Regulatory Standards

National Ambient Air Quality Standards (NAAQS)

- set exclusively on the basis of their effects on human health, permitting CB considerations, among others, to come into play only in the choice of policies to achieve the health-based standards.

EPA periodically reviews the standards.

Ozone & PM standards reviewed in 1997.

Total Vehicle Miles Traveled and Highway Vehicle Emissions, 1970 - 95

(Millions of short tons, unless noted)

Category	1970		1995		Total percent reduction 1970–95 in	
	Highway vehicles	*Percent of total U.S. emissions*	*Highway vehicles*	*Percent of total U.S. emissions*	*Highway vehicle emissions*	*Highway vehicle emissions per VMT*
Vehicle miles traveled, VMT (millions)	1,109,724	. . .	2,422,775	. . .	. . .	. . .
Emissions of pollutants						
Carbon monoxide	88.03	68.6	54.1	60.3	38.7	71.9
Nitrogen oxides	7.39	34.2	7.3	30.6	0.9	54.6
Volatile organic compounds	12.97	42.1	5.7	27.7	56.0	79.9
Particulate matter	. . .	. . .	13.1	48.6	. . .	. . .
Fuel-related	0.44	3.4	0.3	1.1	33.9	69.7
Fugitive dust	. . .	. . .	12.8	47.5	. . .	. . .
Lead (thousands of short tons)	171.96	77.9	< 0.01	0.5	> 99.9	> 99.9

Source: Bureau of Transportation (1996: Appendix A) for data on travel; EPA Office of Air Quality Planning and Standards (1997a: table A-1, A-2, A-3, A-5, A-6) for data on emissions. Percentages were calculated from data in the tables.

Great Success__

Between 1970 & 1996

Lead Emissions ↓ by 98%
CO ↓ by 31%
VOC ↓ by 38%

However,
Agg. Nox ↑ by 8% (declined on per mile basis)
Particulates ↑ by 137%

Non Attainment Areas

1990	1997
92 (ozone)	59 (ozone)
42 (CO)	28 (CO)

Vehicle Miles ↑ more than 100% (1970 - 95%)

Between 1970 - 95

CO emissions	↓ 39%	by VMT ↓72%
Nox	↓ 0.9%	↓ 55%
PM	↓ 34%	↓ 70%
Lead	↓ 99.9%	> 99.9%

Percentage Change in Transportation Emissions for Selected Major Metropolitan Areas, 1985 - 94

Metro area	*VOC*	*NO_x*	*CO*	*PM_{10}*
North				
New York, northern New Jersey[a]	–32.7	–7.3	–26.2	–17.9
Chicago, Gary	–39.9	–9.5	–31.2	–18.9
Pittsburgh, Beaver Valley	–46.0	–26.1	–36.9	–31.0
Indianapolis	–20.1	3.0	–1.7	–4.9
South				
Dallas, Ft. Worth	–46.4	–17.4	–34.9	–24.7
Houston, Galveston	–41.9	–15.3	–27.5	–34.1
Miami, Ft. Lauderdale	–34.9	6.3	–14.1	–7.1
Tampa, St. Petersburg	–41.7	–1.6	–23.5	–12.6
West				
Los Angeles, Anaheim, Riverside	–31.7	–8.8	–25.9	–18.3
San Francisco, Oakland, San Jose	–30.1	–15.8	–22.2	–24.6
Seattle, Tacoma	–28.3	–8.9	–23.3	–16.8
San Diego	–34.8	–15.2	–30.4	–22.1
Portland	–28.4	–5.2	–22.7	–12.6

Source: Bureau of Transportation Statistics (1995: table 8-1). Metropolitan areas are as defined by the Bureau of the Census using 1990 census data.

a. Does not include parts of two Connecticut counties included in the 1990 census definition.

Federal Emission Standards for Passenger Cars (grams per mile)

Year	*Hydro-carbons (HC)*	*Carbon monoxide (CO)*	*Nitrogen oxides (gasoline)*	*Nitrogen oxides (diesel)*	*Particulates*
Uncontrolled	8.20	90.0	3.4, 4.0[a]	. . .	0.3[b], 0.5[c], 1.0[d]
1968–69	5.90	50.8	. . .	. . .	. . .
1970–71	3.90	33.3	. . .	. . .	. . .
1972	3.00	28.0	. . .	. . .	. . .
1973–74	3.00	28.0	3.1	. . .	. . .
1975–76	1.50	15.0	3.1	. . .	. . .
1977–79	1.50	15.0	2.0	. . .	. . .
1980	0.41	7.0	2.0	. . .	. . .
1981	0.41	3.4	1.0	1.0	. . .
1982–84	0.41	3.4	1.0	1.0	0.60
1990	0.41	3.4	1.0	1.0	0.20
1991	0.41	3.4	1.0	1.0	0.20
1994	0.25	3.4	0.4	1.0	0.08
2004–2006[e]	0.13	1.7	0.2	0.2	0.10

Source: For years before 1980, White (1982:15); after 1980, Bureau of Transportation Statistics (1997a:189). Standards are those actually applied to cars of the indicated model year, with the exception of 2004–2006.

a. NO_x emissions from a car controlled for HC and CO at the 1970 standards.

b. Emissions from a vehicle burning leaded gasoline; emissions from a vehicle with a catalytic converter burning unleaded gasoline are under 0.01.

c. Emissions from an uncontrolled diesel automobile.

d. Emissions from a diesel automobile controlled to meet the 1980 NO_x standard.

e. To be implemented no sooner than the 2004 model year and no later than the 2006 model year, contingent on a demonstration by EPA that further controls are needed, technically feasible, and cost-effective.

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Thank you