) must have their post development stormwater management plan evaluated/re-evaluated using the total post development impervious area of the site (new criteria), in lieu of the post development net increase in impervious area of the site (old criteria), to determine the activity/project's percent impervious and corresponding water quality requirements. The procedures and guidance outlined in Appendix A of this document, titled "Application of Water Quality Criteria for VDOT Regulated Land Disturbing Activities/Projects", shall be used in the evaluation/revaluation process.

If using the new criteria results in an increase in the water quality requirements for the proposed land disturbing activity/project from that determined using the old criteria, the additional water quality requirements shall be incorporated into the post development stormwater management plan for the proposed land disturbing activity/project based on the following:

- Category 1 activities are those proposed land disturbing activities/projects that have not completed the public hearing/willingness notice stage of plan development as of the effective date. These activities/projects will be required to fully incorporate any additional water quality requirements into their proposed post development stormwater management plan.
- Category 2 activities are those proposed land disturbing activities/projects that have completed the public hearing/willingness notice stage of plan development but have not yet begun the construction advertisement stage. These activities/projects will be required to incorporate any additional water quality requirements into their proposed post development stormwater management plan to the maximum extent practicable without impacting (increasing) the existing or currently proposed right of way/easement footprint and without impacting (delaying) the construction schedule.

For Category 2 land disturbing activities/projects, any revisions to the proposed post development stormwater management plan to address additional water quality requirements should be reasonable and practicable and be applied in a logical and common sense approach. Any additions or modifications to the proposed post development stormwater management plan should utilize standard Best Management Practices (BMPs) typically associated with the specific type of project (i.e., rural or urban). For example, proposing to install a large number of Filterias on a rural secondary roadway project may, theoretically, satisfy the water quality “numbers” but, in reality, may be neither reasonable nor practical.

The following steps should be followed in the evaluation/re-evaluation process for Category 2 land disturbing activities/projects:

1. Determine the additional water quality requirements in accordance with the procedures and guidance in Appendix A (“Application of Water Quality Criteria for VDOT Regulated Land Disturbing Activities/Projects”).
2. Explore all reasonable BMP alternatives to achieve any additional water quality requirements within the existing or currently proposed right of way/easement footprint for the proposed land disturbing activity/project or within adjacent VDOT right of way or easement.
3. Determine/select which BMP alternatives can be feasibly incorporated into the activity/project’s proposed post development stormwater management plan without impacting (delaying) the construction schedule.
4. Incorporate the selected water quality BMPs into the project’s proposed post development stormwater management plan.
5. For those activities/projects not achieving 100% of the required pollutant load reduction, document the proposed land disturbing activity/project files and Stormwater Pollution Prevention Plan (SWPPP) with regards to the additional/total water quality requirements, BMP alternatives investigated, BMP alternatives selected, reasons why certain BMPs were selected/not selected and the amount/percent of the total water quality requirements achieved and/or not achieved.

The guidance provided in this Stormwater Program Advisory shall be followed until such can be incorporated into Instructional and Informational Memorandum IIM-LD-195.

# STORMWATER PROGRAM ADVISORY SWPA 12-01

## APPENDIX A

### APPLICATION OF WATER QUALITY CRITERIA FOR VDOT REGULATED LAND DISTURBING ACTIVITIES/PROJECTS

The following guidance is provided in the application of the water quality criteria contained in the VSMP Regulations Section 4VAC-50-60-93.1 Part II C to VDOT regulated land disturbing activities/projects.

#### DEFINITIONS

“BMP” – Best Management Practice.

“HUC” or “Hydrologic Unit Code” - A watershed unit established in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset.

“IIM” – Instructional and Informational Memorandum.

“Pre-Development” refers to those conditions that exist prior to commencement of the proposed land disturbing activity/project.

“Pre-Development Impervious Area” is the amount of impervious area within the “site” prior to commencement of the proposed land disturbing activity/project.

“Pre-Development Percent Impervious” is the amount of pre-development impervious area within the “site” divided by the total area of the “site”.

“Post Development” refers to those conditions that will or are expected to exist after completion of the proposed land disturbing activity/project.

“Post Development Impervious Area” is the amount of impervious area within the “site” that will or is expected to exist after completion of the proposed land disturbing activity/project.

“Post Development Percent Impervious” is the amount of post development impervious area within the “site” divided by the total area of the “site”.

“Site” is the area of actual proposed land disturbance (i.e., construction limits) plus any right of way acquired in support of the proposed land disturbance activity/project. Any staging areas within existing or proposed VDOT right of way associated with the proposed land disturbance activity/project and identified in the pre-construction SWPPP for the proposed land disturbance activity/project shall also be considered a part of the site. Permanent easements and/or other property acquired through the right of way acquisition process in support of the proposed land disturbance activity/project may be considered a part of the site and utilized in the determination of the post development water quality requirements provided such property will remain under the ownership/control of the VDOT and providing such property is so identified/designated on the proposed land disturbance activity/project plans and legally encumbered for the purpose of stormwater management.

“SWPPP” – Storm Water Pollution Prevention Plan.

“VDOT” – Virginia Department of Transportation.

“VSMP” – Virginia Stormwater Management Program.

## CRITERIA

1. Evaluation of water quality requirements shall be performed using the Performance Based Water Quality Criteria (see the Virginia Stormwater Management Handbook (1999) and VDOT IIM-LD-195.7).
2. Evaluation of water quality requirements may be performed considering the “site” at each individual stormwater discharge (outfall) point from the proposed land disturbing activity/project or may be performed considering the “site” for the entire limits of the proposed land disturbing activity/project.
3. Where the proposed land disturbing activity/project drains to more than one HUC, the required pollutant load reductions shall be applied independently within each HUC unless reductions are proposed to be achieved under a comprehensive stormwater management plan developed in accordance with section 4VAC50-60-92 of the VSMP Regulations.

## PROCEDURE

Using the Performance Based Water Quality Criteria procedures and the pre-development and post development percent impervious and the area of the “site”:

1. Select the applicable Land Development Situation (1, 2, 3 or 4).
2. Determine the pre-development and post development pollutant load from the “site”.
3. Determine the required pounds of pollutant reduction.
4. Select appropriate BMP(s) to achieve pollutant reduction requirements.

## WATER QUALITY BMP SELECTION/DESIGN CONDITIONS

1. The design of the selected water quality BMP(s) shall consider the total drainage area flowing through the BMP, the total impervious area from within the “site” draining to the BMP and any impervious area from adjacent VDOT right of way draining to the BMP.
  - a. The water quality BMP shall be designed to convey (not treat) the run-off from the total drainage area flowing through the BMP.
  - b. The water quality volume of the BMP shall be based on the total impervious area from within the “site” and any impervious area from adjacent VDOT right of way draining to the BMP.
2. The design of the selected water quality BMP(s) shall be based on the design criteria and any restrictions (e.g., total drainage area size, total impervious area size, etc.) listed in the Virginia Stormwater Management Handbook (1999) and any approved revisions thereto as specified in VDOT IIM-LD-195.7.
3. The pounds of pollutant reduction achieved shall be based on the pollutant removal efficiency of the water quality BMP times the pollutant load generated by the total impervious area from within the “site” and any impervious area from adjacent VDOT right of way draining to the BMP.