Source Category:	**Fugitive Dust from Paved Road**
SCC Code:	**2294000000**
Pollutants of Concern:	**PM-10, PM-2.5**

How is the PM National Emission Inventory developed for this category?

Current Methodology (see also the link to the NEI Methodology Description):
- The calculation of the fleet average PM_{10} and $PM_{2.5}$ emission factors are discussed in the NEI methodology description.
- Emission factor is an empirical equation that includes the variables: average weight of the vehicles traveling the road (WEIGHT), the road surface silt loading (PVSILT). The activity of total PM emissions is based on the paved vehicle miles traveled (VMT).
- PM_{10} and $PM_{2.5}$ emissions from vehicle exhaust, tire wear, and brake wear are subtracted from the total to represent the fugitive dust from the road surface.
- The equation and equation constants are discussed in Section 4.8.1.5 of the NEI Methodology Description.
- The total emissions are adjusted to account for the number of days when there is enough precipitation to suppress dust suspension.

Current Variables/Assumptions Used:
- Average weight of vehicles [*Automotive industry and U.S. Department of Commerce studies from the early 1990s*]
- Vehicle miles traveled [*Highway Statistics*]

Uncertainties / Shortcomings of Current Methods:
- This method is based on an empirical model that was developed with data collected in measurement programs in discreet locations.
- The fleet average vehicle weight default value of 6,360 pounds is based on vehicles fleet statistics from the early 1990s.

How can State, Local, and Tribal agencies improve upon this methodology?

- Improved estimates of road silt loading could be obtained by selecting location specific values from the national database[*see related documents under AP-42, Section 13.2.1*], or by local measurement [*see Appendix C1 and C2 AP-42*] .
- VMT updates that are developed for other programs can be applied directly. [*State Environmental Agency*]
- The average vehicle weight is the most heavily weighted variable in the predictive equation. Improved accuracy can be achieved by updating the vehicle mix through the use of recent registration data.

Where can I find Additional Information and Guidance?

EPA Contact:	Mr. William B. Kuykendal Emission Factor and Inventory Group U.S. Environmental Protection Agency D205-01 USEPA Mailroom Research Triangle Park, NC 27711 E-mail: kuykendal.bill@epa.gov Telephone: 919-541-5372
AP-42, Section 13.2.1, Paved Roads	http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s02-1.pdf
Area Source Emissions Model	http://www.epa.gov/ttn/chief/software/asem/index.html
County Level Emission Density Maps for this Source Category	http://www.epa.gov/ttn/chief/eiip/pm25inventory/densitymaps.pdf
NEI Methodology Description	http://www.epa.gov/ttn/chief/trends/procedures/ (Section 4.8.1.5, pages 4-253 - 4-254) Note: This document is currently being revised.
Procedure for Laboratory Analysis of Surface/Bulk Loading Samples	http://www.epa.gov/ttn/chief/ap42/appendix/app-c2.pdf
Procedures for Sampling Surface/Bulk Dust Loading	http://www.epa.gov/ttn/chief/ap42/appendix/app-c1.pdf
Road Silt Loading Database	http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-1.html