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Pocket Guide to Transportation

2003

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Pocket Guide to Transportation

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Contents

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

Context	1980	2001
Resident population (thous.)	226,542	284,797
Total area (thous. sq. mi.)[a]	3,619	3,718 (1990)
Total civilian labor force (thous.)	106,940	141,815
Real gross domestic product[b]	$4.9 trillion	$9.2 trillion
Median household income[b,d]	$32,661 (1984)	$38,426
Average household income[b,c,d]	$34,189 (1984)	$43,362
Average household expenditures[b,c,d]	$32,020 (1984)	$36,070
Number of households (thous.)	80,776	R105,480 (2000)
Average life expectancy (years)	73.7	P76.9 (2000)

[a] 1980 data include the Great Lakes and inland and coastal water. 1990 data include inland water only. The Census Bureau tabulates area data for the decennial census years only.

[b] Expressed in 1996 chained dollars (see Glossary for definition).

[c] Earliest year available is 1984. [d] BTS computations, Nov. 15, 2002.

Key: P = preliminary data; R = revised.

Sources: Population, area, number of households—U.S. Department of Commerce (USDOC), Census Bureau, *Statistical Abstract of United States: 2000*, available at http://quickfacts.census.gov/qfd/states/00000.html; GDP—USDOC, BEA; median household income—USDOC, Census, available at www.census.gov/hhes/www/income/histinc/ie1.html; average household income and expenditures, employment—U.S. Department of Labor, BLS, available at http://www.bls.gov/cex; life expectancy—Centers for Disease Control and Prevention, available at www.cdc.gov.

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 expanding system to get to work, embark on vacations, conduct business, and ship goods within the United States and abroad. This system links regions and connects small and large cities and urban and rural areas.

Table 1
The Transportation Network: 2001

Mode	Components
Highway	***Public roads***
	46,717 miles of Interstate highway
	114,700 miles of other National Highway System roads
	3,801,849 miles of other roads
Air	***Public-use airports***
	5,315 airports
	Airports serving large certificated carriers
	29 large hub areas (72 airports), 445 million enplaned passengers (see Glossary for "hub" definition)
	31 medium hub areas (52 airports), 95 million enplaned passengers
	55 small hub areas (72 airports), 36 million enplaned passengers
	598 nonhub areas (622 airports), 16 million enplaned passengers
Rail	***Miles of railroad operated***[a]
	97,631 miles by Class I freight railroads in the United States[b]
	17,439 miles by regional freight railroads
	27,563 miles by local freight railroads
	22,741 miles by Amtrak (passenger) (2000)

Mode	Components	
Urban transit	***Directional route-miles*[c]**	
	Bus: 160,506 (2000)	
	Trolley bus: 471	
	Commuter rail: 5,209	
	Heavy rail: 1,572	
	Light rail: 892	
	Stations	
	Commuter rail: 1,155	
	Heavy rail: 1,019	
	Light rail: 628	
Water *(2000)*	26,000 miles of navigable waterways	
	Ferry routes: 487	
	***Commercial waterway facilities*[d]**	
	Great Lakes:	611 deep-draft
		143 shallow-draft
	Inland:	2,367 shallow-draft
	Ocean:	4,079 deep-draft
		2,109 shallow-draft
	Locks:	276
Pipeline	***Oil***	
	Crude lines: 76,658 miles of pipe	
	Product lines: 87,123 miles of pipe	
	Gas (2000)	
	Transmission: 250,000 miles of pipe	
	Distribution: 1,110,000 miles of pipe	

[a] Amtrak mileage is included in rail categories, except for track they own in the Northeast Corridor and Michigan.
[b] There are also 311 miles of railroad operated by U.S. Class I freight railroads in Canada and Mexico.
[c] Directly operated service. Does not include contracted service.
[d] See Glossary for definition of commercial waterway facilites.

Sources: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 1-1; Association of American Railroads, *Railroad Facts, 2002* (Washington, DC: 2002); USDOT, Federal Highway Administration, *Highway Statistics 2001* (Washington, DC: 2002); *Oil & Gas Journal*, Sept. 16, 2002; USDOT, Federal Transit Administration, personal communication, special calculations from National Transit Database, Nov. 18, 2002; USDOT, BTS, *Airport Activity Statistics of Certificated Air Carriers, Summary Tables, 12 Months Ending Dec. 31, 2001* (Washington, DC: 2003).

2 Transportation Safety

The safety of the traveling public is of major concern for the U.S. Department of Transportation. Although progress has been made in reducing fatalities, roughly 45 percent of U.S. deaths due to unintentional injury involve transportation. Roughly 95 percent of these transportation fatalities arise from motor vehicle crashes.

Table 2
Fatalities by Transportation Mode

Mode	1970	1980	1990	2000	2001
Large air carrier[a]	146	1	39	92	531
Commuter air carrier[a]	N	37	R7	5	13
On-demand air taxi[a]	N	105	51	71	60
General aviation[a]	1,310	1,239	767	592	553
Highway[b]	52,627	51,091	44,599	R41,945	42,116
Railroad[c]	785	584	599	512	548
Transit[d]	N	N	339	295	U
Commercial ship					
Vessel	178	206	85	32	U
Nonvessel[e]	420	281	101	87	U
Recreational boating	1,418	1,360	865	701	U
Gas and hazardous liquid pipeline	30	19	9	38	7

[a] Includes people on planes and on the ground. For large air carriers, fatalities resulting from the Sept. 11, 2001, terrorist attacks include only those persons onboard aircraft.

[b] Includes occupants, nonoccupants, and motor vehicle fatalities at railroad crossings.

[c] 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.

[d] Fatalities resulting from all reportable incidents, not just accidents. Includes commuter rail, heavy rail, light rail, motorbus, demand-responsive, van pool, and automated guideway.

[e] 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; R = revised; U = unavailable.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 2-1.

Table 3
Distribution of Transportation Fatalities: 2000

Category	Number	Percent
Passenger car occupants	R20,699	46.7
Light-truck occupants	R11,526	26.0
Pedestrians struck by motor vehicles	R4,763	10.7
Motorcyclists	R2,897	6.5
Large-truck occupants	R754	1.7
Recreational boating	701	1.6
Pedalcyclists struck by motor vehicles	R693	1.6
General aviation	594	1.3
RR trespassers (excluding grade crossings)[a]	463	1.0
Unknown and other motor vehicle occupants	R450	1.0
Other nonoccupants struck by motor vehicles[b]	R141	0.32
Air carriers	92	0.21
Waterborne transportation (nonvessel)	87	0.20
Heavy rail transit (e.g., subway)	80	0.18
Air taxi	71	0.16
Grade crossings, not involving motor vehicles[c]	64	0.14
Private grade crossings, with motor vehicles	55	0.12
Waterborne transportation (vessel-related)	32	0.07
Light-rail transit	30	0.07
RR employees on duty and contractors	25	0.06
Bus occupants (school, intercity, and transit)	22	0.05
Gas distribution pipelines	22	0.05
RR-related, not otherwise specified	20	0.05
Gas transmission pipelines	15	0.03
Transit buses, not related to accidents[d]	8	0.02
Commuter air	5	0.01
Passengers on railroad trains	4	<0.01
Hazardous liquid pipelines	1	<0.01
Total[e]	**R44,314**	**100.0**
Other counts, redundant with above[f]		
Large-truck occupants and nonoccupants	5,282	
Public grade crossings, with motor vehicles	306	
Commuter rail (included in RR categories)	87	
Transit buses, accident-related	82	
Outside planes in crashes	13	
Demand-responsive transit (accident-related)	8	

[a] Includes fatalities outside trains. [b] Includes all nonoccupant fatalities except pedalcyclists and pedestrians. [c] Public grade-crossing fatalities involving motor vehicles are included in counts for motor vehicles. [d] Includes homicides and suicides. [e] Unless otherwise specified, includes fatalities outside the vehicle. [f] In the above, fatalities at grade crossings with motor vehicles are included under relevant motor vehicle modes. Commuter rail fatalities are counted under RR. 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.

Key: R = revised; RR = railroad.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 2-4.

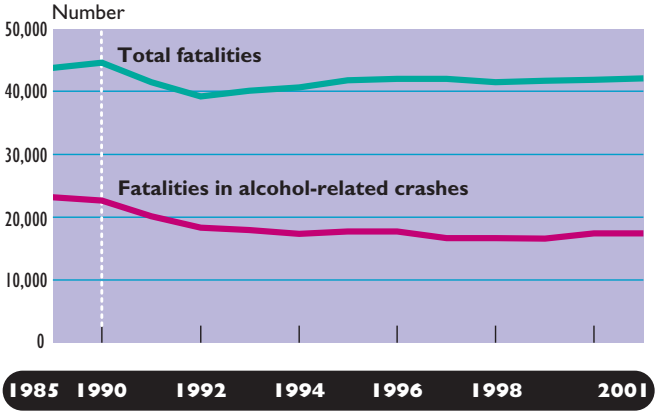
Table 4
Fatalities in Motor Vehicle Crashes by Number of Vehicles and Alcohol Involvement: 2001

Number of vehicles	Fatalities	Alcohol involvement	Percent
Occupants	**36,386**	**14,759**	**40.6**
Single-vehicle crashes	17,747	9,005	50.7
Two-vehicle crashes	15,578	4,748	30.5
More than two-vehicle crashes	3,061	1,006	32.9
Pedestrians	**4,882**	**2,369**	**48.5**
Single-vehicle crashes	4,461	2,117	47.5
Multiple-vehicle crashes	421	252	59.9
Pedalcyclists	**728**	**281**	**38.6**
Single-vehicle crashes	705	268	38.0
Multiple-vehicle crashes	23	12	52.2
Others/unknown	**120**	**39**	**32.5**
Total	**42,116**	**17,448**	**41.4**

Note: A fatal crash is considered alcohol-related if either a driver or a nonmotorist had a measurable or estimated blood alcohol concentration of 0.01 grams per deciliter or above.

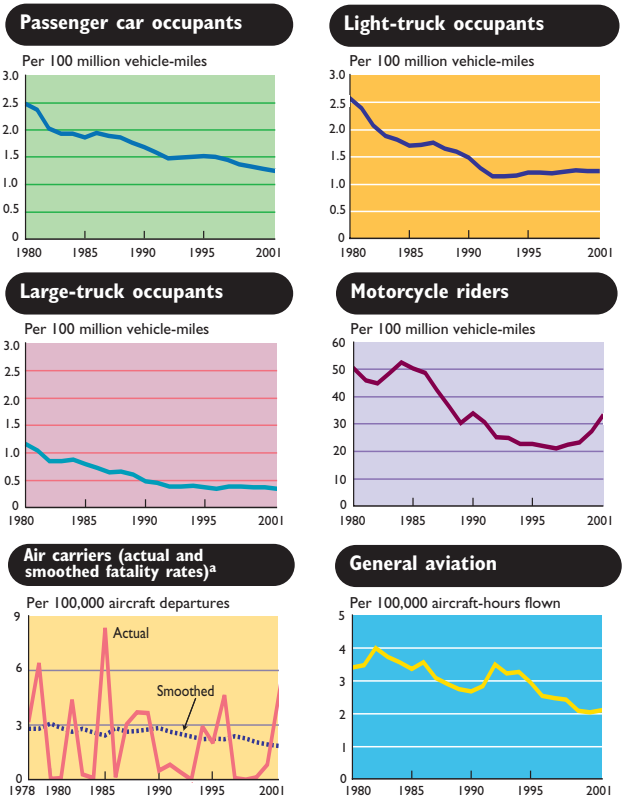
Source: USDOT, National Highway Traffic Safety Administration, personal communication, Sept. 10, 2002.

Figure 1
Fatalities in Alcohol-Related Motor Vehicle Crashes



Source: USDOT, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, Fatality Analysis Reporting System (FARS) database, personal communication, as of Sept. 10, 2002.

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. Departure data, and hence the denominator of the rates, are not strictly comparable between pre- and post-1977 eras.

For large air carriers, fatalities resulting from the Sept. 11, 2001, terrorist attacks include only those persons onboard aircraft.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), chapter 2.

Table 5
Injured Persons by Transportation Mode

Mode	1970	1980	1990	2000	2001
Air carrier[a]	107	19	29	R27	P16
Commuter air carrier[b]	N	14	11	R7	P4
On-demand air taxi[c]	N	43	36	R12	P23
General aviation[d]	715	681	409	R310	P322
Highway[e]	N	N	R3,230,666	R3,189,000	3,032,672
Railroad[f]	17,934	58,696	22,736	10,424	9,739
Transit[g]	N	N	54,556	56,697	U
Commercial ship Vessel accidents	105	180	175	125	U
Nonvessel accidents[h]	U	U	U	564	U
Recreational boating	780	2,650	3,822	4,355	U
Gas and hazardous liquid pipeline	254	192	76	81	46

[a] All scheduled and nonscheduled service operating under 14 CFR 121. Since Mar. 20, 1997, 14 CFR 121 includes only aircraft with 10 or more seats formerly operated under 14 CFR 135.

[b] All scheduled service operating under 14 CFR 135. Before Mar. 20, 1997, 14 CFR 135 applied to aircraft with 30 seats or less. Since Mar. 20, 1997, 14 CFR 135 includes only aircraft with less than 10 seats.

[c] Nonscheduled service operating under 14 CFR 135.

[d] All operations other than those operating under 14 CFR 121 and 14 CFR 135.

[e] Includes passenger car occupants, motorcyclists, light-duty and large truck occupants, bus occupants, pedestrians, pedalcyclists, occupants of unknown vehicle types, and other nonmotorists.

[f] Injuries resulting from train accidents, train and nontrain incidents, and occupational illness. Includes Amtrak.

[g] Injuries resulting from all reportable incidents, not just from accidents. Includes commuter rail, heavy rail, light rail, motorbus, demand-responsive, van pool, and automated guideway.

[h] Injuries unrelated to vessel accidents, e.g., an individual getting a cut while onboard a vessel.

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

Note: Each mode may use different reporting criteria for injuries.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 2-2.

3 Transportation Security

Ensuring security of all transportation modes, facilities, and the people who use them is a national priority. While much of the national focus since September 2001 has been on aircraft and airports, attention is also being directed at other modes; including rail, water, highways, and pipelines. The U.S. transportation sector remains almost entirely dependent on petroleum as an energy source and more than 55 percent of the petroleum used in the United States is now imported.

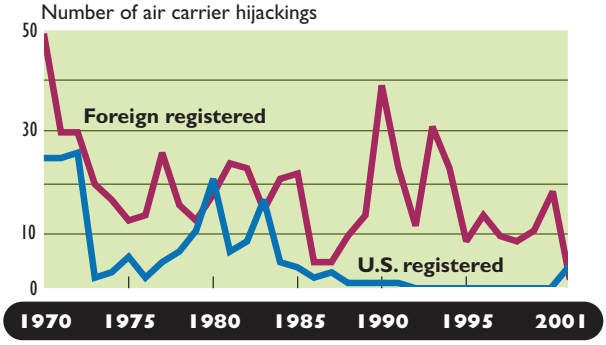
Table 6
Airline[a] Passenger Screening Results

	1985	1990	1995	2000	2001
Persons screened (millions)	993	1,145	1,263	1,812	1,320
Firearms detected	2,913	[R]2,549	2,390	1,937	1,071
Handguns	2,823	2,490	2,230	1,643	1,008
Long guns (rifles)	90	59	160	294	63
Persons arrested					
Carrying firearms/ explosives	1,310	1,336	1,194	600	362
Giving false information	42	18	68	61	90

[a] Includes operators with a U.S. Department of Transportation, Federal Aviation Administration operating certificate engaged in scheduled passenger or public charter passenger operations and airports at which these operations are conducted.

Sources:
1985—USDOT, Federal Aviation Administration (FAA), *Semiannual Report to Congress on the Effectiveness of the Civil Aviation Security Program, July 1–December 31, 1985* (Washington, DC: May 1986).
1990–2001—USDOT, FAA, Office of Civil Aviation Security Policy and Planning, *Annual Report to Congress on Civil Aviation Security* (Washington, DC: Annual issues), and personal communications, May 27, 1999, Mar. 29, 2000, Aug. 7, 2001, and Sept. 13, 2002.

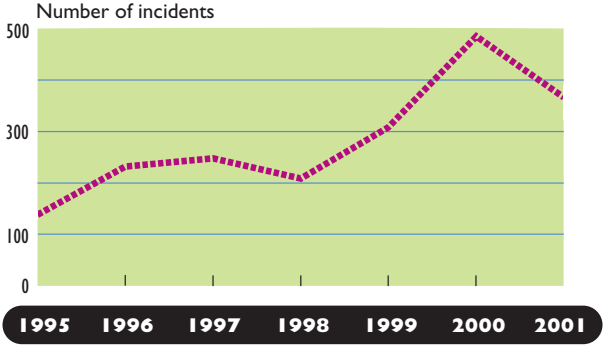
Figure 3
Worldwide Civil Aviation Hijackings



Note: There were no hijackings in the United States from 1992 through 2000.

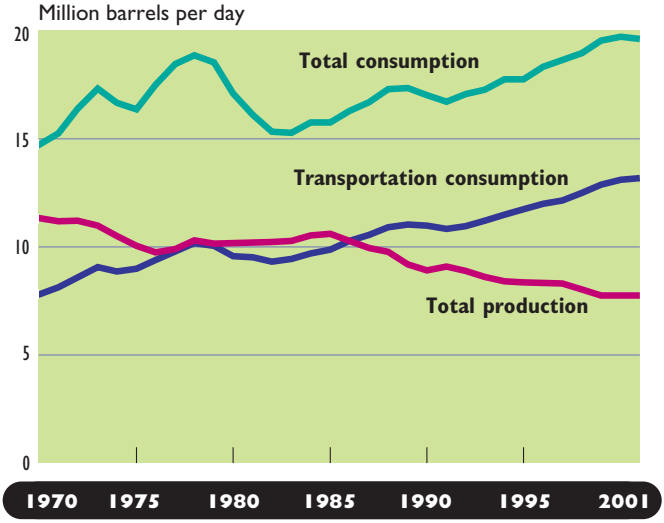
Source: USDOT, Transportation Security Administration, *Criminal Acts Against Civil Aviation*, available at http://www.tsadot.gov/briefing_room/pubs_reports/index.shtm, as of October, 2002.

Figure 4
International Piracy and Armed Robbery at Sea



Source: United Nations International Maritime Organization, Monthly Circulars and Annual Reports 1995–2002, available at http://www.imo.org, as of October 2002.

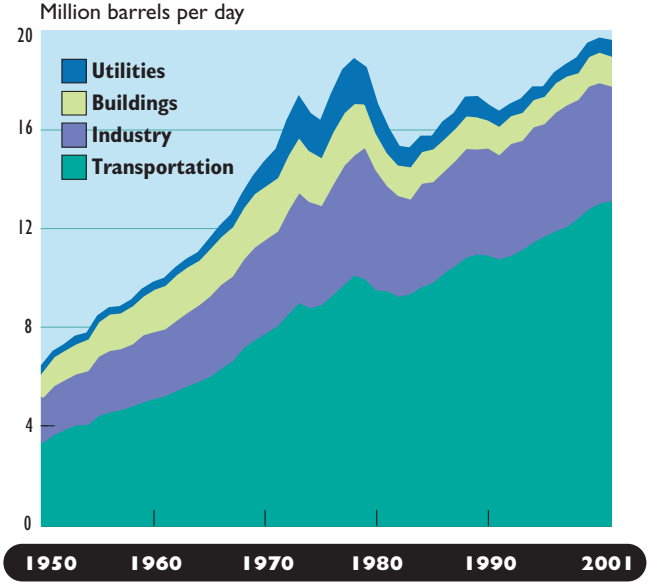
Figure 5
U.S. Petroleum Production and Consumption



Note: 2001 data are not final.

Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2001* (Washington, DC: October 2002), tables 5.1 and 5.12c.

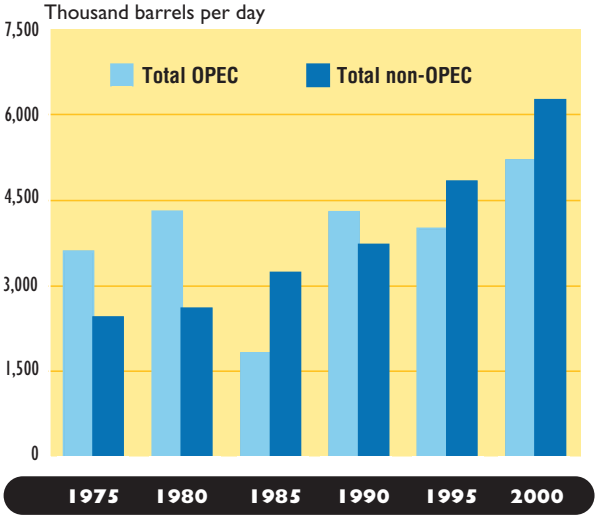
Figure 6
Transportation's Share of U.S. Petroleum Use



Note: Data through 1988 for utilities are for consumption at electric utilities only. Data from 1989 forward include consumption at independent power producers in addition to electric utilities and are preliminary numbers. 2001 data are not final.

Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2001* (Washington, DC: October 2002), table 5.12a–d.

Figure 7
U.S. Oil Imports



Key: OPEC = Organization of the Petroleum Exporting Countries (Algeria, Indonesia, Iran, Iraq Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela).

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review,* January 2000, tables 3.3d and 3.3h, available at http://www.eia.doe.gov/emeu/mer/, as of February 2002.

Table 7
Major Suppliers of U.S. Crude Oil and Petroleum Products
(Rank in 2000; thousand barrels per day, average)

	1975	1980	1985	1990	1995	2000
Canada	846	455	770	934	1,332	1,807
Saudi Arabia	715	1,261	168	1,339	1,344	1,572
Venezuela	702	481	605	1,025	1,480	1,546
Mexico	71	533	816	755	1,068	1,373
Nigeria	762	857	293	800	627	896
Iraq	2	28	46	518	0	620
United Kingdom	14	176	310	189	383	366
Norway	17	144	32	102	273	343
Colombia	9	4	23	182	219	342
Angola	75	42	110	237	367	301
Virgin Islands	[R]406	388	247	282	278	291
Kuwait	16	27	21	86	218	272
Algeria	282	488	187	280	234	225
Total, major suppliers	**3,917**	**4,884**	**3,628**	**6,729**	**7,823**	**9,954**
Total, all U.S. imports	6,056	6,909	5,067	8,018	8,835	11,459

Note: The country of origin for petroleum products may not be the country of origin for the crude oil used to produce the products. Refined products imported from western European refining areas may have been produced from Middle Eastern crude oil.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review,* January 2002, tables 3.3a–3.3h, available at http://www.eia.doe.gov/emeu/mer/petro.html, as of November 2002.

The U.S. transportation network makes possible a high degree of personal mobility and freight activity. The data in this section show growth in local travel and freight shipments over time. Factors influencing this growth include, among others: greater vehicle availability, reduced travel costs, population increases, congestion, the economy, and consumer income.

Table 8
Per Capita Passenger Travel and Freight Transportation

	Number
Passenger travel (2001)[P]	
Trips	
Annualized daily trips per person[a]	1,581
Daily trips per person[a]	4.3
Miles	
Annualized daily miles per person[a]	15,529
Daily miles per person[a]	43
Domestic freight transportation (2000)	
Tons per person, annually	50.3
Ton-miles per person, annually	13,846

[a] Persons aged 5 and over.

Key: P = preliminary.

Notes: Data used for passenger travel are from the preliminary National Household Travel Survey (NHTS) travel-day file and include trips of all lengths made by respondents on a single day; about 95 percent of these daily trips were 30 miles or less. Calculations are based on preliminary weighted estimates from the 2001 NHTS.

Sources: **Passenger**—USDOT, Federal Highway Administration and Bureau of Transportation Statistics, National Household Travel Survey, available at http://nhts.ornl.gov, as of January 2003.
Freight—USDOT, Bureau of Transportation Statistics, and U.S. Department of Commerce, U.S. Census Bureau, *1997 Commodity Flow Survey* (Washington, DC: 1999); plus additional estimates prepared by BTS, October 2002.

Table 9
Number of Aircraft, Railcars, Vehicles, and Vessels

Mode	1970	1980	1990	2000	2001
Air carriers	2,679	3,808	6,083	8,055	8,497
General aviation	131,743	211,045	R196,800	217,533	U
Passenger cars[a]	89,243,557	121,600,843	133,700,496	133,621,420	137,633,467
Motorcycles	2,824,098	5,693,940	4,259,462	4,346,068	4,903,056
Other 2-axle, 4-tire vehicles	14,210,591	27,875,934	48,274,555	79,084,979	84,187,636
Trucks: Single-unit	3,681,405	4,373,784	4,486,981	5,926,030	5,703,500
Combination	905,082	1,416,869	1,708,895	2,096,619	2,154,174
Buses[b]	377,562	528,789	626,987	746,125	749,548
Passenger rail:					
Amtrak—Cars	N	2,128	1,863	1,894	U
Locomotives	N	419	318	378	U
Commuter railcars and locomotives	N	4,500	4,415	P5,073	U
Transit[c]	10,548	10,654	11,332	P12,168	U
Class I rail:					
Freight cars	1,423,921	1,168,114	658,902	560,154	499,860
Locomotives	27,077	28,094	18,835	20,028	19,745
Other freight cars	360,260	542,713	553,359	820,642	814,276
Nonself-propelled vessels (barges)[d,e]	19,377	31,662	31,209	33,152	U
Self-propelled vessels[e]	6,455	7,126	8,236	8,202	U
Oceangoing ships[e] (1,000 gross tons and over)	1,579	864	636	R454	443
Recreational boats[f]	R5,128,345	8,577,857	10,996,253	12,782,143	12,884,166

[a] In July 1997, the USDOT, 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. [e] U.S.-flag vessels. [f] Numbered boats. Key: N = data do not exist; P = preliminary; U = unavailable; R = revised.

Sources: Various sources, as cited in USDOT, BTS, *National Transportation Statistics 2002* (Washington, DC: 2002); table 1-9; **air carriers 2000–2001**—Aerospace Industries Association, *Aerospace Facts & Figures* (Washington DC: 2002/2003), "Active U.S. Air Carrier Fleet"; **2001 Class I rail**—Association of American Railroads, *Class I Railroad Statistics,* available at http://www.aar.org/AboutTheIndustry/AboutThe Industry.asp, as of Oct. 2002; **oceangoing ships 2000–2001**—USDOT, Maritime Administration, Office of Statistical & Economic Analysis, personal communication, 2002; **recreational boats 2001**—U.S. Coast Guard, personal communication, 2002.

Table 10
Vehicle-Miles
(Millions)

Mode	1970	1980	1990	2000	2001
Air carriers	2,068	2,523	3,963	R5,664	5,550
General aviation	3,207	5,204	R4,548	[a]N	[a]N
Passenger cars	916,700	1,111,596	R1,408,266	R1,600,287	1,619,422
Motorcycles	2,979	10,214	9,557	R10,469	9,529
Other 2-axle, 4-tire vehicles[b]	123,286	290,935	574,571	R923,059	937,839
Trucks:					
Single-unit	27,081	39,813	51,901	R70,500	72,286
Combination	35,134	68,678	94,341	R135,020	135,400
Buses[c]	4,544	6,059	5,726	R7,590	6,986
Rail[d]:					
Transit[e]	441	403	561	P648	U
Commuter	N	179	213	P271	U
Class I freight	29,890	29,277	26,159	34,590	U
Intercity/Amtrak[f]	690	235	301	368	U
Other transit[g]	N	15	324	P833	U

[a]The Federal Aviation Administration has estimated vehicle-miles for general aviation aircraft through 1997, relying in part on hours-flown survey data. Vehicle-miles estimates for subsequent years are not yet available.

[b] In July 1997, the USDOT, Federal Highway Administration, reassigned some vehicle-miles from "passenger car" to "other 2-axle, 4-tire."

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

[d] Car-miles.

[e] Includes light and heavy rail only.

[f] Fiscal year data. Amtrak began operations in 1971.

[g] Includes demand-responsive, ferry boat, and other transit not specified; 1980 data include "other transit" only.

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

Sources: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 1-32.

2001 air carriers—USDOT, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics* (Washington, DC: Annual December issues).

Table 11
Passenger-Miles
(Millions)

Mode	1970	1980	1990	2000	2001
Air carriers	108,442	204,368	345,873	R516,129	486,506
General aviation	9,100	14,700	13,000	U	U
Passenger cars	1,750,897	2,011,989	2,281,391	R2,544,457	2,574,882
Motorcycles	3,277	12,257	12,424	R11,516	10,482
Other 2-axle, 4-tire vehicles[a]	225,613	520,774	999,754	R1,467,664	1,491,164
Buses[b]	N	N	121,398	R160,919	148,113
Rail:					
Transit[c]	N	10,939	12,046	P15,200	U
Commuter	4,592	6,516	7,082	P9,402	U
Intercity/ Amtrak[d]	6,179	4,503	6,057	5,498	U
Other transit[e]	N	390	841	P1,631	U

[a] In July 1997, the USDOT, 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] Fiscal year data. Amtrak began operations in 1971.

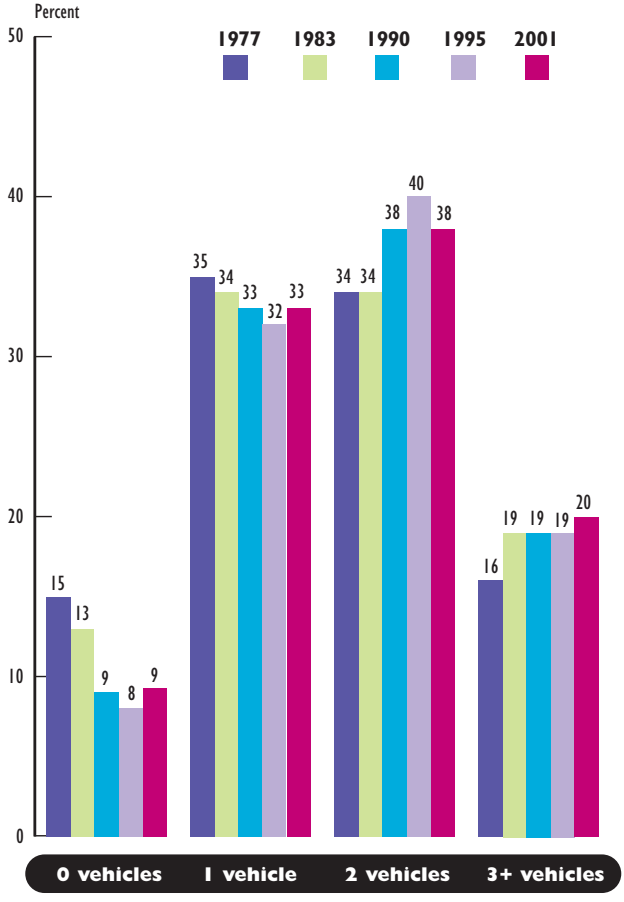
[e] Includes demand-responsive, ferry boat, and other transit not specified; 1980 data include ferry boat and "other transit" only.

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

Sources: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 1-34.

2001 air carriers—USDOT, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics* (Washington, DC: Annual December issues).

Figure 8
Households by Number of Vehicles



Sources: USDOT, Federal Highway Administration, *Nationwide Personal Transportation Survey*, *Our Nation's Travel* (Washington, DC: 1997). U.S. Department of Commerce, U.S. Census Bureau, American Housing Survey, 1999 and 2001.

Table 12

Top 20 U.S. Passenger Airports

(Thousands of enplaned passengers on large certificated air carriers)

	2001		1991		
Rank	Airport	Total enplaned passengers	Rank	Total enplaned passengers	% change 1991–2001
1	Atlanta (Hartsfield), GA	36,384	4	17,691	105
2	Chicago (O'Hare), IL	28,626	1	26,053	10
3	Dallas/Ft. Worth, TX	25,198	2	22,834	10
4	Los Angeles, CA	22,873	3	18,335	25
5	Phoenix (Sky Harbor), AZ	16,540	7	10,981	51
6	Denver, CO	16,397	6	12,461	32
7	Las Vegas (McCarran), NV	16,121	14	9,011	79
8	Minneapolis, MN	15,648	12	9,207	70
9	Houston (Intercontinental), TX	15,640	18	7,850	99
10	Detroit (Wayne County), MI	15,467	8	9,800	58
11	San Francisco, CA	13,863	5	14,038	–1
12	Newark, NJ	13,823	9	9,742	42
13	St. Louis (Lambert-St. Louis), MO	12,864	10	9,453	36
14	Seattle, WA	12,705	21	7,723	65
15	Orlando, FL	12,620	19	7,755	63
16	Miami, FL	11,505	11	9,350	23
17	Philadelphia, PA	10,387	24	6,553	59
18	New York (LaGuardia), NY	10,311	13	9,195	12
19	Charlotte (Douglas), NC	10,226	22	7,679	33
20	Boston (Logan), MA	10,017	15	8,917	12
	Top 20 airports	**327,216**		**234,674**	**39.4**

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

Sources: **Total enplaned passengers: 1991**—USDOT, Bureau of Transportation Statistics (BTS), *Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 1991* (Washington, DC: 1992). **2001**—USDOT, BTS, *Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 2001* (Washington, DC: 2002). **Airport ranking: 1991**—USDOT, *FAA Statistical Handbook, Calendar Year 1990* (Washington, DC: 1990). **2001**—USDOT, BTS, *Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 2001* (Washington, DC: 2002).

Table 13
U.S.-Canadian Border Land-Passenger Gateways: 2001
(Thousands)

Land gateway	Entering the U.S.
All U.S.-Canadian land gateways	
Personal vehicles	34,308
Personal vehicle passengers	74,971
Buses	169
Bus passengers	4,456
Train passengers	254
Pedestrians	750
Personal vehicles—top 5 gateways	
Detroit, MI	7,585
Buffalo-Niagara Falls, NY	7,396
Blaine, WA	2,892
Port Huron, MI	2,199
Calais, ME	1,233
Personal vehicle passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	16,571
Detroit, MI	15,157
Blaine, WA	6,927
Port Huron, MI	4,699
Champlain-Rouses Point, NY	2,902
Buses—top 5 gateways	
Buffalo-Niagara Falls, NY	53
Detroit, MI	40
Blaine, WA	17
Champlain-Rouses Point, NY	10
Sault Ste. Marie, MI	9
Bus passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	1,619
Detroit, MI	990
Blaine, WA	382
Champlain-Rouses Point, NY	291
Port Huron, MI	141
Train passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	53
Blaine, WA	43
Champlain-Rouses Point, NY	35
Skagway, AK	34
Port Huron, MI	33
Pedestrians—top 5 gateways	
Buffalo-Niagara Falls, NY	415
Sumas, WA	99
Calais, ME	49
Portland, ME (pedestrian/ferry combination crossing)	33
International Falls, MN	27

Source: USDOT, Bureau of Transportation Statistics, special tabulation, 2002; based on U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management database, as of April 2002.

Table 14
U.S.-Mexican Border Land-Passenger Gateways: 2001
(Thousands)

Land gateway	Entering the U.S.
All U.S.-Mexican land gateways	
Personal vehicles	89,527
Personal vehicle passengers	209,106
Buses	288
Bus passengers	3,367
Train passengers	19
Pedestrians	51,501
Personal vehicles—top 5 gateways	
El Paso, TX	16,136
San Ysidro, CA	15,002
Hidalgo, TX	7,550
Brownsville, TX	7,548
Laredo, TX	7,454
Personal vehicle passengers—top 5 gateways	
El Paso, TX	39,200
San Ysidro, CA	33,004
Hidalgo, TX	17,714
Laredo, TX	17,282
Brownsville, TX	16,952
Buses—top 5 gateways	
San Ysidro, CA	103
Otay Mesa, CA	58
Laredo, TX	40
Hidalgo, TX	33
Brownsville, TX	14
Bus passengers—top 5 gateways	
San Ysidro, CA	897
Laredo, TX	721
Hidalgo, TX	659
Otay Mesa, CA	458
El Paso, TX	195
Train passengers—top 5 gateways	
Eagle Pass, TX	7
Tecate, CA	5
Nogales, AZ	3
El Paso, TX	2
Calexico East, CA	2
Pedestrians—top 5 gateways	
San Ysidro, CA	11,436
El Paso, TX	7,201
Calexico, CA	7,120
Laredo, TX	5,061
Nogales, AZ	4,875

Source: USDOT, Bureau of Transportation Statistics, special tabulation, 2002; based on U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management database, as of April 2002.

Table 15
Roadway Hours of Delay and Congestion Cost per Person in 75 Metropolitan Areas: 1990 and 2000

Annual Roadway Delay per Person
(Hours per year)

	1990 delay per person	2000 delay per person	Percentage change 1990–2000	Annual growth rate 1990–2000
Very large areas	28	35	24	2.2
Large areas	12	22	88	6.5
Medium areas	6	14	120	8.2
Small areas	4	7	88	6.5
75-area average	**19**	**27**	**40**	**3.4**

Estimated Annual Congestion Cost per Person
(Current dollars)

	1990 cost per person	2000 cost per person	Percentage change 1990–2000	Annual growth rate 1990–2000
Very large areas	388	648	67	5.3
Large areas	169	424	151	9.6
Medium areas	88	273	210	12.0
Small areas	40	115	188	11.1
75-area average	**267**	**507**	**90**	**6.6**

Note:

Very large = over 3 million population (e.g., New York-northern NJ)

Large = 1 million–3 million population (e.g., Atlanta)

Medium = selected areas with 500,000–1 million population (e.g., Memphis)

Small = selected areas under 500,000 population (e.g., Colorado Springs)

TTI estimates delay indirectly by using traffic volumes and methodology developed by the Federal Highway Administration for estimating the effects of roadway incidents.

TTI estimates cost by taking into account fuel cost, value of time, and commercial vehicle operating cost.

Source: Texas Transportation Institute (TTI), 2002 *Urban Mobility Report* (College Station, TX: 2002), "Mobility Data" spreadsheet available at http://mobility.tamu.edu/ums/study/mobility_data, as of December 2002.

Table 16
Amtrak On-Time Performance Trends and Hours of Delay by Cause

	1980	1985	1990	1995	2000
On-time performance					
Total system	69%	81%	76%	76%	78%
Short distance (<400 miles)	71%	82%	82%	81%	81%
Long distance (>=400 miles)	64%	78%	53%	57%	56%
Hours of delay by cause[a]					
Amtrak[b]	N	N	3,565	5,527	20,187
Freight[c]	N	N	4,244	11,224	33,718
Other[d]	N	N	4,316	8,497	14,718
Total[e]	**N**	**N**	**12,126**	**25,248**	**68,623**

[a] Amtrak changed its method for reporting delays in 2000. Therefore, 2000 data are not comparable to prior years.

[b] Includes equipment malfunctions, train servicing in stations, and passenger-related delays.

[c] Includes maintenance of way/slow orders, freight train interference, signal delays.

[d] Includes passenger train interference, waiting for connections, running time, weather-related delays, and miscellaneous.

[e] Numbers may not add to totals due to rounding.

Key: N = data do not exist.

Notes: All percentages are based on Amtrak's fiscal year (Oct. 1–Sept. 30).

Amtrak trips are considered delayed based on the following chart:

Trip length (miles)	Arrival time delay (minutes)
0–250	10
251–350	15
351–450	20
451–550	25
≥ 551	30

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 1-66.

Table 17

U.S. Passenger Airports with the Highest Percentage of Flight Delays

(Percentage of scheduled flights canceled, diverted, or arriving at least 15 minutes after the scheduled arrival time)

	2001		1991		
Rank	Airport	Percent	Rank	Percent	% change 1991–2001
1	Seattle-Tacoma Int., WA	30.7	7	20.7	10.0
2	San Francisco Int., CA	28.7	1	27.4	1.3
3	New York LaGuardia, NY	28.4	16	18.7	9.7
4	New York JFK Int., NY	27.8	4	21.9	5.9
5	Philadelphia Int., PA	27.4	17	18.3	9.1
6	Chicago O'Hare Int., IL	27.1	10	19.6	7.5
7	Boston Logan Int., MA	26.8	3	22.5	4.3
8	Los Angeles Int., CA	25.8	2	24.0	1.8
9	Newark Int., NJ	25.0	6	21.4	3.6
10	Miami Int., FL	24.4	9	19.7	4.7
11	Ft. Lauderdale Int., FL	23.8	13	19.1	4.7
12	Portland Int., OR	23.3	20	17.0	6.3
13	Washington Reagan Natl., DC	23.3	26	14.9	8.4
14	San Diego Int., CA	23.1	14	19.1	4.0
15	Washington Dulles Int., VA	22.7	25	15.1	7.6
16	Denver Int., CO	22.5	5	21.7	0.8
17	Atlanta Hartsfield Int., GA	22.5	8	20.0	2.5
18	Tampa Int., FL	22.2	22	16.7	5.5
19	Las Vegas McCarran Int., NV	21.5	18	17.0	4.5
20	Orlando Int., FL	21.3	19	17.0	4.3

Notes: The 32 largest airports (of which only the top 20 are shown in this table) each handled more than 1% of all domestically enplaned passengers in 2001. Denver International, CO, started operations in February of 1995. Prior to 1995, Denver Metropolitan Aviation Operations took place at Stapleton International Airport. 1991 data are based on delay information from Stapleton International Airport.

Data are collected from U.S. carriers. For comparison purposes, Pan Am and Midway are excluded from 1991, and American Eagle and Aloha are excluded from 2001.

Source: USDOT, Bureau of Transportation Statistics, Office of Airline Information data, special tabulation, Nov. 15, 2002.

Table 18
Top 20 U.S. Water Ports by Weight
(Millions of tons)

2000			1990		
Rank	Port	Total tons	Rank	Total tons	% change 1990–2000
1	South Louisiana, LA	215.9	1	194.2	11.2
2	Houston, TX	186.6	3	126.2	47.9
3	New York, NY & NJ	137.2	2	140.0	–2.0
4	New Orleans, LA	90.0	6	62.7	43.5
5	Corpus Christi, TX	81.3	7	62.0	31.1
6	Beaumont, TX	76.9	23	26.7	188.0
7	Huntington-Tristate, WV-OH-PA[a]	76.9	N	N	N
8	Long Beach, CA	69.9	10	52.4	33.4
9	Baton Rouge, LA	65.2	5	78.1	–16.5
10	Plaquemine, LA	59.7	8	56.6	5.5
11	Texas City, TX	58.1	12	48.1	20.8
12	Pittsburgh, PA	53.9	19	35.5	51.8
13	Mobile, AL	53.7	15	41.1	30.7
14	Lake Charles, LA	53.0	16	40.9	29.6
15	Los Angeles, CA	48.1	13	46.4	3.7
16	Valdez, AK	48.1	4	96.0	–49.9
17	Tampa, FL	46.5	11	51.6	–9.9
18	Norfolk Harbor, VA	42.3	9	53.7	–21.2
19	Duluth-Superior, MN & WI	41.7	17	40.8	2.2
20	Baltimore, MD	40.8	18	39.5	3.3
	Total[b]	**1,468.9**		**1,292.5**	**13.6**

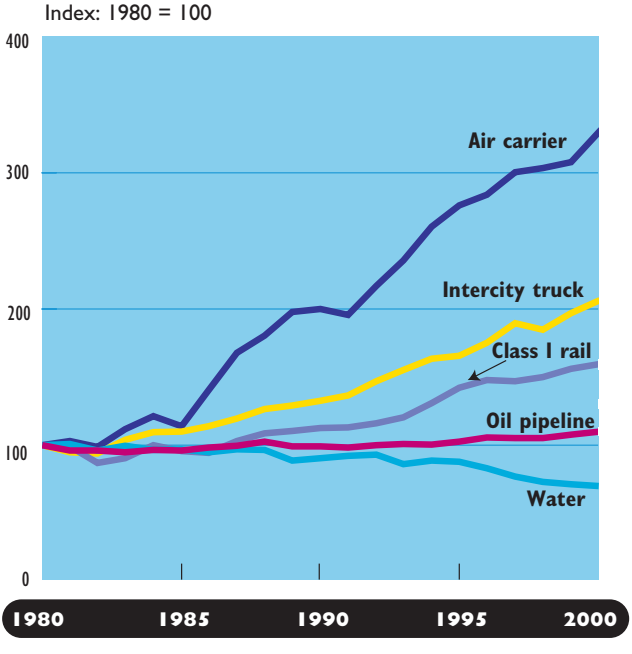
[a] Huntington-Tristate, WV-OH-PA, is a newly defined port since the release of the 1990 data. [b] For purposes of comparison, Huntington-Tristate, WV-OH-PA, is excluded.

Key: N = data are nonexistent.

Note: See table 18 for top 20 freight gateways by value.

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.
2000—U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 2000, Part 5, National Summaries*, available at http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm, table 5-2.

Figure 9
Index of U.S. Domestic Freight Ton-Miles by Mode: 1980–2000



Sources: USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 1-44.

Table 19
U.S. Domestic Freight Ton-Miles by Mode: 1980–2000

	Ton-miles (billions)		1980–2000	
	1980	2000	% change	Average annual growth rate
Air carrier	5	15	230.9	6.2
Intercity truck	555	[a]1,142	105.8	3.7
Class I rail	919	1,466	59.5	2.4
Water transportation	922	646	–29.9	–1.8
Oil pipeline	588	[a]627	4.9	0.2
Total	**2,988**	**3,896**	**30.4**	**1.3**

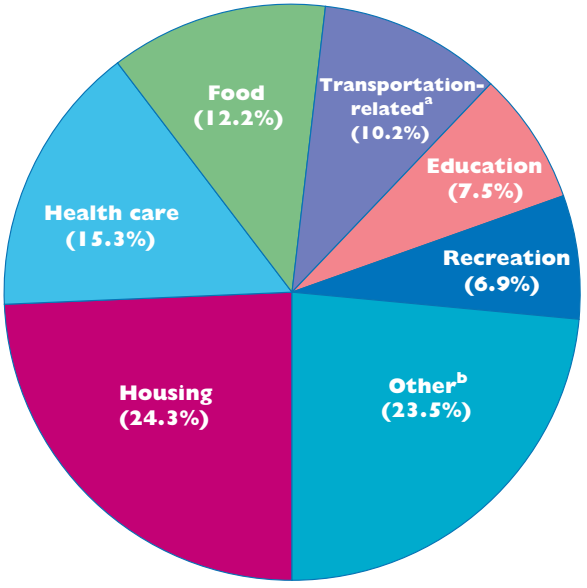
[a] Intercity truck and pipeline ton-miles data for 2000 are estimates based on their respective average annual growth rate from 1990 to 1999.
Note: Ton-miles are based on short tons.

Sources: USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2002* (Washington, DC: 2002), table 1-44.

5 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 2001, transportation-related goods and services contributed $1,047 billion to a $10.08 trillion U.S. Gross Domestic Product.

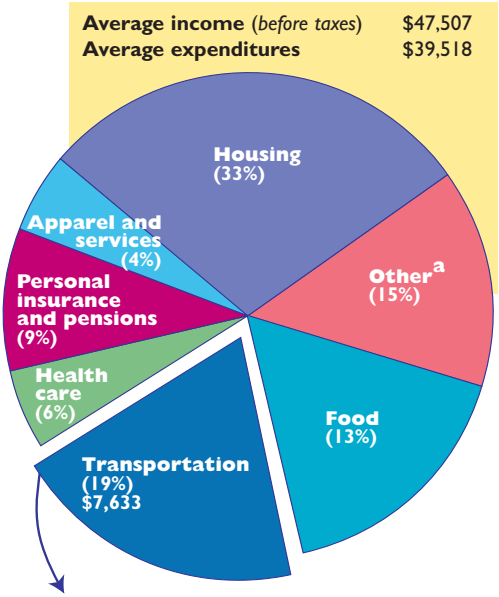
Figure 10
U.S. Gross Domestic Product by Major Societal Function: 2001



[a] Includes all consumer and government purchases of goods (e.g., vehicles and fuel) and services (e.g., auto insurance) and exports related to transportation. [b] Includes all other categories (e.g., entertainment, personal care products and services, and payments to pension plans).

Source: USDOT, Bureau of Transportation Statistics, calculated from data in U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* October 2002.

Figure 11
Average Household Expenditures by Major Category: 2001
(In current dollars)



Private vehicle expenditures	=	**$7,233**
Vehicle purchases	=	$3,579
Gasoline and motor oil	=	$1,279
Other vehicle expenditures	=	$2,375
Public transportation expenditures	=	**$400**
Airline fares	=	$255
Mass transit fares	=	$51
Ship fares	=	$24
Intercity train fares	=	$23
Taxi fares	=	$23
Local transportation on out-of-town trips	=	$12
Intercity bus fares	=	$11
School buses	=	$2

[a] Includes entertainment, personal care products and services, education, tobacco products and smoking, and miscellaneous.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey, 2002.

Table 20
Value of U.S. International Merchandise Trade by Mode of Transportation: 2001
(Millions of current U.S. dollars)

	Exports	Modal %	Imports	Modal %	Total trade	Total modal %
Total	**731,026**	**100.0**	**1,141,959**	**100.0**	**1,872,985**	**100.0**
Water	198,841	27.2	519,607	45.5	718,448	38.4
Air	251,494	34.4	267,107	23.4	518,602	27.7
Truck	191,918	26.3	203,507	17.8	395,425	21.1
Rail	23,362	3.2	69,255	6.1	92,617	4.9
Pipeline	517	0.1	25,910	2.3	26,428	1.4
Other, unknown, & miscellaneous	64,894	8.9	56,573	5.0	121,466	6.5

Notes:

Numbers may not sum to total due to rounding.

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 USDOT, Bureau of Transportation Statistics (BTS), May 2002. **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 2001. **Total, truck, rail, pipeline, other and unknown data**—USDOT, BTS, Transborder Surface Freight Data 2002.

Table 21
Weight of U.S. International Merchandise Trade by Mode of Transportation: 2001
(Millions of short tons)

	Exports[a]	Modal %	Imports	Modal %	Total trade[a]	Total modal %
Total	**480,505**	**100.0**	**1,162,399**	**100.0**	**1,642,904**	**100.0**
Water	360,830	75.1	915,079	78.7	1,275,909	77.7
Air	2,704	0.6	3,464	0.3	6,169	0.4
Truck	88,804	18.5	91,639	7.9	180,443	11.0
Rail	22,271	4.6	75,033	6.5	97,304	5.9
Pipeline	3,904	0.8	75,399	6.5	79,303	4.8
Other, unknown, & miscellaneous	1,991	0.4	1,784	0.2	3,775	0.2

[a] BTS estimated the export weight for truck, rail, pipeline, and other and unknown based on value-to-weight ratios from the import data. This was necessary, because export weights for surface modes are not currently reported. Weight for water and air exports and imports are from U.S. Department of Commerce, U.S. Census Bureau.

Notes:

Numbers may not sum to total due to rounding.

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 USDOT, Bureau of Transportation Statistics (BTS), May 2002. **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 2001. **Total, truck, rail, pipeline, other and unknown data**—USDOT, BTS, Transborder Surface Freight Data 2002; and special calculation, May 2002.

Table 22
U.S. Merchandise Trade with Canada and Mexico by Mode: 2001

Mode	Value (percent)	Weight (percent)
NAFTA trade, total[a]	**100.0**	**100.0**
Truck	64.4	31.5
Rail	15.1	17.0
Pipeline	4.3	13.9
Air	6.0	0.1
Water	4.8	37.4
Other and unknown	5.4	0.2
U.S. NAFTA imports, total	**100.0**	**100.0**
Truck	58.4	22.9
Rail	19.9	18.8
Pipeline	7.4	18.9
Air	4.3	<0.05
Water	5.9	39.3
Other and unknown	4.0	0.1
U.S. NAFTA exports, total[a]	**100.0**	**100.0**
Truck	72.4	51.3
Rail	8.8	12.9
Pipeline	0.2	2.3
Air	8.2	0.2
Water	3.3	33.0
Other and unknown	7.1	0.3

[a] BTS estimated the export weight for truck, rail, pipeline, and other and unknown based on value-to-weight ratios from the import data. This was necessary, because export weights for surface modes are not currently reported. Weight for water and air exports and imports are from U.S. Department of Commerce, U.S. Census Bureau.

Note: Value based on millions of U.S. dollars; weight based on millions of short tons.

Sources: Compiled by USDOT, Bureau of Transportation Statistics (BTS), May 2002. **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 2001. **Total, truck, rail, pipeline, other and unknown data**—USDOT, BTS, Transborder Surface Freight Data 2002; and special calculation, May 2002.

Table 23
Top 20 Foreign Trade Freight Gateways by Value of Shipments: 2001
(Billions of current dollars)

Rank	Gateway	Exports	Imports	Total
1	JFK International, NY (a)	50.1	66.5	116.6
2	Los Angeles, CA (w)	17.4	86.8	104.2
3	Long Beach, CA (w)	16.7	78.0	94.7
4	Detroit, MI (l)	49.2	42.8	92.0
5	New York, NY and NJ (w)	22.7	63.2	85.9
6	Laredo, TX (l)	34.7	44.9	79.6
7	Los Angeles Internatl. Airport, CA (a)	34.0	29.9	63.9
8	San Francisco Internatl. Airport, CA (a)	32.3	29.6	62.0
9	Buffalo-Niagara Falls, NY (l)	29.4	31.1	60.5
10	Huron, MI (l)	17.3	38.4	55.6
11	Chicago, IL (a)	19.9	25.0	44.9
12	Houston, TX (w)	19.5	25.0	44.5
13	El Paso, TX (l)	15.9	22.0	37.9
14	Charleston, SC (w)	12.5	20.9	33.4
15	Seattle, WA (w)	5.3	23.3	28.6
16	New Orleans, LA (a)	13.8	13.5	27.4
17	Oakland, CA (w)	7.7	17.2	25.0
18	Norfolk Harbor, VA (w)	11.3	13.6	24.9
19	Miami Internatl. Airport, FL (a)	15.4	7.2	22.6
20	Anchorage, AK (a)	5.1	16.8	21.9

Key: a = air; l = land port/border crossing; w = water port.

Notes: Trade excludes imports of less than $1,250 and exports of 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 area and small regional airports. Due to Census Bureau confidentiality regulations, courier operations are included in airport totals for JFK, New Orleans, Los Angeles, Chicago, and Miami. Numbers may not add to totals due to rounding. Water data are preliminary. See table 14 for top water ports by weight.

Sources: USDOT, Bureau of Transportation Statistics (BTS); based on: **Air**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, special tabulation, May 2002. **Water**—USDOT, Maritime Administration, Office of Statistical and Economic Analysis, personal communication, May 2002. **Land**—USDOT, BTS, Transborder Surface Freight Data, 2002, as of May 2002.

Table 24
U.S. Trade in Transportation-Related Commodities: 2001
(Millions of current U.S. dollars)

Commodity and code	Exports	Imports	Total trade	Balance
Motor vehicles and parts (87)	58,750	159,341	218,091	–100,592
Aircraft, spacecraft, and parts (88)	44,705	21,098	65,804	23,607
Ships, boats, and floating structures (89)	1,899	1,206	3,105	693
Railway or tramway locomotives and parts (86)	1,506	1,357	2,863	149
Total, transportation goods	**106,860**	**183,003**	**289,863**	**–76,143**
Total, all goods	731,026	1,141,959	1,872,985	–410,933
Transportation goods share of trade	14.6%	16.0%	15.5%	18.5%

Note: Numbers in parenthesis—classification categories are based on Harmonized Schedule of Commodity Codes.

Source: USDOT, Bureau of Transportation Statistics; based on data from U.S. Department of Commerce, U.S. International Trade Commission, Interactive Tariff and Trade DataWeb, available at http://dataweb.usitc.gov/, as of December 2002.

Table 25

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

(Thousands)

	1970	1980	1990	2000	2001
Total transportation and related industries employment	5,999	8,535	10,133	11,672	U
For-hire transport sector total	**2,726**	**3,175**	**3,715**	**4,653**	**U**
Air	352	453	968	R1,280	1,266
Local and inter-urban passenger transit	280	266	338	477	479
Pipeline[b]	50	236	223	150	U
Railroad	634	532	279	R237	234
Transportation services	115	198	336	R470	463
Trucking and warehousing	1,083	1,280	1,395	R1,847	1,848
Water	212	211	177	R194	192
Equipment manufacturing total	**1,949**	**1,995**	**2,073**	**R1,931**	**1,835**
Other related industries total	**613**	**2,694**	**3,672**	**R4,442**	**4,473**
Automotive and home supply stores	U	261	337	R408	410
Automotive repair services and parking; gasoline service stations	C613	1,132	1,561	R1,886	1,905
Highway and street construction	U	U	239	R281	289
Motor vehicles/parts/supplies, new/used car dealers, and other automotive retailers	U	1,301	1,535	R1,868	1,869
Government employment[d] total	**711**	**671**	**673**	**646**	**654**

[a] Annual averages.

[b] Includes liquid and natural gas transmission pipelines.

[c] Includes gasoline service stations only.

[d] Data are for fiscal years and include permanent and temporary civilian and military transportation-related personnel.

Key: R = revised; U = unavailable.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics* 2002 (Washington, DC: 2002), table 3-19.

Table 26
Government Transportation Revenues by Mode and Level of Government
(Millions of current dollars)

	1980	1990	1995	1999	2000
Highway total	**25,268**	**49,945**	**66,743**	**88,668**	**87,800**
Federal: Highway Trust Fund—Highway Account[a]	7,647	13,453	19,377	33,823	30,347
State	16,287	32,644	42,415	48,784	P51,073
Local	1,334	3,848	4,952	6,061	P6,380
Transit total	**2,397**	**7,193**	**9,352**	**13,186**	**12,674**
Federal: Highway Trust Fund—Mass Transit Account	–	1,977	2,813	5,478	4,625
State	362	1,074	1,257	1,404	P1,524
Local	2,035	4,142	5,283	6,304	P6,525
Air total	**4,100**	**10,119**	**13,954**	**21,079**	**21,627**
Federal: Airport and Airway Trust Fund[b]	2,274	4,945	6,291	11,089	10,544
State	190	556	695	744	P852
Local	1,636	4,617	6,968	9,246	P10,231
Water total	**1,211**	**2,487**	**3,567**	**3,923**	**3,682**
Federal: water receipts[c]	391	999	1,644	1,568	1,175
State	249	355	479	651	P693
Local	572	1,133	1,444	1,704	P1,813
Pipeline total	**–**	**10**	**35**	**30**	**40**
Federal: Pipeline Safety Fund	–	10	35	30	40
General support total	**–**	**–**	**7**	**8**	**25**
Federal: Emergency Preparedness Fund	–	–	7	8	25
Total, all modes	**32,977**	**69,753**	**93,659**	**126,895**	**125,847**
Federal	10,312	21,384	30,166	51,996	46,756
State	17,088	34,629	44,846	51,584	P54,142
Local	5,577	13,740	18,647	23,315	P24,949

[a] Since 1983, some Highway Trust Fund fuel tax has gone to transit.

[b] A requirement that 10% of passenger ticket taxes and other taxes paid by airport and airway users be transferred to this trust fund expired in December 1996.

[c] Includes Harbor Maintenance Trust Fund, St. Lawrence Seaway tolls, Inland Waterway Trust Fund, Panama Canal receipts, Oil Spill Liability Trust Fund, Offshore Oil Pollution Fund, Deep Water Port Liability Fund, and excise taxes of the Boat Safety Program.

Key: – = no activity or a value of zero; P = preliminary.

Note: Data for 2000 are preliminary. Numbers may not add to totals due to rounding.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *Government Transportation Financial Statistics*, available at www.bts.gov.

Table 27

Government Transportation Expenditures by Mode and Level of Government From Own Funds

(Millions of current dollars)

	1980	1990	1995	1999	2000
Highway total	**34,553**	**62,563**	**79,309**	**95,494**	**103,838**
Federal	11,706	15,452	20,078	23,589	27,657
State and local	22,847	47,112	59,232	71,905	P76,181
Transit total	**8,949**	**19,261**	**26,162**	**29,027**	**31,827**
Federal	3,307	3,832	4,474	4,265	5,337
State and local	5,642	15,429	21,688	24,762	P26,490
Rail total	**2,497**	**541**	**1,043**	**565**	**781**
Federal	2,474	534	1,034	546	755
State and local	23	7	9	19	P26
Air total	**5,673**	**12,568**	**16,960**	**21,789**	**20,820**
Federal	3,762	7,305	10,389	10,722	9,556
State and local	1,911	5,263	6,571	11,067	P11,264
Water total	**4,477**	**5,480**	**6,628**	**7,682**	**7,942**
Federal	3,308	3,537	4,380	4,565	4,810
State and local	1,168	1,943	2,247	3,117	P3,132
Pipeline total[a]	**–**	**26**	**43**	**30**	**27**
Federal	–	9	19	30	27
State and local	–	17	24	U	U
General support total[b]	**259**	R**191**	R**396**	R**258**	R**259**
Federal, general support	259	R191	R396	R258	R259
Total, all modes	**56,407**	**100,629**	R**130,542**	R**154,845**	**165,494**
Federal	24,815	R30,859	R40,769	R43,975	R48,401
State and local	31,592	69,770	89,772	110,871	P117,093

[a] Includes gas and liquid pipeline.

[b] General support includes administrative and operating expenditures of the USDOT, the Interstate Commerce Commission, Office of the Inspector General, the Research and Special Programs Administration, and the National Transportation Safety Board.

Key: – = no activity or a value of zero; P = preliminary; R = revised; U = unavailable.

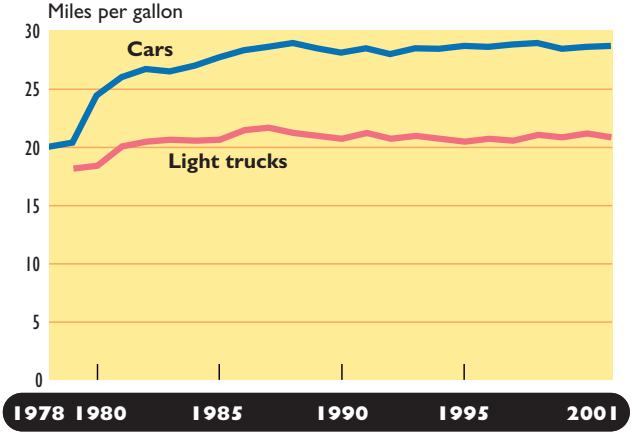
Note: Data for 2000 are preliminary. Numbers may not add to totals due to rounding.

Source: Various sources, as cited in USDOT, Bureau of Transportation Statistics, *Government Transportation Financial Statistics*, available at www.bts.gov.

6 Transportation and the Environment

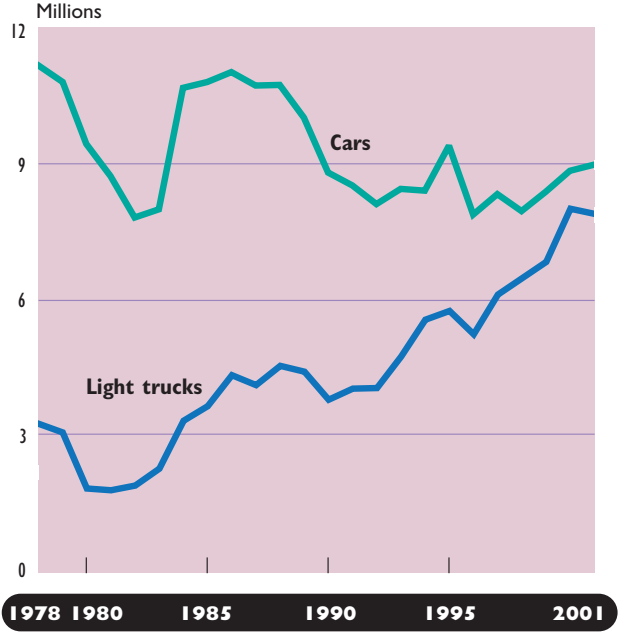
While transportation enhances the quality of our lives, it also generates undesired environmental impacts that can lead to human health problems and ecological damage. Overall, most transportation air emissions, such as carbon monoxide and particulates, have declined since 1980 despite significant increases in U.S. population, Gross Domestic Product, and vehicle-miles traveled. Only nitrogen oxides, which contribute to the formation of ground-level ozone, and ammonia remain above their 1990 level.

Figure 12
New Passenger Car and Light Truck Fuel Economy Averages: Model Years 1978–2001



Source: USDOT, National Highway Traffic Safety Administration, *Automotive Fuel Economy Program: Annual Update Calendar Year 2001,* September 2001, table II-6, available at www.nhtsa.dot.gov/cars/problems/studies, as of October 2002.

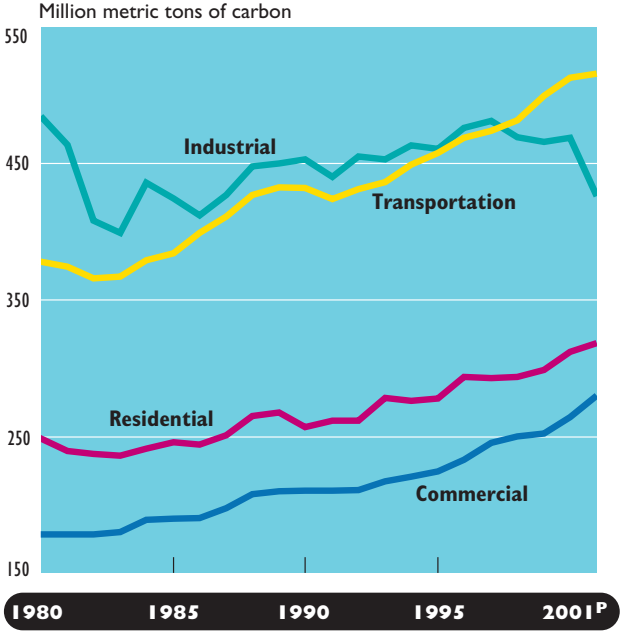
Figure 13
New Passenger Car and Light Truck Sales: Model Years 1978–2001



Notes: Data are based on Environmental Protection Agency definitions of light trucks (gross vehicle weight 8,500 pounds or less). 2001 data are preliminary.

Source: U.S. Environmental Protection Agency, "Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2001," appendix F, September 2001, available at http://www.epa.gov/otaq/fetrends.htm, as of November 2002.

Figure 14
U.S. Carbon Dioxide Emissions from Energy Use

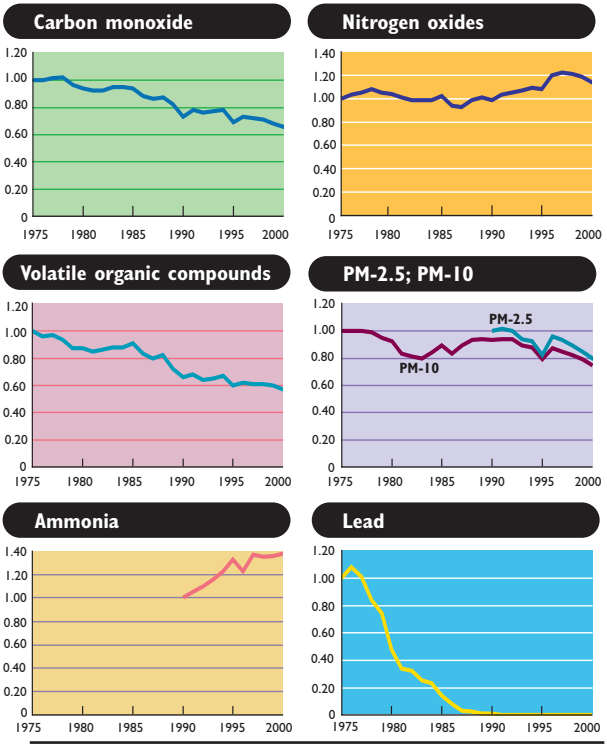


Key: P = preliminary.

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

Source: **1980–1989**—Appendix E available at www.eia.doe.gov/oiaf/1605/ggrpt/appendixes.html. **1990–2001**—U.S. Department of Energy, Energy Information Administration, U.S. Carbon Dioxide from Energy Sources 2001 Flash Estimate, available at www.eia.doe.gov/oiaf/1605a.html.

Figure 15
Index of Key Air Pollutant Emissions from U.S. Transportation
Index: 1975 = 1.0, 1990 = 1.0 for PM-2.5 and ammonia



Key: PM-10 and PM-2.5 = airborne particulates of less than 10 microns or 2.5 microns in diameter, respectively.

Notes: 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, e.g., farming equipment, are not included. Lead estimates include onroad mobile sources only.

Source: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, *National Air Pollutant Trends*, available at www.epa.gov/ttn/chief/trends/index.html, as of September 2002.

Glossary

Air carrier—Certificated provider of scheduled and nonscheduled services.

Chained dollars—A method to measure real changes in dollar values between years that uses chain-type indices, rather than constant dollars. The method first calculates the real changes between adjacent years. Annual rates of real changes are then chained (multiplied) together to obtain the rate of real changes between nonadjacent years.

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

Commercial waterway facilities—Waterway facilities as counted by the U.S. Army Corps of Engineers are piers, wharves, and docks. Not included are those facilities used exclusively for recreational or active military craft and generally those providing nonmaritime use.

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 transit service.

Contracted service (purchased transportation)—Transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract.

Demand-responsive transit—A nonfixed-route, nonfixed-schedule form of transportation that operates in response to calls from passengers or their agents to the transit operator or dispatcher.

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

Directly operated service—Transportation service provided directly by a transit agency, using their employees to supply the necessary labor to operate the revenue vehicles.

Draft—The depth of water a vessel draws, loaded or unloaded.

General aviation—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.

Gross Domestic Product—The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the suppliers may be either U.S. residents or residents of foreign countries.

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

Hub area—As used here, a geographic area based on the percentage of total enplaned passengers in that area. A hub area can comprise more than one airport and falls into one of the following classes: large, a community enplaning 1% or more of the total enplaned passengers; medium, 0.25%–0.99%; small, 0.05%–0.24%; nonhub area, less than 0.05%. The definition of hub used here should not be confused with air line usage of the term to describe "hub and spoke" route structures, or other definitions of hubs used by the Federal Aviation Administration focusing on traffic at individual airports.

Intermodal—Transportation activities involving more than one mode of transportation, including transportation connections, choices, cooperation and coordination of various modes.

Large certificated air carrier—Carriers operating aircraft with a maximum passenger capacity of more than 60 seats or a maximum payload of more than 18,000 pounds. These carriers are also grouped by annual operating revenues: 1) majors—more than $1 billion; 2) nationals—between $100 million and $1 billion; 3) large regionals—between $20 million and $99,999,999; and 4) medium regionals—less than $20 million.

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.

Light truck—Trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and sport utility vehicles.

Metric ton—A unit of weight equal to 2,204.6 pounds.

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.

Particulates—Carbon particles formed by partial oxidation and reduction of the hydrocarbon fuel. Also included are trace quantities of metal oxides and nitrides, originating from engine wear, component degradation, and inorganic fuel additives.

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

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.

Short-ton—A unit of weight equal to 2,000 pounds.

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

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