

SURFACE STABILIZATION

Compost Mulching



Compost mulching is the application of composted materials to enhance vegetative establishment and minimize erosion potential.

Source: U.S. Dept. of Agriculture, Natural Resources Conservation Service, Iowa, Lynn Betts

Purpose

- To protect exposed soil from the erosive forces of wind and water.
- To provide temporary surface stabilization.
- To prevent soil from crusting.
- To conserve soil moisture and promote seed germination and seedling growth.

Note: This measure should not be used in storm water runoff channels or anywhere that concentrated flow is anticipated.

Specifications

Compost Specifications

- Feedstocks may include but are not limited to well-composted vegetable matter, leaves, yard trimmings, food scraps, composted manures, paper fiber, wood bark, Class A biosolids (as defined in Title 40 of the Code of Federal Regulations at 40 CFR Part 503), or any combination thereof.
- Compost shall be produced using an aerobic composting process meeting 40 CFR Part 503 regulations, including time and temperature data indicating effective weed seed, pathogen, and insect larvae kill.
- Compost shall be well decomposed, stable, and weed free.

COMPOST MULCHING

- Refuse free (less than one percent by weight).
- Free of any contaminants and materials toxic to plant growth.
- Inert materials not to exceed one percent by dry weight pH of 5.5 to 8.0.
- Carbon-nitrogen ratio not to exceed 100.
- Moisture content not to exceed 45 percent by dry weight.
- Variable particle size with maximum dimensions of three inches in length, one-half inch in width and one-half inch in depth.

Table 1. Compost Particle Size

Percent Passing Sieve Size			
2-Inch Sieve	1-Inch Sieve	¾-Inch Sieve	> ¼-Inch Sieve
100%	99%	90%	25%

Bonding Agents (optional)

Tackifiers, flocculants, or microbial additives may be used to remove sediment and/or additional pollutants from storm water runoff. (All additives combined with compost materials should be tested for physical results at a certified erosion and sediment control laboratory and biologically tested for elevated beneficial microorganisms at a United States Compost Council, Seal of Testing Assurance, approved testing laboratory.)

Soil Material (optional)

Five percent to ten percent sandy loam (as classified by the U.S. Department of Agriculture soil classification system).

Cover Density

Ninety percent or greater over the soil surface.

Anchoring Method

- Moisten compost/mulch blanket for a minimum of 60 days.
- Erosion control netting (optional).

Cover Thickness

Table 2. Compost Blanket Thickness

Slope		Thickness of Compost Blanket	Thickness of Compost Blanket with Erosion Control Netting
< 25%	< 4:1	1 to 2 inches	Not Applicable
25% to 50%	4:1 to 2:1	1 to 2 inches	2 inches
> 50%	> 2:1	2 to 3 inches	3 inches

Application

1. Remove existing vegetation, large soil clods, rocks, stumps, large roots, and debris in areas where compost mulch is to be applied and dispose of in designated areas.
2. Scarify sloping areas.
3. Aerate areas to be covered with compost/mulch blanket. (Proper aeration will require a minimum of two passes oriented in opposite directions.)
4. Broadcast a minimum of one pound of nitrogen (N), one-half pound of phosphorous (P_2O_5), and one-half pound of potash (K_2O) per 1,000 square feet or 300 to 400 pounds per acre of 12-12-12 analysis fertilizer, or equivalent, per acre.
5. Apply compost mulch blanket with a pneumatic blower or per manufacturer's directions.
 - a. Apply within three days of completing aeration operations.
 - b. Overlap top of slope shoulder by five to ten feet.
 - c. Seed may be applied at time of installation. (Seed must be evenly blended into the compost if applied with a pneumatic blower or applied with a calibrated seeder attachment prior to installation of the compost blanket.)
6. Water compost mulch blanket for a period of 60 days following application. (On steeper slopes, it may be necessary to install erosion control netting over the compost blanket.)
 - a. Mist blanket for first seven days and then every three days throughout the remainder of the 60-day period.
 - b. Maintain a constant moisture content of 40 percent to 60 percent.

Maintenance

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- Repair eroded areas.
- Reseed, if applicable.
- Monitor vegetation and apply appropriate soil amendments (if needed) per a soil test.