



# Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

## SOIL EROSION AND SEDIMENT REQUIREMENTS FOR SINGLE-FAMILY RESIDENCES, INDIVIDUAL LOT CONSTRUCTION AND MINOR CONSTRUCTION PROJECT ACTIVITIES

All earth disturbance activities in the Commonwealth of Pennsylvania are regulated by the requirements of Title 25, Chapter 102 of the Pennsylvania Code. Depending on the size and scope of a project, the requirements range from implementing and maintaining Best Management Practices (BMPs) to having an Erosion and Sediment (E&S) Control Plan to requiring a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges associated with construction activities.

### How are the Size and Scope of the Project Determined?

One of the key factors in determining what is required is the size of the area of disturbance.

Area of disturbance: *The area affected by construction or other human activity that disturbs the surface of the land including, but not limited to: clearing and grubbing; grading; excavations; embankments; land development; and the moving, depositing, stockpiling, or storing, of soil, rock or other earth materials.*

The size of the building lot may not be equal to the area of disturbance. Only the area that is being disturbed for construction or use as listed above should be considered. If the remainder of the lot will remain in a natural undisturbed state, it is not considered part of the area of disturbance.

### When is an E&S Control Plan Required?

All earth disturbance activities, including those that disturb less than 5,000 square feet, must implement and maintain E&S control practices.

A written E&S Control Plan is required if one or more of the following apply: the total area of disturbance is 5,000 square feet or greater, or if the activity has the potential to discharge to a water classified as a High Quality (HQ) or Exceptional Value (EV) water published in Chapter 93 regulations (relating to water quality

standards). Since many municipalities have local ordinances that require a written and approved E&S Control Plan even if the disturbance is less than 5,000 square feet, it is recommended you contact your local county conservation district office to determine whether a written plan is required under a local ordinance.

### When is an NPDES Permit required?

An NPDES Permit is required if five or more acres of earth is disturbed. An NPDES Permit is also required if both of the following apply: the total area of disturbance is greater than one acre, and there is a point source\* discharge from the affected area to surface waters\* (\*see *definitions below*). Additionally, an NPDES permit would be required for an earth disturbance of one acre or smaller if it is part of a larger, common plan of development. A common plan of development is an area where several distinct construction activities are occurring under one overall plan (e.g., the construction of a house on a half-acre lot in a residential development where other homes are being constructed). It is recommended you contact your local county conservation district office to determine whether a permit is required.

\*Point Source: *Any discernable, confined and discrete conveyance including, but not limited to: any pipe, ditch, channel, conduit, well, discrete fissure, container from which pollutants are or may be discharged to surface waters.*

\*Surface Waters: *Any and all rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, ponds, springs, wetlands and all other bodies or channels of conveyance of surface water, or parts thereof, whether natural or artificial.*

Most single-family residence individual lot construction sites can avoid a point source discharge so long as they are not part of a

larger common plan of development. If water runoff is collected on site and permitted to soak into the ground, or if runoff is permitted to flow across the land without being concentrated into a point source, an NPDES Permit would not be necessary.

**What other Approvals May be Necessary?**

This fact sheet focuses on state and federal E&S requirements. Local governments often have their own requirements for construction sites. It is the responsibility of the landowner and contractor to ensure compliance with all local requirements as well. Additional state or federal permits may be needed when operating across, along or near Surface Waters of the Commonwealth.

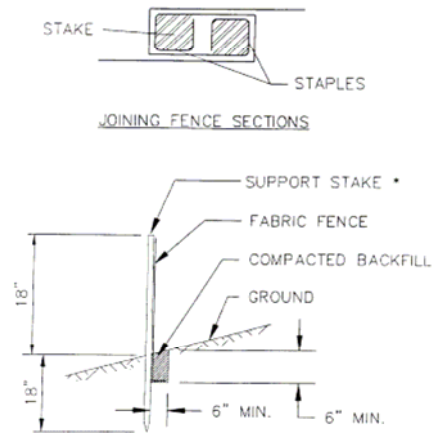
**What are E&S Control Practices or BMPs?**

E&S BMPs are activities or structures that effectively control stormwater during construction to prevent and minimize soil loss and surface water pollution. The implementation and maintenance of BMPs are required on all earth disturbance activities including those that do not require a written E&S Control Plan or NPDES Permit. The most common BMPs for a single-family residence individual lot construction site would include Filter Fabric Fence or Straw Bale Barriers, Rock Construction Entrance, and Site Stabilization.

Filter Fabric Fence, commonly referred to as Silt Fence, can be purchased at most builder's supply stores or landscape centers (ensure that the silt fence is a minimum of 18 inches in height). Filter Fabric Fence and Straw Bale Barriers perform the same function and are referred to as perimeter controls. Either of these practices would be installed down-slope of the construction where the disturbed area meets vegetation in the undisturbed area. Proper installation and maintenance of the Filter Fabric Fence and/or the Straw Bale Barrier is crucial to the BMP functioning correctly. (Figures 1 & 2)

**Figure 1**

**STANDARD CONSTRUCTION DETAIL #19**  
Standard Filter Fabric Fence (18" High)



\*Stakes spaced @ 8' maximum. Use 2" x 2" wood or equivalent steel stakes.

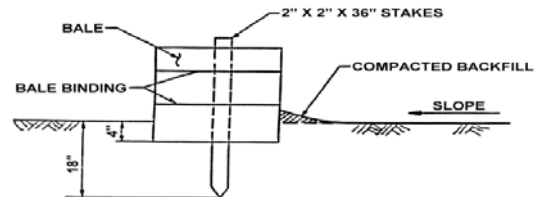
Filter Fabric Fence must be placed at level existing grade. Both ends of the barrier must be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.

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

Any section of Filter Fabric Fence which has been undermined or topped must be immediately replaced with a Rock Filter Outlet.

**Figure 2**

**STANDARD CONSTRUCTION DETAIL #17**  
Straw Bale Barriers



Straw Bale Barriers should not be used for more than 3 months.

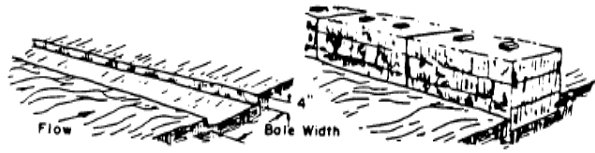
Straw Bale Barriers shall be placed at existing level grade. Both ends of the barrier shall be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.

Sediment shall be removed when accumulations reach 1/3 the above ground height of the barrier.

Any section of Straw Bale Barrier which has been undermined or topped shall be immediately replaced with a Rock Filter Outlet.

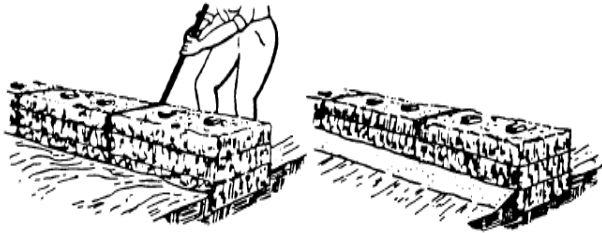
1. EXCAVATE THE TRENCH.

2. PLACE AND STAKE STRAW BALES.



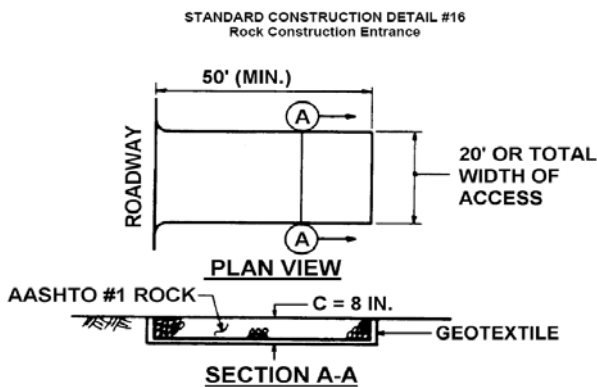
2. WEDGE LOOSE STRAW BETWEEN BALES.

4. BACKFILL AND COMPACT THE EXCAVATED SOIL. (ANCHOR TOE)



A Rock Construction Entrance is installed along the roadway for the purpose of cleaning mud from the tires of construction vehicles before they leave the worksite. (Figure 3)

Figure 3



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.

Site Stabilization is one of the most effective tools available to control erosion. Site Stabilization is used as both a temporary and permanent measure to control erosion of bare ground on construction sites. When areas of a construction site are completed, they should be stabilized as soon as possible. Getting vegetation to grow on completed portions of a jobsite while remaining areas are still under construction makes final stabilization of the entire site easier and provides some buffering for the remainder of the site. Stabilization

practices can use straw mulch, seed, manufactured erosion control products, or a combination of all of the above.

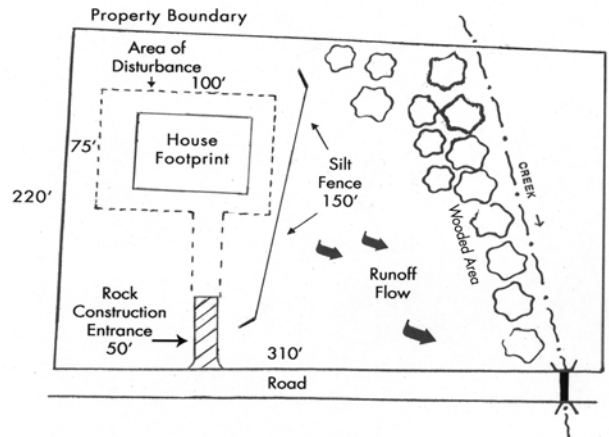
## Erosion & Sediment Control Plan

### What is Included in a Written E&S Control Plan?

A site sketch should include the dimensions of the lot, identification and dimensions of the area to be disturbed, location of any prominent drainage, wetland, or surface waters, location of any major trees, an understanding of your lot's general slope characteristics, and the BMPs that need to be implemented. (Figure 4)

For the purposes of a single-family residence, a site sketch made by the landowner and/or operator should be adequate.

Figure 4



## NPDES Permit Assistance

If you believe your single-family residence construction site may need an NPDES Permit, the first step would be to discuss your concerns with your contractor, consultant, municipality or county conservation district. They will be able to assist you in making the determination if an NPDES Permit is required.

The process of developing an NPDES Permit application is best completed by a Qualified Licensed Professional or earthmoving construction professional (engineer, geologist, surveyor, or landscape architect).

**For More Information:**

Visit DEP's Web site at [www.depweb.state.pa.us](http://www.depweb.state.pa.us), Keyword: "Erosion Control."

Or contact your local county conservation district, or the DEP Permitting and Technical Services Section at one of the following regional offices:

<p><b>Southeast Region</b> 2 East Main Street Norristown, PA 19401 484-250-5900</p> <p><b>Counties:</b> Bucks, Chester, Delaware, Montgomery and Philadelphia</p>	<p><b>Southwest Region</b> 400 Waterfront Drive Pittsburgh, PA 15222-4745 412-442-4000</p> <p><b>Counties:</b> Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland</p>	<p><b>Southcentral Region</b> 909 Elmerton Ave., 2nd Floor Harrisburg, PA 17110 717-705-4707</p> <p><b>Counties:</b> Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York</p>
<p><b>Northeast Region</b> 2 Public Square Wilkes-Barre, PA 18711-0790 570-826-2511</p> <p><b>Counties:</b> Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming</p>	<p><b>Northcentral Region</b> 208 W. Third St., Suite 101 Williamsport, PA 17701 570-327-3574</p> <p><b>Counties:</b> Bradford, Cameron, Clearfield, Centre, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union</p>	<p><b>Northwest Region</b> 230 Chestnut St. Meadville, PA 16335-3481 814-332-6984</p> <p><b>Counties:</b> Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren</p>