

SOIL EROSION BY WATER

New building and development causes significant site damage, often resulting in soil erosion. Eroded soil causes many problems for homeowners and public facilities. Soil erosion carries away valuable topsoil containing critical nutrients, as well as excess fertilizers and pesticides. This traveling soil eventually reaches rivers and lakes. In addition, eroded soil clogs storm-water facilities such as sewers, infiltration swales and drywells. The siltation of these facilities by eroded soil costs taxpayers tens of thousands of dollars in additional maintenance.

The susceptibility of soil to erosion depends on:

Soil cover - Its presence and form.

Soil types - Sandy and silty soils are the most erosion-prone.

Slope of the land - Moderate to steeply sloping areas are most likely to erode.

Soil erosion around home sites, particularly new ones, can have serious consequences. However, it can be prevented in a number of convenient and potentially attractive ways. The first step is to identify the source of the water causing the damage. Redirect the water coming from gutter downspouts away from slopes with splash-blocks. Place the splash-blocks so that water is directed into an area where it is allowed to slowly dissipate into a shrub border or gravel area.

Slowing the flow of water allows it to soak into the soil rather than rushing over the surface. Disguise splash-blocks and gravel areas with groundcovers or other vegetation. The plants will benefit from the additional water and will eventually cover the gravel.

Directing water from downspouts or other sources can provide interesting opportunities for landscaping.

Drains

One way to control water is by installing area drains connected to pipes to move the water to underground sumps/drywells or areas that can handle the flow of water without damage. Always strive to control water on your property rather than sending it onto someone else's.

Dry Streams

Another way is to construct a dry stream. Fill a low swale with 1-3 inch diameter washed river rock for directing storm water to plants or areas that need more water. Slope the swale away from foundations or basements to areas that can handle the runoff.

Terracing

To minimize erosion on a steep slope it is best to create terraces. Make terraces by leveling out the soil every 2 feet of elevation change. Terraces hold the water, reduce its velocity, and give plants a better chance to establish a root hold. Planting groundcovers and drought-tolerant plants in the terraces protects the slope while not requiring additional water after establishment.

Bare soil exposed to rain is a primary cause of erosion. Replant vegetation as soon as possible where practical. Choose plant materials that are suited for the site. Straw, grass clippings, wood chips, and commercial erosion control materials (such as woven fabrics or plastic) are good surface mulches and will reduce the amount of erosion that occurs. Companies are listed in the telephone directory or online search engines under "Erosion Control." Straw is available locally from farmers (look for classified ads in the newspapers) or some farm and seed supply stores.

In summary, the key points are: control the source, protect the soil, redirect water flow on slopes, and re-vegetate bare soil as quickly as possible with the right plants. Preventing erosion will prevent damage to landscaping, property and storm-water facilities.