

Dust Control

Plan Symbol



Description

Wind erosion occurs when the surface soil is loose and dry, vegetation is sparse or absent, the wind is sufficiently strong, and when construction traffic disturbs the soil. Wind erodes soils and transports the sediment off site in the form of fugitive dust, where it may be washed into receiving water bodies by the next rainfall event. Fugitive dust is a nuisance for neighbors. It settles on automobiles, structures and windows and finds its way into homes. It also makes breathing difficult for those with respiratory problems and becomes a safety problem when it blinds motorists, equipment operators, and laborers.

When and Where to Use It

Utilize dust control methods whenever there are offsite impacts, especially during periods of drought. Implemented dust control until final stabilization is reached.

Dust Control Design Criteria

There are many methods to control dust on construction sites. These methods include but are not limited to :

- **Phasing the Project.** Phasing is done to decrease the area of disturbed soil that is exposed to erosion. The smaller the amount of soil that is exposed at one time, the smaller the potential for dust generation. Phasing a project and utilizing temporary stabilization practices can significantly reduce dust emissions.
- **Vegetative Cover.** A vegetative cover helps reduce wind erosion. Vegetative Cover is for disturbed areas not subject to traffic. Vegetation provides the most practical method of dust control.
- **Mulch.** Mulching offers a temporary way to stabilize the soil and prevent erosion. Mulching offers a fast, effective means of controlling dust.
- **Sprinkling Water.** Sprinkling helps control the suspension of dust particles and promotes dust to settle out of the air. Sprinkling water is effective for dust control on haul roads and other traffic routes.
- **Spray-on-Adhesive.** Adhesives prevent soil from blowing away. Latex emulsions, or resin in water is sprayed onto mineral soils to prevent their blowing away and reduce dust caused by traffic.
- **Calcium Chloride.** Calcium chloride keeps the soil surface moist and prevents erosion. Calcium chloride is applied by mechanical spreaders as loose, dry granules or flakes at a rate that keeps the surface moist but not so high as to cause water pollution or plant damage.
- **Barriers.** Barriers are fences that prevent erosion by obstructing the wind near the ground stopping the soil from blowing offsite. Broad, wind, or sediment fences can control air currents and blowing soil. Barriers are not a substitute for permanent stabilization. Perennial grass and strands of existing trees may also serve as wind barriers.

Inspection and Maintenance

- Add additional dust control or re-spray area as necessary to keep dust to a minimum.
- Spray exposed soil areas only with approved dust control agents as indicated by the SCDHEC Standard Specifications.



Dust Control by Sprinkling Water



Dust Control by Sprinkling Water

Preventive Measures and Troubleshooting Guide

Field Condition	Common Solutions
Excessive dust leaves the site.	Increase frequency of dust control application. Consider using a palliative or binder on inactive areas.
Vehicles kick up dust.	Water more frequently. Limit vehicle speeds. Stabilize the roadway.
Watering for dust control causes erosion.	Reduce water pressure on the water truck. Check watering equipment to ensure that it has a positive shutoff. Water less frequently.
Sprayed areas are ineffective at limiting dust.	Re-spray areas and ensure that the application rate is proper. Try another product or method if current dust control is not effective.