

2018

# Pocket Guide to Transportation



Download the new and improved mobile app



U.S. Department of Transportation  
Bureau of Transportation Statistics

Text **USDOT BTSPG** to  
**468311** to download the  
*Pocket Guide to Transportation*  
app



or search:  
**BTS Pocket Guide**



U.S. Department of Transportation  
Bureau of Transportation Statistics

For additional copies of this guide or information about the Bureau of Transportation Statistics and its products and services, contact:

**Product Orders**

Internet: <http://www.bts.gov>

Mail:           Product Orders  
                  Bureau of Transportation Statistics  
                  ATTN: Product Orders  
                  1200 New Jersey Avenue, SE, Room  
                  E34-457  
                  Washington, DC 20590

**Information Service**

Phone:   202-366-DATA  
Email:   answers@dot.gov

January 2018

2018

# Pocket Guide to Transportation

Download the new and improved mobile app



U.S. Department of Transportation  
**Bureau of Transportation Statistics**

# ACKNOWLEDGMENTS

## **U.S. Department of Transportation**

Elaine L. Chao  
*Secretary*

Jeffrey A. Rosen  
*Deputy Secretary*

## **Bureau of Transportation Statistics**

Patricia Hu  
*Director*

Rolf Schmitt  
*Deputy Director*

## **Produced under the direction of:**

Michael J. Sprung  
*Director, Office of  
Transportation Analysis*

Sonya Smith-Pickel  
*Project Manager*

William Moore  
*Editor*

Alpha Wingfield  
*Visual Information  
Specialist*

## **Major Contributors:**

Long Nguyen

## **Contributors:**

Femi Adebayo

Steve Beningo

Matthew Chambers

Bernetta Crutcher

Chester Ford

Sean Jahanmir

Mindy Liu

Jordan Riddle

Demi Riley (Spatial Front)

Jessie Zhou (Spatial Front)

# ABOUT THE *POCKET GUIDE TO TRANSPORTATION*

The *BTS Pocket Guide to Transportation* is a quick reference guide that provides transportation statistics at your fingertips. It provides key information and highlights major trends on the U.S. transportation system.

This year features a new and improved Pocket Guide mobile app that includes improved navigation and dynamic data updates to highlight the most recent up-to-date statistics. Download on the App Store and on Google Play.

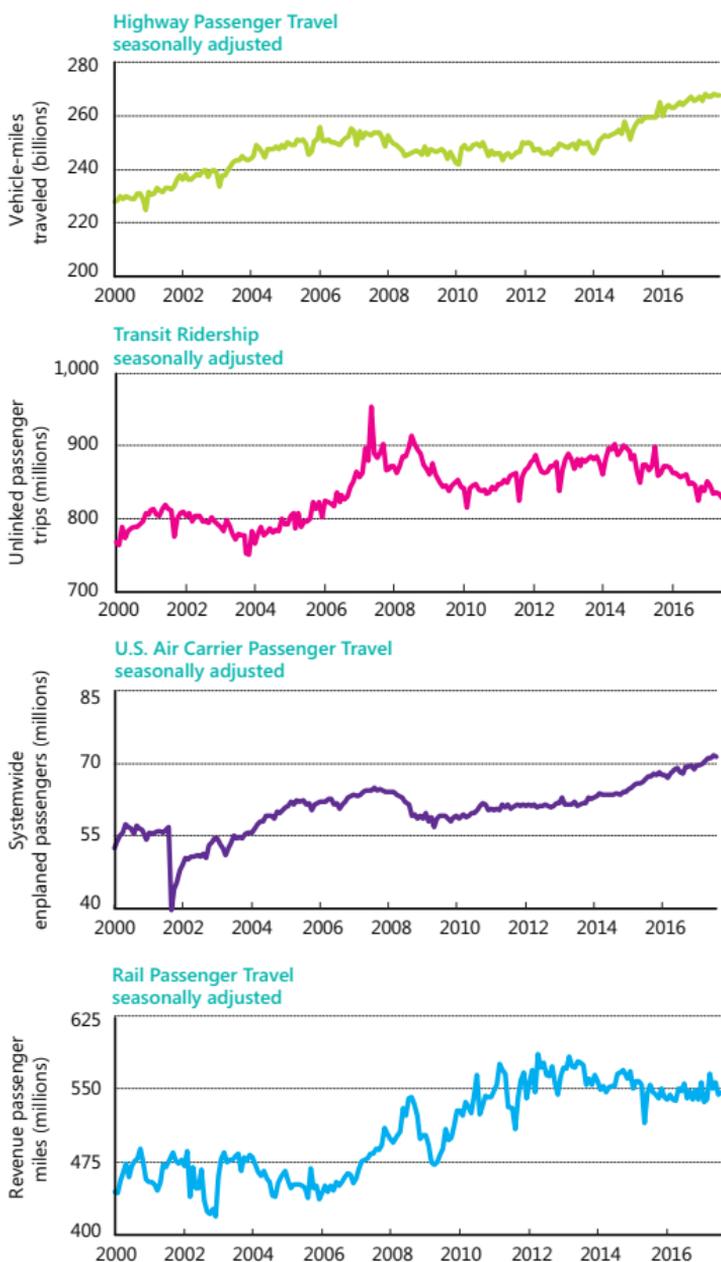
BTS welcomes comments and suggestions for improving this product.

## CONTENTS

Major Trends.....	iv
Infrastructure .....	1
Moving People.....	7
Moving Goods.....	19
Safety.....	27
Performance .....	33
Economy .....	39
Environment .....	47
Glossary .....	57

## Major Trends

### Moving People: January 2000–August 2017

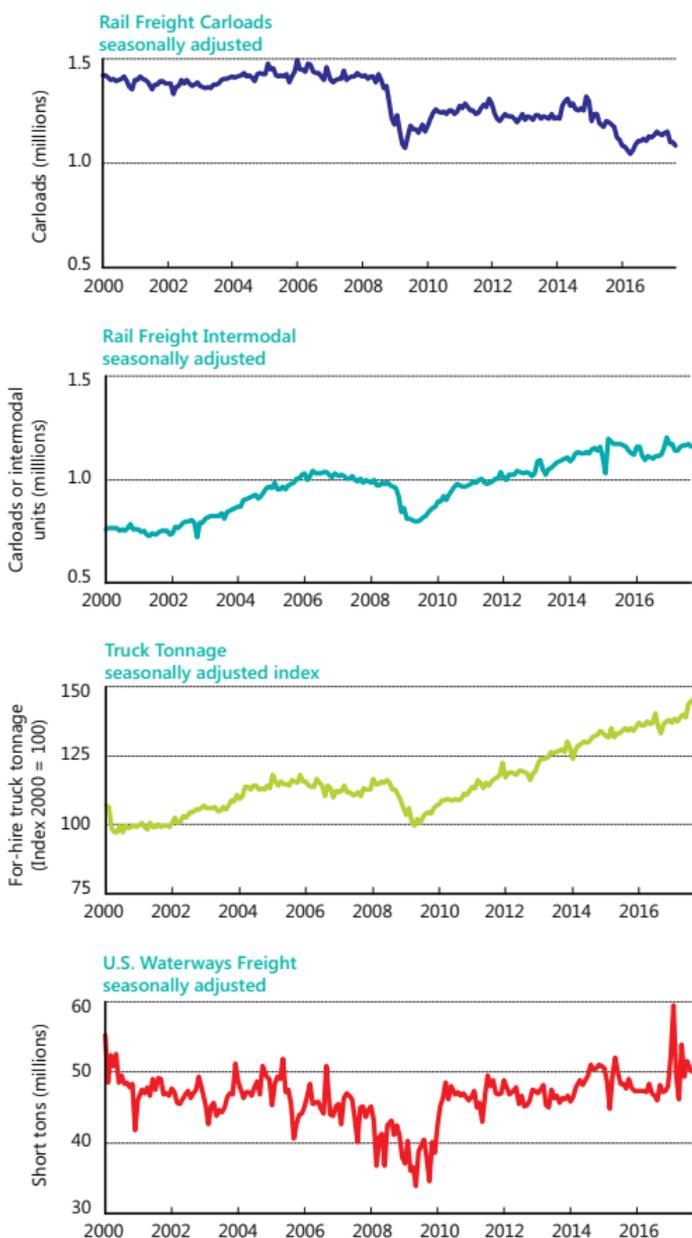


**Notes:** Graph scales are not comparable. Seasonally adjusted data measure the real differences in data trends by adjusting for seasonal factors, such as the change in the number of days, weekends, holidays, or other seasonal activity in a month such as vacation travel.

**Source:** **Seasonally adjusted transportation data**—U.S. Department of Transportation, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## Major Trends

Moving Freight: January 2000–September 2017



**Notes:** Graph scales are not comparable. **Rail Freight Intermodal**—Rail intermodal traffic includes shipping containers and truck trailers moved on rail cars. **U.S. Waterways Freight**—Includes tonnage carried on internal U.S. waterways.

**Source:** **Seasonally adjusted transportation data**—U.S. Department of Transportation, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of November 2017.



# 1 INFRASTRUCTURE

The U.S. transportation system consists of a network of roads, bridges, airports, railroads, transit systems, ports, waterways, and pipelines, connecting the Nation to the rest of the world.

## 1-1 Transportation Network Length miles

Mode	2005	2015
<b>Highway</b>		
Public roads	3,995,635	4,154,727
Public road lanes <sup>a</sup>	8,371,718	8,736,587
<b>Pipeline</b>		
Gas distribution	1,962,351	2,190,494
Gas transmission and gathering	324,222	318,924
<b>Rail</b>		
Class I freight railroad	95,664	93,628
Amtrak	22,007	21,358
<b>Transit</b>		
Commuter rail <sup>b</sup>	7,118	7,697
Heavy rail <sup>b</sup>	1,622	1,643
Light rail <sup>b,c</sup>	1,188	1,893
<b>Water</b>		
Navigable waterways <sup>d</sup>	25,000	25,000

<sup>a</sup>Measured in lane-miles. <sup>b</sup>Measured in directional route-miles. <sup>c</sup>Light Rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail. <sup>d</sup>Estimated length of domestic waterways.

**Sources: Highway, Pipeline, Rail, Transit, Water**—As cited in U.S. Department of Transportation, 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 2016 as of September 2017.

## 1-2 Transportation Facilities

number

Mode	2005	2015
<b>Air</b>		
Certificated airports <sup>a</sup>	575	531 <sup>b</sup>
General aviation airports	19,279	19,005 <sup>b</sup>
<b>Highway</b>		
Bridges	595,362	611,845
<b>Pipeline</b>		
LNG facilities	U	155
<b>Rail</b>		
Amtrak stations	531	521
<b>Transit rail</b>		
Commuter rail stations	1,174	1,245
Heavy rail stations	1,042	1,130
Light rail stations <sup>c</sup>	730	828
<b>Water</b>		
Ports <sup>d</sup>	195	183
Cargo handling docks <sup>e</sup>	*	8,229
Lock chambers	257	239

<sup>a</sup>Certificated airports serve air carrier operations with aircrafts seating more than nine passengers. <sup>b</sup>Uses 2016 air facility data since 2015 was not available. <sup>c</sup>Light Rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail. <sup>d</sup>Ports handling over 250,000 short tons. <sup>e</sup>Data for 2005 and 2015 are not comparable due to changes in data coverage.

**Key:** \*2005 cargo handling docks number is omitted because it is not comparable to 2015 number due to a change in data collection methodology. LNG = liquified natural gas; U = Data are unavailable.

**Sources:** **Air, Highway, Rail**—As cited in U.S. Department of Transportation, 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 2017. **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 2017. **Transit**—U.S. Department of Transportation, National Transit Database, available at [www.ntdprogram.gov](http://www.ntdprogram.gov) as of October 2017. **Water**—U.S. Army Corps of Engineers, Navigation Data Center, Transportation Facts and Information, available at [www.navigationdatacenter.us](http://www.navigationdatacenter.us) as of October 2017.

## 1-3 Transportation Vehicles

number

Mode	2005	2015
<b>Air</b>		
Air carrier aircraft	7,686	6,876
General aviation aircraft	224,352	210,030
<b>Highway</b>		
Light-duty vehicle <sup>a</sup>	231,904,922	242,917,192
Truck	8,481,999	11,203,184
Motorcycle	5,767,934	8,600,936
<b>Rail</b>		
Class I freight locomotive	22,779	26,574
Class I freight car	474,839	330,996
Amtrak locomotive	258	423
Amtrak car	1,186	1,428
<b>Transit rail</b>		
Commuter rail <sup>b</sup>	6,290	7,151
Heavy rail <sup>b</sup>	11,110	10,737
Light rail <sup>b,c</sup>	1,645	2,478
<b>Water</b>		
Nonself-propelled vessel	31,296	31,043
Self-propelled vessel	8,976	8,951
Oceangoing vessel	231	170
Recreational boat	12,942,414	11,867,049

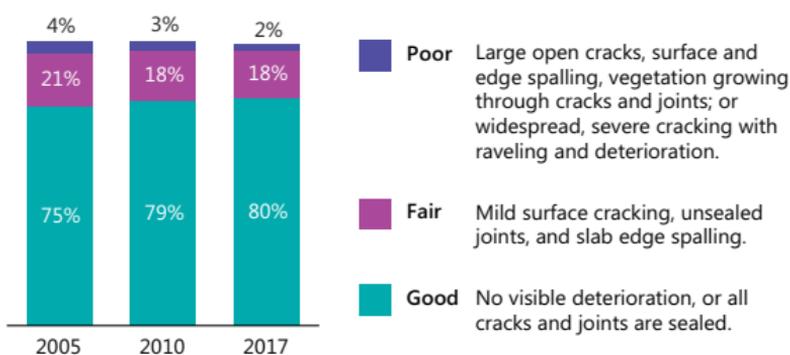
<sup>a</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles.

<sup>b</sup>Includes revenue vehicles available for maximum service. <sup>c</sup>Light Rail was revised beginning in 2011.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-11, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 1-4 Airport Runway Pavement Condition

percent of NPIAS runways

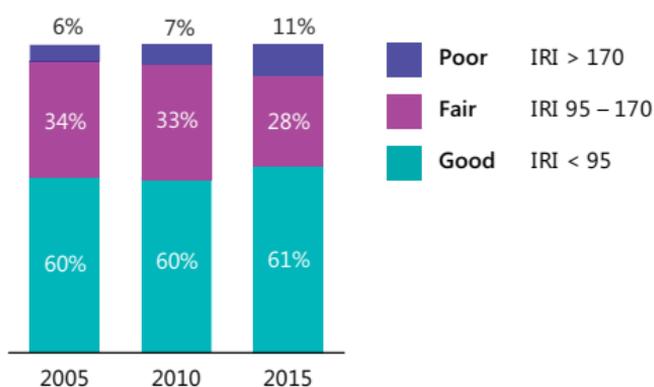


**Note:** National Plan of Integrated Airport Systems (NPIAS) airports include commercial service airports, reliever airports, and selected general aviation airports.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-25, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 1-5 National Highway System Pavement Condition

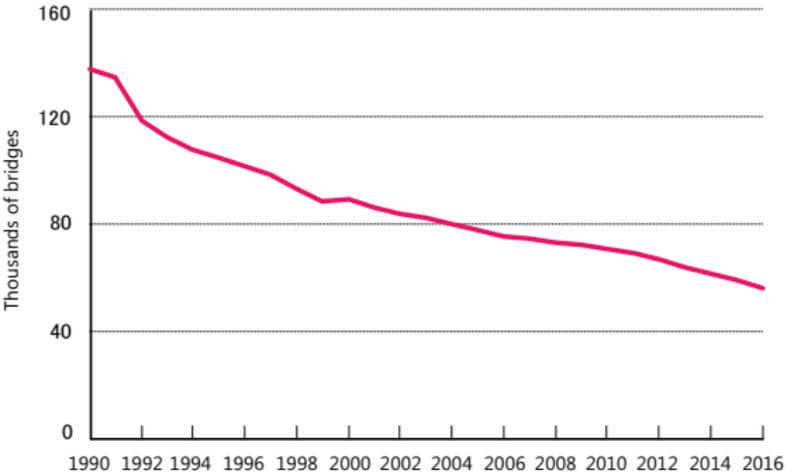
percent of NHS facility miles



**Note:** Pavement condition is measured by the International Roughness Index (IRI), which takes a longitudinal profile of pavement roughness based on one-way facility centerline miles. A lower IRI indicates smoother highway conditions and a higher IRI indicates rougher highway conditions.

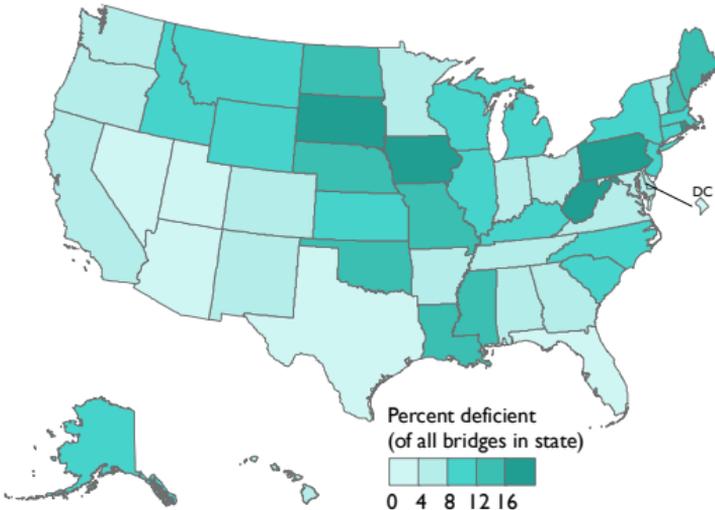
**Source:** U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, table HM-47, available at <https://www.fhwa.dot.gov/policyinformation/statistics.cfm> as of November 2017.

## 1-6 Structurally Deficient Bridges: 1990–2016



**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-28, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 1-7 Structurally Deficient Bridges by State: 2016



**Source:** U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at <http://www.fhwa.dot.gov/bridge/deficient.cfm> as of October 2017.



## 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

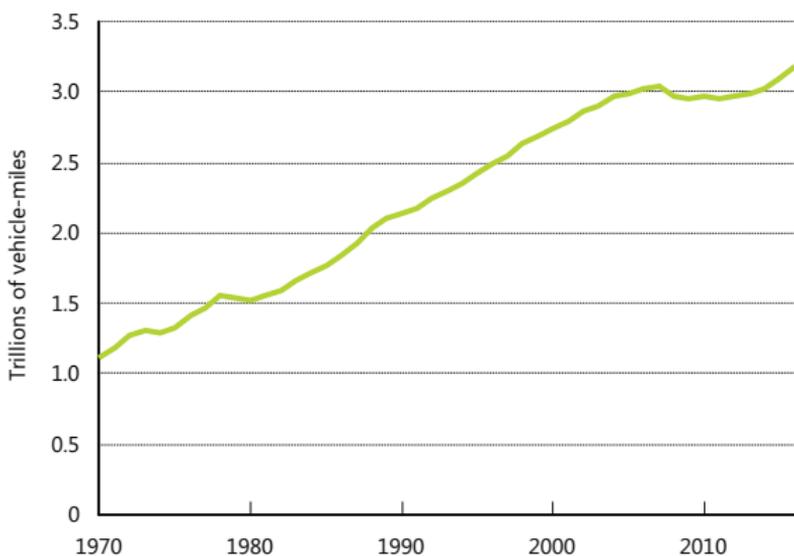
Mode	2008	2015
<b>Air</b>		
U.S. air carrier, domestic <sup>a</sup>	6,446	6,046
<b>Highway</b>		
Light-duty vehicle <sup>b</sup>	2,630,213	2,779,693
Motorcycle	20,811	19,606
Truck	310,680	279,844
Bus	14,823	16,230
<b>Passenger rail</b>		
Amtrak <sup>c</sup>	272	319
Commuter rail <sup>c</sup>	337	374
Heavy rail <sup>c</sup>	674	701
Light rail <sup>c,d</sup>	88	115

<sup>a</sup>Measured in revenue aircraft-miles. <sup>b</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles. <sup>c</sup>Measured in passenger car-miles.

<sup>d</sup>Light rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-35, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 2-2 Highway Travel: 1970–2016



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

**Source:** U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, available at <http://www.fhwa.dot.gov/policyinformation/statistics.cfm> as of November 2017.

## 2-3 Passenger-Miles Traveled

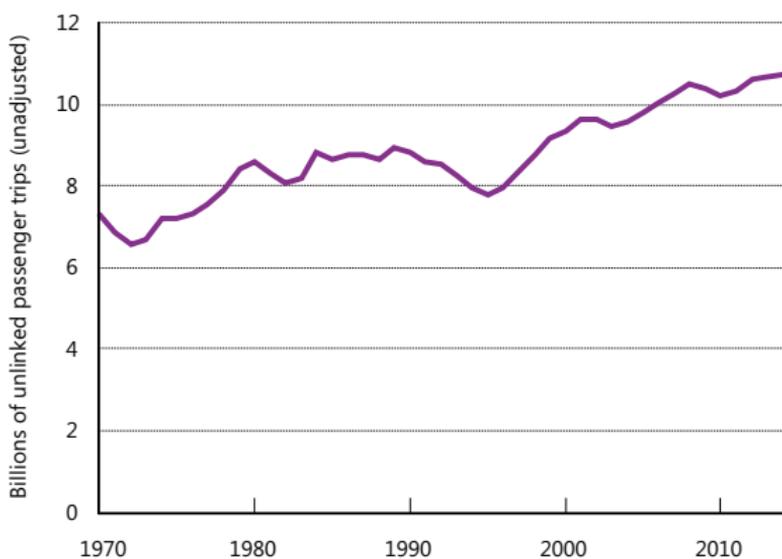
millions

Mode	2007	2015
<b>Air</b>		
U.S. air carrier, domestic	607,564	641,905
<b>Highway</b>		
Light-duty vehicle <sup>a</sup>	4,341,984	3,828,301
Motorcycle	27,173	21,118
Truck	304,178	279,844
Bus	307,753	344,073
<b>Passenger rail</b>		
Amtrak <sup>b</sup>	5,784	6,536
Commuter rail	11,137	11,759
Heavy rail	16,138	18,400
Light rail <sup>c</sup>	1,930	2,645

<sup>a</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles. <sup>b</sup>Measured in revenue passenger-miles. <sup>c</sup>Light rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-40, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 2-4 Transit Ridership: 1970–2014



**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*, Appendix, available at [www.apta.com](http://www.apta.com) as of October 2017.

## 2-5 Daily Passenger Travel

	1995	2001	2009
<b>Travel per person</b>			
Daily person trips	4.3	3.7	3.8
Daily person-miles	38.7	36.9	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

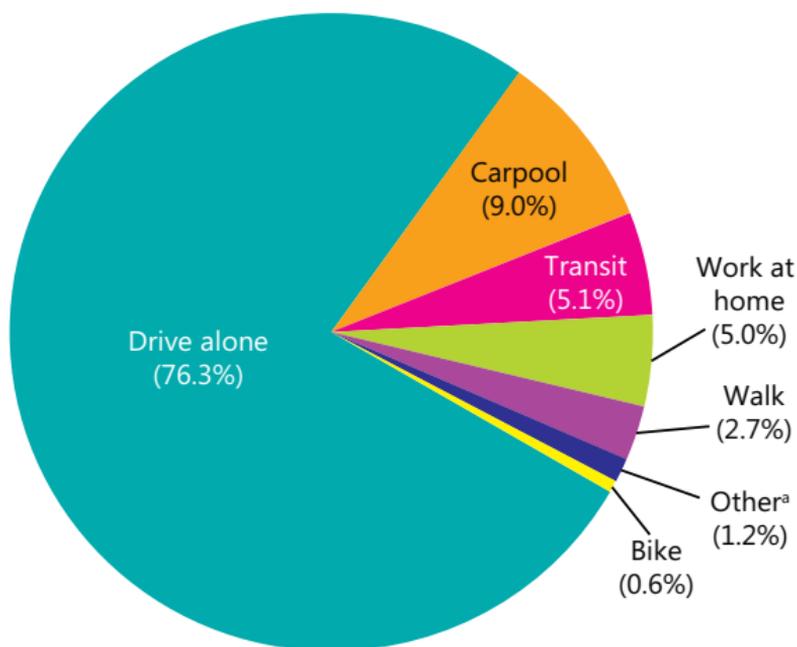
<sup>a</sup>Includes local transit bus, commuter bus, school bus, charter/tour bus, city-to-city bus. <sup>b</sup>Includes subway/elevated rail, street car/trolley, Amtrak/intercity train, and commuter train. <sup>c</sup>Includes ferry, hotel/airport shuttle, light electric vehicle, limousine, passenger 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](https://nhts.ornl.gov) as of October 2017.

## 2-6 Commute Mode Share: 2016

percent of workers age 16 and older

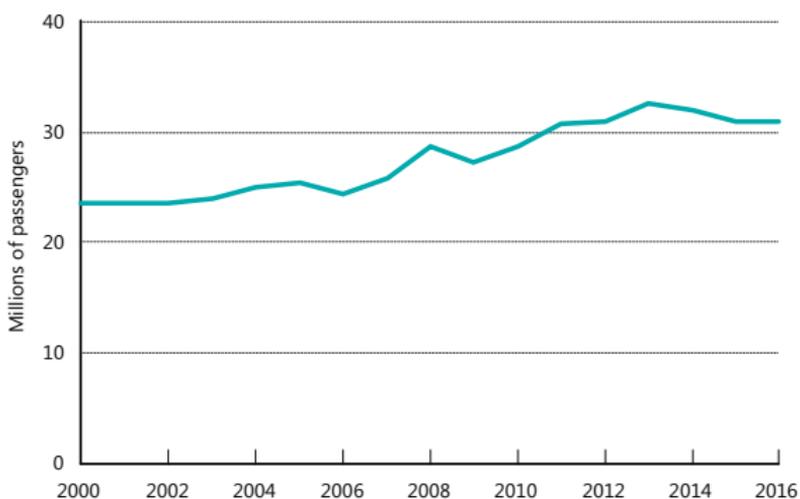


<sup>a</sup> Includes motorcycle, taxi, and other means.

**Notes:** Percents may not add to 100 due to rounding. 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:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-41, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 2-7 Amtrak Ridership: FY2000–FY2016



**Source:** U.S. Department of Transportation, Federal Railroad Administration, available at [safetydata.fra.dot.gov/OfficeofSafety](http://safetydata.fra.dot.gov/OfficeofSafety) as of October 2017.

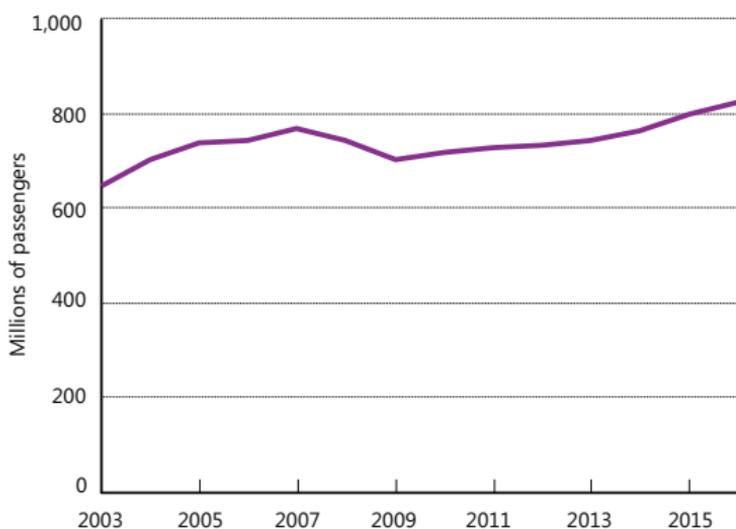
## 2-8 Top 10 Amtrak Stations: FY2016 by passengers

Rank	Station	FY '15–FY '16 change	Millions of passengers
1	New York Penn Station, NY	▲ 2.4%	10.4
2	Washington, DC	▲ 2.6%	5.1
3	Philadelphia 30th St., PA	▲ 4.6%	4.3
4	Chicago, IL	▼ -1.5%	3.2
5	Los Angeles, CA	▲ 2.9%	1.6
6	Boston South Station, MA	▲ 2.0%	1.6
7	Sacramento, CA	▲ 2.3%	1.1
8	Baltimore, MD	▲ 3.7%	1.0
9	Albany-Rensselaer, NY	▲ 3.6%	0.9
10	San Diego, CA	▲ 0.5%	0.8

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

**Source:** Amtrak, *National Fact Sheet and State Fact Sheet*, available at [www.amtrak.com](http://www.amtrak.com) as of October 2017.

## 2-9 U.S. Air Carrier Passenger Traffic: 2003–2016



**Note:** Includes passenger enplanements on scheduled services only (domestic and international flights).

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market data, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 2-10 Top 10 U.S. Airports: 2016 by enplaned passengers

Rank	Station	'15-'16 change	Millions of passengers
1	Atlanta, GA	▲ 2.4%	50.5
2	Los Angeles, CA	▲ 8.7%	39.6
3	Chicago O'Hare, IL	▲ 3.4%	37.5
4	Dallas/Fort Worth, TX	▼ -1.0%	31.3
5	New York JFK, NY	▲ 4.4%	29.1
6	Denver, CO	▲ 7.6%	28.2
7	San Francisco, CA	▲ 6.1%	25.7
8	Las Vegas, NV	▲ 4.5%	22.6
9	Seattle, WA	▲ 8.6%	21.8
10	Charlotte, NC	▼ -1.8%	21.5

**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, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market data, available at [transtats.bts.gov](http://transtats.bts.gov) as of December 2017.

## 2-11 Top 10 World Airports: 2016

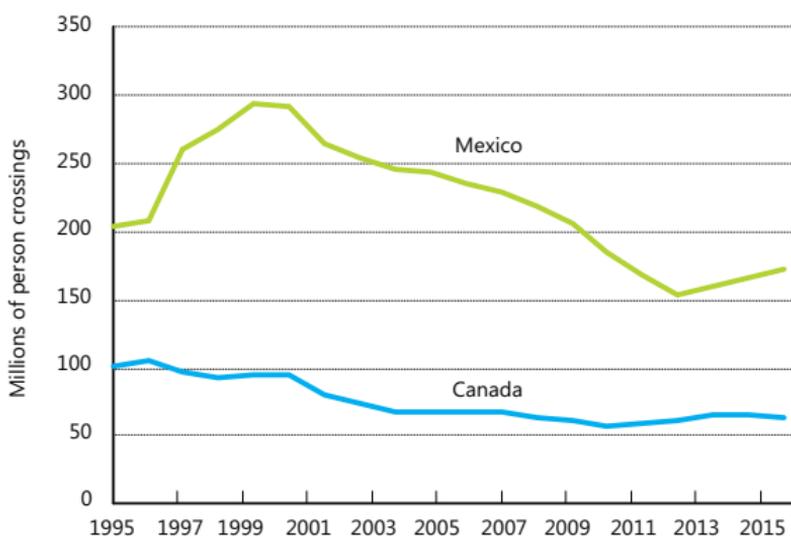
by enplaned, deplaned, and in-transit passengers

Rank	Airport	'15-'16 change	Millions of passengers
1	Atlanta, USA	▲ 2.6%	104.2
2	Beijing, China	▲ 5.0%	94.4
3	Dubai, United Arab Emirates	▲ 7.2%	83.7
4	Los Angeles, USA	▲ 8.0%	80.9
5	Tokyo Haneda, Japan	▲ 5.5%	79.7
6	Chicago O'Hare, USA	▲ 1.3%	78.0
7	London, United Kingdom	▲ 1.0%	75.7
8	Hong Kong, China	▲ 3.0%	70.3
9	Shanghai, China	▲ 9.8%	66.0
10	Paris, France	▲ 0.3%	65.9

**Note:** Preliminary data for passengers enplaned, deplaned, and passengers in transit.

**Source:** Airports Council International, available at [www.aci.aero](http://www.aci.aero) as of October 2017.

## 2-12 Incoming Land Border Person Crossings: 1995–2016



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

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, Border Crossing Entry Data, available at <https://data.transportation.gov/> as of October 2017.

## 2-13 Top 5 Land Ports of Entry: 2016

by incoming person crossings

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

Rank	Port	'15-'16 change	Millions of person crossings
1	San Ysidro, CA	▼ -4.5%	31.6
2	El Paso, TX	▲ 3.4%	28.0
3	Otay Mesa, CA	▲ 8.7%	17.1
4	Laredo, TX	▼ -0.9%	15.4
5	Hidalgo, TX	▲ 1.6%	12.3

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

Rank	Port	'15-'16 change	Millions of person crossings
1	Buffalo-Niagara Falls, NY	▼ -2.0%	11.1
2	Blaine, WA	▼ -5.7%	8.0
3	Detroit, MI	▼ -2.7%	7.0
4	Port Huron, MI	▼ -5.5%	3.1
5	Champlain-Rouses Pt., NY	▼ -1.4%	2.6

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

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, Border Crossing Entry Data, available at <https://data.transportation.gov/> as of October 2017.



## 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

Value of shipments (billions of chained 2012 dollars)

Mode	2012	2015	2045
Truck	12,222	13,066	24,506
Rail	718	793	1,789
Water	430	486	947
Air and truck-air	650	766	3,126
Pipeline	1,301	1,486	1,867
Multiple modes <sup>a</sup>	2,148	2,325	5,192
Other <sup>b</sup>	264	257	559
<b>Total</b>	<b>17,733</b>	<b>19,178</b>	<b>37,985</b>

Weight of shipments (millions of tons)

Mode	2012	2015	2045
Truck	10,759	11,466	17,248
Rail	1,838	1,802	2,557
Water	654	722	1,068
Air and truck-air	7	7	25
Pipeline	2,963	3,358	4,646
Multiple modes <sup>a</sup>	424	444	1,013
Other <sup>b</sup>	398	314	414
<b>Total</b>	<b>17,043</b>	<b>18,113</b>	<b>26,971</b>

Ton-miles of shipments (billions of ton-miles)

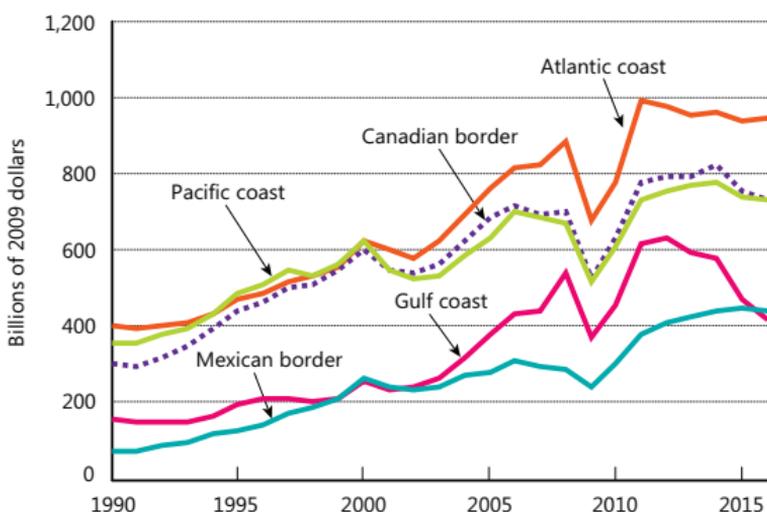
Mode	2012	2015	2045
Truck	1,919	2,048	3,580
Rail	1,491	1,436	1,999
Water	323	333	445
Air and truck-air	6	7	27
Pipeline	821	967	1,346
Multiple modes <sup>a</sup>	339	360	848
Other <sup>b</sup>	11	11	34
<b>Total</b>	<b>4,911</b>	<b>5,161</b>	<b>8,278</b>

<sup>a</sup>Includes mail. <sup>b</sup>Includes other, unknown, and imported crude oil with 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, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, Version 4.4, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

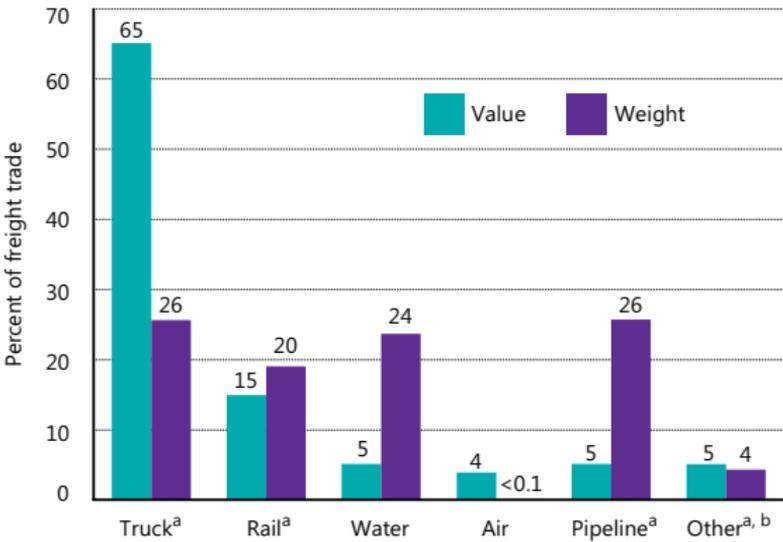
## 3-2 U.S. Trade by Coasts and Borders: 1990–2016



**Note:** Includes merchandise trade only.

**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 June 2017. **Implicit GDP Deflator**—U.S. Department of Commerce, Bureau of Economic Analysis, available at [www.bea.gov](http://www.bea.gov) as of June 2017.

### 3-3 U.S.-NAFTA Merchandise Freight Trade by Mode: 2016

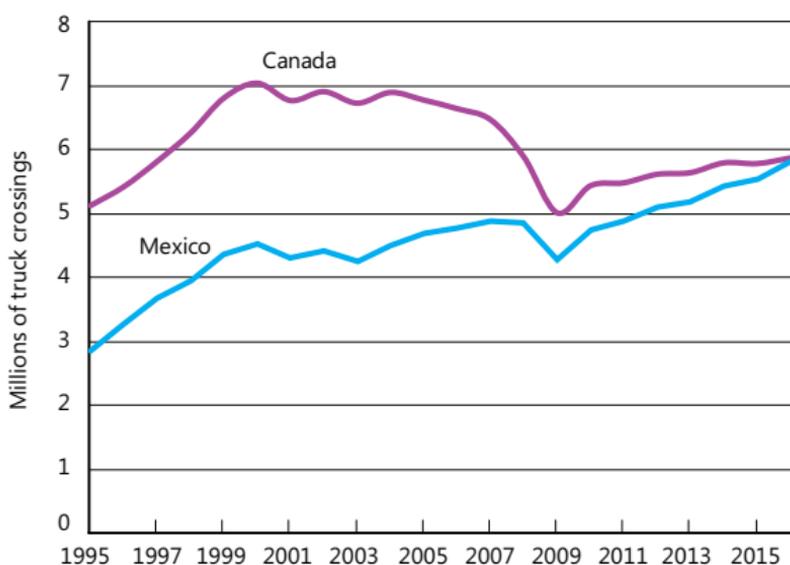


<sup>a</sup>Export weights for land modes are estimated by the Bureau of Transportation Statistics using value-to-weight ratios derived from import data. <sup>b</sup>Includes mail, other, unknown, and shipments through Foreign Trade Zones.

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

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation and North American Transborder Freight Data, available at [www.bts.gov](http://www.bts.gov) as of May 2017.

### 3-4 Incoming Truck Border Crossings: 1995–2016



**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, Border Crossing Entry Data, available at <https://data.transportation.gov/> as of October 2017.

## 3-5 Top 5 Truck Ports of Entry: 2016

by incoming truck crossings

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

Rank	Port	'15-'16 change	Millions of truck crossings
1	Detroit, MI	▲ 3.5%	1.6
2	Buffalo-Niagara Falls, NY	▲ 1.0%	1.0
3	Port Huron, MI	▲ 4.2%	0.8
4	Blaine, WA	▼ -3.5%	0.4
5	Champlain-Rouses Pt, NY	▼ -3.5%	0.3

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

Rank	Port	'15-'16 change	Millions of truck crossings
1	Laredo, TX	▲ 3.4%	2.1
2	Otay Mesa, CA	▲ 8.4%	0.9
3	El Paso, TX	▲ 2.2%	0.8
4	Hidalgo, TX	▲ 4.0%	0.6
5	Calexico East, CA	▲ 3.6%	0.3

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, Border Crossing Entry Data, available at <https://data.transportation.gov/> as of October 2017.

## 3-6 Top 10 U.S. Water Ports: 2016

by short tons

Rank	Port	'15-'16 change	Millions of short tons
1	South Louisiana	▲ 1.1%	261.9
2	Houston, TX	▲ 2.9%	248.0
3	New York/New Jersey	▲ 5.3%	133.4
4	New Orleans, LA	▲ 2.8%	90.3
5	Beaumont, TX	▼ -3.0%	84.5
6	Corpus Christi, TX	▼ -4.3%	82.0
7	Long Beach, CA	▼ -0.4%	77.8
8	Baton Rouge, LA	▲ 6.1%	73.0
9	Los Angeles, CA	▲ 4.0%	62.6
10	Mobile, AL	▼ -1.0%	58.0

## by container TEUs, excluding foreign empty TEUs

Rank	Port	'15-'16 change	Millions of TEUs
1	Los Angeles, CA	▲ 8.5%	6.0
2	Long Beach, CA	▼ -2.3%	5.1
3	New York/New Jersey	▼ -0.4%	4.6
4	Savannah, GA	▲ 2.3%	2.9
5	Port of Virginia, VA	▲ 6.0%	2.1
6	Oakland, CA	▲ 11.3%	1.8
7	Tacoma, WA	▲ 11.4%	1.8
8	Houston, TX	▲ 3.7%	1.8
9	Charleston, SC	▲ 4.0%	1.6
10	Seattle, WA	▲ 16.7%	1.3

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

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

**Sources: Short tons** - As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-57, available at [www.bts.gov](http://www.bts.gov) as of October 2017. **Containers** - U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, available at [www.navigationaldatacenter.us](http://www.navigationaldatacenter.us) as of November 2017.

### 3-7 Top 10 World Container Ports: 2015

by TEUs, including full and empty containers

Rank	Port	'14-'15 change	Millions of TEUs
1	Shanghai	▲ 3.4%	36.5
2	Singapore	▼ -9.5%	30.9
3	Shenzhen	▲ 1.4%	24.1
4	Ningbo	▲ 5.7%	20.6
5	Hong Kong	▼ -11.5%	20.1
6	Busan	▲ 5.4%	19.5
7	Quindao	▲ 4.0%	17.3
8	Guangzhou	▲ 5.5%	17.1
9	Dubai Ports	▲ 5.4%	15.6
10	Tianjin	▼ -1.2%	13.9
16	Los Angeles	▼ -2.2%	8.2
20	Long Beach	▲ 5.2%	7.2
24	New York/ New Jersey	▲ 9.4%	6.4

**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 2017.

## 3-8 Top 10 International Trade Gateways: 2015 by value of shipments

Rank	Port		'14-'15 change	Billions of dollars
1	New York/New Jersey, NY		▼ -1.9%	202.6
2	Los Angeles, CA		▼ -7.8%	198.4
3	Laredo, TX		▲ 2.7%	197.2
4	New York JFK Airport, NY		▼ -3.2%	185.5
5	Long Beach, CA		▼ -12.8%	154.2
6	Chicago, IL		▲ 5.6%	141.8
7	Houston, TX		▼ -18.4%	134.6
8	Detroit, MI		▼ -3.1%	128.9
9	Los Angeles Airport, CA		▲ 8.2%	99.9
10	Savannah, GA		▲ 8.4%	87.3

**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:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-51, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 4 SAFETY

Transportation safety is the top priority of the U.S. Department of Transportation.

### 4-1 Transportation Fatalities by Mode

Mode	2005	2015	2016
<b>Air</b>	<b>603</b>	<b>404</b>	<b>400</b>
U.S. air carrier	22	0	0
Commuter carrier	0	1	0
On-demand air taxi	18	27	28
General aviation	563	376	372
<b>Highway</b>	<b>43,510</b>	<b>35,485</b>	<b>37,461</b>
Passenger car occupants	18,512	12,761	13,412
Motorcyclists	4,576	5,029	5,286
Light-truck occupants	13,037	9,818	10,302
Heavy-truck occupants	804	665	722
Bus occupants	58	49	43
Pedestrians	4,892	5,495	5,987
Pedalcyclists	786	829	840
Other	845	839	869
<b>Pipeline</b>	<b>17</b>	<b>12</b>	<b>16</b>
<b>Rail</b>	<b>884</b>	<b>751</b>	<b>791</b>
Train Accidents	33	13	8
Highway-rail grade crossing <sup>a</sup>	359	235	266
Trespassers	458	452	482
Other	34	52	31
<b>Transit<sup>b</sup></b>	<b>149</b>	<b>254</b>	<b>256</b>
<b>Water</b>	<b>829</b>	<b>766</b>	<b>737</b>
Freight vessel and Industrial/Other	80	59	29
Passenger vessel and Recreational boating	749	707	708

<sup>a</sup> Individual modes don't add up to totals due to double counting in highway, rail, and transit grade crossings. <sup>b</sup> Includes transit employee, contract worker, passenger, revenue facility occupant, and other fatalities for all modes reported to the National Transit Database.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 4-2 Transportation Injuries by Mode

Mode	2005	2015	2016
<b>Air</b>	<b>305</b>	<b>284</b>	<b>U</b>
U.S. air carrier	14	23	U
Commuter carrier	0	4	U
On-demand air taxi	20	9	U
General aviation	271	248	U
<b>Highway</b>	<b>2,699,000</b>	<b>2,424,000</b>	<b>U</b>
Passenger car occupants	1,573,396	1,378,000	U
Motorcyclists	87,335	88,000	U
Light-truck occupants	872,137	803,000	U
Heavy-truck occupants	27,284	30,000	U
Bus occupants	11,133	U	U
Pedestrians	64,446	70,000	U
Pedalcyclists	45,439	45,000	U
Other	17,806	10,000	U
<b>Pipeline</b>	<b>46</b>	<b>49</b>	<b>86</b>
<b>Rail</b>	<b>9,550</b>	<b>9,130</b>	<b>8,407</b>
Train Accidents	787	563	386
Highway-rail grade crossing <sup>a</sup>	1,053	1,044	839
Trespassers	420	414	485
Other	7,290	7,109	6,697
<b>Transit<sup>b</sup></b>	<b>19,039</b>	<b>24,299</b>	<b>24,377</b>
<b>Water</b>	<b>4,125</b>	<b>3,165</b>	<b>U</b>
Freight vessel and Industrial/Other	473	239	U
Passenger vessel and Recreational boating	3,652	2,926	U

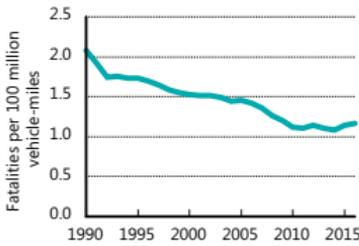
<sup>a</sup>Excludes injuries involving motor vehicles at public highway-rail grade crossings, which are assumed to be counted under Highway categories. <sup>b</sup>Includes transit employee, contract worker, passenger, revenue facility occupant, and other injuries for all modes reported to the National Transit Database. Other transit injuries are assumed to be counted under Highway or Rail categories.

**Key:** U = Data are unavailable.

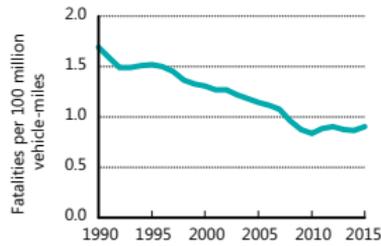
**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-2, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 4-3 Fatality Rates by Mode

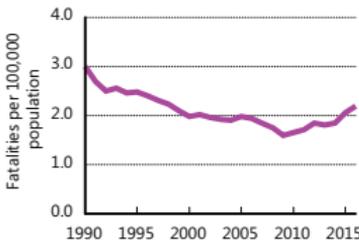
Highway: 1990–2016



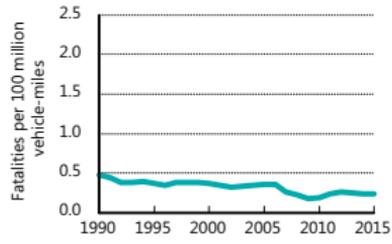
Passenger car and light-truck occupants: 1990–2016



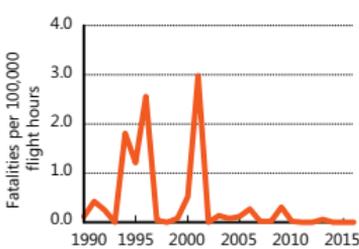
Highway nonoccupants: 1990–2016



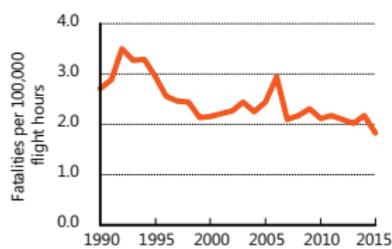
Large-truck occupants: 1990–2015



U.S. air carriers: 1990–2016



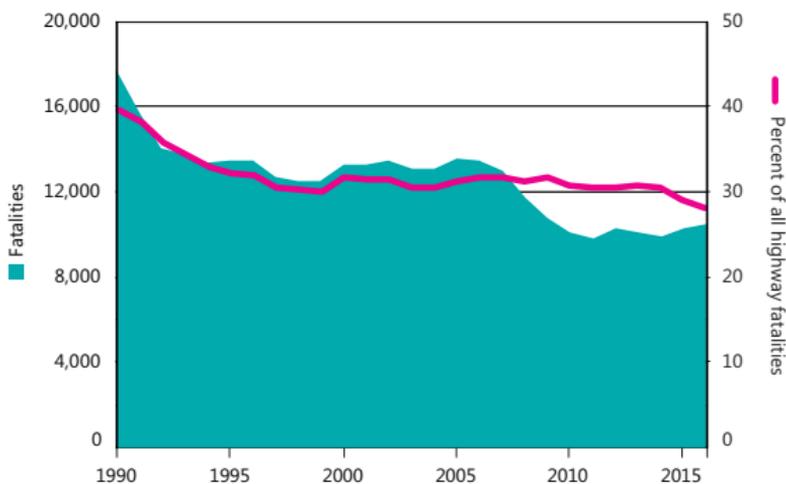
General aviation: 1990–2015



**Notes:** Graphs with same color trend lines have identical scales. Highway non-occupants include pedestrian, pedalcyclist, and other.

**Sources:** As cited in or calculated from U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 2-9, 2-14, 2-17, 2-19, 2-21, 2-23, and 3-10 available at [www.bts.gov](http://www.bts.gov) as of November 2017.

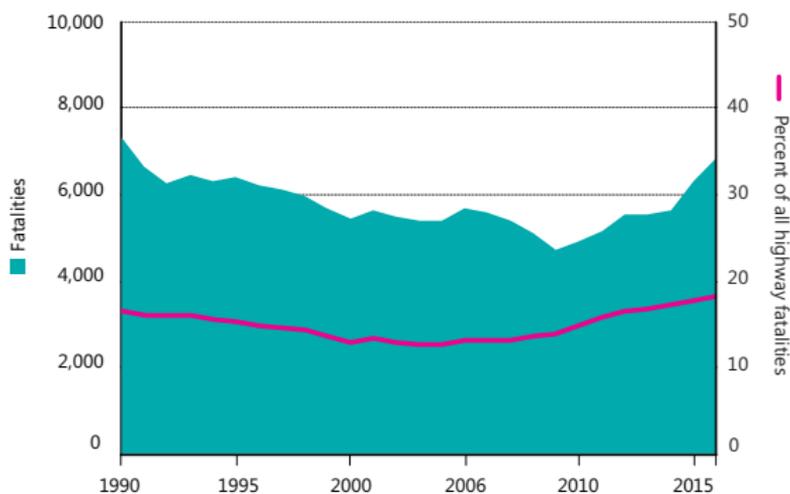
## 4-4 Alcohol-Impaired Driving Fatalities: 1990–2016



**Note:** 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 (USDOT), National Highway Traffic Safety Administration, Traffic Safety Facts: Alcohol-Impaired Driving (Annual Issues) as of November 2017.

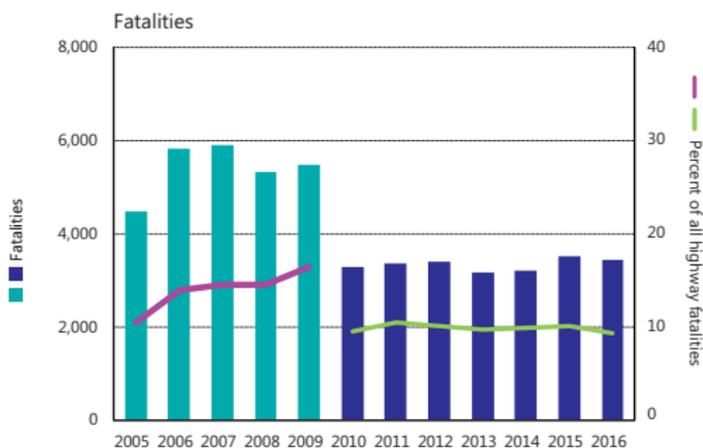
## 4-5 Pedestrian and Bicyclist Fatalities: 1990–2016



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

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 4-6 Distracted Driving Fatalities and Injuries: 2005–2016



**Note:** Distracted driving fatality data for 2010–2016 and on are not comparable with previous years due to changes in methodology.



**Note:** Distracted driving involves any activity that could divert a person's attention away from the primary task of driving, such as texting, using a cell phone, eating and drinking, grooming, using a navigation system, adjusting a radio, etc.

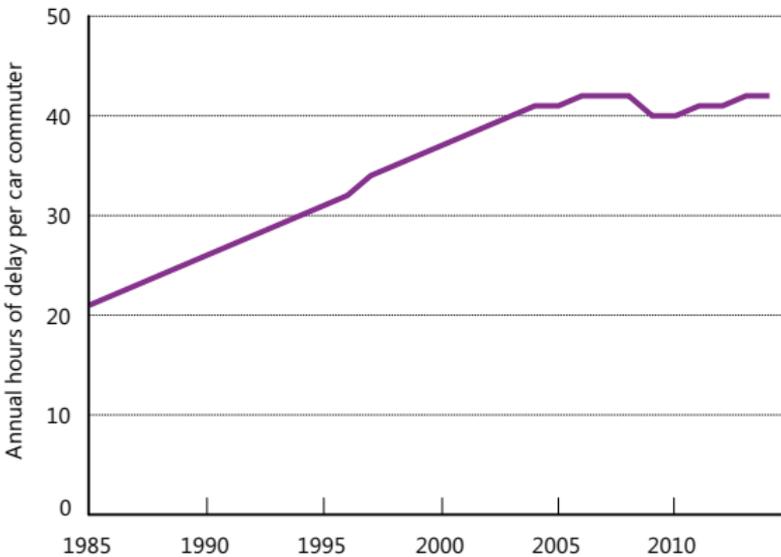
**Source:** U.S. Department of Transportation, National Highway Traffic Safety Administration, available at [www.nhtsa.gov](http://www.nhtsa.gov) as of November 2017.



# 5 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.

## 5-1 Road Congestion: 1985–2014



**Notes:** The methodology to calculate congestion performance measures was updated to reflect more comprehensive data collection, including congestion estimates for each of the 471 U.S. urban areas. The congestion estimates for all study years are recalculated every time the methodology is altered to provide a consistent data trend. For a detailed explanation of the updated methodology, see the 2015 Urban Mobility Scorecard Methodology, available at <http://mobility.tamu.edu/ums/report/>.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-69, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 5-2 Top 10 Urban Congested Area Rankings: 2014

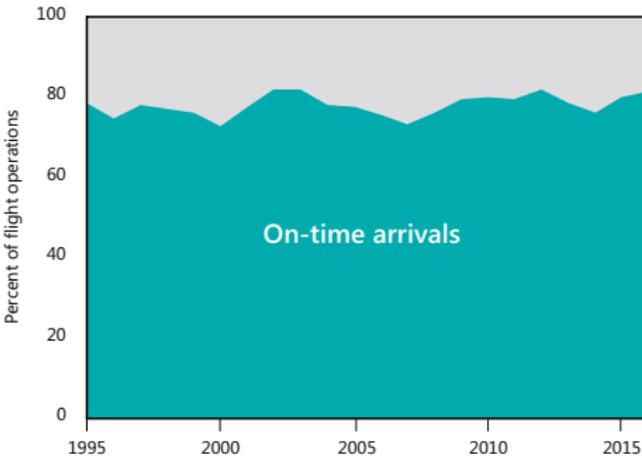
by hours of delay per car commuter

Rank	Urban area	Annual hours of delay per car commuter
1	Washington, DC-VA-MD	82
2	Los Angeles, CA	80
3	San Francisco, CA	78
4	New York, NY-NJ	74
5	Boston, MA-NH-RI	64
6	Seattle, WA	63
7	Chicago, IL-IN	61
7	Houston, TX	61
9	Dallas-Fort Worth-Arlington, TX	53
10	Atlanta, GA	52
	<b>Average of 471 urban areas</b>	<b>42</b>

**Notes:** Ranks include very large geographic areas only. The methodology was updated to reflect more comprehensive data collection efforts for each of the 471 U.S. urban areas.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-69, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

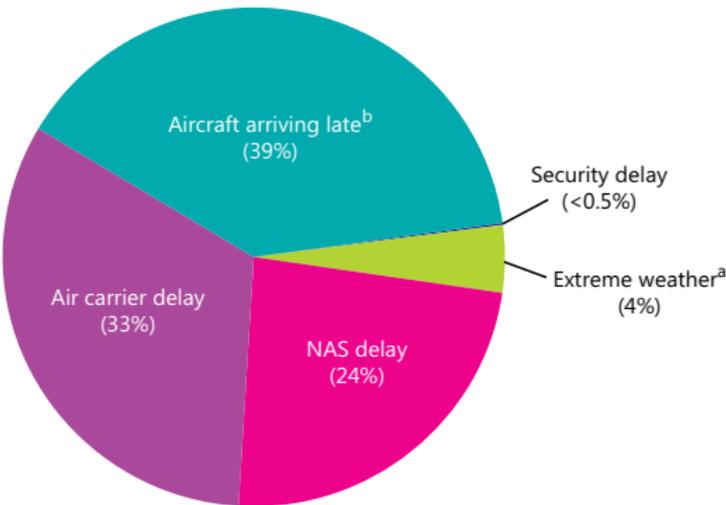
### 5-3 U.S. Airport On-time Performance: 1995–2016



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

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

### 5-4 U.S. Airport Delays by Cause: 2016 percent of delayed time



<sup>a</sup>Includes weather events that prevent flying. Other weather delays that slow operations are included under other categories. <sup>b</sup>Delay resulting from a previous flight with the same aircraft arriving late.

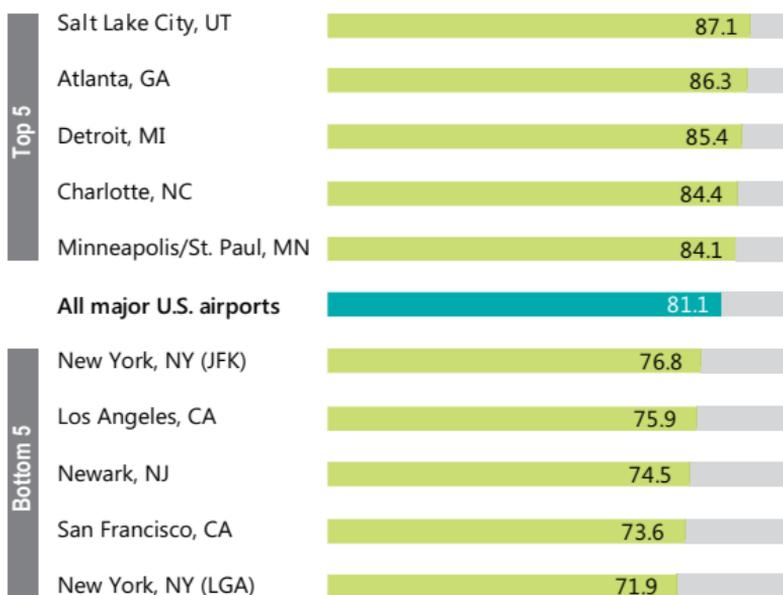
**Key:** NAS = Delays attributable to the national aviation system (NAS) that refer to a broad set of conditions, such as non-extreme weather, airport operations, heavy traffic volume, and air traffic control.

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

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 5-5 U.S. Major Airport Performance Rankings: 2016

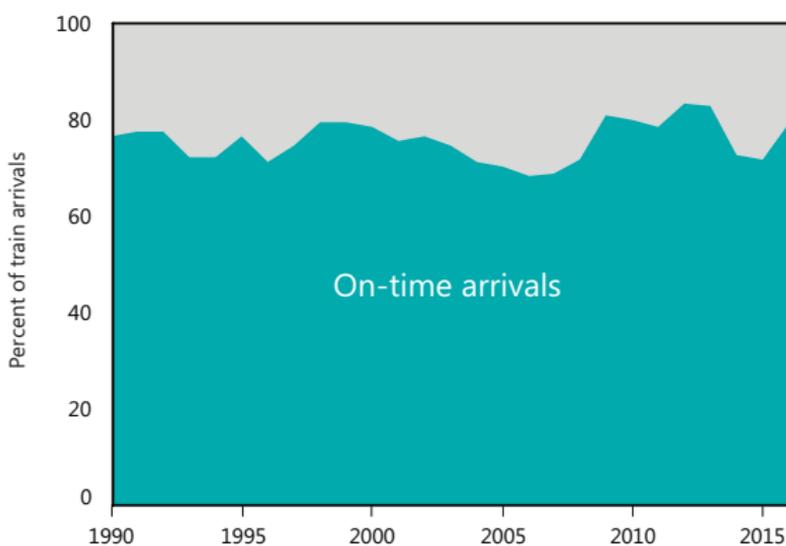
by percent of on-time arrivals



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

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 5-6 Amtrak On-time Performance: FY1990–FY2016



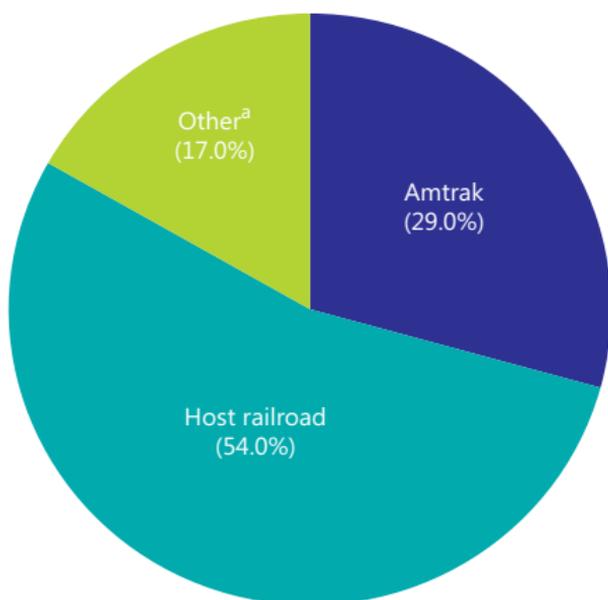
**Note:** On-time performance is a percentage measure of train performance. A train is considered on-time if it arrives at the final destination, or end-point, within an allowed number of minutes, or tolerance, of its scheduled arrival time. Trains are allowed a certain tolerance at the end-point based on the number of miles traveled:

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

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

## 5-7 Amtrak Delays by Cause: FY2016

percent of delayed time



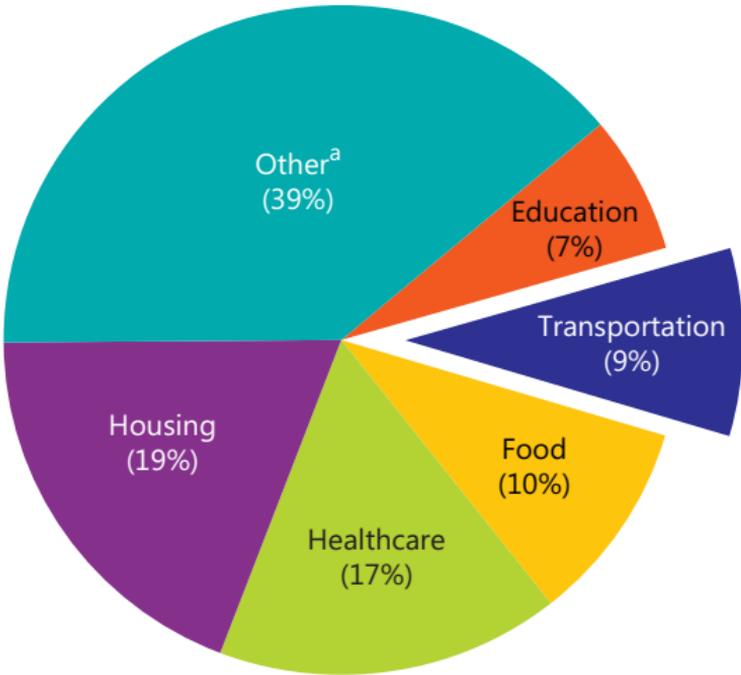
<sup>a</sup>Delays not attributable to Amtrak or other host railroads, such as customs and immigration, law enforcement action, weather, or waiting for scheduled departure time.

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at [www.bts.gov](http://www.bts.gov) as of October 2017.

# 6 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.

**6-1 U.S. GDP by Spending Category: 2016**  
percent of GDP



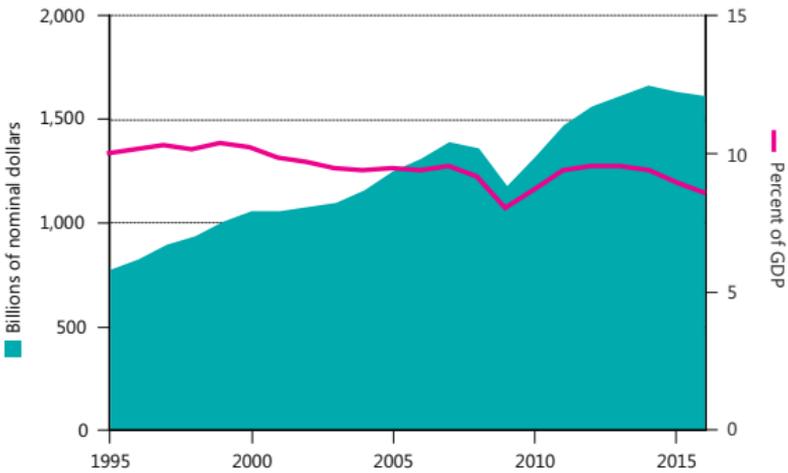
<sup>a</sup>Includes all other categories (e.g. entertainment, personal care products and services, and payments to pension plans).

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

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

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 6-2 U.S. Transportation Spending: 1995–2016



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

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 6-3 Transportation-Related Final Demand

billions of chained 2009 dollars

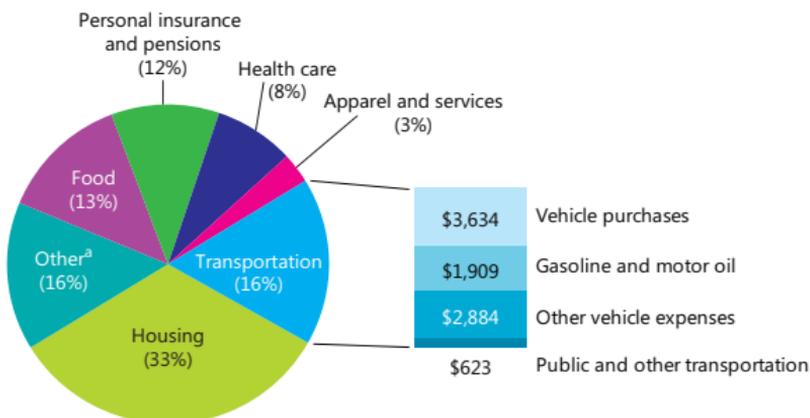
Category	2006	2016
<b>Personal consumption of transportation</b>	<b>995</b>	<b>1,060</b>
Motor vehicles and parts	385	439
Motor vehicle fuels, lubricants, and fluids	274	268
Transportation services	336	353
<b>Gross private domestic investment</b>	<b>222</b>	<b>289</b>
Transportation structures	9	11
Transportation equipment	213	278
<b>Government transportation-related purchases</b>	<b>291</b>	<b>282</b>
Federal purchases	34	36
State and local purchases	242	234
Defense-related purchases	16	12
<b>Exports ( + )</b>	<b>245</b>	<b>320</b>
<b>Imports ( - )</b>	<b>380</b>	<b>470</b>
<b>Total transportation-related final demand</b>	<b>1,372</b>	<b>1,490</b>
<b>U.S. GDP</b>	<b>14,614</b>	<b>16,716</b>

**Notes:** Numbers may not add to totals due to rounding. Transportation-related final demand measures the size of transportation functions in relation to the gross domestic product (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:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-4, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 6-4 Household Expenses by Category: 2016

percent of average annual household expenses

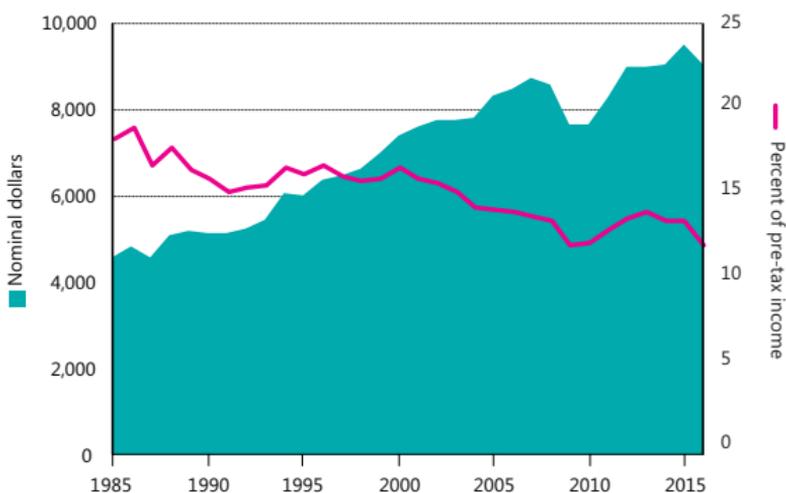


<sup>a</sup> Includes alcoholic beverages, cash contributions, education, entertainment, personal care products and services, reading, tobacco products and smoking supplies, and other miscellaneous items.

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

**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 November 2017.

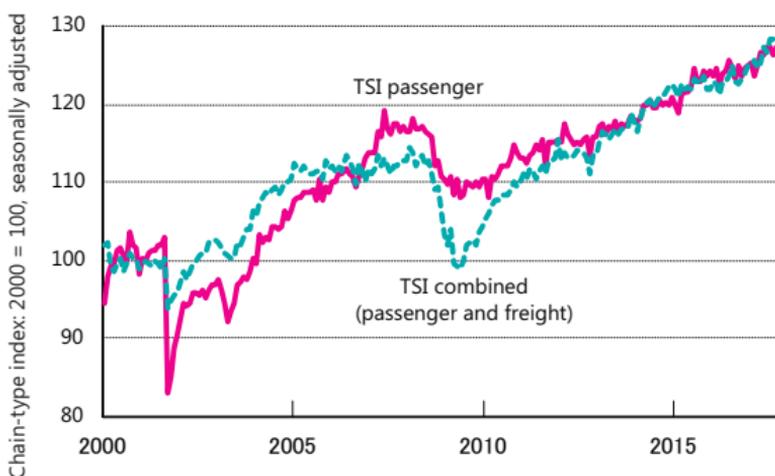
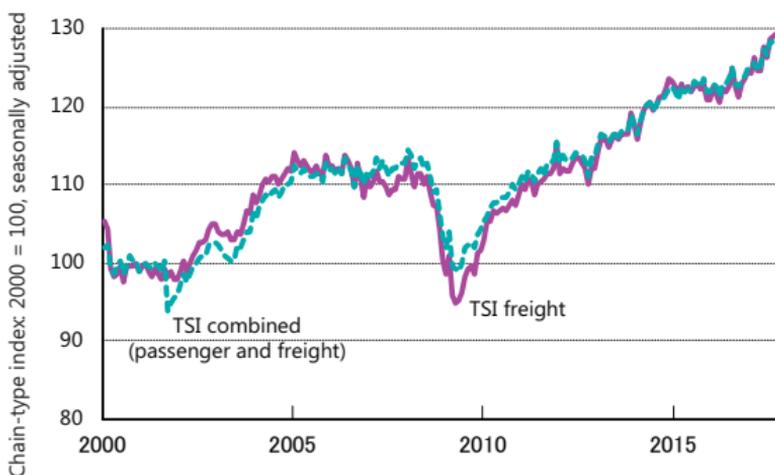
## 6-5 Household Transportation Expenses: 1985–2016



**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 November 2017.

## 6-6 Transportation Services Index: Jan. 2000–Sept. 2017

chain-type index: 2000 = 100, seasonally adjusted



**Notes: TSI Combined** - The TSI, created by the U.S. Department of Transportation, Bureau of Transportation Statistics, is a measure of the month-to-month changes in the output of services provided by the for-hire transportation industries. TSI data change monthly due to the use of concurrent seasonal analysis, which results in seasonal analysis factors changing as each month's data are added. **TSI Freight** - Includes freight railroad services (including rail-based intermodal shipments such as containers on flat cars); inland waterway traffic; pipeline movements (including principally petroleum and petroleum products and natural gas); and air freight. **TSI Passenger** - The passenger transportation services index consists of: local mass transit; intercity passenger rail; and passenger air transportation.

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 6-7 Employment in Transportation-Related Industries

thousands

Category	2006	2016
<b>For-hire transportation and warehousing</b>	<b>4,470</b>	<b>4,989</b>
Air	487	459
Rail	227	215
Water	63	66
Truck	1,436	1,454
Transit and ground passenger	399	478
Pipeline	39	49
Scenic and sightseeing	28	35
Support activities	571	660
Couriers and messengers	582	642
Warehousing and storage	638	915
<b>Transportation-related manufacturing<sup>a</sup></b>	<b>2,128</b>	<b>1,914</b>
<b>Other transportation-related industries</b>	<b>5,239</b>	<b>5,454</b>
Postal service	770	609
<b>Government employment<sup>b</sup></b>	<b>885</b>	<b>U</b>
<b>Total transportation-related labor force</b>	<b>13,491</b>	<b>13,004</b>
<b>U.S. labor force</b>	<b>136,453</b>	<b>144,306</b>

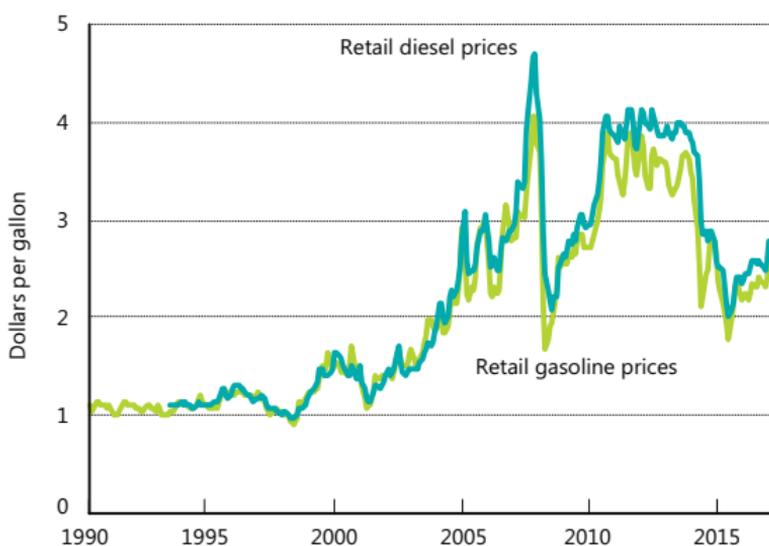
<sup>a</sup>Includes transportation equipment; petroleum products; tires; rubber; plastics; search, detection, navigation, guidance, aeronautical, and nautical systems; and instrument manufacturing. <sup>b</sup>Fiscal year data for federal, state, and local personnel.

**Key:** U = data are not available.

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

**Source:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-23, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 6-8 Motor Vehicle Fuel Prices: Sept. 1990–Oct. 2017



**Notes:** Retail Gasoline Prices include average nominal monthly prices of U.S. Regular All Formations retail gasoline. Diesel Retail Prices include average nominal monthly prices of U.S. No. 2 Diesel Retail Prices.

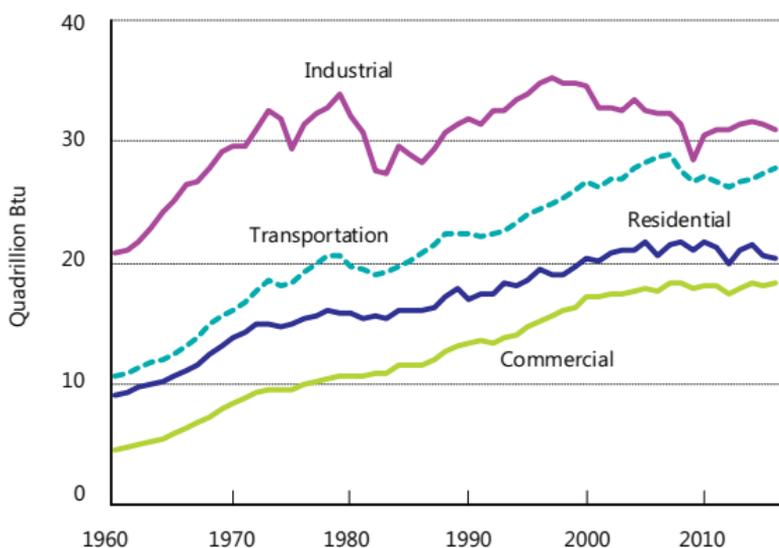
**Source:** U.S. Department of Energy, Energy Information Administration, available at [www.eia.doe.gov](http://www.eia.doe.gov) as of November 2017.



## 7 ENVIRONMENT

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

### 7-1 Energy Consumption by Sector: 1960–2016



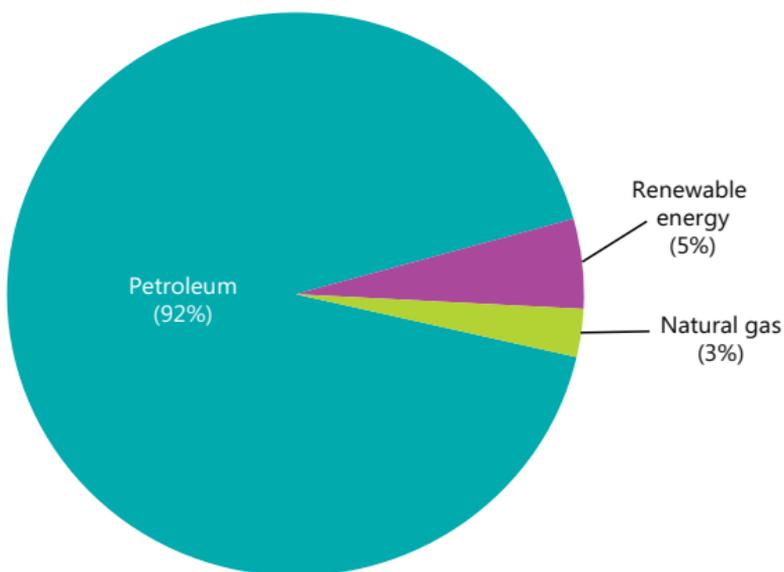
**Key:** Btu = British thermal unit.

**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 November 2017.

## 7-2 Transportation Energy Consumption by Source: 2016

percent of Btu consumed

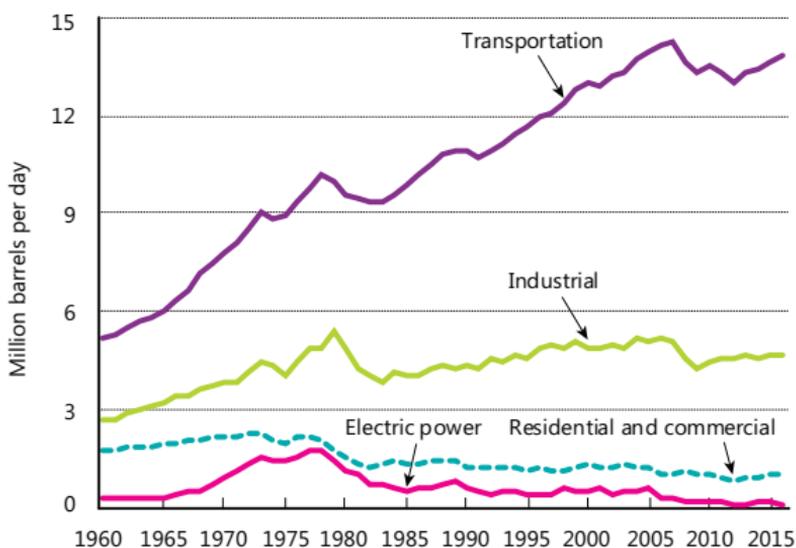


**Key:** Btu = British thermal unit.

**Notes:** Includes primary energy consumed. Excludes electricity retail sales and electrical system energy losses.

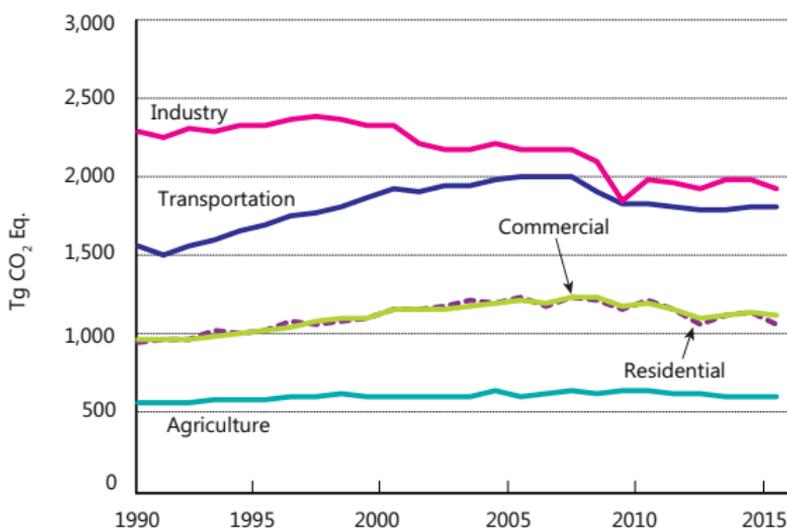
**Source:** U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly) as of November 2017.

## 7-3 Petroleum Consumption by Sector: 1960–2016



**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 November 2017.

## 7-4 Greenhouse Gas Emissions by Sector: 1990–2015



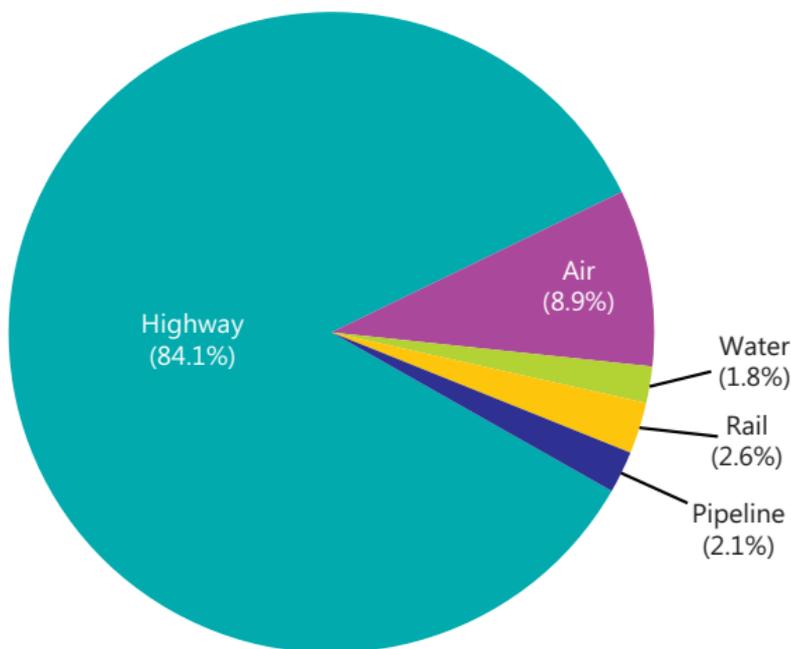
**Key:** Tg CO<sub>2</sub> Eq. = teragrams of carbon dioxide equivalent. A teragram = 1 million metric tons.

**Notes:** 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: 1990-2015 Report Tables*, <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2015> as of November 2017.

## 7-5 Greenhouse Gas Emissions by Transportation Mode: 2015

Percent of Tg CO<sub>2</sub> Eq.



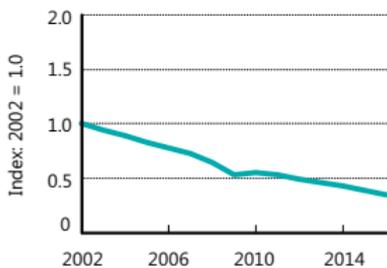
**Key:** Tg CO<sub>2</sub> Eq. = teragrams of carbon dioxide equivalent. A teragram = 1 million metric tons.

**Notes:** Percents may not add to 100 due to rounding. Does not include International Bunker Fuels.

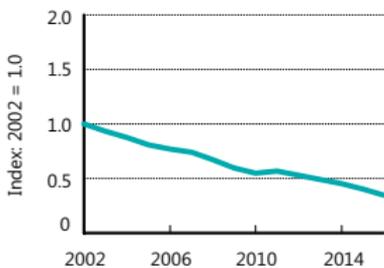
**Source:** U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2015 Report Tables*, available at <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2015> as of November 2017.

## 7-6 Highway Vehicle Air Pollutant Emissions: 2002–2016

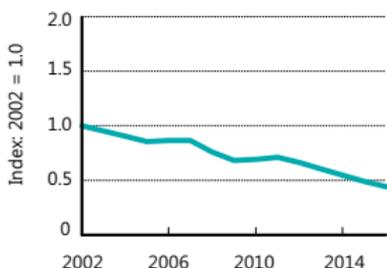
### Carbon monoxide



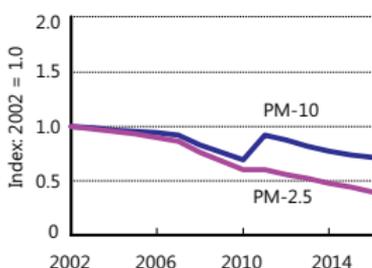
### Nitrogen oxide



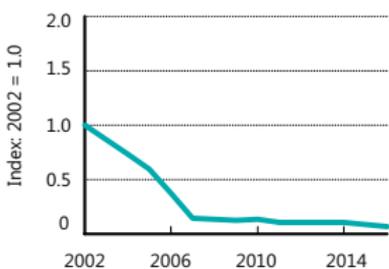
### Volatile organic compounds



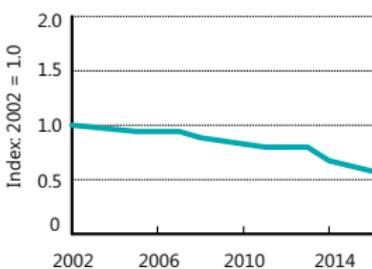
### Particulate matter



### Sulfur dioxide



### Ammonia

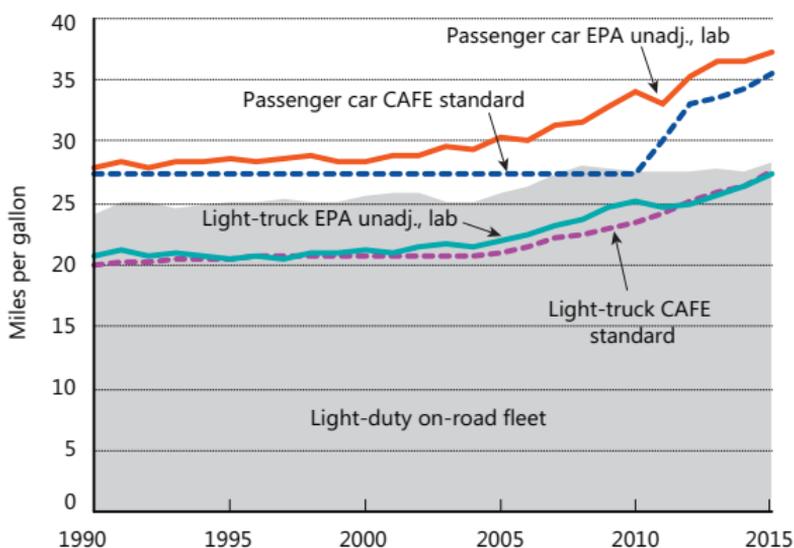


**Key:** PM-10 = airborne particulates of less than 10 microns; PM-2.5 = airborne particulates of less than 2.5 microns.

**Notes:** Indices are calculated using data on highway vehicle emissions only. Particulate matters include PM without condensibles.

**Sources:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 4-45 through 4-50, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 7-7 Fuel Economy of Light-Duty Vehicles: 1990–2015

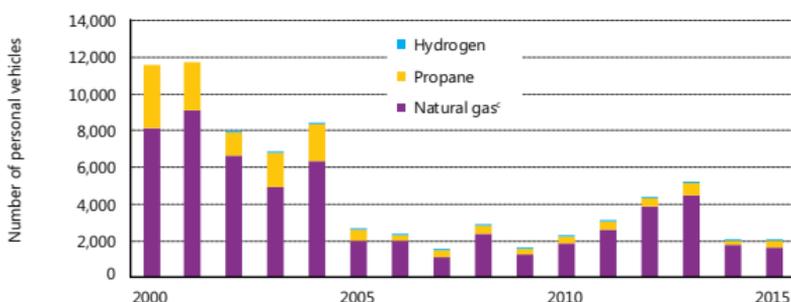
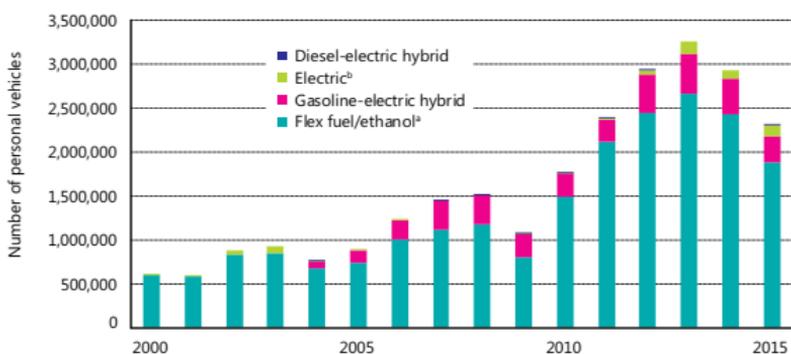


**Key:** CAFE = Corporate Average Fuel Economy; EPA = Environmental Protection Agency.

**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:** As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-23, available at [www.bts.gov](http://www.bts.gov) as of November 2017.

## 7-8 Alternative Fuel Vehicles by Fuel Type, Personal Vehicles: 2000–2015

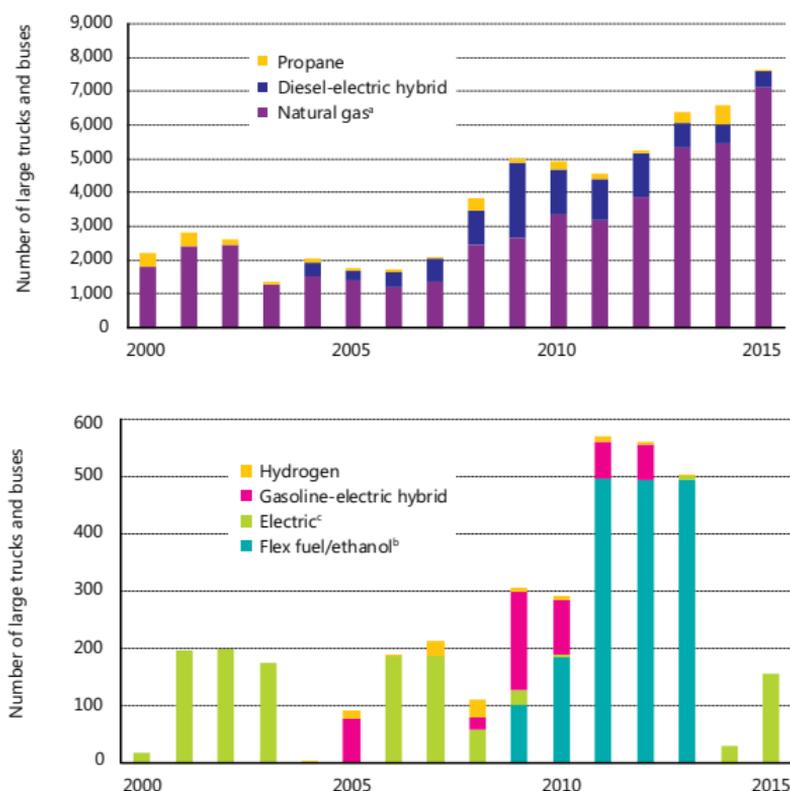


<sup>a</sup>Flex fuel/ethanol vehicles are capable of running on E85, plain gasoline, or any ethanol-gasoline blends in between. <sup>b</sup>Excludes gasoline-electric and diesel-electric hybrids. <sup>c</sup>Includes compressed natural gas (CNG) and liquified natural gas (LNG).

**Note:** Includes the total number of light and medium duty vehicles that were manufactured or converted by vehicle suppliers (companies or organizations) in the associated calendar year.

**Source:** U.S. Department of Energy, Energy Information Administration, Alternative Fuel Vehicle Data, Supplier Database, available at <https://www.eia.gov/renewable/afv/supply.php> as of October 2017.

## 7-9 Alternative Fuel Vehicles by Fuel Type, Large Trucks and Buses : 2000–2015



**Notes:** <sup>a</sup>Includes compressed natural gas (CNG) and liquified natural gas (LNG). Includes the total number of heavy duty vehicles that were manufactured or converted by vehicle suppliers (companies or organizations) in the associated calendar year. <sup>b</sup>Flex fuel/ethanol vehicles are capable of running on E85, plain gasoline, or any ethanol-gasoline blends in between. <sup>c</sup>Excludes gasoline-electric and diesel-electric hybrids.

**Source:** U.S. Department of Energy, Energy Information Administration, Alternative Fuel Vehicle Data, Supplier Database, available at <https://www.eia.gov/renewable/afv/supply.php> as of October 2017.



# GLOSSARY

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

**Alternative fueled vehicle:** A vehicle designed to operate on an alternative fuel (e.g., compressed natural gas, propane, electricity). The vehicle can be either a dedicated vehicle designed to operate exclusively on alternative fuel or a non-dedicated vehicle designed to operate on alternative fuel and/or traditional fuel.

**Chained dollars:** A method of adjusting to real dollar amounts to account for both changes in price-levels and the composition of output over time. This is completed by using a chain-weighted type index, or average weights in successive time periods, to get a comparable time series of data.

**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.

**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 electric 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 pavement 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.

**Light-duty vehicle:** Includes passenger cars, light trucks, vans, pickup trucks, and sport/utility vehicles regardless of wheelbase.

**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.

**Nominal dollars:** A market value that does not take inflation into account and reflects prices and quantities that is current during the period being measured.

**Nonself-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.

**Plug-in hybrid electric vehicles:** Plug-in hybrids use the electric battery as the primary energy source by relying on battery power for propulsion for a limited range (15-40 miles) before switching to internal combustion propulsion (thus reducing gasoline consumption).

**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.

**Seasonally adjusted:** Measures the real differences in data trends by adjusting for seasonal factors such as the change in the number of days, weekends, holidays, or other seasonal activity in a month such as vacation travel.

**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:** Structural deficiencies are characterized by deteriorated conditions of significant bridge elements and reduced load-carrying capacity.

**Real dollars:** A method of adjusting nominal dollars to account for price level changes over time. It reflects purchasing power in a given period.

**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:** BTS' 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.bts.gov](http://www.bts.gov) for a detailed explanation.

**Transportation Services Index Combined:** The combined Transportation Services Index (TSI) includes available data on freight traffic, as well as passenger travel, that have been weighted to yield a monthly measure of transportation services output.

**Transportation Services Index Freight:** The freight TSI measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight.

**Transportation Services Index Passenger:** The passenger TSI includes local transit, intercity passenger rail, and passenger air transportation, that have been weighted to yield a monthly measure of transportation services output.

**Unlinked passenger trip:** 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.

Photos provided by BTS Stock Photos

**MAJOR TRENDS**

**INFRASTRUCTURE**

**MOVING PEOPLE**

**MOVING GOODS**

**SAFETY**

**PERFORMANCE**

**ECONOMY**

**ENVIRONMENT**

**GLOSSARY**



Printed on paper containing recycled post  
consumer waste paper.