



## SOIL ROUGHENING

### DEFINITION AND PURPOSE:

Soil roughening is a temporary erosion control practice often used in conjunction with grading. Soil roughening involves increasing the relief of a bare soil surface with horizontal grooves by either stair-stepping (running parallel to the contour of the land) or using construction equipment to track the surface. Slopes that are not fine-graded and left in a roughened condition can also reduce erosion. Soil roughening reduces runoff velocity, increases infiltration, reduces erosion, traps sediment, and prepares the soil for seeding and planting by giving seed an opportunity to take hold and grow.

### APPROPRIATE APPLICATIONS:

Soil roughening is appropriate for all slopes but works especially well on: slopes greater than 4:1, on piles of excavated soil, and in areas with highly-erodible soils. This technique is especially appropriate for soils that are frequently disturbed because roughening is relatively easy.

### CONDITIONS FOR EFFECTIVE USE:

Type of Flow: Sheet flow.

Contributing Area: Unlimited on slopes <10%, slopes >10% may require additional BMPs (such as a diversion channel, slope drain, fiber rolls/wattles, etc.).

### WHEN BMP IS TO BE INSTALLED:

Immediately after rough grading and prior to seeding or mulching.

### STANDARDS AND SPECIFICATIONS:

Depending on the type of slope and the available equipment, use different methods for roughening soil on a slope. These include stair-step grading, grooving, and tracking. When choosing a method, consider factors such as slope steepness, mowing requirements, whether the slope is formed by cutting or filling, and available equipment. Soil roughening is not appropriate for rocky slopes. Tracked machinery can excessively compact the soil, therefore light weight machinery should be considered.

### OPERATION AND MAINTENANCE PROCEDURES:

Inspect at least every week and immediately after every storm. Rework the slope and regroove after sediment buildup is deeper than ½ the groove depth. Rework the slope and regroove if rills have cut across the roughened surface.

### SITE CONDITIONS FOR REMOVAL:

The slope should be reworked to the design grades immediately prior to final stabilization.

### TYPICAL DETAILS:

RM-9