

## COUNTY NOTICES PURSUANT TO A.R.S. § 49-112

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### NOTICE OF PROPOSED RULEMAKING

#### MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS

#### NEW RULE 242 - EMISSION OFFSETS GENERATED BY THE VOLUNTARY PAVING OF UNPAVED ROADS

[M06-368]

#### PREAMBLE

1. 

<b><u>Rules Affected</u></b>	<b><u>Rulemaking Action</u></b>
Rule 242 - Emission Offsets Generated By The Voluntary Paving Of Unpaved Roads	New Rule
  
2. **The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**  
Authorizing statutes: Arizona Revised Statutes (A.R.S.) § 49-112 (A) and § 49-479  
Implementing statutes: Arizona Revised Statutes (A.R.S.) § 49-479
  
3. **A list of all previous notices addressing this rulemaking:**  
Notice of Rulemaking Docket Opening, October 7, 2005  
Arizona Administrative Register (A.A.R.) Volume 11, Issue 41
  
4. **The name and address of department personnel with whom persons may communicate regarding this rulemaking:**  
Name: Patricia P. Nelson or Jo Crumbaker, Air Quality Department  
Address: 1001 North Central Avenue, Suite # 595, Phoenix, AZ 85004  
Telephone Number: 602-506-6709 or 602-506-6705  
Fax Number: 602-506-6179  
E-Mail Address: pnelson@mail.maricopa.gov or jcrumbak@mail.maricopa.gov
  
5. **The time which the department will accept written comments and the time and place where oral comments may be made:**  
Oral comments may be made at the oral proceeding scheduled for October 24, 2006 at the Maricopa County Air Quality Department. All comments made at this oral proceeding will be considered formal comments and will be recorded and transcribed. All formal comments will be addressed in the notice of Final Rulemaking.  
  
Formal written comments may also be submitted for a period of 30 days, beginning on the date of this publication and ending on the day after the oral proceeding, October 25, 2006. Written comments may be mailed, e-mailed or hand delivered to the Maricopa County Air Quality Department. Written comments received during the comment period will be considered formal comments to the proposed rules and will be responded to in the Notice of Final Rulemaking.
  
6. **Explanation of the rules, including the department's reasons for initiating the rulemaking:**  
Maricopa County is proposing to adopt new Rule 242 in order to establish enforceable procedures for calculating offsets for particulate matter at 10 microns (PM<sub>10</sub>) by sources that voluntarily pave unpaved roads. The rule applies

to applicants subject to New Source Review (NSR) who need offsets for the construction of new major stationary sources or major modifications to an existing source in the Maricopa County PM<sub>10</sub> non-attainment area and voluntarily elect to generate offsets of PM<sub>10</sub> by paving unpaved roads in the Maricopa County PM<sub>10</sub> non-attainment area. The new rule defines offsets as being enforceable, surplus, quantifiable and permanent, states procedures for an offset plan, and lays out the calculation methodology for the emissions from the road before and after it is paved.

Two sources have already performed paving projects that are grandfathered in this proposed rule. Arizona Public Service's West Phoenix Power Plant and Salt River Project's Santan Generating Plant relied upon emission reductions from road paving to provide PM<sub>10</sub> offsets in their previously permitted modifications.

Rule 242 also exists to make offsets enforceable as required by the New Source Review program (NSR). Maricopa County is a non-attainment area for PM<sub>10</sub>. Sources that need to generate emission reduction offsets for PM<sub>10</sub> in Maricopa County are limited in their choices of options for these offsets. Voluntary paving of roads is one option that is available for the source to generate PM<sub>10</sub> offset credits while also improving the environment by reducing PM<sub>10</sub> emissions.

The Environmental Protection Agency (EPA) considers this program to be an Economic Incentive Program (EIP). An EIP is one that uses market-based strategies to encourage people to reduce emissions of air pollutants in the most efficient manner. Under EPA's guidance for EIPs, the County is required to periodically evaluate the program. Therefore, starting in 2008, Maricopa County proposes to evaluate this EIP program once every three years and will submit the evaluation report to EPA within 60 days of completion. The purpose of the evaluation is to retrospectively assess the performance of this program on emissions and evaluate other aspects of program performance. The evaluation report will contain the following elements for each evaluation period:

- Total number of applications received
- Total miles of roads paved
- Total number of reductions achieved ( tons/yr)
- Average distances between paved road(s) and user of credits
- Map identifying the location of the paved projects and the user of the credits.

The evaluation report may address the following, when applicable:

- Has it been difficult to make a surplus determination on any application? Why was it difficult? Should the rule be revised to provide additional clarity and if so, how?
- What changes, if any, are appropriate for the equations, emission factors, constants, or default values in Appendix A?
- Describe any situation where: the paved road was not subsequently adopted by the local authority, the paved road was not being properly maintained, or the emission reductions were subsequently deemed invalid. What happened to those emission reductions and how was the problem resolved?
- Have there been any unintentional beneficial or detrimental effects from the program?
- What changes, if any, are appropriate to streamline or improve the administrative process?
- Did the County have sufficient resources to implement this program?
- What have been the lessons learned?

**7. Demonstration of compliance with A.R.S. §49-112:**

Under A.R.S. § 49-112 (A), Maricopa County may adopt rules that are more stringent than or in addition to a provision of the state, provided that the rule is necessary to address a peculiar local condition; and if it is either necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible; or if it is required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to enforce federal statutes or regulations if the county rule is equivalent to federal statutes or regulations; and if any fee adopted under the rule will not exceed the reasonable costs of the county to issue and administer that permit program. Maricopa County is in compliance with A.R.S. §49-112(A) by proposing to adopt new Rule 242, which is in addition to a provision of the

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state in order to address a peculiar local condition, the designation of Maricopa County as a serious non-attainment area for particulate matter at 10 microns. New major sources or existing major sources making a major modification in the PM<sub>10</sub> nonattainment area are required to obtain offsets for the new emissions that they will be generating. The proposed rule clarifies how non- traditional offsets of PM<sub>10</sub> generated by the voluntary paving of unpaved roads can meet the criteria of enforceable, surplus, quantifiable and permanent required for all offsets. The proposed rule and Maricopa County's proposed commitment to provide periodic status reports to EPA complies with the requirements contained in the national Economic Incentive Program. Adoption of this rule will provide additional flexibility for major sources seeking to expand in Maricopa County.

8. **A reference to any study relevant to the rule that the department reviewed and either proposes to rely on in its evaluation of or justification for the rule or proposes not to rely on in its evaluation or justification for the rule; where the public may obtain or review the study, all data underlying each study, any analysis of the study, and other supporting material:**

The public may obtain the following documents at Maricopa County Air Quality Department, Planning and Analysis Division, 1001 North Central Ave, Suite 595, Phoenix, Arizona 85001:

*The Cost- Effectiveness of Selected PM<sub>10</sub> Control Measures* prepared for Maricopa County Department of Transportation by Sierra Research, Inc., June 28, 2006.

*The Analysis of the Fine Fraction of Particulate Matter in Fugitive Dust* prepared by Western Regional Air Partnership, October 12, 2005.

*Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors* prepared by Midwest Research Institute, February 1, 2006.

*Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1, Appendix C.1* by the Environmental Protection Agency, 1985.

*Improving Air Quality with Economic Incentive Programs*, EPA-452/R-01-001, January, 2001.

9. **Summary of the economic, small business and consumer impact:**

The purpose of this emissions offsets rule is to make the voluntary road paving actions, undertaken to provide PM<sub>10</sub> emission offsets, federally enforceable. No **direct** regulatory cost can be imputed to the offset donor source because the source is not **required** to participate. The donor source may incur costs due to negotiations with the utilizing source and also may incur costs due to the future maintenance of the roads. Arizona State Statute, A.R.S 28-6705 requires the responsible local government to accept roads into their transportation network that are constructed to standard. Once the roads are accepted, the local government is then responsible for future operation and maintenance costs.. Historical costs provided by Maricopa County Department of Transportation (MCDOT) reflect a cost of \$2,000 to 2,500 per year for grading a dirt road as long as there is no repair needed and \$7,000 per year annualized for paved roads resulting from resealing every 7-10 years. Local governments have agreed and may agree in the future to participate in this program because the source utilizing the offsets pays to pave the roads.

Sources utilizing offsets will incur the usual fees for obtaining the permit or permit revision that will recognize the offsets. For sources permitted by the county, these fees are contained in Rule 280. The major sources subject to New Source Review (NSR )who need offsets for the construction of new major stationary sources or major modifications to an existing source in the Maricopa County PM<sub>10</sub> non- attainment area are required to obtain offsets whether from this program or from another stationary source. This program adds flexibility as to where these sources can obtain the

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offsets. As a result, this program does not add any additional direct costs. The biggest cost that the source will incur is in the paving of the roads. Paving a mile of road can cost from \$90,000 to \$135,000 per mile of road paved.

Maricopa County has reviewed permits and files and has determined that there are no small businesses subject to this rulemaking. Therefore, there is no need to consider each of the methods prescribed in A.R.S. §§ 41-1035 and 41-1055 (B) for reducing the impact on small businesses. The rule contains regulatory flexibility that is available to all sources regardless of the classification. The County could not find other alternative methods that would reduce the impact of this rulemaking on sources, or that would be less intrusive or less costly to implement the statutory objectives. Maricopa County could not exempt small businesses, or even establish less stringent standards or schedules from compliance or reporting requirements.

Benefits of the rule involve the creation of additional business operations in the county without an increase in overall air pollutants within a particular PM<sub>10</sub> nonattainment area, maintenance or modeling domain and increased flexibility to obtain offsets. This added flexibility gives the sources an additional choice from which they can obtain PM<sub>10</sub> emission offsets.

Maricopa County solicits input from the sources on the administrative and other costs required for compliance with the proposed rulemaking, and any other information relevant to the economic, small business, and consumer impact statement.

**10. The name and address of department personnel with whom persons may communicate regarding the accuracy of the economic, small business and consumer impact statement:**

Name: Patricia P. Nelson or Jo Crumbaker, Air Quality Department  
Address: 1001 North Central Avenue, Suite # 595  
Phoenix, AZ 85004  
Telephone Number: 602-506-6709 or 602-506-6705  
Fax Number: 602-506-6179  
E-Mail Address: pnelson@maricopa.mail.gov or jcrumbak@mail.maricopa.gov

**11. the time, place, and nature of the proceedings for the making, amendment, or repeal of the rules:**

Oral Proceeding Date: October 24, 2006  
Location: Maricopa County Air Quality Department  
5<sup>th</sup> Floor Conference Room #560  
1001 North Central Avenue  
Phoenix, Arizona 85004

Nature: Public hearing with the opportunity for formal comments on the record regarding the proposed rule and submittal of the rule to EPA as a revision to the State Implementation Plan (SIP). Call (602) 506-0169 for current information. Please call (602)506-6443 for special accommodations under the Americans with Disabilities Act.

**12. Any other matters prescribed by statute that are applicable to the specific department or to any specific rules or class of rules:**

Not applicable.

**13. Incorporations by reference and their location in the rules:**

None

**Incorporations by reference updated to 7/1/04      Location**

None

14. **The full text of the rule follows:**

**REGULATION II – PERMITS AND FEES**

**RULE 242**

**EMISSION OFFSETS GENERATED BY THE VOLUNTARY  
PAVING OF UNPAVED ROADS**

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**MARICOPA COUNTY  
AIR POLLUTION CONTROL REGULATIONS**

**REGULATION II – PERMITS AND FEES  
RULE 242**

**EMISSION OFFSETS GENERATED BY THE VOLUNTARY  
PAVING OF UNPAVED ROADS**

**SECTION 100 – GENERAL**

- 101 PURPOSE:** To establish enforceable procedures for calculating emission reductions of particulate matter at 10 microns or less (PM<sub>10</sub>) created through the voluntary paving of unpaved roads that will be used as offsets to meet New Source Review (NSR) requirements.
- 102 APPLICABILITY:** This rule applies to applicants subject to NSR requirements, who need PM<sub>10</sub> offsets for the construction of new major stationary sources or major modifications to an existing major stationary source in the Maricopa County PM<sub>10</sub> non-attainment area and those same applicants who also voluntarily elect to generate emission reductions of PM<sub>10</sub> by paving unpaved roads in the Maricopa County non-attainment area.

**SECTION 200 – DEFINITIONS:** For the purpose of this rule the following definitions shall apply:

- 201 EMISSION OFFSETS** – Emission reductions that have occurred and continue to occur within the Maricopa County PM<sub>10</sub> non-attainment area, used to mitigate emission increases from new or modified major sources.
- 202 ENFORCEABLE** – Offsets are enforceable if they are independently verifiable, program violations are defined, those liable can be identified, and the Administrator and the Control Officer can apply penalties and secure appropriate corrective action where applicable.
- 203 PERMANENT** – Continuing or enduring for the duration of the New Source Review (NSR) obligation.
- 204 QUANTIFIABLE** – Emission reductions that can be reliably and replicably measured by adhering to the quantification protocol set forth in this rule.
- 205 ROADWAY SEGMENT** – A section of roadway between two definitive points, including but not limited to intersections, road ends or other demarcation points, which define a change in the roadway structure. The length of such segments shall be expressed in miles and/or fractions thereof.
- 206 SURPLUS** – The amount of emission reductions from the paving of an unpaved road that are not:
- 206.1** Required by federal, state, local law or the Clean Air Act; or
  - 206.2** Included, required or relied upon in the existing federally approved State Implementation Plan (SIP); or
  - 206.3** Included in the Agricultural Best Management Plan; or

- 206.4 Used by any source to meet any other regulatory requirement including but not limited to, at the time offsets are used, Reasonable Available Control Technology (RACT); or
- 206.5 Required by any other legal settlement or consent decree; or
- 206.6 Included in any SIP-related requirements, including but not limited to: Reasonable Further Progress (RFP), milestones, attainment demonstration, conformity regulations, emissions inventories, operating permit regulations, operating permits issued under Maricopa County or Arizona operating permit regulations, any requirement contained in any new source review permits such as Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations, limitations on operations of raw materials, emission reductions used for offset or netting purposes, and assumptions used in an attainment demonstration; or
- 206.7 Subject to be included in any of the following as contained in the SIP-approved Plan or in the latest locally-adopted rules or PM plan: Rule 310.01 or Rule 310 of the Maricopa County Air Pollution Control Rules and Regulations, the resolutions listed in 40 CFR 52.120(c) (100), Arizona Revised Statutes Sections 49-457 and 49-504.4, or contingency measures.

#### SECTION 300 – STANDARDS

- 301 **OFFSET PLAN REQUIREMENTS:** Applicants who choose to use the provisions of this rule to meet their NSR PM<sub>10</sub> offset requirements shall submit an Offset Plan. The Offset Plan shall at a minimum contain the information specified in Sections 301.1 through 301.7.
  - 301.1 A statement that the offsets will be generated from the paving of unpaved roads identified within the Offset Plan.
  - 301.2 A statement that the unpaved road(s) will be paved according to state or local government paving standards.
  - 301.3 A list of roads that the generator has proposed for paving including their location and roadway segment identification.
  - 301.4 A copy of a letter or agreement from the appropriate state or local government stating that the public road(s):
    - a. Has been inspected;
    - b. Has been described as being either gravel- or non-gravel-surfaced;
    - c. Will be adopted into the state or local government transportation network, if not already a part of the network; and
    - d. Will be maintained.
  - 301.5 Calculations that quantify vehicle miles traveled for each roadway segment, including all supporting data from the traffic counts performed pursuant to Section 302.1.

- 301.6** Calculations that quantify emissions from each roadway segment before and after paving, including all results and supporting data from any source-specific testing performed pursuant to Section 302.2.
- 301.7** Results of any silt content testing performed on the unpaved roads according to Section 502.
- 301.8** Photos or video of the public roads to be paved, if they are classified as “non-gravel” roads.
- 302** **CALCULATION METHODOLOGY:** Calculations of vehicle miles traveled and the emission(s) reductions from the voluntary paving of roads, for each roadway segment, shall be determined according to the procedures in Sections 302.1 and 302.2.
- 302.1** **Vehicle Miles Traveled (VMT):** For the purpose of calculating vmt/day and vmt/year for emission reduction calculations, the applicant shall conduct two traffic counts for each roadway segment.
- a.** Each traffic count shall measure vehicular traffic over a 48 hour period, which may consist of two non-consecutive 24-hour periods. Vehicular traffic shall be measured continuously during each 24-hour period.
- b.** The two distinct 24-hour traffic counts shall be conducted on two non holiday weekdays.
- c.** The vmt/day and vmt/year calculations for each roadway segment shall be based on the time-weighted averages of the two separate traffic counts for that particular roadway segment.
- d.** The vmt/day shall be calculated by multiplying traffic count results by the length of the roadway segment in miles to the nearest 1/10 of a mile.
- e.** The average daily traffic count shall be multiplied by the daily and monthly seasonal adjustment factors for paved roads to calculate the annual vehicle miles traveled. For the purpose of the offset program, the adjustment factors shall be obtained from the most recent Freeway Management System data provided by the Arizona Department of Transportation.
- f.** All future projects must comply with Sections 302.1 listed above, except for a previously permitted modification at the Salt River Project’s Santan Generating Plant and a previously permitted modification at the Arizona Public Service’s West Phoenix Power Plant, both of which, during the permitting process, specifically relied upon emission reductions from road paving to provide PM<sub>10</sub> offsets.
- 302.2** **Emissions From Unpaved and Paved Roads:**
- a.** The equations provided in Appendix A shall be used to determine the quantity of PM<sub>10</sub> emissions (in terms of lbs/VMT) emitted from each unpaved and paved road segment.
- b.** The default values provided in Appendix A for silt content shall be used to calculate PM<sub>10</sub> emissions, unless the applicant provides source specific values obtained in accordance with Section 502.



c. The PM<sub>10</sub> emission reduction associated with paving a segment of unpaved road shall be calculated as the difference, in tons per year, between the emissions from the road in the unpaved condition and the emissions from the road in the paved condition.

d. For the two modifications referenced in Section 302.1 (f.) the silt content of the unpaved road(s) used in calculating the PM<sub>10</sub> emission reductions shall be that for a gravel road, 6.2%, unless the Arizona government transportation agency responsible for the road(s) provides documentary evidence that the road(s) did not, in fact, have a gravel surface. This documentary evidence must have been created prior to the paving of the road(s).

**303 STANDARDS FOR APPROVING OFFSET PLANS:**

- 303.1** The Control Officer will approve an Emission Offset Plan if it complies with Section 301 and demonstrates that the emission reductions are quantifiable, permanent, enforceable, and surplus.
- 303.2** The Control Officer shall issue a written approval of the Offset Plan, indicating which roadway segment(s) may be paved and the amount of the resulting emission offsets that will be generated for each roadway segment.
- 303.3** Except for a previously permitted modification at the Salt River Project's Santan Generating Plant and a previously permitted modification at the Arizona Public Service's West Phoenix Power Plant, both of which, during the permitting process, specifically relied upon emission reductions from road paving to provide PM<sub>10</sub> offsets, the approved Offset Plan shall not generate offsets from roadway segments that were paved before (insert rule adoption date).

**304 OFFSET PLAN COMPLETION:**

- 304.1** When the applicant has completed paving any of the roadway segment(s) specified in Section 303.2, the applicant shall submit to the Control Officer a summary report that identifies each roadway segment(s) paved, provides the date(s) paving was completed, and includes a copy of the local or state governments' report evaluating the condition of each roadway segment.
- 304.2** The Control Officer shall issue an approval in writing for the quantity of emission reductions actually generated, based on data submitted pursuant to Section 304.1.
- 304.3** The quantity of emission reductions approved by the Control Officer pursuant to Section 304.2, may be used to meet NSR PM<sub>10</sub> offset requirements.

**305 ROAD INTEGRITY RESPONSIBILITIES:** After the paving of the roadway segment(s) identified in Section 304.1 is completed, the applicant, for a period of 30 years shall:

- 305.1** At least once every two years, obtain a copy of the local or state governments' report evaluating the condition of each roadway segment(s) identified in Section 304.1; and
- 305.2** Review the report upon receipt and determine if any roadway segment(s) identified in Section 304.1 is degraded. The roadway segment shall be considered degraded if the pavement condition score is less than 30% according to the pavement condition analysis criteria listed in the American Association of State Highway and Transportation Officials (AASHTO); and

**305.3** Within 60 days of receipt of the report, submit to the Control Officer a copy of the report and a statement identifying any roadway segment(s) that is degraded.

**306 OFFSET INTEGRITY RESPONSIBILITIES:**

**306.1** If pursuant to Section 305.3 any of the road segments paved and approved by the Control Officer under Section 304.2 are found to be degraded, then within 12 months of the report submittal date, the applicant shall provide replacement offsets.

**306.2** Replacement offsets may be provided by:

- a. Repaving the degraded road segment(s) identified in Section 305.3, and upon completion submit a report that includes the information specified in Section 304.1 or
- b. Generating the appropriate number of PM<sub>10</sub> offsets pursuant to Rule 242 or
- c. Generating the appropriate number of PM<sub>10</sub> offsets pursuant to Rule 204.

**SECTION 400 - ADMINISTRATIVE REQUIREMENTS (NON-APPLICABLE)**

**SECTION 500 - MONITORING AND RECORDS**

**501 RECORDKEEPING AND RECORDS RETENTION:** After the Control Officer has issued an approval of the emission reductions in writing, copies of the documents submitted pursuant to Sections 301, 303.2, 304.1, 305.1, 305.2 and 306 shall be maintained onsite for a minimum of thirty (30) years and provided to the Control Officer upon request.

**502 TEST METHODS:** Unless the applicant uses the default silt content values provided in Appendix A, silt content of the unpaved road segments shall be determined using the sampling and laboratory analysis procedures provided in EPA's "Compilation of Air Pollutant Emission Factors," (AP-42), Fifth Edition, Volume 1, Appendix C.1. If the applicant performs any silt content analysis, or has such analysis performed on its behalf, the applicant must use the silt content determined from that analysis to calculate PM<sub>10</sub> emissions.

**APPENDIX A**

**1. UNPAVED PUBLIC ROADS:**

- a. For the purposes of this rule, the following empirical expression shall be used to estimate the quantity in pounds (lbs) of particulate emissions from publicly accessible unpaved roads, dominated by light duty vehicles, per vehicle mile traveled (VMT).

**Equation #1**

$$E = \frac{(s/12) * 1.467}{1.572} - 0.00047 \text{ lb/VMT}$$

E = emission factor (lb/VMT)

s = surface material silt content (%)

b. The default values listed for “s” in Table A below shall be used in Equation 1, as applicable, unless the applicant provides source-specific values for “s” using the methods specified in Section 502.

c. Equation #1 is derived from the following empirical expression:

$$E = \frac{k * (s/12)^a * (S/30)^d}{(M/0.5)^c} - C$$

Where:

E = emission factor (lb/VMT)

s = surface material silt content (%)

M= surface material moisture content (%)

S = mean vehicle speed (mph)

C = emission factor for 1980’s vehicle fleet exhaust, brake wear and tear

K, a, c and d = constants

The default values listed in Table A were used for each variable.

**TABLE A  
DEFAULT VALUES FOR EQUATION #1/UNPAVED PUBLIC ROADS**

VARIABLES (Units)	DEFAULT VALUES
s (%) Non-gravel roads	11.0
s (%) Gravel roads	6.2
M (%)	1.0%
S (mph)	20
C (lb/VMT)	0.00047

**2. PAVED PUBLIC ROADS:**

For the purposes of this rule, the quantity in pounds (lb) of particulate emissions from resuspension of loose material on a road surface due to vehicle travel on a dry paved public road shall be 0.005 lbs/VMT. This value is derived from the following empirical expression:

**Equation #2**

$$E = k (sL/2)^{0.65} (W/3)^{1.5} - C$$

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where:

- E = emission factor (lb/VMT) k = particulate size multiplier for particle size range and units of interest  
sL = road surface silt loading (grams per square meter or g/m<sup>2</sup>)  
W = average weight (tons) of the vehicles traveling the road  
C = emission factor for 1980s vehicle fleet exhaust, brake wear and tire wear

The following default values were used for each variable.

<b>VARIABLES (Units)</b>	<b>DEFAULT VALUES</b>
K (lbs /VMT)	0.016
sL (grams/m <sup>2</sup> )	0.23
W (tons)	3.74
C (lbs / VMT)	0.00047