Adams Co. Conservation District
670 Old Harrisburg Road, Suite 201
Gettysburg, PA 17325
Telephone: 334-0636
Fax: 337-0730
www.adamscounty.us

Erosion and Sediment Pollution Control Guidelines for Residential Lots with soil disturbance of less than 1 acre (see exceptions)

What is Soil Erosion?

Erosion is the wearing away of soil and its parent material (rock) through the natural processes of wind and rain. Sedimentation, which results from erosion, is the transport and deposition of these soils and rock particles to a location away from their origin. In many cases the waters of the Commonwealth (streams, lakes, wetlands, storm sewers, etc.) become the recipients of this sedimentation. Through man's activities (Earthmoving Activities) however, the rates of erosion and sedimentation are greatly accelerated. The PA DEPARTMENT OF ENVIRONMENTAL PROTECTION defines an earthmoving activity as "…any construction or other activity which disturbs the surface of the land including, but not limited to, clearing and grubbing, grading, excavations, embankments, land developments, subdivision development, agricultural plowing or tilling, timber harvesting activities, road maintenance activities, mineral extraction and the moving, depositing or storing soil, rock, or earth." Simply put, if the vegetative cover (grass and other plant material) is removed, leaving earth exposed, an earthmoving activity has occurred. Without proper controls, the exposed earth will erode.

WHY SHOULD I CARE?

The **PA Clean Streams Law** as amended defines sediment as a pollutant. Sediment has become the number one pollutant by volume to the waters of the Commonwealth. The soil particles contained in sediment also carry and retain chemical pollutants such as herbicides, pesticides, and fertilizers. Accelerated sedimentation that flows into the waters of the Commonwealth can:

1. Raise the level of the streams, lakes, etc. and increase flooding.
2. Decrease oxygen in the waters, suffocating fish and other aquatic life.
3. Deposit sediment over the breeding beds (eggs) of aquatic life.
4. Increase filtering costs of public water supply.
5. Ruin the scenic values of the waters

The total cost of damages caused by sedimentation is about 500 million dollars per year nationally.

WHAT CAN I DO?

LEAVE IT GREEN! Practice erosion control by keeping the soil covered with vegetation, which will not allow the soil to erode easily. Minimize amount of disturbance at any given time. Plan your grading around growing season for establishing vegetative cover.

DEVELOP A PLAN for controlling accelerated erosion during construction.

If the site has features such as steep slopes, flowing streams, wetlands, springs, highly erodable soils, etc. specific care and planning must be taken to control erosion. Assistance is available from private consultants, contact the Conservation District for a list of professionals

- *This pamphlet contains an overview of PA State regulations governing soil erosion, a sample plan for single residential lot, and installation details for common erosion and sedimentation pollution control devices.*

STATE REGULATIONS

In an attempt to control sediment pollution, The Department of Environmental Protection (DEP) adopted strict rules and regulations concerning erosion and sedimentation control in 1972. The rules and regulation, known as PA CODE TITLE 25 CHAPTER 102 EROSION CONTROLS states "...any landowner ...engaged in earthmoving activities shall develop, implement and maintain erosion and sedimentation control measures which effectively minimize accelerated erosion and sedimentation. These erosion and sedimentation measures must be set forth in a plan IF (any of the following 3 criteria are met)

1. The earth disturbance activity will result in a total of 5,000 square feet disturbed or more.

2. The person proposing the earth disturbance activities is required to develop an Erosion and Sediment Control Plan pursuant to this chapter under Department regulations other than those contained in this chapter.

3. The disturbance activity, because of its proximity to existing drainage features or patterns, has the potential to discharge to water classified as a High Quality or Exceptional Value.

Furthermore, the plan must be available at all times at the site of the activity. Failure to follow the rules and regulations of Chapter 102 and the PA Clean Streams Law carries strict penalties ranging up to $10,000 per day per violation.

The Adams County Conservation District has been granted authority by DEP to review E&S plans and to enforce these rules and regulations by conducting inspections of earthmoving activities.

REMEMBER, the LANDOWNER, NOT THE CONTRACTOR, is responsible for any violation that may occur on his/her property.

The Plan Must Consider:

-The existing topography of the site: slope or grade of the land; location of any water (stream, ponds, wetlands, springs, etc.); any other significant features of the site.

-The types of soils on the site and means of addressing any soils limitations. A copy of the Adams County Soil Survey book is available for inspection at the Conservation District.

-The amount of runoff from the project area (water flowing across or from the site).

-**The staging of earthmoving activities.** Determine the sequence in which the earthmoving will occur, always keeping in mind that the most effective method of controlling erosion is to disturb only those areas necessary for construction. Disturbed areas should be stabilized immediately after earthmoving has been completed.

-Temporary and permanent control measures and their maintenance.

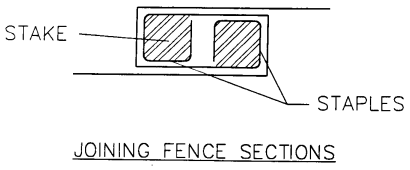
Seeding and Mulch Specifications

Temporary seeding should be an annual grass. Permanent seeding should be a perennial grass. Straw mulch should be applied at 3 tons per acre. For additional information on lawn establishment, consult the Adams County Penn State Cooperative Extension Office at 334-6271.

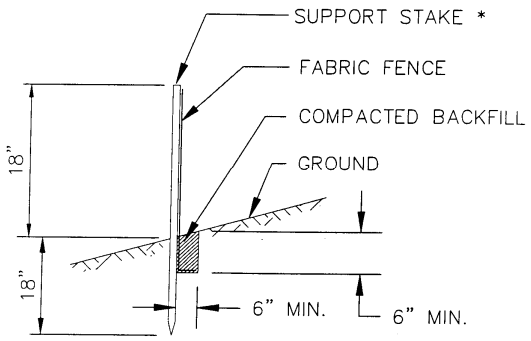
Recycling and Disposal of Construction Waste

All building materials and wastes must be removed from the site and recycled or disposed in accordance with DEP's Solid Waste Management Regulations. No building materials or wastes or unused building materials shall be buried, dumped, or discharged at the site. For more information, contact the Adams County Solid Waste and Recycling Office at (717) 337-9827.

Standard Filter Fabric Fence (18” High)



JOINING FENCE SECTIONS

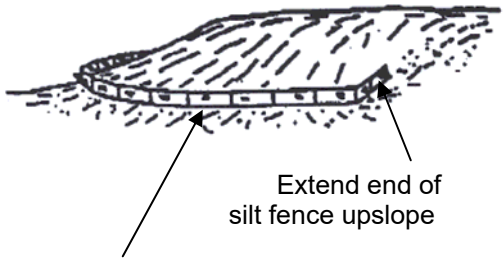


- Stakes spaced @ 8’ maximum.
  Use 2"x 2" wood or equivalent steel stakes.

- Sediment must be removed when accumulations reach 1/2 the above ground height of the fence.

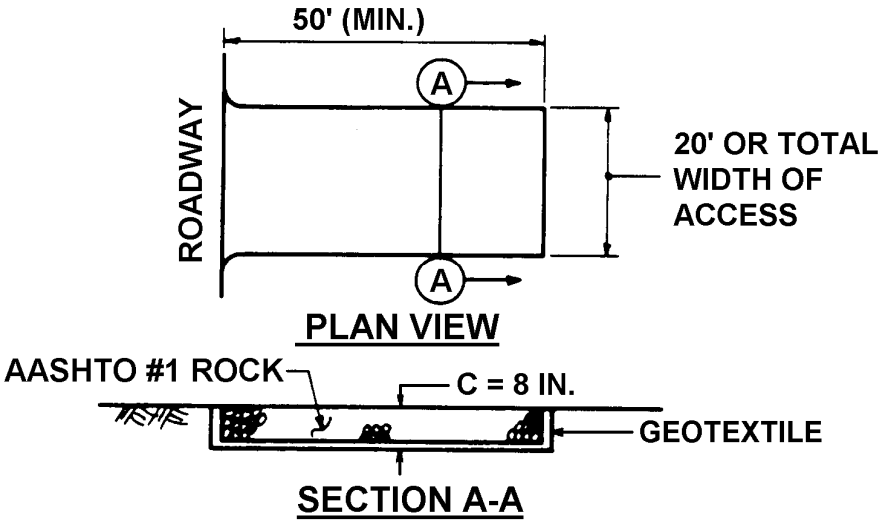
- Filter Fabric Fence must be placed at level existing grade. Both ends of the barrier must be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.

Proper Fence Installation



Silt fence installed level with the ground contour

Rock Construction Entrance

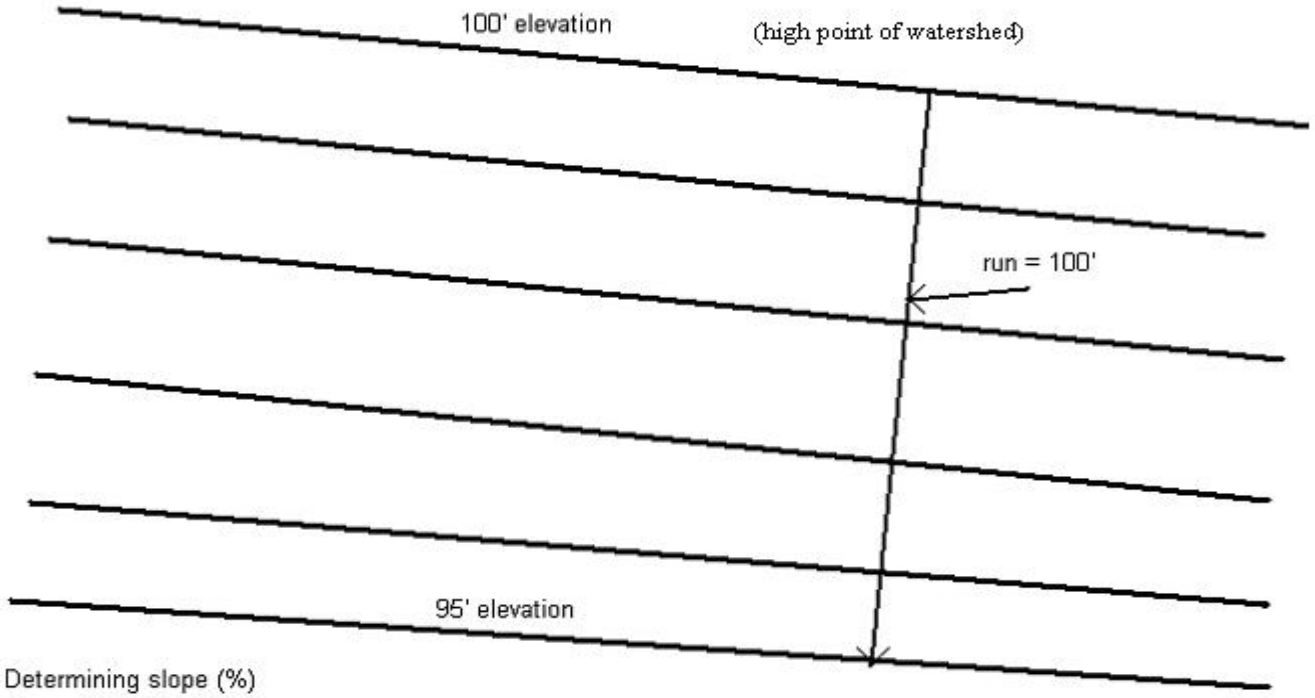


MAINTENANCE: Rock Construction Entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on site for this purpose. At the end of each construction day, all sediment deposited on paved roadways shall be removed and returned to the construction site.

Maximum Slope Lengths for Filter Fabric Fence

Slope - Percent	Maximum Slope Length (ft) Above Fence 18" High Fence
2 (or less)	150
5	100
10	50
15	35
20	25
25	20
30	15
35	15
40	15
45	10
50	10

The following example depicts how one determines the maximum slope length for filter fabric fence (silt fence)



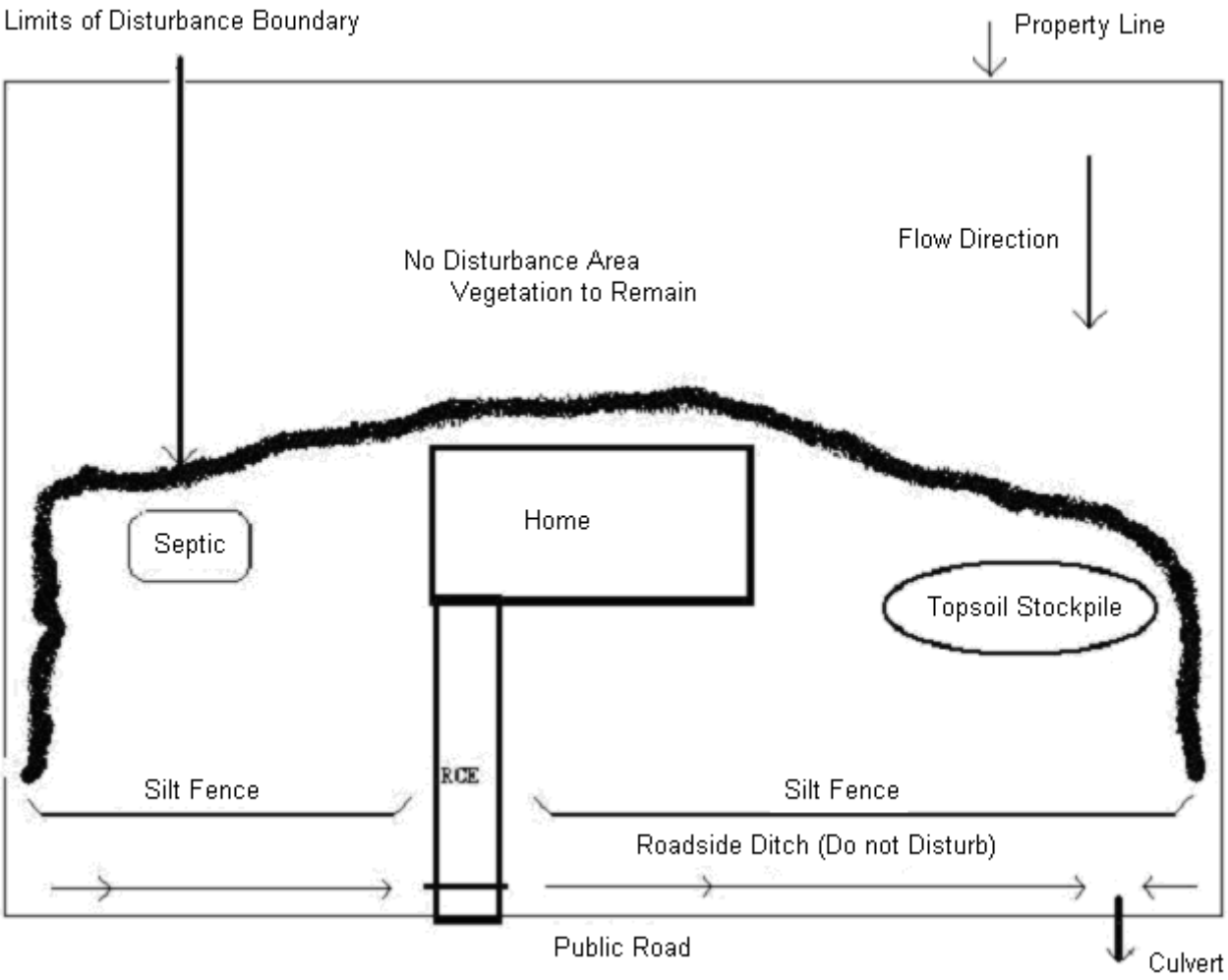
Determining slope (%)
slope (%) = Rise/Run

Example:
Rise = 100' - 95' = 5'
Run = 100'

Slope = 5/100 = 5%

Based on the calculated slope of 5% and measured linear run of 100', the use of 18" silt fence is an acceptable sediment control for sheet flow - See table above.

Typical Layout Showing E & S Controls



Suggested Staging of Earthmoving Activities

1. Install a rock construction (tire cleaning) entrance. (see detail)
2. Install temporary sediment control measures such as silt fence. (see detail)
3. If applicable, install and stabilize any temporary or permanent upslope conveyance channel with an appropriate lining (ex. seed, mulch, matting, sod or stone).
4. Once topsoil is stripped and stabilized, proceed with rough grading of site.
5. Construct dwelling and all utilities.
6. Finish grade and permanently stabilize (seed. mulch, sod, etc.) the site.
7. Remove temporary sediment controls. (Do not remove these controls until the upslope disturbed areas are permanently covered stone, paved, concrete, or established grass.)

The information contained in this pamphlet is an overview of the Pennsylvania Erosion and Sediment Pollution Control Program. The Adams County Conservation District has prepared these basic guidelines for incorporation into certain earthmoving activities. This information is not meant to supersede the required erosion and sediment control plans but to be used as a tool to develop a plan for a residential earthmoving activity that will not exceed 1 acre of earth disturbance. (See exceptions)

Exceptions:

1. Sites which have the potential to discharge to HQ/EV waters of the Commonwealth
2. Sites that require other permits requiring District or other approvals of Erosion and Sediment Plans
3. Sites with unique soil limitations
4. Sites with slope steeper than 5%
5. Sites within 50’ of bodies of Water
6. Sites with point source discharge