



Storm Water Phase II Proposed Rule

Construction Program Overview

Storm Water Phase II Proposed Rule Fact Sheet Series

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This fact sheet is based on the Storm Water Phase II Proposed Rule. Therefore, the information provided herein is subject to change upon publication of the final Phase II rule in November 1999. A revised series of fact sheets will be provided at that time. A comprehensive list of the current fact sheets is in the text box at left.

The 1972 amendments to the Federal Water Pollution Control Act, later referred to as the Clean Water Act (CWA), prohibit the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Efforts to improve water quality under the NPDES program traditionally have focused on reducing pollutants in industrial process wastewater and municipal sewage treatment plant discharges. Over time, it has become evident that more diffuse sources of water pollution, such as storm water runoff from construction sites, are also significant contributors to water quality problems.

Sediment runoff rates from construction sites are typically 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction activity can contribute more sediment to streams than can be deposited over several decades, causing physical and biological harm to our Nation's waters.

In 1990, EPA promulgated rules establishing Phase I of the NPDES storm water program. Phase I addresses, among other discharges, discharges from large construction activities disturbing 5 acres or more of land. Phase II of the NPDES storm water program proposes to cover additional, smaller, construction activities. Phase II is scheduled to become final in November 1999 with permits issued within 3 years and 90 days of publication of the final rule. This fact sheet outlines the construction activities covered by Phase I and proposed to be covered by Phase II, including possible waiver options from Phase II coverage, as well as the proposed Phase II construction program requirements.

Who Is Currently Covered Under the Phase I Rule?

Sites Five Acres and Larger

The Phase I NPDES storm water permitting rule identifies eleven categories of industrial activity in the definition of "storm water discharges associated with industrial activity" that must obtain an NPDES permit. One of these categories is construction activity. The Phase I rule requires all **operators** of construction activity **disturbing 5 or more acres** of land to apply for a storm water permit. Operators of sites disturbing less than 5 acres also are required to obtain a permit under Phase I if they are part of a "larger common plan of development or sale" with a planned disturbance of 5 or more acres. "Disturbance" refers to exposed soil resulting from activities such as clearing, grading, and excavating. Construction activities can include road building, construction of residential houses, office buildings, industrial sites, or demolition.

What Is Meant by a "Larger Common Plan of Development or Sale"?

As defined in EPA's NPDES storm water general permit for Phase I construction, a "larger common plan of development or sale" means a contiguous area where multiple separate and distinct construction activities are occurring under one plan (e.g., the operator is building on three half-acre lots in a 6-acre development). The "plan" in a common plan of development or sale is

broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

What Is the Definition of an “Operator” of a Construction Site?

As defined in EPA’s storm water general permit for Phase I construction, an “operator” is the party or parties that has:

- ❑ Operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications, *and*
- ❑ Day-to-day operational control of those activities that are necessary to ensure compliance with a storm water pollution prevention plan (SWPPP) for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

There may be more than one party at a site performing the tasks related to “operational control” as defined above. Depending on the site and the relationship between the parties (e.g., owner, developer, contractor), there can either be a single party acting as site operator and consequently be responsible for obtaining permit coverage, or there can be two or more operators, all obligated to seek permit coverage. It is important to note that NPDES-authorized States may use a different definition of “operator” than the one above.

How Is the Proposed Phase II Construction Rule Related to the Phase I Construction Rule?

In 1992, the Ninth Circuit court remanded for further proceedings portions of EPA’s existing Phase I storm water regulation related to the category of discharges from construction activity (*NRDC v. EPA*, 966 F.2d at 1292). The court concluded that the 5-acre threshold used for defining construction activity as “industrial activity” (and therefore needing a permit) was improper because EPA had failed to identify information “to support its perception that construction activities on less than 5 acres are non-industrial in nature” (and therefore do not need a permit) (966 F.2d at 1306). Based on consultations with the Storm Water Phase II Federal Advisory Subcommittee, EPA responded to the court’s decision by designating under Phase II storm water discharges from construction sites less than 5 acres as sources that should be regulated to protect water quality. The Phase II Proposed Rule designates these sources as “storm water discharges associated with *other* activity” (rather than storm water associated with *industrial* activity).

Who Would Be Covered Under the Proposed Phase II Construction Rule?

Sites Between One and Five Acres

The Storm Water Phase II Proposed Rule would automatically cover, under the NPDES storm water permitting program, all owners or operators of construction site activities that result in a *land disturbance of equal to or greater than 1 but less than 5 acres*.

Sites Less Than One Acre

Site activities disturbing less than 1 acre would also be included in the NPDES storm water program if they are part of a larger common plan of development or sale with a planned disturbance of equal to or greater than 1 acre but less than 5 acres, or if they are designated by the NPDES permitting authority. As proposed, the NPDES permitting authority may designate construction activities disturbing less than 1 acre if a project is deemed to have the potential for adverse impacts on water quality or for significant contribution of pollutants based on a Total Maximum Daily Load (TMDL), watershed, or other local assessment.

Would Waivers Be Available for Owners or Operators of Regulated Construction Activity?

Yes, but only for Phase II construction activity. Under the Phase II Proposed Rule, NPDES permitting authorities would have the option of providing a waiver from the requirements to owners or operators of Phase II construction activity who could certify to any one of three conditions:

- ❶ Low predicted rainfall potential (i.e., activity occurs during a negligible rainfall period), where the rainfall erosivity factor (“R” in the Revised Universal Soil Loss Equation [RUSLE]) would be less than 2 during the period of construction activity.
- ❷ Low predicted soil loss – on a case-by-case basis – where the annual soil loss for a site would be less than 2 tons/acre/year as determined using RUSLE, assuming the constants of no ground cover and no runoff controls in place.
- ❸ A determination that storm water controls are not necessary based on either:
 - (A) Wasteload allocations that are part of TMDLs that address the pollutants of concern for construction activities; **OR**
 - (B) A comprehensive watershed plan, implemented for the receiving waterbody, that includes the equivalents of TMDLs and addresses the pollutants of concern for construction activities.

The intent of the waiver provision is to waive only those sites that are highly unlikely to have a negative effect on water quality. Therefore, before applying for a waiver, owners or operators of Phase II construction activity would be encouraged to consider the potential water quality impacts that may result from their project and to carefully examine such factors as proximity to water resources and sensitivity of receiving waters.

a. *What is RUSLE in Waivers ① and ②?*

Proposed waivers ① and ② would use the RUSLE as the means of determining if the potential for polluted discharge is low enough to justify a waiver from the requirements. The Universal Soil Loss Equation (USLE) is a well established method for predicting soil loss from construction sites. Developed initially by the U.S. Department of Agriculture as a predictive tool to measure soil loss from agricultural lands at various times of the year on a regional basis, the USLE was identified in the early 1970s as a technique that could be useful in predicting construction site soil losses.

The USLE predicts construction site soil loss using six variables: rainfall erosivity; soil erodibility; length of slope; steepness of slope; cover; and practice. A refinement of the USLE is reflected in the RUSLE, which provides a broader range of data within the individual variables. Once the site-specific variables that make up the RUSLE are determined, the values for rainfall erosivity or soil loss can be calculated.

An electronic version of RUSLE can be downloaded at <http://danpatch.ecn.purdue.edu/~engelb/agen526/rusle.html>.

In addition, the RUSLE user's guide can be downloaded at <http://www.itc.nrcs.usda.gov/focs/RUSLE/userguid/ruslug1.html>.

b. *What is a "TMDL" in Waiver ③?*

For impaired waters where technology-based controls required by NPDES permits are not achieving State water quality standards, the CWA requires the TMDL process be implemented for those waters. The TMDL process establishes the maximum amount of pollutants a waterbody can assimilate before water quality is impaired, then requires that this maximum level not be exceeded.

A TMDL is done for each pollutant that is found to be contributing to the impairment of a waterbody or a segment of a waterbody. To allow a waiver for construction activities, a TMDL would need to address Total Suspended Solids, the major pollutant of concern. Additional TMDLs addressing common pollutants from construction sites such as nitrogen, phosphorus, and oil and grease also may be necessary to ensure water quality protection and allow a waiver from the NPDES storm water program.

A TMDL assessment determines the source or sources of a pollutant of concern, considers the maximum allowable level of that pollutant for the waterbody, then allocates to each source or category of sources a set level of the pollutant that it is allowed to discharge into the waterbody. Allocations to point sources are called wasteload allocations.

c. *How Would an Owner or Operator Qualify for, and Certify to, Waiver ③?*

EPA expects that when TMDLs, or the equivalents of TMDLs, are completed, there may be a determination that certain classes of sources, such as small construction sites, would not have to control their contribution of pollutants of concern to the waterbody in order for the waterbody to be in attainment with water quality standards (i.e., these sources were not assigned wasteload allocations). In such a case, to qualify for waiver ③ the owner or operator of the construction site would need to certify on a form that its construction activity will take place, and the storm water discharges will occur, within the area covered either by the TMDLs or a comprehensive watershed plan that includes the equivalents of TMDLs. The certification form would likely be provided by the NPDES permitting authority.

What Would Be Required Under the Phase II Construction Program?

The Phase II Proposed Rule would require owners or operators of Phase II construction sites, nationally, to obtain an NPDES permit and implement practices to minimize pollutant runoff. It is important to note that, locally, these same sites may also be covered by State, Tribal, or local construction runoff control programs (see Fact Sheets 2.6 and 2.7 for information on the proposed Phase II small MS4's construction program). For the Phase II construction program, EPA has taken an approach similar to the Phase I approach where the program requirements are not fully defined in the rule but rather in the NPDES permit by the NPDES permitting authority.

EPA would likely recommend that the NPDES permitting authorities use their existing Phase I NPDES construction general permits as a guide to developing their Phase II construction permits. In doing so, the Phase II requirements would be similar to the three general Phase I requirements summarized below.

- ❑ Submission of a *Notice of Intent* (NOI) that includes general information and a certification that the activity will not impact endangered or threatened species. This certification is unique to EPA's NOI and is not a requirement of most NPDES-delegated State's NOIs;

- ❑ The development and implementation of a *Storm Water Pollution Prevention Plan* (SWPPP) with appropriate BMPs to minimize the discharge of pollutants from the site; and
- ❑ Submission of a *Notice of Termination* (NOT) when final stabilization of the site has been achieved as defined in the permit or when another operator has assumed control of the site.

What are Some Recommended BMPs for Phase II Construction Sites?

The approach and BMPs for controlling pollutants in storm water discharges from smaller Phase II sites may vary from those used for larger Phase I sites since their characteristics can differ in many ways. For example, operators of smaller sites may have more limited access to qualified design personnel and technical information. Also, activity on smaller sites may allow for less space for installing and maintaining certain BMPs.

As is the case with all construction sites, erosion and sediment control at small construction sites is best accomplished with proper planning, installation, and maintenance of controls. The following practices have shown to be efficient, cost effective, and versatile for small construction site operators to implement. The practices are divided into two categories: non-structural and structural.

❑ Non-Structural BMPs

- Minimizing Disturbance
- Preserving Natural Vegetation
- Good Housekeeping

❑ Structural BMPs

Erosion Controls

- Mulch
- Grass
- Stockpile Covers

Sediment Controls

- Silt Fence
- Inlet Protection
- Check Dams
- Stabilized Construction Entrances
- Sediment Traps

Most erosion and sediment controls require regular maintenance to operate correctly. Accumulated sediments should be removed frequently and materials should be checked periodically for wear. Regular inspections by qualified personnel, which can allow problem areas to be addressed, should be performed after major rain events.

For Additional Information

Contacts

- ☞ U.S. EPA Office of Wastewater Management
 - Phone : 202 260-5816
 - E-mail: SW2@epa.gov
 - Internet: www.epa.gov/owm/sw2.htm
- ☞ Your local soil conservation district office. They can provide assistance with RUSLE and other conservation related issues.
 - A list of conservation district contacts is available at: www.nacd.net.org/about/statelist.htm

Reference Documents

- ☞ Storm Water Phase II Proposed Rule Fact Sheet Series.
 - Contact the U.S. EPA Water Resource Center at 202 260-7786 or at waterpubs@epa.gov
 - Internet: www.epa.gov/owm/sw2.htm
- ☞ Storm Water Phase II Proposed Rule, published on Jan. 9, 1998 in the *Federal Register* (63 FR 1536).
 - Internet: www.epa.gov/owm/sw2.htm
- ☞ *Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)*.
 - Copies can be obtained from USDA-ARS, Southwest Watershed Research Center, 2000 East Allen Road, Tucson, AZ 85719.
- ☞ *Guidance for Water Quality Based Decisions: The TMDL Process*. April 1991. U.S. EPA Office of Water. EPA 440/4-91-001.
 - Internet: www.epa.gov/OWOW/tmdl.
- ☞ *NPDES General Permits for Storm Water Discharges from Construction Activities*, published on Feb. 17, 1998 in the *Federal Register* (63 FR 7857).