RITA *Bureau of Transportation Statistics*

Pocket Guide to Transportation 2010

U.S. Department of Transportation
Research and Innovative Technology Administration

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RITA *Bureau of Transportation Statistics*

Pocket Guide to Transportation 2010

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Research and Innovative Technology Administration

U.S. Department of Transportation

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America's transportation system continues to change along with the population, work force, and economy. The following table puts those changes in perspective:

Context	1990	2008
Resident population (thousands)	248,791	304,060
Total area (thousand sq. mi.)	3,718	3,794 (2000)[a]
Total civilian labor force (thousands)	125,840	154,287
Real gross domestic product[b] (trillions)	$8.0	$13.3
Median household income[b,c]	$41,465	$46,370
Average household income[b,c]	$44,160	$58,594
Average household expenditures[b,c]	$39,338	$46,304
Number of households (thousands)	93,347	117,181
Life expectancy at birth (years)[d]	75.4	77.7 (2006)

[a] Data for 2000 include inland water, coastal water, Great Lakes, and territorial water. The Census Bureau tabulates area data for the decennial census years only. [b] Data in 2005 chained dollars (see Glossary for definition). [c] BTS computations, November 2009. [d] Life expectancy for 2000–2006 was calculated using a revised methodology and may differ from previously published data.

Sources: **Area**—U.S. Department of Commerce (USDOC), U.S. Census Bureau, *Statistical Abstract of the United States: 2002 and 2009*, available at www.census.gov as of November 2009. **GDP**—USDOC, Bureau of Economic Analysis, available at www.bea.gov as of November 2009. **Population, number of households, and median household income**—USDOC, Census Bureau, available at www.census.gov as of November 2009. **Average household income and expenditures, and labor force**—U.S. Department of Labor, Bureau of Labor Statistics, available at www.bls.gov as of October 2009. **Life expectancy**—Centers for Disease Control and Prevention, available at www.cdc.gov as of September 2009.

1 Transportation Infrastructure and Use

The U.S. transportation system is an extensive, interrelated public and private network of roads, airports, railroads, transit routes, waterways, terminals, ports, and pipelines. Millions of people and businesses rely on this expanding system to get to work, travel on vacations, conduct business, and ship goods within the United States and abroad. The transportation system links regions and connects small and large cities and urban and rural areas.

1-1
The Transportation Network: 2008

Mode	Components
Highway (2007)	**Public roads**
	46,934 miles of Interstate highway
	116,813 miles of other National Highway System roads
	3,884,777 miles of other roads
Air	***Public-use airports***
	5,202 airports
	Airports serving large certificated carriers (enplaned passengers)
	25 large hub areas[a] (71 airports), 479 million passengers
	38 medium hub areas (65 airports), 142 million passengers
	70 small hub areas (87 airports), 54 million passengers
	893 nonhub areas (927 airports), 22 million passengers
Rail (2007)	***Miles of railroad operated***
	94,313 miles by Class I freight railroads in the United States[b]
	16,930 miles by regional freight railroads
	28,891 miles by local freight railroads
	21,708 miles by Amtrak (passenger)[c]

1-1—continued

Mode	Components
Urban transit	***Directional route-miles***[d]
	Bus: 150,899[e]
	Trolley bus: 456[e]
	Commuter rail: 3,876
	Heavy rail: 1,603
	Light rail: 1,252
	Stations
	Commuter rail: 1,189
	Heavy rail: 1,041
	Light rail: 787
Water	***Navigable channels:*** 25,320 miles (2007)
	Ferry routes: 682 directional route-miles
	Commercial waterway facilities[a]
	Great Lakes: 600 deep-draft, 154 shallow-draft
	Inland: 2,321 shallow-draft
	Ocean: 4,466 deep-draft, 2,043 shallow-draft
	Lock chambers: 257
Pipeline	***Miles of oil pipe***
	Total oil: 169,322
	Miles of gas pipe
	Transmission: 298,993
	Distribution: 1,205,991

[a] See Glossary for definitions. [b] There are also 561 miles of railroad operated within the U.S. Class I freight railroad system that are owned by Canadian railroads. [c] Approximately 97% of the trackage on which Amtrak operates is owned by freight railroads. [d] Directional route-miles includes only directly operated service. Does not include contracted service. [e] Includes directional route-miles on exclusive right-of-way, controlled right-of-way, and mixed traffic.

Sources: **Highway**—USDOT, FHWA, *Highway Statistics 2007* (Washington, DC: 2009), table HM-18. **Air**—Public-use airports—FAA as cited in USDOT, RITA, BTS, *National Transportation Statistics*, tables 1-03, available at http://www.bts.gov as of December 2009. Airports serving large certificated carriers—USDOT, RITA, BTS, Airport Activity Statistics of Certificated Air Carriers, Summary Tables, October 2009. **Rail**—Association of American Railroads, Railroad Facts 2008. **Transit**—USDOT, Federal Transit Administration, *National Transit Database 2008*, tables 21, 23, and 24. **Water**: Commercial waterway facilities—U.S. Army Corps of Engineers, Institute for Water Resources, Navigation Data Center, *The U.S. Waterway System Facts*, December 2007 (Alexandria, VA: 2008). Navigable channels—U.S. Army Corps of Engineers as cited in USDOT, RITA, BTS, *National Transportation Statistics*, tables 1-1, available at http://www.bts.gov as of October 2009. **Pipeline**—PHMSA as cited in USDOT, RITA, BTS, *National Transportation Statistics*, table 1-10, available at http://www.bts.gov as of January 2010.

1-2

Condition of U.S. Highway Bridges: 1990–2008

Mode	1990	2000	2007	2008
Total all bridges	572,205	589,674	599,766	601,396
Urban	108,770	133,384	151,171	153,407
Rural	463,435	456,290	448,595	447,989
Structurally deficient bridges, total	137,865	86,678	72,520	71,461
Urban	16,847	13,079	12,951	12,896
Rural	121,018	73,599	59,569	58,565
Functionally obsolete bridges, total	100,355	81,510	79,804	79,933
Urban	30,266	29,398	33,139	33,691
Rural	70,089	52,112	46,665	46,242

Notes: Explanations for the terms Structurally Deficient and Functionally Obsolete can be found on pages 14 and 15 in chapter 3 of the Federal Highway Administration, *2006 Conditions and Performance Report*, available at http://www.fhwa.dot.gov/policy/2006cpr/pdfs/chap3.pdf as of September 2009. U.S. totals include the 50 states, the District of Columbia, and Puerto Rico. Data include: Rural–interstate, principal arterial, minor arterial, major collector, minor collector and local roads; Urban–interstate, other freeways or expressways, other principal arterial, minor arterial, collector, and local roads. Data for 1990, 2007, and 2008 are as of December of those years and for 2000 as of August of that year.

Sources: Federal Highway Administration, Office of Bridge Technology, National Bridge Inventory Database, *Count, Area, Length of Bridges by Highway System*, available at http://www.fhwa.dot.gov/bridge/britab.htm as of March 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-27, available at http://www.bts.gov as of September 2009.

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 40 percent of U.S. deaths due to unintentional injury involve transportation. Roughly 95 percent of transportation fatalities arise from motor vehicle crashes.

2-1

Transportation Fatalities by Mode: 1990–2008

Mode	1990	R2005	R2007	P2008
Air				
Large U.S. air carrier[a]	39	22	1	3
Commuter air carrier[a]	6	0	0	0
On-demand air taxi[a]	51	18	43	66
General aviation[a]	770	563	496	495
Highway[b]	44,599	43,510	41,259	37,261
Pipeline, gas, and hazardous liquid	9	14	15	8
Railroad[c]	599	525	510	513
Transit[d]	339	236	288	U
Waterborne				
Vessel-related, commercial ship	85	78	67	51
Nonvessel-related[e], commercial ship	101	60	59	67
Recreational boating	865	697	685	709

[a] Includes people on planes and on the ground. [b] Includes motor vehicle occupants, nonoccupants, and 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 response, van pool, and automated guideway. [e] Fatalities unrelated to vessel accidents, e.g., individual falling overboard and drowning.

Key: P = preliminary; R = revised; U = unavailable.

Notes: Data for 2005 have been revised for pipeline, vessel-related, and nonvessel-related. Data for 2007 have been revised for general aviation, highway, transit, vessel-related, and nonvessel-related. The number of railroad fatalities in 2008 is preliminary.

Sources: **Air**—National Transportation Safety Board, **Highway**—National Highway Traffic Safety Administration, **Pipeline**—Office of Pipeline Safety, **Rail**—Federal Railroad Administration, **Transit**—Federal Transit Administration and personal communication, **Water**—U.S. Coast Guard as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

2-2

Distribution of Transportation Fatalities: 2008

Category	[P]Number	%
Passenger car occupants	14,587	37.16
Light-truck occupants	10,764	27.42
Motorcycle riders	5,290	13.48
Pedestrians struck by motor vehicles	4,378	11.15
Pedalcyclists struck by motor vehicles	716	1.82
Recreational boating	709	1.81
Large-truck occupants	677	1.72
Other and unknown motor vehicle occupants	594	1.51
General aviation	495	1.26
Railroad trespassers (excl. grade crossings)[a]	457	1.16
Other nonoccupants struck by motor vehicles[b]	188	0.48
Grade crossings, not involving motor vehicles[c]	68	0.17
Waterborne transportation (nonvessel-related)	67	0.17
Bus occupants (school, intercity, transit)	67	0.17
Air taxi	66	0.17
Waterborne transportation (vessel-related)	51	0.13
Rail employees on duty and contractors[a]	26	0.07
Passengers on railroad trains	24	0.06
Private grade crossings, with motor vehicles[a]	21	0.05
Gas distribution pipelines	6	0.02
Air carriers	3	0.01
Hazardous liquid pipelines	2	0.01
Gas transmission pipelines	0	0.00
Commuter air	0	0.00
Total, all modes[d]	**39,256**	**100.00**
Other counts, redundant with above		
Crashes involving large trucks[e]	U	
Public grade crossings, with motor vehicles[a]	198	
Commuter rail	U	

[a] Includes fatalities outside trains. [b] Includes all nonoccupant fatalities in motor vehicle crashes, except pedalcyclists and pedestrians. [c] Public grade crossing fatalities involving motor vehicles are included in motor vehicle counts. [d] Unless otherwise noted, includes fatalities outside vehicles [e] Includes large-truck occupants, other vehicle occupants, and nonoccupants.

Key: P = preliminary; U = unavailable.

Notes: Fatalities for general aviation, air carriers, air taxi, passengers on railroad trains, commuter air, grade crossing not involving motor vehicles, public grade crossing with motor vehicles and private grade crossings with motor vehicles are preliminary. Heavy-rail transit (e.g., rail subway) and Light-rail transit catagories are excluded due to lack of data.

Sources: **Air**—National Transportation Safety Board, **Highway**—National Highway Traffic Safety Administration, **Rail**—Federal Railroad Administration, **Transit**—Federal Transit Administration, **Waterborne**—U.S. Coast Guard, **Recreational boating**—U.S. Coast Guard, Office of Boating Safety, **Pipeline**—Pipeline and Hazardous Materials Safety Administration as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-4, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

2-3

Fatalities in Motor Vehicle Crashes by Person Type, Crash Type, and Alcohol Involvement: 2008

Crash category	Fatalities in category [a]	Alcohol involvement [b]	% Alcohol involvement [c]
Occupants	**31,979**	**12,963**	**40.5**
Single-vehicle crashes	17,058	8,591	50.4
Two-vehicle crashes	12,594	3,656	29.0
More than two-vehicle crashes	2,327	716	30.8
Pedestrians	**4,378**	**2,150**	**49.1**
Single-vehicle crashes	3,965	1,906	48.1
Multiple-vehicle crashes	413	245	59.3
Pedalcyclists	**716**	**268**	**37.4**
Single-vehicle crashes	688	252	36.6
Multiple-vehicle crashes	28	16	57.1
Others/unknown	**188**	**58**	**30.9**
Total	**37,261**	**15,438**	**41.4**

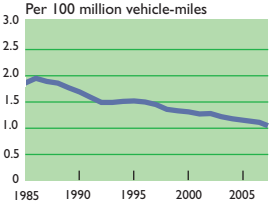
[a] Fatalities in all crashes whether or not alcohol was involved. [b] Fatalities in crashes that involve alcohol. [c] Percentage of all crash fatalities in category that involve alcohol.

Notes: Numbers may not add to totals due to rounding. A motor vehicle crash is considered to be alcohol-related if at least one driver or non-occupant (e.g., a pedestrian or pedalcyclist) involved in the crash is determined to have had a blood alcohol concentration of 0.01 grams per deciliter or greater. The National Highway Traffic Safety Administration estimates alcohol involvement when test results are unknown

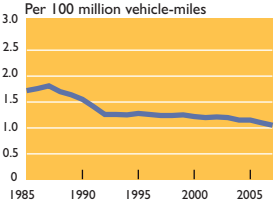
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Fatality Analysis Reporting System (FARS)* Database, personal communication, October 2009 as cited in USDOT, RITA, BTS, National Transportation Statistics, table 2-20, available at http://www.bts.gov as of January 2010.

2-4
Fatality Rates for Selected Modes: 1985–2007

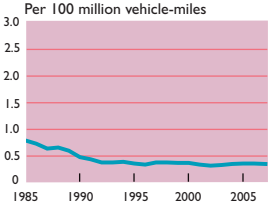
Passenger car occupants



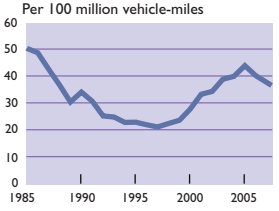
Light-truck occupants



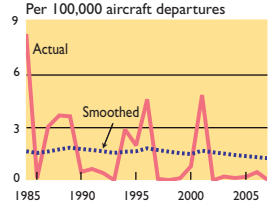
Large-truck occupants



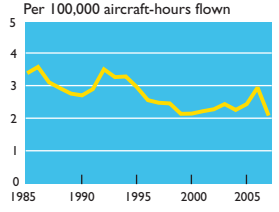
Motorcycle riders



Air carriers (actual and smoothed fatality rates)



General aviation



Notes: Air carrier data were smoothed using an exponential smoothing model, with a weight of 0.945 to reduce the year-to-year fluctuations. Air carrier fatalities resulting from the Sept. 11, 2001, terrorist attacks include only those persons onboard aircraft. All 2006 data are revised. 1999 and 2003 data for general aviation fatalities and rates, 1997 data for passenger car occupants fatalities, and 1985 data for VMT are revised.

Sources: **Passenger car occupants, Light-truck occupants, Large-truck occupants, and Motorcycle riders**—U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *Traffic Safety Facts 2007*, table 7 to 10, available at http://www-nrd.nhtsa.dot.gov as of October 2009. **Air carriers and General aviation**—National Transportation Safety Board, *Annual Review of Aircraft Accident Data— U.S. Air Carrier Operations and U.S. General Aviation*, available at http://www.ntsb.gov/ as of April 2008 and September 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 2-9 and 2-14, available at http://www.bts.gov/publications/national_transportation_statistics/ as of October 2009.

2-5
Injured Persons by Transportation Mode: 1990–2008

Mode	1990	2000	R2007	2008
Air				
Large U.S. air carrier	29	29	16	16
Commuter air carrier	11	7	0	2
On-demand air taxi	36	12	20	13
General aviation	409	309	255	258
Highway[a]	3,230,666	3,188,750	2,491,000	2,346,000
Pipeline, gas, and hazardous liquid	76	81	50	63
Railroad[b]	22,736	10,424	8,501	7,765
Transit[c]	54,556	56,697	20,625	U
Waterborne				
Vessel-related, commercial ship	175	150	190	152
Nonvessel-related[d], commercial ship	U	607	559	464
Recreational boating	3,822	4,355	3,673	3,331

[a] Includes passenger car occupants, motorcyclists, light-duty and large-truck occupants, bus occupants, occupants of unknown vehicle types, and pedestrians, pedalcyclists, and other nonmotorists. [b] Injuries resulting from train accidents, train and nontrain incidents, and occupational illness. Includes Amtrak. Also includes train occupants and nonoccupants except motor vehicle occupants at grade crossings.
[c] Injuries resulting from all reportable incidents, not just from accidents. Includes commuter rail, heavy rail, light rail, motorbus, demand response, van pool, and automated guideway. The drop in the number of injuries in 2007 is due largely to a change in definitions by the Federal Transit Administration. Only injuries requiring immediate medical treatment away from the scene now qualify as reportable. Previously, any injury was reportable. [d] Injuries unrelated to vessel accidents, e.g., an individual getting a cut while onboard a vessel.

Key: R = revised; U = unavailable.

Notes: Modes may use different reporting criteria and/or estimation methods for injuries. All 2007 data have been revised with the exception of highway, commuter air carrier and on-demand air taxi.

Sources: **Air**—National Transportation Safety Board, **Highway**—National Highway Traffic Safety Administration, **Pipeline**—Pipeline and Hazardous Materials Safety Administration, **Railroad**—Federal Railroad Administration, **Transit**—Federal Transit Administration, **Waterborne**—U.S. Coast Guard as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-2, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

2-6

Hazardous Materials Transportation Incidents, Injuries, and Fatalities: 1990–2008

	1990	R2000	R2006	R2007	2008
Highway	**7,297**	**15,063**	**17,157**	**16,904**	**14,781**
Accident related	249	329	306	306	283
Injuries	311	164	192	161	149
Fatalities	8	16	6	10	8
Air	**297**	**1,419**	**2,411**	**1,555**	**1,277**
Accident related	0	3	7	7	8
Injuries	39	5	2	8	7
Fatalities	0	0	0	0	0
Rail	**1,279**	**1,058**	**704**	**750**	**750**
Accident related	48	62	44	52	26
Injuries	73	82	24	56	63
Fatalities	0	0	0	0	1
Water	**7**	**17**	**68**	**61**	**98**
Accident related	0	0	0	0	0
Injuries	0	0	15	3	0
Fatalities	0	0	0	0	0

Pipeline	1990	2000	2006	2007	2008
Natural gas distribution	**110**	**154**	**142**	**153**	**151**
Injuries	52	59	30	36	58
Fatalities	6	22	18	9	6
Natural gas transmission	**89**	**80**	**146**	**132**	**140**
Injuries	17	18	5	7	5
Fatalities	0	15	3	2	0
Liquid	**180**	**146**	**120**	**119**	**139**
Injuries	7	4	2	10	2
Fatalities	3	1	0	4	2

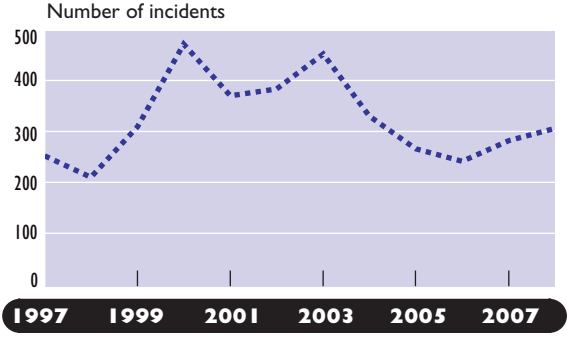
Key: R = revised.

Notes: Accident related excludes human errors, package failures, and unreported cases. Water data are for incidents involving packaged materials only and do not include incidents where the vessel is the container (e.g., a barge or oil tanker). Nonpipeline reporting requirements changed in 2002. Natural gas transmission includes gathering systems. Natural gas transmission fatalities for 2000 is revised. Highway incidents and accident related; natural gas distribution incidents, injuries and fatalities; and liquid pipline incidents for 2006 are revised. 2007 incidents for highway, rail, air and natural gas transmission are revised. Moreover, 2007 accident related incidents and injuries for highway, and rail injuries are revised.

Sources: **Highway, Rail, Air, and Water**—USDOT, Pipeline and Hazardous Materials Safety Administration, Hazardous Materials Information System Database, available at http://www.phmsa.dot.gov/hazmat/library/data-stats as of November 2009 as reported in USDOT, RITA, BTS, *National Transportation Statistics*, table 2-6, available at http://www.bts.gov as of January 2010. **Pipeline**—USDOT, PHMSA, Office of Pipeline Safety, *Pipeline Statistics*, available at http://ops.dot.gov/stats/stats.htm as of November 2009.

Ensuring the security of all transportation systems and the people who use them is a national priority. While much of the initial national focus after the September 11, 2001, terrorist attacks was on aircraft and airports, today attention is also directed at other modes, including rail, water, highways, and pipelines. Another national security issue is U.S. dependency on foreign sources of oil. The U.S. transportation sector remains almost entirely dependent on petroleum as an energy source, and nearly two-thirds of the petroleum used in the United States is imported.

3-1
International Piracy and Armed Robbery at Sea: 1997–2008



Note: Incidents include attempts and threatening actions. 2006 data are revised.

Source: International Maritime Organization, *Reports on Acts of Piracy and Armed Robbery Against Ships: Annual Report*, available at http://www.imo.org/home.asp as of September 2009.

3-2

Prohibited Items Intercepted at U.S. Airport Screening Checkpoints: 2005–2008

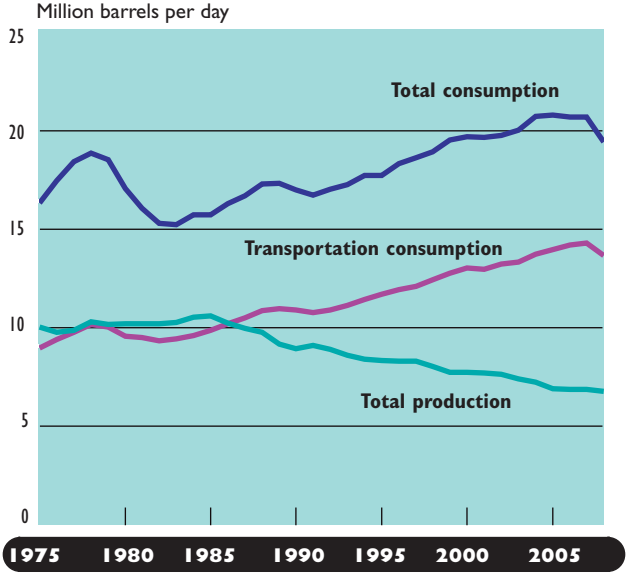
Items	2005	2006	2007	2008
Knives[a]	1,822,752	1,607,125	1,056,687	626,182
Incendiaries and explosive/ flammable materials	398,830	113,700	89,623	116,200
Other cutting instruments[a]	3,276,691	163,419	101,387	59,459
Clubs[a]	20,531	12,296	9,443	6,447
Box cutters[a]	21,315	15,999	11,908	6,284
Firearms	2,217	2,075	1,416	902
Other[a]	10,345,260	11,797,145	5,245,558	157,336
Total prohibited items	**15,887,596**	**13,711,759**	**6,516,022**	**972,810**

[a] 2008 consists of data up to Aug. 8, 2008 with the exception of firearms and incendiaries. TSA has stopped the collection of data on all prohibited items except for Firearms and Incendiaries as of Aug. 8, 2008.

Notes: Other cutting instruments include scissors, hatchets, swords, sabers, meat cleavers, ice axes, and picks. Effective Dec. 22, 2005, scissors less than 4 inches and tools less than 7 inches were no longer prohibited. Knives include any length and type except round-bladed, butter, and plastic cutlery. Clubs includes martial arts items, baseball bats, night sticks, hammers, pool cues, and billy clubs. Firearms includes any weapon (including a starter gun) that is designed to or may readily be converted to expel a projectile by the action of an explosive, as well as spear guns, BB guns, flare pistols, compressed air guns, and stunning devices. Other refers to tools, self-defense items, compressed gas cylinders, bleach, lighters, and certain sporting goods. Lighters (except for torch lighters and micro torches) were removed from the prohibited items list effective Aug. 4, 2007.

Source: U.S. Department of Homeland Security, Transportation Security Administration, personal communication, October 2009 as reported in USDOT, RITA, BTS, *National Transportation Statistics*, table 2-16b, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

3-3
U.S. Petroleum Production and Consumption: 1975–2008

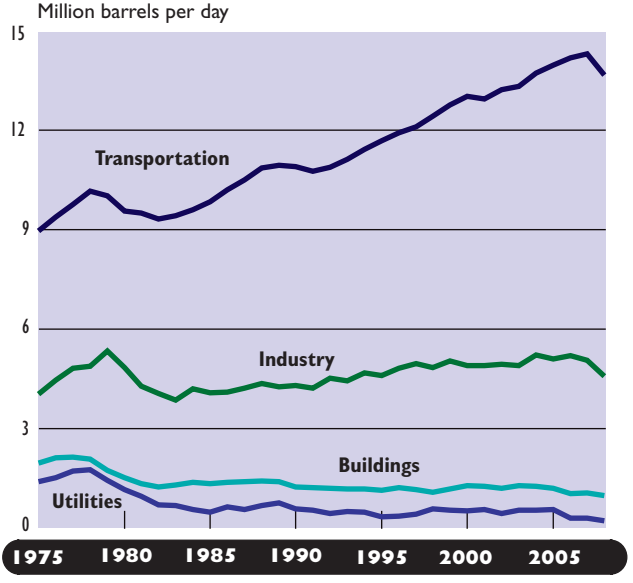


Notes: 2008 data are preliminary. All 2007 data are revised. Transportation consumption data for 2006 are revised.

Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2008* (Washington, DC: June 2009), tables 5.1 and 5.13a-d, available at http://www.eia.doe.gov/aer/petro.html as of September 2009 as reported in USDOT, RITA, BTS, *National Transportaiton Statistics*, Table 4-1, available at http://www.bts.gov/ as of January 2010.

3-4

Transportation's Share of U.S. Petroleum Use: 1975–2008

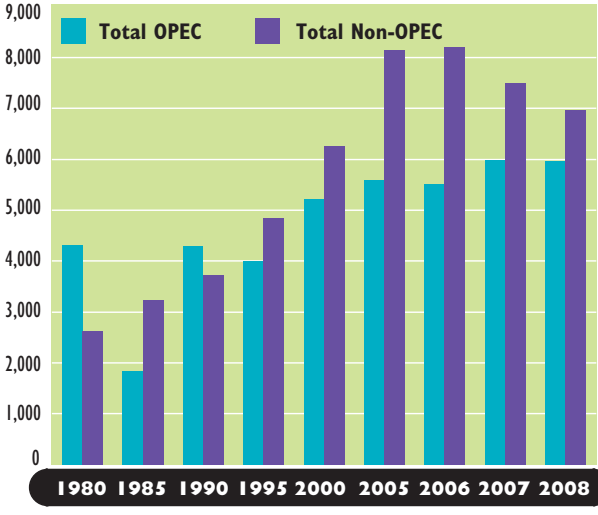


Notes: 2008 data are preliminary. 1984 data for Industry and Buildings; 2006 data for Transportation, Industry, and Buildings; and 2007 data for Transportation and Buildings are revised.

Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2008* (Washington, DC: June 2009), tables 5.13a–d, available at http://www.eia.doe.gov/aer/petro.html as of September 2009.

3-5
U.S. Oil Imports: 1980–2008

Thousand barrels per day, average



Notes: OPEC (Organization of Petroleum Exporting Countries) members are Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela. Angola joined OPEC in January 2007. Ecuador was a member of OPEC from 1973-1992, and rejoined OPEC in November 2007. Gabon was a member from 1975-1994. Indonesia withdrew from OPEC in May 2008.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, September 2009, tables 3.3c and 3.3d, available at http://www.eia.doe.gov/emeu/mer/petro.html as of September 2009.

3-6

Major Suppliers of U.S. Imported Crude Oil and Petroleum Products: 1990–2008

(Thousand barrels per day, average; rank in 2008)

	1990	2000	R2007	2008
Canada	934	1,869	2,455	2,493
Saudi Arabia	1,339	1,543	1,485	1,529
Mexico	755	1,340	1,532	1,302
Venezuela	1,025	1,360	1,361	1,189
Nigeria	800	490	1,134	988
Iraq	518	254	484	627
Algeria	280	240	670	548
Angola	237	301	508	513
Russia	45	29	414	465
U.S. Virgin Islands	282	255	346	320
Brazil	49	59	200	258
United Kingdom	189	273	277	236
Ecuador	49	128	205	221
Kuwait	86	239	181	210
Total, major suppliers	**6,588**	**8,381**	**11,252**	**10,899**
Total, all U.S. imports	8,018	11,459	13,468	12,915

Key: R = revised.

Notes: The country of origin for petroleum products may not be the country of origin for the crude oil used to produce the products. For example, refined products imported from western European refineries may have been produced from Middle Eastern crude oil. 2007 Ecuador data represent 9 month average.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, tables 3.1, 3.3c–d, available at http://www.eia.doe.gov/emeu/mer/petro.html as of September 2009.

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

4-1
Vehicle-Miles: 1990–2007
(Millions)

Mode	1990	2000	R 2006	P 2007
Air				
Air carrier	3,963	5,664	6,605	6,428
Highway				
Passenger cars	1,408,266	1,600,287	1,690,534	1,670,994
Other 2-axle, 4-tire vehicles[a]	574,571	923,059	1,082,490	1,111,277
Motorcycles	9,557	10,469	12,050	13,612
Buses[b]	5,726	7,590	6,783	6,976
Trucks				
Single-unit	51,901	70,500	80,344	81,954
Combination	94,341	135,020	142,169	145,008
Total Highway	**2,144,362**	**2,746,925**	**3,014,370**	**3,029,821**
Rail[c]				
Transit[d]	561	648	726	741
Commuter	213	271	315	326
Intercity/Amtrak[e]	301	368	264	267
Class I freight	26,159	34,590	38,955	38,186
Other transit[f]	**324**	**833**	**1,136**	**1,657**

[a] Includes vans, pickup trucks, sport utility vehicles, and other 2-axle, 4-tire motor vehicles that are not passenger cars. [b] Includes municipally owned transit and commercial, federal, and school buses. [c] Car-miles. [d] Includes light and heavy rail only. [e] Fiscal year data. [f] Includes demand response, ferryboat, and other transit not specified.

Key: R = revised; P = preliminary.

Notes: Air and highway data for 2006 are revised. Transit, commuter rail, and other transit data for 2007 are preliminary.

Sources: **Air Carrier**—Bureau of Transportation Statistics, **General Aviation**—National Transportation Safety Board, **Highway**—Federal Highway Administration, **Class I and Intercity Rail**—Association of American Railroads, **Transit and Commuter Rail**—American Public Transportation Association as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-32, available at http://www.bts.gov as of October 2009.

4-2

Number of Aircraft, Vehicles, Railcars, and Vessels: 1990–2007

Mode	R1990	R2000	R2006	2007
Air				
Air carrier	6,083	8,055	8,089	8,044
General aviation	198,000	217,533	221,943	231,607
Highway				
Automobiles	133,700,496	133,621,420	135,399,945	135,932,930
Other 2-axle, 4-tire vehicles[a]	48,274,555	79,084,979	99,124,775	101,469,615
Buses (municipally owned transit and commercial, federal, and school buses)	626,987	746,125	821,959	834,436
Motorcycles	4,259,462	4,346,068	6,678,958	7,138,476
Trucks				
Single-unit	4,486,981	5,926,030	6,649,337	6,806,630
Combination	1,708,895	2,096,619	2,169,670	2,220,995
Rail—Passenger				
Amtrak–Cars	1,863	1,894	1,191	1,164
Amtrak–Locomotives	318	378	319	270
Commuter railcars and locomotives	4,982	5,498	6,403	6,391
Transit[b]	11,477	11,638	12,853	13,032
Rail—freight				
Class I–Freight cars	658,902	560,154	475,415	460,172
Class I–Locomotives	18,835	20,028	23,732	24,143
Other freight cars[c]	553,359	820,642	871,092	925,537
Waterborne				
Nonself-propelled vessels (barges)[d,e]	31,209	33,152	32,211	31,654
Self-propelled vessels[d,e]	8,236	8,202	8,898	9,041
Oceangoing ships[e] (1,000 gross tons and over)	635	461	272	275
Recreational boats (numbered boats)	10,996,253	12,782,143	12,746,126	12,875,568

[a] Includes vans, pickup trucks, sport utility vehicles, and other 2-axle, 4-tire motor vehicles that are not passenger cars. [b] Includes light and heavy rail transit only. [c] Includes Non-class I and car companies' and shippers' freight cars only. [d] See Glossary for definitions. [e] U.S.-flag vessels. 1990 and 2000 data include private and government owned vessels of 1,000 gross tons and over. Beginning in 2006, data are for privately-owned vessels of 1,000 gross tons and over.

Key: R = revised.

Notes: Transit, commuter rail, oceangoing ships, and motorcycles data for 2006 are revised. Transit and oceangoing ships data for 1990 and 2000 are revised, as is commuter rail data for 1990.

Sources: **Air**—Federal Aviation Administration, **Highway**—Federal Highway Administration, **Rail**—Amtrak and Association of American Railroads, **Transit**—American Public Transportation Association, **Waterborne**—U.S. Army, Corps of Engineers and U.S. Coast Guard as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-11, available at http://www.bts.gov as of January 2010.

4-3
Passenger-Miles: 1990–2007
(Millions)

Mode	1990	2000	R2006	P2007
Air[a]				
Air carrier	345,873	516,129	588,455	607,546
General aviation	13,000	15,200	U	U
Highway				
Passenger cars	2,281,391	2,544,457	2,671,044	2,640,170
Other 2-axle, 4-tire vehicles[b]	999,754	1,467,664	1,876,690	1,926,597
Buses[c]	121,398	160,919	143,816	147,906
Motorcycles	12,424	11,516	15,303	17,287
Rail				
Transit[d]	12,046	15,200	16,587	18,070
Commuter	7,082	9,402	10,361	11,153
Intercity/Amtrak[e]	6,057	5,498	5,410	5,784
Other transit[f]	**841**	**1,631**	**2,221**	**2,998**

[a] All domestic operations of U.S. carriers other than those operating under 14 CFR 121 and 14 CFR 135. [b] Includes vans, pickup trucks, sport utility vehicles, and other 2-axle, 4-tire motor vehicles that are not passenger cars. [c] Includes municipally owned transit and commercial, federal, and school buses. [d] Includes light and heavy rail only. [e] Fiscal year data. Amtrak began operations in 1971. [f] Includes demand response, ferryboat, and other transit not specified.

Key: R = revised, U = unavailable, P = preliminary.

Notes: Highway and air data are revised for 2006. Rail (except Intercity/Amtrak) and other transit data are preliminary for 2007. 2007 data for buses and other are not comparable to earlier years due to a change in the method of data collection and estimation by the American Public Transportation Association (APTA).

Sources: **Air Carrier**—Bureau of Transportation Statistics, **General Aviation**—Eno Transportation Foundation, **Highway**—Federal Highway Administration, **Class I and Intercity Rail**—Association of American Railroads, **Transit and Commuter Rail**—American Public Transportation Association as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-37, available at http://www.bts.gov as of October 2009.

4-4
U.S. Domestic Freight Ton-Miles by Mode: 1990–2007 *(Billions)*

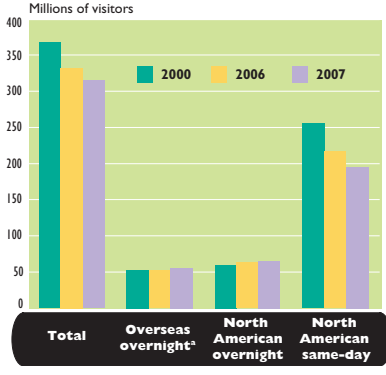
Mode	R1990	R2000	R2006	2007	Percent change 1990–2007
Total	**3,622**	**4,329**	**4,631**	**4,609**	**27.2**
Air	10	16	15	15	45.3
Truck	849	1,193	1,291	1,317	55.2
Railroad	1,064	1,546	1,856	1,820	71.0
Water	834	646	562	553	-33.6
Pipeline	865	928	907	904	4.5

Key: R = revised.

Notes: Truck data are revised for 1990. Truck and Pipeline data are revised for 2000. All data except Domestic Water Transportation are revised for 2006. BTS is revising truck ton-mile estimates to include 2002 Commodity Flow Survey data.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-46b, available at http://www.bts.gov/publications/national_transportation_statistics/ as of December 2009.

4-5
Travel Between the United States and Foreign Countries: 2000, 2006, 2007

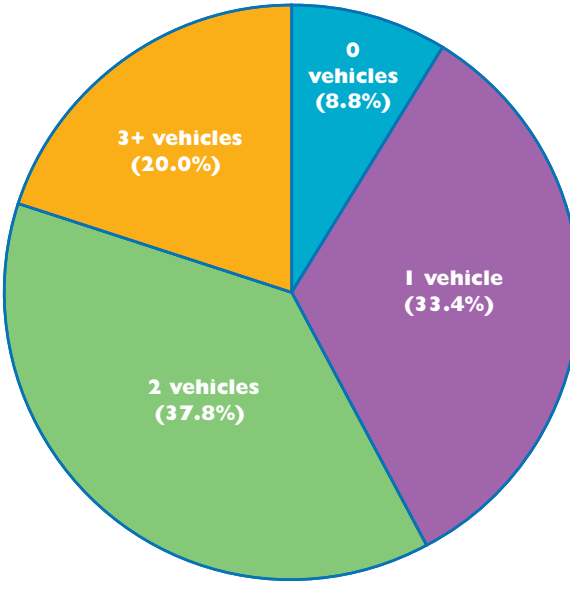


[a] Overseas excludes Canada and Mexico.

Source: **Overseas overnight and North American overnight**—U.S. Department of Commerce, International Trade Administration, Office of Travel and Tourism Industries, *2008 United States Resident Travel Abroad*, available at http://tinet.ita.doc.gov as of October 2009. **North American same-day, Canada and North American same-day, Mexico**—North American Transportation Statistics Database, Tables 9-1b and 9-1c, available at http://nats.sct.gob.mx as of October 2009.

4-6

Households by Number of Motor Vehicles: 2008



Note: Data cover the household population and exclude the population living in institutions, college dormitories, and other group quarters.

Source: U.S. Department of Commerce, U.S. Census Bureau, 2008 *American Community Survey*, annual issues, available at http://www.census.gov/acs/www/index.html as of September 2009.

4-7

Top 20 World Airports by Passenger Movements[a]: 2007 and 2008

(Thousands of passengers enplaned, deplaned, and in-transit at airport)

2008 rank	City airport	2007	2008	% change 2007–2008
1	Atlanta, GA (Hartsfield)	89,379	90,039	0.7
2	Chicago, IL (O'Hare)	76,178	69,354	-9.0
3	London, England (Heathrow)	68,068	67,056	-1.5
4	Tokyo, Japan (Narita)	66,823	66,755	-0.1
5	Paris, France (Charles de Gaulle)	59,922	60,875	1.6
6	Los Angeles, CA (Los Angeles)	61,896	59,498	-3.9
7	Dallas/Ft Worth, TX (Dallas/Ft. Worth)	59,786	57,093	-4.5
8	Beijing, China (Beijing Capital)	53,584	55,937	4.4
9	Frankfurt, Germany (Frankfurt)	54,162	53,467	-1.3
10	Denver, CO (Denver)	49,863	51,245	2.8
11	Madrid, Spain (Barajas)	52,123	50,824	-2.5
12	Hong Kong, China (Hong Kong)	47,042	47,858	1.7
13	New York, NY (JFK)	47,717	47,808	0.2
14	Amsterdam, Netherlands (Schiphol)	47,795	47,430	-0.8
15	Las Vegas, NV (McCarran)	46,961	43,209	-8.0
16	Houston, TX (G. Bush)	42,998	41,709	-3.0
17	Phoenix, AZ (Phoenix Sky Harbor)	42,185	39,891	-5.4
18	Bangkok, Thailand (Suvarnabhumi)	41,210	38,603	-6.3
19	Changi, Singapore (Changi)	36,702	37,695	2.7
20	Dubai, United Arab Emirates (Dubai)	34,348	37,441	9.0

[a] Passenger movements include enplanements and deplanements, with intransit passengers counted once. Both domestic and international passenger movements are included. General aviation passengers are excluded.

Notes: Airports include those participating in the ACI annual traffic statistics collection as of Aug. 26, 2009. Airports are ranked based on 2008 data.

Source: Airports Council International, *Annual Traffic Data*, available at http://www.airports.org/cda/aci_common/display/main/aci_content07_c.jsp?zn=aci&cp=1-5-54-55_666_2__ as of Aug. 26, 2009.

4-8

Top 20 U.S. Gateways for Nonstop International Air Travel: 2007 and 2008

(Thousands of international passengers[a])

2008 rank	Gateway airport	R2007	2008	% change 2007–2008
1	New York (JFK), NY	21,460	22,029	2.7
2	Los Angeles, CA	16,869	16,164	-4.2
3	Miami, FL	15,586	15,999	2.7
4	Chicago (O'Hare), IL	11,539	11,106	-3.7
5	Newark, NJ	10,568	10,934	3.5
6	Atlanta, GA	8,911	9,232	3.6
7	San Francisco, CA	8,601	8,331	-3.1
8	Houston (G. Bush), TX	7,476	7,673	2.6
9	Washington (Dulles), DC	5,822	6,011	3.2
10	Dallas-Ft. Worth, TX	5,031	4,938	-1.9
11	Detroit, MI	3,830	3,800	-0.8
12	Philadelphia, PA	3,611	3,724	3.1
13	Boston, MA	3,808	3,523	-7.5
14	Honolulu, HI	3,858	3,414	-11.5
15	Fort Lauderdale, FL	2,883	3,073	6.6
16	Seattle-Tacoma, WA	2,547	2,787	9.4
17	Orlando, FL	2,214	2,575	16.3
18	Guam Island, GU	2,777	2,564	-7.7
19	Minneapolis-St. Paul, MN	2,515	2,560	1.8
20	Charlotte, NC	2,110	2,297	8.9
Total, top 20 U.S. international airports		**142,134**	**142,733**	**0.4**
Top 20, percentage of total[b]		**88.4**	**89.0**	**0.6**
Total, all U.S. international airports		**160,846**	**160,379**	**-0.3**

[a] International passengers are residents of any country traveling nonstop to and from the United States on U.S. and foreign carriers.

[b] The value in the last column is the difference in the percentage from 2007 to 2008.

Key: R = revised.

Notes: Ranking is based on 2008 data. The 2007 total, top 20 U.S. international airports is not the total of this table because some of the airports in the 2007 top 20 are not in the 2008 top 20, and thus are not shown here. The data cover all passengers arriving and departing from U.S. airports on nonstop commercial international flights with 60 seats or more.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Segment Data*, September 2009.

4-9

U.S.-Mexican Border Land-Passenger Crossings: 2008

(Thousands)

	Entering the U.S.
Total for all U.S.-Mexico crossings	
Personal vehicles	78,857
Personal vehicle passengers	157,982
Buses	266
Bus passengers	3,456
Train passengers and crew	22
Pedestrians	44,842
Personal vehicles—top 5 gateways	
El Paso, TX	13,716
San Ysidro, CA	13,672
Hidalgo, TX	6,983
Brownsville, TX	6,567
Laredo, TX	6,105
Personal vehicle passengers—top 5 gateways	
San Ysidro, CA	25,319
El Paso, TX	21,806
Laredo, TX	15,398
Hidalgo, TX	13,468
Brownsville, TX	13,275
Buses—top 5 gateways	
San Ysidro, CA	88
Otay Mesa, CA	48
Laredo, TX	39
Hidalgo, TX	33
El Paso, TX	25
Bus passengers—top 5 gateways	
Laredo, TX	929
El Paso, TX	748
San Ysidro, CA	701
Hidalgo, TX	334
Otay Mesa, CA	240
Train passengers and crew—top 5 gateways	
El Paso, TX	9.7
Eagle Pass, TX	6.6
Nogales, AZ	2.6
Tecate, CA	2.2
Calexico East, CA	0.5
Pedestrians—top 5 gateways	
El Paso, TX	8,029
San Ysidro, CA	7,290
Nogales, AZ	6,568
Calexico, CA	4,360
Laredo, TX	3,874

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Border Crossing/Entry Data*, available at http://www.bts.gov/itt/ as of September 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-45, available at http://www.bts.gov as of January 2010.

4-10

U.S.-Canadian Border Land-Passenger Crossings: 2008

(Thousands)

	Entering the U.S.
Total for all U.S.-Canada crossings	
Personal vehicles	28,678
Personal vehicle passengers	57,401
Buses	127
Bus passengers	3,404
Train passengers and crew	239
Pedestrians	500
Personal vehicles—top 5 gateways	
Buffalo-Niagara Falls, NY	5,716
Detroit, MI	4,744
Blaine, WA	2,749
Port Huron, MI	1,667
Massena, NY	1,003
Personal vehicle passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	13,102
Detroit, MI	8,386
Blaine, WA	5,755
Port Huron, MI	3,500
Champlain-Rouses Point, NY	1,946
Buses—top 5 gateways	
Buffalo-Niagara Falls, NY	34
Detroit, MI	31
Blaine, WA	14
Skagway, AK	11
Champlain-Rouses Point, NY	8
Bus passengers—top 5 gateways	
Buffalo-Niagara Falls, NY	1,041
Detroit, MI	720
Blaine, WA	336
Champlain-Rouses Point, NY	306
Sault Ste. Marie, MI	208
Train passengers and crew—top 5 gateways	
Skagway, AK	77
Buffalo-Niagara Falls, NY	37
Blaine, WA	35
Champlain-Rouses Point, NY	32
Detroit, MI	9
Pedestrians—top 5 gateways	
Buffalo-Niagara Falls, NY	334
Sumas, WA	38
Calais, ME	27
Detroit, MI	16
International Falls, MN	15

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Border Crossing/Entry Data*, available at http://www.bts.gov/itt/ as of September 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-44, available at http://www.bts.gov as of January 2010.

4-11

Top 20 U.S. Passenger Airports: 1998 v. 2008 Rankings

(Thousands of enplaned passengers on large certificated air carriers)

	1998		2008		
Airport	**Rank**	**Total enplaned passengers**	**Rank**	**Total enplaned passengers**	**% change 1998-2008**
Atlanta, GA	1	34,951	1	43,251	23.7
Chicago (O'Hare), IL	2	33,002	2	31,358	-5.0
Dallas/Ft. Worth, TX	3	28,289	3	26,839	-5.1
Denver, CO	5	16,929	4	23,920	41.3
Los Angeles, CA	4	22,874	5	22,440	-1.9
Las Vegas, NV	11	14,033	6	19,887	41.7
Houston (G. Bush), TX	13	13,784	7	19,414	40.8
Phoenix, AZ	8	15,045	8	19,209	27.7
Charlotte, NC	20	10,242	9	17,193	67.9
New York (JFK), NY	21	10,076	10	16,964	68.4
Detroit, MI	7	15,113	11	16,752	10.8
Minneapolis/St. Paul, MN	12	13,909	12	16,317	17.3
Orlando, FL	16	11,931	13	16,122	35.1
Newark, NJ	9	14,564	14	16,112	10.6
San Francisco, CA	6	16,684	15	15,728	-5.7
Philadelphia, PA	19	10,286	16	15,267	48.4
Seattle, WA	15	12,243	17	15,207	24.2
Miami, FL	14	13,265	18	13,578	2.4
Boston, MA	17	10,704	19	11,599	8.4
New York (La Guardia), NY	18	10,356	20	11,173	7.9
Top 20 airports		**332,415**		**388,330**	**16.8**
Top 20, percentage of total[a]		**52.0**		**55.6**	**3.6**
All airports		639,053		698,528	9.3

[a] The value in the last column is the difference in percentages from 1998 to 2008.

Notes: The 1998 top 20 airports total does not reflect the total of this table because some airports that appeared in the 1998 top 20 did not appear in the 2008 top 20. New York (JFK), NY, was not in the top 20 in 1998. St. Louis (STL), MO, was in the top 20 in 1998 but not in 2008.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Schedule T-3 Data*, special tabulation, September 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-41, available at http://www.bts.gov as of January 2010.

4-12

Major U.S. Airports' On-Time Arrival Performance: 2007 and 2008

(Percent on-time, rank in 2008)

	R2007		2008	
Airport	On-time rank	%	On-time rank	%
Salt Lake City, UT	1	80.0	1	83.5
Phoenix, AZ	6	77.9	2	80.9
Chicago (Midway), IL	4	78.4	3	80.7
Oakland, CA	2	79.7	4	80.3
Baltimore, MD	7	77.6	5	80.3
Detroit, MI	17	73.7	6	80.0
Cincinnati, OH	9	76.7	7	79.1
Minneapolis/St. Paul, MN	19	72.6	8	78.9
Denver, CO	14	75.8	9	78.3
Houston (G. Bush), TX	3	78.7	10	78.3
Charlotte, NC	24	71.3	11	78.3
San Diego, CA	5	78.4	12	78.0
Tampa, FL	11	76.5	13	78.0
Washington (Reagan National), DC	22	71.7	14	77.9
Orlando, FL	10	76.5	15	77.8
Las Vegas, NV	8	76.8	16	77.8
Portland, OR (PDX)	13	76.2	17	77.7
St. Louis, MO (STL)	15	74.9	18	77.3
Los Angeles, CA	12	76.4	19	76.9
Dallas/Ft. Worth, TX	21	72.0	20	76.2
Seattle, WA	23	71.4	21	75.6
Atlanta, GA	16	74.4	22	75.5
Fort Lauderdale, FL	18	73.4	23	75.1
Washington (Dulles), DC	20	72.4	24	74.0
Boston, MA	27	69.7	25	73.4
Philadelphia, PA	28	66.5	26	73.0
Miami, FL	25	71.0	27	70.9
San Francisco, CA	26	69.8	28	69.1
New York (JFK), NY	30	62.8	29	68.6
Chicago (O'Hare), IL	29	65.9	30	67.7
New York (LaGuardia), NY	32	58.5	31	62.8
Newark, NJ	31	59.4	32	62.3

Key: R = revised.

Notes: On-time flights arrive within 15 minutes of scheduled arrival time. 2007 Newark data have been revised.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Airline On-Time Performance Data* (December issues), table 4, available at http://www.bts.gov/programs/airline_information/airline_ontime_tables as of September 2009.

4-13

Roadway Delay and Congestion Cost per Peak Traveler[a] in Urban Areas: 1997 and 2007

Annual Roadway Delay per Peak Traveler
(Hours per year)

	1997 delay per peak traveler	2007 delay per peak traveler	Percentage change 1997-2007	Annual growth rate 1997-2007
Very large areas	43	51	18.1	1.7
Large areas	31	35	12.3	1.2
Medium areas	20	23	15.2	1.4
Small areas	15	19	25.5	2.3
90-area average	36	41	15.8	1.5

Annual Roadway Congestion Cost per Peak Traveler
(Current dollars)

	1997 cost per peak traveler	2007 cost per peak traveler	Percentage change 1997-2007	Annual growth rate 1997-2007
Very large areas	666	1,084	62.8	5.0
Large areas	475	734	54.5	4.4
Medium areas	304	481	58.2	4.7
Small areas	224	384	71.4	5.5
90-area average	547	871	59.2	4.8

[a] A peak traveler is estimated to travel from 6:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m.

Key:

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

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

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

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

Notes: See Glossary for definitions of delay and congestion cost. Methodology and data sources have been changed in 2009 and applied retroactively to past years, these figures are not comparable to those in past editions of Pocket Guide.

Source: Texas Transportation Institute, *2009 Urban Mobility Report*, Tables by Population Groups, available at http://mobility.tamu.edu/ums/congestion_data/ as of August 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-63 and 1-66, available at http://www.bts.gov as of October 2009.

4-14

Amtrak On-Time Performance Trends and Hours of Delay by Cause: 2006–2009

	2006	2007	2008	2009
On-time performance				
Total (weighted)	67.8%	68.6%	71.2%	80.4%
Short distance (<400 miles)[a]	72.8%	72.2%	73.6%	81.1%
Long distance (>400 miles)	29.9%	39.5%	52.0%	75.5%
Hours of delay by cause				
Amtrak[b]	23,968	22,902	23,223	21,813
Host railroad[c]	71,387	72,565	64,724	46,842
Other[d]	6,166	6,187	6,618	10,648
Total[e]	**101,522**	**101,655**	**94,566**	**79,304**

[a] Includes all Amtrak Northeast Corridor and Empire Service (New York State) trains. [b] Includes all delays when operating on Amtrak-owned tracks and delays for equipment or engine failure, passenger handling, holding for connections, train servicing, and mail/baggage handling when on tracks of a host railroad. [c] Includes all operating delays not attributable to Amtrak when operating on tracks of a host railroad (e.g., track- and signal-related delays, power failures, freight and commuter train interference, routing delays). [d] Includes delays not attributable to Amtrak or host railroads (e.g., customs and immigration, law enforcement action, weather, or waiting for scheduled departure time). [e] Numbers may not add to totals due to rounding.

Notes: All percentages are based on Amtrak's fiscal year (Oct. 1–Sept. 30). Host railroad is a freight or commuter railroad over which many Amtrak trains operate for all or part of their trips.

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: Amtrak, personal communication, November 2009.

4-15

Top 20 U.S. Water Ports by Shipment Weight & Top 20 U.S. Water Ports by Container TEUs: 2007

Port by shipment weight	Short tons (millions)	Port by container TEUs	Full TEUs (thousands)
South Louisiana, LA	229.0	Los Angeles, CA	5,497
Houston, TX	216.1	Long Beach, CA	5,131
New York, NY and NJ	157.2	New York/ New Jersey	4,047
Long Beach, CA	85.9	Savannah, GA	1,980
Beaumont, TX	81.4	Norfolk Harbor, VA	1,626
Corpus Christi, TX	81.1	Oakland, CA	1,579
Huntington-Tristate, WV-OH-PA	76.5	Seattle, WA	1,416
New Orleans, LA	76.0	Tacoma, WA	1,415
Los Angeles, CA	65.5	Houston, TX	1,400
Mobile, AL	64.5	Charleston, SC	1,369
Lake Charles, LA	64.2	Honolulu, HI	889
Plaquemines, LA	58.8	San Juan, PR	792
Texas City, TX	56.8	Port Everglades, FL	676
Baton Rouge, LA	54.6	Miami, FL	669
Tampa, FL	46.9	Jacksonville, FL	581
Duluth-Superior, MN and WI	46.5	Baltimore, MD	501
Baltimore, MD	41.3	Anchorage, AK	276
Norfolk Harbor, VA	39.7	New Orleans, LA	255
Pittsburgh, PA	38.1	Portland, OR	213
Paulsboro, NJ	38.0	Wilmington, DE	179
Total, top 20	**1,618**		**30,493**
Total, all ports	**2,564**		**32,567**

Notes: Includes exports, imports, and domestic shipments. See table 5-8 for top 20 freight gateways by value of shipments. TEUs = 20-foot equivalent units. One 20-foot container equals one TEU.

Sources: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, Calendar Year 2007, Part 5, National Summaries, tables 1-1 and 5-2, available at http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm as of September 2009. U.S. Army Corps of Engineers, *Waterborne Container Traffic for U.S. Ports and all 50 States and U.S. Territories*, Port TEUs, available at http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm as of September 2009.

4-16

Top 20 World Container Ports: 2006 and 2007

(Thousands of full and empty TEUs)

Rank (2006)	Rank (2007)	Port	Country	TEUs
1	1	Singapore	Singapore	27,936
3	2	Shanghai	China	26,152
2	3	Hong Kong	China	23,998
4	4	Shenzhen	China	21,104
[a]	5	Yingkou(Liaoning)	China	13,713
5	6	Busan	South Korea	13,255
7	7	Rotterdam	Netherlands	10,791
8	8	Dubai	United Arab Emirates	10,653
6	9	Kaohsiung	Taiwan	10,257
9	10	Hamburg	Germany	9,917
11	11	Qingdao	China	9,431
13	12	Ningbo	China	9,259
15	13	Guangzhou	China	9,200
10	14	Los Angeles	United States	8,355
14	15	Antwerp	Belgium	8,176
12	16	Long Beach	United States	7,312
16	17	Port Klang	Malaysia	7,119
17	18	Tianjin	China	7,102
19	19	Tanjung Pelepas	Malaysia	5,500
18	20	New York/ New Jersey	United States	5,299

[a] Yingkou was unranked among the world's top 20 container ports in 2006.

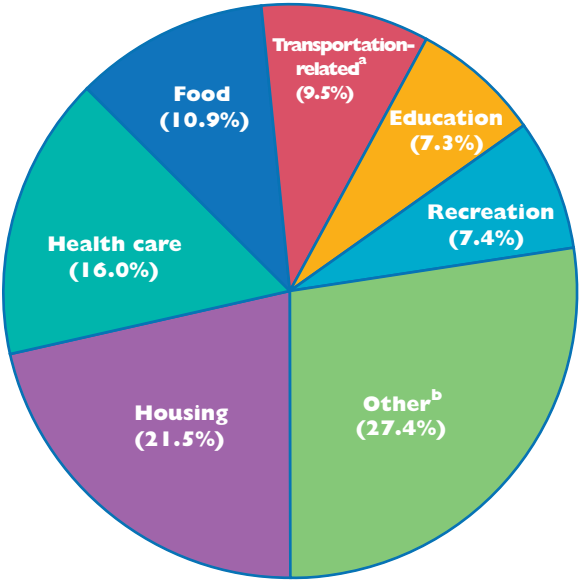
Notes: TEU = 20-foot equivalent unit. One 20-foot container equals one TEU.

Source: American Association of Port Authorities (AAPA), *Port Industry Statistics, World Port Rankings* (Container Traffic), available at http://www.aapa-ports.org/ as of September 2009.

5 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 2008, transportation-related goods and services contributed $1.38 trillion to the $14.44 trillion U.S. Gross Domestic Product.

5-1
U.S. Gross Domestic Product by Major Societal Function: 2008



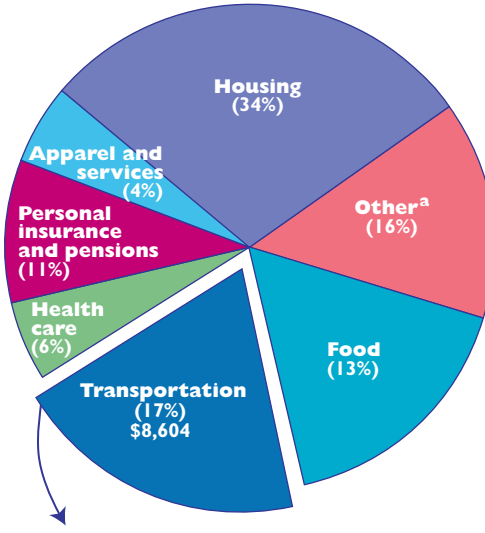
[a] Includes all consumer and government purchases of goods (e.g., vehicles and fuel) and services (e.g., auto insurance) and exports related to transportation. [b] Includes all other categories (e.g., entertainment, personal care products and services, and payments to pension plans).

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, calculated based on data from U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Account Tables*, available at http://www.bea.gov/national/nipaweb/Index.asp as of October 2009 as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-5, available at http://www.bts.gov/publications/national_transportation_statistics/ as of February 2009.

5-2

Average Household Expenditures by Major Spending Category: 2008

Current dollars



Private vehicle expenditures	**=**	**$8,091**
Vehicle purchases	=	$2,755
Gasoline and motor oil	=	$2,715
Other vehicle expenditures	=	$2,621
Public transportation expenditures	**=**	**$513**
Airline fares	=	$343
Ship fares	=	$38
Mass transit fares	=	$61
Taxi fares	=	$25
Intercity train fares	=	$22
Local transportation on out-of-town trips	=	$12
Intercity bus fares	=	$11
School bus	=	$1

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

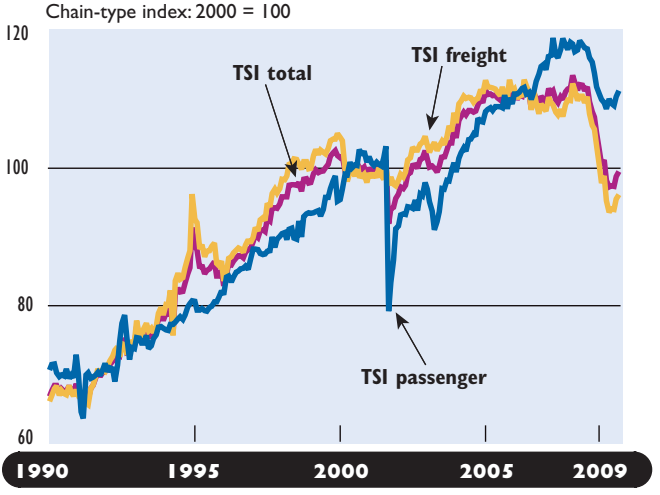
Note: Numbers do not add to totals due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey, 2008*, personal communication, October 2009.

5-3

Transportation Services Index (TSI): January 1990–August 2009

Seasonally adjusted



Notes: May–August 2009 data are preliminary. The TSI total is a monthly measure of the volume of services provided by for-hire transportation industries in the United States using 2000 as the base year.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics (BTS), special calculation, avaliable at http://www.bts.gov/xml/tsi/src/index.xml as of October 2009.

5-4

Employment in Transportation and Selected Transportation-Related Industries[a] : 1990-2008

(*Thousands*)

	R1990	R2000	R2007	2008
Total U.S. labor force (Nonfarm)	**109,487**	**131,785**	**137,598**	**137,066**
Total transportation related labor force[b]	**12,317**	**13,907**	**13,516**	**13,234**
Transportation as a percent of U.S. total	**11.2**	**10.5**	**9.8**	**9.7**
For-hire transport & warehousing	**3,476**	**4,410**	**4,541**	**4,505**
Air	529	614	492	493
Water	57	56	66	65
Railroad	272	232	234	230
Transit/ground passenger transportation	274	372	412	418
Pipeline	60	46	40	42
Trucking	1,122	1,406	1,439	1,391
Support activities	364	537	584	590
Scenic/sightseeing transportation	16	28	29	28
Couriers/messengers	375	605	581	576
Warehousing/storage	407	514	665	673
Related services & construction	**5,256**	**6,177**	**6,015**	**5,871**
Automotive repair services/ parking; automotive equipment rental/leasing; gasoline stations	1,800	2,125	2,053	2,010
Highway, street, bridge construction	289	340	345	329
Dealers or wholesalers of motor vehicles, parts, petroleum, supplies, equipment	1,993	2,360	2,393	2,319
Travel arrangement/ reservation services	250	299	227	228
Ambulatory health care services	99	173	228	239
Postal service	825	880	769	748
Transportation-related manufacturing[c]	**2,683**	**2,447**	**2,071**	**1,963**
Government[b]	**903**	**873**	**890**	**895**

[a] Annual averages. Data are NAICS-based. (See Glossary for definition.)

[b] Fiscal year data. Includes U.S. DOT and state and local personnel. State and local component of government employment includes highway, air, transit, and water modes; while this component of the data in the last year's version of the report included highway employment only.

[c] Includes transportation equipment; petroleum products; tires; rubber; plastics; search, detection, navigation, guidance, aeronautical, and nautical systems; and instrument manufacturing.

Key: R = revised.

Notes: USCG employees are excluded from government for years 2003 and after. All 2007 data are revised. Government employment and total transportation related labor force data for 1990 and 2000 are revised. Transportation-related manufacturing employment is revised for 1990. Due to independent rounding, details may not add to total.

Sources: Total and transportation related labor force—Bureau of Labor Statistics, **Government**—Bureau of the Census and U.S. Department of Tranportation as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-19b, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

5-5

Value of U.S.–International Merchandise Trade by Mode of Transportation: 2008

(Millions of current U.S. dollars)

	Exports	Modal %	Imports	Modal %	Total trade	Total modal %
Total	**1,300,136**	**100.0**	**2,100,141**	**100.0**	**3,400,277**	**100.0**
Water	471,536	36.3	1,152,327	54.9	1,623,863	47.8
Air	388,347	29.9	417,227	19.9	805,574	23.7
Truck	278,857	21.4	275,577	13.1	554,434	16.3
Rail	51,403	4.0	89,022	4.2	140,424	4.1
Pipeline	5,564	0.4	82,212	3.9	87,775	2.6
Other, unknown & miscellaneous	104,430	8.0	83,777	4.0	188,206	5.5

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

Excludes intransit data (merchandise shipped from one foreign country to another via a U.S. 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. The data for other, unknown & miscellaneous are derived by deducting the sum of water, air, truck, rail and pipeline from the total value of merchandise trade.

Sources: **Total, water and air**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, *FT920 U.S. Merchandise Trade: Selected Highlights*, December 2008, available at http://www.census.gov/foreign-trade/Press-Release/ft920_index.html as of September 2009. **Truck, rail, and pipeline** —U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Transborder Freight Data*, available at http://www.bts.gov/programs/international/transborder/TBDR_QA.html as of September 2009.

5-6

Weight of U.S.–International Merchandise Trade by Mode of Transportation: 2008

(Thousands of short tons)

	Exports	Modal %	Imports	Modal %	Total trade	Total modal %
Total	**705,093**	**100.0**	**1,256,610**	**100.0**	**1,961,703**	**100.0**
Water[a]	535,527	76.0	983,145	78.2	1,518,672	77.4
Air	3,686	0.5	4,226	0.3	7,912	0.4
Truck[b]	93,717	13.3	88,474	7.0	182,191	9.3
Rail[b]	62,454	8.9	85,049	6.8	147,503	7.5
Pipeline[b]	3,600	0.5	94,991	7.6	98,591	5.0
Other, unknown, & miscellaneous[b]	6,109	0.9	724	0.1	6,833	0.3

[a] The weight data for water transportation vary from those officially reported by the U.S. Army Corps of Engineers, because the data in this table exclude intransit shipments (merchandise shipped from one foreign country to another via a U.S. port but not part of U.S. official merchandise trade). BTS uses U.S. Census Bureau trade-based data to allow for a complete modal comparison among the different freight transportation modes. [b] The Bureau of Transportation Statistics (BTS) estimated the weight of exports for truck, rail, pipeline, mail and other and unknown modes based on the import weight-to-value ratios that vary by country, mode, and commodity. The import weight-to-value ratios at the six, four, and two-digit HS code commodity detail are applied. Since the weight-to-value ratio of a given commodity drastically changes from one year to another, BTS removed the irregular components (outliers) of the import ratios to produce consistent and reliable export weight estimates.

Notes: Numbers may not add to totals due to rounding. Excludes intransit data (merchandise shipped from one foreign country to another via a U.S. 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: **Water and air**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, *FT920 U.S. Merchandise Trade: Selected Highlights* (December Issues), available at http://www.census.gov/foreign-trade/Press-Release/ft920_index.html as of September 2009. **Truck, rail, pipeline and other, unknown, and miscellaneous**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *TransBorder Freight Data*; and special calculation, August 2009.

5-7

U.S. Merchandise Trade With Canada and Mexico by Mode Share: 2008

Mode	Value (percent)	Weight (percent)
NAFTA trade, total	**100.0**	**100.0**
Truck[a]	57.5	27.3
Rail[a]	14.6	22.1
Pipeline[a]	9.1	14.8
Air	4.2	0.1
Water	9.7	34.8
Other and unknown[a]	4.9	1.0
U.S.-NAFTA imports, total	**100.0**	**100.0**
Truck	50.0	20.5
Rail	16.1	19.7
Pipeline	14.9	22.0
Air	2.9	0.0
Water	12.8	37.6
Other and unknown	3.2	0.2
U.S.-NAFTA exports, total	**100.0**	**100.0**
Truck[a]	67.6	39.6
Rail[a]	12.5	26.4
Pipeline[a]	1.3	1.5
Air	6.0	0.1
Water	5.4	29.7
Other and unknown[a]	7.1	2.6

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

Note: U.S. North American Free Trade Agreement (NAFTA) refers to U.S. trade with Canada and Mexico, our partners in this agreement.

Sources: **Water and air**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, *FT920 U.S. Merchandise Trade: Selected Highlights*, December 2008, available at http://www.census.gov/foreign-trade/Press-Release/ft920_index.html as of October 2009. **Truck, rail, pipeline, and other and unknown**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Transborder Freight Data*, available at http://www.bts.gov/programs/international/transborder/ as of November 2009; and BTS special calculation.

5-8

Top 20 U.S. Foreign Trade Freight Gateways by Value of Shipments: 2008

(Billions of current dollars)

Rank	Gateway	Exports	Imports	Total
1	New York, NY and NJ (w)	51.0	138.4	189.4
2	Los Angeles, CA (w)	33.6	148.7	182.4
3	JFK International Airport, NY (a)	85.5	82.4	167.9
4	Long Beach, CA (w)	32.8	119.2	152.0
5	Houston, TX (w)	68.5	78.2	146.7
6	Detroit, MI (l)	66.5	53.7	120.2
7	Laredo, TX (l)	53.9	61.8	115.8
8	Chicago, IL (a)	35.9	61.2	97.0
9	Port Huron, MI (l)	35.2	46.0	81.2
10	Buffalo-Niagara Falls, NY (l)	40.3	40.5	80.8
11	Los Angeles Intl. Airport, CA (a)	41.3	37.0	78.3
12	Charleston, SC (w)	22.3	39.9	62.1
13	Savannah, GA (w)	22.8	36.0	58.8
14	Norfolk, VA (w)	26.5	29.9	56.3
15	San Francisco Int'l Airport, CA (a)	26.6	26.2	52.8
16	El Paso, TX (l)	20.2	28.0	48.2
17	Baltimore, MD (w) P	16.1	29.0	45.1
18	New Orleans, LA (a)	19.9	25.1	45.0
19	New Orleans, LA (w)	20.2	21.4	41.7
20	Anchorage, AK (a)	10.2	31.2	41.4

Key: a = airport; l = land port; w = water port; P = preliminary.

Notes: Air gateways include a low level (generally less than 3% of the total value) of freight shipped through small user-fee airports located in the same area as the gateways listed. 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 only JFK, Los Angeles, Chicago, and Anchorage. Data for Baltimore are preliminary.

Sources: **Air**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, special tabulation, September 2009. **Water**—U.S. Army Corps of Engineers, Navigation Data Center, Waterborne Commerce Statistics Center, special tabulation, September 2009. **Land**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *TransBorder Freight Data* as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-47, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

5-9

U.S. Trade in Transportation-Related Commodities: 2008

(Millions of current U.S. dollars)

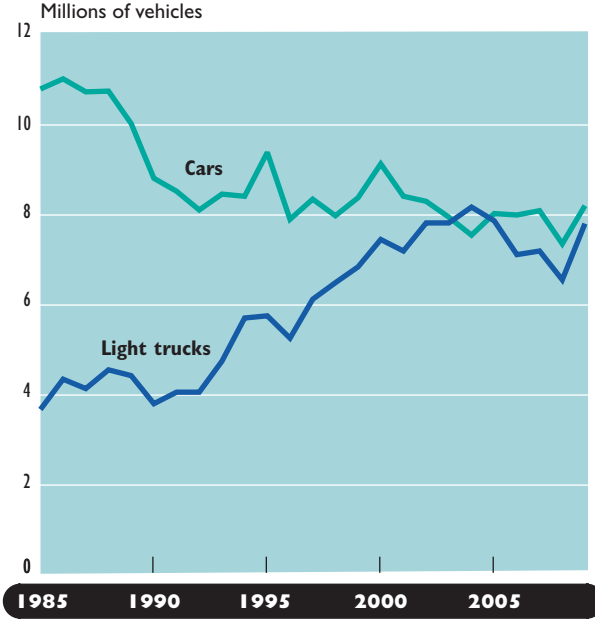
Commodity and code	Exports	Imports	Total trade	Balance
Motor vehicles and parts (87)	111,457	195,073	306,531	-83,616
Aircraft, spacecraft, and parts (88)	71,993	21,555	93,548	50,439
Ships, boats, and floating structures (89)	3,243	1,678	4,921	1,565
Railway or tramway locomotives and parts (86)	3,020	1,805	4,825	1,215
Total, transportation commodities	**189,713**	**220,111**	**409,824**	**-30,398**
Total, all commodities	1,300,136	2,100,141	3,400,277	-800,006
Transportation commodities share of trade	14.6%	10.5%	12.1%	3.8%

Notes: The numbers in parentheses are the classification categories from the Harmonized Tariff Schedule. Classification category (87) also includes bicycles, wheelchairs, and baby carriages. Total trade = exports plus imports. Balance = exports minus imports.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, 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 September 2009.

5-10

New Passenger Car and Light Truck Sales: Model Years 1985–2008



Notes: Data are based on Environmental Protection Agency (EPA) definitions of light trucks (gross vehicle weight of 8,500 pounds or less). Model year 2009 data are projected sales from the automotive companies. Cars and light-trucks data for 2007 and 2008 are revised.

Source: U.S. Environmental Protection Agency, *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 Through 2008*, Table E-1 to E-15, available at http://www.epa.gov/otaq/fetrends.htm as of November 2009.

5-11

Government Transportation Revenues by Mode and Level of Government: 1995–2007

(Millions of current dollars)

	1995	2000	R2006	2007
Highway total	**67,544**	**90,980**	**107,491**	**108,141**
Federal: Highway Trust Fund[a]	22,200	34,985	39,191	40,077
State and local	45,344	55,995	68,300	68,063
Transit total[b]	**8,575**	**10,670**	**15,117**	**13,874**
Railroad[c]	**36**	**1**	**0**	**0**
Air total	**14,518**	**22,298**	**27,080**	**29,447**
Federal: Airport and Airway Trust Fund[d]	6,291	10,544	11,137	11,994
State and local	8,227	11,754	15,943	17,453
Water total	**3,832**	**4,058**	**5,536**	**5,739**
Federal: water receipts[e]	1,909	1,551	1,837	1,873
State and local	1,923	2,507	3,699	3,866
Pipeline[c]	**35**	**40**	**58**	**60**
General support[c]	**7**	**26**	**21**	**16**
Total, all modes	**94,548**	**128,073**	**155,303**	**157,276**
Federal	30,478	47,147	52,244	54,020
State and local	64,070	80,926	103,059	103,256

[a] Includes both Highway and Transit Accounts of the Highway Trust Fund (HTF). Also includes other receipts from motor fuel and motor vehicle taxes not deposited in the HTF.

[b] Includes state and local government only.

[c] Includes federal only.

[d] Receipts from aviation user and aviation security fees are also included.

[e] Includes Harbor Maintenance Trust Fund, St. Lawrence Seaway tolls, Inland Waterway Trust Fund, Panama Canal receipts through 2000, Oil Spill Liability Trust Fund, Offshore Oil Pollution Fund, Deep Water Port Liability Fund, and excise taxes of the Boat Safety Program.

Key: R = revised.

Notes: Government transportation revenue consists of money collected by governments from transportation user charges and taxes to finance transportation programs. The following types of receipts are excluded: 1) revenues collected from users of the transportation system that are directed to the general fund and used for nontransportation purposes, 2) nontransportation general fund revenues that are used to finance transportation programs, and 3) proceeds from borrowing. Local government receipts from motor fuel, motor vehicle, and highway toll charges are not included in 2007 due to lack of data. Thus, state and local revenues data for 2007 is not comparable to the data for previous years. State and local highway and air transportation revenues are revised for 2006.

Source: U. S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Government Transportation Financial Statistics 2009* as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-27a, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

5-12

Government Transportation Expenditures by Mode and Level of Government: 1995–2007

(Millions of current dollars)

	R1995	R2000	R2006	2007
Highway total	**90,075**	**119,911**	**157,613**	**114,253**
Federal	1,685	2,190	2,972	2,688
State and local	88,391	117,720	154,641	111,564
Transit total	**25,460**	**34,828**	**44,097**	**48,750**
Federal	1,277	3,677	83	98
State and local	24,183	31,150	44,014	48,652
Rail total	**1,049**	**778**	**1,548**	**1,528**
Federal	1,023	765	1,528	1,523
State and local	26	13	20	5
Air total	**19,250**	**22,525**	**41,873**	**43,791**
Federal	10,807	9,285	23,480	23,746
State and local	8,443	13,240	18,393	20,045
Water total	**6,623**	**7,634**	**10,888**	**12,069**
Federal	4,314	4,493	6,603	7,308
State and local	2,309	3,141	4,286	4,761
Pipeline total	**24**	**46**	**91**	**89**
Federal	12	28	66	66
State and local	12	18	25	23
General support	**775**	**653**	**1,117**	**1,227**
Federal	769	645	1,105	1,214
State and local	6	8	12	13
Total, all modes	**143,256**	**186,374**	**257,226**	**221,707**
Federal	19,886	21,084	35,836	36,644
State and local	123,369	165,290	221,391	185,063

Key: R = revised.

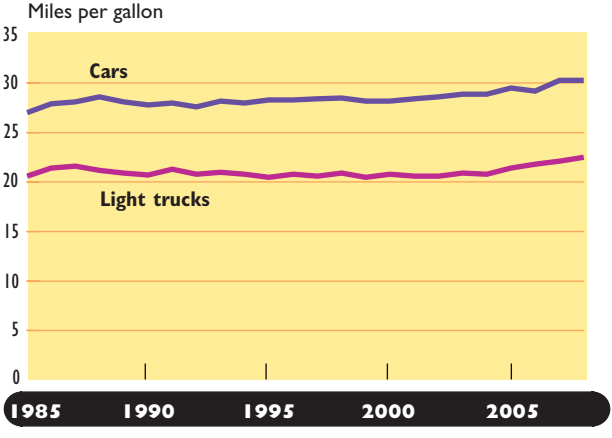
Notes: Federal expenditure includes direct federal spending, excluding grants to state and local governments. State and local expenditure includes outlays from all sources of funds including funds from federal grants, except railroad and pipeline modes. State and local expenditure for rail and pipeline modes include outlays that are funded by federal grants only. The part of expenditure that may be funded by other funding sources of state and local governments are not covered due to lack of data. Outlays for civilian transportation-related activities of the U.S. Army Corps of Engineers for construction, operation, and maintenance of channels, harbors, locks, and dams, and protection of navigation are not included for all years due to lack of data. Local government outlays for highway are not included in 2007 due to lack of data. Thus, state and local expenditure data for 2007 is not comparable to the data for previous years. Federal air and general support expenditures for 2006 are revised. State and local highway outlays for 2006 are also revised.

Source: U. S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Government Transportation Financial Statistics 2009* as reported in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 3-29a and 3-30a, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2010.

6 Environmental Sustainability

While transportation enhances the quality of our lives, it also generates environmental impacts that can lead to human health problems and ecological damage. Overall, most transportation air emissions in the United States, such as particulates, have declined since 1980 despite significant increases in U.S. population, Gross Domestic Product, and vehicle-miles traveled. However, carbon dioxide emissions from transportation fuel use have risen.

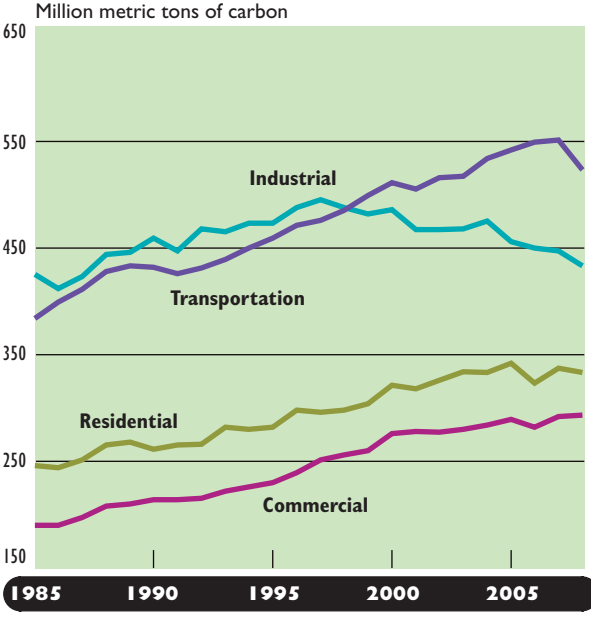
6-1
New Passenger Car and Light Truck Fuel Economy Averages: Model Years 1985–2009



Notes: Fuel economy is miles divided by gallons. 2008 data are revised.

Source: U.S. Environmental Protection Agency, *Light-Duty Automotive Technology, Carbon Dioxide Emissions and Fuel Economy Trends: 1975 Through 2009*, Table A-2, available at http://www.epa.gov/otaq/fetrends.htm as of November 2009.

6-2
U.S. Carbon Dioxide Emissions From Energy Use: 1985–2008



Notes: 2008 data are preliminary. One ton of carbon equals 3.667 tons of carbon dioxide gas. Electric utility emissions are distributed across sectors. All data are revised from 1987 to 2007.

Sources: **1985–1986**—U.S. Department of Energy (USDOE), Energy Information Administration (EIA), *Emissions of Greenhouse Gasses in the United States,* Appendix E, available at http://www.eia.doe.gov/oiaf/1605/1605aold.html as of December 2005. **1987-1989**, U.S. Department of Energy (USDOE), Energy Information Administration (EIA), *Emissions of Greenhouse Gasses in the United States*, table 5, available at http://www.eia.doe.gov/oiaf/1605/1605aold.html as of October 2009. **1990–2008**—USDOE, EIA, *U.S. Carbon Dioxide Emissions from Energy Source 2008 Flash Estimate*, available at http://www.eia.doe.gov/oiaf/1605/flash/flash.html as of October 2009.

6-3

Wetlands Impacted and Mitigated Under the Federal-Aid Highway Program: 2000–2007

	2000	2001	2002	2003	2004	2005	R2006	2007
Acres:								
Impacted	2,041	1,905	1,942	1,278	847	1,139	591	699
Mitigated	7,671	4,017	5,198	3,431	1,763	3,741	1,581	2,285
Gained (net)	5,630	2,112	3,256	2,153	916	2,602	990	1,586
Mitigation ratio	3.8:1	2.1:1	2.7:1	2.7:1	2.1:1	3.3:1	2.7:1	3.3:1

Key: R = revised.

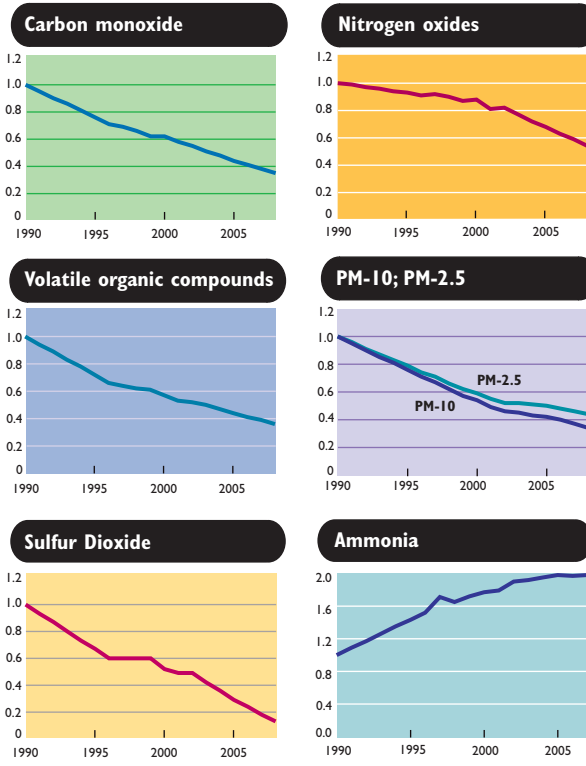
Notes: These data cover wetlands acreage affected by Federal-Aid Highway projects, approximately 24% of the total mileage of U.S. public roads. These data are collected by states using varying collection methodologies. The mitigation ratio equals acres mitigated to acres impacted. Acres gained data have been revised for 2006. 2000-05 data are adjusted to represent all 50 states, based on the proportion of reporting states. 2006 data are based on 17 states' responses. 2007 data are based on 34 states' responses.

Sources: **2000–2004**—U.S. Department of Transportation, Federal Highway Administration, *Federal Highway Administration Wetland Mitigation Performance Measure for Federal-Aid Highway Projects Fiscal Year (FY) 2004*, available at http://www.fhwa.dot.gov/environment/perform/ as of November 2008. **2005–2007**—USDOT, FHWA, personal communication, August 2007 and September 2009.

6-4

Index of Key Air Pollutant Emissions From U.S. Transportation: 1990–2008

Index: 1990 = 1.0



Key: PM-10 = airborne particulates of less than 10 microns, PM-2.5 = airborne particulates of less than 2.5 microns.

Notes: The indexes are calculated using data on emissions from highway vehicles only. Particulate matters include PM without condensibles. 2003 data are revised except carbon monoxide, nitrogen oxide, sulfur dioxide, and ammonia. 2004 data are revised except nitrogen oxide, sulur dioxide, and ammonia. 2005 data are revised except carbon monoxide, sulfur dioxide, and ammonia. 2006 data are revised except carbon monoxide, volatile organic compounds, and ammonia. 2007 data revised except carbon monoxide, sulfur dioxide, and ammonia.

Source: U.S. Environmental Protection Agency, Clearinghouse for Inventories and Emissions Factors (CHIEF), *Current Emission Trends Summaries*, available at http://www.epa.gov/ttn/chief/trends/index.html as of September 2009.

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 indexes, 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 railroads—Railroads earning adjusted annual operating revenues for three consecutive years of $250,000,000 or more.

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.

Congestion cost—Value of travel time delay (estimated at $15.47 per hour of person travel and $102.42 per hour of truck travel) and excess fuel consumption (estimated using the average cost per gallon by state).

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.

Delay—The extra travel time (hours) spent traveling at congested speeds rather than free-flow speeds (60 mph on freeways and 35 mph on principal arterials) divided by the number of persons making a trip during the peak period (6:00 a.m.–9:00 a.m. and 4:00 p.m.–7:00 p.m.).

Demand-response 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 airline usage of the term to describe "hub-and-spoke" route structures or other definitions of hubs used by the Federal Aviation Administration, which focus 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.

Long-distance travel—As defined in the Bureau of Transportation Statistics National Household Travel Survey, long-distance trips are trips of 50 miles or more from home to the farthest destination traveled and include the return component as well as any overnight stops and stops to change transportation mode.

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 pickup trucks, vans, truck-based station wagons, and sport utility vehicles.

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

North American Industry Classification System (NAICS)—NAICS (established in April 1997) replaces the Standard Industrial Classification (SIC) and groups producing and nonproducing economic activities into 20 sectors and 1,170 industries in the United States version. It was developed to provide common industry definitions for Canada, Mexico, and the United States to facilitate analyses of the economies of the three countries.

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

Particulates—Carbon particles formed by partial oxidation and reduction of 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.

Standard Industrial Classification (SIC)—SIC (first used in 1937) groups establishments by primary activity to ease data collection, tabulation, presentation, and analysis. SIC was intended to promote greater uniformity and comparability in data presentations by government, industry, and research institutions. SIC classifies industries by composition and structure of the economy.

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.

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