

SURFACE STABILIZATION

Sod



The soil surface is stabilized by laying a continuous cover of grass sod over soil exposed to erosive forces.

Purpose

- To provide immediate vegetative cover on critically sloping areas, channels, and sediment control structures.
- To prevent erosion and damage from sedimentation.
- To reduce problems associated with mud or dust from unvegetated soil surfaces.

Specifications

Site Preparation

- Grade the site to achieve positive drainage.
- Prepare a smooth, firm soil surface and apply soil amendments.

Irrigation

Irrigate as needed to ensure rooting of sod.

Materials

- Soil Amendments – Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services.) or 400 to 600 pounds of 12-12-12 analysis fertilizer, or equivalent.
- Sod – Select a high quality, healthy, vigorous variety well adapted to the region and compatible with the intended use. (Selection of varieties is usually much more limited than when establishing vegetation from seed.)

Installation

Sod should not be installed during hot weather, on dry soil, frozen soil, compacted clay, loose sand or gravelly substrate soils, aggregate, or pesticide-treated soil. The ideal time to lay sod is May 1 to June 1 or September 1 to September 30, although it can be installed as early as March 15 if available or June 1 to September 1 if irrigated.

Site Preparation

1. Apply topsoil (see **Topsoil Salvage and Utilization** on page 25) if existing soil conditions are unsuitable for establishing vegetation.
2. Grade the site to achieve positive drainage and create a smooth, firm soil surface.
3. Where applicable, use a chisel plow, disk, harrow, or rake to break up compacted soils and create a favorable rooting depth of six to eight inches.

Sod Bed Preparation

1. Test soil to determine pH and nutrient levels.
2. If soil pH is too acidic for the grass sod to be installed, apply lime according to soil test results or at the rate recommended by the sod supplier.
3. Apply fertilizer as recommended by the soil test. If testing was not done, apply 400 to 600 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
4. Work the soil amendments into the upper two to four inches of soil with a disk or rake operated across the slope.
5. Rake or harrow the area to achieve a smooth final grade and then roll or cultipack the soil surface to create a firm surface on which to lay the sod.

Laying the Sod

1. Install sod within thirty-six hours of its cutting.
2. Store the sod in a shaded location during installation.
3. Immediately before laying the sod, rake the soil surface to break any crust. (If the weather is hot, lightly irrigate the soil surface prior to laying the sod.)
4. Lay sod strips in a brick-like pattern (see Exhibit 1).
5. Butt all joints tightly against each other (do not stretch or overlap them), using a knife or mason's trowel to trim and fit sod into irregularly shaped areas.
6. Roll the sod lightly after installation to ensure firm contact between the sod and soil.

7. Irrigate newly sodded areas until the underlying soil is wet to a depth of four inches, and then keep moist until the grass takes root.

Slope Application

1. Install the sod strips with the longest dimension perpendicular to the slope.
2. Where slopes exceed a ratio of 3:1, staple or stake each strip at the corners and in the middle.

Channel Application

(Sodding provides quicker protection than seeding and may reduce the risk of early washout.)

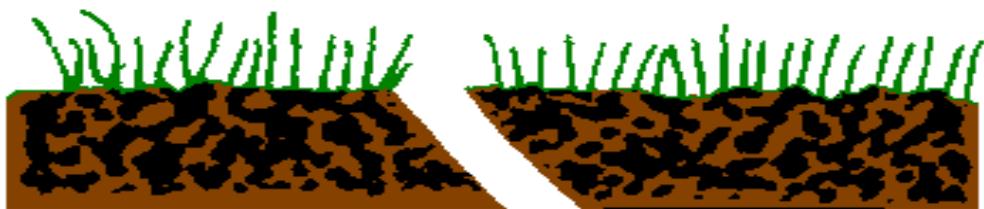
1. Excavate the channel, allowing for the full thickness of the sod.
2. Lay the sod strips with the longest dimension perpendicular to channel flow.
3. Staple or stake each strip of sod at the corners and in the middle.
4. Staple jute or biodegradable polypropylene netting over the sodded area to minimize the potential for washout during establishment.

Maintenance

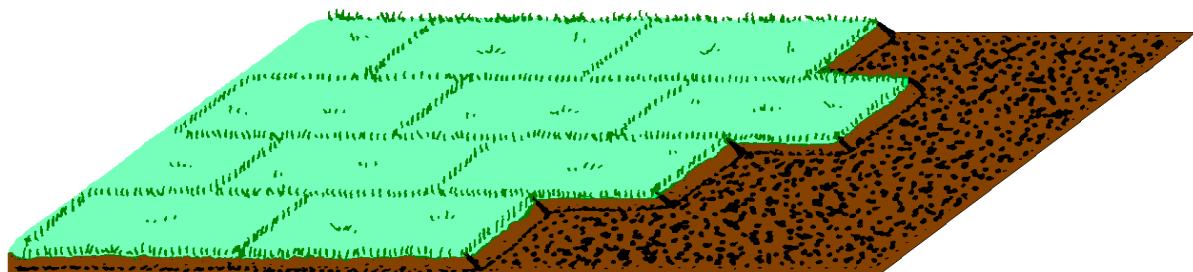
- Inspect within 24 hours of each rain event and at least once every seven calendar days until sod is well rooted.
- Keep sod moist until fully rooted.
- After sod is well-rooted (two to three weeks), maintain a plant height of two to three inches.
- Time mowing to avoid ruts in turf.
- Fertilize turf areas annually. Apply fertilizer in a split application. For cool-season grasses, apply one-half of the fertilizer in late spring and one-half in early fall. For warm-season grasses, apply one-third in early spring, one-third in late spring and one-third in mid-summer.

Exhibit 1

Cross-Section View



Perspective View



Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993