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Pocket Guide to Transportation

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America's transportation system has changed along with the nation's society and economy. The following table puts those changes in perspective:

Characteristic	1970	1999
Resident population (thous.)	203,984	272,691
Total area (thous. sq. mi.)	3,619	[a]3,718 (1990)
Total civilian labor force (thous.)	82,771	139,368
Gross Domestic Product[b]	$3.4 trillion	$8.8 trillion
Median household income[b]	$29,600	37,430 (1998)
Average household expenditures[b]	N	34,205 (1998)
Number of households (thous.)	63,401	103,874
Average life expectancy (years)	70.8	76.5 (1997)
Labor force participation by women	46%	60%

[a] 1990 data reflect the inclusion of the Great Lakes, inland water, and coastal water. 1970 data include inland water only. The Census Bureau tabulates area (square miles) data for the decennial census years only.

[b] Converted from current dollars to 1996 chained dollars using implicit deflators constructed from the Bureau of Labor Statistics' Consumer Price Index and the Bureau of Economic Analysis' chained-type price index.

Key: N = data do not exist.

Note: All dollar amounts are 1996 chained dollars.

Sources: Population, area, number of households—U.S. Department of Commence (USDOC), Census Bureau, *Statistical Abstract of United States: 1999* (Washington, DC: 1999), also available at www.census.gov; GDP, median household income—USDOC, Bureau of Economic Analysis; Consumer expenditures, employment—U.S. Department of Labor, Bureau of Labor Statistics; Life expectancy—Centers for Disease Control and Prevention, available at www.cdc.gov/nchs/fastats/fastats.htm.

The Bureau of Transportation Statistics compiled the data in this guide from multiple sources. The guide is divided into five sections and a glossary:

1 Transportation System Extent and Use

The U.S. transportation system is an extensive, interrelated network of public and private roads, airports, railroads, transit routes, waterways, terminals, ports, and pipelines. Millions of people and businesses rely on this ever-expanding system to get to work, take vacation trips, conduct business, and ship goods here and abroad. It links regions and connects small and large cities and urban and rural areas.

Table 1
The Transportation Network: 1999

Mode	Components
Highway	***Public roads***
	46,564 miles of Interstate highway
	113,995 miles of other National Highway System roads
	3,771,456 miles of other roads
Air	***Public-use airports***
	5,354 airports
	Airports serving large certificated carriers
	29 large hubs (69 airports), 459 million enplaned passengers (see Glossary for definition of "hub")
	31 medium hubs (48 airports), 96 million enplaned passengers
	56 small hubs (73 airports), 39 million enplaned passengers
	577 nonhubs (604 airports), 17 million enplaned passengers
Rail	***Miles of railroad operated***
	120,412 miles by Class I freight railroads[a]
	21,250 miles by regional freight railroads
	28,422 miles by local freight railroads
	22,741 miles by Amtrak (passenger)

Mode	Components	
Urban transit	***Directional route-miles serviced***[b]	
(1998)	Bus: 157,823	
	Trolley bus: 424	
	Commuter rail: 5,172	
	Heavy rail: 1,527	
	Light rail: 676	
	Stations	
	Commuter rail: 972	
	Heavy rail: 997	
	Light rail: 555	
Water	26,000 miles of navigable waterways	
	Ferry routes: 487	
	Commercial waterway facilities	
	Great Lakes:	619 deep-draft 144 shallow-draft
	Inland:	2,376 shallow-draft
	Ocean:	4,057 deep-draft 2,131 shallow-draft
	Locks:	276
Pipeline	***Oil***	
(1998)	Crude lines: 88,000 miles of pipe	
	Product lines: 91,000 miles of pipe	
	Gas	
	Transmission: 254,000 miles of pipe	
	Distribution: 981,000 miles of pipe	

[a] There are also 574 miles of railroad operated by U.S. Class I freight railroads in Canada.

[b] Directly operated service. Does not include contracted service.

Sources: U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), *Transportation Statistics Annual Report 2000* (Washington, DC: In press), table 1-1; USDOT, BTS, *National Transportation Statistics 2000* (Washington, DC: In press); Association of American Railroads, *Railroad Facts*, 2000 (Washington, DC: 2000); USDOT, Federal Highway Administration, *Highway Statistics 1998* (Washington, DC: 1999); National Ferry database, as of 10/10/00; and U.S. Army Corps of Engineers, Navigation Data Center, The U.S. Waterway System, Transportation Facts, available at www.wrsc.usace.army.mil/ndc/fcgeodis.htm, as of November 2000.

2 Transportation and Safety

The highest priority of the U.S. Department of Transportation is to promote safety. Although progress has been made in reducing fatalities, transportation remains the leading cause of accidental deaths and injuries in the United States. In 1999, about 95 percent of transportation fatalities and an even higher percentage of injuries occurred on the nation's roadways.

Table 2
Fatalities by Transportation Mode

Mode	1970	1980	1990	1995	1999
Large air carrier	146	1	39	168	12
Commuter air	N	37	7	9	12
On-demand air taxi	N	105	51	52	38
General aviation	1,310	1,239	767	734	628
Highway[a]	52,627	51,091	44,599	41,817	41,611
Railroad[b]	785	584	599	567	530
Transit[c]	N	N	339	274	299
Commercial ship					
Vessel casualties	178	206	85	46	44
Nonvessel casualties[d]	420	281	101	137	67
Recreational boating	1,418	1,360	865	829	734
Gas and hazardous liquid pipeline	30	19	9	21	21

[a] Includes occupants, nonoccupants, and motor vehicle fatalities at railroad crossings.
[b] Includes fatalities from nontrain incidents, as well as train incidents and accidents. Also includes train occupants and nonoccupants, except motor vehicle occupants at grade crossings.
[c] Fatalities resulting from all reportable incidents, not just accidents. Includes commuter rail, heavy rail, light rail, motor bus, demand responsive, van pool, and automated guideway.
[d] Fatalities unrelated to vessel accidents, e.g., individual falling overboard and drowning.
Key: N = data do not exist or are not cited because of reporting changes.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000* (Washington, DC: In press), table 2-1.

Table 3
Distribution of Transportation Fatalities: 1999

Category	Number	Percent
Passenger car occupants	20,818	47.5
Light-truck occupants	11,243	25.6
Pedestrians struck by motor vehicles	4,906	11.2
Motorcyclists	2,472	5.6
Large-truck occupants	758	1.7
Pedalcyclists struck by motor vehicles	750	1.7
Recreational boating	734	1.7
General aviation	628	1.4
Railroad[a] (excluding grade crossings)	530	1.2
Other and unknown motor vehicle occupants	457	1.0
Other nonoccupants struck by motor vehicles[b]	149	0.3
Heavy-rail transit	84	0.2
Waterborne transportation (nonvessel-related)	67	0.2
Bus occupants (school, intercity, and transit)	58	0.1
Grade crossings (not involving motor vehicles)	57	0.1
Waterborne transportation (vessel-related)	44	0.1
Air taxi	38	0.09
Light-rail transit	17	0.04
Gas distribution pipelines	15	0.03
Air carriers	12	0.03
Commuter air	12	0.03
Transit buses (not related to accidents)[c]	11	0.03
Hazardous liquid pipelines	4	<0.01
Gas transmission pipelines	2	<0.01
Demand-responsive transit (not related to accidents)	0	0.0
Total[d]	**43,866**	**100.0**
Redundant with above[e]		
Grade crossings with motor vehicles	345	
Commuter rail (included in railroad)	95	
Transit bus (accident-related)	91	
Passengers on railroad trains	14	
Demand-responsive transit (accident-related)	1	

[a] Includes fatalities outside trains, except at grade crossings.
[b] Includes all nonoccupant fatalities, except pedalcyclists and pedestrians.
[c] Not included under highway submodes. Includes suicides.
[d] Unless otherwise specified, includes fatalities outside the vehicle.
[e] For transit bus and demand-responsive transit, occupant fatalities are counted under "bus" and nonoccupant fatalities are counted under "pedestrians," "pedalcyclists," or other motor vehicle categories.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000* (Washington, DC: In press), table 2-4.

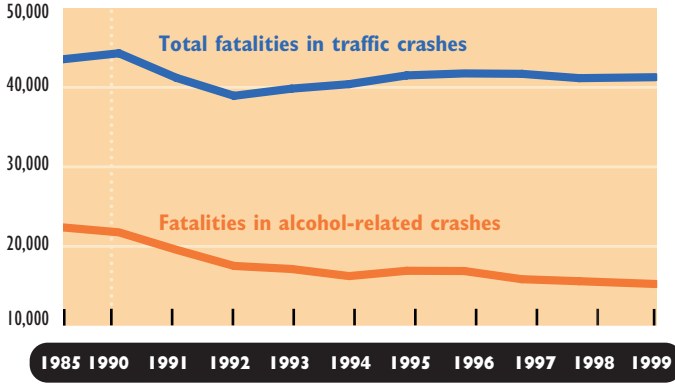
Table 4
Occupant and Nonmotorist Fatalities in Crashes by Number of Vehicles and Alcohol Involvement: 1999

	Fatalities	Alcohol involvement	Percent
Occupants	**35,806**	**13,145**	**36.7**
Single-vehicle crashes	17,052	8,163	47.9
Two-vehicle crashes	15,690	4,204	26.8
More than two-vehicle crashes	3,064	778	25.4
Pedestrians	**4,906**	**2,325**	**47.3**
Single-vehicle crashes	4,488	2,090	46.6
Multiple-vehicle crashes	418	235	56.2
Pedalcyclists	**750**	**286**	**38.1**
Single-vehicle crashes	714	267	37.4
Multiple-vehicle crashes	36	19	55.6
Other/unknown	**149**	**31**	**20.8**
Total	**41,611**	**15,786**[a]	**37.9**

[a] The total shows one fewer case of alcohol involvement than the sum of the subtotals. This is due to adjustment for rounding in the method used to estimate alcohol involvement.

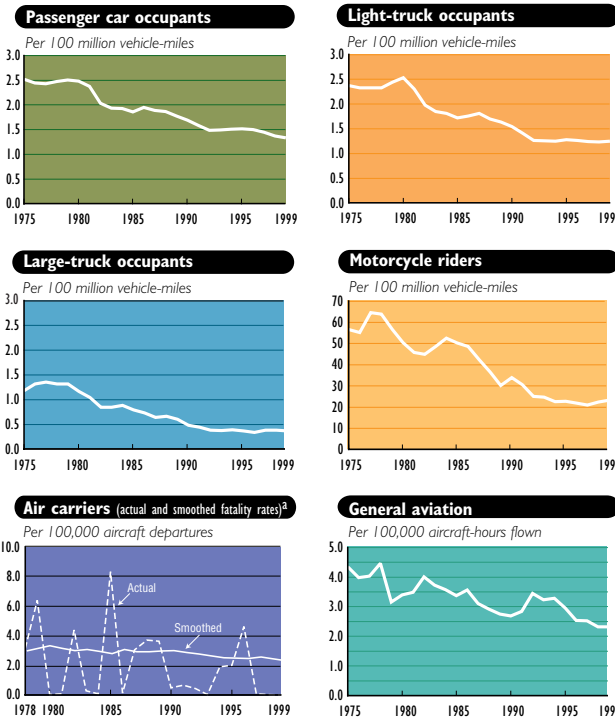
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, Fatality Analysis Reporting System (FARS) database, available at http://www-fars.nhtsa.dot.gov/www/query.html, as of December 2000.

Figure 1
Fatalities in Alcohol-Related Crashes



Source: U.S. Department of Transportation, National Highway Safety Administration, National Center for Statistics and Analysis, Fatality Analysis Reporting System (FARS) database, available at http://www.fars.nhtsa.dot.gov/www/query.html, as of December 2000.

Figure 2
Fatality Rates for Selected Modes



[a] For air carriers, the data were dampened, or smoothed, to reduce the month-to-month fluctuations. This dampening was performed using an exponential smoothing model, with a weight of 0.95.

Source: Various sources, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000* (Washington, DC: In press).

Table 5
Injured Persons by Transportation Mode

Mode	1970	1980	1990	1995	1999
Air carrier	107	19	29	25	57
Commuter carrier	N	14	11	25	2
On-demand air taxi	N	43	36	14	14
General aviation	715	681	402	395	325
Highway[a]	N	N	3,231,000	3,465,000	3,236,000
Railroad[b]	17,934	58,696	22,736	12,546	10,509
Transit[c]	N	N	54,556	57,196	55,325
Commercial ship					
Vessel accidents	105	180	175	145	113
Nonvessel accidents[d]	U	U	U	1,916	399
Recreational boating	780	2,650	3,822	4,141	4,315
Gas and hazardous liquid pipeline	254	192	76	64	107

[a] Includes passenger car occupants, motorcyclists, light-duty and large trucks, bus occupants, pedestrians, pedalcyclists, occupants of unknown vehicle types, and other nonmotorists.
[b] Injuries resulting from train accidents, train and nontrain incidents, and occupational illness. Includes Amtrak.
[c] Injuries resulting from all reportable incidents, not just from accidents. Includes commuter rail, heavy rail, light rail, motor bus, demand responsive, van pool, and automated guideway.
[d] Injuries unrelated to vessel accidents, e.g., an individual getting a cut while onboard a vessel.
Key: N = data do not exist; U = unavailable.
Note: Each mode may use different reporting criteria for injuries.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000* (Washington, DC: In press).

3 Mobility

The U.S. transportation network provides a high degree of personal mobility and freight activity. In 1999, the transportation network supported 4.8 trillion passenger-miles and about 3.9 trillion ton-miles. The data in this section confirm that local and long-distance travel and freight shipments continue to grow. Several factors influence this growth: greater vehicle availability, reduced travel costs, population increases, an expanding economy, and higher consumer incomes.

Table 6
Per Capita Passenger Travel and Freight Transportation

	Number
Passenger travel (1995)	
Local trips per person,[a] annual	1,568
Local trips per person,[a] daily	4.3
Long-distance trips[b] per person, annual	3.9
Local miles per person,[a] annual	14,115
Local miles per person,[a] daily	39
Long-distance miles per person, annual domestic only	3,129
Freight transportation (1997)	
Tons per person, annual	55
Ton-miles per person, annual	14,383

[a] Persons aged 5 and over. A trip is defined as travel from one address to another address.

[b] Each time a person goes to a destination at least 100 miles away from home and returns.

Notes: Data used for local travel are from the Nationwide Personal Transportation Survey travel-day file and include trips of all lengths made by respondents on a single day; about 95% of these daily trips were 30 miles or less. Per capita calculations are based on population estimates within each survey, not from the Census Bureau estimate reported in the table.

Sources: U.S. Department of Transportation (USDOT), Federal Highway Administration, *Nationwide Personal Transportation Survey, Our Nation's Travel* (Washington, DC: 1997.); USDOT, Bureau of Transportation Statistics (BTS) and U.S. Department of Commerce, Census Bureau, *1997 Commodity Flow Survey: United States* (Washington, DC: 1999); USDOT, BTS, American Travel Survey data, October 1997, person trip and demographic files; plus additional estimates prepared for the BTS by Oak Ridge National Laboratory.

Table 7
Number of Aircraft, Vehicles, and Vessels

Mode	1970	1980	1990	1995	1998
Air carriers[R]	2,679	3,808	6,083	7,411	8,111
General aviation	[R]131,743	[R]211,045	196,800	182,605	204,710
Passenger cars[a]	89,243,557	121,600,843	133,700,496	128,386,775	131,838,538
Motorcycles	2,824,098	5,693,940	4,259,462	3,897,191	3,879,450
Other 2-axle, 4-tire vehicles	14,210,591	27,875,934	48,274,555	65,738,322	71,330,205
Trucks: Single-unit	3,681,405	4,373,784	4,486,981	5,023,670	5,734,925
Combination	905,082	1,416,869	1,708,895	1,695,751	1,997,305
Buses[b]	377,562	528,789	626,987	685,503	715,540
Passenger rail:					
Amtrak—Cars	N	2,128	1,863	1,722	1,962
Locomotives	N	419	318	313	345
Commuter railcars and locomotives	N	4,500	4,415	4,565	[P]4,907
Transit[c]	10,548	10,654	11,332	11,156	11,506
Class I rail:					
Freight cars	1,423,921	1,168,114	658,902	583,486	575,604
Locomotives	27,077	28,094	18,835	18,812	20,261
Other freight cars	360,260	542,713	553,359	635,441	740,063
Nonself-propelled vessels[d,e]	19,377	31,662	31,209	31,360	33,509
Self-propelled vessels[d,e]	6,455	7,126	8,236	8,281	8,523
Oceangoing ships[e] *(1,000 gross tons and over)*	1,579	864	636	509	470
Recreational boats	7,400,000	8,577,857	10,996,253	11,734,710	12,565,930

[a] In July 1997, the U.S. Department of Transportation, Federal Highway Administration, reassigned some vehicles from "passenger car" to "other 2-axle, 4-tire."

[b] Includes municipally owned transit, commercial, federal, and school buses.

[c] Includes light and heavy rail only.

[d] See glossary, page 29.

[e] U.S. flag vessels.

Key: N = data do not exist; P = preliminary; R = revised.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000* (Washington, DC: In press), table 1-9.

Table 8
Vehicle-Miles
(Millions)

Mode	1970	1980	1990	1995	1999
Air carriers	2,068	2,523	3,963	4,629	5,309
General aviation	3,207	5,204	4,830	3,795	U
Passenger cars[R]	916,700	1,111,596	1,408,286	1,428,497	1,569,270
Motorcycles[R]	2,979	10,214	9,557	9,797	10,584
Other 2-axle, 4-tire vehicles[a,R]	123,286	290,935	574,571	790,029	901,121
Trucks:					
Single-unit[R]	27,081	39,813	51,901	62,705	70,311
Combination[R]	35,134	68,678	94,341	115,451	132,386
Buses[b,R]	4,544	6,059	5,726	6,420	7,663
Other[c]	N	15	[R]326	[R]547	U
Rail:					
Transit[d]	441	403	561	572	U
Commuter	N	179	213	238	U
Class I freight[e]	29,890	29,277	26,159	30,383	33,851
Intercity/Amtrak[e,f]	690	235	301	292	U

[a] In July 1997, the U.S. Department of Transportation, Federal Highway Administration, reassigned some vehicle-miles from "passenger car" to "other 2-axle, 4-tire."
[b] Includes municipally owned transit, commercial, federal, and school buses.
[c] Includes demand responsive, ferry boat, and other transit not specified; 1980 data include "other transit" only.
[d] Includes light and heavy rail only.
[e] Car-miles
[f] Fiscal year data. Amtrak began operations in 1971.
Key: N = data do not exist; R = revised; U = unavailable.

Sources: U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), *National Transportation Statistics 2000* (Washington, DC: In press), table 1–29; USDOT, BTS, Office of Airline Information, *Air Carrier Traffic Statistics* (Washington, DC: 2000); USDOT, Federal Highway Administration, *Highway Statistics 1999* (Washington, DC: 2000); and Association of American Railroads, *Railroad Facts, 1999* (Washington, DC: 2000).

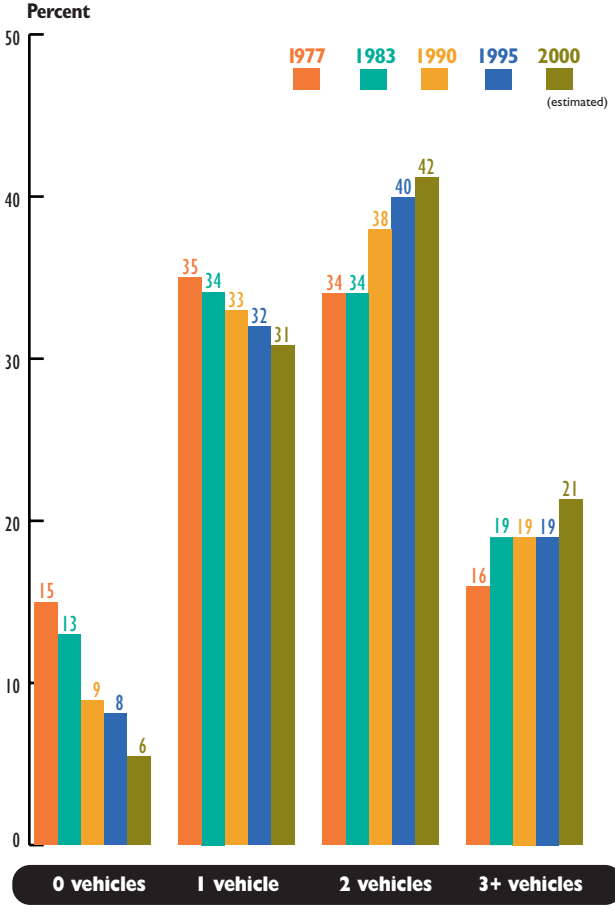
Table 9
Passenger-Miles
(Millions)

Mode	1970	1980	1990	1995	1999
Air carriers[R]	108,442	204,368	345,873	403,888	487,906
General aviation	9,100	14,700	13,000	[R]10,800	U
Passenger cars[R]	1,750,897	2,011,989	2,281,391	2,271,310	2,495,140
Motorcycles[a,R]	3,277	12,257	12,424	11,560	11,642
Other 2-axle, 4-tire vehicles[R]	225,613	520,774	999,754	1,338,135	1,432,782
Trucks					
Single-unit[R]	27,081	39,813	51,901	62,705	70,311
Combination[R]	35,134	68,678	94,341	115,451	132,386
Buses[b,R]	N	N	121,398	136,104	162,466
Other[c]	N	390	841	1,140	U
Rail:					
Transit[d,R]	N	10,939	12,046	11,419	U
Commuter[R]	4,592	6,516	7,082	8,244	U
Intercity/Amtrak[e,R]	6,179	4,503	6,057	5,545	5,330

[a] In July 1997, the U.S. Department of Transportation, Federal Highway Administration, reassigned some vehicles from "passenger car" to "other 2-axle, 4-tire."
[b] Includes municipally owned transit, commercial, federal, and school buses.
[c] Includes demand responsive, ferry boat, and other transit not specified; 1980 data include ferry boat and "other transit" only.
[d] Includes light and heavy rail only.
[e] Fiscal year data. Amtrak began operations in 1971.
Key: N = data do not exist; R = revised; U = unavailable.

Sources: U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), *National Transportation Statistics 2000* (Washington, DC: In press), table 1–31; USDOT, BTS, Office of Airline Information, *Air Carrier Traffic Statistics* (Washington, DC: 2000); USDOT, Federal Highway Administration, *Highway Statistics 1999* (Washington, DC: 2000); and Association of American Railroads, *Railroad Facts, 1999* (Washington, DC: 2000).

Figure 3
Households by Number of Vehicles



Sources: U.S. Department of Transportation (USDOT), Federal Highway Administration, *Nationwide Personal Transportation Survey, Our Nation's Travel* (Washington, DC: 1997. 2000 estimate: USDOT, Bureau of Transportation Statistics, based on linear regressions using data from 1977, 1983, 1990, and 1995 Nationwide Personal Transportation Survey results.

Table 10

Top 20 U.S. Passenger Airports

(Thousands of enplaned passengers on large, certificated air carriers)

1999			1989		
Rank	Airport	Total enplaned passengers	Rank	Total enplaned passengers	% change 1989–99
1	Atlanta (Hartsfield), GA	37,224	3	20,398	82
2	Chicago (O'Hare), IL	31,657	1	25,664	23
3	Dallas/Ft. Worth, TX	27,593	2	22,623	22
4	Los Angeles, CA	24,024	4	18,583	29
5	Denver, CO	17,493	6	12,320	42
6	Detroit (Wayne Co.), MI	16,565	11	9,739	70
7	San Francisco, CA	16,541	5	13,326	24
8	Phoenix (Sky Harbor), AZ	16,083	8	10,166	58
9	Minneapolis, MN	15,390	16	8,460	82
10	Las Vegas (McCarran), NV	15,361	21	7,027	119
11	St. Louis (Lambert-St. Louis), MO	14,930	13	9,396	59
12	Newark, NJ	14,905	10	9,822	52
13	Houston (Intercontinental), TX	14,735	20	7,030	110
14	Seattle, WA	13,062	19	7,060	85
15	Miami, FL	12,721	15	8,591	48
16	Orlando, FL	12,539	18	7,373	70
17	Boston (Logan), MA	11,078	12	9,661	15
18	New York (LaGuardia), NY	10,780	7	12,320	–12
19	Philadelphia, PA	10,342	24	6,247	66
20	New York (John F. Kennedy), NY	10,138	9	10,081	1
	Top 20 airports	**343,161**		**235,887**	**51.6**

Note: Numbers may not add to totals due to rounding.

Sources: **Total enplaned passengers:** 1989—U.S. Department of Transportation (USDOT), Federal Aviation Administration (FAA) and Research and Special Programs Administration, *Airport Activity Statistics of Certificated Route Air Carriers, 12 Months Ending December 31, 1989* (Washington, DC: 1990), *table 1*. 1999—USDOT, Bureau of Transportation Statistics (BTS), *Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 1999* (Washington, DC: In press). **Airport ranking:** 1989—USDOT, FAA, *FAA Statistical Handbook, Calendar Year 1989* (Washington, DC: 1989), table 4.11. 1999–USDOT, BTS, *Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 1999* (Washington, DC: In press).

Table 11

U.S.-Canadian Border Land-Passenger Gateways: 1999

Land gateway	Entering the U.S.
All U.S.-Canadian land gateways	
All personal vehicles	34,519,136
All personal vehicle passengers	87,691,325
All buses	181,581
All bus passengers	4,805,421
All train passengers	183,728
All pedestrians	586,765
Personal vehicles—top 5 gateways	
Detroit, MI	8,919,145
Buffalo-Niagara Falls, NY	7,441,950
Blaine, WA	3,312,775
Port Huron, MI	2,150,304
Calais, ME	1,427,853
Personal vehicle passengers—top 5 gateways	
Detroit, MI	19,382,235
Buffalo-Niagara Falls, NY	16,531,915
Blaine, WA	8,442,615
Sault Ste. Marie, MI	5,765,704
Port Huron, MI	4,308,549
Buses—top 5 gateways	
Buffalo-Niagara Falls, NY	61,507
Detroit, MI	39,455
Blaine, WA	20,478
Champlain-Rouses Pt., NY	9,570
Skagway, AK	8,996
Bus passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	1,795,942
Detroit, MI	624,974
Blaine, WA	469,659
Champlain-Rouses Pt., NY	281,021
Skagway, AK	137,717
Train passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	35,305
Blaine, WA	31,496
Port Huron, MI	28,795
Skagway, AK	28,166
Champlain-Rouses Pt., NY	25,618
Pedestrians—top 5 gateways	
Buffalo-Niagara Falls, NY	305,775
Calais, ME	51,003
Sumas, WA	35,941
Portland, ME[a]	29,883
International Falls-Ranier, MN	24,733

[a]Pedestrian/ferry combination crossing.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, 2000, based on U.S. Department of the Treasury, U.S. Customs Service, Office of Field Operations, Operations Management database, 1999.

Table 12

U.S.-Mexican Border Land-Passenger Gateways: 1999

Land gateway	Entering the U.S.
All U.S.-Mexican gateways	
All personal vehicles	83,638,656
All personal vehicle passengers	242,613,249
All buses	295,429
All bus passengers	3,495,414
All train passengers	16,535
All pedestrians	48,186,155
Personal vehicles—top 5 gateways	
El Paso, TX	16,001,926
San Ysidro, CA	15,269,561
Hildago, TX	8,319,581
Brownsville, TX	7,579,231
Laredo, TX	6,894,982
Personal vehicle passengers—top 5 gateways	
El Paso, TX	46,397,134
San Ysidro, CA	33,593,034
Hildago, TX	29,118,835
Calexico, CA	20,372,381
Brownsville, TX	18,948,078
Buses—top 5 gateways	
San Ysidro, CA	108,025
Hildago, TX	61,550
Otay Mesa, CA	46,142
Laredo, TX	31,371
Brownsville, TX	12,702
Bus passengers—top 5 gateways	
Hildago, TX	1,384,270
San Ysidro, CA	854,098
Laredo, TX	379,425
Otay Mesa, CA	312,342
Brownsville, TX	145,298
Train passengers—top 5 gateways	
Tecate, CA	7,392
Eagle Pass, TX	5,756
Calexico East, CA	1,743
Nogales, AZ	900
San Ysidro, CA	384
Pedestrians—top 5 gateways	
Calexico, CA	8,099,253
San Ysidro, CA	7,558,174
Laredo, TX	6,764,293
El Paso, TX	5,666,477
Nogales, AZ	4,806,076

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, 2000, based on U.S. Department of the Treasury, U.S. Customs Service, Office of Field Operations, Operations Management database, 1999.

Table 13
Top 20 U.S. Water Ports
(Million tons)

1999			1990		
Rank	Port	Total tons	Rank	Total tons	% change 1990–99
1	South Louisiana, LA	214.2	1	194.2	10.3
2	Houston, TX	158.8	3	126.2	25.9
3	New York, NY & NJ	133.7	2	140.0	–4.5
4	New Orleans, LA	87.5	6	62.7	39.5
5	Corpus Christi, TX	78.1	7	62.0	25.9
6	Beaumont, TX	69.5	23	26.7	160.0
7	Baton Rouge, LA	63.7	5	78.1	18.5
8	Plaquemine, LA	62.4	8	56.6	10.3
9	Long Beach, CA	60.9	10	52.4	16.2
10	Valdez, AK	53.4	4	96.0	–44.3
11	Pittsburgh, PA	52.9	19	35.5	49.0
12	Tampa, FL	51.5	11	51.6	–0.2
13	Lake Charles, LA	50.8	16	40.9	24.3
14	Texas City, TX	49.5	12	48.1	3.0
15	Mobile, AL	45.5	15	41.1	10.6
16	Duluth-Superior, MN & WI	42.3	17	40.8	3.8
17	Los Angeles, CA	42.3	13	46.4	–8.7
19	Norfolk Harbor, VA	40.8	9	53.7	–24.1
18	Philadelphia, PA	39.3	14	41.8	–6.0
20	Baltimore, MD	37.3	18	39.5	–5.7
	Total top 20	**1,434.4**		**1,334.4**	**7.5**

Sources: 1990—U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 1990, Part 5, National Summaries* (New Orleans, LA: 1993), table 5-2. 1999—Ibid. *Waterborne Commerce of the United States, Calendar Year 1999, Part 5, National Summaries*, personal communication.

Table 14

Domestic- and Export-Bound Freight Shipments within the United States: 1997

Mode	Value		Tons		Ton-miles	
	Billions of 1997 $	Percent	Millions	Percent	Billions	Percent
Parcel, postal, courier services	856	10.0	34	0.2	18	0.5
Truck (for-hire, private, both)	5,336	62.3	8,836	59.7	1,109	28.8
Rail (includes truck and rail)	436	5.1	1,676	11.3	1,132	29.4
Water	762	8.9	2,220	15.0	726	18.9
Air (includes truck and air)	653	7.6	10	0.1	6	0.2
Pipeline	231	2.7	1,448	9.8	656	17.0
Other and unknown modes	293	3.4	576	3.9	204	5.3
Total [a]	**$8,567**	**100.0**	**14,800**	**100.0**	**3,851**	**100.0**

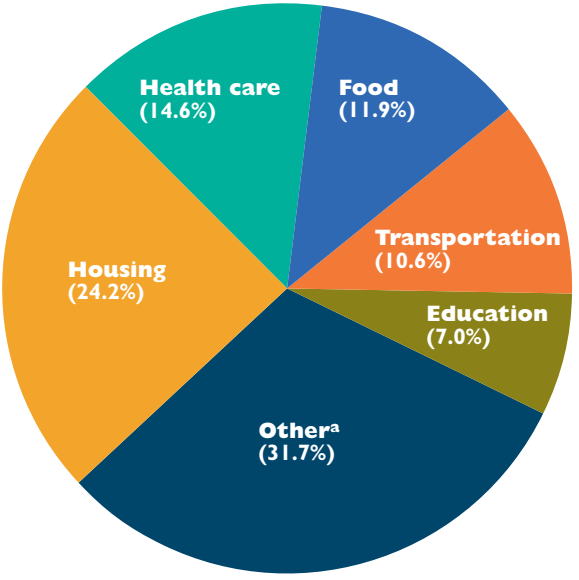
[a] Data from the Commodity Flow Survey (CFS), plus Bureau of Transportation Statistics estimates to fill in CFS gaps. The estimates cover out-of-scope farm-based truck shipments, truck and rail imports from Canada and Mexico, and air cargo and water imports and exports.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, *1997 Commodity Flow Survey: United States* (Washington, DC: December 1999).

4 Transportation and the Economy

Transportation is a major sector of the U.S. economy. It moves people and goods, employs millions of workers, generates revenue, and consumes resources and services produced by other sectors of the economy. In 1999, transportation-related goods and services contributed $980 billion to a $9.26 trillion U.S. Gross Domestic Product.

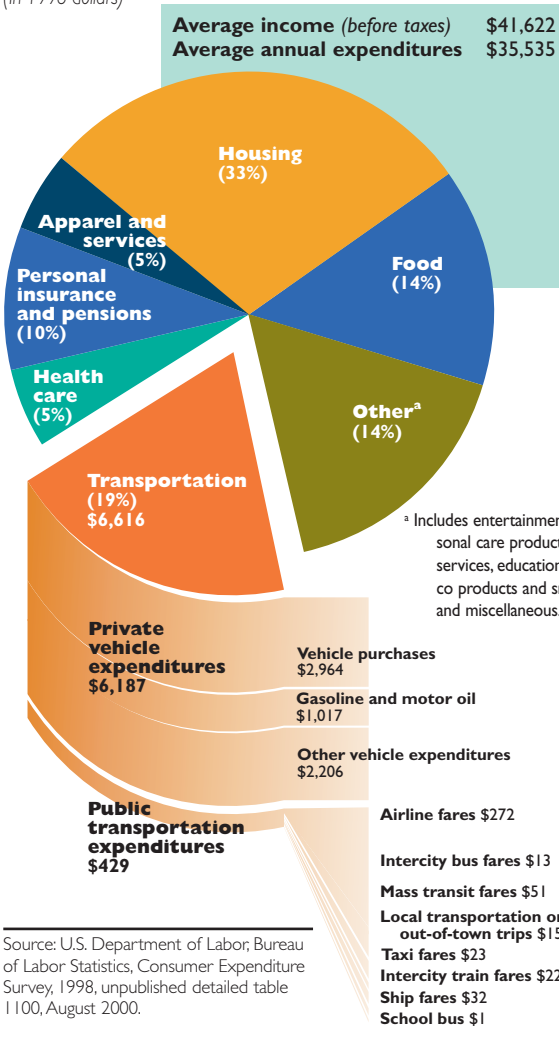
Figure 4
U.S. Gross Domestic Product by Major Societal Function: 1999



[a] Includes all other categories, such as entertainment, products and services, personal care, premiums for personal insurance, and payments to pension plans.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, derived from U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (Washington, DC: July 2000).

Figure 5
Average Household Expenditures by Major Category: 1998
(In 1998 dollars)



Source: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey, 1998, unpublished detailed table 1100, August 2000.

Table 15

Top Foreign Trade Freight Gateways by Value of Shipments: 1999

(Billions of 1999 U.S. dollars)

Rank	Gateway	Exports	Imports	Total
1	JFK International, NY (a)	44.4	60.6	105.0
2	Port of Detroit, MI (l)	48.5	44.1	92.6
3	Port of Long Beach, CA (w)	14.3	75.2	89.5
4	Port of Los Angeles, CA (w)	14.1	69.1	83.2
5	Port of New York, NY and NJ (w)	17.9	54.2	72.1
6	San Francisco Airport, CA (a)	32.1	39.8	71.9
7	Port of Buffalo-Niagra Falls, NY (l)	35.2	35.6	70.8
8	Los Angeles International Airport, CA (a)	35.9	31.3	67.2
9	Port of Laredo, TX (l)	29.8	34.9	64.7
10	Port of Huron, MI (l)	17.3	32.4	49.7
11	Chicago, IL (a)	18.1	21.5	39.6
12	Port of Houston, TX (w)	16.6	17.3	33.9
13	Port of El Paso, TX (l)	13.8	19.0	32.8
14	Port of Seattle, WA (w)	5.5	26.2	31.7
15	Port of Charleston, SC (w)	11.2	18.3	29.5
16	Port of Oakland, CA (w)	10.1	14.9	25.0
17	Port of Norfolk, VA (w)	11.4	13.3	24.7
18	New Orleans, LA (a)	10.4	12.8	23.2
19	Miami International Airport, FL (a)	15.1	8.0	23.1
20	Anchorage, AK (a)	6.3	15.4	21.7

Key: a = air; l = land; w = water.

Notes: Trade excludes low-value shipments (imports valued at less than $1,250 and exports valued at less than $2,500). Air: Includes a low level (generally less than 2%–3% of the total value) of small user-fee airports located in the same region. Air gateways not identified by airport name (e.g., Chicago, IL) include major airport(s) in that geographic area in addition to small regional airports. Due to Census Bureau confidentiality regulations, courier operations are included in the airport totals for JFK, New Orleans, Los Angeles, Chicago, Miami, and Anchorage. Numbers may not add to totals due to rounding.

Sources: Air—U.S. Department of Commerce, Census Bureau, Foreign Trade Division, special tabulation, November 2000. Water—U.S. Department of Transportation (USDOT), Maritime Administration, Office of Statistical and Economic Analysis, *U.S. Waterborne Exports and General Imports: Annual 1998* (Washington, DC: July 2000); and personal communication, Dec. 20, 2000. Land—USDOT, Bureau of Transportation Statistics, Transborder Surface Freight Data, 2000.

Table 16
Value of U.S. International Merchandise Trade by Mode of Transportation: 1999
(Millions of current U.S. dollars)

	Exports	Modal %	Imports	Modal %	Total trade	Total modal %
Total	**692,821**	**100.0**	**1,024,766**	**100.0**	**1,717,587**	**100.0**
Water	182,211	26.3	449,344	43.8	631,555	36.8
Air	236,649	34.2	258,883	25.3	495,533	28.9
Truck	190,064	27.4	195,349	19.1	385,413	22.4
Rail	17,466	2.5	60,948	5.9	78,414	4.6
Pipeline	258	0.04	12,058	1.2	12,316	0.7
Other, unknown & miscellaneous	66,173	9.6	48,184	4.7	114,356	6.7

Notes:
Water: Excludes intransit data (merchandise shipped from one foreign country to another via a U.S. water port).
Imports: Excludes imports valued at less than $1,250. Import value is based on U.S. general imports, customs value basis.
Exports: Excludes exports valued at less than $2,500. Export value is FAS (free alongside ship) and represents the value of exports at the port of export, including the transaction price and inland freight, insurance, and other charges.

Sources: Compiled by U.S. Department of Transportation, Bureau of Transportation Statistics, November 2000. Total, water, and air data—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, *U.S. Exports of Merchandise,* CD-ROM and *U.S. Imports of Merchandise,* CD-ROM, December 1999. Truck, rail, pipeline, other and unknown data—U.S. Department of Transportation, Bureau of Transportation Statistics, Transborder Surface Freight Data 1999, and special tabulations.

Table 17

Employment in For-Hire Transportation and Selected Transportation-Related Industries[a]

(Thousands)

	1970	1980	1990	1995	1999
Total transportation and related industries employment	6,000	8,536	10,133	10,527	10,843
For-hire transport sector total	**R2,726**	**3,175**	**R3,716**	**R4,083**	**4,425**
Air	352	453	968	1,068	1,237
Local and inter-urban passenger transit	R280	265	338	R420	481
Pipeline	b50	236	223	194	U
Railroad	634	532	279	238	230
Transportation services	115	198	336	401	469
Trucking and warehousing	1,083	1,280	1,395	1,587	1,813
Water	212	211	177	175	181
Equipment manufacturing total	**1,949**	**R1,995**	**2,073**	**1,870**	**1,932**
Other related industries total	**613**	**2,694**	**R3,672**	**3,930**	**4,386**
Automotive and home supply stores	U	261	337	369	405
Automotive repair services and parking; gasoline service stations	c613	1,132	1,561	1,669	1,887
Highway and street construction	U	U	239	228	264
Motor vehicles/parts wholesalers/retailers and other automotive retailers	U	1,301	R1,535	1,664	1,831
Government employment[d] total	**711**	**671**	**673**	**644**	**U**

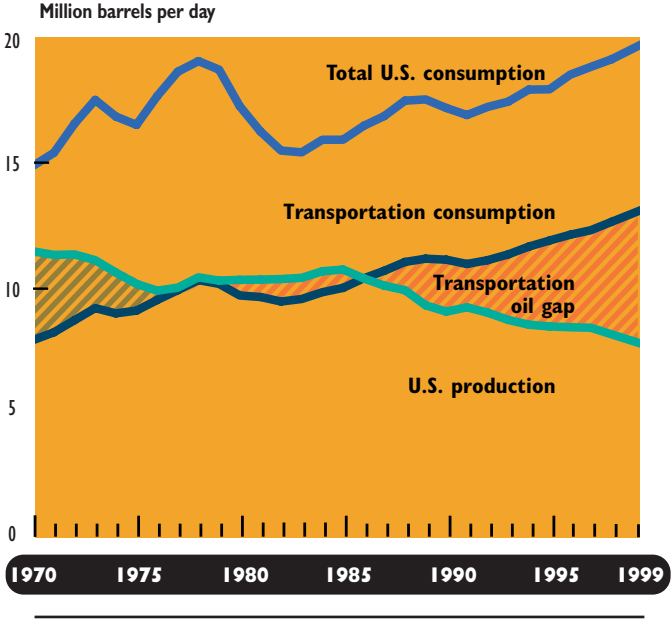
[a] Annual averages.
[b] Includes liquid and natural gas transmission pipelines.
[c] Includes only gasoline service stations.
[d] Data are for fiscal years and include permanent and temporary civilian and military personnel.
Key: R = revised; U = unavailable.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics* 2000 (Washington, DC: In press), table 3–19.

5 Transportation, Energy, and the Environment

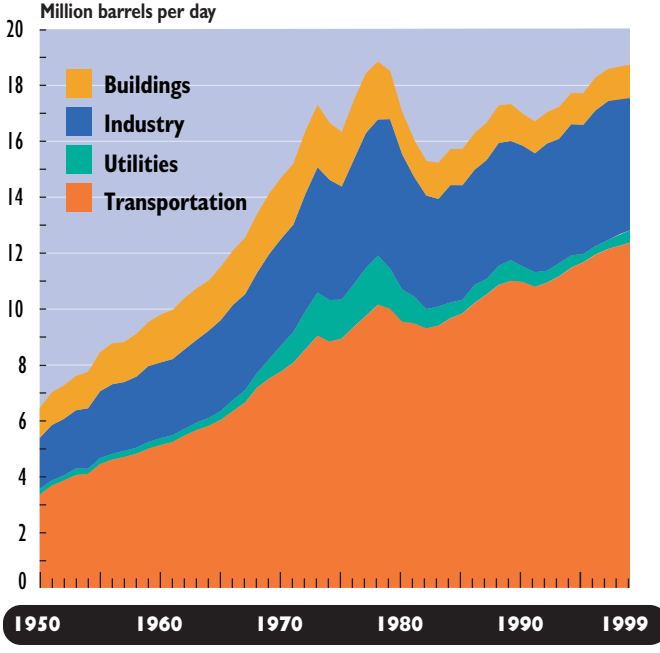
Serious energy and environmental issues are associated with transportation. The U.S. transportation sector remains almost entirely dependent on petroleum as an energy source and more than 50 percent of the petroleum used in the United States must now be imported. Petroleum use is responsible for most of the environmental problems resulting from transportation, including carbon dioxide emissions that may contribute to global climate change.

Figure 6
U.S. Petroleum Production and Consumption: 1970–99



Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 1999* (Washington, DC: July 2000), table 5.1.

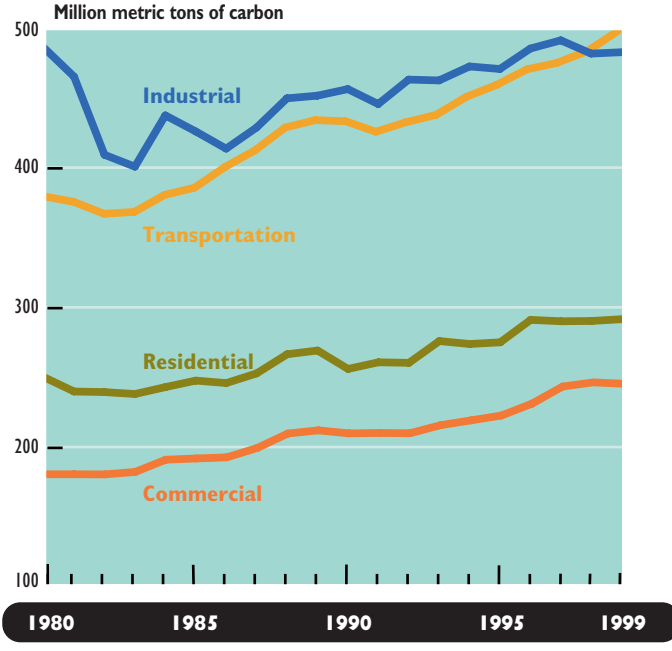
Figure 7
Transportation's Share of U.S. Petroleum Use: 1950–99



Note: 1998 and 1999 data are estimates.

Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2000* (Washington, DC: July 2000), tables 5.12a & b.

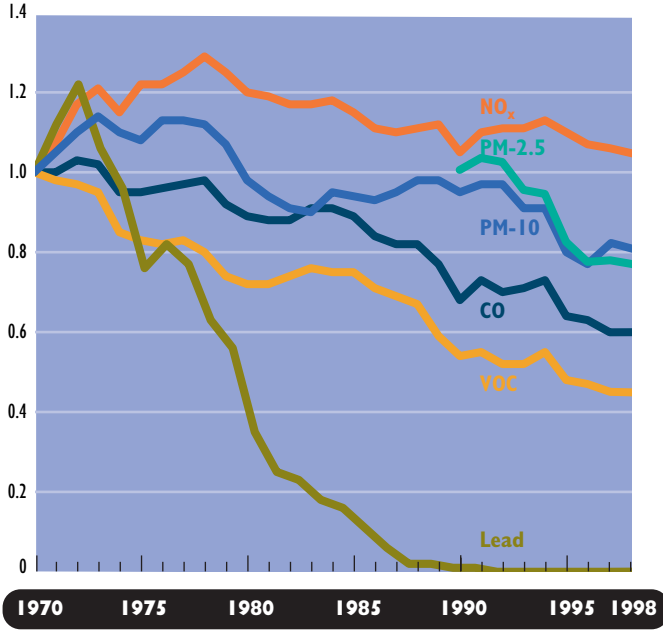
Figure 8
U.S. Carbon Dioxide Emissions from Energy Use: 1980–99



Note: One ton of carbon equals 3.667 tons of carbon dioxide gas. Electric utility emissions are spread across end-user sections.

Sources: U.S. Department of Energy (USDOE), Energy Information Administration (EIA), *Emissions of Greenhouse Gases in the United States 1999*, DOE/EIA-0573(99) (Washington, DC: October 2000), table 5; and USDOE, EIA, *Annual Energy Review* 1999, DOE/EIA-0384(99) (Washington, DC: July 2000), table 12.2.

Figure 9
Index of Key Air Pollutant Emissions from U.S. Transportation: 1970–98
Index: 1970 = 1.0, 1990 = 1.0 for PM-2.5



Key: NO_x = oxides of nitrogen; PM-10 and PM-2.5 = airborne particulates of less than 10 microns or 2.5 microns, respectively; CO = carbon monoxide; VOC = volatile organic compounds.

Note: Transportation emissions include all onroad mobile sources and the following nonroad mobile sources: recreational vehicles and boats, airport service equipment, aircraft, commercial marine vessels, and railroads. Other nonroad sources, such as lawnmowers and farming equipment, are not included. Lead estimates include onroad mobile sources only.

Source: U.S. Environmental Protection Agency, Office of Air and Radiation, Air Quality Planning and Standards, National Air Quality and Emission Trends, 1900–1998, available at www.epa.gov/ttn/chief/trends98/emtrnd/html, as of December 2000.

Glossary

Air carrier—Certificated provider of scheduled and nonscheduled services.

Class I railroad—A freight railroad with an annual gross operating revenue in excess of $250 million (based on 1991 dollars).

Commuter rail—Urban/suburban passenger train service for short-distance travel between a central city and adjacent suburbs run on tracks of a traditional railroad system. Does not include heavy- or light-rail service.

Directional route-miles—The sum of the mileage in each direction over which transit vehicles travel while in revenue service.

Fatality—For purposes of compiling DOT safety statistics, any injury that results in death within 30 days of a transportation crash, accident, or incident.

General aviation—All civil aviation operations other than those air carriers holding a Certificate of Public Convenience and Necessity. Types of aircraft used in general aviation range from corporate, multi-engine jets piloted by a professional crew to amateur-built, single-engine, piston-driven, acrobatic planes.

Heavy-rail transit—High-speed passenger rail operated on rights-of-way that exclude all other vehicles and pedestrians.

Hub—A geographic area based on the percentage of total enplaned passengers in that area. A hub may have more than one airport in it. This definition should not be confused with the definition used by airlines in describing their "hub and spoke" route structures.

Light-rail transit—Urban transit rail operated on a reserved right-of-way that may be crossed by roads used by motor vehicles and pedestrians.

Nonself-propelled vessels—Includes dry cargo and tank barges and railroad car floats that operate in U.S. ports and waterways.

Other 2-axle, 4-tire vehicles—Includes vans, pickup trucks, and sport utility vehicles. Does not include passenger cars.

Passenger-mile—One passenger transported one mile. One vehicle traveling 3 miles carrying 5 passengers generates 15 passenger-miles.

Personal-use vehicles—Cars, pickup trucks, or vans; other small trucks; rental cars, trucks, or vans; recreational vehicles or motor homes; or motorcycles or mopeds.

Self-propelled vessels—Includes dry cargo vessels, tankers, and offshore supply vessels, tugboats, pushboats, and passenger vessels, such as excursion/sightseeing boats, combination passenger and dry cargo vessels, and ferries.

Ton-miles—A unit of measure equal to the movement of one ton over one mile.

Truck:

Single unit—A large truck on a single frame with at least 2 axles and 6 tires. Excludes "other 2-axle, 4-tire vehicles" noted above.

Combination—A power unit (truck or truck tractor) and one or more trailing units.

Vehicle-mile—One vehicle traveling one mile.

Statistics published in this *Pocket Guide to Transportation* come from many different sources. Some statistics are based on samples and are subject to sampling variability. Statistics may also be subject to omissions and errors in reporting, recording, and processing.

U.S. Department of Transportation