

## Soil + Water = Pollution

You may be surprised to learn that soil—yes, good old dirt—is Pennsylvania’s number one water pollutant. The good news is, steps can be taken to prevent soil or sediment pollution of our shared water resources: the streams, rivers, lakes, and wetlands of Pike County.

## Wind and Water Erosion

**Erosion** and **sedimentation** are naturally occurring processes. Erosion is the wearing away of bedrock and soil layers by wind and rain. Sedimentation occurs when soil particles or sediments are carried by wind or water and deposited at another location—frequently a stream, river, pond or wetland (collectively referred to as surface waters).

Many human activities greatly increase rates of erosion and sedimentation, resulting in excess amounts of sediment entering surface waters, degrading these aquatic habitats.

## You are Responsible

It is the responsibility of any person undertaking an earth disturbance activity to complete and implement an Erosion and Sedimentation Control Plan (E&S Plan). Failure to implement measures which prevent erosion can result in pollution of surface waters and violation of state rules and regulations.



Soil sediment accumulating in stream bed.

## Fish and Muddy Waters

Sediment creates a toxic environment for fish and other aquatic life. Impacts of sediment pollution include:

- Contamination of waters with pollutants, including garden and lawn care chemicals, which stick to soil sediments
- Increased rates of aquatic plant growth in lakes and streams because of excess nutrients, including nitrogen and phosphorus from soils
- Sediment coating streambed areas where fish and other aquatic life lay eggs
- Increased frequency and intensity of flooding as sediment clogs waterways
- Contamination of public water supplies and increased filtration costs

## Keep it on Site

**Earth disturbance** occurs when land-use activities result in plants and forest litter being removed, exposing bare soil to wind and water.

Commercial and residential development, timber harvesting, road maintenance, and drainage improvements create earth disturbance, which can result in increased rates of erosion and sedimentation and potential surface water pollution.

People proposing or conducting earth disturbance activities are required by Pennsylvania state regulations to develop, implement and maintain **Best Management Practices (BMPs)** to minimize erosion and sedimentation from project sites.

Examples of BMPs used to prevent sediment pollution include: proper site planning, installing compost filter sock, prompt seeding and mulching of disturbed areas, and maintaining existing vegetation, including vegetated streamside buffers.

# Erosion Control Best Management Practices

## Practical Guidelines to Minimize Erosion and Sedimentation

### Plan Erosion and Sediment Control Best Management Practices (BMPs) to keep soil on the construction site.

*Don't let the soil on your construction site wash off-site into roadside channels, streams, lakes, or wetlands.*

### Consult the Pike County Soil Survey to learn about building or drainage limitations and plants that will grow best in your soils.

*Don't wait until work has started to discover soils on your site are wet, highly erodible, or otherwise unsuitable for your project.*



Earth disturbance can increase erosion and sedimentation and pollute surface water.

### Schedule stormwater drainage and erosion and sediment control as part of construction operations.

*Don't depend on emergency measures or the weather to control stormwater drainage or erosion and sedimentation.*

### Preserve natural vegetation on site whenever possible. It's the least expensive and easiest erosion control Best Management Practice.

*Don't disturb natural vegetation, especially in critical areas, unless or until necessary.*

### Do prepare a good seedbed; apply lime and fertilizer prior to seeding. Use mulches of hay, straw, or other suitable materials to promote germination and protect the soil until grass is established.

*Don't plant grass or other cover on sloping ground without mulch or matting to hold the seed and soil in place.*

### Plan construction to keep the area and time of exposure to a minimum. Permanently stabilize disturbed areas as they are completed.

*Don't allow areas not actively under construction to remain disturbed. Stabilize with mulch or temporary seeding.*

### Avoid springs, streams, floodways, wetlands and other bodies of water.

*Don't undertake any work in waters without first checking on local, state, and federal permit requirements and obtaining required permits.*

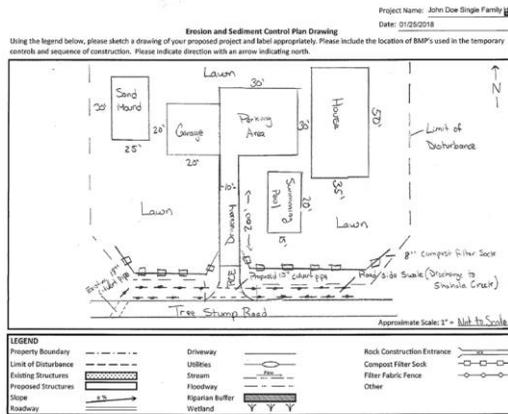


Compost filter sock prevents sediment from washing off the construction site.

## Proactive Project Planning

Developing and implementing an **Erosion and Sedimentation Control Plan (E&S Plan)** is a highly effective way to minimize soil erosion and sedimentation from earth disturbance sites.

In fact, an E&S Plan must be in writing and available at all times at the site of any earth disturbance activity whenever the potential exists for the discharge of sediment to waters designated as either *High Quality* or *Exceptional Value*—which includes most of Pike County.



Example of an E & S plan drawing.

E&S Plans should be site-specific and include maps illustrating the project site area, proposed alterations, Best Management Practices for each project phase, and an inspection and maintenance program for control measures.

Resources are available at the Conservation District to assist with the development of an E&S plan including the **Erosion and Sediment Control Plan Worksheet** and, for larger more complex projects, the PA Department of Environmental Protection's **Erosion and Sediment Pollution Control Program Manual**.

In addition to local engineers and other consultants, Conservation District staff can answer questions and provide assistance with the completion of an E&S Plan.

## It's the Law

To address the problem of sediment pollution, the PA Legislature adopted **Chapter 102 Erosion and Sediment Control Rules and Regulations**. People proposing or conducting earth disturbance activities are required to develop, implement and maintain Erosion and Sedimentation Best Management Practices to protect water quality.

A completed Erosion and Sedimentation Control Plan (E&S Plan) must be available at all times at the site of any earth disturbance activity. An E&S Plan must be in writing whenever the potential exists for discharge to *High Quality* or *Exceptional Value* waters—which includes most of Pike County.

In some cases, an E&S Plan must be submitted to the County Conservation District for review: if required by a local municipality, as part of another permit, or if requested by the Conservation District.

In addition, under the Federal Clean Water Act, projects with *greater than 1 acre of earth disturbance over the life of the project* generally require a **National Pollutant Discharge Elimination System (NPDES)** permit. Check with the Conservation District to help determine if your project will require an NPDES permit.

## Local Regulations May Apply

Prior to starting any earth disturbance activity, check with your local municipality regarding local ordinances or permit requirements.



Conservation District staff can provide information and technical assistance.

## We're Here to Help

Pike County Conservation District (PCCD) is committed to natural resources conservation through leadership, education, technical assistance, planning and enforcement to ensure the long-term protection and sustainable use of Pike County's natural resources and implementation of environmentally sound development and land use practices.

Like all Pennsylvania conservation districts, PCCD is a legal subdivision of state government. We work under delegation agreements with the PA Department of Environmental Protection (DEP) to administer Erosion and Sedimentation control and National Pollutant Discharge Elimination System regulations within county boundaries.

Our responsibilities under these agreements include:

- Review of Erosion and Sedimentation and Post-Construction Stormwater Management plans
- Investigation of complaints
- Inspection of earth disturbance sites
- Processing of National Pollutant Discharge Elimination System permits
- Providing technical assistance and educational materials

Conservation Districts can also provide information on other state and federal regulations and permit requirements pertaining to streams, wetlands and other bodies of water.

## Pike County Conservation District

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## Before You Grade, Build, or Excavate



## Plan to Protect Pike County's Soil and Water Resources



Pike County  
Conservation District