



# Heavy Use Area Protection

Conservation Solutions for your Pennsylvania Farm

## Do You Have Problems With:

- Cows knee deep in mud
- Muddy areas around watering troughs or feed bunks
- Muddy areas around buildings from equipment traffic
- Muddy and eroded walkways used by livestock

## Heavy Use Area Protection Can Help by

- Providing safe and stable access to frequently used areas
- Keeping your animals cleaner and healthier
- Improving safety on your farm
- Improving efficiency on your farm

## Purposes and Benefits of Heavy Use Area Protection:

- Improves the appearance of your farm
- Reduces accidents
- Reduces odors
- Reduces flies and mosquitoes
- Reduces equipment maintenance



*Gravel protection around a watering facility*



*A cow in the mud.*

## Costs and Benefits

The costs for Heavy Use Area Protection will be different depending on what you use to build it and how large an area needs treatment. Some of the costs to think about are:

- Removing mud
- Finding and Moving Fill dirt
- Buying Fabric
- Buying Stone or chips

# Heavy Use Area Protection

## How to Install the Practice:

A heavy use area is protected by first removing all the mud and muck then replacing it with something that will last for a long time such as gravel or clam shells. A layer of filter fabric placed on the ground before you place the gravel or shells will help to keep it clean. (Filter fabric is a light weight cloth made out of plastic that has very small openings which allows water, but not soil to pass through it.)

You can sometimes correct problems by changing the way you manage your operation. For example you can change the travel lanes used by your tractor and other equipment when you see mud beginning to appear, or you can block animal walkways so that they will walk in other areas. You can eliminate a muddy area around watering facilities in your pasture by using a portable watering trough and moving it to a new location often. You can also eliminate muddy areas by fencing the animals out temporarily while the area is re-graded, seeded and mulched, and allowed to grow. Later you can allow the animals back to this area, being careful not to allow them to stay too long or in wet weather.

Mud is often associated with wetlands. Work with the NRCS office to make sure wetland rules are not violated when you clean up a muddy mess.



*An area needing heavy use area protection.*

## Other Benefits:

- **Reduced erosion**
- **Improved water quality**
- **Less time spent pulling stuck animals and equipment out of the mud.**



*A wood chip path*

## Protection using pavement.

If you have an area on your farm where heavy trucks make frequent visits, or areas that need to be scraped to remove manure or other materials, paving may be the best solution. Materials such as concrete, asphalt, soil cement, fly ash and paving blocks can be used for paving.

To install paving you need to get rid of the mud and add some gravel to make a base.

If you use concrete, you will need to have forms constructed, woven wire steel reinforcement and expansion joints. Make the edges where heavy trucks will enter thicker to prevent cracks.

Asphalt is not as durable as concrete, but its cheaper and faster to install. An asphalt contractor will be needed to install the asphalt.

# Heavy Use Area Protection

## Other Materials:

Soil cement and fly ash can both be used to make pavements that are cheaper to build although they are not as durable as concrete or asphalt. Soil cement is made by mixing Portland cement with soil and compacting. It will harden to make a fairly durable surface.

If your farm is near a coal fired power plant, fly ash may be available at a low cost. Fly ash can be used to form a paved surface when properly prepared. Typically fly ash is mixed with sand and water in a cement mixer and poured into forms and allowed to harden, which may take a few weeks. Fly ash pavement is more likely to crack than concrete, and is more easily damaged by scraping.



*Scraping manure from a paved area*



A portable watering tank

## How to Maintain the Practice:

Heavy use areas should be checked regularly to repair any problems that occur.

- Areas using vegetation for protection should be mowed periodically
- Fertilize and lime yearly
- Move portable water troughs often
- Move fences when mud appears
- Add gravel or wood chips when needed
- Check pavement for cracks and repair them
- Fill pot holes before they get big.

## CONSERVATION SOLUTIONS FOR YOUR PENNSYLVANIA FARM

### Technical Help Is Available

Your local Natural Resources Conservation Service (NRCS) office has experienced conservationists that can assist you with Heavy Use Area Protection. They can also help you develop a Conservation Plan to solve other problems you have identified on your farm.

There is no charge for our assistance. Simply call your local office at the number listed below to set up an appointment and we will come to your farm.

You may also be eligible to receive financial assistance, through a state or federal program. Your NRCS office will explain any programs that are available so you can make the best decision for your operation. All NRCS programs and services are voluntary.



*Helping People Help the Land*

#### **NRCS FIELD OFFICES:**

Adams: 717-334-2317 ext 3  
Allegheny: 717-482-4800 ext 3  
Armstrong: 724-545-1022 ext 3  
Beaver: 724-482-4800 ext 3  
Bedford: 814-623-7900 ext 3  
Berks: 610-372-4655 ext 3  
Blair: 814-695-6291 ext 3  
Bradford: 570-265-6969 ext 3  
Bucks: 215-453-9527 ext 3  
Butler: 724-482-4800 ext 3  
Cambria: 814-472-5502 ext 3  
Cameron: 814-375-2125 ext 3  
Carbon: 610-625-8392 ext 3  
Centre: 570-726-3196 ext 3  
Chester: 610-696-0398 ext 3  
Clarion: 814-226-8160 ext 3  
Clearfield: 814-375-2125 ext 3  
Clinton: 570-726-3196 ext 3  
Columbia: 570-784-1062 ext 3  
Crawford: 814-724-1852 ext 3  
Cumberland: 717-249-1037 ext 3

Dauphin: 717-921-2380 ext 3  
Delaware: 610-696-0398 ext 3  
Elk: 814-375-2125 ext 3  
Erie: 814-796-6760 ext 3  
Fayette: 724-437-7971 ext 3  
Forest: 814-226-8160 ext 3  
Franklin: 717-264-8074 ext 3  
Fulton: 717-485-3812 ext 3  
Greene: 724-627-5821  
Huntingdon: 814-627-1626 ext 3  
Indiana: 727-463-8547 ext 3  
Jefferson: 814-375-2125 ext 3  
Juniata: 717-436-8953 ext 3  
Lackawanna: 570-282-8732 ext 3  
Lancaster: 717-299-5361 ext 3  
Lawrence: 724-652-5811  
Lebanon: 717-272-3908 ext 3  
Lehigh: 610-625-8392 ext 3  
Luzerne: 570-799-0645 ext 3  
Lycoming: 570-433-3902 ext 3  
McKean: 814-274-8166 ext 3  
Mercer: 724-662-3740 ext 3  
Mifflin: 717-248-9541 ext 3

Monroe: 610-625-8392 ext 3  
Montgomery: 610-372-4655 ext 3  
Northampton: 610-625-8392 ext 3  
Northumberland: 570-286-7114 ext 3  
Perry: 717-582-4144 ext 3  
Pike: 570-282-8732 ext 3  
Potter: 814-274-8166 ext 3  
Schuylkill: 570-622-1312 ext 3  
Snyder: 570-837-0007 ext 3  
Somerset: 814-445-6876 ext 3  
Sullivan: 570-836-2490 ext 3  
Susquehanna: 570-278-1011 ext 3  
Tioga: 570-724-1726 ext 3  
Union: 570-523-3280  
Warren: 814-563-3125  
Washington: 724-222-3060 ext 3  
Wayne: 570-282-8732 ext 3  
Westmoreland: 724-834-3970 ext 3  
Wyoming: 570-836-2490 ext 3  
Venago: 814-437-2473 ext 3  
York: 717-755-2966 ext 3