know where it goes
take simple steps to reduce STORMWATER POLLUTION

Soil Stabilization

Updated 2017

You know erosion control on a construction site is important. But did you know soil stabilization is key?

What is Soil Stabilization?

Soil stabilization is a general term for any biological, physical, chemical, or combined engineering method that provides protection of the soil against the impacts of wind, rain, and stormwater runoff. Stabilization measures prevent erosion and runoff from occurring on soil stockpiles, bare or disturbed areas, and slopes.

TO EFFECTIVELY CONTROL EROSION YOU NEED TO PROTECT AND STABILIZE BARE AND DISTURBED SOILS AND SLOPES USING SEASONALLY APPROPRIATE TECHNIQUES.

Techniques

An area is considered fully stabilized when it has an established stand of grass or suitable treatment and is free from future uncontrolled discharges.

TEMPORARY VEGETATIVE COVER is the establishment of vegetative cover on soils exposed for a period greater than one month but less than 12 months; considered established when there is approximately 80% vegetative surface cover.

PERMANENT VEGETATIVE COVER is the establishment of permanent vegetative cover by seeding and mulching exposed soils with an appropriate seed mixture to facilitate long term stabilization following site preparation and topsoiling; considered established when there is ~95% vegetative surface cover, it prevents soil erosion and withstands severe weather conditions.

STRUCTURAL SOIL STABILIZATION practices include mulches, stone aggregate, turf reinforcement matting, erosion control blankets, riprap, cellular confinement systems, gabion mattresses, or articulating concrete block revetment systems. All need to be installed in accordance with manufacturers' recommendations and good engineering practices.

Keys to Success (Using the RIPDES Construction General Permit & SESC Plans/SWPPPs)

1. Stabilization of disturbed areas must, **at a minimum**, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbance activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding **fourteen** (14) calendar days.

2. Stabilization must be completed using vegetative stabilization measures or using alternative measures whenever vegetative measures are deemed impracticable or during periods of drought.

3. All disturbed soils exposed prior to **October 15th** shall be seeded by that date.

4. Any such areas which do not have adequate vegetative stabilization by **November 15th** must be stabilized through the use of non-vegetative erosion control measures.

5. If work continues within any stabilized areas during the period from **October 15th through April 15th,** care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be restabilized within five (5) working days.

Hydroseeding a slope along a roadway to stabilize soils and prevent erosion

Straw blankets applied to a stockpile to prevent erosion and sedimentation during a shut-down period

Gabion mattresses constructed to prevent erosion in an area of flow

Turf reinforcement matting used on a slope to help hydroseed adhere and prevent erosion

More information on soil stabilization measures and how to control erosion at your site may be found in Sections Four and Six of the latest Soil Erosion and Sediment Control Handbook.

Produced by RI Stormwater Solutions with support from the RI Department of Transportation and the Rhode Island Department of Environmental Management.