

12.0 STORMWATER POLLUTANT REMOVAL PRACTICES

A wide variety of Best Management Practices (BMPs) and general development strategies may be utilized to remove environmentally harmful pollutants from stormwater run-off. Allowable BMPs are listing on the BMP Clearinghouse website.

12.1 References

Except where more stringent requirements are presented in this Design Manual, stormwater quality best management practices shall comply with ~~DCR~~ DEQ requirements. The primary design reference is the BMP Clearinghouse.

12.2 Stormwater Quality Requirements

Stormwater runoff generated from land disturbing activities shall be treated through best management practices designed to remove pollutants from the stormwater. The required pollutant removal shall be dependent on the land cover conditions.

For most projects, the BMPs will be designed to remove phosphorus from the stormwater runoff. Generally, when a BMP is efficient in removing phosphorus from the stormwater runoff, it is assumed that easier to remove pollutants such as heavy metals and total suspended solids have also been adequately removed.

Where appropriate, additional pollutants may be required to be removed from the stormwater runoff based on the presence of stormwater hotspots (land use activities that generate highly contaminated runoff, as determined by the Administrator). These pollutants may include the following:

- Total Suspended Solids, in areas with highly erodible soils.
- Total Petroleum Hydrocarbons (TPH), fueling stations or areas with fuel-contaminated soil.
- Heavy Metals, in areas with contaminated soils.
- High temperature runoff.

Land disturbing activities shall also comply with all additional water quality requirements as indicated in the Stormwater Management Ordinance and Chapter 11.1 – Erosion and Sediment Control (Code) of Roanoke City, Virginia.

Proposed residential subdivisions or commercial or industrial parks shall apply stormwater quality management criteria to the land development project as a whole. Individual lots in new subdivisions shall not be considered separate land development projects, but rather the entire subdivision shall be considered as a single land development project. Hydrologic parameters shall reflect the ultimate land development and shall be used in all engineering calculations.

Where stormwater quality requirements must be implemented, stormwater runoff must flow through appropriate BMPs before the water is discharged from the site.

12.3 Stormwater Quality Calculations

To meet the requirements of section 9VAC25-870-65 of the stormwater management regulations the runoff reduction method will be utilized. A water quality compliance worksheet, utilizing this method, is available on DEQ website. This worksheet must be submitted with the application for plan review, in order to verify compliance.

12.4 Manufactured BMP Systems

A manufactured BMP system is a structural measure which is specifically designed and sized by a manufacturer to intercept stormwater runoff and prevent the transfer of pollutants downstream. Use of Manufactured BMPs will only be allowed if the device is approved and listed on the BMP Clearinghouse.