

MULCHING FOR SEEDING AND SOIL STABILIZATION

(no.)
CODE 875



(Source: Kane-DuPage Soil and Water Conservation District)

DEFINITION

The application of mulch materials over seeded areas or for soil stabilization.

PURPOSE

The purposes of this practice are as follows:

1. To prevent erosion and surface compaction or crusting by protecting the soil surface from raindrop impact and reducing the velocity of overland flow.
2. To foster the growth of vegetation by conserving available moisture and providing insulation against extreme heat and cold.

CONDITIONS WHERE PRACTICE APPLIES

1. Areas that have been seeded to provide permanent vegetation.
2. Areas that have been seeded to provide temporary erosion control.
3. Areas requiring soil stabilization.
4. Areas with slopes of 3:1 (H:V) or flatter.

This practice does not apply to tree and shrub planting areas. Follow the requirements of practice standard [TREE](#)

[AND SHRUB PLANTING 985](#) for mulching in these areas.

This practice does not apply to areas where concentrated flows are present. Follow the requirements set forth in other practice standards, such as [EROSION BLANKET: TURF REINFORCEMENT MAT \(TRM\) 831](#) or [SODDING 925](#).

For slopes greater than 3:1 (H:V), follow the requirements of practice standard [EROSION BLANKET 830](#), [EROSION BLANKET: TURF REINFORCEMENT MAT \(TRM\) 831](#), [SOIL BIOENGINEERING 926](#), or [SURFACE ROUGHENING 953](#).

CRITERIA

When used over seeded areas, mulching Methods 1, 2 and 3 shall be performed within 24 hours of the application of seed. Seed shall be applied in accordance with practice standard [PERMANENT VEGETATION 880](#) or [TEMPORARY SEEDING 965](#).

Areas to receive mulch shall be prepared in accordance with construction specification [6 SEEDING, SPRIGGING AND MULCHING](#).

Foot and vehicular traffic and equipment movement shall be prohibited in mulched areas.

The choice of materials and application method shall be based on the soil type, slope length, slope angle, and season.

Mulch Materials – Straw mulch shall come from oats, wheat, rye or barley and be free of diseased plant residue, weed seeds, and harmful chemical residues. Hydraulic mulch shall consist of wood, cotton, straw, or paper – or a combination of the four. Compost shall be thoroughly decomposed organic waste. Chemical mulch binder shall be approved as safe for the surrounding ecosystem. Manufactured mulches shall be installed in accordance with manufacturer's specifications.

Method 1 – This method shall consist of the application of straw mulch at a rate of 2 tons/acre. This method shall be used on relatively flat surfaces in areas protected from wind.

Method 2 – This method shall consist of the application of stabilized straw mulch at a rate of 2 tons/acre. This method shall be used in areas of moderate slope, when the ground is not frozen. Mulch shall be stabilized using one of the following methods:

1. Anchoring by means of mechanical stabilizer, or crimper, with dull, flat, parallel disks spaced approximately eight inches apart. Mulch material shall be tucked 2" to 3" into the soil surface. Anchoring operation shall operate as close to the contour as possible.
2. Stabilizing by the application of an overspray of hydraulic mulch after the application of straw mulch. The hydraulic mulch shall be applied by an approved hydraulic mulcher at a minimum rate of 900 lb. of mulch per acre. The hydraulic mulch shall be mixed in accordance with manufacturer's recommendations. Hydraulic mulch shall not be applied when the ambient temperature is at or below freezing.

3. Anchoring by means of stabilizing the mulch with a chemical mulch binder applied with the straw or as an overspray.

Method 3 – This method shall consist of machine application of hydraulic mulch using an approved hydraulic mulcher. The mulch shall be applied at a rate of 1 ton of mulch per acre. The hydraulic mulch shall be mixed in accordance with manufacturer's recommendations.

Hydraulic mulch shall not be applied when the ambient temperature is at or below freezing. To achieve full and even coverage, the hydraulic mulch shall be applied from two opposing directions.

Method 4 – This method shall consist of the application of compost. Compost shall be applied using a pneumatic blower to a depth of 2 inches. Compost shall be produced at an IEPA permitted facility and be United States Composting Council (USCC) certified.

When compost is used for seeding applications, the seed shall be blended through the mulch or applied to the top of the mulch. Compost shall not be applied over soil that has been seeded.

CONSIDERATIONS

Organic mulch materials such as paper, cotton, straw and wood fiber do not need to be removed since they can incorporate naturally into the soil. Organic mulches should be used where practical. Mulch that can be windblown, such as straw, should be anchored to stay in place.

Chemical mulch binders may be used as recommended by the manufacturer to anchor mulch. When using chemical mulch binder it is important to allow for the required curing time or drying time.

Erosion control blankets also meet the purposes of mulching and can be used

in lieu of this standard. See practice standard [EROSION BLANKET 830](#) and/or [EROSION BLANKET: TURF REINFORCEMENT MAT \(TRM\) 831](#).

When Polyacrylamide (PAM) is used in place of or in addition to mulch products, it shall be applied per practice standard [POLYACRYLAMIDE \(PAM\) FOR TEMPORARY SOIL STABILIZATION 893](#).

Mulch may also be used for aesthetic reasons or to minimize weed growth, however, these are not the primary purposes of this practice standard.

PLANS AND SPECIFICATIONS

Plans and specifications for applying mulch shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. At a minimum include the following items:

1. Method(s) to be used
2. Application rates for mulch and anchoring material
3. Anchoring method, if applicable
4. Times of application
5. Location of different materials if more than one material is used on the site

OPERATION AND MAINTENANCE

All mulches shall be inspected periodically, in particular after rain events greater than ½ inch, to check for rill erosion and uniform coverage. Where erosion is observed or where mulch has been displaced, the seeding and mulch, as well as other damages, shall be repaired or replaced immediately. Inspections shall occur until seeded areas are firmly established or soil stabilization is no longer required.

Operations by equipment on or near the site shall not damage the intended

purpose of the mulch. Any damage shall be repaired or replaced immediately.

REFERENCES

Illinois Department of Transportation. Standard Specifications for Road and Bridge Construction. January 1, 2007.

Tennessee Department of Environment and Conservation, Division of Water Pollution Control. Tennessee Erosion and Sediment Control Handbook, Second Edition. Disturbed Area Stabilization (With Mulch) – MU. Nashville, TN. March 2002.

O'Hare Modernization Program, Master Specifications, Volume IIIC. Seeding T-901. Rev. 11, Issued 10/15/2008

O'Hare Modernization Program, Master Specifications, Volume IIIC. Temporary Air and Water Pollution, Soil Erosion and Sediment Control T-156 Rev. 9, Issued 1/30/2009

April 2010

urbst875.doc