Air and Radiation

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Office of Mobile Sources

# **Emission Facts**

### Annual Emissions and Fuel Consumption for an "Average" Passenger Car<sup>1</sup>

| <u>Component</u> | Environmental<br>Impact          | Emission Rate / Consumption <sup>2</sup> per Mile (mi) | Average Annual Mileage <sup>3</sup> | <u>Calculation</u>                       | Total Annual Pollution/Fuel Consumption <sup>4</sup> |
|------------------|----------------------------------|--|-------------------------------------|--|--|
| Hydrocarbons     | Urban ozone (smog)<br>Air toxics | 3.01 grams (g)   | 11,300                              | (3.01 g/mi) x (11,300 mi) x (1 lb/454 g) | = 74.9 pounds of hydrocarbons                        |
| Carbon Monoxide  | Poisonous gas                    | 21.4 grams   | 11,300                              | (21.4 g/mi) x (11,300 mi) x (1 lb/454 g) | = 532 pounds of carbon monoxide                      |
| Nitrogen Oxides  | Urban ozone (smog)<br>Acid rain  | 1.46 grams   | 11,300                              | (1.46 g/mi) x (11,300 mi) x (1 lb/454 g) | = 36.3 pounds of nitrogen oxides                     |
| Carbon Dioxide   | Global warming                   | 0.807 pound (lb)                                       | 11,300                              | (0.807 lb/mi) x (11,300 mi)              | = 9,119 pounds of carbon dioxide                     |
| Gasoline         | Renewable Resources              | 0.0458 gallon  | 11,300                              | (0.0458gallon/mi) x (11,300 mi)          | = 518 gallons of gasoline                            |

#### Notes:

- 1. These are averages. Individual vehicles may differ in miles traveled and pollution emitted per mile than indicated here. Emission factors and pollution/fuel consumption totals may differ slightly from original sources due to rounding.
- 2. The emission factors used here come from standard EPA emission models. They assume an "average," properly maintained car on the road in 1998, operating on typical gasoline on a summer day (72-96°F). Emissions may be higher in very hot or very cold weather.
- 3. Source: EPA Office of Mobile Sources Assessment and Modeling Division, Mobile 5 Model.
- 4. Fuel consumption is based on average in-use passenger car fuel economy of 21.8 miles per gallon. Source: US DOT/FHA, Highway Statistics 1996 Tables.

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## **Emission Facts**

### Annual Emissions and Fuel Consumption for an "Average" Light Truck<sup>1</sup>

| <u>Component</u> | Environmental<br><u>Impact</u>   | Emission Rate/ Consumption per mile (mi) | Average Annual Mileage <sup>3</sup> | <u>Calculation</u>                       | Total Annual Pollution/Fuel Consumption <sup>4</sup> |
|------------------|----------------------------------|--|-------------------------------------|--|--|
| Hydrocarbons     | Urban ozone (smog)<br>Air toxics | 3.40 grams(g)                            | 11,800                              | (3.40 g/mi) x (11,800 mi) x (1 lb/454 g) | = 88.4 pounds of hydrocarbons                        |
| Carbon Monoxide  | Poisonous gas                    | 26.1 grams                               | 11,800                              | (26.1 g/mi) x (11,800 mi) x (1 lb/454 g) | = 678 pounds of carbon monoxide                      |
| Nitrogen Oxides  | Urban ozone (smog)<br>Acid rain  | 1.68 grams                               | 11,800                              | (1.68 g/mi) x (11,800 mi) x (1 lb/454 g) | = 43.7 pounds of nitrogen oxides                     |
| Carbon Dioxide   | Global warming                   | 0.996 pound (lb)                         | 11,800                              | (0.996 lb/mi) x (11,800 mi)              | = 11,753 pounds of carbon dioxide                    |
| Gasoline         | Nonrenewable Resource            | 0.0565 gallon                            | 11,800                              | (0.0565 gallon/mi) x (11,800 mi)         | = 667 gallons of gasoline                            |

#### *Notes:*

- 1. These values are averages. Individual vehicles may differ in miles traveled and pollution emitted per mile than indicated here. Emission factors and pollution/fuel consumption totals may differ slightly from original sources due to rounding.
- 2. The emission factors used here come from standard EPA emission models. They assume an "average," properly maintained truck on the road in 1998, operating on typical gasoline on a summer day (72-96°F). Emissions may be higher in very hot or very cold weather.
- 3. Source: EPA Office of Mobile Sources Assessment and Modeling Division, Mobile 5 Model.
- 4. Fuel consumption is based on average in-use light truck fuel economy of 17.7 miles per gallon. Source: US DOT/FHA, Highway Statistics 1996 Tables.