RITA Bureau of Transportation Statistics

# Pocket Guide to Transportation 2011

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

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RITA *Bureau of Transportation Statistics*

# Pocket Guide to Transportation 2011

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

## U.S. Department of Transportation

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## Research and Innovative Technology Administration

Peter H. Appel
*Administrator*

Robert L. Bertini, Ph.D.
*Deputy Administrator*

## Bureau of Transportation Statistics

Steven K. Smith, Ph.D.
*Acting Director*


## Acknowledgments

### Produced under the direction of:

Deborah Johnson
*Assistant Director for Transportation Analysis*

### Project Manager

Sean Jahanmir

### Contributors

Steven Anderson
David Chesser, Ph.D.
Bingsong Fang, Ph.D.
Chester Ford
Xiaoli Han, Ph.D.
Getachew Mekonnen
Adam Mengesha
William Moore
Long Nguyen
Hilary Ross
Gang Shao, Ph.D.
Michael Spencer
Lei Tang, Ph.D.
Alpha Glass Wingfield

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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 | 2009 |
|---|---|---|
| Resident population (thousands) | 248,791 | 307,007 |
| Total area (thousand sq. mi.) | 3,718 | 3,794 (2000)[a] |
| Total civilian labor force (thousands) | 125,840 | 154,142 |
| Real gross domestic product[b] (trillions) | $8.0 | $12.9 |
| Median household income[b,c] | $41,465 | $45,410 |
| Average household income[b,c] | $44,160 | $57,342 |
| Average household expenditures[b,c] | $39,338 | $44,909 |
| Number of households (thousands) | 93,347 | 117,538 |
| Life expectancy at birth (years) | 75.4 | 77.9 (2007) |

[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 calculations, November 2010.

Sources: **Area**—U.S. Department of Commerce (USDOC), U.S. Census Bureau, *Statistical Abstract of the United States: 2002 and 2010*, available at www.census.gov as of November 2010. **GDP**—USDOC, Bureau of Economic Analysis, available at www.bea.gov as of November 2010. **Population, number of households, and median household income**—USDOC, U.S. Census Bureau, available at www.census.gov as of November 2010. **Average household income and expenditures, and labor force**—U.S. Department of Labor, Bureau of Labor Statistics, available at www.bls.gov as of November 2010. **Life expectancy**—Centers for Disease Control and Prevention, available at www.cdc.gov as of November 2010.

# 1 Safety

The safety of the traveling public is the number one concern of the U.S. Department of Transportation. Although progress has been made in reducing fatalities, roughly 94 percent of transportation fatalities arose from motor vehicle crashes. Injuries from crashes are a major U.S. public health issue.

1-1
## Transportation Fatalities by Mode: 1990–2009

| Mode | 1990 | 2005 | 2008 | 2009 |
|---|---|---|---|---|
| **Air** | | | | |
| Large U.S. air carrier[a] | 39 | 22 | 3 | 52 |
| Commuter air carrier[a] | 6 | 0 | 0 | 0 |
| On-demand air taxi[a] | 51 | 18 | 69 | 17 |
| General aviation[a] | 770 | 563 | 494 | 474 |
| **Highway[b]** | 44,599 | 43,510 | 37,423 | 33,808 |
| **Pipeline, gas and hazardous liquid** | 9 | 14 | 8 | 13 |
| **Railroad[c]** | 599 | 525 | 514 | 458 |
| **Transit[d]** | 339 | 236 | 240 | 230 |
| **Waterborne** | | | | |
| Vessel-related, commercial ship | 85 | 78 | 51 | 57 |
| Nonvessel-related[e], commercial ship | 101 | 60 | 67 | 93 |
| Recreational boating | 865 | 697 | 709 | 736 |

[a] Includes airborne and ground-level fatalities. [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, on-demand service, van pool, and automated guideway. [e] Fatalities unrelated to vessel operations, e.g., individual falling overboard and drowning.

Notes: Data for 2008 has been revised for on-demand air taxi, general aviation, highway, railroad and transit. Air and railroad fatalities in 2009 are 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 2011.

1-2

## Distribution of Transportation Fatalities: 2009

| Category | Number | % |
|---|---|---|
| Passenger car occupants | 13,095 | 36.38 |
| Light-truck occupants | 10,287 | 28.58 |
| Motorcycle riders | 4,462 | 12.40 |
| Pedestrians struck by motor vehicles | 4,092 | 11.37 |
| Recreational boating | 736 | 2.04 |
| Pedalcyclists struck by motor vehicles | 630 | 1.75 |
| Other and unknown motor vehicle occupants | 563 | 1.56 |
| Large-truck occupants | 503 | 1.40 |
| General aviation | 474 | 1.32 |
| Railroad trespassers (excl. grade crossings)[a] | 428 | 1.19 |
| Other nonoccupants struck by motor vehicles[b] | 150 | 0.42 |
| Heavy rail transit (subway) | 96 | 0.27 |
| Waterborne transportation (nonvessel-related) | 93 | 0.26 |
| Grade crossings, not involving motor vehicles[c] | 66 | 0.18 |
| Transit buses, accident-related fatalities | 63 | 0.18 |
| Waterborne transportation (vessel-related) | 57 | 0.16 |
| Air carriers | 52 | 0.14 |
| Light rail transit | 33 | 0.09 |
| Rail employees and contractors on duty[a] | 28 | 0.08 |
| Bus occupants (school, intercity, transit) | 26 | 0.07 |
| Private grade crossings, with motor vehicles[a] | 19 | 0.05 |
| Air taxi | 17 | 0.05 |
| Gas distribution pipelines | 9 | 0.03 |
| Demand response transit, accident-related fatalities | 5 | 0.01 |
| Transit buses, fatalities not related to accidents[d] | 4 | 0.01 |
| Hazardous liquid pipelines | 4 | 0.01 |
| Passengers on railroad trains | 3 | 0.01 |
| Demand response transit, fatalities not related to accidents[d] | 2 | 0.01 |
| **Total, all modes[e]** | **35,997** | **100.00** |
| Other counts, redundant with above | | |
| Crashes involving large trucks[e] | 3,380 | |
| Public grade crossings, with motor vehicles[a] | 161 | |
| Commuter rail | 67 | |

[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] Includes large truck occupants, other vehicle occupants, and nonoccupants. [e] Unless otherwise noted, includes fatalities outside vehicles.

Notes: Fatality data are preliminary for general aviation, air carriers, air taxi, railroad trespassers (excluding grade crossings), passengers on railroad trains, on-duty rail employees and contractors, commuter air, grade crossing not involving motor vehicles, public grade crossing with motor vehicles and private grade crossings with motor vehicles. There were no fatalities related to gas transmission pipeline or commuter air in 2009.

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 2011.

1-3

## Alcohol-Related Fatalities in Motor Vehicle Crashes by Person Type and Crash Type: 2009

| Crash category | Fatalities in category[a] | Alcohol involvement[b] | % Alcohol involvement[c] |
|---|---|---|---|
| **Occupants** | 28,936 | 11,890 | 41.1 |
| Single-vehicle crashes | 15,386 | 7,806 | 50.7 |
| Two-vehicle crashes | 11,458 | 3,443 | 30.0 |
| More than two-vehicle crashes | 2,092 | 641 | 30.6 |
| **Pedestrians** | 4,092 | 1,997 | 48.8 |
| Single-vehicle crashes | 3,736 | 1,806 | 48.3 |
| Multiple-vehicle crashes | 356 | 191 | 53.7 |
| **Pedalcyclists** | 630 | 252 | 40.0 |
| Single-vehicle crashes | 600 | 237 | 39.5 |
| Multiple-vehicle crashes | 30 | 16 | 53.3 |
| **Others/unknown** | 150 | 49 | 32.7 |
| **Total** | 33,808 | 14,188 | 42.0 |

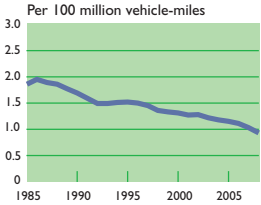
[a] Total fatalities. [b] Total alcohol-related fatalities. [c] Alcohol-related fatalities as a percentage of total fatalities.

Notes: Category numbers may not sum to totals due to rounding. A motor vehicle crash is considered to be alcohol-related if at least one driver or nonoccupant (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 of alcohol concentration are unknown. 2009 data are preliminary.

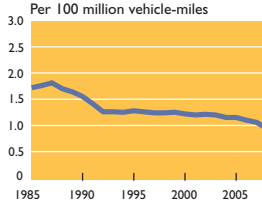
Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Fatality Analysis Reporting System* (FARS) Database, personal communication, November 2010 as cited in USDOT, RITA, BTS, *National Transportation Statistics*, table 2-20, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2011.

## 1-4
## Fatality Rates for Selected Modes: 1985–2008

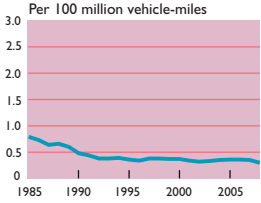
### Passenger car occupants



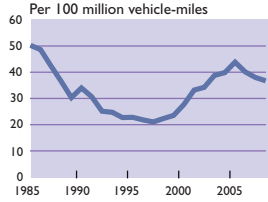

### Light-truck occupants



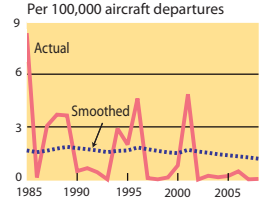

### Large-truck occupants



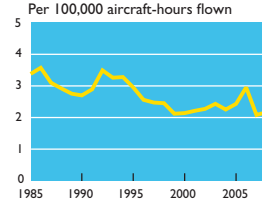

### Motorcycle riders




### 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 onboard fatalities. 2007 passenger car occupant, light-truck occupant, large-truck occupant, and motorcycle rider data are revised. 1992, 1995, 1998, and 2006 are revised for general aviation fatalities and rates.

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 2008*, table 7 to 10, available at http://www-nrd.nhtsa.dot.gov as of October 2010. **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 October 2010 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 2010.

1-5

## Injured Persons by Transportation Mode: 1990–2009

| Mode | 1990 | 2000 | 2008 | 2009 |
|---|---|---|---|---|
| **Air** | | | | |
| Large U.S. air carrier[a] | 29 | 31 | 23 | 23 |
| Commuter air carrier[a] | 11 | 7 | 2 | 1 |
| On-demand air taxi[a] | 36 | 12 | 12 | 4 |
| General aviation[a] | 409 | 309 | 258 | 278 |
| **Highway[b]** | 3,230,666 | 3,188,750 | 2,346,000 | 2,217,000 |
| **Pipeline, gas and hazardous liquid** | 76 | 81 | 63 | 67 |
| **Railroad[c]** | 22,736 | 10,424 | 7,993 | 7,103 |
| **Transit[d]** | 54,556 | 56,697 | 23,222 | 21,420 |
| **Waterborne** | | | | |
| Vessel-related, commercial ship | 175 | 150 | 152 | 132 |
| Nonvessel-related, commercial ship[e] | U | 607 | 464 | 379 |
| Recreational boating | 3,822 | 4,355 | 3,331 | 3,358 |

[a] Includes serious injuries only. [b] Includes passenger car occupants, motorcyclists, light-duty and large-truck occupants, bus occupants, occupants of unknown vehicle types, and pedestrians, pedalcyclists, and other nonmotorists. [c] Injuries resulting from train accidents, train and nontrain incidents, and occupational illness. Includes Amtrak, as well as train occupants and nonoccupants except motor vehicle occupants at grade crossings. [d] Injuries resulting from all reportable incidents, not just from accidents. Includes commuter rail, heavy rail, light rail, motorbus, on-demand service, van pool, and automated guideway. The drop in the number of injuries in 2008 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. [e] Injuries unrelated to vessel operations.

Key: U = unavailable.

Notes: Reporting criteria and/or estimation methods for injuries are not standardized across modes. Large U.S. air carrier data for 2000 are revised. 2008 data have been revised with the exception of commuter air carrier, general aviation, pipeline, and waterborne data.

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**—United States 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 2011.

1-6

## State Laws on Distracted Driving: Bans on Hand-Held Devices and Texting While Driving as of October 2010

| State | Ban on handheld devices | Texting ban | State | Ban on handheld devices | Texting ban |
|---|---|---|---|---|---|
| AL | | | MT | | |
| AK | | ✓ | NE | | ✓ |
| AZ | | | NV | | |
| AR | | ✓ | NH | | ✓ |
| CA | ✓ | ✓ | NJ | ✓ | ✓ |
| CO | | ✓ | NM | | |
| CT | ✓ | ✓ | NY | ✓ | ✓ |
| DE | ✓ | ✓ | NC | | ✓ |
| DC | ✓ | ✓ | ND | | |
| FL | | | OH | | |
| GA | | ✓ | OK | | |
| HI | | | OR | ✓ | ✓ |
| ID | | | PA | | |
| IL | | ✓ | RI | | ✓ |
| IN | | | SC | | |
| IA | | ✓ | SD | | |
| KS | | ✓ | TN | | ✓ |
| KY | | ✓ | TX | | |
| LA | | ✓ | UT | | ✓ |
| ME | | | VT | | ✓ |
| MD | ✓ | ✓ | VA | | ✓ |
| MA | | ✓ | WA | ✓ | ✓ |
| MI | | ✓ | WV | | |
| MN | | ✓ | WI | | ✓ |
| MS | | | WY | | ✓ |
| MO | | | PR | | |
| | | | **U.S., total** | 9 | 31 |

Note: While nine States have universal bans on hand-held devices and texting, many other States have partial bans on either or both that restrict use for novice drivers or bus drivers. Delaware's laws were passed in 2010 but not enforced until Jan. 2, 2011. In Iowa and Virginia, secondary enforcement is applied to texting while driving. In Maryland, secondary enforcement is applied to using hand-held devices while driving. The term "secondary enforcement" means that motorists must be stopped for another violation before they can be cited for texting or using a cell phone.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, *State Laws on Distracted Driving*, available at http://www.distraction.gov/state-laws/ as of Oct. 27, 2010

1-7

## Hazardous Materials Transportation Incidents, Injuries, and Fatalities: 1990–2009

| | 1990 | 2000 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| **Highway** | **7,297** | **15,063** | **16,932** | **14,808** | **12,728** |
| Accident-related | 249 | 329 | 321 | 302 | 252 |
| Injuries | 311 | 164 | 161 | 153 | 153 |
| Fatalities | 8 | 16 | 9 | 6 | 12 |
| **Rail** | **1,279** | **1,058** | **752** | **750** | **643** |
| Accident-related | 48 | 62 | 53 | 26 | 37 |
| Injuries | 73 | 82 | 56 | 63 | 38 |
| Fatalities | 0 | 0 | 0 | 1 | 1 |
| **Air** | **297** | **1,419** | **1,556** | **1,278** | **1,358** |
| Accident-related | 0 | 3 | 7 | 8 | 2 |
| Injuries | 39 | 5 | 8 | 7 | 10 |
| Fatalities | 0 | 0 | 0 | 0 | 0 |
| **Water** | **7** | **17** | **61** | **98** | **90** |
| Accident-related | 0 | 0 | 0 | 0 | 0 |
| Injuries | 0 | 0 | 3 | 0 | 0 |
| Fatalities | 0 | 0 | 0 | 0 | 0 |
| **Pipeline** | **1990** | **2000** | **2007** | **2008** | **2009** |
| **Natural gas distribution** | **110** | **154** | **153** | **149** | **158** |
| Injuries | 52 | 59 | 36 | 56 | 52 |
| Fatalities | 6 | 22 | 9 | 7 | 9 |
| **Natural gas transmission** | **89** | **80** | **132** | **141** | **129** |
| Injuries | 17 | 18 | 7 | 5 | 11 |
| Fatalities | 0 | 15 | 2 | 0 | 0 |
| **Liquid** | **180** | **146** | **120** | **145** | **117** |
| Injuries | 7 | 4 | 10 | 2 | 4 |
| Fatalities | 3 | 1 | 4 | 2 | 4 |

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. Pipeline data contains all incidents reported to PHMSA based on the reporting criteria in effect at the time of the incidents. Natural gas transmission includes gathering system. The 2007 data are revised for total highway incidents, accident-related incidents, and fatalities; for rail accident-related incidents; for total air incidents; and total liquid incidents. The 2008 highway data and natural gas distribution data are revised, as are incidents for rail, air, and hazardous liquid categories. Hazardous liquid incident figures reflect all incidents, which differ from previous editions of *Pocket Guide* reporting significant incidents only.

Sources: **Highway, Rail, Air and Water**—USDOT, Pipeline and Hazardous Materials Safety Administration (PHMSA), *Hazardous Materials Information System Database*, available at http://www.phmsa.dot.gov/hazmat/library/data-stats as of November 2010 as reported in USDOT, RITA, BTS, *National Transportation Statistics*, table 2-6, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2011. **Pipeline**—USDOT, PHMSA, Office of Pipeline Safety, *Accident/Incident and Mileage Summary Stats*, available at http://ops.dot.gov/stats/stats.htm as of December 2010.

1-8

## Prohibited Items Intercepted at U.S. Airport Screening Checkpoints: 2006–2009

| Items | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|
| Knives[a] | 1,607,125 | 1,056,687 | 626,182 | N |
| Incendiaries and explosive/ flammable materials | 113,700 | 89,623 | 116,200 | 127,176 |
| Other cutting instruments[a] | 163,419 | 101,387 | 59,459 | N |
| Clubs[a] | 12,296 | 9,443 | 6,447 | N |
| Box cutters[a] | 15,999 | 11,908 | 6,284 | N |
| Firearms | 2,075 | 1,416 | 902 | 889 |
| Other[a] | 11,797,145 | 5,245,558 | 157,336 | 1,396 |
| Total prohibited items | 13,711,759 | 6,516,022 | 972,810 | 129,461 |

[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.

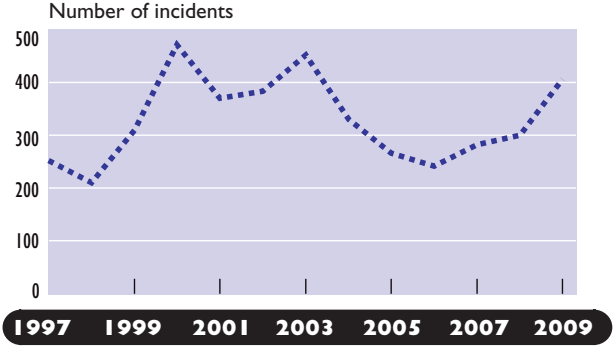
Key: N = data are nonexistent.

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, November 2010 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 2011.

1-9

## International Piracy and Armed Robbery at Sea: 1997–2009




Notes: Incidents include attempts and threatening actions. 2008 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 as of August 2010.

# State of Good Repair 2

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, conduct business, ship goods within the United States and abroad and travel on vacations. The transportation system links regions and connects urban and rural areas.

2-1
**The Transportation Network: 2009**

| Mode | Components |
|---|---|
| **Highway** | **Public roads** |
| (2008) | 47,011 miles of Interstate highway |
| | 117,084 miles of other National Highway System roads |
| | 3,895,244 miles of other roads |
| **Air** | ***Public-use airports*** |
| | 5,178 airports |
| | Airports serving large certificated carriers (enplaned passengers) |
| | 25 large hub areas[a] (71 airports), 461 million passengers |
| | 36 medium hub areas (65 airports), 127 million passengers |
| | 74 small hub areas (93 airports), 55 million passengers |
| | 890 nonhub areas (924 airports), 20 million passengers |
| **Rail** | ***Miles of railroad operated*** |
| (2008) | 94,082 miles by Class I freight railroads in the United States[b] |
| | 16,690 miles by regional freight railroads |
| | 28,554 miles by local freight railroads |
| | 21,178 miles by Amtrak (passenger)[c] |

*continued next page*

2-1—continued

| Mode | Components |
|---|---|
| **Urban transit** | ***Directional route-miles***[d] |
| | Bus: 238,360[e] |
| | Trolley bus: 456[e] |
| | Commuter rail: 7,561 |
| | Heavy rail: 1,623 |
| | Light rail: 1,477 |
| | ***Stations*** |
| | Commuter rail: 1,214 |
| | Heavy rail: 1,041 |
| | Light rail: 836 |
| **Water** | ***Navigable channels:*** 25,320 miles (2008) |
| | ***Ferry routes:*** 697 directional route-miles |
| | ***Commercial waterway facilities***[a] |
| | Great Lakes: 646 |
| | Inland: 1,883 shallow-draft |
| | Ocean: 5,821 |
| | Lock chambers: 238 |
| **Pipeline** | ***Miles of oil pipe*** |
| | Total oil: 172,048 |
| | ***Miles of gas pipe*** |
| | Transmission: 301,896 |
| | Distribution: 1,217,967 |

[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 other railroads. [d] Directional route-miles includes both directly operated and purchased transport service. [e] Includes directional route-miles on exclusive right-of-way, controlled right-of-way, and mixed traffic.

Sources: **Highway**—USDOT, FHWA, *Highway Statistics 2008* (Washington, DC: 2009), table HM-18. **Air**—Public-use airports: FAA as cited in USDOT, RITA, BTS, *National Transportation Statistics*, tables 1-3, available at http://www.bts.gov/publications/national_transportation_statistics/ as of October 2010. Airports serving large certificated carriers: USDOT, RITA, BTS, Airport Activity Statistics of Certificated Air Carriers, Summary Tables, October 2010. **Rail**—Association of American Railroads, *Railroad Facts 2009*. **Transit**—USDOT, Federal Transit Administration, *National Transit Database 2009*, tables 21, 23, and 24, available at http://www.ntdprogram.gov/ntdprogram/data.htm as of November 2010. **Water**—Commercial waterway facilities—U.S. Army Corps of Engineers, Institute for Water Resources, Navigation Data Center, *The U.S. Waterway System Facts, December 2009* (Alexandria, VA: 2009). Navigable channels—U.S. Army Corps of Engineers as cited in USDOT, RITA, BTS, National Transportation Statistics, table 1-1, available at http://www.bts.gov/publications/national_transportation_statistics/ as of October 2010. **Pipeline**—PHMSA as cited in USDOT, RITA, BTS, *National Transportation Statistics*, tables 1-1 and 1-10, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2011.

## 2-2
## Number of Aircraft, Railcars, Vehicles, and Vessels: 1990–2008

| Mode | 1990 | 2000 | 2007 | 2008 |
|---|---|---|---|---|
| **Air** | | | | |
| Air carrier | 6,083 | 8,055 | 8,044 | 7,856 |
| General aviation | 198,000 | 217,533 | 231,607 | 228,663 |
| **Highway** | | | | |
| Automobiles | 133,700,496 | 133,621,420 | 135,932,930 | 137,079,843 |
| Other 2-axle, 4-tire vehicles[a] | 48,274,555 | 79,084,979 | 101,469,615 | 101,234,849 |
| Buses (municipally owned transit and commercial, federal, and school buses) | 626,987 | 746,125 | 834,436 | 843,308 |
| Motorcycles | 4,259,462 | 4,346,068 | 7,138,476 | 7,752,926 |
| Trucks | | | | |
| Single-unit | 4,486,981 | 5,926,030 | 6,806,630 | 6,790,882 |
| Combination | 1,708,895 | 2,096,619 | 2,220,995 | 2,215,856 |
| **Rail—Passenger** | | | | |
| Amtrak–Cars | 1,863 | 1,894 | 1,164 | 1,177 |
| Amtrak–Locomotives | 318 | 378 | 270 | 278 |
| Commuter railcars and locomotives | 4,982 | 5,497 | 6,279 | 6,494 |
| Transit[b] | 11,477 | 11,617 | 13,024 | 13,325 |
| **Rail—freight** | | | | |
| Class I–Freight cars | 658,902 | 560,154 | 460,172 | 450,297 |
| Class I–Locomotives | 18,835 | 20,028 | 24,143 | 24,003 |
| Other freight cars[c] | 553,359 | 820,642 | 925,537 | 942,675 |
| **Waterborne** | | | | |
| Nonself-propelled vessels (barges)[d,e] | 31,209 | 33,152 | 31,654 | 31,238 |
| Self-propelled vessels[d,e] | 8,236 | 8,202 | 9,041 | 9,063 |
| Oceangoing ships[e] (1,000 gross tons and over) | 636 | 454 | 275 | 272 |
| Recreational boats (numbered boats) | 10,996,253 | 12,782,143 | 12,875,568 | 12,692,892 |

[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 2007, data are for privately-owned vessels of 1,000 gross tons and over.

Note: Transit and commuter rail data for 2000 and 2007 are revised, as are oceangoing ships data for 1990 and 2000.

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, U.S. Coast Guard, and Maritime Administration 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/publications/national_transportation_statistics/ as of July 2010.

2-3

## Condition of U.S. Highway Bridges: 1990–2009

| Mode | 1990 | 2000 | 2008 | 2009 |
|---|---|---|---|---|
| **Total all bridges** | 572,205 | 589,674 | 601,396 | 603,259 |
| Urban | 108,770 | 133,384 | 153,407 | 156,305 |
| Rural | 463,435 | 456,290 | 447,989 | 446,954 |
| **Structurally deficient bridges, total** | 137,865 | 86,678 | 71,461 | 71,177 |
| Urban | 16,847 | 13,079 | 12,896 | 12,828 |
| Rural | 121,018 | 73,599 | 58,565 | 58,349 |
| **Functionally obsolete bridges, total** | 100,355 | 81,510 | 79,933 | 78,477 |
| Urban | 30,266 | 29,398 | 33,691 | 33,743 |
| Rural | 70,089 | 52,112 | 46,242 | 44,734 |

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's *2006 Conditions and Performance Report*, available at http://www.fhwa.dot.gov/policy/2006cpr/pdfs/chap3.pdf as of October 2010. 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 are as of December for 1990, 2008, and 2009 of those years and as of August for the year 2000.

Sources: **1990 and 2000**: U.S. Department of Transportation, Federal Highway Administration, Office of Bridge Technology, National Bridge Inventory (NBI), personal communications, August 2001 and April 2008. **2008 and 2009**: Ibid., Count, Area, *Length of Bridges by Highway System*, available at http://www.fhwa.dot.gov/bridge/britab.htm as of April 2010 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/publications/national_transportation_statistics/ as of October 2010.

The U.S. transportation system makes possible a high degree of personal accessibility and freight activity. The data in this section show growth in travel and freight shipments over time. Factors influencing this growth include vehicle availability, travel costs, population, congestion, the economy, and consumer income.

## 3-1
## Vehicle-Miles: 1990–2008
*(Millions)*

| Mode | 1990 | 2000 | 2007 | 2008 |
|---|---|---|---|---|
| **Air** | | | | |
| Air carrier | 3,963 | 5,662 | 6,733 | 6,446 |
| **Highway** | | | | |
| Passenger cars | 1,408,266 | 1,600,287 | 1,672,467 | 1,615,850 |
| Other 2-axle, 4-tire vehicles[a] | 574,571 | 923,059 | 1,112,271 | 1,108,603 |
| Motorcycles | 9,557 | 10,469 | 13,621 | 14,484 |
| Buses[b] | 5,726 | 7,590 | 6,980 | 7,114 |
| Trucks | | | | |
| Single-unit | 51,901 | 70,500 | 82,014 | 83,951 |
| Combination | 94,341 | 135,020 | 145,046 | 143,507 |
| **Total Highway** | **2,144,362** | **2,746,925** | **3,032,399** | **2,973,509** |
| **Rail[c]** | | | | |
| Transit[d] | 561 | 647 | 741 | 762 |
| Commuter | 213 | 271 | 325 | 337 |
| Intercity/Amtrak[e] | 301 | 368 | 267 | 272 |
| Class I freight | 26,159 | 34,590 | 38,186 | 37,226 |
| **Other transit[f]** | **322** | **628** | **916** | **989** |

[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 on-demand service and other unspecfied forms of transit.

Notes: Air and other transit data for 2000 are revised. All 2007 data except for motorcycles, Intercity/Amtrak, and Class I freight are revised.

Sources: **Air Carrier**—Bureau of Transportation Statistics. **General Aviation**—National Transportation Safety Board. **Highway**—Federal Highway Administration. **Class I freight and Intercity/Amtrak Rail**—Association of American Railroads. **Transit and Commuter Rail**—American Public Transportation Association and Federal Transit Administration 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/publications/national_transportation_statistics/ as of October 2010.

3-2

**Passenger-Miles: 1990–2008**

*(Millions)*

| Mode | 1990 | 2000 | 2007 | 2008 |
|---|---|---|---|---|
| **Air** | | | | |
| Air carrier | 345,873 | 516,129 | 607,546 | 583,506 |
| General aviation[a] | 13,000 | 15,200 | U | U |
| **Highway** | | | | |
| Passenger cars | 2,281,391 | 2,544,457 | 2,642,498 | 2,553,043 |
| Other 2-axle, 4-tire vehicles[b] | 999,754 | 1,467,664 | 1,928,319 | 1,921,960 |
| Buses[c] | 121,398 | 160,919 | 147,985 | 150,827 |
| Motorcycles | 12,424 | 11,516 | 17,298 | 18,395 |
| **Rail** | | | | |
| Transit[d] | 12,046 | 15,183 | 18,068 | 18,931 |
| Commuter | 7,082 | 9,400 | 11,137 | 11,032 |
| Intercity/Amtrak[e] | 6,057 | 5,498 | 5,784 | 6,179 |
| **Other transit[f]** | **841** | **1,518** | **2,125** | **2,390** |

[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. [f] Includes on-demand service, ferryboat, and other unspecified means of transit.

Key: U = unavailable.

Notes: Highway and air data are revised for 2007. Rail (except Intercity/Amtrak) and other transit data are also revised for 2007. Transit data from 2000 and after are not comparable to the data for earlier years or to the data published in previous editions of the report due to differences in data sources.

Sources: **Air Carrier**—Bureau of Transportation Statistics, **General Aviation**—Eno Transportation Foundation. **Highway**—Federal Highway Administration. **Intercity/Amtrak Rail**—Association of American Railroads. **Transit and Commuter Rail**—American Public Transportation Association and Federal Transit Administration 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/publications/national_transportation_statistics/ as of April 2010.

3-3

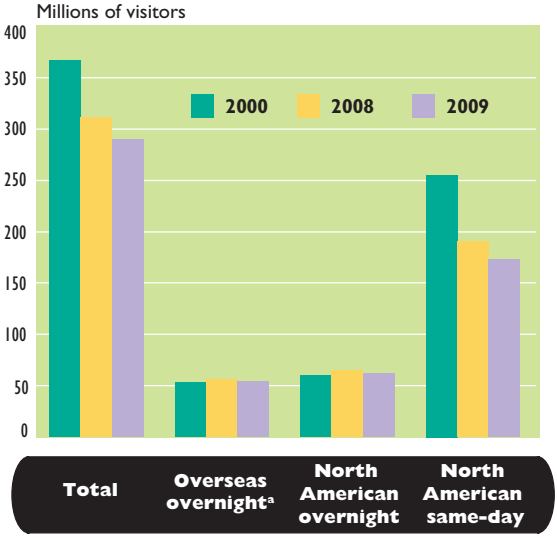
## Passenger Travel and Freight Transportation Per Person: 2009

| | Number |
|---|---|
| **Trips** | |
| Daily trips per person | 3.8 |
| Daily trips per person per year | 1,378 |
| **Miles** | |
| Daily miles per person | 37.2 |
| Daily miles per person per year | 13,571 |
| **Domestic freight transportation (2007)** | |
| Tons per capita, annually | 41.6 |
| Ton-miles per capita, annually | 11,090 |

Notes: Tons per capita is calculated with BTS methodology based on data from the *2007 Economic Census: Transportation Commodity Flow Survey*. Data based on the *National Household Travel Survey* presented here use the source frame population estimate, which does not include persons under five years of age. The 2009 passenger travel data are preliminary.

Sources: **Passenger**—U.S. Department of Transportation (USDOT), Federal Highway Administration, 2009 *National Household Travel Survey*, available at http://nhts.ornl.gov/ as of October 2010. **Freight**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, *2007 Economic Census: Transportation Commodity Flow Survey*, December 2009. **Population**—U.S. Department of Commerce, U.S. Census Bureau, *Population Division, Annual Population Estimates*, December 2009, available at http://www.census.gov/popest/estbygeo.html as of October 2010.

## 3-4
## Travel Between the United States and Other Countries: 2000, 2008, and 2009




[a] Overseas excludes Canada and Mexico.

Note: Year 2000 data are revised.

Sources: **Overseas overnight and North American overnight**—U.S. Department of Commerce, International Trade Administration, Office of Travel and Tourism Industries, *2009 United States Resident Travel Abroad*, available at http://tinet.ita.doc.gov as of October 2010. 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 November 2010.

3-5
## U.S.-Mexican Border Land-Passenger Crossings: 2009
*(Thousands)*

| | Entering the U.S. |
|---|---|
| **Total for all U.S.-Mexico crossings** | |
| Personal vehicles | 70,305 |
| Personal vehicle passengers | 141,017 |
| Buses | 228 |
| Bus passengers | 2,429 |
| Train passengers and crew | 4 |
| Pedestrians | 41,315 |
| **Personal vehicles—top 5 gateways** | |
| San Ysidro, CA | 13,355 |
| El Paso, TX | 10,529 |
| Hidalgo, TX | 6,178 |
| Brownsville, TX | 5,513 |
| Laredo, TX | 5,452 |
| **Personal vehicle passengers—top 5 gateways** | |
| San Ysidro, CA | 23,935 |
| El Paso, TX | 18,377 |
| Laredo, TX | 12,729 |
| Hidalgo, TX | 12,074 |
| Brownsville, TX | 11,157 |
| **Buses—top 5 gateways** | |
| San Ysidro, CA | 72 |
| Laredo, TX | 43 |
| Otay Mesa, CA | 35 |
| Hidalgo, TX | 28 |
| El Paso, TX | 19 |
| **Bus passengers—top 5 gateways** | |
| Laredo, TX | 846 |
| San Ysidro, CA | 453 |
| El Paso, TX | 312 |
| Hidalgo, TX | 301 |
| Nogales, AZ | 167 |
| **Train passengers and crew—top 4 gatewaysa** | |
| Nogales, AZ | 2.3 |
| Tecate, CA | 0.9 |
| Calexico East, CA | 0.6 |
| Otay Mesa/San Ysidro, CA | 0.5 |
| **Pedestrians—top 5 gateways** | |
| El Paso, TX | 7,638 |
| San Ysidro, CA | 6,188 |
| Laredo, TX | 4,090 |
| Nogales, AZ | 4,038 |
| Calexico, CA | 3,905 |

[a] Although there are eight U.S.-Mexico Ports of Entry for rail, four are in Texas where train crews are exchanged at the border, resulting in no new entry of persons into the United States. Therefore, no persons are recorded as entering the U.S. by train at Texas Ports of Entry. There is no regularly scheduled rail passenger service across the border.

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/programs/international/ as of September 2010 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/publications/national_transportation_statistics/ as of September 2010.

## 3-6
## U.S.-Canadian Border Land-Passenger Crossings: 2009
*(Thousands)*

| | Entering the U.S. |
|---|---|
| **Total for all U.S.-Canada crossings** | |
| Personal vehicles | 26,698 |
| Personal vehicle passengers | 53,509 |
| Buses | 116 |
| Bus passengers | 2,503 |
| Train passengers and crew | 218 |
| Pedestrians | 380 |
| **Personal vehicles—top 5 gateways** | |
| Buffalo-Niagara Falls, NY | 5,292 |
| Detroit, MI | 4,082 |
| Blaine, WA | 2,843 |
| Port Huron, MI | 1,570 |
| Champlain-Rouses Point, NY | 1,040 |
| **Personal vehicle passengers—top 5 gateways** | |
| Buffalo-Niagara Falls, NY | 11,818 |
| Detroit, MI | 7,271 |
| Blaine, WA | 5,966 |
| Port Huron, MI | 3,320 |
| Champlain-Rouses Point, NY | 2,198 |
| **Buses—top 5 gateways** | |
| Detroit, MI | 30 |
| Buffalo-Niagara Falls, NY | 29 |
| Blaine, WA | 15 |
| Skagway, AK | 11 |
| Champlain-Rouses Point, NY | 9 |
| **Bus passengers—top 5 gateways** | |
| Buffalo-Niagara Falls, NY | 883 |
| Blaine, WA | 323 |
| Detroit, MI | 298 |
| Champlain-Rouses Point, NY | 283 |
| Skagway, AK | 161 |
| **Train passengers and crew—top 5 gateways** | |
| Skagway, AK | 65 |
| Blaine, WA | 45 |
| Champlain-Rouses Point, NY | 36 |
| Buffalo-Niagara Falls, NY | 28 |
| International Falls, MN | 7 |
| **Pedestrians—top 5 gateways** | |
| Buffalo-Niagara Falls, NY | 245 |
| Sumas, WA | 27 |
| Calais, ME | 17 |
| Detroit, MI | 17 |
| 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/programs/international/ as of September 2010 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/publications/national_transportation_statistics/ as of September 2010.

## 3-7
## Top 20 U.S. Passenger Airports: 1999 v. 2009 Rankings
*(Thousands of enplaned passengers on large certificated air carriers)*

| | 1999 | | 2009 | | |
|---|---|---|---|---|---|
| **Airports** | **Rank** | **Total enplaned passengers** | **Rank** | **Total enplaned passengers** | **% change 1999-2009** |
| Atlanta, GA | 1 | 37,232 | 1 | 41,876 | 12.5 |
| Chicago (O'Hare), IL | 2 | 31,658 | 2 | 28,994 | -8.4 |
| Dallas/Ft. Worth, TX | 3 | 27,593 | 3 | 26,333 | -4.6 |
| Denver, CO | 5 | 17,502 | 4 | 23,722 | 35.5 |
| Los Angeles, CA | 4 | 24,044 | 5 | 21,677 | -9.8 |
| Houston (G. Bush), TX | 13 | 14,735 | 6 | 18,610 | 26.3 |
| Phoenix, AZ | 8 | 16,090 | 7 | 18,329 | 13.9 |
| Las Vegas, NV | 10 | 15,367 | 8 | 18,314 | 19.2 |
| Charlotte, NC | 21 | 9,442 | 9 | 17,078 | 80.9 |
| New York (JFK), NY | 20 | 10,138 | 10 | 16,192 | 59.7 |
| San Francisco, CA | 7 | 16,563 | 11 | 15,997 | -3.4 |
| Minneapolis/ St. Paul, MN | 9 | 15,391 | 12 | 15,506 | 0.7 |
| Newark, NJ | 12 | 14,912 | 13 | 15,209 | 2.0 |
| Orlando, FL | 16 | 12,564 | 14 | 15,063 | 19.9 |
| Detroit, MI | 6 | 16,570 | 15 | 15,042 | -9.2 |
| Seattle, WA | 14 | 13,064 | 16 | 14,720 | 12.7 |
| Philadelphia, PA | 19 | 10,347 | 17 | 14,714 | 42.2 |
| Miami, FL | 15 | 12,764 | 18 | 13,390 | 4.9 |
| Boston, MA | 17 | 11,091 | 19 | 11,378 | 2.6 |
| New York (La Guardia), NY | 18 | 10,805 | 20 | 10,751 | -0.5 |
| **Top 20 airports** | | **343,360** | | **372,894** | **8.6** |
| **Top 20, percentage of total[a]** | | **56.1** | | **56.2** | **0.1** |
| All airports | | 611,582 | | 663,173 | 8.4 |

[a] The value in the last column is the percent change in total enplaned passengers from 1999 to 2009.

Notes: The 1999 top 20 airports total does not reflect the total of this table because some airports that appeared in the 1999 top 20 did not appear in the 2009 top 20. Charlotte, NC, was not in the top 20 in 1999. St. Louis (STL), MO, was in the top 20 in 1999 but not in 2009.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Schedule T-3 Data*, special tabulation, April 2010 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/publications/national_transportation_statistics/ as of August 2010.

3-8

## Top 20 U.S. Gateways for Nonstop International Air Travel: 2008 and 2009

*(Thousands of international passengers[a])*

| 2009 rank | Gateway airport | 2008 | 2009 | % change 2008–2009 |
|---|---|---|---|---|
| 1 | New York (JFK), NY | 21,983 | 21,423 | -2.5 |
| 2 | Miami, FL | 15,957 | 15,715 | -1.5 |
| 3 | Los Angeles, CA | 16,225 | 14,727 | -9.2 |
| 4 | Newark, NJ | 10,959 | 10,583 | -3.4 |
| 5 | Chicago (O'Hare), IL | 11,125 | 10,204 | -8.3 |
| 6 | Atlanta, GA | 9,255 | 8,765 | -5.3 |
| 7 | San Francisco, CA | 8,331 | 7,905 | -5.1 |
| 8 | Houston (G. Bush), TX | 7,687 | 7,606 | -1.1 |
| 9 | Washington (Dulles), DC | 6,020 | 5,999 | -0.3 |
| 10 | Dallas-Ft. Worth, TX | 4,949 | 4,662 | -5.8 |
| 11 | Philadelphia, PA | 3,724 | 3,739 | 0.4 |
| 12 | Boston, MA | 3,573 | 3,493 | -2.2 |
| 13 | Honolulu, HI | 3,414 | 3,276 | -4.0 |
| 14 | Fort Lauderdale, FL | 3,073 | 2,933 | -4.6 |
| 15 | Orlando, FL | 2,588 | 2,905 | 12.3 |
| 16 | Detroit, MI | 3,805 | 2,738 | -28.0 |
| 17 | Seattle-Tacoma, WA | 2,802 | 2,528 | -9.8 |
| 18 | Charlotte, NC | 2,303 | 2,344 | 1.8 |
| 19 | Minneapolis-St. Paul, MN | 2,563 | 2,214 | -13.6 |
| 20 | Las Vegas, NV | 2,235 | 2,153 | -3.7 |
| **Total, top 20 U.S. international airports** | | **140,336** | **133,759** | **-4.7** |
| **Top 20, percentage of total[b]** | | **87.4** | **88.5** | **1.1** |
| **Total, all U.S. international airports** | | **160,589** | **151,096** | **-5.9** |

[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 third column is the percent change in international passengers from 2008 to 2009.

Notes: Ranking is based on 2009 data. The data cover all passengers arriving and departing from U.S. airports on nonstop commercial international flights with 60 seats or more. 2008 data has been revised.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, *T-100 International Segment Data*, special calculation, September 2010.

3-9

## Top 20 World Airports by Passenger Movements[a]: 2008 and 2009

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

| 2009 rank | City airport | 2008 | 2009 | % change 2008–2009 |
|---|---|---|---|---|
| 1 | Atlanta, GA (Hartsfield) | 90,039 | 88,032 | -2.2 |
| 2 | London, England (Heathrow) | 67,056 | 66,038 | -1.5 |
| 3 | Beijing, China (Beijing Capital) | 55,937 | 65,372 | 16.9 |
| 4 | Chicago, IL (O'Hare) | 69,354 | 64,158 | -7.5 |
| 5 | Tokyo, Japan (Haneda) | 66,755 | 61,904 | -7.3 |
| 6 | Paris, France (Charles de Gaulle) | 60,875 | 57,907 | -4.9 |
| 7 | Los Angeles, CA (Los Angeles) | 59,498 | 56,521 | -5.0 |
| 8 | Dallas/Ft Worth, TX (Dallas/Ft. Worth) | 57,093 | 56,030 | -1.9 |
| 9 | Frankfurt, Germany (Frankfurt) | 53,467 | 50,933 | -4.7 |
| 10 | Denver, CO (Denver) | 51,245 | 50,168 | -2.1 |
| 11 | Madrid, Spain (Barajas) | 50,824 | 48,251 | -5.1 |
| 12 | New York, NY (JFK) | 47,808 | 45,915 | -4.0 |
| 13 | Hong Kong, China (Hong Kong) | 47,858 | 45,559 | -4.8 |
| 14 | Amsterdam, Netherlands (Schiphol) | 47,430 | 43,570 | -8.1 |
| 15 | Dubai, United Arab Emirates (Dubai) | 37,441 | 40,902 | 9.2 |
| 16 | Bangkok, Thailand (Suvarnabhumi) | 38,603 | 40,500 | 4.9 |
| 17 | Las Vegas, NV (McCarran) | 43,209 | 40,469 | -6.3 |
| 18 | Houston, TX (G. Bush) | 41,709 | 40,007 | -4.1 |
| 19 | Phoenix, AZ (Phoenix Sky Harbor) | 39,891 | 37,825 | -5.2 |
| 20 | San Francisco, CA (San Francisco) | 37,235 | 37,339 | 0.3 |

[a] Passenger movements include enplanements and deplanements, with in-transit 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. 5, 2010. Airports are ranked based on 2009 data. The value in the third column is the percent change in passengers enplaned, deplaned, and in-transit from 2008 to 2009

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 August 2010.

3-10

## Major U.S. Airports On-Time Arrival Performance: 2008 and 2009

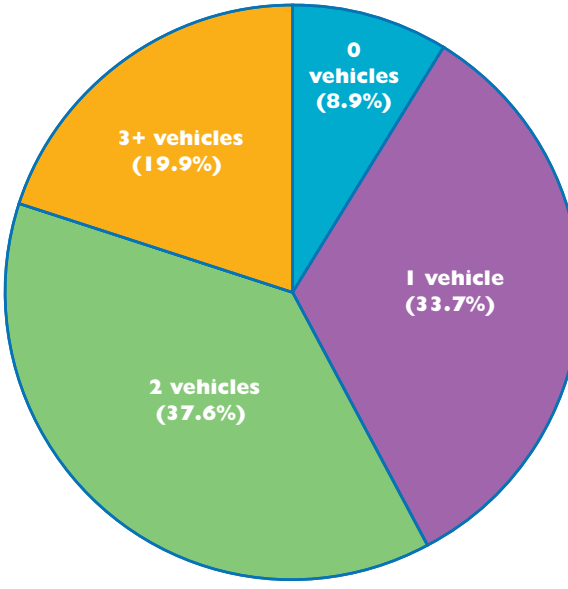
*(Percent on-time, rank in 2009)*

| | 2008 | | 2009 | |
|---|---|---|---|---|
| **Airport** | **On-time rank** | **%** | **On-time rank** | **%** |
| Salt Lake City, UT | 1 | 83.6 | 1 | 85.1 |
| Phoenix, AZ | 2 | 80.9 | 2 | 83.9 |
| Chicago (Midway), IL | 3 | 80.7 | 3 | 83.5 |
| Portland, OR (PDX) | 16 | 77.7 | 4 | 83.0 |
| Las Vegas, NV | 15 | 77.8 | 5 | 82.9 |
| Houston (G. Bush), TX | 9 | 78.3 | 6 | 82.8 |
| Los Angeles, CA | 18 | 76.9 | 7 | 82.7 |
| Baltimore, MD | 4 | 80.3 | 8 | 82.5 |
| Seattle, WA | 20 | 75.6 | 9 | 82.2 |
| Cincinnati, OH | 6 | 79.1 | 10 | 82.2 |
| St. Louis, MO (STL) | 17 | 77.3 | 11 | 81.9 |
| Detroit, MI | 5 | 80.0 | 12 | 81.9 |
| San Diego, CA | 11 | 78.1 | 13 | 81.7 |
| Tampa, FL | 12 | 78.0 | 14 | 81.3 |
| Orlando, FL | 14 | 77.8 | 15 | 80.9 |
| Washington (Dulles), DC | 23 | 74.1 | 16 | 80.8 |
| Denver, CO | 8 | 78.3 | 17 | 80.8 |
| Washington (Reagan National), DC | 13 | 77.9 | 18 | 80.3 |
| Charlotte, NC | 10 | 78.3 | 19 | 80.1 |
| Chicago (O'Hare), IL | 29 | 67.7 | 20 | 79.4 |
| Dallas/Ft. Worth, TX | 19 | 76.2 | 21 | 79.0 |
| Minneapolis/St. Paul, MN | 7 | 78.9 | 22 | 78.9 |
| Fort Lauderdale, FL | 22 | 75.1 | 23 | 78.0 |
| Boston, MA | 24 | 73.4 | 24 | 76.5 |
| Miami, FL | 26 | 70.9 | 25 | 75.8 |
| Philadelphia, PA | 25 | 73.0 | 26 | 74.6 |
| San Francisco, CA | 27 | 69.1 | 27 | 73.5 |
| New York (JFK), NY | 28 | 68.6 | 28 | 73.5 |
| Atlanta, GA | 21 | 75.5 | 29 | 72.6 |
| New York (LaGuardia), NY | 30 | 62.8 | 30 | 68.7 |
| Newark, NJ | 31 | 62.3 | 31 | 65.8 |

Notes: On-time flights arrive within 15 minutes of scheduled arrival time. 2008 Portland and Salt Lake City 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 August 2010.

3-11
## Households by Number of Motor Vehicles: 2009




Note: Data cover the household population and exclude the population living in institutions, college dormitories and other group quarters. Data do not sum to 100 due to rounding.

Source: U.S. Department of Commerce, U.S. Census Bureau, *2009 American Community Survey*, table B25044, available at http://www.census.gov/acs/www/index.html as of October 2010.

3-12

## Amtrak On-Time Performance Trends and Hours of Delay by Cause: 2007–2010

| | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| **On-time performance** | | | | |
| Total (weighted) | 68.6% | 71.2% | 80.4% | 79.7% |
| Short distance (<400 miles)[a] | 72.2% | 73.6% | 81.1% | 80.5% |
| Long distance (>400 miles) | 39.5% | 52.0% | 75.5% | 73.7% |
| **Hours of delay by cause** | | | | |
| **Total[b]** | **101,655** | **94,566** | **79,304** | **79,976** |
| Amtrak[c] | 22,902 | 23,223 | 21,813 | 23,404 |
| Host railroad[d] | 72,565 | 64,724 | 46,842 | 44,090 |
| Other[e] | 6,187 | 6,618 | 10,648 | 12,482 |

[a] Includes all Amtrak Northeast Corridor and Empire Service (New York State) trains. [b] Numbers may not add to totals due to rounding. [c] 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. [d] 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). [e] Includes delays not attributable to Amtrak or host railroads (e.g., customs and immigration, law enforcement action, weather, or waiting for scheduled departure time).

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.

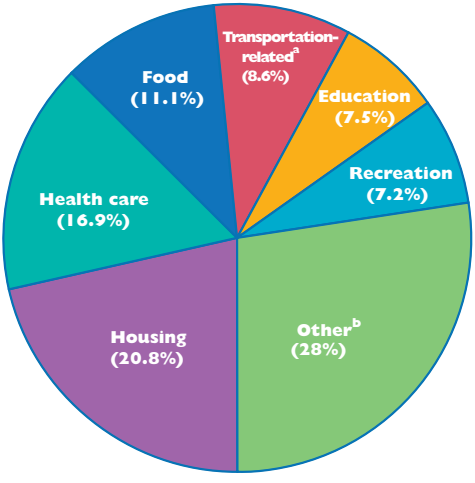
Amtrak trains are considered on time if the actual arrival time at the endpoint is within the minutes of scheduled arrival time as shown on the following chart. Trip length is based on the total distance traveled by that train from origin to destination:

| Trip length (miles) | Minutes late at endpoint |
|---|---|
| 0–250 | 0 or less |
| 251–350 | 15 or less |
| 351–450 | 20 or less |
| 451–550 | 25 or less |
| > 551 | 30 or less |

Source: Amtrak, personal communication, October 2010.

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 2009, transportation related goods and services contributed $1.2 trillion to the $14.1 trillion U.S. Gross Domestic Product.

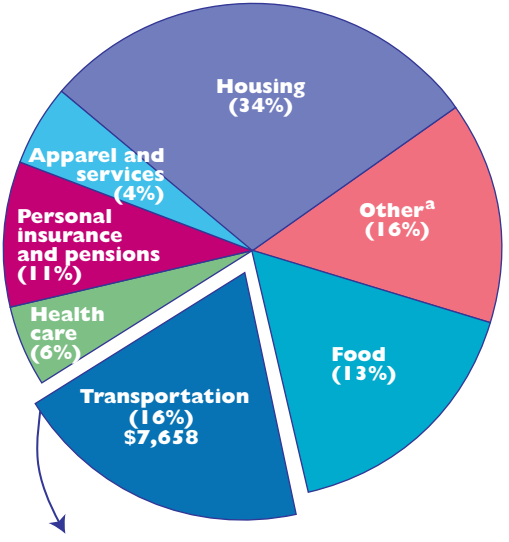
4-1
**U.S. Gross Domestic Product by Major Societal Function: 2009**




[a] Includes purchases of transportation-related goods (e.g., vehicles and fuel) and services (e.g., auto insurance), private investment in transportation-related structures and equipment, net exports related to transportation, and changes in motor vehicle inventory. [b] Includes all other categories.

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 2010 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 January 2011.

4-2
**Average Household Expenditures by Major Spending Category: 2009**
*Current dollars*




| | | |
|---|---|---|
| **Private vehicle expenditures** | = | **$7,179** |
| Vehicle purchases | = | $2,657 |
| Gasoline and motor oil | = | $1,986 |
| Other vehicle expenditures | = | $2,536 |
| **Public transportation expenditures** | = | **$479** |
| Airline fares | = | $301 |
| Mass transit fares | = | $65 |
| Ship fares | = | $48 |
| Taxi fares | = | $30 |
| Intercity train fares | = | $15 |
| Local transportation on out-of-town trips | = | $11 |
| Intercity bus fares | = | $9 |
| School bus | = | <$1 |

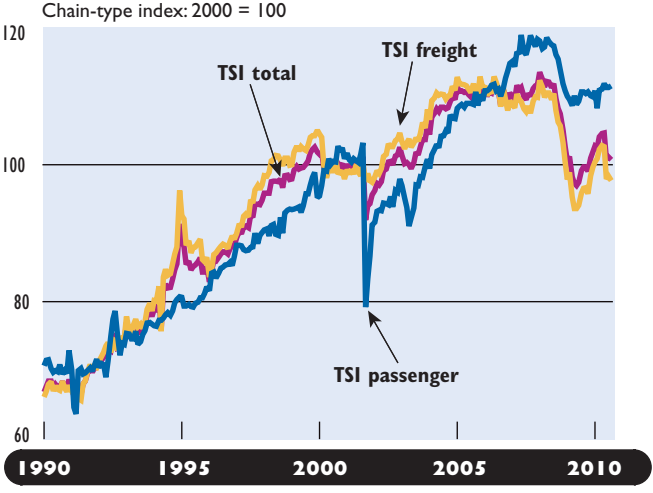
[a] Includes alcoholic beverages, entertainment, personal care products and services, reading, education, tobacco products and smoking, miscellaneous, and others.

Source: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey, 2009*, personal communication, October 2010.

4-3

**Transportation Services Index (TSI): January 1990–August 2010**

*Seasonally adjusted*




Notes: June–August 2010 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, available at http://www.bts.gov/xml/tsi/src/index.xml as of November 2010.

4-4

## Employment in Transportation and Selected Transportation-Related Industries[a]: 1990–2009

(*Thousands*)

| | 1990 | 2000 | 2008 | 2009 |
|---|---|---|---|---|
| **Total U.S. labor force (Nonfarm)** | **109,487** | **131,785** | **136,790** | **130,920** |
| **Total transportation related labor force[b]** | **12,317** | **13,907** | **13,212** | **12,232** |
| **Transportation as a percent of U.S. total** | **11.2** | **10.6** | **9.7** | **9.3** |
| **For-hire transport & warehousing** | **3,476** | **4,410** | **4,508** | **4,235** |
| Air | 529 | 614 | 491 | 460 |
| Water | 57 | 56 | 67 | 64 |
| Railroad | 272 | 232 | 231 | 219 |
| Transit/ground passenger transportation | 274 | 372 | 423 | 419 |
| Pipeline | 60 | 46 | 42 | 42 |
| Trucking | 1,122 | 1,406 | 1,389 | 1,266 |
| Support activities | 364 | 537 | 592 | 549 |
| Scenic/sightseeing transportation | 16 | 28 | 28 | 28 |
| Couriers/messengers | 375 | 605 | 573 | 547 |
| Warehousing/storage | 407 | 514 | 672 | 642 |
| **Related services & construction** | **5,256** | **6,177** | **5,844** | **5,432** |
| Automotive repair services/ parking; automotive equipment rental/leasing; gasoline stations | 1,800 | 2,125 | 2,005 | 1,913 |
| Highway, street, bridge construction | 289 | 340 | 327 | 286 |
| Dealers or wholesalers of motor vehicles, parts, petroleum, supplies, equipment | 1,993 | 2,360 | 2,304 | 2,087 |
| Travel arrangement/ reservation services | 250 | 299 | 223 | 196 |
| Ambulatory health care services | 99 | 173 | 238 | 246 |
| Postal service | 825 | 880 | 747 | 703 |
| **Transportation-related manufacturing[c]** | **2,683** | **2,447** | **1,965** | **1,672** |
| **Government[b]** | **903** | **873** | **895** | **893** |

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

Notes: U.S. Coast Guard employees are excluded from government for years 2003 and after. All 2008 data are revised. Due to independent rounding, individual components may not sum to total. This table does not include in-house employment.

Sources: **Total and transportation related labor force**—Bureau of Labor Statistics, **Government**—Bureau of the Census and U.S. Department of Transportation 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 2011.

4-5

## U.S. Trade in Transportation-Related Commodities: 2009

*(Millions of current U.S. dollars)*

| Commodity and code | Exports | Imports | Total trade[a] | Trade balance[b] |
|---|---|---|---|---|
| Motor vehicles and parts (87) | 73,602 | 131,069 | 204,671 | -57,467 |
| Aircraft, spacecraft, and parts (88) | 82,958 | 18,344 | 101,302 | 64,614 |
| Ships, boats, and floating structures (89) | 2,042 | 1,268 | 3,310 | 774 |
| Railway or tramway locomotives and parts (86) | 2,221 | 1,257 | 3,478 | 964 |
| **Total, transportation commodities** | **160,823** | **151,938** | **312,761** | **8,885** |
| Total, all commodities | 1,056,932 | 1,557,876 | 2,614,808 | -500,944 |
| Transportation commodities share of trade | 15.2% | 9.8% | 12.0% | 1.8% |

Notes: The numbers in parentheses are the classification categories from the Harmonized Tariff Schedule. Classification category (87) also includes bicycles, wheelchairs, and baby carriages.

[a] Total trade = exports plus imports. [b] Trade balance = exports minus imports.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics; special calculation 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 October 2010.

4-6

## U.S. Domestic Freight Shipments by Mode: 2007

*(Commodity Flow Survey data only)*

| Mode | Value ($billions) | Tons (millions) | Ton-miles (billions) |
|---|---|---|---|
| **Total** | **11,685** | **12,543** | **3,345** |
| **Single modes** | 9,539 | 11,698 | 2,894 |
| Truck[a] | 8,336 | 8,779 | 1,342 |
| Rail | 436 | 1,861 | 1,344 |
| Water | 115 | 404 | 157 |
| Air (including truck and air) | 252 | 4 | 5 |
| Pipeline[b] | 400 | 651 | S |
| **Multiple modes** | 1,867 | 574 | 417 |
| Parcel, USPS, or courier | 1,562 | 34 | 28 |
| Truck and rail | 187 | 226 | 197 |
| Truck and water | 58 | 146 | 98 |
| Rail and water | 14 | 55 | 47 |
| Other multiple modes | 45 | 114 | 46 |
| **Other and unknown modes** | 279 | 272 | 34 |

[a] Truck as a single mode includes any shipment that was made by private truck only, by for-hire truck only, or by a combination of private and for-hire truck. [b] Estimates for pipeline exclude shipments of crude petroleum.

Key: S = Estimate does not meet publication standards because of high sampling variability or poor response quality.

Notes: The data presented in this table exclude shipments from entities classified in forestry, fishing, utilities, construction, transportation, and most retail and services industries. Farms and government-owned entities (except government-owned liquor stores) were also excluded. Also excluded are most imports and commodities shipped from a foreign location to another foreign destination that pass through the United States. Other and unknown modes refers to shipments using modes not listed above or any shipment for which the mode of transportation could not be determined.

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, *2007 Economic Census: Transportation Commodity Flow Survey,* December 2009.

4-7

## Value of U.S.–International Merchandise Trade by Mode of Transportation: 2009

*(Millions of current U.S. dollars)*

| | Exports | Modal % | Imports | Modal % | Total trade | Total modal % |
|---|---|---|---|---|---|---|
| **Total** | **1,056,932** | **100.0** | **1,557,876** | **100.0** | **2,614,808** | **100.0** |
| Water | 367,520 | 34.8 | 795,279 | 51.0 | 1,162,799 | 44.5 |
| Air | 334,444 | 31.6 | 366,938 | 23.6 | 701,382 | 26.8 |
| Truck | 231,961 | 21.9 | 222,866 | 14.3 | 454,827 | 17.4 |
| Rail | 35,263 | 3.3 | 60,361 | 3.9 | 95,624 | 3.7 |
| Pipeline | 3,420 | 0.3 | 45,786 | 2.9 | 49,205 | 1.9 |
| Other, unknown & miscellaneous | 84,324 | 8.0 | 66,647 | 4.3 | 150,971 | 5.8 |

Notes: Individual categories may not sum 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 subtracting 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 2009, available at http://www.census.gov/foreign-trade/Press-Release/ft920_index.html as of November 2010. **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/ as of November 2010.

4-8

## Weight of U.S.–International Merchandise Trade by Mode of Transportation: 2009

*(Thousands of short tons)*

| | Exports | Modal % | Imports | Modal % | Total trade | Total modal % |
|---|---|---|---|---|---|---|
| **Total** | **637,048** | **100.0** | **1,062,068** | **100.0** | **1,699,116** | **100.0** |
| Water[a] | 498,049 | 78.2 | 826,420 | 77.8 | 1,324,469 | 78.0 |
| Air | 3,130 | 0.5 | 3,522 | 0.3 | 6,653 | 0.4 |
| Truck[b] | 79,804 | 12.5 | 75,436 | 7.1 | 155,240 | 9.1 |
| Rail[b] | 47,375 | 7.4 | 61,057 | 5.7 | 108,432 | 6.4 |
| Pipeline[b] | 3,419 | 0.5 | 95,181 | 9.0 | 98,600 | 5.8 |
| Other, unknown, & miscellaneous[b] | 5,270 | 0.8 | 451 | <0.05 | 5,722 | 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 Harmonized Tariff Schedule code commodity detail are applied. Since the weight-to-value ratio of a given commodity drastically fluctuates from year to year, BTS removed the irregular components (outliers) of the import ratios to produce consistent and reliable export weight estimates.

Notes: Individual categories may not sum 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 August 2010. **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*, available at http://www.bts.gov/programs/international/transborder/ as of November 2010, and BTS special calculation, August 2010.

4-9

## U.S. Merchandise Trade With Canada and Mexico by Mode Share: 2009

| Mode | Value (percent) | Weight (percent) |
|---|---|---|
| **NAFTA trade, total** | **100.0** | **100.0** |
| Truck[a] | 61.9 | 27.8 |
| Rail[a] | 13.0 | 19.4 |
| Pipeline[a] | 6.7 | 17.7 |
| Air | 5.3 | 0.1 |
| Water | 8.1 | 34.0 |
| Other and unknown[a] | 5.0 | 1.0 |
| **U.S.-NAFTA imports, total** | **100.0** | **100.0** |
| Truck | 55.5 | 20.4 |
| Rail | 15.0 | 16.5 |
| Pipeline | 11.4 | 25.7 |
| Air | 4.1 | 0.0 |
| Water | 10.8 | 37.3 |
| Other and unknown | 3.2 | 0.1 |
| **U.S.-NAFTA exports, total** | **100.0** | **100.0** |
| Truck[a] | 69.5 | 42.6 |
| Rail[a] | 10.6 | 25.3 |
| Pipeline[a] | 1.0 | 1.8 |
| Air | 6.9 | 0.1 |
| Water | 4.7 | 27.4 |
| Other and unknown[a] | 7.3 | 2.8 |

[a] Because export weights for surface modes are not currently reported, BTS estimated the export weight for truck, rail, pipeline, and other and unknown based on value-to-weight ratios from the import data.

Note: U.S. North American Free Trade Agreement (NAFTA) refers to U.S. trade with Canada and Mexico.

Sources: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *Transborder Freight Data*, special calculation available at http://www.bts.gov/programs/international/transborder/ as of November 2010.

4-10

## Top 20 U.S. - International Trade Freight Gateways by Value of Shipments: 2009

*(Billions of current dollars)*

| Rank | Gateway | Exports | Imports | Total |
|---|---|---|---|---|
| 1 | Los Angeles, CA (w) | 28.0 | 167.7 | 195.6 |
| 2 | New York, NY, and NJ (w) | 38.3 | 104.5 | 142.8 |
| 3 | JFK International Airport, NY (a) | 65.8 | 61.2 | 127.0 |
| 4 | Houston, TX (w) | 48.4 | 57.7 | 106.1 |
| 5 | Laredo, TX (l) | 45.3 | 49.8 | 95.1 |
| 6 | Chicago, IL (a) | 31.0 | 59.8 | 90.8 |
| 7 | Detroit, MI (l) | 47.7 | 37.2 | 85.0 |
| 8 | Long Beach, CA (w) | 24.2 | 44.4 | 68.5 |
| 9 | Los Angeles Intl. Airport, CA (a) | 30.9 | 32.2 | 63.1 |
| 10 | Buffalo-Niagara Falls, NY (l) | 33.2 | 27.8 | 61.0 |
| 11 | Port Huron, MI (l) | 28.4 | 30.1 | 58.5 |
| 12 | Savannah, GA (w) | 18.9 | 27.7 | 46.6 |
| 13 | New Orleans, LA (a) | 19.2 | 25.7 | 44.9 |
| 14 | Norfolk, VA (w) | 18.9 | 24.0 | 43.0 |
| 15 | El Paso, TX (l) | 17.9 | 24.4 | 42.3 |
| 16 | San Francisco Int'l Airport, CA (a) | 21.0 | 18.8 | 39.8 |
| 17 | Miami Int'l Airport, FL (a) | 27.5 | 11.7 | 39.1 |
| 18 | Dallas/Ft. Worth Int'l Airport, TX (a) | 14.9 | 20.9 | 35.8 |
| 19 | Anchorage, AK (a) | 8.4 | 26.2 | 34.7 |
| 20 | Oakland, CA (w) | 12.7 | 21.1 | 33.8 |

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

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.

Sources: **Air and Water**—calculations based on data from U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, *USA Trade Online*, available at http://data.usatradeonline.gov/ as of November 2010. **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 2011.

4-11

## Top 20 U.S. Water Ports by Shipment Weight & Top 20 U.S. Water Ports by Container TEUs: 2008

| Port by shipment weight | Short tons (millions) | Port by container TEUs | Full TEUs (thousands) |
|---|---|---|---|
| South Louisiana, LA | 224.0 | Los Angeles, CA | 5,521 |
| Houston, TX | 212.2 | Long Beach, CA | 4,843 |
| New York, NY, and NJ | 153.5 | New York, NY and NJ | 4,103 |
| Long Beach, CA | 80.2 | Savannah, GA | 2,086 |
| Corpus Christi, TX | 76.8 | Norfolk Harbor, VA | 1,645 |
| New Orleans, LA | 73.0 | Oakland, CA | 1,548 |
| Beaumont, TX | 69.5 | Tacoma, WA | 1,458 |
| Huntington - Tristate | 69.3 | Houston, TX | 1,371 |
| Mobile, AL | 67.6 | Charleston, SC | 1,307 |
| Plaquemines, LA | 63.7 | Seattle, WA | 1,224 |
| Los Angeles, CA | 59.8 | Honolulu, HI | 859 |
| Lake Charles, LA | 53.8 | San Juan, PR | 801 |
| Texas City, TX | 52.6 | Port Everglades, FL | 677 |
| Baton Rouge, LA | 51.8 | Miami, FL | 665 |
| Duluth - Superior, MN, and WI | 45.3 | Jacksonville, FL | 544 |
| Norfolk Harbor, VA | 44.6 | Baltimore, MD | 505 |
| Baltimore, MD | 43.4 | Anchorage, AK | 288 |
| Pittsburgh, PA | 41.8 | New Orleans, LA | 242 |
| Tampa, FL | 39.7 | Portland, OR | 204 |
| Paulsboro, NJ | 36.4 | Philadelphia, PA | 199 |
| **Total, top 20** | **1,559** | | **30,091** |
| **Total, all ports** | **2,477** | | **32,007** |

Notes: Includes exports, imports, and domestic shipments. See table 4-10 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*, Part 5, National Summaries, tables 1-1 and 5-2, available at http://www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm as of July 2010 as cited in USDOT, RITA, BTS, *National Transportation Statistics*, table 1-51, available at http://www.bts.gov/publications/national_transportation_statistics/ as of October 2010. 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 August 2010.

4-12

**Top 20 World Container Ports: 2007 and 2008**

*(Thousands of full and empty TEUs)*

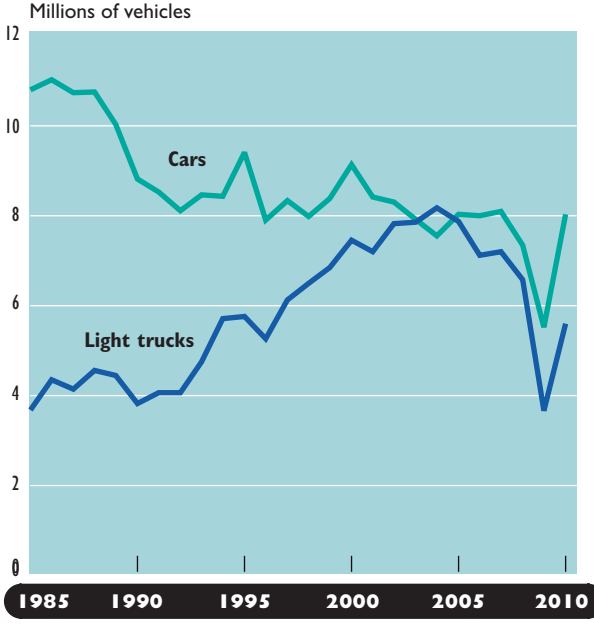
| Rank (2007) | Rank (2008) | Port | Country | TEUs |
|---|---|---|---|---|
| 1 | 1 | Singapore | Singapore | 29,918 |
| 2 | 2 | Shanghai | China | 28,006 |
| 3 | 3 | Hong Kong | China | 24,494 |
| 4 | 4 | Shenzhen | China | 21,416 |
| 6 | 5 | Busan | South Korea | 13,446 |
| 8 | 6 | Dubai | United Arab Emirates | 11,827 |
| 12 | 7 | Ningbo | China | 11,226 |
| 13 | 8 | Guangzhou | China | 11,001 |
| 7 | 9 | Rotterdam | Netherlands | 10,784 |
| 11 | 10 | Qingdao | China | 10,024 |
| 10 | 11 | Hamburg | Germany | 9,737 |
| 9 | 12 | Kaohsiung | Taiwan | 9,677 |
| 15 | 13 | Antwerp | Belgium | 8,663 |
| 18 | 14 | Tianjin | China | 8,503 |
| 17 | 15 | Port Kelang | Malasyia | 7,974 |
| 14 | 16 | Los Angeles | United States | 7,850 |
| 16 | 17 | Long Beach | United States | 6,350 |
| 21 | 18 | Bremen/ Bremerhaven | Germany | 5,488 |
| 19 | 19 | Tanjung Pelepas | Malasyia | 5,466 |
| 20 | 20 | New York/ New Jersey | United States | 5,265 |

Notes: TEUs = 20-foot equivalent units. 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 August 2010.

4-13

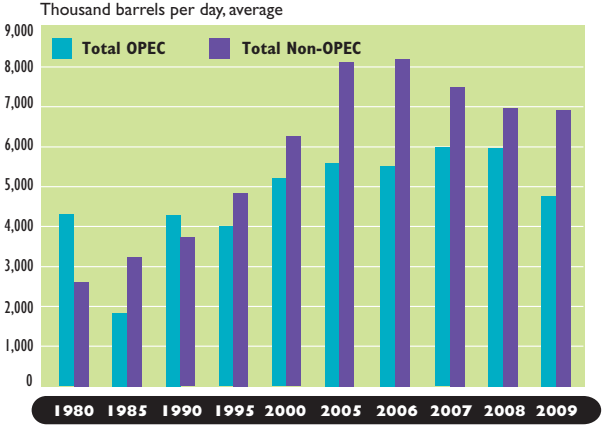
## New Passenger Car and Light Truck Production: Model Years 1985–2010




Notes: Data are based on Environmental Protection Agency (EPA) definitions of light trucks (gross vehicle weight of 8,500 pounds or less). Model year 2010 data are projected production from the automotive companies. Cars and light trucks data for 2003, 2008, and 2009 are revised.

Source: U.S. Environmental Protection Agency, Light-Duty Automotive Technology, *Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2010*, appendix E, available at http://www.epa.gov/oms/fetrends.htm as of November 2010.

4-14
## U.S. Oil Imports: 1980–2009




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* (Washington, DC: October 2010), tables 3.3c and 3.3d, available at http://www.eia.doe.gov/emeu/mer/petro.html as of October 2010.

4-15

## Major 2009 Suppliers of U.S. Imported Crude Oil and Petroleum Products v. Production in Earlier Years

*(Thousand barrels per day, average; rank in 2009)*

| | Rank | 1990 | 2000 | 2008 | 2009 |
|---|---|---|---|---|---|
| Canada | 1 | 934 | 1,807 | 2,493 | 2,479 |
| Mexico | 2 | 755 | 1,373 | 1,302 | 1,210 |
| Venezuela (OPEC) | 3 | 1,025 | 1,546 | 1,189 | 1,063 |
| Saudi Arabia (OPEC) | 4 | 1,339 | 1,572 | 1,529 | 1,004 |
| Nigeria (OPEC) | 5 | 800 | 896 | 988 | 809 |
| Russia | 6 | 45 | 72 | 465 | 563 |
| Algeria (OPEC) | 7 | 280 | 225 | 548 | 493 |
| Angola (OPEC) | 8 | NR | NR | 513 | 460 |
| Iraq (OPEC) | 9 | 518 | 620 | 627 | 450 |
| Brazil | 10 | 49 | 51 | 258 | 309 |
| U.S. Virgin Islands | 11 | 282 | 291 | 320 | 277 |
| Colombia | 12 | 182 | 342 | 200 | 276 |
| United Kingdom | 13 | 189 | 366 | 236 | 245 |
| Ecuador (OPEC) | 14 | 49 | NR | 221 | 185 |
| Kuwait (OPEC) | 15 | 86 | 272 | 210 | 182 |
| Netherlands | 16 | 55 | 30 | 168 | 140 |
| Norway | 17 | 102 | 343 | 102 | 108 |
| Libya (OPEC) | 18 | 0 | 0 | 103 | 79 |
| **Total, major suppliers** | | **6,690** | **9,806** | **11,473** | **10,333** |
| Total, all U.S. imports | | 8,018 | 11,459 | 12,915 | 11,691 |

Key: NR= Not reported; OPEC = Organization of Petroleum Exporting Countries; R= revised.

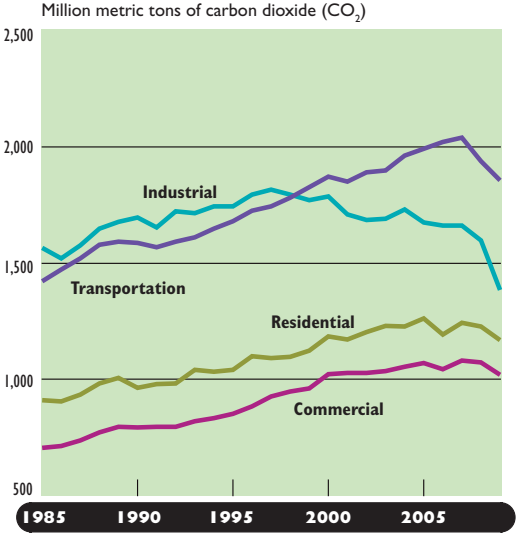
Notes: The country of origin for petroleum products may not be the country of origin for the crude oil used to produce the products. For example, refined products imported from western European refineries may have been produced from Middle Eastern crude oil. Angola joined OPEC in January 2007. Ecuador was a member of OPEC from 1973-1992, and rejoined OPEC in November 2007. Data for Angola for 1973-2006, and Ecuador for 1993-2007 are included in Total Non-OPEC in Energy Information Administration, *Monthly Energy Review*, table 3.3d. All 2000 data are revised. The data for Colombia, Netherlands, Norway and Libya, which were not included in last year's table, are included in this year's table, thus Total, major suppliers is revised accordingly.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review* (Washington, DC: October 2010), tables 3.1, 3.3c–d, available at http://www.eia.doe.gov/emeu/mer/petro.html as of October 2010.

# 5 Environmental Sustainability

While transportation enhances the quality of our lives, it also generates environmental impacts that can lead to human health problems and environmental 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 rose steadily until 2007 before decreasing in 2008.

## 5-1
## U.S. Greenhouse Gas Emissions From Energy Use: 1985–2009



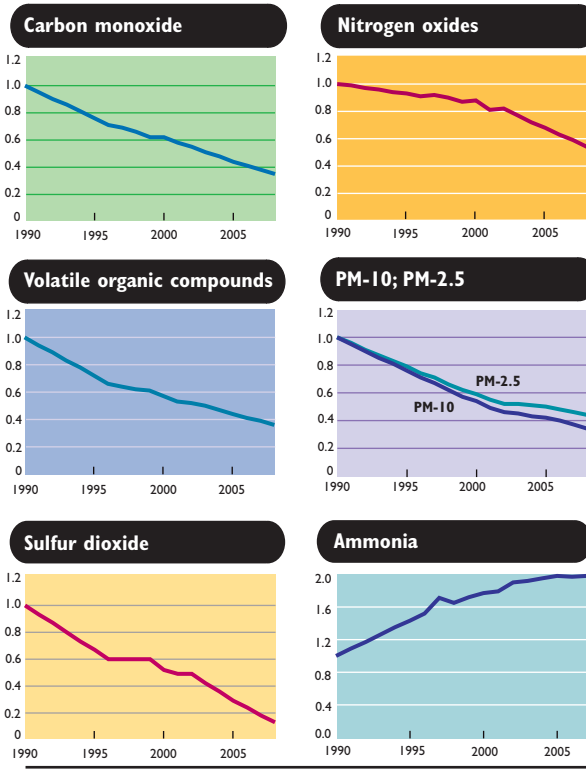

Notes: Electric utility emissions are distributed across sectors. Data for all years except 2009 are revised.

Sources: U.S. Department of Energy (USDOE), Energy Information Administration (EIA), Monthly Energy Review, *Carbon Dioxide Emissions From Energy Consumption*, tables 12.2 to 12.5, available at http://www.eia.doe.gov/emeu/mer/environ.html as of November 2010.

5-2

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

*Index: 1990 = 1.0*



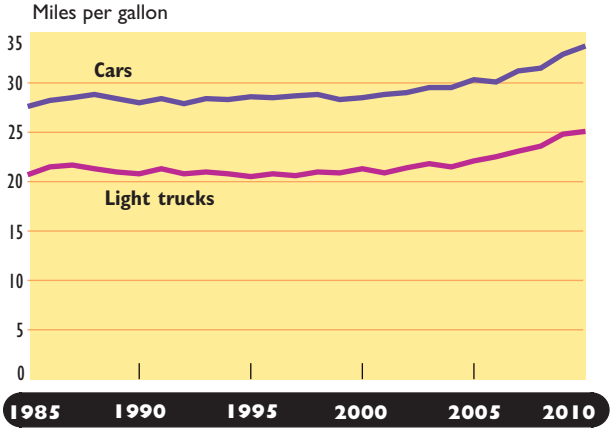

Key: PM-10 = airborne particulates of less than 10 microns, PM-2.5 = airborne particulates of less than 2.5 microns.

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 November 2010.

5-3

## New Passenger Car and Light Truck Fuel Economy Averages: Model Years 1985–2010




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

Source: National Highway Traffic Safety Administration, *Summary of Fuel Economy Performance* (Washington, DC: Annual Issues), available at http://www.nhtsa.gov/, as cited in U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-23, available at http://www.bts.gov/publications/national_transportation_statistics/ as of January 2011.

5-4

**Hybrid Vehicle Sales[a] in the United States: 1999–2009**

*(Units)*

| Year | Domestic[b] | Import | Total |
|---|---|---|---|
| 1999 | 0 | 17 | 17 |
| 2000 | 0 | 9,350 | 9,350 |
| 2001 | 0 | 20,282 | 20,282 |
| 2002 | 0 | 22,335 | 22,335 |
| 2003 | 0 | 47,566 | 47,566 |
| 2004 | 2,993 | 81,206 | 84,199 |
| 2005 | 15,960 | 189,868 | 205,828 |
| 2006 | 24,198 | 229,320 | 253,518 |
| 2007 | 77,629 | 275,233 | 352,862 |
| 2008 | 86,082 | 229,606 | 315,688 |
| 2009 | 81,882 | 208,350 | 290,232 |

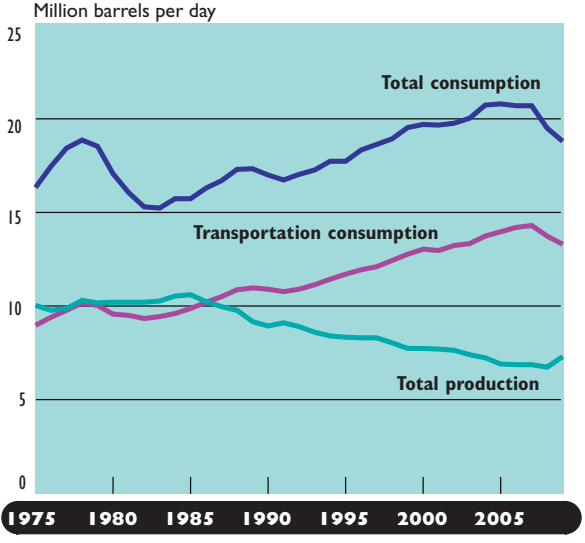
[a] Sales include leased vehicles and fleet sales. [b] Includes vehicles produced in Canada and Mexico.

Notes: The first domestic hybrid vehicle was not introduced in the U.S. market until 2004. A hybrid vehicle is a vehicle powered by a combination of battery-electric motor(s) and an internal combustion engine.

Source: Ward's Automotive Group, WardsAuto.com, personal communication, April 2010.

5-5

## U.S. Petroleum Production and Consumption: 1975–2009

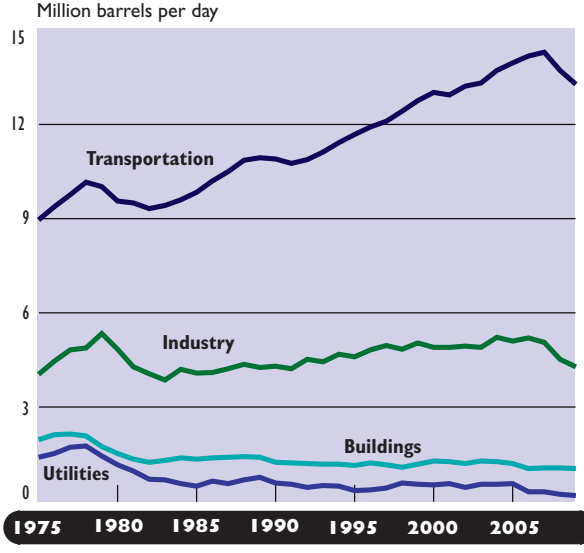



Notes: 2009 data are preliminary. Data for all other years are revised.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review* (Washington, DC: September 2010), tables 3.1, and 3.7c, available at http://www.eia.doe.gov/aer/petro.html as of August 2010 as cited in USDOT, RITA, BTS, *National Transportation Statistics*, table 4-1, available at http://www.bts.gov/publications/national_transportation_statistics/ as of October 2010.

5-6

## Transportation's Share of U.S. Petroleum Use: 1975–2009




Notes: 2009 data are preliminary. Data for all other years are revised.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review* (Washington, DC: October 2010), tables 3.7a–c, available at http://www.eia.doe.gov/mer/petro.html as of October 2010.

# Glossary

**Air carrier:** Certificated provider of scheduled and nonscheduled services.

**Chained dollars:** A method to measure real changes in dollar values between years; 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 railroad:** Railroads earning adjusted annual operating revenues for three consecutive years of $250,000,000 or more based on 1991 dollars with an adjustment factor applied to subsequent years.

**Commercial waterway facilities:** Waterway facilities, as defined 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 $102.12 per hour of truck travel in 2007) 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 is distinct from airline usage of the term to describe "hub-and-spoke" route structures or other definitions of hubs used by the Federal Aviation Administration, which relate to 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: majors—more than $1 billion; nationals—between $100 million and $1 billion; large regionals—between $20 million and $99,999,999; and 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 pickup trucks, vans, truck-based station wagons, and sport utility vehicles.

**Long-distance travel:** As defined in the 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.

**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 U.S. 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.

**Pedalcyclist:** A person on a vehicle powered solely by pedals.

**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.

**Serious injury (Air Carrier/General Aviation):** An injury that requires hospitalization for more than 48 hours, commencing within 7 days from the date when the injury was received; results in a bone fracture (except simple fractures of fingers, toes, or nose); involves lacerations that cause severe hemmorrhages, nerve, muscle, or tendon damage; involves injury to any internal organ; or involves second- or third-degree burns or any burns affecting more than 5 percent of the body surface.

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

**Standard Industrial Classification (SIC):** SIC (first used in 1937) groups entities 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.
>
> **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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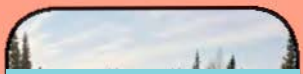

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