STORMWATER MANAGEMENT NONSTRUCTURAL PRACTICES

There are five simple nonstructural practices that may be used to control stormwater runoff from most common residential construction. These practices, whether used separately or in combination, satisfy State and local stormwater management requirements if designed and constructed according to the **2000 STORMWATER DESIGN MANUAL, VOL. I & II** and the conditions listed in the Standard Plan. This section will help you select the most appropriate practice(s) for your house and driveway.

DISCONNECTION OF ROOFTOP RUNOFF – A relatively easy practice for treating stormwater runoff is to disconnect and then direct rooftop runoff to vegetated areas where it can either soak into or filter over the ground. This practice is effective when the average slope of the yard is no more than five percent (5%) and the length of the yard is sufficient to remove pollutants as required under State and local regulations. The minimum disconnection length is 75 feet for projects located on the Western Shore of the Chesapeake Bay and 60 feet for those located on the Eastern Shore. However, open section or "curbless" roads that use ditches or "swales" to convey runoff can provide limited water quality treatment if the swales are grassed. If the property drains to a vegetated roadside swale, then the minimum disconnection length required for 100% treatment of rooftop runoff may be reduced to 60 feet on the Western Shore and 45 feet on the Eastern Shore.

DISCONNECTION OF NON-ROOFTOP RUNOFF – Similar to disconnecting of rooftop runoff, this practice disconnects surface imperviousness (e.g. driveways, sidewalks, access roads) by directing it to vegetated areas where it either soaks into the ground, or is filtered through existing vegetation. The minimum disconnection length must be a least equal to the length of the impervious surface contributing runoff. For example, a 12' wide driveway, with crown along its centerline, requires at least 6' of vegetated buffer along each side to meet this method. Additionally, the length of the contributing impervious area cannot exceed 75 feet.

SHEET FLOW TO BUFFERS – This practice is effective if the property is adjacent to a natural buffer to a stream system, forested area, or similar protected resource. Stormwater runoff from pervious and impervious areas is treated by overland flow through the dense vegetation bordering protected resources. The minimum width of the buffer area shall be at least 50 feet, measured to the centerline in the case of a stream. Also, the buffer shall be protected by a conservation easement or other enforceable instrument that ensures perpetual protection of the area. As such, this practice is less suited to individual lots that were not created by a subdivision process.

RAINGARDENS – Landscaped depressions or raised terraced planting beds that use the plants and soil to filter runoff are an inexpensive alternative for treating stormwater runoff. Raingardens are versatile and may be used in areas with limited space, and/or steep slopes. If disconnecting rooftop runoff or promoting sheet flow into protected buffers will not provide stormwater management for the proposed construction, then using raingardens is the preferred alternative for addressing stormwater requirements. Although physically constructed, raingardens are considered as nonstructural practices if the amount of impervious area treated by each is 1,000 square feet or less. The total impervious area draining to any single discharge point shall be 1,000 square feet or less. Because of this limitation, multiple raingardens may be required to fully treat front and/or back yard runoff. If the impervious area draining to each raingarden exceeds 1,000 square feet then an "engineered" practice with specific pretreatment and structural requirements may be required.

RAIN BARRELS – A rain barrel is a small-scale practice designed to collect and store rooftop runoff for future use (e.g. watering plants and lawns). While rain barrels alone do not provide any significant water quality treatment, they do provide extra storage. Therefore rain barrels may be used in conjunction with other practices to expand the contributing area of rooftop to each downspout 100 square feet per barrel to a maximum of 1,000 square feet. To be considered for stormwater management, the following conditions must be met: A. The maximum drainage area to each rain barrel cannot exceed 600 square feet. B. The storage capacity of the rain barrel system shall be at least 50 gallons. Multiple rain barrels may be linked together to meet the minimum storage capacity. C. Rain barrels shall be watertight and contain the following features: 1. An outlet with a threaded spigot, 2. A screened intake port, 3. A secure cover or lid, and 4. An overflow. Rain barrels may be either constructed or purchased "ready-made."