FOREWORD

Legal Framework

Land development activities that change the surface features of land alter stormwater runoff characteristics. Unmanaged changes in stormwater runoff volume, rate and water quality that alter the chemical, physical or biological properties of receiving waters can constitute pollution that is regulated under the federal Clean Water Act, as well as the Pennsylvania Storm Water Management Act and Clean Streams Law.

As specifically outlined in the Department's 2002 Comprehensive Stormwater Management Policy, DEP Policy No. 392-0300-002, post construction stormwater management must be addressed under several regulatory programs administered by the Department of Environmental Protection including: the NPDES Permit for Discharges Associated with Construction Activities and the NPDES Permit for Municipal Small and Large Separate Storm Sewer System programs, as well as under the Pennsylvania Storm Water Management Act requirements.

These regulatory programs utilize narrative based effluent limitations in the form of "best management practices" ("BMPs") to achieve the regulatory standard of preventing pollution. BMPs used to manage post construction stormwater runoff must ultimately protect the water quality of special protection waters (EV and HQ) and protect, maintain, and restore water uses for all surface waters.

The Manual is intended to be a tool to achieve the regulatory standard to protect, maintain, and improve the Commonwealth's water resources through comprehensive site planning and BMP design guidance, while allowing for the continued growth and development of Pennsylvania. This guidance manual identifies information on resource planning, techniques for land development, and concepts and procedures for designing and implementing performance-based BMPs for managing stormwater for quantity and quality. The comprehensive planning approach to stormwater management emphasizes reducing the impacts of development activities through the mitigation process by employing practices that avoid and minimize potential impacts to watershed resources. The BMPs are designed to minimize or mitigate for the unavoidable impacts that development has on watershed resources.

This manual lists various BMPs and design standards, which are acceptable in Pennsylvania to manage stormwater and prevent pollution of waters of the Commonwealth. Stormwater management plans and the BMPs designed according to these standards when properly applied, implemented and maintained, will achieve the Department's water quality mandates established in 25 Pa. Code Chapter 93 and required by the federal Clean Water Act, federal NPDES regulations, the Pennsylvania Storm Water Management Act and the Pennsylvania Clean Streams Law. The proper utilization and implementation of these BMPs will protect and maintain existing uses and the level of water quality necessary to protect the existing uses, and will protect and maintain the water quality of high quality and exceptional value waters of the Commonwealth.

Applying the Manual

Stormwater Management Standard:

- In Special Protection Waters – There should be no measurable change in post construction stormwater runoff volume, rate and quality.

- In Waters other than Special Protection – There should not be a loss of the existing use from any change in post construction stormwater runoff volume, rate and quality.

Recommended Approach to Achieve the Standard:

> Post construction stormwater runoff volume, rate and quality should mimic pre-construction stormwater runoff volume, rate and quality to the maximum extent possible.

This Manual Provides:

- A standardized process for evaluating site design and BMP selection to minimize or eliminate the net change in post construction volume, rate and quality.

- A standardized approach to measuring pre-construction volume, rate and quality and post construction site runoff volume, rate and quality.

- Standardized specifications for BMPs to manage stormwater to minimize the net change in post construction runoff volume, rate and quality.

Alternate BMPs, not listed in this manual, that provide the same or greater level of protection, may also be used to attain the regulatory standard. It is incumbent on the person proposing the use of alternative BMPs to demonstrate their effectiveness with appropriate supporting analysis, calculations, test results or other documentation.

BMPs that fail after installation must be repaired to function properly or replaced by comparable BMPs that will serve the intended purpose. Likewise, if unforeseen conditions occur at a site, and the installed BMPs are obviously not effective, then alternate BMPs must be designed and installed. The need for redesign will be determined on a case-by-case basis.

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