

Fugitive Dust



Welcome

City of Albuquerque
Air Quality Division
Enforcement Section
Environmental Health Department

Presentation Content:

- Fugitive Dust Control Workshop
- Fugitive Dust Control Regulation
- Amended Regulation
- Fugitive Dust
- Fugitive Dust Control Permit Application
- Enforcement / Compliance issues
- Fugitive Dust Control Strategies
- No Dust Control Measures
- Other areas of concern

Workshop

- 20.11.20.28 NMAC The department shall provide or approve public education regarding reducing fugitive dust, and the department shall implement a program to provide training at no cost to individuals who are or may in the future be required to comply with provisions of this part. Approximately twice per year, the department shall provide or approve training workshops on fugitive dust and its control to persons who conduct or participate in projects involving active operations or any other interested person.

Fugitive Dust Regulation

- 20.11.20 NMAC – General Provisions: Each person shall use reasonably available control measures or any other effective control measure during active operations or on inactive disturbed surface areas, as necessary to prevent the release of fugitive dust, whether or not the person is required to obtain a fugitive dust control permit. It shall be a violation to allow fugitive dust, track out, or transported material from any active operation, open storage pile, paved or unpaved roadway disturbed surface area, or inactive disturbed surface area to cross or be carried beyond the property line or any other area under control of the person generating or allowing the fugitive dust if the fugitive dust may:

Fugitive Dust Regulation

- (1) With reasonable probability injure human health or animal or plant life; or
- (2) Unreasonably interfere with the public welfare, visibility or the reasonable use of property: or
- (3) Be visible for a total of 15 minutes or more during any consecutive one hour observation period using the fugitive dust detection method 20.11.20.26 NMAC (Visual Determination of Fugitive Dust Emissions).

AMENDED REGULATION

- Amended Regulation 20.11.20 NMAC Fugitive Dust Control has been approved by the Albuquerque-Bernalillo County Air Quality Control Board and became effective March 17, 2008.

Major Changes

- Changing the eight, three-year exemptions to five “conditionally exempt sources” which would only be subject to 20.11.20 NMAC if the Department determines the fugitive dust emitted may adversely and significantly affect human health within Bernalillo county. Unpaved roads serving six or fewer residential dwellings and unpaved roads less than ¼ mile in length that are not short cuts – would no longer be exempt.
- All lots smaller than ¾ acre used for any purpose would be conditionally exempt
- New conditions available for claiming a high wind affirmative defense
- 20.11.20.23 Mandatory perimeter fencing specifications and entry/exit apron device as control measures for all fugitive dust control construction permits
- Stockpiles shall be no higher than 15 feet above the existing natural or man-made grade that abuts the stockpile, unless otherwise approved in advance and in writing by the department.

The following five sources of fugitive dust in Bernalillo County are conditionally exempt:

- Areas zoned for agriculture, and used for growing a crop
- Bicycle trails, hiking paths, pedestrian paths, and horse trails or similar paths used exclusively for purposes other than travel by motor vehicles
- Unpaved roadways on privately-owned easements serving residential dwellings.
- Lots smaller than three-quarters of an acre used for any purpose; and
- Unpaved roadways within properties used for ranching, or properties owned or controlled by the US Dept. of Energy or Dept. of Defense, or United States Department of Agriculture Forest Service lands or United States Department of Interior Park Service lands if the public does not have motor vehicle access to the roadways.

Exempt: 20.11.20 NMAC does not apply to sources within Bernalillo County that are:

- Located on Indian lands over which the Albuquerque-Bernalillo air quality control board lacks jurisdiction
- Hard rock mining pits and operations contained within the mining pit and permitted pursuant to the state of New Mexico Mining Act.
- Emergency maintenance operations that are intended to address an imminent threat to property or person; however, dust control measures must be employed and activities must be filed with the Department no later than 10 days after the incident.
- Stationary source operations that have an Authority to Construct Permit or Operating Permit , but only if the source of fugitive dust is addressed and controlled through their permit conditions. However, a fugitive dust control permit is required for new construction or site modification at a stationary source site.

Fugitive Dust

- Fugitive dust is one of the main components of the “Brown Cloud” of air pollution that continues to hover over the Rio Grande Valley.
- High winds = High Particulate Matter (PM10)
- Check your E-Mail daily by late morning and again before the end of the day to check for High Wind Alert Notifications
- High Wind Event – Announced by the Department- Wind speeds of approximately 30 miles per hour or greater that, when accompanied by dry soil conditions, that is likely to result in widespread reduced visibility due to blowing fugitive dust.
- Active operations must cease if there is a high wind event, except dust control measures.

Fugitive Dust

- Any solid particulate matter entrained in the ambient air which is caused by anthropogenic or natural activities which is emitted into the air without first passing through a stack or duct...
- Dust may irritate healthy people's eyes, nose, throat, and lungs, and might cause more serious problems in individuals with asthma or other respiratory diseases or individuals with cardio vascular disease, the elderly, children and smokers.
 - Effects are immediate and long term

Fugitive Dust

- PM10 – Particles less than 10 microns in diameter, that include both fine and coarse particles.
- PM10 poses the greatest health concern because it can pass through the nose and throat and get into the lungs. Can increase asthma attacks, reduce lung function, aggravate bronchitis and cause premature death.

Effects are immediate and long term

PM10 Takes Several Forms and Comes From Many Sources

MANMADE (ANTHROPOGENIC) – Human caused changes in the natural or built condition of the environment.

- Disturbed Soil
- Wood Burning
- Automobiles
- Industrial Sources

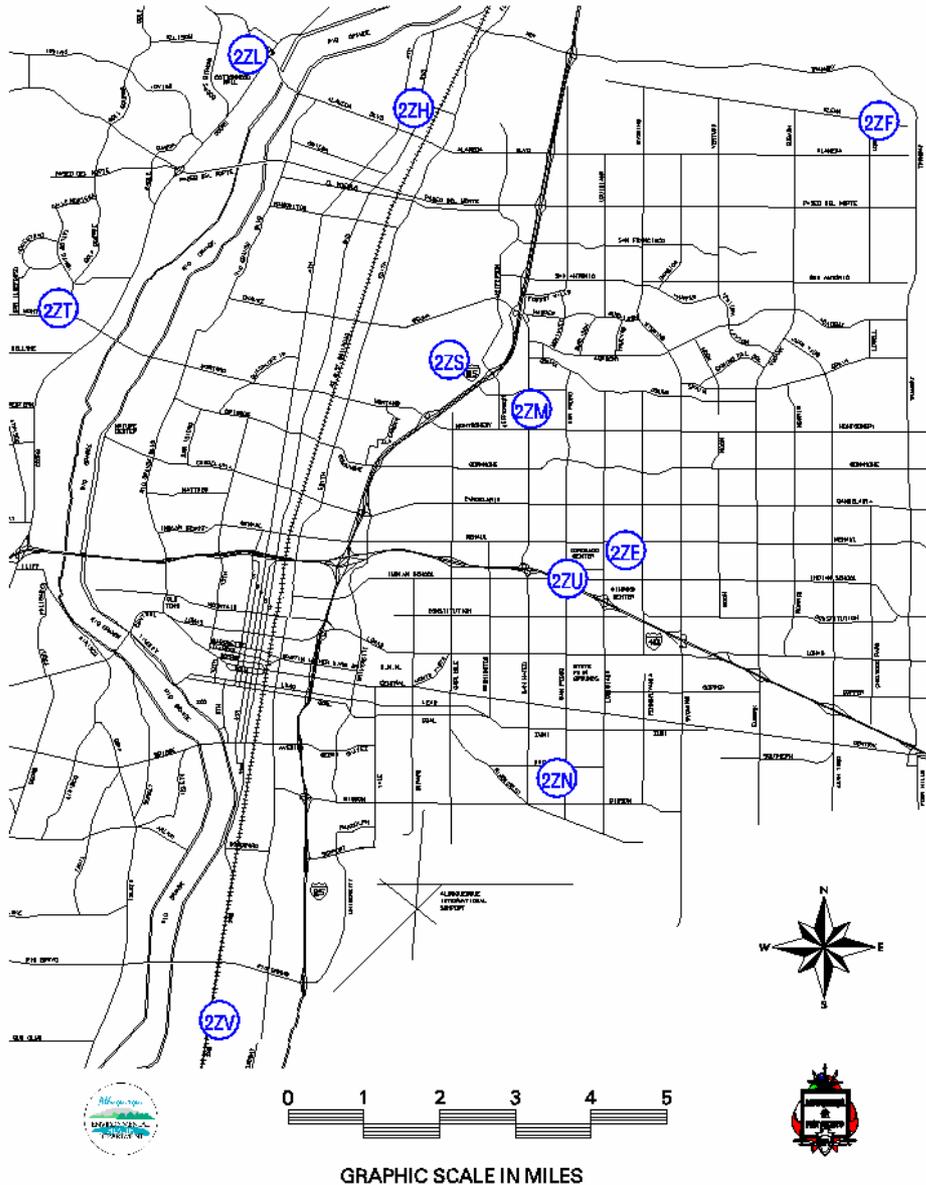
NATURAL

- Wind Action
- Vacant lots
- Forest Fires
- Volcanoes

Fugitive Dust

- City of Albuquerque currently has a total of 10 monitoring stations and 1 portable station.
- Each station has the capability of measuring for Particulate Matter PM-2.5, PM-10, TSP (Total Suspended Particulate), CO (Carbon Monoxide), NOX (Nitrogen Oxide), and O₃ (Ozone)
- Meteorology information is also gathered from each station.

Albuquerque/Bernalillo County 2002 Air Monitoring Network



Monitoring Stations	Address
Uptown Zuni Park	2421 Mesillia NE
North Valley	9818 Second Street N.W.
Corrales	11055 Coors N.W
Del Norte	4700 San Mateo NE
SE Heights	6000 Anderson SE
Jefferson Corridor	3700 Singer NE
Taylor Ranch	5100 Montano NW
Uptown San Pedro	AMAFCA Diversion Channel (Indian School & San Pedro)
South Valley	201 Prosperity SE

Fugitive Permit Dust Application

- $\frac{3}{4}$ acre to no more than 25 acre sites - must be submitted with fees no fewer than 10 business days prior to start of active operations
- For projects greater than 25 acres - permit and fees must be submitted 20 business days prior to start of active operations.
- All permits are issued for 1 year following the approval date or the anticipated completion date - whichever is longer –
and may be issued for up to 5 years
- Project signs are issued with each permit and must be posted at all job sites

Properly Posted Project Sign for < 10 acres 22" X 28"



Properly Posted Project Sign for 10 acres or greater 4' X 4'



Enforcement / Compliance Issues

The application filing & review fee, and the inspection fee are collected to support the activities with the fugitive dust program.

- Pre-construction site inspection & photo-documentation conditions prior to construction
- Application review, processing & issuance
- Surveillance
- Complaints

Enforcement / Compliance Issues

Failure to maintain proper reasonable available control measures to control dust may include:

- Verbal Warning
- Post Inspection Notification (PIN)
- Notice of Violation (NOV) (Financial Penalties Assessed)
- Stop work order

Fugitive Dust Control Strategies

First – think air pollution prevention!

- Watering
- Silt fencing
- Gravel entrance / exits
- Soil Stabilizers
- Street Sweepers / Track-out
- Innovative ideas

WATERING

- Water is very effective, short-term dust control measure
- Water is also expensive, scarce resource
- Plan your site watering carefully to make the most effective use of the water
- Water disturbed areas before it gets windy
- Water areas at the end of the day when high winds are expected at night or early morning
- Water wisely !

Disturbed Area

- Minimize the surface area disturbed
- The less ground you disturb, the less dust you will have as you work, and the less clean up when your work is done.
- Limit work on windy days. Put your efforts into extra dust suppression measures as needed.

Site Watering – Road Work



Site Watering - Trenching



Silt Fencing

Coors & St. Joseph's



Coors & St. Joseph's



Coors & St. Joseph's



McMahon & Rockcliff



Irving & Ventana





Gravel Entrance / Exits

Gravel mat w/grizzly bars



No Gravel Pit



Result Track-Out



Soil Stabilizers

Irving & Eagle Ranch



Irving & Eagle Ranch



Paseo Del Norte & Universe



Street Sweeper

- Street sweeping services are performed for three primary purposes:
- To reduce airborne dust and particulate matter (PM-10) generated by heavy traffic, track-out on dirt roads and parking lots, and construction related activities
- To clear dirt and debris which may be carried along curb and gutter lines into the City's Storm Water System
- Aesthetics

Street sweepers





Improper Street Sweeping





Water Reservoir



No Dust Control Measures

- Safety Hazard
- High Levels of PM10
- Property Damage
- Track out / Washout
- Quality of Life

Safety Hazard

Universe south of PDN



I-40 at 98th



July 17, 2007 Dust storm in Phoenix Arizona



High Level of PM10

Visibility



Property Damage







Washout



Washout



Other areas of concern:

- Programmatic Permits
- Short-cuts

Programmatic Permits

- 20.11.20.13(A) – Programmatic permits are required for single or multiple facility locations to address real property totaling three-quarters of an acre or more that is subject to routine maintenance, routine surface disturbance activities, or routine ongoing active operations.
- Examples –Automotive Recycling yards, salvage yards, towing services, and construction storage yards.

LOW IMPACT



MODERATE IMPACT



HIGH IMPACT



Short-cuts

- 20.11.20.19(A) - Privately or publicly owned unpaved short-cuts of any length are prohibited.
- This includes new construction and existing short-cuts!
- Roadway used by motor vehicle drivers to save time by avoiding use of a dedicated and authorized roadway.
- We are currently enforcing short-cuts as we find them and locate the owner.

South end of Rainbow



South end of Rainbow



West end of McMahan



West end of McMahan



QUESTIONS