



Dust Control Treatments for Roads and Surfaces

What are dust control treatments?

Airborne dust from roads and open surfaces, called *fugitive dust*, is a form of air pollution. Minnesota regulations require any person operating any commercial facility to take appropriate measures to control fugitive dust. Dust control also protects employee health and reduces employee health care costs, reduces equipment maintenance and depreciation costs, and improves community relations. Dust control measures may include facility planning and layout, vehicle traffic patterns, and *dust control treatments* – liquids applied to roads and open surfaces to control dust.

While allowing fugitive dust releases will cause air pollution problems for a commercial facility, improper use of dust control treatments may cause water pollution problems for the facility. This fact sheet will provide guidance to help you choose appropriate dust control treatments for your site.

Toxicity reduction

An effective way to reduce the responsibilities and costs associated with dust control treatments is to reduce the toxicity of the treatments you use, how much of a treatment you use, and how often you reapply. The Minnesota Technical Assistance Program (MnTAP) has staff and resources to help you reduce all of these factors by examining your facility and substituting products when possible. See *More information* on page two for MnTAP's contact information.

Using dust control treatments

Even if used properly, many dust control treatments can cause surface or ground water pollution for which you may be liable. You are strongly encouraged to consider and use dust control measures other than treatments as much as possible. These measures may cost less and be more effective than dust control treatments over the life of your facility. Recommended measures include the following or combinations of the following:

1. Reduced vehicle speed
2. Wind fences, barriers, and planted tree lines
3. Ground vegetation and plantings
4. Permanent paving or temporary non-erodible ground covering, such as mats or planking
5. Vehicle traffic redirection

If you still decide to use a liquid dust control treatment, follow these general guidelines:

- Know all the ingredients and health effects of any dust control treatment before you use it.
- Understand the reapplication frequency and other use requirements of any treatment.
- Apply only the minimum amount of treatment specified. Ensure it does not pool or run off.
- Do not apply any treatment near surface waters, including bridges, culverts and wetlands.
- Do not apply any treatment to hard surfaces, including pavement or frozen ground.
- Do not apply any dust control treatments other than water near wells or drainage tile inlets.
- Do not apply any dust control treatments other than water when rain is falling or imminent.

Drawbacks and advantages of common dust control treatments are presented in Table 1.

Table 1. Drawbacks and advantages of common dust control treatments

Treatment	Drawbacks	Advantages
Water	May cause sediment runoff.	Non-toxic
Vegetable oils & starches	Water impacts may include oxygen depletion.	Less toxic
Acrylic polymers	Water impacts may include oxygen depletion.	
Petroleum oils & bitumens (not <i>used oil</i>)	May significantly increase stormwater runoff. Water impacts may include oxygen depletion, ammonia, dissolved salts (especially sulfate), and heavy metals.	
Lignosulfates & wood pulping liquors	Effectiveness reduced after heavy rain. May harm vegetation. Water impacts may include oxygen depletion, acidity/corrosivity, ammonia, phenols, chloride, sodium, sulfate, and heavy metals (especially zinc). May cause foaming and discoloration in surface water.	
Salts & brines	Effectiveness diminishes over time. May harm vegetation and wildlife. Water impacts may include oxygen depletion, petroleum hydrocarbons (from oil field sources), cyanides, dissolved salts, and heavy metals.	Less likely to increase stormwater runoff
Used oil	Prohibited	

Remember: Even if used properly, many dust control treatments can cause surface or ground water pollution for which you may be liable.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapters 7011, 7045, 7050, and 7060. Visit the Office of the Revisor of Statutes at <https://www.revisor.mn.gov/pubs> to review statutes and rules.

For general guidance on pollution prevention and road maintenance, visit the U.S. Environmental Protection Agency (EPA) at <http://www.epa.gov> to view the Rural Roads webpage.

Your metropolitan county and the MPCA have staff available to answer your dust control questions. For more information, contact your metropolitan county environmental office or your nearest MPCA regional staff. For information about reducing product toxicity, contact MnTAP.

Metro County Environmental Offices

Anoka..... 763-422-7030
 Carver 952-361-1800
 Dakota..... 952-891-7557
 Hennepin 612-348-3777
 Ramsey 651-266-2400
 Scott..... 952-496-8475
 Washington..... 651-430-6655
 Websites [http://www.co.\[county\].mn.us](http://www.co.[county].mn.us)

Minnesota Technical Assistance Program

Toll free (outstate only) 1-800-247-0015
 Metro 612-624-1300
 Website..... <http://www.mntap.umn.edu/>

Minnesota Pollution Control Agency

Toll free (all offices)..... 1-800-657-3864
 Brainerd.....218-828-2492
 Detroit Lakes218-847-1519
 Duluth218-723-4660
 Mankato507-389-5977
 Marshall507-537-7146
 Rochester507-285-7343
 St. Paul651-296-6300
 Willmar320-214-3786
 Website<http://www.pca.state.mn.us/>