

Sources and Mitigation of Agricultural Fugitive Dust

April 21, 2021

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NRCS Overview

- NRCS is the conservation agency in USDA
 - Not a regulatory agency
 - Not a research agency – we rely on our friends at ARS, NIFA, FS, and universities
- NRCS works with agricultural producers to accomplish natural resource objectives via voluntary conservation efforts
 - Provide technical and financial assistance
 - Use our conservation planning process to address *resource concerns* holistically
 - SWAPAE + H

NRCS AQ Resource Concerns

- Emissions of Particulate Matter (PM) and PM Precursors
- Emissions of Ozone Precursors
- Objectionable Odors
- Emissions of Greenhouse Gases
- Emissions of Airborne Reactive Nitrogen

Sources of Agricultural Fugitive Dust

- Windblown dust
- Unpaved roads
- Tillage/harvesting/field operations
- Animal activity in open lots/pens
- Animal housing



Agricultural Dust Mitigation

- Windblown dust
 - Maintain ground cover
 - Conservation/reduced tillage
 - Windbreaks/vegetative barriers



Agricultural Dust Mitigation

- Unpaved roads
 - Apply dust suppressants
 - Minimize vehicle traffic/speeds



Agricultural Dust Mitigation

- Tillage/harvesting/field operations
 - Conservation/reduced tillage
 - Timing of operations
 - Windbreaks/vegetative barriers
 - Alternative harvesting techniques

Agricultural Dust Mitigation

- Animal activity in open lot pens
 - Pen surface management
 - Windbreaks/vegetative barriers

- Animal housing
 - Filtration and scrubbing systems
 - Windbreaks/vegetative barriers



Resources

- USDA-NRCS Conservation Practice Standards
 - https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/nra/nri/?&cid=nrcs143_026849
- USDA-NRCS Air Quality page (with links to the USDA/EPA Conservation Measures Guides)
 - <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/air/quality/>
- USDA Dust Mitigation Handbook
 - <https://dust.swclimatehub.info/>

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