

USEPA Storm Water Phase II Final Rule
NOACA Storm Water Task Force (SWTF)

POST-CONSTRUCTION RUNOFF CONTROL

Minimum Measure

(Draft Ohio EPA MS4 Permit Section 4.2.5)

Recommended Model Plan-Draft December 5, 2002

Background

NOACA SWTF Construction Site Runoff/Post-Construction Management Work Group developed this Model Plan to assist communities in meeting the Post-Construction Runoff Control requirements outlined in the USEPA Storm Water Phase II Final Rule and the Ohio EPA Model Permit Requirements. This Model Plan is broken down into the following sections:

Section 1 - Summary of Requirements

Section 2 - Model Plan Recommendations

**Section 3 – Summary Table of Model Plan Recommendations for the
Post-Construction Runoff Minimum Measure**

Section 1 Summary of Requirements

The NOACA SWTF Construction Site Runoff/Post-Construction Management Work Group utilized the Ohio EPA August 9, 2002 Draft MS4 (Municipal Separate Storm Sewer System) General Permit Section 4.2.5 to identify the Phase II requirements during the development of the recommendations for this model plan. Ohio EPA requires the following:

Permit requirement: You **must** develop, implement, and enforce a program to address storm water runoff from **new development and redevelopment** projects that disturb greater than one acre of land. Your program **must** ensure that controls are in place that would prevent or minimize water quality impacts.

Requirement #1 – Develop and implement strategies that include a combination of structural and/or non-structural BMPs (Draft Ohio EPA MS4 Permit Section **4.2.5.1.2**).

Requirement #2 – Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects (**4.2.5.1.3**)

Requirement #3 – Ensure adequate long-term operation and maintenance of BMPs. (**4.2.5.1.4**)

Section 2 Model Plan Recommendations

The NOACA Model Plan recommends that communities utilize the following model plan components, or some applicable equivalent components as necessary, in order to meet and/or exceed the requirements of the Phase II Post-Construction Runoff Control Minimum Control Measure.

The recommendations are broken down in accordance with the requirements of the USEPA Phase II Regulations.

Requirement #1 – Develop and implement strategies that include a combination of structural and/or non-structural BMPs.

USEPA identifies two classes of non-structural BMPs: Planning Procedures and Site-Based Controls. Planning Procedures include Master Plans, Comprehensive Plans and zoning ordinances that can promote improved water quality by guiding the growth of a community away from sensitive areas. Site Based Controls include buffer strip and riparian zone preservation, minimization of disturbance and imperviousness, and maximization of open space.

The Model Plan recommends two non-structural BMPs for use in all communities that will realize significant development or redevelopment activity. The first is adoption of a Riparian and Wetland Setback Ordinance based on a model endorsed by the SWTF, the Chagrin River Watershed Partners and numerous other entities in the region. The second is active support for use of development practices commonly referred to as low-impact design, conservation development, or open space development. The principles and practices of the Countryside Program sponsored by the Western Reserve Resource Conservation and Development Program serve as one model to be followed by local communities in this regard.

Structural BMPs identified by USEPA and recommended by the Model Plan include storage practices that control storm water volume and settle out particulates for pollutant removal. Also recommended are infiltration practices designed to facilitate the percolation of runoff through the soil resulting in reduced storm water quantity and reduced mobilization of pollutants. The third category of recommended structural practices include vegetative practices that are landscaping features that enhance pollutant removal, maintain site hydrology, promote habitat, and increase aesthetic appeal.

The NOACA SWTF has developed a Model Ordinance for Post-Construction Storm Water Runoff Control that can be used by communities to meet this requirement. The Model Ordinance specifies use of what is known as the “critical storm” approach and dictates methods to be used in determining runoff quantities that must be controlled. Two versions of this Model Ordinance have been developed: one applies to new development, and one applies to redevelopment

activities. USEPA allows for the use of alternative approaches when dealing with redevelopment projects that often have constraints that are not found on new development sites. The Model Ordinances are posted on NOACA's web site (www.noaca.org). Ohio EPA staff has been involved in the development of the model ordinance to help ensure that it is Phase II compliant.

The NOACA Model Plan recommends enactment of the Riparian and Wetland Setback Ordinance that has been developed under the lead of the Chagrin River Watershed Partners. (Summit County has just adopted an ordinance based on this model.) The riparian and wetland provision has been incorporated into the Recommended Model Ordinance available on the web at www.noaca.org.

The NOACA Model Plan recommends the use of storm water ponds as the primary mechanism to reduce the pollutant content of post-construction runoff. The Model Plan calls for all detention ponds that are to be constructed to control storm water volume to be adapted so as to provide for water quality control. The Post-Construction Storm Water Runoff Quality Model Ordinance provides the mechanism to implement the procedures and practices identified in the "Rain Water and Land Development Guide".

Infiltration practices and vegetative controls are BMPs that are applicable on all construction sites and many post-construction sites. Regionally, there is a need to develop training on how the use of these controls can be fostered in the region. This is an objective that needs to be addressed during the five-year permit implementation period.

It is recognized that the developer, construction contractors and community site inspectors would benefit from training in the proper design, use, and maintenance of construction site runoff control practices. The Model Plan calls for the on-going training of these individuals.

Requirement #2 – Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects.

The Model Ordinance provides for storm water volume control, for minimizing pollutant loadings through use of storm water quality ponds, and for riparian/wetland set backs.

The Model Plan recommends that communities review zoning and building ordinances to determine what changes may be necessary to allow or encourage low-impact design development. The SWTF will seek sources that offer guidance to communities as they implement this measure.

Requirement #3 – Ensure adequate long-term operation and maintenance of BMPs.

As noted above, the Model Plan recommends enactment of the regional Model Ordinance to meet this requirement. This ordinance has provisions in it to assist communities in their effort to maintain retention basins over the long-term. Communities can choose to require the establishment of homeowner associations that are required to finance and undertake maintenance when required. Communities can elect to assume this burden themselves. They can also rely on an impact fee arrangement.

Storm water quality ponds rely on aquatic vegetation to provide for pollutant reductions. Some degree of annual maintenance of these ponds is likely to be necessary. Training will be needed to address this recommendation.

Section 3: SUMMARY TABLE OF MODEL PLAN RECOMMENDATIONS

The following table details the recommendations of the Post-Construction Runoff Control Minimum Measure Model Plan.

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