

ARTICLE 1. WEST PINAL PM10 MODERATE NONATTAINMENT AREA FUGITIVE DUST

4-1-010. General Applicability

1. The purpose of this Article is to control fugitive dust from open areas /vacant lots, unpaved roads, unpaved lots and paved public roadways by requiring measures to prevent, reduce or mitigate fugitive dust emissions.

2. Effective Date

The rules in this Article will become effective on January 1, 2016.

3. Geographic Scope

The rules in this Article shall be effective throughout the West Pinal County PM₁₀ Moderate Nonattainment area as defined in 40 CFR Part 81.303.

4-1-015. Exemptions

1. In the case of legitimate vehicle test and development facilities and operations conducted by or for an equipment manufacturer, where dust is required to test and validate the design integrity, product quality and/or commercial acceptance, those specific activities shall be exempt from the applicable standards and requirements in this Article.
2. The standards and requirements of this Article shall not apply to emergency response activities that may disturb the soil conducted by any utility or government agency in order to prevent public injury or to restore critical utilities to functional status. For purposes of this subsection, an emergency response must address a situation arising from a sudden and unforeseeable event beyond the control of the owner and/or operator, including acts of God. Activities by an owner and/or operator to address a disturbance resulting from improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error shall not qualify as an emergency response.
3. The standards and requirements of this Article shall not apply to normal farm cultural practices according to A.R.S. §49-457 and A.R.S. §49-504.4 which are subject to Arizona Department of Environmental Quality (ADEQ) rules R18-2-610, R18-2-610.01, R18-2-611 and R18-2-611.01.
4. The standards and requirements of this Article shall not apply to dust generating operations subject to the standards and/or requirements described in Chapter 4, Article 3.
5. The standards and requirements of this Article shall not apply to the establishment of initial landscapes without the use of mechanized equipment, conducting landscape maintenance without the use of mechanized equipment, and playing on or maintaining a field used for non-motorized sports. However, establishing initial landscapes without the use of mechanized equipment and conducting landscape maintenance without the use of mechanized equipment shall not include grading, or trenching, performed to establish initial landscapes or to redesign existing landscapes.

4-1-020. Definitions

For the purpose of this Article, the following definitions shall apply:

1. ADT (Average Daily Trips) – As used in this Article, means the average number of vehicles that cross a given point surface during a specific 24-hour period as determined by the most recent Institute of Transportation Engineers trip generation manual, tube counts, or observations.
2. CONTROL MEASURES- as used in this Article means, a preemptive or concurrent technique used to minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust in order to comply with applicable standards.

3. **DISTURBED SURFACE AREA** – As used in this Article, means any portion of the earth’s surface that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural condition.
4. **DUST SUPPRESSANT** – As used in this Article, means water, hygroscopic material, solution of water and chemical surfactant foam, non-toxic chemical stabilizer or any other dust palliative, which is not prohibited by the U. S. Environmental Protection Agency (EPA) or the Arizona Department of Environmental Quality (ADEQ), or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.
5. **EMERGENCY** - as used in this Article means a situation arising from sudden and reasonably unforeseeable events beyond the control of the owner and/or operator, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the associated activities to exceed a limitation in this rule, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include any noncompliance due to improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
6. **FUGITIVE DUST** – As used in this Article, means the regulated particulate matter, which is not collected by a capture system, which is entrained in the ambient air, and which is caused from human and/or natural activities, such as but not limited to, movement of soils, vehicles, equipment, blasting, and wind. For the purpose of this rule, fugitive dust does not include particulate matter emitted directly from the exhaust of motor vehicles and other internal combustion engines, from portable brazing, soldering, or welding equipment, and from piledrivers.
7. **MOTOR VEHICLE** - As used in this Article, means a self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform motor vehicle Act, including any non-motorized attachments, such as but not limited to, trailers and other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.
8. **OPEN AREAS/VACANT LOTS** – As used in this Article, means any of the following described in Subsections a through c below. For the purposes of this rule, vacant portions of residential or commercial lots and contiguous parcels that are immediately adjacent to and owned and/or operated by the same individual or entity are considered one open area.
 - a. An unsubdivided or undeveloped land whether or not it is adjoining a developed or a partially developed residential, industrial, institutional, governmental, or commercial area.
 - b. A subdivided residential, industrial, institutional, governmental, or commercial lot that contains no approved or permitted buildings or structures of a temporary or permanent nature.
 - c. A partially developed residential, industrial, institutional, governmental, or commercial lot and contiguous lots under common ownership.
9. **OWNER AND/OR OPERATOR** – As used in this Article, means any person including, but not limited to, the property owner, lessee or responsible official.
10. **PAVE** – As used in this Article, to apply and maintain asphalt, concrete, or other similar material to a roadway surface, such as asphaltic concrete, concrete pavement, chip seal, or rubberized asphalt.
11. **PAVED PUBLIC ROADWAY** – As used in this Article, means a publicly owned paved roadway, owned by federal, state, county, municipal, or other government or quasi-governmental agencies as evidenced by a formal acceptance by the state or a political subdivision of the state of either:
 - a. An on-going maintenance obligation for the roadway; or
 - b. A title or easement for the roadway.
12. **PINAL COUNTY DUST CONTROL FORECAST** as used in this Article, means a forecast, which shall identify a low, moderate or high risk of dust generation for the next five consecutive days and shall be issued by noon on each day the forecast is generated. When developing these forecasts, the Department of Environmental Quality shall consider all of the following:
 - a. Projected meteorological conditions, including:
 - i) Wind speed and direction,
 - ii) Stagnation,
 - iii) Recent precipitation, and
 - iv) Potential for precipitation;
 - b. Existing concentrations of air pollution at the time of the forecast; and
 - c. Historic air pollution concentrations that have been observed during meteorological conditions similar to those that are predicted to occur in the forecast.

13. STABILIZED – As used in this Article, means any previously disturbed surface area which, through the application of control measures, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust.
14. TRACKOUT – As used in this Article, any and all bulk materials that adhere to and agglomerate on the exterior surface of motor vehicles, haul trucks, and/or equipment (including tires) and that have fallen onto a paved roadway.
15. UNPAVED LOT – as used in this Article, is any area that is not paved and that is used for parking, maneuvering, material handling, or storing motor vehicles and equipment. An unpaved lot includes, but is not limited to, automobile impound yards, wrecking yards, automobile dismantling yards, salvage yards, material handling yards, and storage yards. For the purpose of this rule, maneuvering shall not include military maneuvers or exercises conducted on federal facilities.
16. UNPAVED ROAD - as used in this Article, means any roads, equipment paths, or travel ways that are not paved. Unpaved roads are owned only by federal, state, county, municipal, or other governmental or quasi-governmental agencies. For the purposes of this Article, an unpaved road is not an agricultural road, horse trail, hiking path, bicycle path, or other similar path used exclusively for purposes other than travel by motor vehicles.

4-1-030. Standards

1. GENERAL REQUIREMENTS

- A. The owner and/or operator of open areas/vacant lots, unpaved lots, unpaved roads and paved public roadways shall be subject to the standards and/or requirements described in this rule. Failure to comply with any such standards and/or requirements is deemed a violation of this rule.
- B. The owner and/or operator shall implement applicable control measures.
- C. Control measures shall be implemented to meet the visible emissions requirements, stabilization requirements and compliance determinations for each applicable category.
- D. Failure to implement control measures as required by this rule, as applicable and/or failure to maintain stabilization in order to prevent wind erosion as measured by the requirements of this rule shall be deemed a violation of this rule.

2. OPEN AREAS/VACANT LOTS

- A. Visible Emissions and Stabilization Requirements: The owner and/or operator of open areas/vacant lots shall not cause, suffer, allow, or permit fugitive dust emissions which result in opacity of the dust to exceed twenty percent (20%) as measured using an opacity method, as determined by the applicable test method in §4-9-340 or an equivalent test method approved in writing by the Control Officer and the EPA Administrator.
- B. Upon evidence of trespass in open areas/vacant lots, an owner and/or operator shall install and maintain one of the following:
 - i. No trespassing signs
 - ii. Physical barriers such as curbs, fences, gates, posts, shrubs, trees, or other effective control measures to effectively prevent access to the open areas/vacant lots.
- C. Owners and/or operators of open areas/vacant lots 1.0 acre (43,560 square feet) or larger and have a cumulative of 0.5 acre (21,780 square feet) or more disturbed surface area shall implement at least one control measure described below on the disturbed surface area in order to stabilize:
 - i. Apply and maintain water or dust suppressants; or
 - ii. Establish vegetation; or
 - iii. Install and maintain pavement; or
 - iv. Apply and maintain gravel uniformly; or
 - v. Apply and maintain chemical/organic stabilizers/suppressants; or

vi. Apply and maintain an alternative control measure approved in writing by the Control Officer and the EPA Administrator.

D. For open areas/vacant lots 1.0 acre (43,560 square feet) or larger and have a cumulative of 0.5 acre (21,780 square feet) or more disturbed surface area, within 30 calendar days following the initial discovery of the disturbed surface area on the open areas/vacant lots, the owner and/or operator shall sign up to receive the Pinal County dust control forecast. The owner and/or operator shall ensure the open areas/vacant lots is stabilized the day leading up to and the day that is forecast to be high risk for dust emissions, as noticed by the Pinal County dust control forecast.

E. No person shall remove vegetation from any open areas/vacant lots by blading, disking, plowing under or any other means without implementing all of the following control measures to prevent or minimize fugitive dust.

- i. Apply a dust suppressant(s) to the total surface area subject to the disturbance immediately prior to or during the weed abatement.
- ii. Prevent or eliminate material trackout onto paved surfaces and access points adjoining paved surfaces through one of the control measures in 4-1-030.5.A.i.
- iii. Apply a dust suppressant(s), gravel, compaction or an alternative control measure immediately following weed abatement to the entire disturbed surface area such that the surface is stabilized.

F. Compliance with the stabilization requirement in paragraphs C, D and E shall be determined by one of the following:

- i. Observation of a visible crust as determined by the drop ball test in Article 9 (§4-9-320.B.1); or
- ii. A Threshold Friction Velocity (TFV), corrected for non-erodible elements, of 100 cm/second or higher as determined by the test method in Article 9 (§4-9-320.B.2); or
- iii. Flat vegetation cover equal to at least 50 percent as determined by the test method in Article 9 (§4-9-320.B.3); or
- iv. Standing vegetation cover equal to or greater than 30 percent as determined by the test method in Article 9 (§4-9-320.B.4); or
- v. Standing vegetation cover equal to or greater than 10 percent as determined by the test method in Article 9 (§4-9-320.B.4) where threshold friction velocity, corrected for non-erodible elements, is equal to or greater than 43 cm/second.

3. UNPAVED LOTS

A. The owner and/or operator of an unpaved lot greater than 5,000 square feet in size shall be subject to the requirements described in 4-1-030.3.A.i and shall comply with at least one of the control measures described in 4-1-030.3.A.ii:

i. Visible Emissions Requirements and Stabilization Requirements: The owner and/or operator of an unpaved lot shall not cause or allow visible fugitive dust emissions to exceed 20% opacity as measured using an opacity method, as determined by the applicable test method in §4-9-340 or an equivalent test method approved in writing by the Control Officer and the EPA Administrator, and shall not allow silt loading equal to or greater than 0.33 oz/ft² as determined by the applicable test method in §4-9-320.A.1. However, if silt loading is equal to or greater than 0.33 oz/ft², then the owner and/or operator shall not allow the silt content to exceed 8%;

ii. CONTROL MEASURES:

- a. Pave; or
- b. Apply dust suppressant in sufficient quantity and frequency to maintain a stabilized surface; or
- c. Apply and maintain surface gravel uniformly such that the surface is stabilized; or
- d. Apply and maintain an alternative control measure approved in writing by the Control Officer and the EPA Administrator.

B. Control measure(s) in 4-1-030.3.A.ii shall be considered effectively implemented when the unpaved lot meets the requirements of 4-1-030.3.A.i.

4. UNPAVED ROADS

A. The owner and/or operator of unpaved roads with average daily trips (ADT) greater than 150 (A traffic count shall measure motor vehicle traffic over a 48-hour period, which may consist of two non-consecutive 24-hour periods. Motor vehicle traffic shall be measured continuously during each 24-hour period.) shall be subject to the requirements described in 4-1-030.4.A.i and shall comply with one of the control measures described in 4-1-030.4.A.ii:

i. Visible Emissions Requirements and Stabilization Requirements: The owner and/or operator of unpaved roads shall not cause or allow visible fugitive dust emissions to exceed 20% opacity as measured using an opacity method, as determined by the applicable test method in §4-9-340 or an equivalent test method approved in writing by the Control Officer and the EPA Administrator and shall not allow silt loading equal to or greater than 0.33 oz/ft² as determined by the applicable test method in §4-9-320.A.1. However, if silt loading is equal to or greater than 0.33 oz/ft², then the owner and/or operator shall not allow the silt content to exceed 6%;

ii. CONTROL MEASURES:

- a. Pave; or
- b. Apply and maintain dust suppressants other than water; or
- c. Uniformly apply and maintain surface gravel

B. Control measure(s) in 4-1-030.4.A.ii shall be considered effectively implemented when:

i. One of the control measures described in 4-1-030.4.A.ii is annually implemented on 15 miles per year of unpaved roads having ADT of 150 or more.

a. When the control measure is application and maintenance of dust suppressants other than water, the application and maintenance of the dust suppressants shall only be counted towards the 15 mile threshold when:

- 1. Done on unpaved roads previously untreated, and
- 2. Application and maintenance of dust suppressants on unpaved roads previously treated continues annually until the unpaved road is paved.

ii. For year 2019 and beyond, control measures applied on unpaved roads with less than 150 ADT can be used for compliance with 4-1-030.4.B.i through use of the following equivalency conversion.

ADT Range	Mileage Equivalency (Miles of equivalent control / mileage of actual control)
0-14	0.000
14-62	0.121
62-103	0.514
103-146	0.531
146+	1.000

Example equivalency conversion calculation:

In year one, City or County “A” paves 10 miles of unpaved roads with ADT of 100.

$10 * 0.514 = 5.14$ miles of 150 ADT equivalent unpaved roads.

5. PAVED PUBLIC ROADWAY

- A. Clean up of trackout, Erosion-Caused Deposition of Bulk Materials on paved public roadway: the owner and/or operator of the property from which the trackout or erosion-caused deposition came from shall upon discovery of mud/dirt that extends 50 feet or more from the nearest unpaved surface exit onto the paved public roadway shall:
- i. Within 24 hours of discovery, remove the mud/dirt from paved public roadway with one of the following control measures. (If needed, restrict vehicles from traveling over said mud/dirt until such time as the material can be removed from the travel lanes of the paved public roadway)
 - a. Manually sweeping and picking up; or
 - b. Operating a rotary brush or broom accompanied or preceded by sufficient wetting to limit opacity to 20% or less; or
 - c. Operating a PM10 efficient street sweeper; or
 - d. Flushing with water, if curb and gutters are not present and where the use of water will not result as a source of trackout material or result in adverse impacts on storm water drainage systems or violate any National Pollutant Discharge Elimination System permit program.
 - ii. During removal of mud/dirt, do so in a manner that does not cause another source of fugitive dust.
 - iii. In the event unsafe travel conditions would result from restricting traffic pursuant to section A.i and removal of such material isn't possible within 72 hours due to a weekend or holiday condition, the provisions of section A.i can be extended upon notification to and approval by the Control Officer.
- B. The owner and/or operator of any existing paved public roadways shall take the following actions prior to, during and after work on unpaved road shoulders:
- i. Apply a dust suppressant(s) to the total surface area subject to the disturbance in sufficient quantity and frequency to maintain a stabilized surface.
 - ii. Prevent trackout by using one of the control measures listed in §4-1-030.5.A.i.

4-1-040. Recordkeeping

Any person subject to the requirements of this rule shall compile and retain records that provide evidence of control measure application (i.e. receipts and/or purchase records). Such person shall describe in the records, the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Control Officer, such person shall provide the records and supporting documentation as soon as possible but no later than 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, such person shall provide the records without delay.

4-1-045. Reporting Requirements

Each city, county, or state agency with primary responsibility for any existing paved public roadway and unpaved roads shall take the following actions:

- A. By January 30 of each year provide the district with a list of all unpaved roads under its jurisdiction, including data on length of, and ADT (if available) on, each unpaved road segment.
- B. By January 30 of each year, submit to the district a list of unpaved roads which were paved during the previous year including the total number of unpaved roads miles, ADTs (if available) and their respective segments.

4-1-050. Records Retention

Copies of the records required by §4-1-040 (Recordkeeping) and §4-1-045 (reporting) of this rule shall be retained for at least two years.

4-1-060. Violations

Failure by any person to comply with the applicable requirements of this Article shall constitute a violation subject to penalty as provided in these rules and A.R.S. Title 49, Chapter 3, Article 3, A.R.S. 49-471 et. seq.

Violation Exemptions:

- A. The opacity requirements of this rule shall not apply during:
 - i. Wind conditions that cause fugitive dust to exceed the opacity requirements if applicable control measures are implemented, applied and maintained, and all dust contributing disturbed surface area are stabilized.
 - ii. Emergency maintenance of flood control channels and water retention basins if at least 1 applicable control measure is applied, and maintained.