

MINIMIZING ACCELERATED SOIL EROSION AND PREVENTING SEDIMENT POLLUTION

WHAT IS SOIL EROSION?

Erosion is a natural process by which the surface of the land is worn away by water, wind, or chemical action.

Accelerated erosion is the removal of the surface of the land through the combined action of human activities and natural processes at a rate greater than would occur from natural processes alone.

IS SEDIMENT REALLY A POLLUTANT?

A certain amount of erosion and sediment occurs naturally. Because it is a natural process, nature is able to assimilate naturally occurring sediments without permanent adverse effects. Adverse effects most often result from accelerated erosion due to earth disturbance activities such as surface mining, agricultural plowing and tilling, construction, and timber harvesting operations.

WHY IS SEDIMENT POLLUTION HARMFUL?

- Fish have gills, which extract oxygen from the water. These gills can become clogged when the water transports excessive amounts of sediment.
- Sediment can cover fish eggs and the gravel nests they rest in.
- Sediment can destroy the food supply for many species of fish by covering aquatic insect habitat on the stream bottom.
- Sediment clouds the water and deprives plants of light needed for photosynthesis.
- Sediment may carry other pollutants such as heavy metals, pesticides, and excess nutrients that are spread by water action and cause problems not only at the source, but also downstream.
- Sediment loads in our waterways often result in eroded and unstable streambanks.
- Sediment increases public drinking water treatment costs or may render unfiltered drinking water supplies harmful for consumption.
- Excess sediment deposits in streams and rivers may necessitate the dredging of a reservoir or other body of water.

HOW IS EROSION AND SEDIMENT CONTROL REGULATED?

Because of the soil erosion problems associated with earth disturbance activities, the Pennsylvania Environmental Quality Board (EQB) approved statewide regulations for Erosion and Sediment Control, 25 Pa. Code Chapter 102 in September 1972 and amended them on November 19, 2010. These regulations are authorized by the Pennsylvania Clean Streams Law, 35 P.S. §§691.1 *et seq.*, and prohibit the discharge of any pollutant to Pennsylvania's waters. Under the Chapter 102 regulations, anyone conducting earth disturbance activities must use Best Management Practices (BMPs) to minimize the amount of sediment leaving the earth disturbance activity.

The Department of Environmental Protection (DEP) is responsible for the administration and enforcement of Chapter 102 regulations and the Clean Streams Law. Conservation districts with trained staff are delegated the responsibility to review Erosion and Sediment Control Plans (E&S Plans), conduct training, perform site inspections, and in some cases, conduct compliance and enforcement actions. Every county in Pennsylvania except Philadelphia County has a conservation district office.

WHAT IS REQUIRED?

An E&S Plan which meets the requirements of Chapter 102 must be properly designed, implemented and available on site for all earth disturbance activities. The E&S Plan must show how land and water resources are to be protected against accelerated erosion through the use of BMPs. Examples of BMPs include: minimizing earth disturbance, silt fence, mulch, diversion ditches, sediment traps, sediment basins, and the establishment of grasses for permanent stabilization. The E&S Plan must show the site, location of BMPs, and the timing and sequence of their installation for maximum effectiveness. Conservation districts are also able to provide guidance for E&S Plan development. Once completed, the E&S Plan is often submitted to the conservation district or DEP for review. Guidance for preparing an E&S Plan, as well as various BMPs that meet Chapter 102 requirements, can be found in DEP's "Erosion and Sediment Pollution Control Program Manual" (363-2134-008).

With the exception of agricultural plowing and tilling, animal heavy use areas, timber harvesting, road maintenance activities and oil and gas activities, projects that disturb equal to or greater than one acre of land must obtain an NPDES (National Pollutant Discharge Elimination System) Permit before commencing any earth disturbance. For more information regarding this permit, please refer to the DEP Fact Sheet "NPDES Permits for Stormwater Discharges Associated With Construction Activities" (3930-FS-DEP3042), or contact one of the offices listed at the end of this fact sheet.

Timber harvesting activities that disturb 25 acres or more of land for haul roads, skid trails, and landing areas; and road maintenance activities disturbing 25 acres or more of land, must obtain an Erosion and Sediment Control Permit. Oil and gas activities that involve five acres or more of earth disturbance over the life of the project shall obtain an E&S Permit (ESCGP-1). Agricultural plowing or tilling activities and animal heavy use areas are exempt from permit requirements, but they still require the development of an E&S Plan or conservation plan, which specifies the implementation and maintenance of BMPs. For more information on plans for agricultural plowing or tilling, please refer to DEP Fact Sheet "Sediment and Erosion Control Requirements for Agricultural, Plowing or Tilling Activities" (3930-FS-DEP2416) or contact one of the offices listed at the end of this fact sheet.

Conservation districts and DEP staff conduct periodic inspections of earth disturbance activities to ensure that E&S Plans are properly implemented and maintained. In addition, permittees, or anyone who conducts earth disturbance activities, must conduct routine site inspections and maintenance to ensure that BMPs are operational and effective and to minimize the potential for sediment pollution or other off-site impacts.

WHAT CAN YOU DO?

Proper planning and use of BMPs is the key to a successful project and the protection of the commonwealth's water resources. Before beginning the project, become familiar with the erosion and sediment control requirements. Inform the contractor or equipment operator of the need for E&S Plans or NPDES permits as part of the project. Assistance and additional information is available at the local conservation district or a DEP regional office.

If sediment pollution is occurring, or if there is evidence that sediment pollution has occurred due to an on-going earth disturbance activity, contact the conservation district for the county where the project is located. Be prepared to provide the location, type of activity, name of the project (if known), and whether sediment pollution is occurring.

For more information, visit www.dep.state.pa.us, keyword: NPDES Construction and Erosion Control

or contact:

The local county conservation district office

or

The local DEP Waterways and Wetlands program at one of the regional offices:

Northwest Region
230 Chestnut Street
Meadville, PA 16335-3481
814-332-6984

Northcentral Region
208 West Third Street
Williamsport, PA 17701-6448
570-327-0529

Northeast Region
2 Public Square
Wilkes-Barre, PA 18701-1915
570-826-2511

Southwest Region
400 Waterfront Drive
Pittsburgh, PA 15222-4745
412-442-4314

Southcentral Region
909 Elmerton Avenue
Harrisburg, PA 17110-8200
717-705-4802

Southeast Region
2 East Main Street
Norristown, PA 19401-4915
484-250-5970

or

Department of Environmental Protection
Bureau of Waterways Engineering and Wetlands
Division of NPDES Construction and Erosion Control
P.O. Box 8460
Harrisburg, PA 17105-8460
717-787-3411
Fax 717-772-0409