

NATURAL RESOURCES CONSERVATION SERVICE
ILLINOIS URBAN MANUAL
PRACTICE STANDARD

DUST CONTROL

(acre)
CODE 825



(Source: NC Erosion and Sediment Control Planning and Design Manual)

DEFINITION

Control of dust blowing and movement on construction sites and roads.

PURPOSE

The purposes of this practice are to prevent blowing and movement of dust from exposed soil surfaces, to reduce on and off-site damage, to minimize health hazards, and to improve traffic safety.

CONDITIONS WHERE PRACTICE APPLIES

This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

CRITERIA

The following are temporary and permanent methods for dust control.

Temporary Methods:

1. Mulches - See practice standard MULCHING 875. Chemical or wood cellulose fiber binders may be used instead of asphalt to bind mulch material.
2. Vegetative Cover - See practice standard TEMPORARY SEEDING 965.
3. Spray-on Adhesives - These may be used on mineral soils. They are not effective on muck soils. Keep traffic off these areas after application.
 - a. Anionic asphalt emulsion: water dilution - 7:1, coarse spray, 1,200 gal/acre.
 - b. Latex emulsion: water dilution - 12.5:1, fine spray, 235 gal/acre.
 - c. Resin-in-water emulsion: water dilution - 4:1, fine spray, 300 gal/acre.
4. Tillage - Roughen the surface and bring clods to the surface. This is an emergency measure that should be used before soil blowing starts. Begin tillage on windward side of site. Chisel plows with shanks spaced about 12"-18" apart and

spring-toothed harrows are examples of equipment that may produce the desired effect.

5. Irrigation - This is commonly used and affords fast protection for haul roads and other heavy traffic roads. The site is sprinkled with water until the surface is moist. Repeat as needed.
6. Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and blowing soil. Barriers placed at right angles to prevailing wind currents at intervals of about 10 times their height are effective in controlling soil blowing.
7. Calcium Chloride - Apply at a rate that will keep the surface moist. This chemical may be applied by a mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so much as to cause water pollution or plant damage. Application rates should be strictly in accordance with the manufacturer's specified rates. Periodic re-treatment may be needed.
8. Stone - Stone can be used to stabilize roads or other areas during construction using crushed stone or coarse gravel. See practice standard STABILIZED CONSTRUCTION ENTRANCE 930.
9. Street Cleaning - Paved areas that have soil on them from construction sites should be cleaned daily, or as needed, utilizing a street sweeper or bucket-type endloader or scraper.

Permanent Method:

Permanent Vegetation - See the practice standard PERMANENT VEGETATION 880 or SODDING 925.

Existing trees or large shrubs may afford valuable protection if left in place.

CONSIDERATIONS

The easiest way to control dust is to avoid exposed soil surfaces. This is not possible on most construction sites, but the area exposed can usually be reduced by careful planning of controlled traffic patterns and by phasing of clearing and grading operations. Consider use of undisturbed vegetative buffers (min. 50 ft.) between graded areas and protected areas.

PLANS AND SPECIFICATIONS

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

1. The area to be treated.
2. The methods that are acceptable to use.

Specifications should indicate when dust control is needed and the method of control to be used. Appropriate industry standards should be used.

All plans shall include the installation, inspection, and maintenance schedules with the responsible party identified.

OPERATION AND MAINTENANCE

When temporary dust control measures are used, repetitive treatment should be applied as needed to accomplish control.

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