

2014

# Pocket Guide to Transportation



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# Pocket Guide to Transportation



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# ABOUT THE *POCKET GUIDE TO TRANSPORTATION*

The *Pocket Guide to Transportation* is a compilation of statistics related to the performance and impact of the U.S. transportation system. Intended as a compact reference, it supports the Bureau of Transportation Statistics' mission to create, manage, and share transportation statistical knowledge.

Many of the tables and figures within this publication are derived from *National Transportation Statistics*, available at [www.bts.gov](http://www.bts.gov).

BTS welcomes comments and suggestions for improving this publication.

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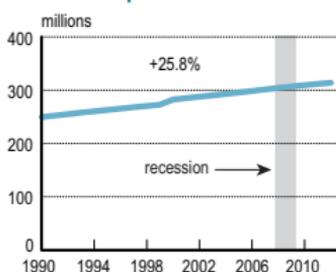
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# A DYNAMIC SYSTEM

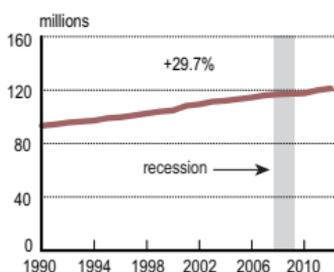
America's transportation system continues to change along with the population, the economy, and employment. The following social and economic trends present a backdrop for the transportation data in this publication.

## The American Landscape: 1990–2012

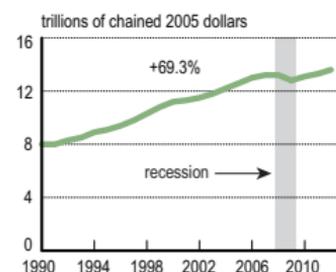
### Resident Population



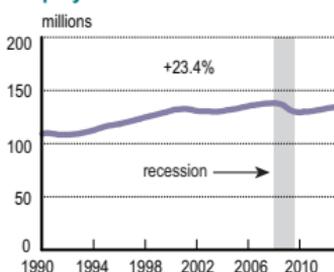
### Households



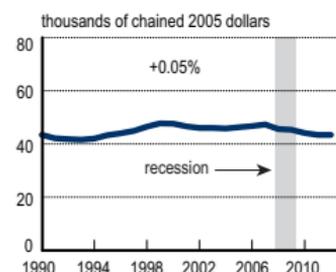
### Real GDP



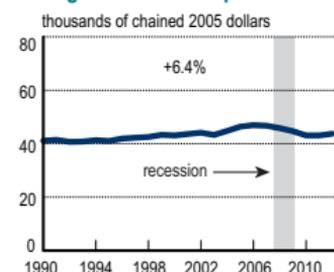
### Employment<sup>a</sup>



### Median household income<sup>b</sup>



### Average household expenditures<sup>b</sup>



<sup>a</sup>Non-farm payroll employment. <sup>b</sup>Converted to chained 2005 dollars by the Bureau of Transportation Statistics using the CPI-U-RS price index.

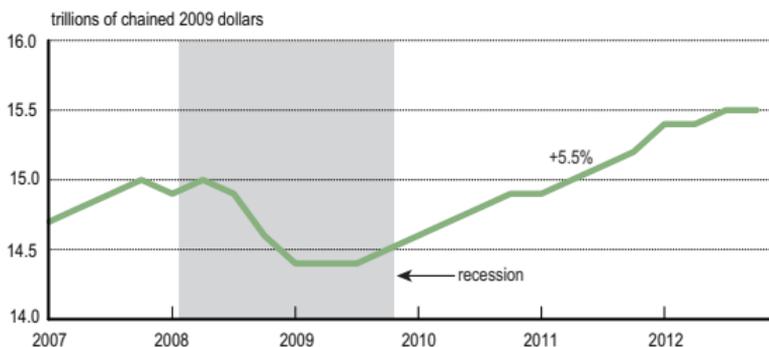
**Key:** GDP = gross domestic product.

**Note:** Graphs with same color trend lines have identical scales.

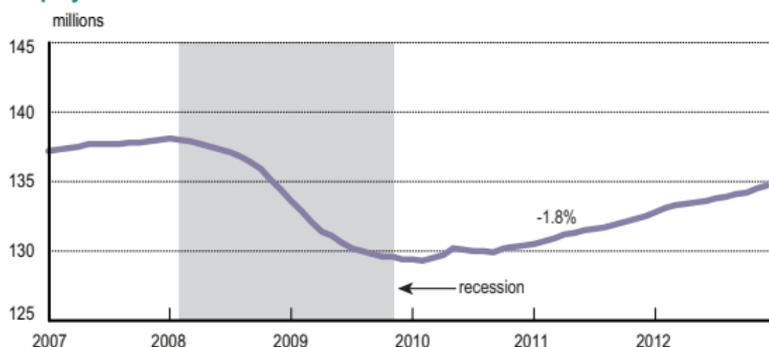
**Sources:** Population, Households, GDP, Income, Expenditures—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table A, available at [www.bts.gov](http://www.bts.gov) as of November 2013. Employment—U.S. Department of Labor, Bureau of Labor Statistics, available at [www.bls.gov](http://www.bls.gov) as of November 2013.

## A Closer Look: 2007–2012

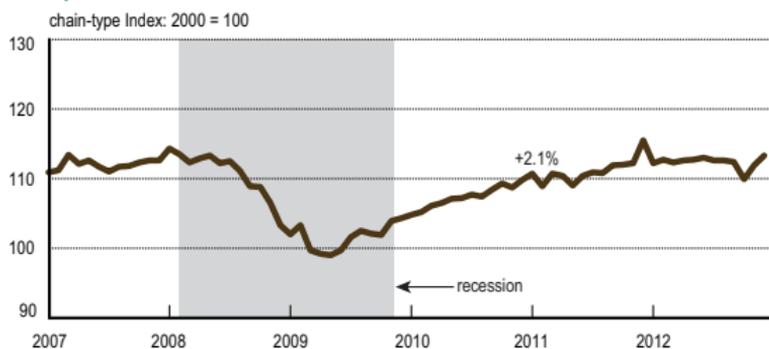
### Real GDP



### Employment<sup>a</sup>



### Transportation Services Index



<sup>a</sup>Non-farm payroll employment.

**Key:** GDP = gross domestic product.

**Note:** Graph scales are not comparable.

**Sources:** **GDP**—U.S. Department of Commerce, Bureau of Economic Analysis, available at [www.bea.gov](http://www.bea.gov) as of November 2013. **Employment**—U.S. Department of Labor, Bureau of Labor Statistics, available at [www.bls.gov](http://www.bls.gov) as of November 2013. **TSI**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of November 2013.



# 1 INFRASTRUCTURE

The U.S. transportation system consists of a vast network of roads, bridges, airports, railroads, transit systems, ports, waterways, and pipelines. The American people rely on this interconnected system to get to work, travel, conduct business, and ship goods. The transportation system links regions and connects the Nation to the rest of the world.

## 1-1 Transportation Network Length miles

Mode	2001	2011
<b>Highway</b>		
Public roads	3,948,335	4,077,756
Public road lanes <sup>a</sup>	8,251,865	8,567,618
<b>Pipeline</b>		
Gas distribution	1,838,359	2,120,272
Gas transmission and gathering	311,391	325,174
<b>Rail</b>		
Class I freight railroad	97,817	95,387
Amtrak	23,000	21,225
<b>Transit</b>		
Commuter rail <sup>b</sup>	5,209	7,576
Heavy rail <sup>b</sup>	1,572	1,617
Light rail <sup>b</sup>	897	1,398
<b>Water</b>		
Navigable waterways <sup>c</sup>	25,000	25,000

<sup>a</sup>Measured in lane miles. <sup>b</sup>Measured in directional route miles. <sup>c</sup>Estimated length of domestic waterways.

**Sources: Highway, Rail, Transit, Water**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-1, 1-6, and 1-10, available at [www.bts.gov](http://www.bts.gov) as of October 2013. **Pipeline**—U.S. Department of Transportation, Pipeline and Hazardous Materials Administration, available at [phmsa.dot.gov/pipeline/library/data-stats](http://phmsa.dot.gov/pipeline/library/data-stats) as of October 2013.

## 1-2 Transportation Facilities number

Mode	2001	2011
<b>Air</b>		
Certificated airports <sup>a</sup>	635	547
General aviation airports	18,721	19,235
<b>Highway</b>		
Bridges	589,673	605,087
<b>Pipeline</b>		
LNG facilities	U	130
<b>Rail</b>		
Amtrak stations	512	517
<b>Transit rail</b>		
Commuter rail stations	986	1,219
Heavy rail stations	1,019	1,041
Light rail stations	613	895
<b>Water</b>		
Ports <sup>b</sup>	U	179
Cargo handling docks	U	8,197
Lock chambers	275	239

<sup>a</sup>Certificated airports serve air carrier operations with aircrafts seating more than nine passengers. <sup>b</sup>Ports handling over 250,000 short tons.

**Key:** LNG = liquified natural gas; U = Data are unavailable.

**Sources:** **Air, Highway, Rail**—U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-3, 1-7, and 1-28, available at [www.bts.gov](http://www.bts.gov) as of October 2013. **Pipeline**—U.S. Department of Transportation, Pipeline and Hazardous Materials Administration, available at [phmsa.dot.gov/pipeline/library/data-stats](http://phmsa.dot.gov/pipeline/library/data-stats) as of October 2013. **Transit**—U.S. Department of Transportation, National Transit Database, available at [www.ntdprogram.gov](http://www.ntdprogram.gov) as of October 2013. **Water**—U.S. Army Corps of Engineers, Navigation Data Center, available at [www.navigationdatacenter.us](http://www.navigationdatacenter.us) as of October 2013.

## 1-3 Transportation Vehicles number

Mode	2001	2011
<b>Air</b>		
Air carrier aircraft	8,497	7,028
General aviation aircraft	211,446	222,250
<b>Highway</b>		
Light duty vehicle <sup>a</sup>	221,821,103	233,841,422
Truck	7,857,675	10,270,693
Motorcycle	4,903,056	8,330,210
<b>Rail</b>		
Class I freight locomotive	19,745	24,250
Class I freight car	499,860	380,699
Amtrak locomotive	401	287
Amtrak car	2,084	1,301
<b>Transit rail</b>		
Commuter rail <sup>b</sup>	5,528	6,971
Heavy rail <sup>b</sup>	10,718	14,942
Light rail <sup>b</sup>	1,359	1,969
<b>Water</b>		
Nonself-propelled vessel	33,042	31,498
Self-propelled vessel	8,546	8,979
Oceangoing vessel	274	214
Recreational boat	12,876,346	12,173,935

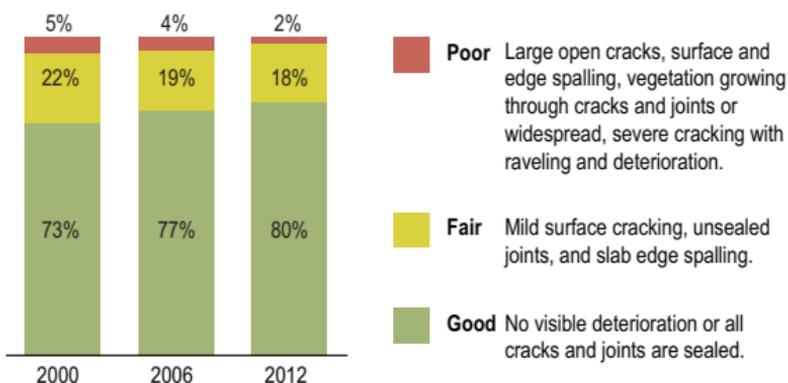
<sup>a</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles.

<sup>b</sup>Includes revenue vehicles available for maximum service.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-11, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 1-4 Airport Runway Pavement Condition

### percent of NPAIS runways

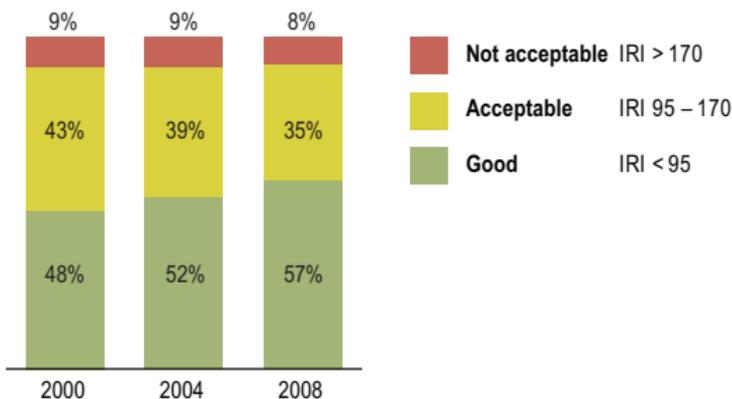


**Note:** National Plan of Integrated Airport Systems (NPAIS) airports include commercial service airports, reliever airports, and selected general aviation airports.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-25, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 1-5 National Highway System Pavement Condition

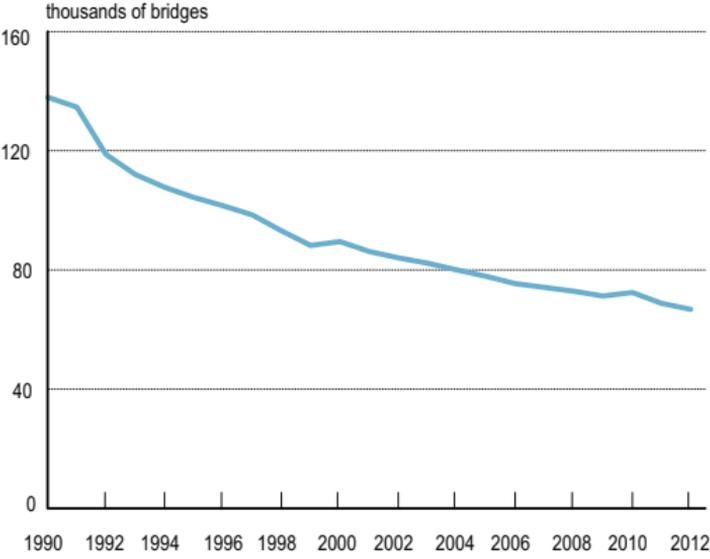
### percent of vehicle miles traveled



**Note:** Pavement condition is measured by the International Roughness Index (IRI).

**Source:** U.S. Department of Transportation, Federal Highway Administration, *2010 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance*, available at [www.fhwa.dot.gov/policy/2010cpr](http://www.fhwa.dot.gov/policy/2010cpr) as of September 2013.

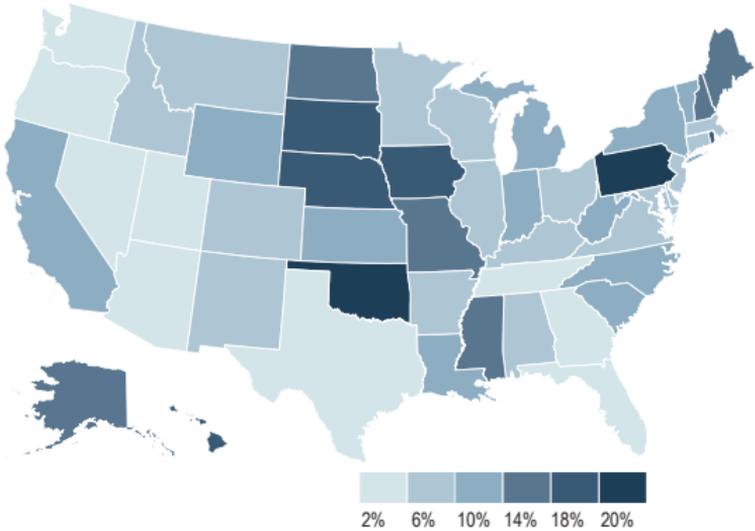
# 1-6 Structurally Deficient Bridges: 1990–2012



**Source:** U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at [www.fhwa.dot.gov/bridge/nbi.cfm](http://www.fhwa.dot.gov/bridge/nbi.cfm) as of October 2013.

# 1-7 Structurally Deficient Bridges by State: 2012

percent of bridges



**Source:** U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at [www.fhwa.dot.gov/bridge/nbi.cfm](http://www.fhwa.dot.gov/bridge/nbi.cfm) as of October 2013.

## 2 MOVING PEOPLE

The U.S. transportation system makes personal mobility possible. Every day, people use the transportation system to get to and from work, school, and shopping and for recreation, social, and personal purposes.

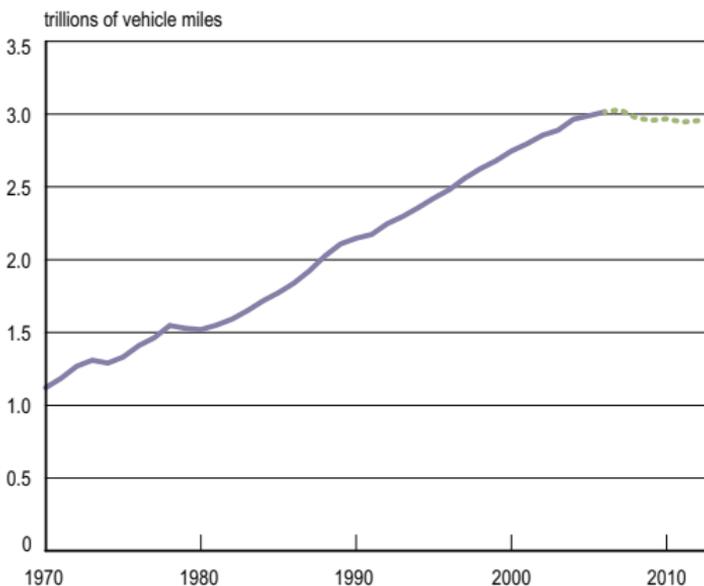
### 2-1 Vehicle Miles Traveled millions

Mode	2001	2011
<b>Air</b>		
U.S. air carrier, domestic <sup>a</sup>	5,545	6,005
<b>Highway</b>		
Light duty vehicle <sup>b,c</sup>	2,569,980	2,646,641
Motorcycle <sup>b</sup>	9,633	18,500
Truck <sup>b</sup>	208,928	267,207
Bus <sup>b</sup>	7,070	13,783
<b>Passenger rail</b>		
Amtrak <sup>d</sup>	378	296
Commuter rail <sup>d</sup>	277	339
Heavy rail <sup>d</sup>	608	655
Light rail <sup>d</sup>	54	89

<sup>a</sup>Measured in revenue aircraft miles. <sup>b</sup>Data for 2001 and 2011 may not be comparable due to changes in methodology. <sup>c</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles. <sup>d</sup>Measured in car miles.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-35, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 2-2 Highway Travel: 1970–2012



**Note:** Data for 2007 and later years may not be comparable to prior years due to changes in methodology.

**Source:** U.S. Department of Transportation, Federal Highway Administration, *Traffic Volume Trends*, available at [www.fhwa.dot.gov](http://www.fhwa.dot.gov) as of October 2013.

## 2-3 Passenger Miles Traveled millions

Mode	2001	2011
<b>Air</b>		
U.S. air carrier, domestic	486,506	575,613
<b>Highway</b>		
Light duty vehicle <sup>a</sup>	*	3,644,971
Motorcycle	*	19,927
Truck	*	267,207
Bus	*	292,192
<b>Passenger rail</b>		
Amtrak <sup>b</sup>	5,559	6,670
Commuter rail	9,544	11,314
Heavy rail	14,178	17,317
Light rail	1,427	2,198

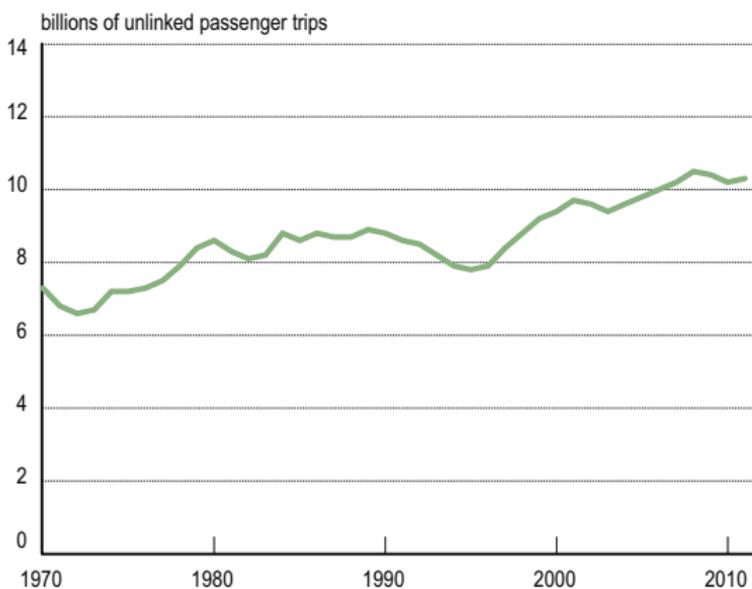
\*2001 highway data are omitted because they are not comparable to 2011 data due to a change in vehicle occupancy rates derived from National Household Travel Surveys.

<sup>a</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles.

<sup>b</sup>Measured in revenue passenger miles.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-40, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 2-4 Transit Ridership: 1970–2011



**Note:** Includes bus, commuter rail, demand response, heavy rail, light rail, trolley bus, ferry boat, aerial tramway, automated guideway, cable car, inclined plane, monorail, and other.

**Source:** American Public Transportation Association, *Public Transportation Fact Book*, available at [www.apta.com](http://www.apta.com) as of October 2013.

## 2-5 Daily Passenger Travel

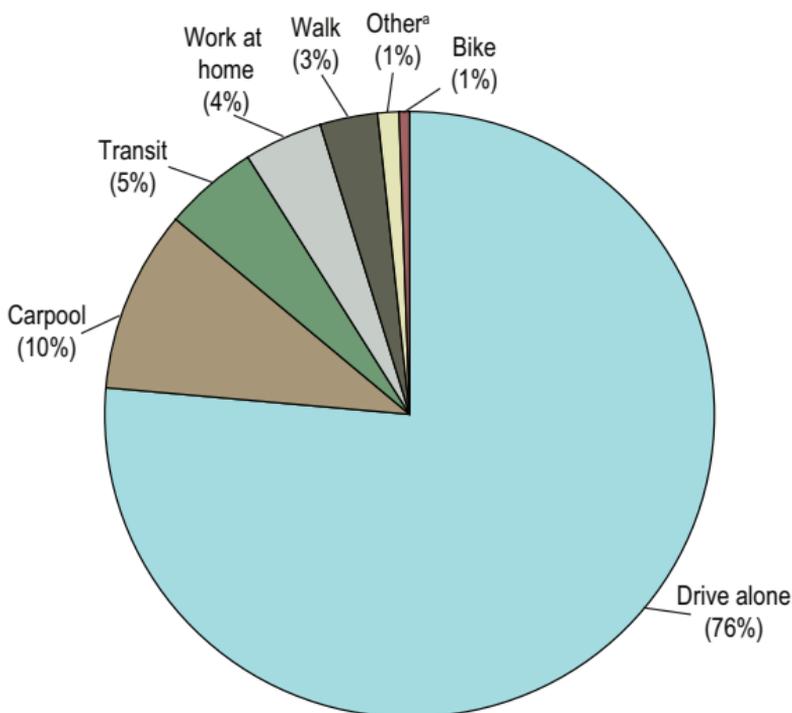
	1995	2001	2009
<b>Travel per person</b>			
Daily person trips	4.3	4.1	3.8
Daily person miles of travel	38.7	40.3	36.1
<b>Travel per driver</b>			
Daily vehicle trips	3.6	3.4	3.0
Daily vehicle miles of travel	32.1	32.7	29.0
<b>Average commute</b>			
Length in miles	11.6	12.1	11.8
Travel time in minutes	20.7	23.3	23.9
<b>Percent of trips by mode</b>			
Private vehicle	89.3	86.4	83.4
Bus <sup>a</sup>	3.0	2.8	3.3
Rail <sup>b</sup>	0.6	0.6	0.6
Walk	5.5	8.7	10.4
Bike	0.9	0.8	1.0
Air	0.1	0.1	0.1
Other <sup>c</sup>	0.5	0.6	1.1

<sup>a</sup>Includes local transit bus, commuter bus, school bus, charter/tour bus, city-to-city bus. <sup>b</sup>Includes subway/elevated rail, street car/trolley, and Amtrak/intercity train. <sup>c</sup>Includes ferry, hotel/airport shuttle, light electric vehicle, limousine, passenger line/ferry, sailboat/motorboat/yacht, ship/cruise, special transit, taxicab, other, and unknown.

**Note:** Percents may not add to 100 due to rounding.

**Source:** U.S. Department of Transportation, Federal Highway Administration, 2009 *National Household Travel Survey*, available at [nhts.ornl.gov](http://nhts.ornl.gov) as of October 2013.

## 2-6 Commute Mode Share: 2012

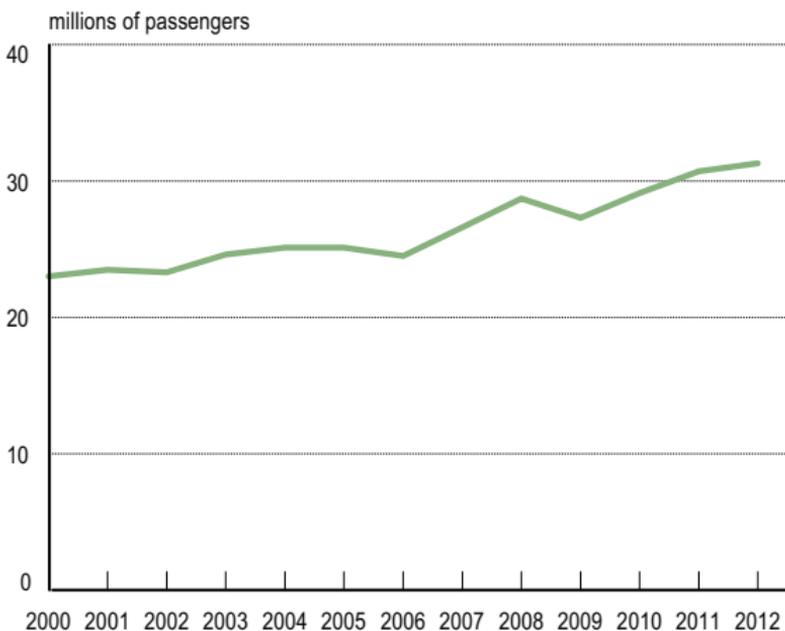


<sup>a</sup>Includes ferry, motorcycle, taxi, and other means.

**Notes:** *The American Community Survey* asks for the mode usually used by the respondent to get to work. For more than one mode of transportation, respondents select the mode used for most of the distance traveled.

**Source:** U.S. Department of Commerce, U.S. Census Bureau, *American Community Survey, 1-Year Estimates*, available at [www.census.gov/acs](http://www.census.gov/acs) as of October 2013.

## 2-7 Amtrak Ridership: FY2000–FY2012



**Source:** U.S. Department of Transportation, Federal Railroad Administration, available at [safetydata.fra.dot.gov/OfficeofSafety](http://safetydata.fra.dot.gov/OfficeofSafety) as of August 2013.

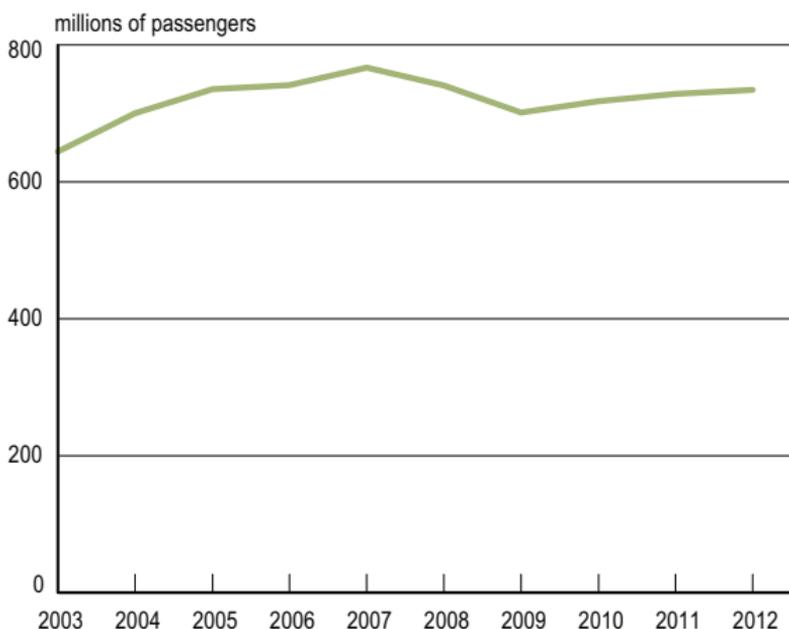
## 2-8 Top 10 Amtrak Station Rankings: FY2012 by passengers

Rank	Station	'11-'12 change	Millions of passengers
1	New York Penn Station, NY	▲ 5.5%	9.5
2	Washington, DC	▲ 3.4%	5.0
3	Philadelphia 30th St., PA	▲ 5.1%	4.1
4	Chicago, IL	▲ 2.6%	3.5
5	Los Angeles, CA	▲ 3.2%	1.7
6	Boston South Station, MA	▲ 6.4%	1.4
7	Sacramento, CA	▲ 1.0%	1.2
8	Baltimore, MD	▲ 7.9%	1.0
9	Albany-Rensselaer, NY	▼ -0.03%	0.8
10	New Haven, CT	▲ 2.0%	0.8

**Note:** Includes passenger boardings and alightings.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *State Transportation Statistics*, table 4-5, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 2-9 U.S. Air Carrier Traffic: 2003–2012



**Note:** Includes passenger enplanements on scheduled services only.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market data, available at [transtats.bts.gov](http://transtats.bts.gov) as of August 2013.

## 2-10 Top 10 U.S. Airport Rankings: 2012 by enplaned passengers

Rank	Station	'11-'12 change	Millions of passengers
1	Atlanta, GA	▲ 3.3%	45.7
2	Chicago O'Hare, IL	▲ 0.7%	32.1
3	Los Angeles, CA	▲ 2.6%	31.3
4	Dallas/Fort Worth, TX	▲ 2.0%	28.0
5	Denver, CO	▲ 0.6%	25.8
6	New York JFK, NY	▲ 3.5%	24.4
7	San Francisco, CA	▲ 6.1%	21.3
8	Charlotte, NC	▲ 5.3%	20.0
9	Las Vegas, NV	▲ 0.5%	19.8
10	Phoenix, AZ	▼ -1.0%	19.5

**Note:** Includes passenger enplanements on U.S. carrier scheduled domestic and international service and foreign carrier scheduled international service to and from the United States.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market data, available at [transtats.bts.gov](http://transtats.bts.gov) as of April 2013.

## 2-11 Top 10 World Airport Rankings: 2011

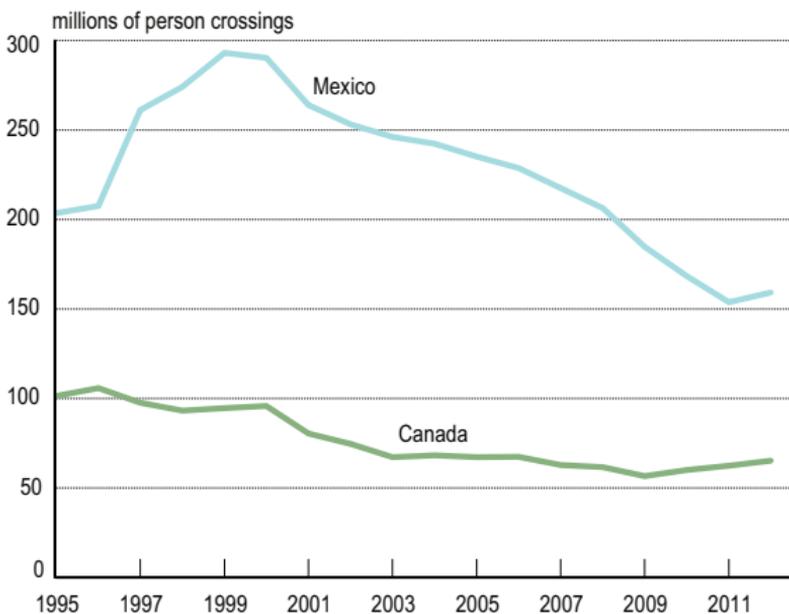
by enplaned, deplaned, and in transit passengers

Rank	Airport	'10-'11 change	Millions of passengers
1	<b>Atlanta</b>	▲ 3.5%	92.4
2	Beijing Capital	▲ 6.4%	78.7
3	London Heathrow	▲ 5.4%	69.4
4	<b>Chicago O'Hare</b>	▼ -0.1%	66.7
5	Tokyo Haneda	▼ -2.5%	62.6
6	<b>Los Angeles</b>	▲ 4.7%	61.9
7	Paris Charles de Gaulle	▲ 4.8%	61.0
8	<b>Dallas/Fort Worth</b>	▲ 1.6%	57.8
9	Frankfurt	▲ 6.5%	56.4
10	Hong Kong	▲ 5.9%	53.3

**Note:** Includes passengers enplaned, deplaned, and passengers in transit counted once for airports participating in the ACI annual traffic statistics collection.

**Source:** Airports Council International, available at [www.aci.aero](http://www.aci.aero) as of October 2013.

## 2-12 Incoming Land Border Crossings: 1995–2012



**Note:** Excludes drivers and passengers in commercial trucks.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, available at [transborder.bts.gov](http://transborder.bts.gov) as of October 2013.

## 2-13 Land Port of Entry Rankings: 2012 by incoming person crossings

### U.S. - Mexico ports of entry

Rank	Port	'11-'12 change	Millions of person crossings
1	San Ysidro, CA	▼ -5.9%	28.7
2	El Paso, TX	▲ 3.9%	22.4
3	Laredo, TX	▲ 3.9%	13.0
4	Otay Mesa, CA	▲ 24.8%	12.7
5	Calexico, CA	▲ 2.7%	11.9

### U.S. - Canada ports of entry

Rank	Port	'11-'12 change	Millions of person crossings
1	Buffalo-Niagara Falls, NY	▲ 2.5%	27.8
2	Blaine, WA	▲ 9.1%	18.2
3	Detroit, MI	▲ 1.7%	15.1
4	Port Huron, MI	▲ 5.4%	7.9
5	Champlain-Rouses Pt, NY	▲ 6.9%	5.9

**Note:** Excludes drivers and passengers in commercial trucks.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, available at [transborder.bts.gov](http://transborder.bts.gov) as of October 2013.

### 3 MOVING GOODS

The freight transportation network links natural resources, manufacturing facilities, labor markets, and customers across the Nation and with international trading partners.

#### 3-1 Freight Shipments Within the U.S. by Mode

<b>Value of shipments</b> (billions of chained 2007 dollars)			
<b>Mode</b>	<b>2002</b>	<b>2007</b>	<b>2011</b>
Truck	11,165	12,193	12,181
Rail	468	574	588
Water	113	212	201
Air <sup>a</sup>	372	357	394
Pipeline	309	795	889
Multiple modes	1,367	1,917	1,985
Other <sup>b</sup>	<u>403</u>	<u>603</u>	<u>567</u>
<b>Total</b>	<b>14,196</b>	<b>16,651</b>	<b>16,804</b>

<b>Weight of shipments</b> (millions of tons)			
<b>Mode</b>	<b>2002</b>	<b>2007</b>	<b>2011</b>
Truck	11,943	13,336	11,924
Rail	1,978	2,024	2,053
Water	680	655	645
Air <sup>a</sup>	5	5	6
Pipeline	1,574	1,674	1,912
Multiple modes	320	568	583
Other <sup>b</sup>	<u>716</u>	<u>617</u>	<u>499</u>
<b>Total</b>	<b>17,215</b>	<b>18,879</b>	<b>17,622</b>

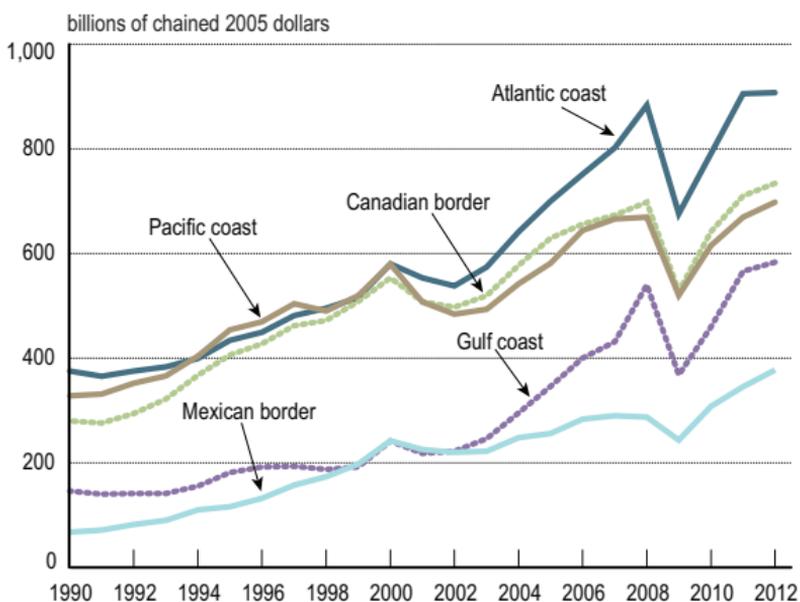
<b>Ton miles of shipments</b> (billions of ton miles)			
<b>Year</b>	<b>2002</b>	<b>2007</b>	<b>2011</b>
Truck	2,281	2,348	2,337
Rail	1,368	1,522	1,518
Water	421	450	434
Air <sup>a</sup>	6	9	11
Pipeline	881	856	1,018
Multiple modes	480	469	489
Other <sup>b</sup>	<u>102</u>	<u>86</u>	<u>93</u>
<b>Total</b>	<b>5,539</b>	<b>5,740</b>	<b>5,807</b>

<sup>a</sup>Includes air and truck-air. <sup>b</sup>Includes other, unknown, and no domestic mode.

**Notes:** Details may not add to totals due to rounding. Includes domestic trade and the domestic portion of imports and exports.

**Source:** U.S. Department of Transportation, Federal Highway Administration, Freight Analysis Framework, Version 3.4, available at [faf.ornl.gov](http://faf.ornl.gov) as of October 2013.

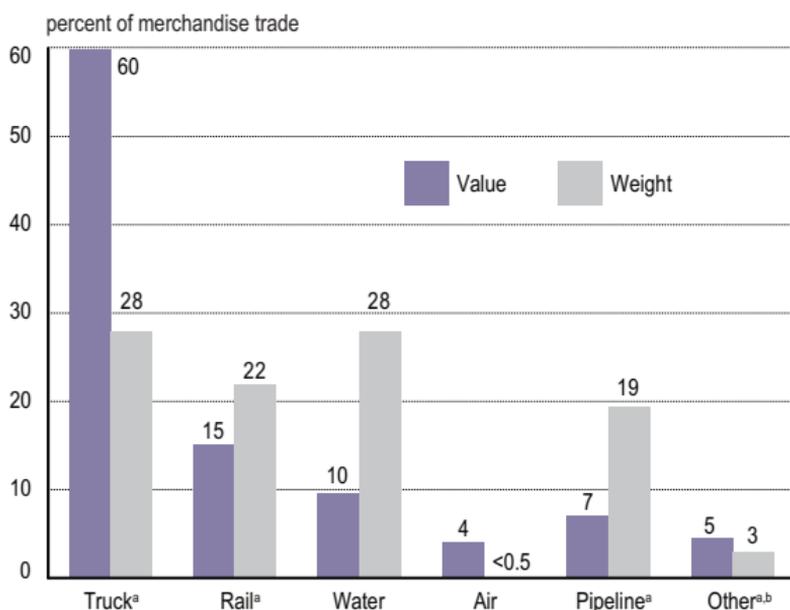
## 3-2 U.S. Trade by Coasts and Borders: 1990–2012



**Notes:** Includes merchandise trade only. The value of coal exports in 2012 for Mobile, AL, Charleston, SC, and Norfolk, VA, are included under the Atlantic Coast.

**Sources:** **Value**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, available at [www.census.gov](http://www.census.gov) as of September 2013. **Implicit GDP Deflator**—U.S. Department of Commerce, Bureau of Economic Analysis, available at [www.bea.gov](http://www.bea.gov) as of September 2013.

### 3-3 U.S.-NAFTA Merchandise Trade by Mode: 2012

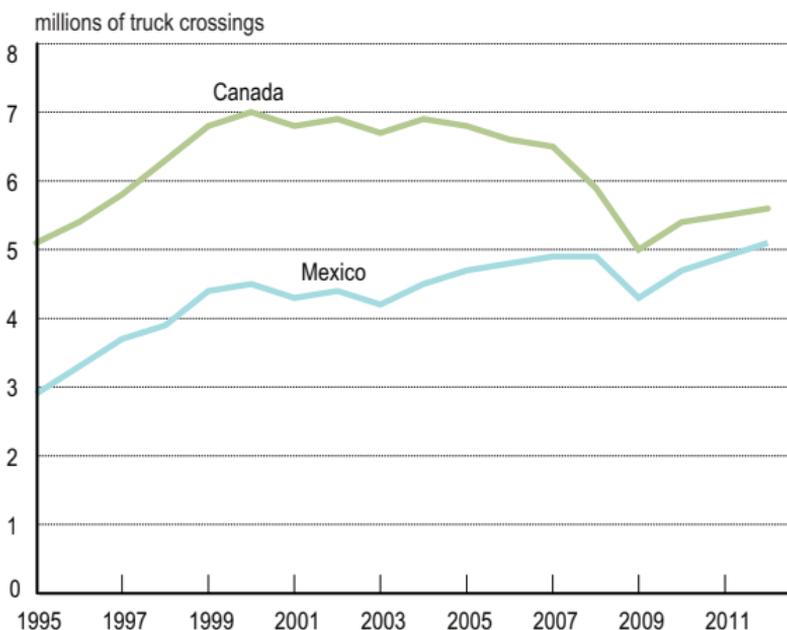


<sup>a</sup>Export weights for land modes are estimated by the Bureau of Transportation Statistics using value-to-weight ratios derived from import data. <sup>b</sup>Includes mail, other, unknown, and shipments through Foreign Trade Zones.

**Notes:** Percents do not add to 100 due to rounding. Excludes intransit data (merchandise shipped from one foreign country to another via a U.S. port). North American Free Trade Agreement (NAFTA) refers to U.S. trade with Canada and Mexico.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, special tabulation and North American Transborder Freight Data, available at [transborder.bts.gov](http://transborder.bts.gov) as of October 2013.

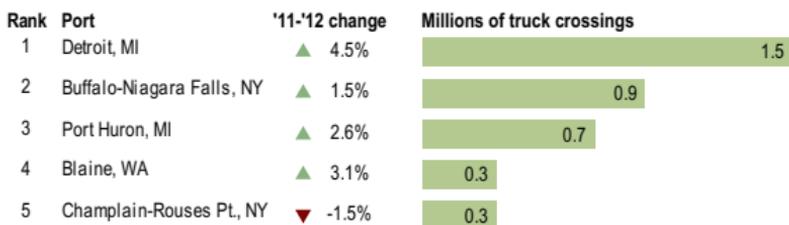
### 3-4 Incoming Truck Border Crossings: 1995–2012



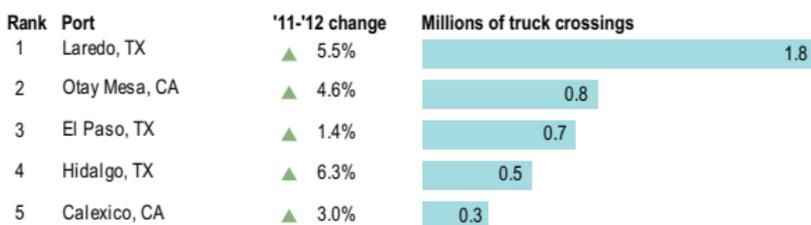
**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, available at [transborder.bts.gov](http://transborder.bts.gov) as of October 2013.

## 3-5 Top 5 Truck Port of Entry Rankings: 2012 by incoming truck crossings

### U.S. - Canada ports of entry



### U.S. - Mexico ports of entry



**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, available at [transborder.bts.gov](http://transborder.bts.gov) as of October 2013.

## 3-6 Top 10 U.S. Water Port Rankings: 2011 by short tons

Rank	Port	'10-'11 change	Millions of short tons
1	South Louisiana	▲ 4.3%	246.5
2	Houston, TX	▲ 4.7%	237.8
3	New York/New Jersey	0.0%	139.2
4	Long Beach, CA	▲ 6.4%	80.3
5	New Orleans, LA	▲ 6.6%	77.2
6	Beaumont, TX	▼ -4.3%	73.7
7	Corpus Christi, TX	▼ -4.2%	70.5
8	Los Angeles, CA	▲ 4.2%	65.0
9	Huntington - Tristate, WV	▼ -4.8%	58.6
10	Baton Rouge, LA	▲ 4.2%	57.9

## by TEUs

Rank	Port	'10-'11 change	Millions of TEUs
1	Los Angeles, CA	▲ 7.7%	5.9
2	Long Beach, CA	▼ -1.0%	4.7
3	New York/New Jersey	▲ 5.1%	4.4
4	Savannah, GA	▲ 5.7%	2.3
5	Oakland, CA	▲ 1.2%	1.7
6	Seattle, WA	▼ -1.8%	1.6
7	Norfolk, VA	▲ 3.7%	1.5
8	Houston, TX	▲ 6.6%	1.4
9	Tacoma, WA	▲ 6.4%	1.2
10	Charleston, SC	▲ 5.8%	1.1

**Key:** TEU = twenty-foot equivalent unit.

**Note:** Includes domestic and foreign waterborne trade. Excludes foreign empty TEUs.

**Source:** U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, available at [www.navigationdatacenter.us](http://www.navigationdatacenter.us) as of October 2013.

### 3-7 Top 10 World Container Port Rankings: 2011 by full and empty TEUs

Rank	Port	'10-'11 change	Millions of TEUs
1	Shanghai	▲ 9.2%	31.7
2	Singapore	▲ 5.3%	29.9
3	Hong Kong	▲ 3.0%	24.4
4	Shenzhen	▲ 0.3%	22.6
5	Busan	▲ 13.9%	16.2
6	Ningbo	▲ 12.0%	14.7
7	Guangzhou	▲ 14.2%	14.3
8	Qindao	▲ 8.4%	13.0
9	Dubai	▲ 9.0%	12.6
10	Rotterdam	▲ 6.6%	11.9
16	Los Angeles	▲ 1.4%	7.9
20	Long Beach	▼ -3.2%	6.1
24	New York/ New Jersey	▲ 4.0%	5.5

**Key:** TEU = twenty-foot equivalent unit.

**Source:** American Association of Port Authorities, *World Port Rankings*, available at [www.aapa-ports.org](http://www.aapa-ports.org) as of October 2013.

### 3-8 International Trade Gateway Rankings: 2012 by value of shipments

Rank	Port		'11-'12 change	Billions of dollars
1	Los Angeles, CA		 1.1%	216.9
2	New York/New Jersey		 1.2%	209.6
3	New York JFK Airport, NY		 -3.8%	182.7
4	Houston, TX		 5.3%	176.5
5	Long Beach, CA		 9.1%	167.3
6	Laredo, TX		 13.0%	163.4
7	Detroit, MI		 8.7%	130.9
8	Chicago, IL		 1.7%	117.5
9	Los Angeles Airport, CA		 2.5%	85.3
10	Buffalo-Niagara Falls, NY		 1.4%	83.1

**Key:**  = airport,  = land port,  = water port

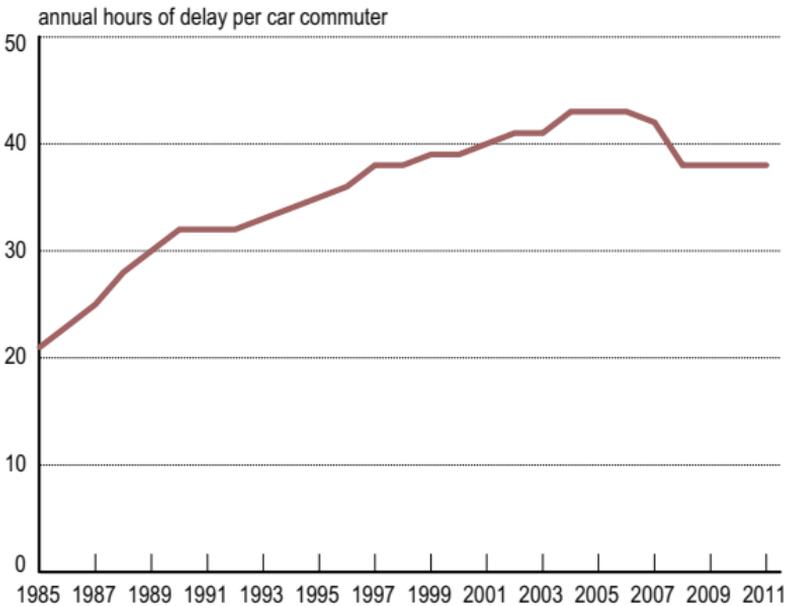
**Notes:** Air gateways include a low level (generally less than 3% of the total value) of freight shipped through small user-fee airports located in the same area as the gateways listed. Air gateways not identified by airport name (e.g., Chicago, IL) include major airport(s) in the area and small regional airports.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-51, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 4 PERFORMANCE

The physical capacity of the U.S. transportation system has not kept pace with growth in travel and commerce. The resulting congestion and delays have significant impacts on passengers and freight shippers.

### 4-1 Road Congestion: 1985–2011



**Source:** Texas A&M Transportation Institute, *2012 Urban Mobility Report*, available at [mobility.tamu.edu](http://mobility.tamu.edu) as of October 2013.

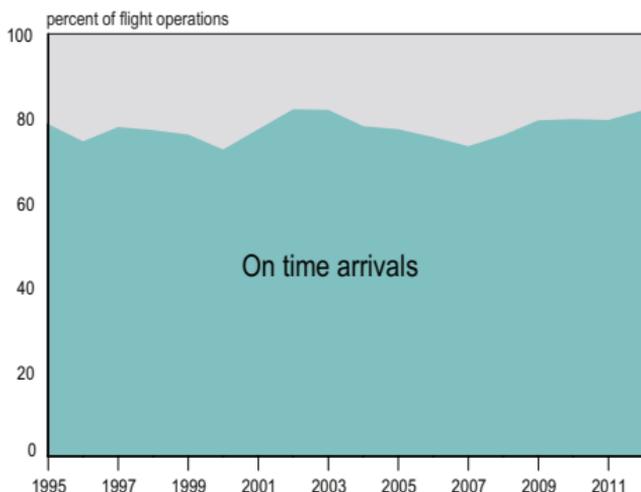
## 4-2 Top 10 Urban Area Congestion Rankings: 2011 by hours of delay per car commuter

Rank	Urban area	Annual hours of delay per car commuter
1	Washington, DC-VA-MD	67
2	Los Angeles, CA	61
2	San Francisco, CA	61
4	New York, NY-NJ	59
5	Boston, MA-NH-RI	53
6	Houston, TX	52
7	Atlanta, GA	51
7	Chicago, IL-IN	51
9	Philadelphia, PA-NJ-DE-MD	48
9	Seattle, WA	48
	<b>Average of 498 urban areas</b>	<b>38</b>

**Note:** The 2012 *Urban Mobility Report* includes 498 urban areas.

**Source:** Texas A&M Transportation Institute, 2012 *Urban Mobility Report*, available at [mobility.tamu.edu](http://mobility.tamu.edu) as of October 2013.

## 4-3 U.S. Airport On-Time Performance: 1995–2012

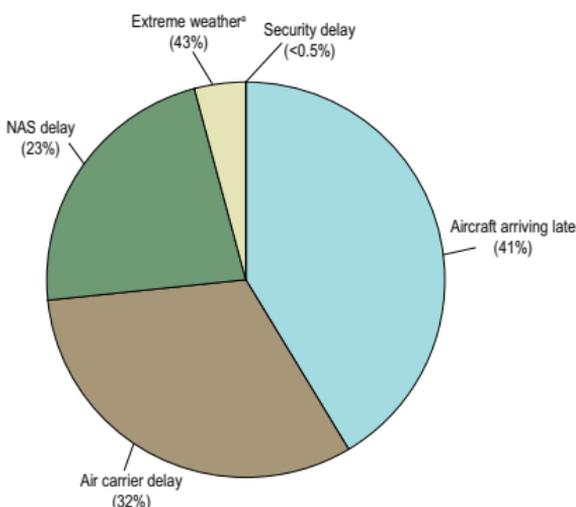


**Note:** Flights arriving at the gate within 15 minutes of scheduled arrival time are on time.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 4-4 U.S. Airport Delays by Cause: 2012

percent of delayed time



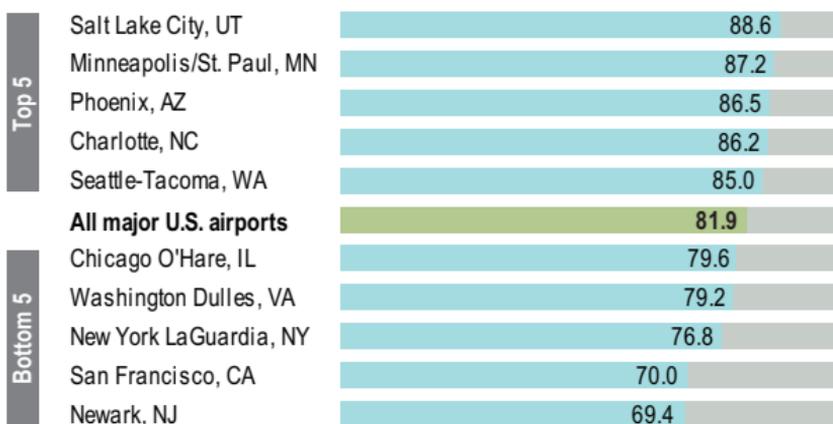
<sup>a</sup>Includes weather events that prevent flying. Other weather delays that slow operations are included under other categories.

**Key:** NAS = Delays attributable to the national aviation system (NAS) that refer to a broad set of conditions, such as non-extreme weather, airport operations, heavy traffic volume, and air traffic control.

**Note:** Percents do not add to 100 due to rounding.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

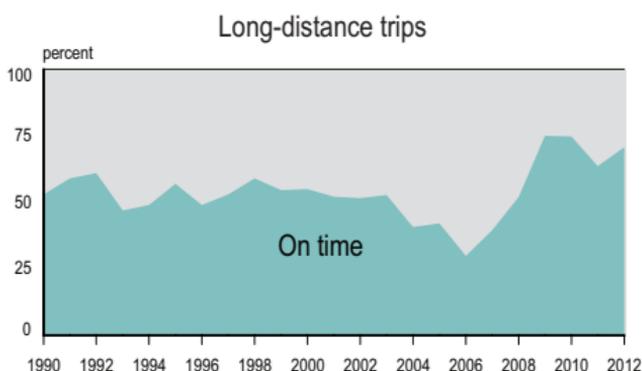
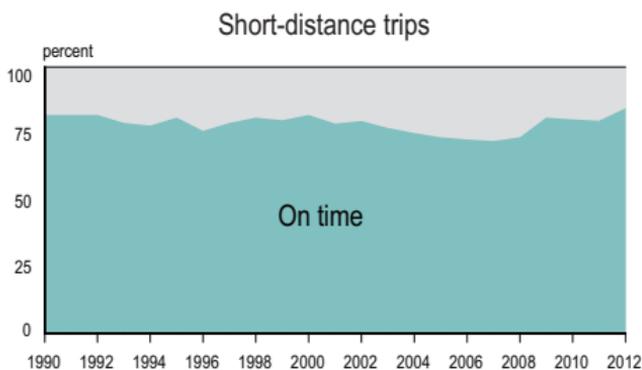
## 4-5 U.S. Major Airport Performance Rankings: 2012 by percent of on-time arrivals



**Note:** Flights arriving at the gate within 15 minutes of scheduled arrival time are on time.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Office of Airline Information, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 4-6 Amtrak On-Time Performance: FY1990–FY2012 percent of train arrivals



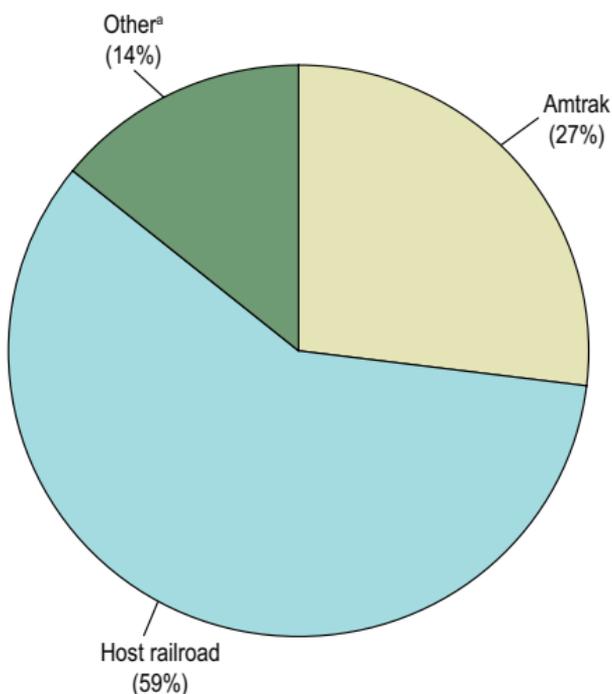
### Amtrak train on-time definition

Trip length	Train arrives at endpoint within
0–250 miles	10 minutes
251–350 miles	15 minutes
351–450 miles	20 minutes
451–550 miles	25 minutes
>551 miles	30 minutes

**Notes:** Short-distance trips are less than 400 miles. Long-distance trips are greater than 400 miles. Host railroads include freight or commuter rail track over which Amtrak operates. Trip length is based on the total distance traveled by that train from origin to destination.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 4-7 Amtrak Delays by Cause: FY2012 percent of delayed time



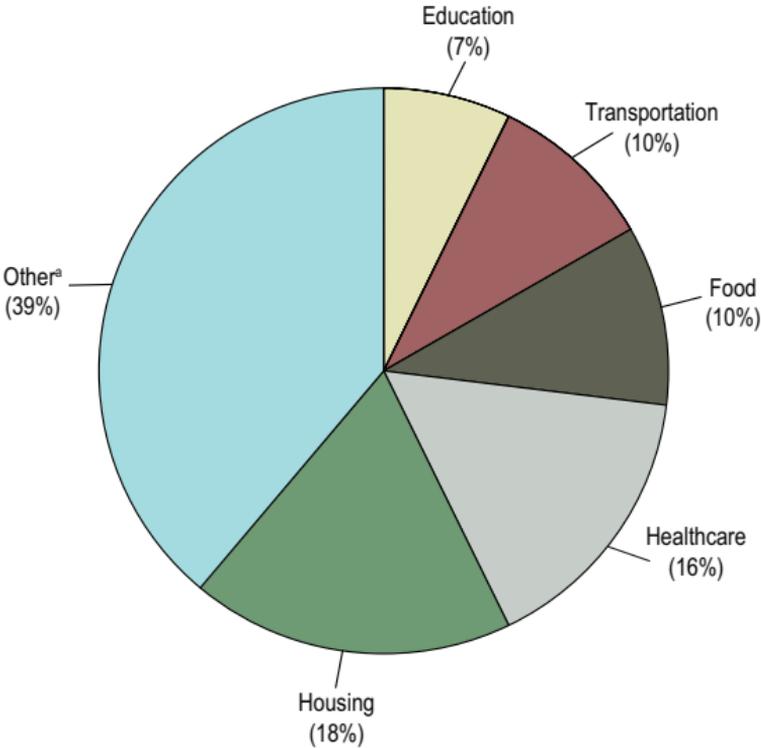
<sup>a</sup>Delays not attributable to Amtrak or other host railroads, such as customs and immigration, law enforcement action, weather, or waiting for scheduled departure time.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

# 5 ECONOMY

Transportation is a major sector of the U.S. economy. The transportation system moves people and goods, employs millions of workers, generates revenue, and consumes resources and services provided by other sectors.

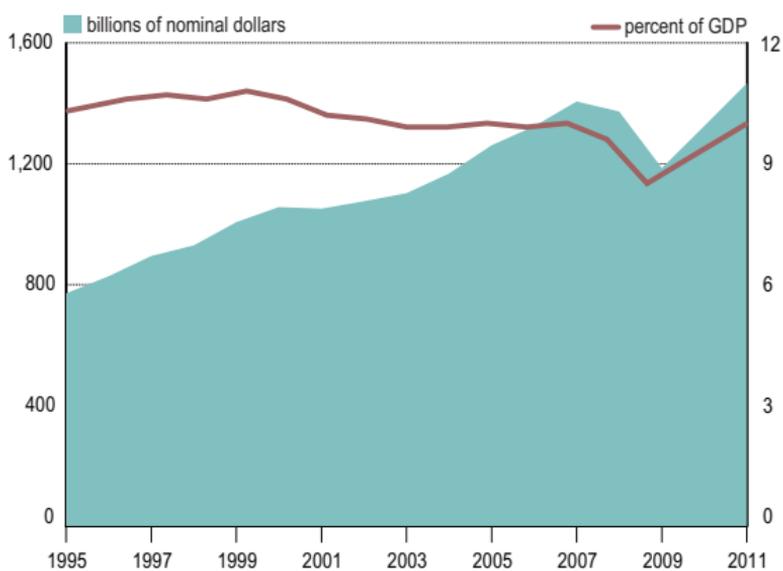
## 5-1 U.S. GDP by Spending Category: 2011 percent of GDP



<sup>a</sup>Includes all other categories (e.g., entertainment, personal care products and services, and payments to pension plans).

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 5-2 U.S. Transportation Spending: 1995–2011



**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 5-3 Transportation-Related Final Demand

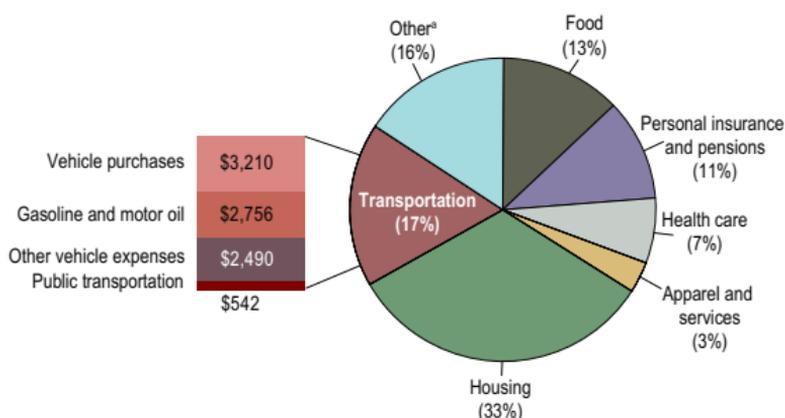
billions of chained 2005 dollars

Category	2001	2011
<b>Personal consumption of transportation</b>	<b>922</b>	<b>854</b>
Motor vehicles and parts	374	347
Motor vehicle fuels, lubricants, and fluids	264	257
Transportation services	284	249
<b>Gross private domestic investment</b>	<b>177</b>	<b>165</b>
Transportation structures	8	9
Transportation equipment	170	157
<b>Government transportation-related purchases</b>	<b>234</b>	<b>226</b>
Federal purchases	25	34
State and local purchases	198	173
Defense-related purchases	12	19
<b>Exports ( + )</b>	<b>196</b>	<b>251</b>
<b>Imports ( - )</b>	<b>-305</b>	<b>-334</b>
<b>Total transportation-related final demand</b>	<b><u>1,224</u></b>	<b><u>1,163</u></b>
<b>U.S. GDP</b>	<b>11,338</b>	<b>13,299</b>

**Notes:** Details may not add to totals due to rounding. Transportation-related final demand measures the size of transportation functions in relation to the GDP. It includes the transportation portion of the four components of the GDP: personal consumption, gross private domestic investment, government purchases, and net exports of goods and services.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-4, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

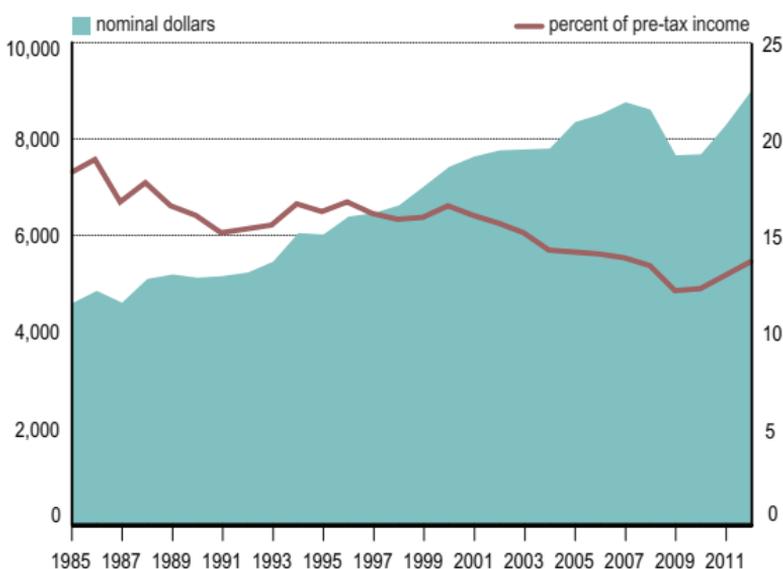
## 5-4 Household Expenses by Category: 2012 percent of average annual household expenses



<sup>a</sup> Includes alcoholic beverages, cash contributions, education, entertainment, personal care products and services, reading, tobacco products and smoking supplies, and other items.

**Source:** U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey*, available at [www.bls.gov/cex](http://www.bls.gov/cex) as of October 2013.

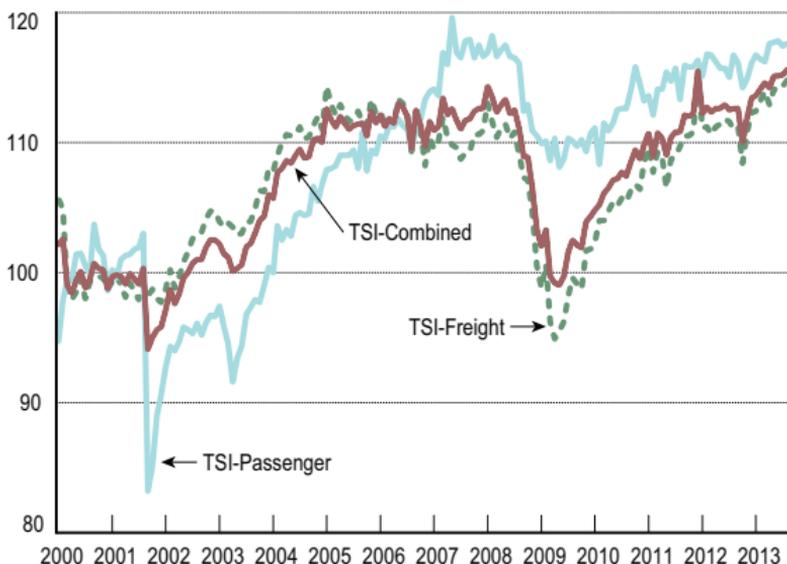
## 5-5 Household Transportation Expenses: 1985–2012



**Source:** U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey*, available at [www.bls.gov/cex](http://www.bls.gov/cex) as of October 2013.

## 5-6 Transportation Services Index: Jan. 2000–Aug. 2013

chain-type index: 2000 = 100, seasonally adjusted



**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 5-7 Employment in Transportation-Related Industries

thousands

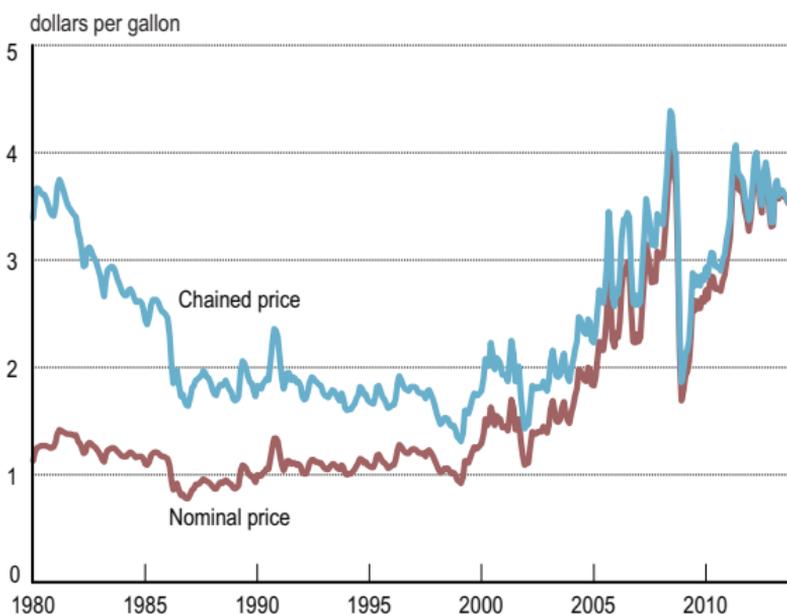
Category	2001	2011
<b>For-hire transportation and warehousing</b>	<b>4,372</b>	<b>4,302</b>
Air	615	457
Rail	227	228
Water	54	61
Truck	1,387	1,301
Transit and ground passenger	375	440
Pipeline	45	43
Scenic and sightseeing	29	28
Support activities	539	562
Couriers and messengers	587	529
Warehousing and storage	514	653
<b>Transportation-related manufacturing<sup>a</sup></b>	<b>2,321</b>	<b>1,685</b>
<b>Other transportation-related industries</b>	<b>5,295</b>	<b>4,795</b>
<b>Postal service</b>	<b>873</b>	<b>631</b>
<b>Government employment<sup>b</sup></b>	<b><u>890</u></b>	<b><u>892</u></b>
<b>Total transportation-related labor force</b>	<b>13,752</b>	<b>12,305</b>
<b>U.S. labor force</b>	<b>131,919</b>	<b>131,497</b>

<sup>a</sup>Includes transportation equipment; petroleum products; tires; rubber; plastics; search, detection, navigation, guidance, aeronautical, and nautical systems; and instrument manufacturing. <sup>b</sup>Fiscal year data for federal, state, and local personnel.

**Notes:** Annual averages based on NAICS data. Details may not add to totals due to rounding.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-23, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 5-8 Motor Vehicle Gas Prices: Jan. 1980–Sept. 2013 dollars per gallon



**Notes:** Prices are average monthly prices of regular grade motor vehicle gasoline. Chained prices are in October 2013 dollars.

**Source:** U.S. Department of Energy, Energy Information Administration, *Short-Term Energy Outlook*, available at [www.eia.doe.gov](http://www.eia.doe.gov) as of October 2013.

## 6 SAFETY

Transportation safety is the top priority of the U.S. Department of Transportation. Although progress has been made in reducing fatalities, over 30 percent of deaths due to unintentional injury involve transportation.

### 6-1 Transportation Fatalities by Mode

Mode	2001	2011
<b>Air</b>	<b>1,166</b>	<b>485</b>
U.S. air carrier	531	0
Commuter carrier	13	0
On-demand air taxi	60	41
General aviation	562	444
<b>Highway</b>	<b>42,196</b>	<b>32,367</b>
Passenger car occupants	20,320	11,981
Motorcyclists	3,197	4,612
Light truck occupants	11,723	9,272
Heavy truck occupants	708	635
Bus occupants	34	54
Pedestrians	4,901	4,432
Pedalcyclists	732	677
Other	581	704
<b>Pipeline</b>	<b>7</b>	<b>14</b>
Hazardous liquid	0	1
Gas	7	13
<b>Rail<sup>a</sup></b>	<b>656</b>	<b>557</b>
<b>Transit<sup>b</sup></b>	<b>80</b>	<b>106</b>
<b>Water</b>	<b>828</b>	<b>820</b>
Commercial vessel	147	62
Recreational boating	<u>681</u>	<u>758</u>
<b>Total</b>	<b>44,933</b>	<b>34,349</b>
<b>Other counts<sup>c</sup></b>		
Highway-rail grade crossings	421	250
Commuter rail	87	97
Heavy rail	59	81
Light rail	21	25
Transit bus	95	64

<sup>a</sup>Excludes fatalities involving motor vehicles at public highway-rail grade crossings, which are assumed to be counted under *Highway* categories. <sup>b</sup>Includes automated guideway, heavy rail, and light rail fatalities. Other transit fatalities are assumed to be counted under *Highway* or *Rail* categories. <sup>c</sup>Other counts are included in modal categories above.

**Note:** Details may not add to totals due to rounding

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 6-2 Transportation Injuries by Mode

Mode	2001	2011
<b>Air</b>	<b>368</b>	<b>362</b>
U.S. air carrier	19	20
Commuter carrier	4	0
On-demand air taxi	24	15
General aviation	321	327
<b>Highway</b>	<b>3,032,672</b>	<b>2,217,000</b>
Passenger car occupants	1,926,625	1,240,000
Motorcyclists	60,236	81,000
Light truck occupants	860,527	728,000
Heavy truck occupants	29,424	23,000
Bus occupants	15,427	13,000
Pedestrians	77,619	69,000
Pedalcyclists	45,277	48,000
Other	17,536	15,000
<b>Pipeline</b>	<b>61</b>	<b>57</b>
Hazardous liquid	10	2
Gas	51	55
<b>Rail<sup>a</sup></b>	<b>9,990</b>	<b>7,550</b>
<b>Transit<sup>b,c</sup></b>	<b>11,878</b>	<b>5,436</b>
<b>Water</b>	<b>5,008</b>	<b>3,840</b>
Commercial vessel	734	759
Recreational boating	4,274	3,081
<b>Total</b>	<b>3,059,977</b>	<b>2,234,245</b>
<b>Other counts<sup>d</sup></b>		
Highway-rail grade crossings	1,157	1,039
Commuter rail	1,813	1,811
Heavy rail <sup>c</sup>	10,641	4,731
Light rail <sup>c</sup>	1,201	601
Transit bus <sup>c</sup>	38,840	12,585

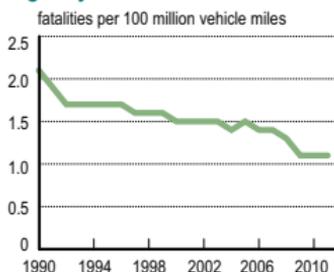
<sup>a</sup>Excludes injuries involving motor vehicles at public highway-rail grade crossings, which are assumed to be counted under *Highway* categories. <sup>b</sup>Includes automated guideway, heavy rail, and light rail injuries. Other transit injuries are assumed to be counted under *Highway* or *Rail* categories. <sup>c</sup>Data for 2001 and 2011 are not comparable due to changes in methodology. <sup>d</sup>Other counts are included in modal categories above.

**Note:** Details may not add to totals due to rounding

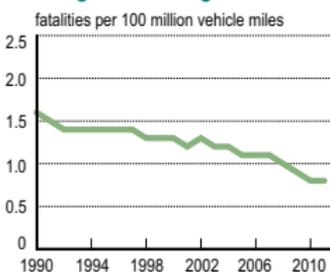
**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-2, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 6-3 Fatality Rates by Mode: 1990–2011

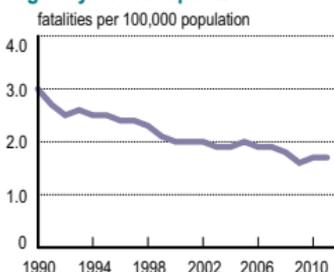
### Highway



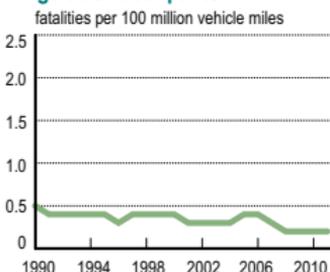
### Passenger car and light truck occupants



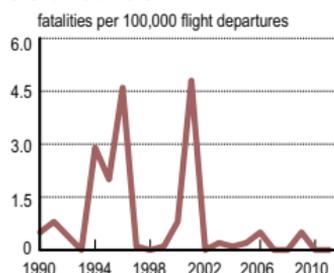
### Highway nonoccupants



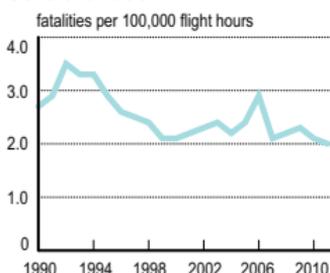
### Large truck occupants



### U.S. air carriers



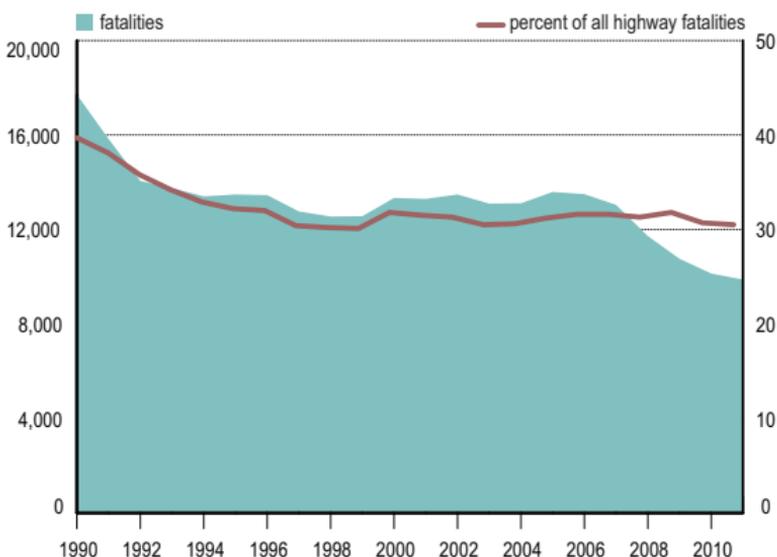
### General aviation



**Notes:** Graphs with same color trend lines have identical scales. Air carrier fatalities resulting from the Sept. 11, 2001, terrorist acts include only onboard fatalities.

**Sources:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 2-9, 2-14, 2-17, 2-19, 2-21, and 2-23, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

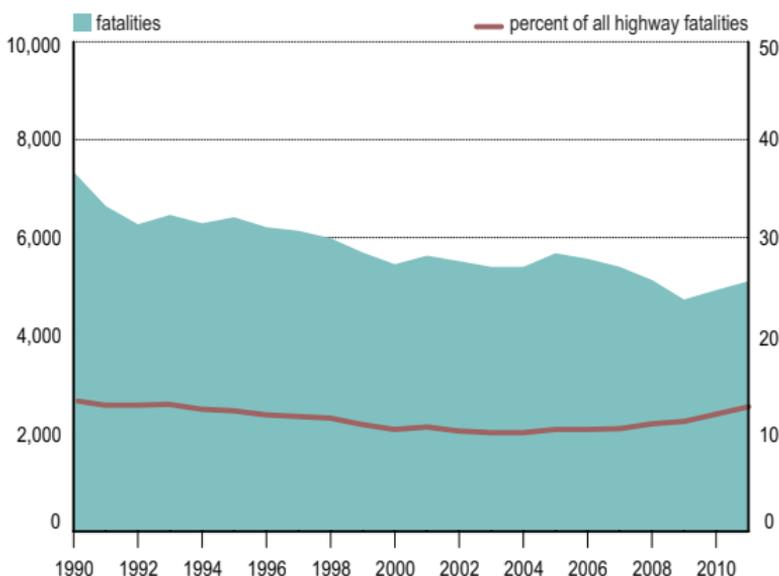
## 6-4 Alcohol-Impaired Driving Fatalities: 1990–2011



**Notes:** Includes fatalities occurring in any crash involving a driver with a blood alcohol concentration (BAC) of 0.08 grams per deciliter or higher.

**Source:** U.S. Department of Transportation, National Highway Traffic Safety Administration, available at [www.nhtsa.gov](http://www.nhtsa.gov) as of October 2013.

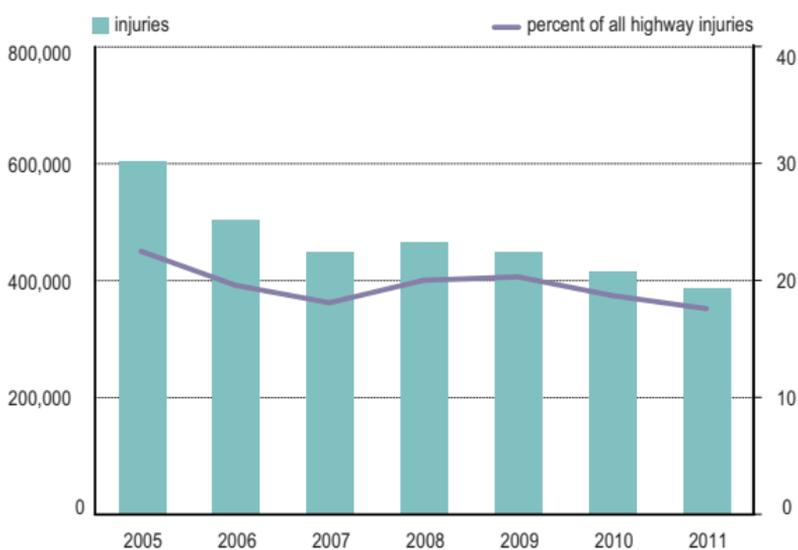
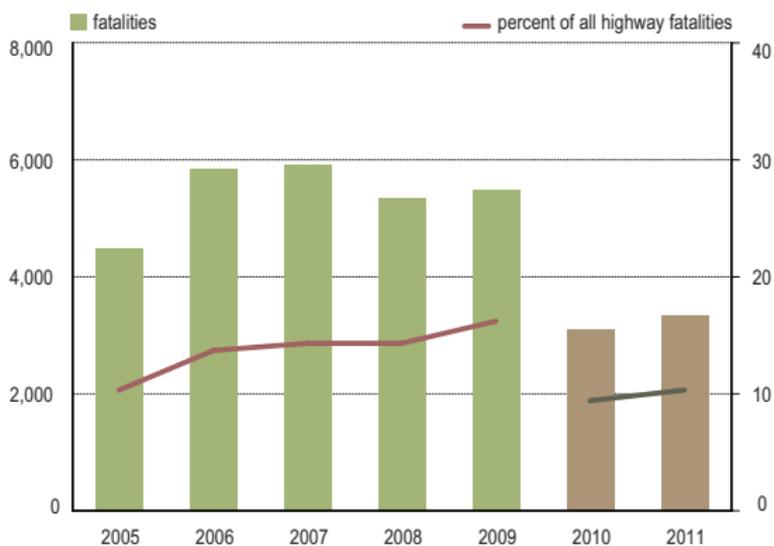
## 6-5 Pedestrian and Bicyclist Fatalities: 1990–2011



**Notes:** Includes pedestrians and riders of nonmotorized bicycles and other pedal-powered vehicles.

**Source:** U.S. Department of Transportation, National Highway Traffic Safety Administration, available at [www.nhtsa.gov](http://www.nhtsa.gov) as of October 2013.

## 6-6 Distracted Driving Fatalities and Injuries: 2005–2011



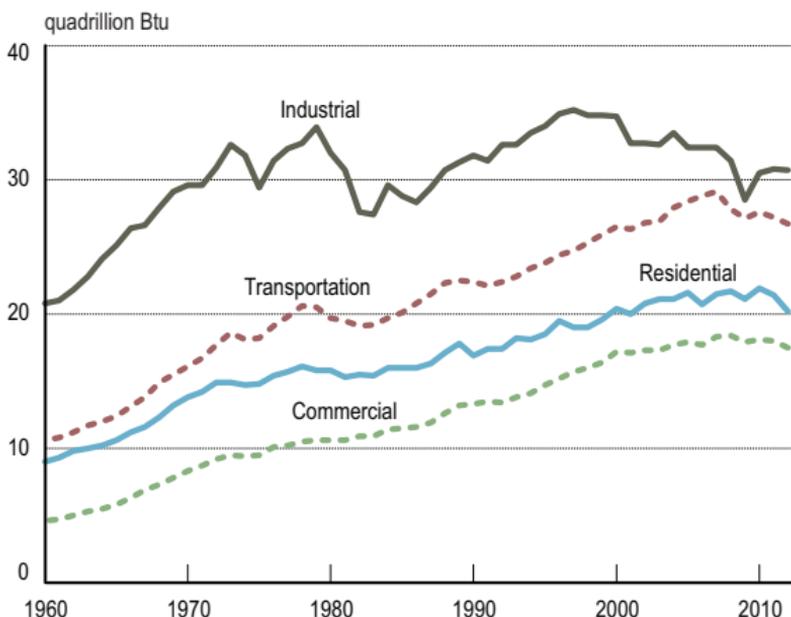
**Note:** Distracted driving fatality data for 2010 and 2011 are not comparable to data for earlier years due to changes in methodology.

**Source:** U.S. Department of Transportation, National Highway Traffic Safety Administration, available at [www.nhtsa.gov](http://www.nhtsa.gov) as of September 2013.

## 7 ENVIRONMENT

The U.S. transportation system is a major consumer of energy and generates significant environmental impacts.

### 7-1 Energy Consumption by Sector: 1960–2012



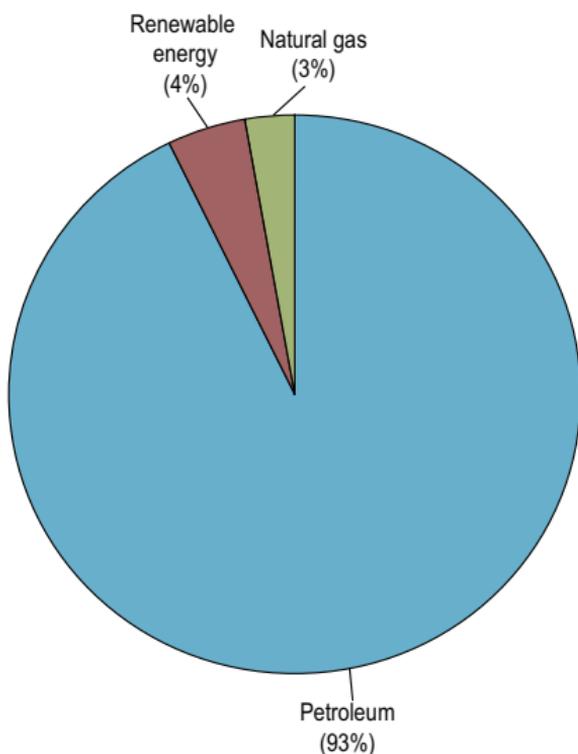
**Key:** Btu = British thermal unit.

**Note:** Includes primary energy consumption, electricity retail sales, and electrical system energy losses.

**Source:** U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly) as of September 2013.

## 7-2 Transportation Energy Consumption by Source: 2012

Percent of Btu

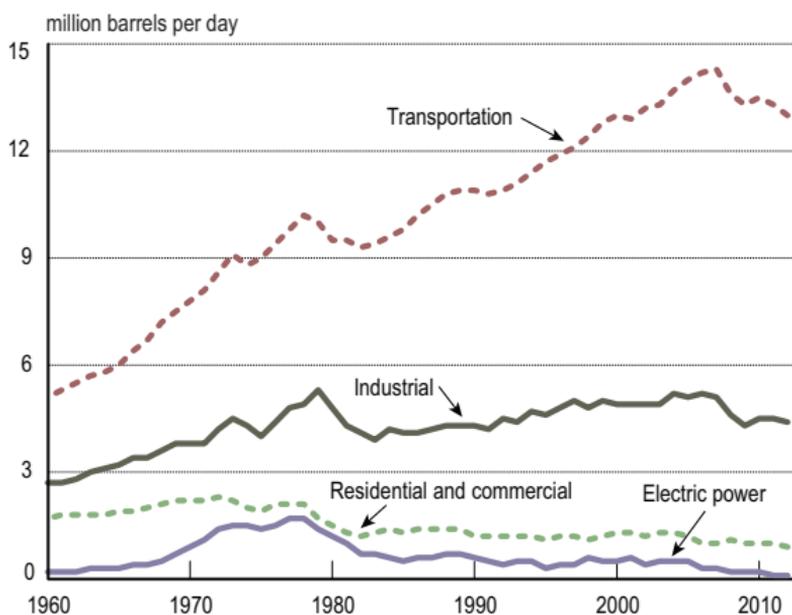


**Key:** Btu = British thermal unit.

**Note:** Excludes electricity retail sales and electrical system energy losses.

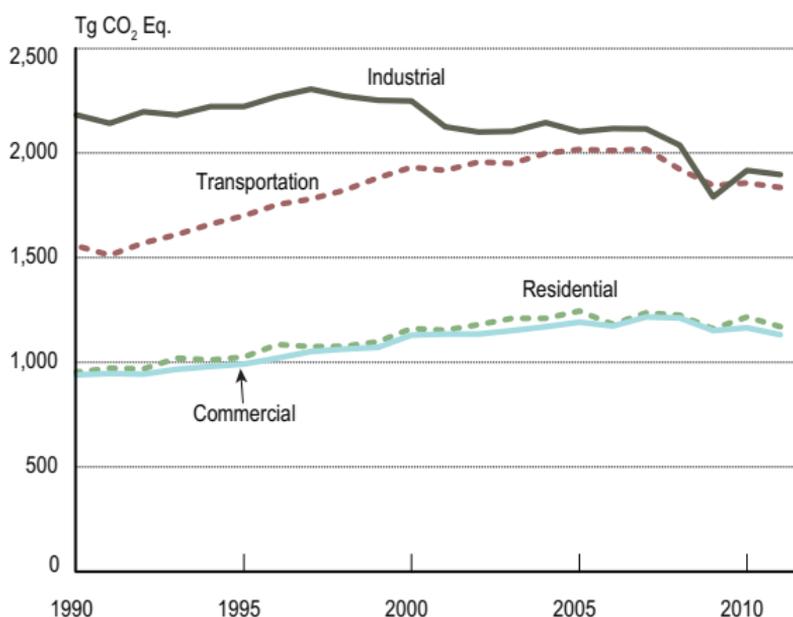
**Source:** U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly) as of September 2013.

## 7-3 Petroleum Consumption by Sector: 1960–2012



**Source:** U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly) as of September 2013.

## 7-4 Greenhouse Gas Emissions by Sector: 1990–2011

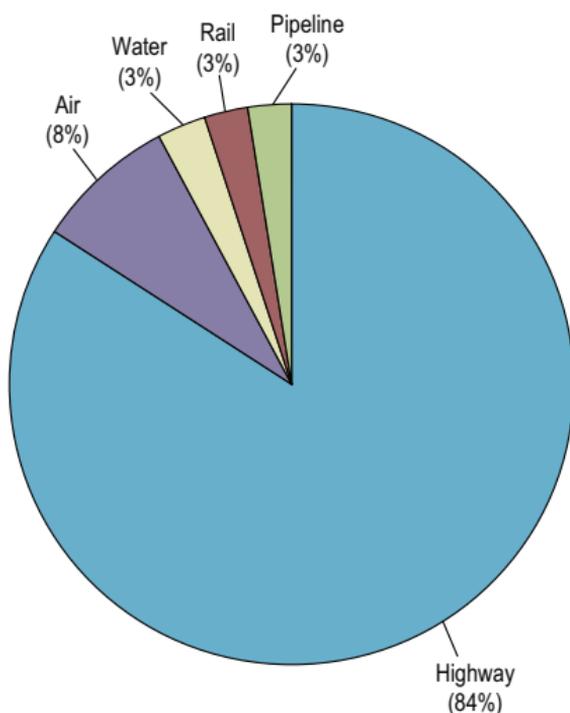


**Key:** Tg CO<sub>2</sub> Eq. = teragrams of carbon dioxide equivalent. A teragram = 1 million metric tons.

**Note:** Electric power sector emissions are distributed across sectors. Emissions include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>.

**Source:** U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011*, available at [www.epa.gov/climatechange/ghgemissions/usinventoryreport.html](http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html) as of August 2013.

## 7-5 Transportation GHG Emissions by Mode: 2011 Percent of Tg CO<sub>2</sub> Eq.



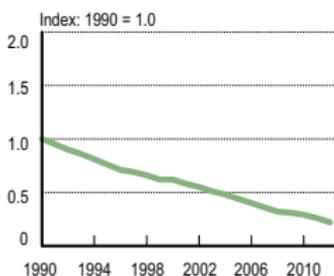
**Key:** GHG = greenhouse gas. Tg CO<sub>2</sub> Eq. = teragrams of carbon dioxide equivalent. A teragram = 1 million metric tons.

**Note:** Percents do not add to 100 due to rounding.

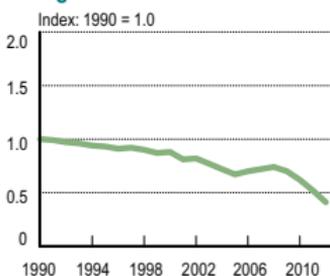
**Source:** U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011*, available at [www.epa.gov/climatechange/ghgemissions/usinventoryreport.html](http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html) as of August 2013.

## 7-6 Highway Vehicle Air Pollutant Emissions: 1990–2012

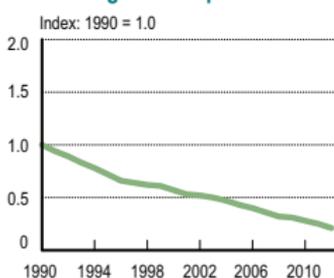
### Carbon monoxide



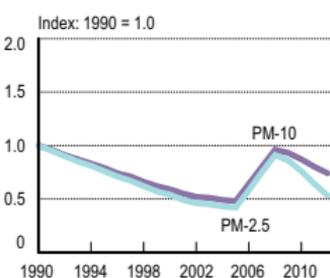
### Nitrogen oxide



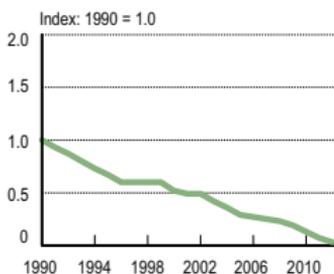
### Volatile organic compounds



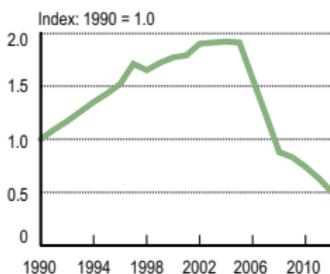
### Particulate matter



### Sulfur dioxide



### Ammonia

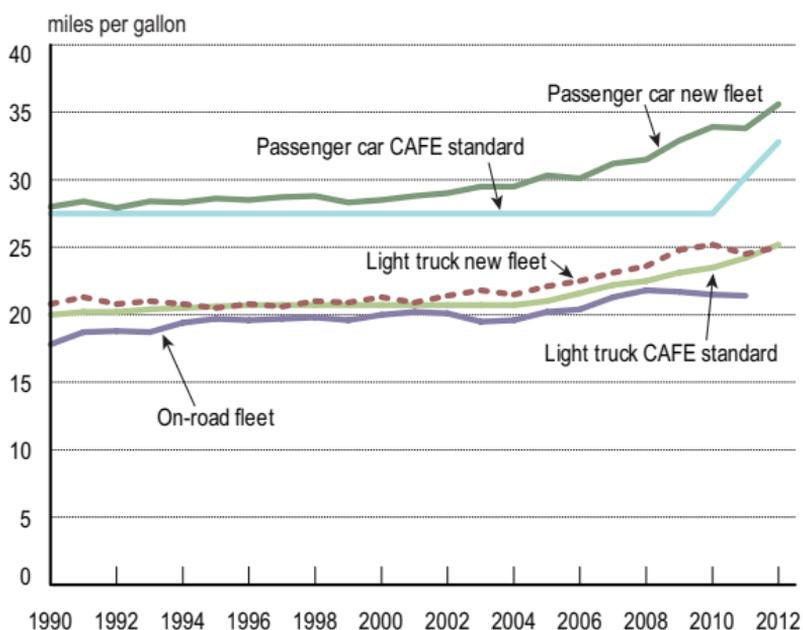


**Key:** PM-10 = airborne particulates of less than 10 microns; PM-2.5 = airborne particulates of less than 2.5 microns.

**Notes:** Data for 2008 and later years may not be comparable to prior years due to changes in methodology. Indices are calculated using data on highway vehicle emissions only. Particulate matters include PM without condensibles.

**Sources:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 4-45 through 4-50, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 7-7 Fuel Economy of Light Duty Vehicles: 1990–2012

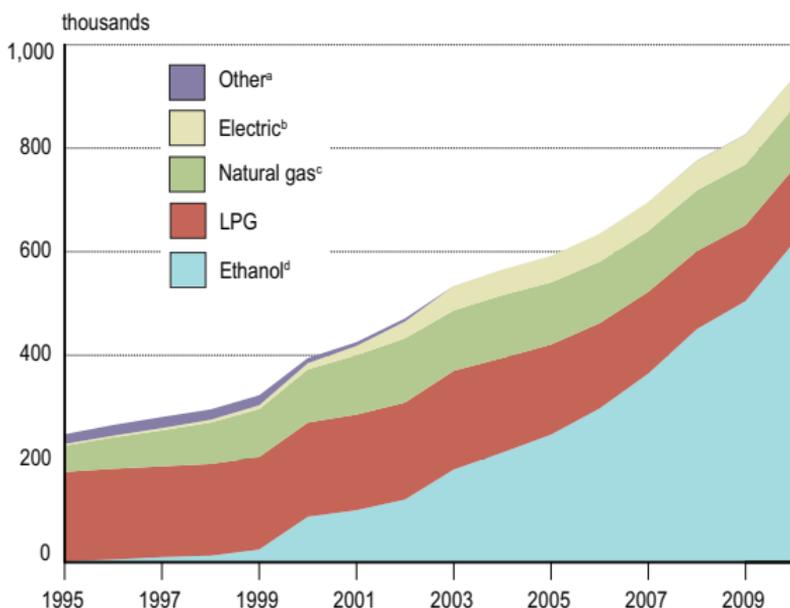


**Key:** CAFE = Corporate Average Fuel Economy.

**Notes:** New fleet data and CAFE standards are for vehicle model years. On-road fleet data include passenger cars and light trucks and are estimated using average miles traveled per gallon of fuel consumed for each calendar year.

**Source:** U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-23, available at [www.bts.gov](http://www.bts.gov) as of October 2013.

## 7-8 Alternative Fuel Vehicles in Use: 1995–2010



<sup>a</sup>Includes 85% methanol (M85), neat methanol (M100), and hydrogen fuels.

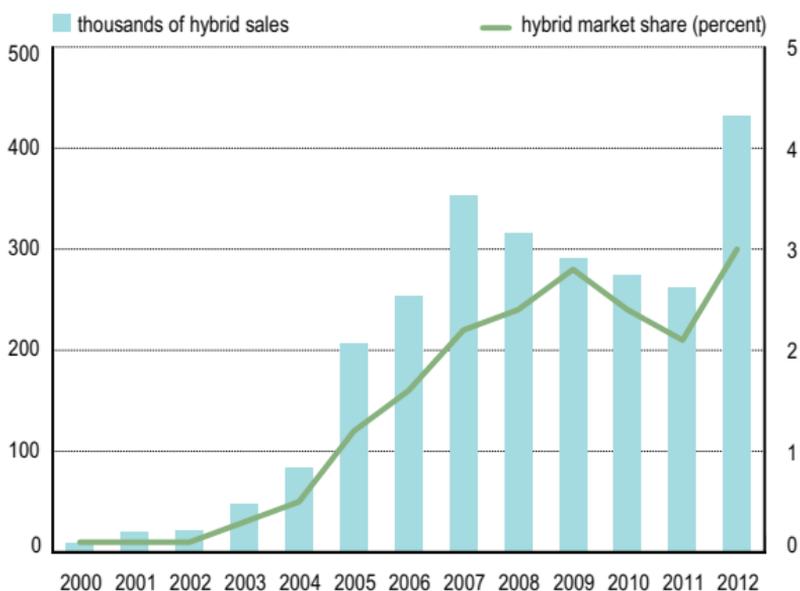
<sup>b</sup>Excludes gasoline-electric hybrids. <sup>c</sup>Includes compressed natural gas (CNG) and liquefied natural gas (LNG). <sup>d</sup>Includes 85% ethanol (E85) and 95% ethanol (E95). E85 includes only fleet-based vehicles and excludes vehicles with E85

fueling capability that are owned by individuals.

**Key:** LPG = liquefied petroleum gas.

**Source:** U.S. Department of Energy, Energy Information Administration, available at [www.afdc.energy.gov/data](http://www.afdc.energy.gov/data) as of September 2013.

## 7-9 Hybrid Vehicle Sales: 2000–2012



**Source:** Ward's Automotive Group, [www.wardsauto.com](http://www.wardsauto.com), personal communication as of January 2013.

## GLOSSARY

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

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

**Class I 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.

**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.

**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.

**Enplanements:** Total number of revenue passengers boarding aircraft.

**For-hire:** Refers to a vehicle operated on behalf of or by a company that provides services to external customers for a fee. It is distinguished from private transportation services in which a firm transports its own freight and does not offer its transportation services to other shippers.

**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.

**Hybrid vehicle:** Hybrid electric vehicles combine features of internal combustion engines and electric motors. Unlike 100% electric vehicles, hybrid vehicles do not need to be plugged into an external source of electricity to be recharged. Most hybrid vehicles operate on gasoline.

**International Roughness Index (IRI):** A scale for roughness based on the simulated response of a generic motor vehicle to the roughness in a single wheel path of the road surface.

**Lane miles:** One mile of one lane of road.

**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 duty vehicle:** Passenger cars, light trucks, vans, pickup trucks, and sport/utility vehicles regardless of wheelbase.

**Nominal dollars:** A market value that does not take inflation into account and reflects prices and quantities that were current at the time the measure was taken.

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

**Oceangoing vessels:** Includes U.S. flag, privately owned merchant fleet of oceangoing, self-propelled, cargo-carrying vessels of 1,000 gross tons or greater.

**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.

**Personal communication:** Involves contacting the source for data if not publicly available.

**Reliever airports:** Airports designated by the Federal Aviation Administration to relieve congestion at commercial service airports and to provide improved general aviation access to the overall community.

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

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

**Structurally deficient:** Characterized by deterioration of significant structural elements and reduced load-carrying capacity.

**Tg CO<sub>2</sub> Eq.:** Teragrams of carbon dioxide equivalent, a metric measure used to compare the emissions from various greenhouse gases based on their global warming potential.

**Ton mile:** A unit of measure equal to movement of one ton over one mile.

**Transportation Services Index (TSI):** A monthly measure indicating the relative change in the volume of services over time performed by the for-hire transportation sector. Change is shown relative to a base year, which is given a value of 100. The TSI covers the activities of for-hire freight carriers, for-hire passenger carriers, and a combination of the two. See [www.rita.dot.gov](http://www.rita.dot.gov) for a detailed explanation.

**Unlinked passenger trips:** The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

**Vehicle mile:** One vehicle traveling one mile.

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

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**INFRASTRUCTURE**

**MOVING PEOPLE**

**MOVING GOODS**

**PERFORMANCE**

**ECONOMY**

**SAFETY**

**ENVIRONMENT**

**GLOSSARY**



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