III. Impervious Acre Credits of Upland Best Management Practices

Upland BMPs are stormwater BMPs that meet the water quality criteria and design standards in the Manual. Upland BMPs include structural practices, nonstructural practices, and alternative surfaces. Impervious acre credits may be achieved when upland BMPs are implemented as part of a restoration, retrofit, or redevelopment project that provides water quality treatment for previously unmanaged impervious surfaces. BMPs must function properly to ensure that the expected water quality improvements are achieved. Upland BMPs must be regularly maintained and inspected a minimum of every three years. BMP data must be submitted within the MS4 Geodatabase.

1. Structural Practices

The impervious acre credit for structural practices is based on the impervious acres in a BMP's drainage area, the depth of rainfall treated, and the water quality volume (WQ_v) standards found in the Manual. For restoration and impervious acre crediting, the rainfall depth treated may be less than the 1 inch required for the WQ_v. For the purposes of this Guidance, the rainfall depth treated in restoration practices is referred to as the water quality treatment volume or "WQ_T". Treatment of 1 inch of rainfall across the drainage area of the BMP will provide full credit for the impervious acres in the BMP's drainage area. This WQ_T is considered the minimum treatment level for 1 impervious acre credit of restoration. Opportunities for restoration that treat less than 1 inch of rainfall (i.e., $WQ_T < 1$ inch) can be pursued where they make sense to an MS4 jurisdiction for local water quality, flooding, or co-benefits. Where the WQ_T is less than 1 inch, the impervious acre credit will be pro-rated on the fraction of the rainfall depth treated (see Equation 1).

Equation 1. Impervious Acre Credits for Structural Practices

$$Impervious\ Acres\ in\ Drainage\ Area \times \left(\frac{Rainfall\ Depth\ Treated}{1\ inch}\right) = Impervious\ Acre\ Credit$$

Examples:

A structural BMP with a drainage area of 10 impervious acres receives the following credit based on the rainfall depth treated:

$$10\ Impervious\ Acres \times \left(\frac{1.0\ inch\ Rainfall\ Depth\ Treated}{1\ inch}\right) = 10\ Impervious\ Acres\ Credit$$

$$10\ Impervious\ Acres \times \left(\frac{0.75\ inch\ Rainfall\ Depth\ Treated}{1\ inch}\right) = 7.5\ Impervious\ Acres\ Credit$$

$$10\ Impervious\ Acres \times \left(\frac{0.5\ inch\ Rainfall\ Depth\ Treated}{1\ inch}\right) = 5\ Impervious\ Acres\ Credit$$

2. Nonstructural Practices

Nonstructural practices acceptable for MS4 restoration must meet the design criteria found in Chapter 5 of the Manual. These practices include disconnection of rooftop runoff,