Passenger Travel Facts and Figures 2015

U.S. Department of Transportation
Bureau of Transportation Statistics

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PREFACE

Passenger Travel Facts and Figures is a snapshot of the characteristics and trends of personal travel in the United States; the network over which passenger travel takes place; and the related economic, safety, and environmental aspects of passenger travel. An electronic version of this publication is available at www.bts.gov.

Chapter 1 summarizes the basic demographic and economic characteristics of the United States that contribute to the demand for passenger travel. Chapter 2 examines travel patterns by household characteristics, trip purpose, and transportation mode. Chapter 3 provides information on the passenger transportation system and its performance. Chapter 4 discusses the economic characteristics of passenger travel and tourism. Chapter 5 describes the safety, energy, and environmental impacts of passenger travel.

The data used throughout this document reflect the latest numbers available at the time of publication. Several of the tables, figures, and analysis included in this report are based on results from national surveys that provide details on travel patterns and characteristics of travelers. An overview of these surveys—the National Household Travel Survey, American Community Survey, and American Time Use Survey—is found in box 2-A.

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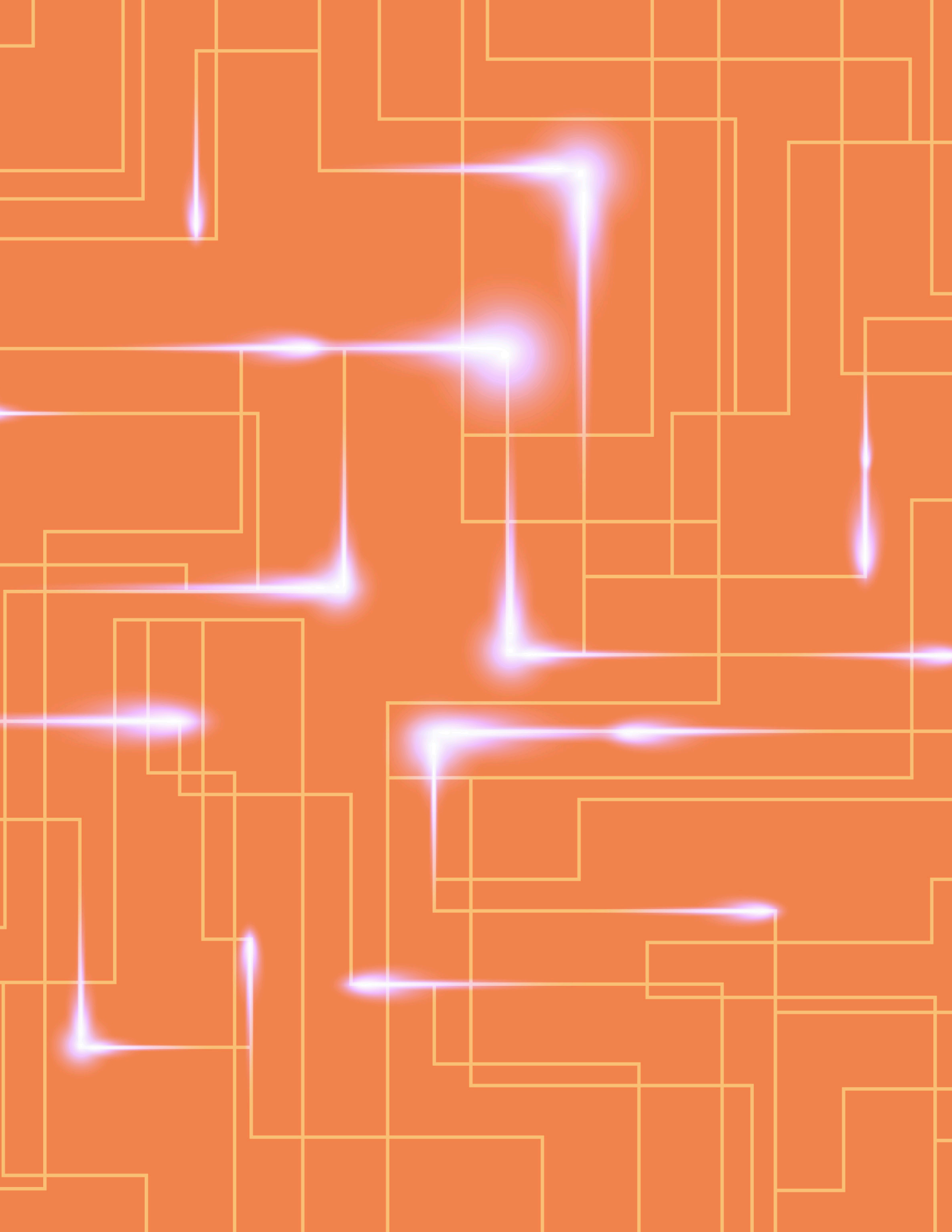
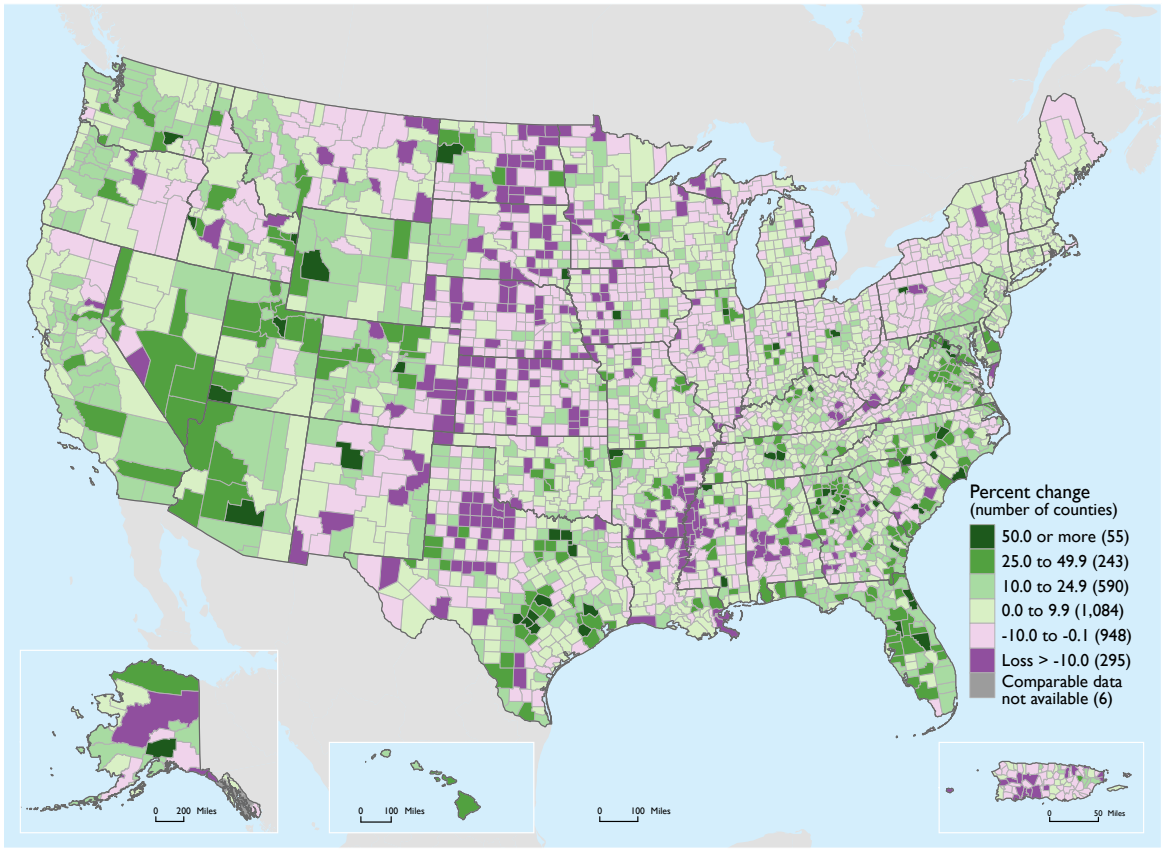


1 A Nation Driven by Travel

Over 300 million residents use the Nation's transportation system every day. Driven primarily by where people live and work, travel demand changes as our Nation grows.

Between 2000 and 2013, the U.S. population grew by 12.2 percent, from 282 million to 316 million. Metropolitan areas experienced the most overall growth, while many counties, particularly in rural areas, lost residents as employment opportunities declined.

Figure 1-1 Population Change by County: 2000–2013



SOURCE: Developed by the Bureau of Transportation Statistics based on data from U.S. Department of Commerce, Census Bureau, Population Division, available at www.census.gov as of March 2015.

Table 1-1 Selected U.S. Demographics and Gross Domestic Product (GDP) by Census Region: 2000, 2010, and 2013

	2000	2010	2013	Percent change, 2000 to 2013
Civilian labor force (thousands)	**142,583**	**153,889**	**155,389**	**9.0**
Households (thousands)	**104,705**	**117,538**	**122,459**	**17.0**
Resident population (thousands)	**282,172**	**309,347**	**316,498**	**12.2**
Northeast	53,668	55,382	56,028	4.4
Midwest	64,494	66,972	67,568	4.8
South	100,560	114,871	118,523	17.9
West	63,451	72,122	74,379	17.2
GDP (millions of chained 2009 $)[a]	**12,643,017**	**14,639,748**	**15,526,715**	**22.8**
Northeast	2,688,045	3,076,447	3,187,268	18.6
Midwest	2,821,504	3,005,195	3,183,248	12.8
South	4,181,041	5,028,768	5,375,285	28.6
West	2,958,760	3,529,346	3,775,891	27.6
GDP per capita (chained 2009 $)[a]	**44,806**	**47,325**	**49,058**	**9.5**
Northeast	50,087	55,550	56,887	13.6
Midwest	43,748	44,872	47,112	7.7
South	41,578	43,777	45,352	9.1
West	46,631	48,936	50,766	8.9

[a]As of Oct. 26, 2006, the Bureau of Economic Analysis renamed the gross state product (GSP) series to gross domestic product (GDP) by state.

NOTES: Chained dollars are not additive. Thus GDP for all regions is not equal to total GDP. Numbers may not add to totals due to rounding.

SOURCES: **Civilian Labor Force**—U.S. Department of Labor, Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, available at www.bls.gov/data as of March 2015. **Households**—U.S. Department of Commerce, Census Bureau, Families and Living Arrangements, table HH-1, available at www.census.gov/population/www/socdemo/hh-fam.html, as of March 2015. **Population**—U.S. Department of Commerce, Census Bureau, Population Division, Annual Population Estimates, available at www.census.gov/popest as of March 2015. **Gross Domestic Product**—U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Accounts, available at www.bea.gov/regional/ as of March 2015.

Population and economic activity grew faster in the South and West, together accounting for 84.2 percent of population growth since 2000. The Northeast, however, continued to produce the most economic activity per capita, as measured by gross domestic product.

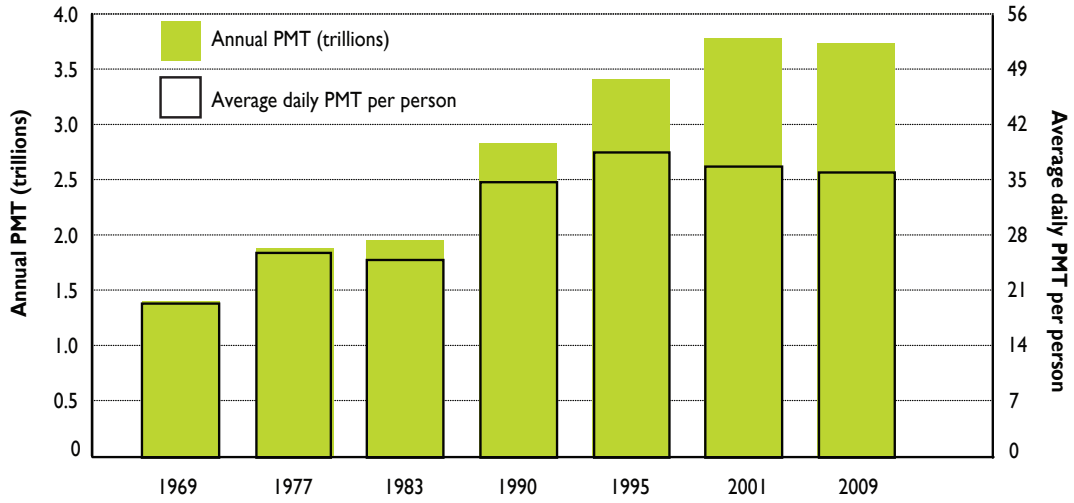
2 Passenger Travel

The U.S. passenger transportation system has grown in both extent and use over the last several decades despite a recent decline in overall transportation activity due to the 2007–2009 economic recession. This expansion is in response to long-term growth in the number of people who travel as well as the distance traveled by each person.

Person-Miles Traveled

Over the last three decades, the total number of miles traveled by passengers has more than doubled. *The National Household Travel Survey* (NHTS), which primarily examines local travel, shows a 169.5 percent increase in annual person-miles traveled[1] (PMT) between 1969 and 2001. Between 2001 and 2009, however, PMT fell by 1.4 percent as people traveled less frequently and made shorter trips. The average number of person-trips declined from 4.1 trips per day in 2001 to 3.8 trips per day in 2009, while average person-trip length declined from 10.0 miles per trip to 9.7 miles per trip. Passenger travel trends also indicate that average daily PMT per person declined between 1995 and 2009.

Figure 2-1 Annual Person-Miles Traveled (PMT) and Average Daily PMT Per Person: 1969, 1977, 1983, 1990, 1995, 2001, and 2009



SOURCE: U.S Department of Transportation, *2009 National Household Travel Survey, Summary of Travel Trends*, available at nhts.ornl.gov as of March 2015.

[1] Person-miles traveled (PMT) is an estimate of the aggregate distances traveled by all persons on a given trip based on the estimated transportation-network-miles traveled on that trip. The *National Household Travel Survey* (NHTS) measures PMT by all modes of travel, including private vehicle, transit, walking and biking.

Table 2-1 U.S. Passenger-Miles Traveled by For-Hire Mode: 2000, 2010, and 2013

Millions

	2000	2010	2013
Air, total[a]	**U**	**798,000**	**840,400**
Domestic	U	552,900	577,900
International	U	245,200	262,500
Transit, total	**45,100**	**52,627**	**56,467**
Heavy rail	13,844	16,407	18,005
Light rail	1,339	2,173	2,565
Commuter rail	9,400	10,774	11,736
Motor bus	18,999	20,739	21,414
Demand response	588	874	898
Ferry boat	298	389	402
Other	632	1,272	1,449
Passenger rail			
Amtrak[a]	5,498	6,420	6,810

[a] Rounded to the nearest 100 million revenue passenger-miles.

KEY: U = Data are unavailable due to a reporting change in 2002.

NOTE: Individual categories may not sum to totals due to rounding.

SOURCES: **Transit**–Federal Transit Administration. **Rail**–Federal Railroad Administration as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-40, available at www.bts.gov as of March 2015. **Air**–USDOT, BTS, Office of Airline Information, *T-100 Segment Data*, available at www.transtats.bts.gov as of March 2015.

Between 2010 and 2013, passenger-miles[2] of travel by commercial aviation, transit, and intercity rail increased, rising by 5.3, 7.3, and 6.1 percent, respectively. Miles traveled by these for-hire transportation modes reached record levels in 2013.

[2] Passenger-miles differ from person-miles traveled estimates in the *National Household Travel Survey*. Passenger-miles are the cumulative sum of the distances ridden by each passenger and do not include mileage accrued by the vehicle operator and crew. A passenger-mile is one passenger transported one mile.

Many demographic factors influence daily passenger travel patterns. On average, Americans traveled 36.1 miles per day in 2009, a 10.2 percent decline from 2001. Men traveled more than women, averaging 40.9 miles per day compared with 31.5 miles per day for women. For both genders, people in their prime working years traveled more, with persons aged 36 to 65 traveling the most.

Table 2-2 Average Daily Person-Miles of Travel by Age and Gender: 1995, 2001, and 2009

	Total		
Age	**1995**	**2001**	**2009**
Total	**38.7**	**40.2**	**36.1**
Under 16	25.0	24.5	25.3
16 to 20	36.4	38.1	29.5
21 to 35	46.0	45.6	37.7
36 to 65	45.1	48.8	44.0
Over 65	24.4	27.5	24.0

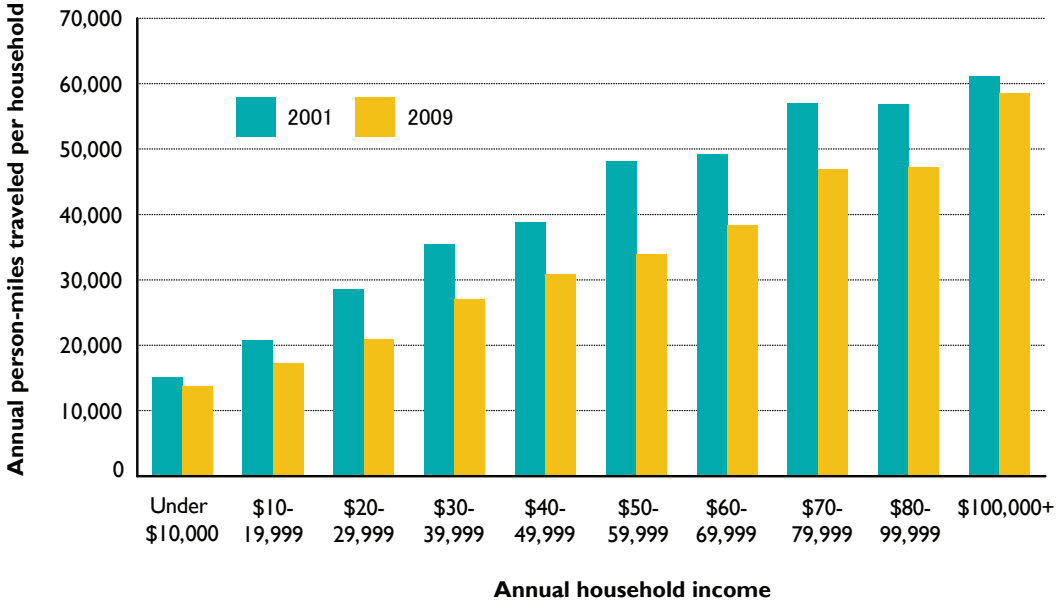
	Men		
Age	**1995**	**2001**	**2009**
Total	**43.9**	**45.0**	**40.9**
Under 16	23.7	24.6	27.2
16 to 20	37.6	34.1	28.2
21 to 35	51.3	49.8	40.5
36 to 65	53.2	57.7	50.9
Over 65	31.7	32.9	30.5

	Women		
Age	**1995**	**2001**	**2009**
Total	**33.8**	**35.7**	**31.5**
Under 16	26.2	24.4	23.3
16 to 20	35.0	42.5	31.0
21 to 35	40.8	41.5	35.0
36 to 65	37.5	40.4	37.0
Over 65	19.2	23.5	19.3

NOTES: All tables reporting totals may include unreported characteristics. 2001 data excludes persons aged 0 to 4 because this age group was not included in the 1995 and 2009 surveys.

SOURCES: **1995**–U.S. Department of Transportation, *National Passenger Travel Survey* and **2001 and 2009**–U.S Department of Transportation, *National Household Travel Survey* as cited in U.S. Department of Transportation, Federal Highway Administration, *2009 National Household Travel Survey Summary of Travel Trends*, table 14, latest data available at nhts.ornl.gov/2009/pub/stt.pdf as of March 2015.

Figure 2-2 Average Annual Person-Miles of Travel per Household by Income: 2001 and 2009



SOURCE: U.S. Department of Transportation, Federal Highway Administration, *2009 National Household Travel Survey*, latest data available at nhts.ornl.gov as of March 2015.

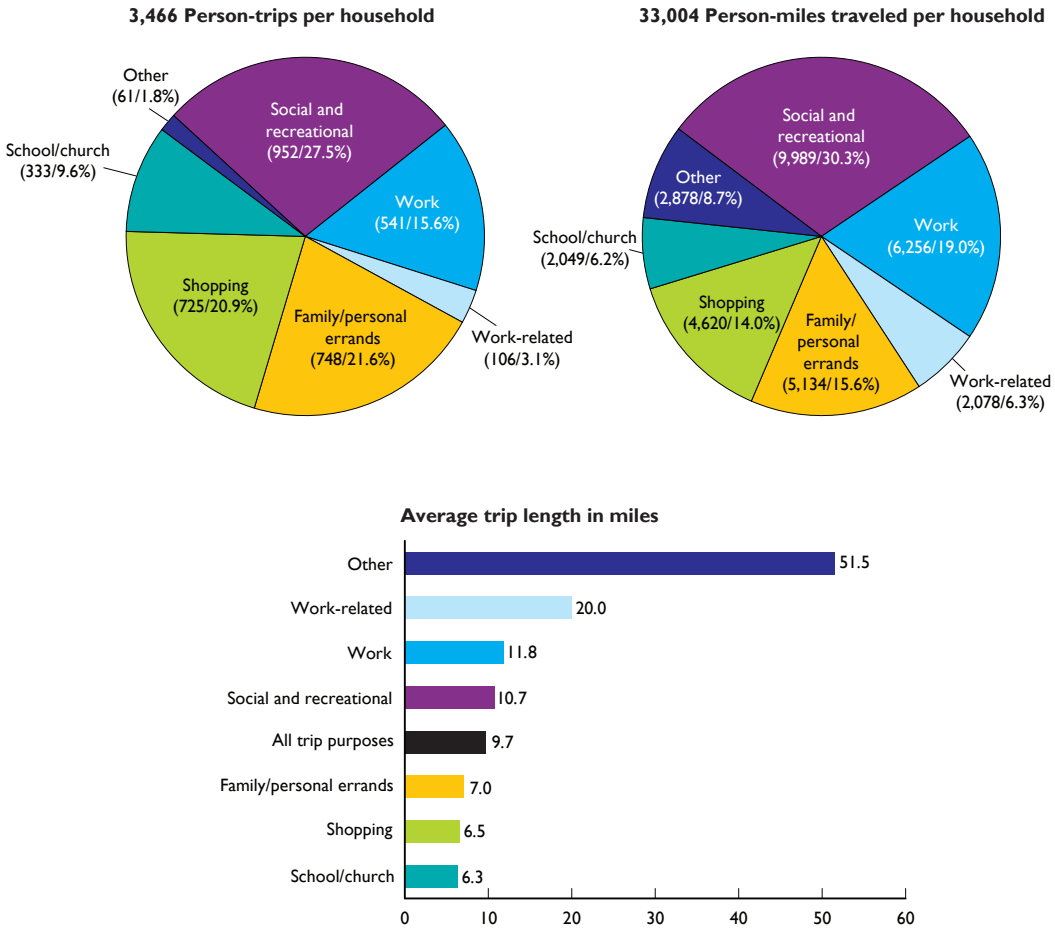
Historically, higher income households travel more miles than lower income households. As shown in figure 2-2, average annual person-miles of travel was directly related to household income in 2001 and 2009. Between 2001 and 2009, personal travel declined for households of all income groups, with the largest declines in middle-income households earning between $50,000 and $60,000 annually.

Why We Travel

Personal local travel is dominated by frequent, repetitive patterns, such as a daily commute to work. The most common reasons for travel are for family and personal errands, social and recreational activities, and work or work-related purposes.

In 2009 work and work-related trips were longer than trips for other purposes, making up 25.3 percent of total miles traveled but only 18.7 percent of total trips. Trips for shopping, personal errands, and social and recreational purposes were shorter but more frequent than commuting trips.

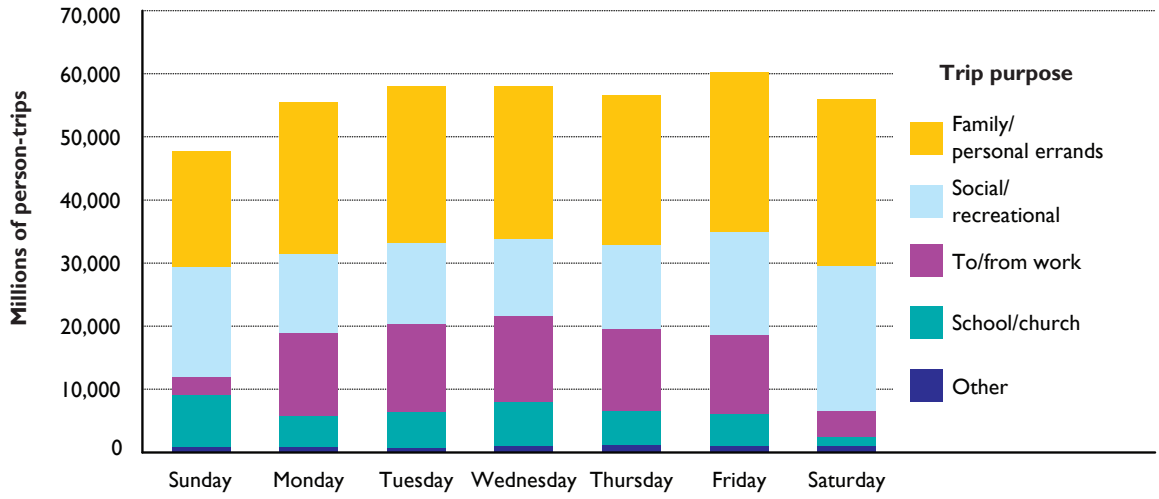
Figure 2-3 Average Annual Person-Trips, Person-Miles, and Trip Length per Household by Purpose: 2009



NOTES: *Person-trips* are trips by one person in any mode of transportation. *Family/personal errands* includes personal business, shopping, and medical/dental appointments. Percents may not add to 100 due to rounding.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, *2009 National Household Travel Survey Summary of Travel Trends*, table 5, latest data available at nhts.ornl.gov as of March 2015.

Figure 2-4 Annual Person-Trips by Purpose and Day of Week: 2009



NOTES: *Person-trips* are trips by one person in any mode of transportation. *Family/personal errands* includes personal business, shopping, and medical/dental appointments. *To or from work* includes work-related business trips.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, *2009 National Household Travel Survey*, latest data available at nhts.ornl.gov as of March 2015.

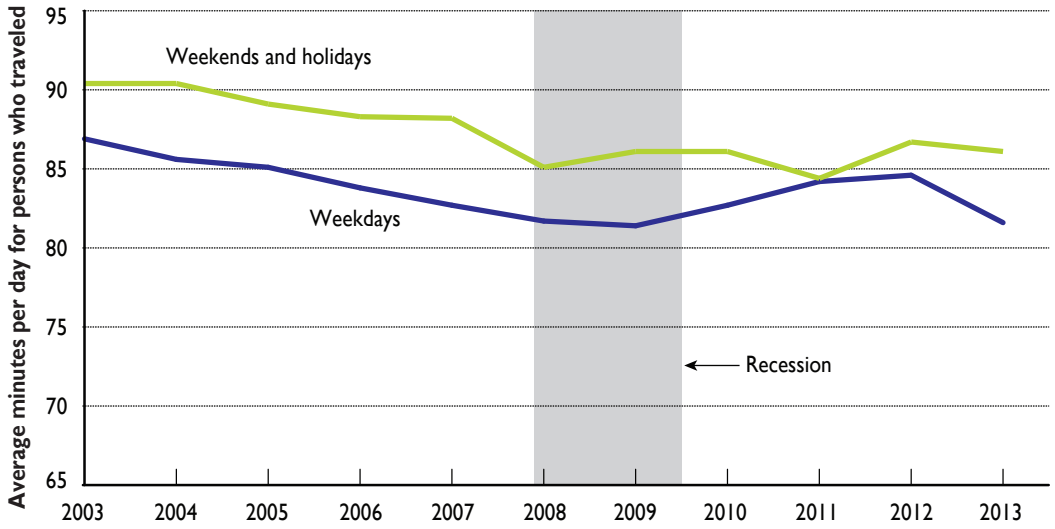
During an average week, people take more trips on weekdays than weekends. Fridays were the busiest days, largely because people make social and recreational trips in addition to regular work and school trips. Over the last 15 years, about one-fifth of trips involved trip-chaining, or a sequence of trips with stops of less than 30 minutes. For example, people often run errands on the way to and from work. Trip-chains can reduce travel times, distance traveled, and fuel, but can also contribute to congestion because these trips often occur during peak travel periods. The least travel occurred on Sundays, although the lower numbers of work trips were partially offset by additional social/recreational and church trips.

Time Spent Traveling

People spent less time traveling in 2013 than 2003. On weekdays people spent 5.2 fewer minutes traveling per day, a decrease of 6.0 percent. On weekends and holidays people spent 4.3 fewer minutes traveling per day, a 4.7 percent decrease.

Time spent traveling reached a low in 2008 in the midst of the last recession. Due to a post-recession increase in weekday travel time combined with a continued decline in weekend travel time, average weekday and weekend/holiday travel time were almost equal in 2011. On average, people traveled nearly 4.0 minutes more on weekends and holidays than on weekdays.

Figure 2-5 Total Time Spent Traveling on Weekdays and Weekends: 2003–2013



NOTES: Activities are based on *American Time Use Survey Activity Lexicon* 2011 definitions. *Weekdays* exclude holidays. *Weekends and holidays* includes the following: New Year's Day, Easter, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *American Time Use Survey,* available at www.bls.gov as of April 2015.

Table 2-3 Average Weekday and Weekend Time Spent Traveling by Persons Engaged in Selected Activities: 2013

Travel activities related to	Average daily minutes, weekdays	Average daily minutes, weekends, and holidays
All travel activities	**81.6**	**86.1**
Work	46.1	37.8
Personal care	40.0	41.8
Caring for and helping household members	37.5	41.5
Caring for and helping nonhousehold members	37.1	38.1
Socializing, relaxing, and leisure	34.9	45.6
Education	34.9	28.3
Consumer purchases	33.5	42.0
Other activities	33.4	39.0
Using government services and civic obligations	33.3	42.1
Using personal care services	33.1	24.7
Using household services	27.2	20.7
Household activities	26.5	35.2
Eating and drinking	25.4	35.9

NOTES: Activities are based on *American Time Use Survey Activity Lexicon* 2011 definitions. *Other activities* includes religious activities, security procedures, sports and recreation, telephone calls, and volunteering. *Weekdays* exclude holidays. *Weekends and holidays* includes the following: New Year's Day, Easter, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *American Time Use Survey 2013*, available at www.bls.gov as of April 2015.

On weekdays in 2013 the average person spent 81.6 minutes per day traveling for a variety of activities. Examining only people who engaged in travel for work, the average person spent 46.1 minutes per day traveling, the most time for all selected activities.

On weekends and holidays people spent an average of 86.1 minutes per day engaged in various travel activities, over 4.0 minutes more than on weekdays. Out of all selected activities, the average person spent the most time (45.6 minutes) traveling for activities related to socializing, relaxing, and leisure, about 11.0 minutes per day more than on weekdays. Travel related to eating and drinking on weekends and holidays accounted for 35.9 minutes—about 10 minutes more than on weekdays.

How We Travel

Most passenger travel occurs in cars or other types of personal motorized vehicles. In 2009, 83.4 percent of trips and 88.4 percent of person-miles traveled were by personal vehicle. The shares for other modes were considerably smaller—walking and biking accounted for 11.5 percent of local trips and 1.0 percent of miles in 2009, while transit's share was 1.9 percent of trips and 1.5 percent of miles.

Table 2-4 Annual Person-Trips and Person Miles Traveled by Mode: 1995, 2001, and 2009

Person-trips (millions)

	1995		2001		2009	
	Number	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total	**378,930**	**100.0**	**384,485**	**100.0**	**392,023**	**100.0**
Privately owned vehicle	327,400	86.4	331,847	86.3	327,118	83.4
Transit	6,638	1.8	6,202	1.6	7,520	1.9
Walk	20,325	5.4	33,145	8.6	40,962	10.4
Bike	3,342	0.9	3,213	0.8	4,082	1.0
Air	313	0.1	359	0.1	311	0.1
Other	20,913	5.5	9,718	2.5	12,031	3.1

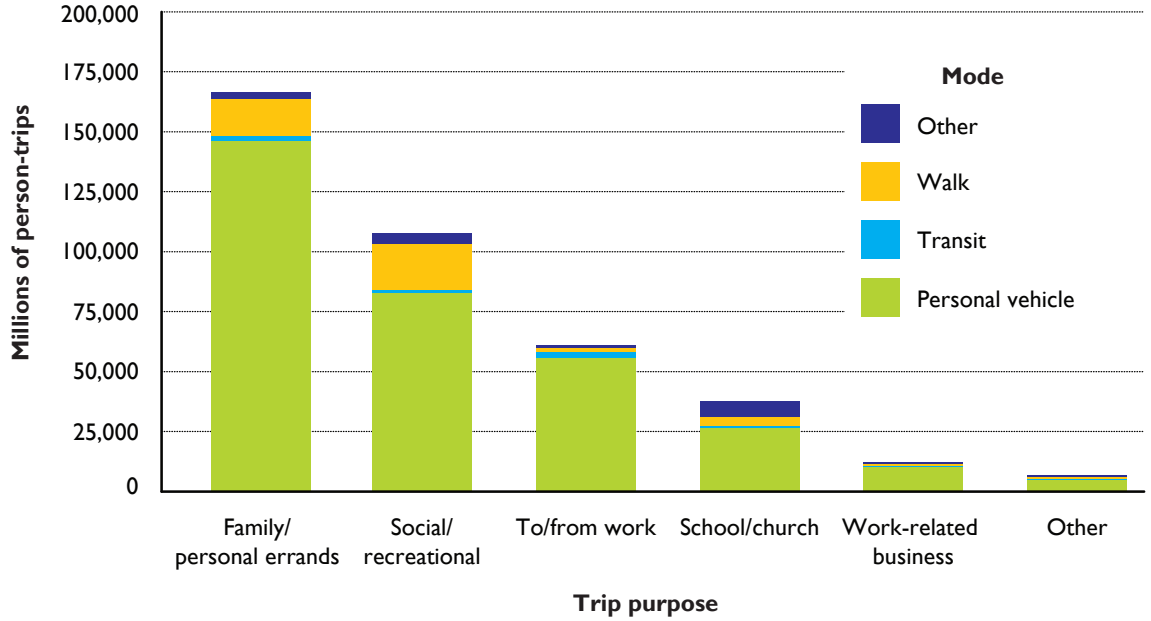
Person-miles traveled (millions)

	1995		2001		2009	
	Number	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total	**3,411,122**	**100.0**	**3,783,979**	**100.0**	**3,732,791**	**100.0**
Privately owned vehicle	3,110,249	91.2	3,337,234	88.2	3,298,168	88.4
Transit	72,577	2.1	44,355	1.2	54,393	1.5
Walk	10,821	0.3	23,522	0.6	27,943	0.7
Bike	4,586	0.1	6,162	0.2	8,956	0.2
Air	116,694	3.4	280,974	7.4	240,651	6.4
Other	96,194	2.8	91,733	2.4	102,680	2.8

NOTES: *Person-trips* are trips by one person in any mode of transportation. *Other* includes other and unreported modes.

SOURCES: **1995**–U.S. Department of Transportation, *National Passenger Travel Survey*, and **2001 and 2009**–U.S Department of Transportation, *National Household Travel Survey*, all available at nhts.ornl.gov as of March 2015.

Figure 2-6 Annual Person-Trips by Mode and Purpose: 2009



NOTES: *Person-trips* are trips by one person in any mode of transportation. *Family/personal errands* includes personal business, shopping, and medical/dental appointments.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, *2009 National Household Travel Survey*, latest data available at nhts.ornl.gov as of March 2015.

Between 1995 and 2009, the share of personal vehicle trips fell 3.0 percentage points, while the share of miles fell 2.8 percentage points. Trips to and from work and for work-related business accounted for 18.7 percent of trips. Walking trips, accounting for 10.4 percent of trips in 2009, were mostly for family/personal errands and social/recreational purposes. Together these two trip purposes accounted for 83.0 percent of walking trips.

Most workers (85.8 percent) drove to work in a personal vehicle in 2013, either by themselves or with others. The shares of workers using alternative modes as their primary means of transportation were smaller: 5.2 percent of workers used transit, 2.8 percent walked, and 0.6 percent biked. Although the number of commuters who drove to work increased between 2000 and 2013, the overall share of drivers decreased. The working population shifted to others modes of transportation as commuters who used transit grew by 21.8 percent, and workers who biked rose 80.6 percent.

Table 2-5 Commuting by Mode of Transportation: 2000, 2010, and 2013

Thousands of workers

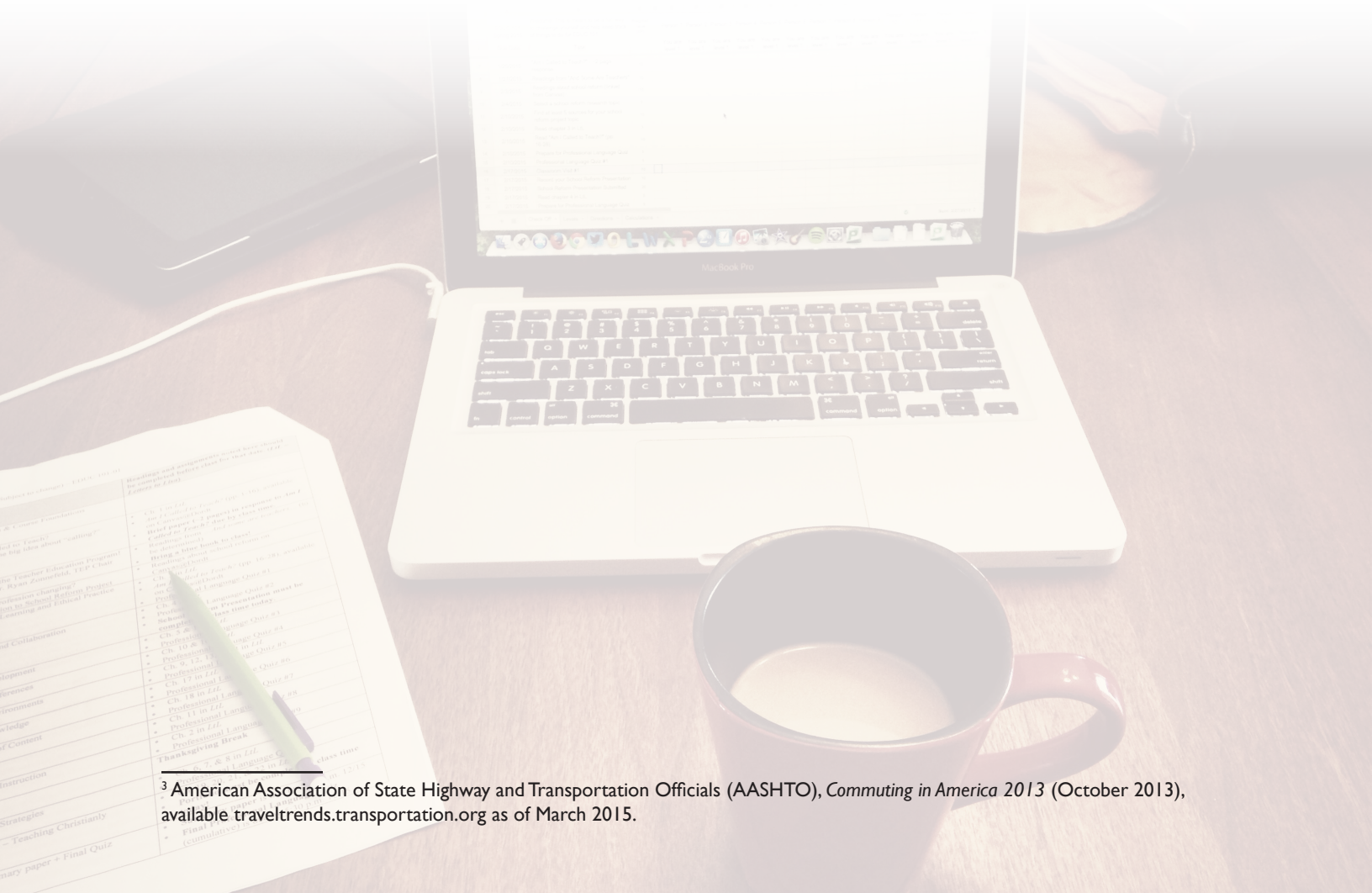
	2000		2010		2013		Change, 2000 to 2013	
	Number	%	Number	%	Number	%	Number	%
Total	**128,279**	**100**	**136,941**	**100**	**142,962**	**100**	**14,683**	**11.4**
Personal vehicle, total	112,736	87.9	118,124	86.3	122,664	85.8	9,928	8.8
Drives self	97,102	75.7	104,858	76.6	109,277	76.4	12,175	12.5
Carpool, total	15,634	12.2	13,266	9.7	13,387	9.4	-2,247	-14.4
2-person	NA	NA	10,294	7.5	10,266	7.2	NA	NA
3-person	NA	NA	1,733	1.3	1,824	1.3	NA	NA
4+ person	NA	NA	1,239	0.9	1,297	0.9	NA	NA
Public transportation	6,068	4.7	6,769	4.9	7,393	5.2	1,325	21.8
Taxicab	200	0.2	151	0.1	161	0.1	-39	-19.6
Bicycle	488	0.4	731	0.5	882	0.6	394	80.6
Motorcycle	142	0.1	267	0.2	296	0.2	153	107.6
Walks only	3,759	2.9	3,797	2.8	4,000	2.8	241	6.4
Other means	901	0.7	1,178	0.9	1,337	0.9	435	48.3
Works at home	4,184	3.3	5,924	4.3	6,229	4.4	2,045	48.9

KEY: NA = not applicable.

NOTES: Mode of transportation is the principal means of transportation used most frequently to get from home to work. If more than one means of transportation is used each day, those surveyed were asked to specify the one used for the longest distance during the trip from home to work. Component values may not add to totals due to rounding.

SOURCES: **2000**—U.S. Department of Commerce (USDOC), Census Bureau (CB), Decennial Census. *About Commuting (Journey to Work)*, available at www.census.gov as of March 2015. **2010 and 2013**—USDOC/CB, *American Community Survey 1-Year Estimates*, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-41, available at www.bts.gov as of March 2015.

The geography of commuting involves two opposing trends. While workers and their places of work have grown farther apart over recent decades, an increasing number of people are working at home. Part of the longer term growth in working at home had been masked in earlier decades by the number of farmers who worked where they also lived[3]. In 2010, 13.4 million people worked from home at least one day per week, an increase of about 4.2 million people (35.4 percent) from 1997. Home-based workers included those who worked exclusively at home as well as those who worked at both home and at a job site. Revealing a similar trend between 2000 and 2013, the *American Community Survey* reported an increase of over 2 million people (48.9 percent) who worked at home the week before the survey interview.



[3] American Association of State Highway and Transportation Officials (AASHTO), *Commuting in America 2013* (October 2013), available traveltrends.transportation.org as of March 2015.

Box 2-A National Surveys

National surveys conducted by multiple agencies throughout the Federal Government capture details on how and why people travel and use the transportation networks within the United States. This report utilizes many sources to draw a complete picture of passenger travel; however, the data collected as part of three surveys were especially useful for developing many of the tables, figures, and analyses: the *National Household Travel Survey* (NHTS), the *American Community Survey* (ACS), and the *American Time Use Survey* (ATUS). Included below are details on each of these surveys.

National Household Travel Survey (NHTS)

The NHTS, conducted by the U.S. Department of Transportation, is a telephone survey of the civilian, noninstitutionalized population of the United States. As such, an eligible household excludes motels; hotels; group quarters such as nursing homes, prisons, barracks, convents, or monasteries; and any living quarters with 10 or more unrelated roommates. The precursor to the NHTS was first administered in 1969 as the Nationwide Personal Transportation Survey (NPTS).

In 2001 the effort was expanded and renamed the National Household Travel Survey. Prior surveys were conducted in 1969, 1977, 1983, 1990, and 1995. The 2009 NHTS was conducted from March 2008 through May 2009. Travel days were assigned for all seven days of the week, including all holidays. The survey data were weighted to a 12-month period to produce annual estimates of travel.

For more information refer to http://nhts.ornl.gov.

American Community Survey (ACS)

The ACS, conducted by the U.S. Census Bureau, began in 1995 with a sample of counties across the country. Today the survey is conducted in all U.S. counties and in Puerto Rico, where it is called the Puerto Rico Community Survey. Designed as a replacement for the Census long form, the ACS is a continuous monthly survey and provides annual and multiyear estimates. Most of the questions in the survey are the same (or similar) to those of the Census 2000 long form. The ACS provides critical economic, social, demographic, and housing information to this country's communities every year.

One of the key transportation-related modules in the ACS is the "Journey to Work" section. To gauge how American's are traveling to work, the ACS asks respondents (each household member) what their usual way to work was for the week prior to the survey. Respondents are given a variety of modal options to choose from. In addition to journey to work information, the ACS also provides data on household vehicle availability, which is another key transportation variable.

Special tabulations, known as the Census Transportation Planning Package (CTPP), are also produced from the ACS data for transportation planners. The CTPP is a set of special tabulations designed by transportation planners using large sample surveys conducted by the Census Bureau. From 1970 to 2000, the CTPP and its predecessor, the Urban Transportation Planning Package, used data from the decennial census long form. The decennial census long form has now been replaced with a continuous survey called the ACS. Therefore, the CTPP now uses the ACS sample for the special tabulation.

For more information on the ACS, refer to http://www.census.gov/acs/. More information on the CTPP can be found at: http://www.fhwa.dot.gov/planning/census_issues/ctpp/.

American Time Use Survey (ATUS)

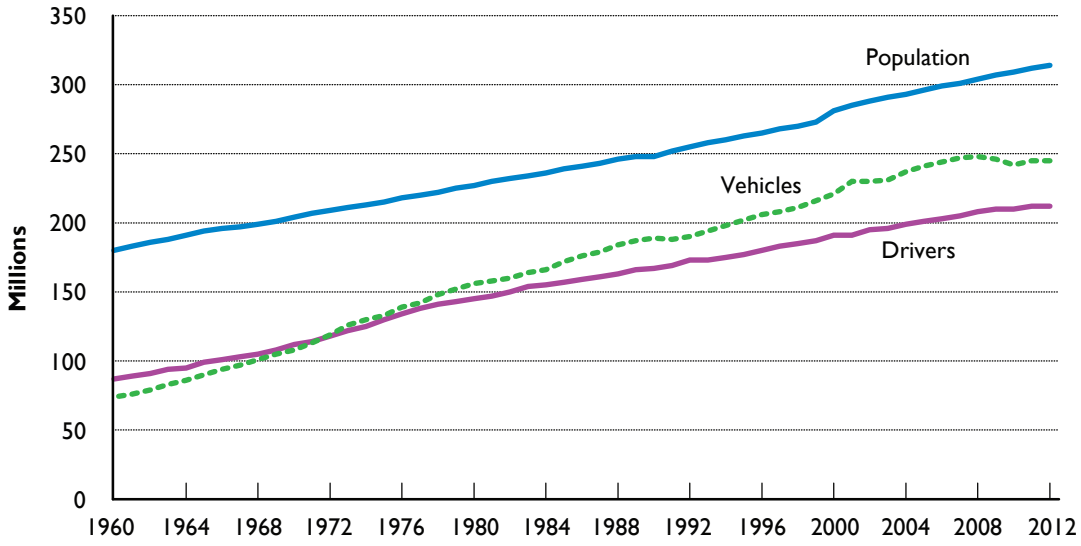
The ATUS provides nationally representative estimates of how, where, and with whom Americans spend their time, and is the only Federal survey providing data on the full range of nonmarket activities, from childcare to volunteering. In the time diary portion of the ATUS interview, survey respondents sequentially report activities they did between 4 a.m. on the day before the interview ("yesterday") until 4 a.m. on the day of the interview. For each activity, respondents are asked how long the activity lasted. Data collected in the ATUS includes the overall average time the population spends traveling on selected activities as well as averages for the subpopulation that engages in selected activities (e.g., omitting persons who did not participate in each activity).

ATUS data files are used by researchers to study a broad range of issues; the data files include information collected from over 136,000 interviews conducted from 2003 to 2013. For more information on the ATUS, refer to http://www.bls.gov/tus/news.htm.

Personal Vehicles

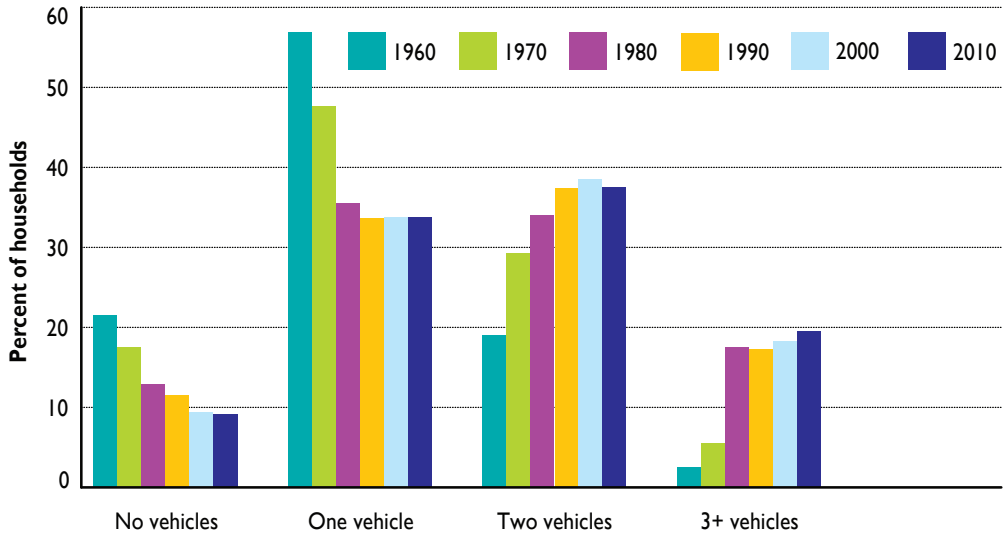
In 1960 the number of drivers exceeded the number of vehicles by 17.6 percent—there were 0.9 vehicles for every driver. By 1972 the number of registered vehicles surpassed the number of licensed drivers. This trend, in which the number of registered vehicles outnumbered licensed drivers, peaked in 2007 with 20.5 percent more vehicles than drivers. By 2012 that ratio had dropped, but vehicles still outnumbered drivers with about 1.2 vehicles per driver.

Figure 2-7 Licensed Drivers, Vehicle Registrations, and Resident Population: 1960–2012



SOURCE: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2012*. Chart DV-1C, available at www.fhwa.dot.gov/policyinformation/statistics/2012 as of March 2015.

Figure 2-8 Household Vehicle Ownership: 1960–2010

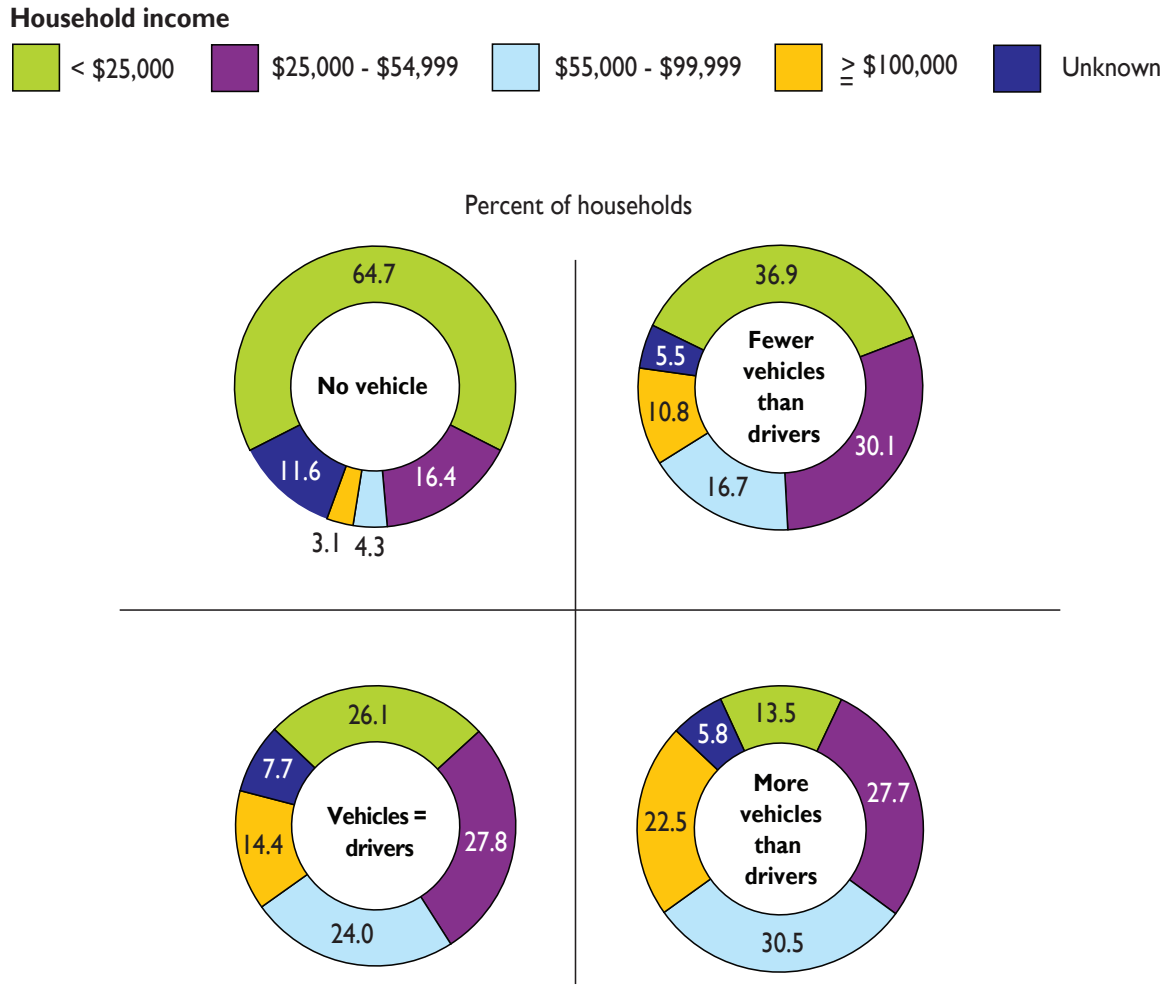


SOURCES: **1960–1990**–U.S. Department of Transportation, Volpe National Transportation Systems Center, *Journey-to-Work Trends in the United States and its Major Metropolitan Area, 1960–1990*. **2000**–U.S. Census Bureau, Decennial Census, table QT-04. **2010**–U.S. Census Bureau, *American Community Survey*, table CP04, as cited in Oak Ridge National Laboratory, *Transportation Energy Data Book*, table 8.5, available at cta.ornl.gov/data as of March 2015.

Although household size has fallen since 1960, household vehicle ownership has increased. Before 1980, the majority of households owned one vehicle. Today the majority of households own two or more vehicles. For the last decade, about 1 in 10 households did not own a vehicle. The number of households without vehicles has remained relatively steady, at 10 to 11 million, despite a growing number of households over the past 40 years.

The majority of these "zero-vehicle" households, 64.7 percent in 2009, had a combined household income of less than $25,000. On the other end of the spectrum, the majority of households with more vehicles than drivers, 80.7 percent, had incomes over $25,000.

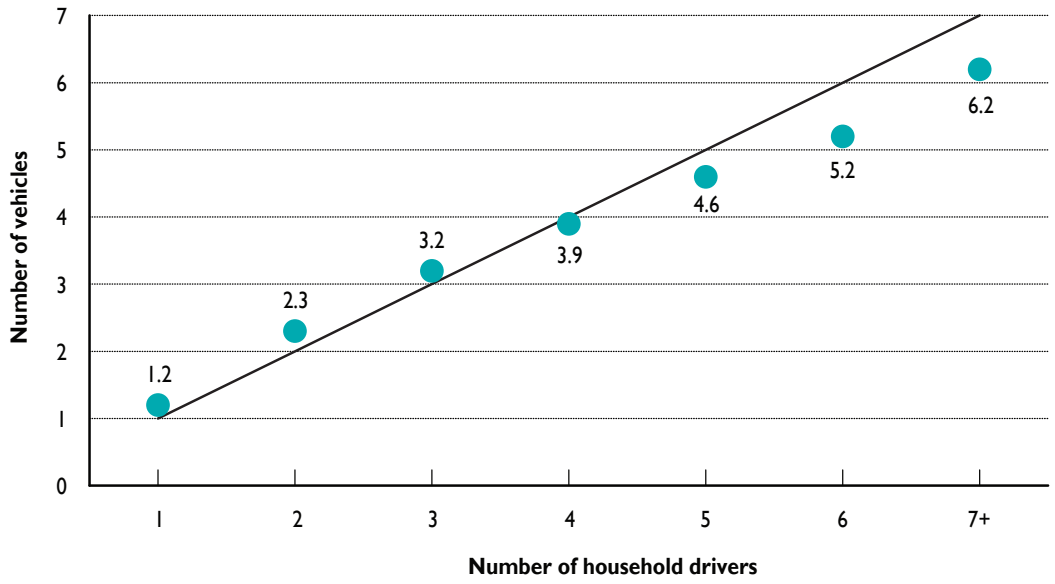
Figure 2-9 Vehicles per Driver by Household Income: 2009



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 as of March 2015.

Figure 2-10 Average Number of Vehicles per Household by Number of Household Drivers: 2009



SOURCE: U.S. Department of Transportation, Federal Highway Administration, *2009 National Household Travel Survey*, available at nhts.ornl.gov as of March 2015.

According to the 2009 *National Household Travel Survey*, 91.7 percent of households have three or less vehicles. Households with one to three drivers averaged more than one vehicle per driver, but households with four or more drivers average less than one vehicle per driver.

Pedestrians and Bicycles

Although walking and biking account for a small portion of passenger travel, 11.5 percent of trips and 1.0 percent of miles traveled, the *National Household Travel Survey* suggests that a growing number of Americans are walking and bicycling. In 2009 walking accounted for 10.4 percent of trips, and biking accounted for 1.0 percent of trips.

Nationwide, 3.4 percent of commuters walk or bike to work, accounting for 2.8 and 0.6 percent of workers, respectively. While less than 1.0 percent of Americans bike to work on a regular basis, the number of bicycle commuters has nearly doubled since 2000.

Walking and biking commuters make up a greater share of workers in urban areas. In principal cities within metropolitan areas, 4.3 percent of workers walk to work, compared with 2.4 percent of workers in suburban areas and 1.9 percent of workers outside metropolitan areas.

High rates of walking and biking are seen in several small and medium-sized cities, particularly those with significant university or college presence. For large cities, Boston, MA, had the highest rate of walking commuters (15.1 percent), while neighboring Cambridge, MA, had the highest rate of medium-sized cities (24.0 percent). Portland, OR, had the highest rate of bike commuters for large cities, and Boulder, CO, had the highest rate for medium cities.

Table 2-6 Top 5 Walk and Bike Commuting Cities by City Size: 2008–2012

Large cities (population ≥ 200,000)

Walk			Bike		
Rank	City	Percent of commuters	Rank	City	Percent of commuters
1	Boston, MA	15.1	1	Portland, OR	6.1
2	Washington, DC	12.1	2	Madison, WI	5.1
3	Pittsburgh, PA	11.3	3	Minneapolis, MN	4.1
4	New York, NY	10.3	4	Boise, ID	3.7
5	San Francisco, CA	9.9	5	Seattle, WA	3.4

Medium cities (population 100,000–199,999)

Walk			Bike		
Rank	City	Percent of commuters	Rank	City	Percent of commuters
1	Cambridge, MA	24.0	1	Boulder, CO	10.5
2	Berkeley, CA	17.0	2	Eugene, OR	8.7
3	Ann Arbor, MI	15.6	3	Berkeley, CA	8.1
4	Provo, UT	14.5	4	Cambridge, MA	7.2
5	New Haven, CT	12.4	5	Fort Collins, CO	6.8

Small cities (population 20,000–99,999)

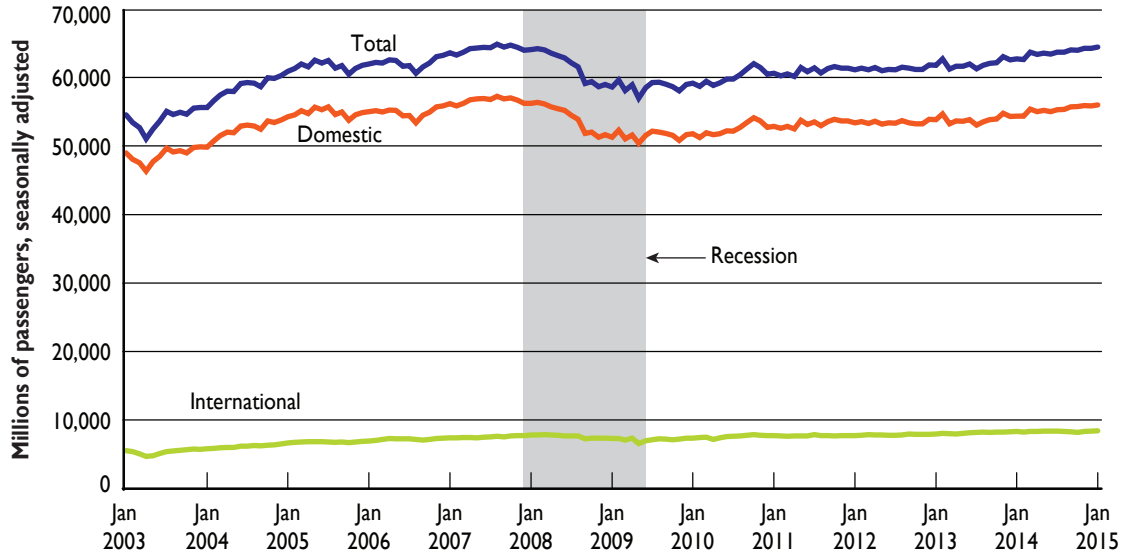
Walk			Bike		
Rank	City	Percent of commuters	Rank	City	Percent of commuters
1	Ithaca, NY	42.4	1	Davis, CA	18.6
2	Athens, OH	36.8	2	Key West, FL	17.4
3	State College, PA	36.2	3	Corvallis, OR	11.2
4	North Chicago, IL	32.2	4	Santa Cruz, CA	9.2
5	Kiryas Joel, NY	31.6	5	Palo Alto, CA	8.5

SOURCE: U.S. Department of Commerce, Census Bureau, *Modes Less Traveled—Bicycling and Walking to Work in the United States: 2008–2012*, available at www.census.gov as of April 2015.

Air Travel

Between January 2003 and January 2015, U.S. airlines' total (domestic and international) passenger enplanements rose 18.1 percent. Enplanements of 64.4 million in January 2015 were the highest since the recession ended in June 2009 and the fourth highest of all-time. During this period, growth of international enplanements (52.3 percent) outpaced domestic enplanements (14.3 percent). While domestic and total enplanements remain below prerecession levels, passengers are traveling longer distances. Passengers traveled 72.8 billion revenue passenger-miles in January 2015, the second highest of all-time, and 0.7 percent less than the all-time record set in the previous month.

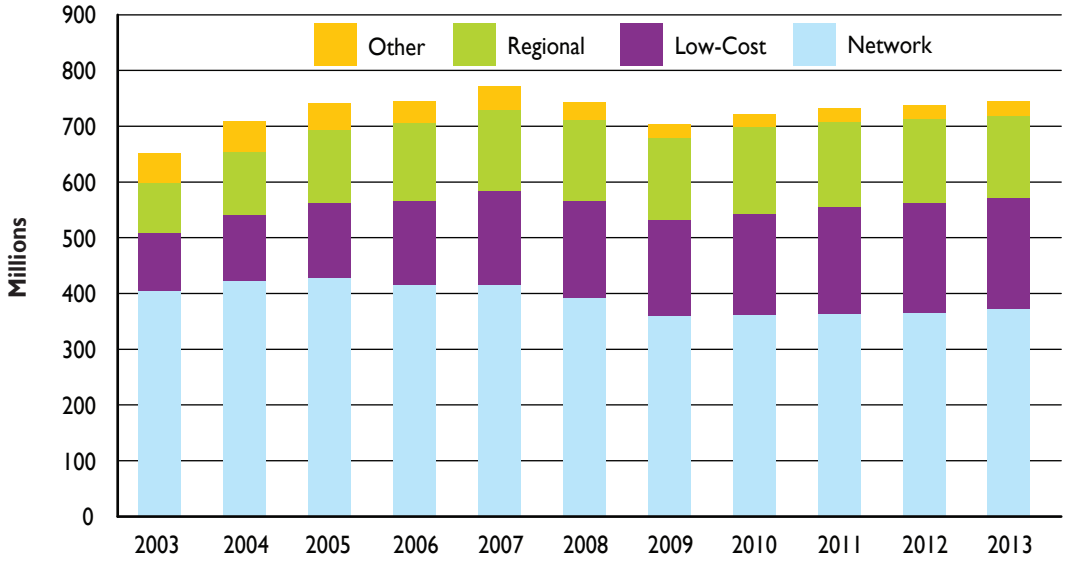
Figure 2-11 U.S. Airline Passenger Enplanements: January 2003–January 2015



NOTE: Includes enplanements on scheduled services. International enplanements include only U.S. carriers.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Market Data*, available at www.transtats.bts.gov as of April 2015.

Figure 2-12 U.S. Airline Passengers by Carrier Type: 2003–2013



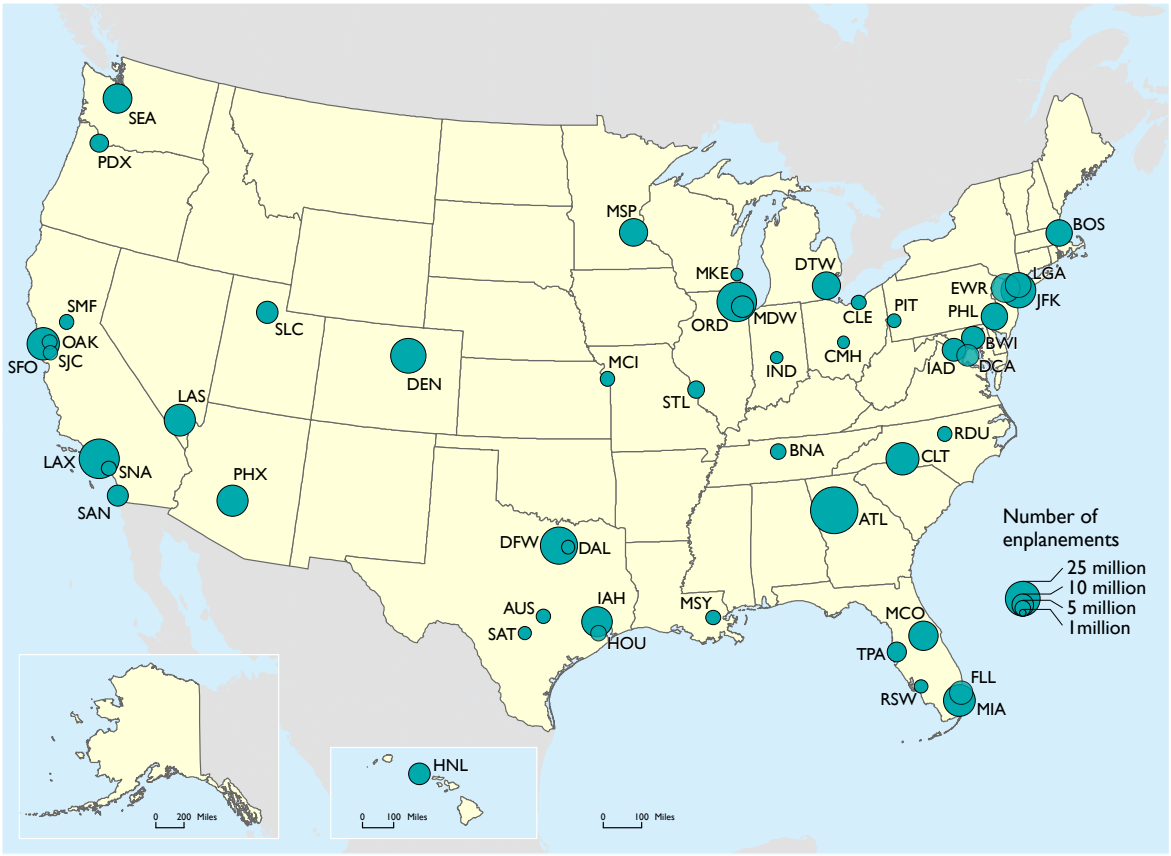
NOTES: Network airlines include United, Continental, Continental Micronesia, Delta, American, US Airways, Alaska, America West, and Northwest. Low-Cost airlines include Southwest, AirTran, JetBlue, Spirit, Frontier, Virgin America, and Allegiant. Regional airlines include Envoy, SkyWest, ExpressJet, Atlantic Southeast, Endeavor, Mesaba , Republic, Horizon, Air Wisconsin, Mesa, Shuttle America, Chautaqua, PSA, PSA, Compass, GoJet, Executive, Colgan, Comair, and Lynx. Other airlines generally operate within specific niche markets.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market Data, available at www.transtats.bts.gov as of June 2015.

Network airlines, which operate a significant portion of their flights using at least one hub where connections are made for flights to down-line destinations or spoke cities, carry the largest portion of U.S. airline passengers. In 2013 the top three network airlines—United, Delta, and American—together carried 39.7 percent of total passengers traveling on U.S. airlines. The share of network airline passengers, however, has declined over the last decade, from 62.0 percent in 2003 to 50.0 percent in 2013. Meanwhile, low-cost airlines have carried an increasing number of passengers. In 2003 these airlines—Southwest, AirTran, JetBlue, Spirit, Frontier, Virgin America, and Allegiant—carried 16.1 percent of U.S. airline passengers. By 2013 these same low-cost airlines carried 26.9 percent of passengers.

The busiest U.S. airport in 2013, measured by the number of enplanements, was Hartsfield–Jackson Atlanta International Airport, followed by Los Angeles International Airport. The top 50 busiest airports accounted for 84.0 percent of the 743.2 million annual U.S. passenger enplanements.

Figure 2-13 Enplanements at the Top 50 U.S. Airports: 2013



NOTES: Includes passengers enplaned on U.S. carrier scheduled domestic and international service and foreign carrier scheduled international service from the United States.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Market Data*, available at www.transtats.bts.gov as of April 2015.

Table 2-7 Top 10 Domestic City Markets by Number of Enplanements: 2013 and 2014

2014 rank	Market	Millions of enplaned passengers		Percent change, 2013–2014
		2013	2014	
1	Atlanta, GA	40.4	41.4	2.5
2	New York City, NY	38.0	38.6	1.5
3	Chicago, IL	36.6	38.1	4.1
4	Los Angeles, CA	33.5	34.8	3.9
5	Dallas/Fort Worth, TX	29.8	31.8	6.5
6	Washington, DC	27.6	27.5	-0.4
7	San Francisco, CA	25.8	27.1	5.1
8	Denver, CO	24.5	24.9	1.4
9	Houston, TX	19.9	20.8	4.1
10	Charlotte, NC	19.8	20.0	0.8

NOTE: Enplaned passengers on U.S. carriers only. A city market may be served by more than one airport.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Domestic Market Data*, available at www.transtats.bts.gov as of April 2015.

From 2013 to 2014, all but one of the top 10 domestic markets experienced an increase in enplaned passengers. Atlanta, served by three airports, was the top market with 41.4 million domestic enplanements in 2014. The largest growth was seen in the Dallas/Fort Worth market, up 6.5 percent from 2013 to 2014. Washington, DC, experienced a 0.4 percent decline in enplanements.

Table 2-8 Top 10 Airlines by Domestic Enplanement: 2013 and 2014

2014 Rank	Airline	Millions of enplaned passengers		Percent change, 2013–2014
		2013	2014	
1	Southwest	115.3	126.7	9.9
2	Delta	98.4	106.2	8.0
3	American	65.1	66.4	2.0
4	United	65.1	64.7	-0.7
5	US Airways	50.0	50.6	1.3
6	ExpressJet	29.9	28.0	-6.4
7	JetBlue	25.8	26.4	2.4
8	SkyWest	25.5	26.0	1.8
9	Alaska	17.9	19.2	7.2
10	Envoy	16.1	14.7	-8.5

NOTE: Southwest and AirTran began reporting jointly in January 2015 following their 2011 merger announcement.

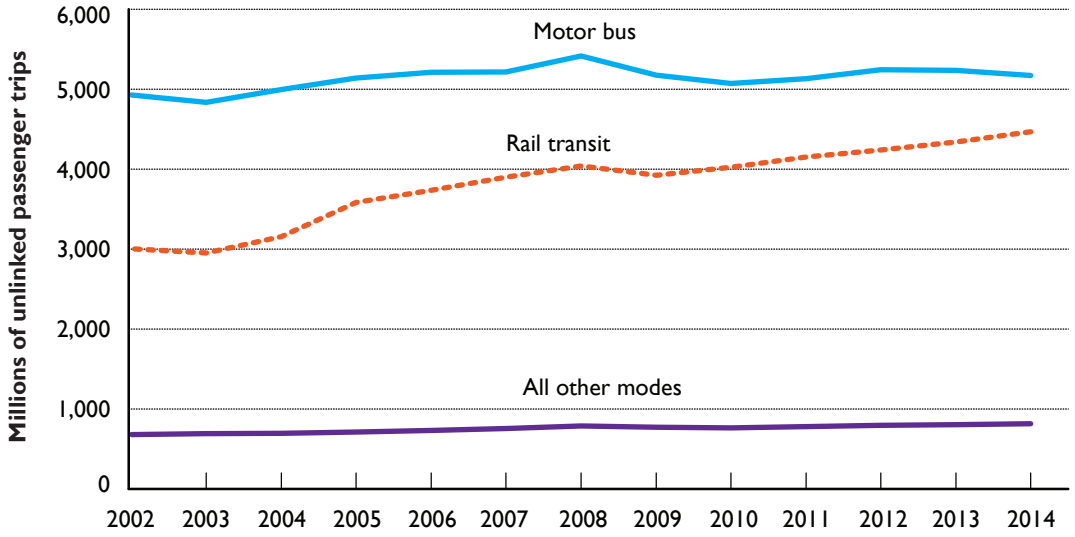
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Domestic Market Data*, available at www.transtats.bts.gov as of March 2015.

Southwest carried the most passengers from domestic airports of any airline in 2013 and 2014, carrying 9.9 percent more passengers in 2014 than in 2013. Delta retained its second place ranking with an 8.0 percent increase in domestic enplanements. Of the top 10 airlines, the largest percentage declines were reported by 2 regional airlines that provide contract service for mainline carriers; Envoy was down 8.5 percent and ExpressJet was down 6.4 percent.

Public Transit

Transit riders in the United States took 10.5 billion unlinked passenger trips[4] in 2014. About half, 49.5 percent, of these trips occurred on motor buses, and 42.4 percent occurred on rail transit modes (commuter rail, heavy rail, light rail, and streetcar). Since 2000 the number of transit trips has steadily increased, driven largely by travel on rail transit modes.

Figure 2-14 Transit Ridership: 2002–2014

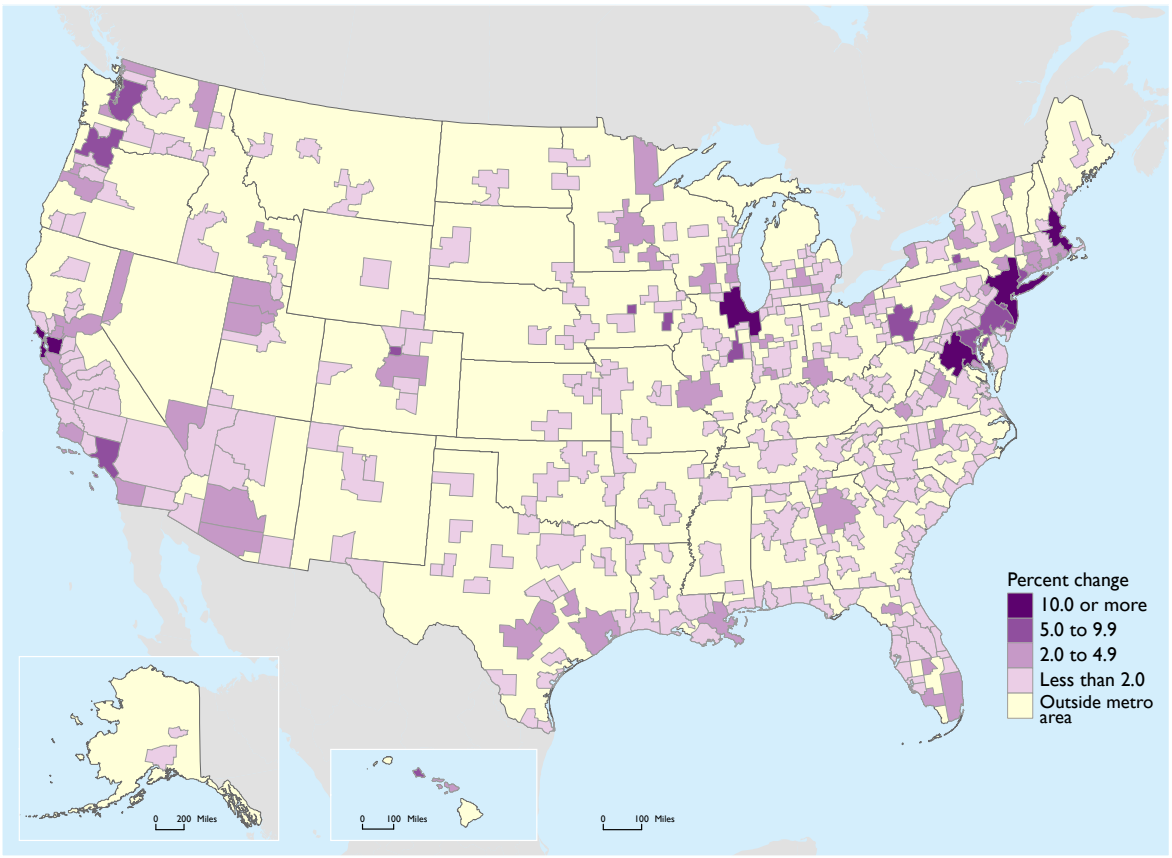


NOTES: *Motor bus* includes local motor bus, commuter bus, and bus rapid transit. *Rail transit* includes heavy rail, light rail, and streetcar rail. *All other modes* includes commuter rail, demand response and demand response taxi, trolley bus, van pool, ferry boat, monorail and automated guideway, cable car, and inclined plane. Starting in 2012, data for Small System Waiver agencies that do not list a mode are reported under *Motor bus*. Data reported under the hybrid rail mode are reported under classifications used prior to 2012.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, *National Transit Database*, as cited in USDOT, Bureau of Transportation Statistics, *Multimodal Transportation Statistics*, available at www.bts.gov as of March 2015.

[4] Unlinked passenger trips are 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.

Figure 2-15 Percent Commuting by Public Transportation in Metro Areas: 2009–2013



SOURCE: U.S. Department of Commerce, Census Bureau, *2009-2013 American Community Survey 5-Year Estimates*, available at www.census.gov/acs as of March 2015.

National trends in transit use, however, do not tell the full picture of travel in individual metropolitan areas. Commuting by transit makes up a greater share of trips in larger metropolitan areas: 12.7 percent in areas with populations over 5 million, 5.8 percent in areas between 2.5 and 5 million, and 2.5 percent in areas between 1 and 2.5 million. At the highest extreme, 58.7 percent of workers living in the borough of Manhattan, in New York City, commute by transit and another 20.9 percent walk.

Motorcoach and Intercity Bus

The motorcoach industry, including charter, tour, sightseeing, airport shuttle, commuter, scheduled, and special operations services, provided 605 million person-trips in the United States and Canada in 2013, down 5.1 percent from 2012. The number of motorcoach carriers fell 3.9 percent, and the number of coaches fell 6.8 percent. This reduction in size was largely due to companies that went out of business, merged with other companies, or were acquired by larger companies. Although the motorcoach industry decreased in size, the number of passenger trips per motorcoach increased every year since 2010. The average motorcoach completed 10.8 percent more passenger trips in 2013 than in 2010.

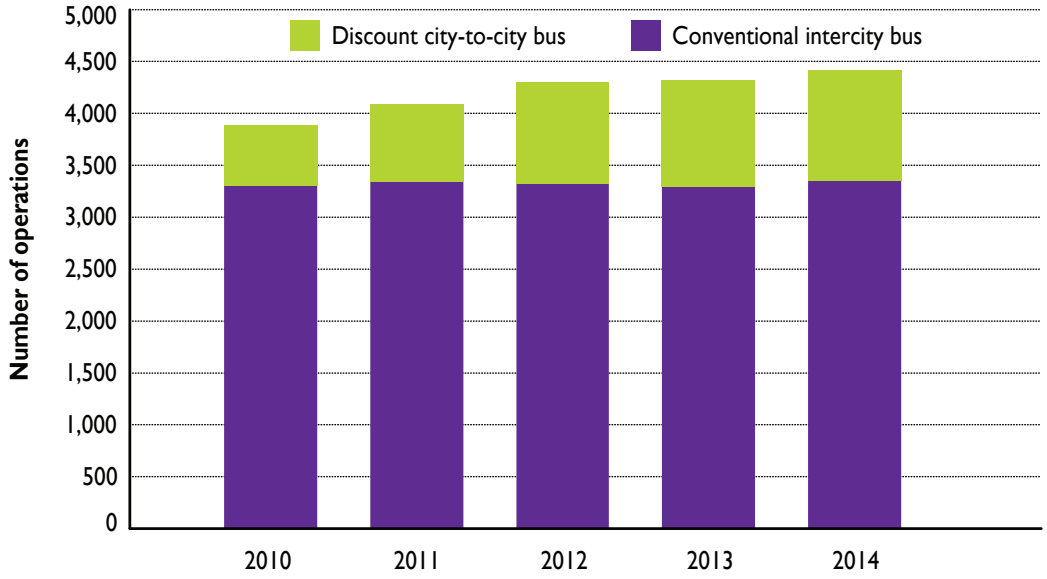
Table 2-9 Motorcoach Carriers, Coaches, Trips, Passenger-Miles, and Trips: 2010–2013

	2010	2011	2012	2013
Carriers	4,011	3,984	3,954	3,801
Coaches	40,709	40,141	39,607	36,903
Passenger trips (millions)	601	627	637	605
Passenger trips per coach	14,800	15,600	16,100	16,400
Passenger miles (billions)	69	76	76	63
Passenger miles per coach	1,703,200	1,897,400	1,912,500	1,710,000

NOTE: *The Motorcoach Census* measures the size and activity of the motorcoach industry in the U.S. and Canada. The survey includes motorcoach charter services, tour and sightseeing services, and passenger motorcoach transportation over regular routes and on regular schedules (airport shuttles, commuter buses, and scheduled intercity and rural transportation services).

SOURCE: American Bus Association, Motorcoach Census, available at www.buses.org as of April 2015.

Figure 2-16 Intercity Bus Operations: 2010–2014



NOTES: Intercity bus operations are akin to a re-occuring flight in air travel and may include service between several cities (e.g., New York-Washington, D.C.). The *Intercity Bus Database* excludes Chinatown operators, numerous Hispanic operators, casino routes, and airport shuttle operations. Discount city-to-city bus consists of express-oriented carriers operating from downtown districts, for example, Megabus and Boltbus.

SOURCE: Chaddick Institute for Metropolitan Development, DePaul University, *Intercity Bus Database* as of March 2015.

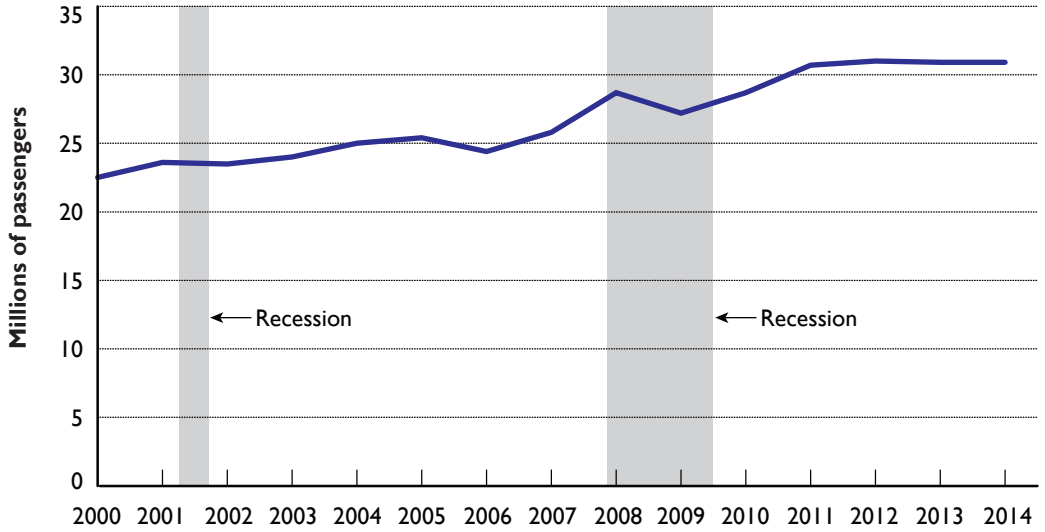
Despite a decline in several measures of the motorcoach industry as a whole, intercity bus travel expanded at a steady pace between 2010 and 2014. During this period, the number of intercity bus operations, which include conventional and discount city-to-city bus operations, grew 13.2 percent.

Conventional service providers, such as Greyhound and Peter Pan, consistently provided over 3,000 operations per year between 2010 and 2014. While these conventional services accounted for the majority of operations, 76 percent in 2014, discount city-to-city bus operations nearly doubled in the same period. Together, Megabus and BoltBus accounted for over 80 percent of discount city-to-city bus operations.

Passenger Rail

Amtrak is the primary operator of intercity passenger rail service in the United States. Ridership on Amtrak has been growing since 2000, reaching a record 31 million passengers in fiscal year 2012.

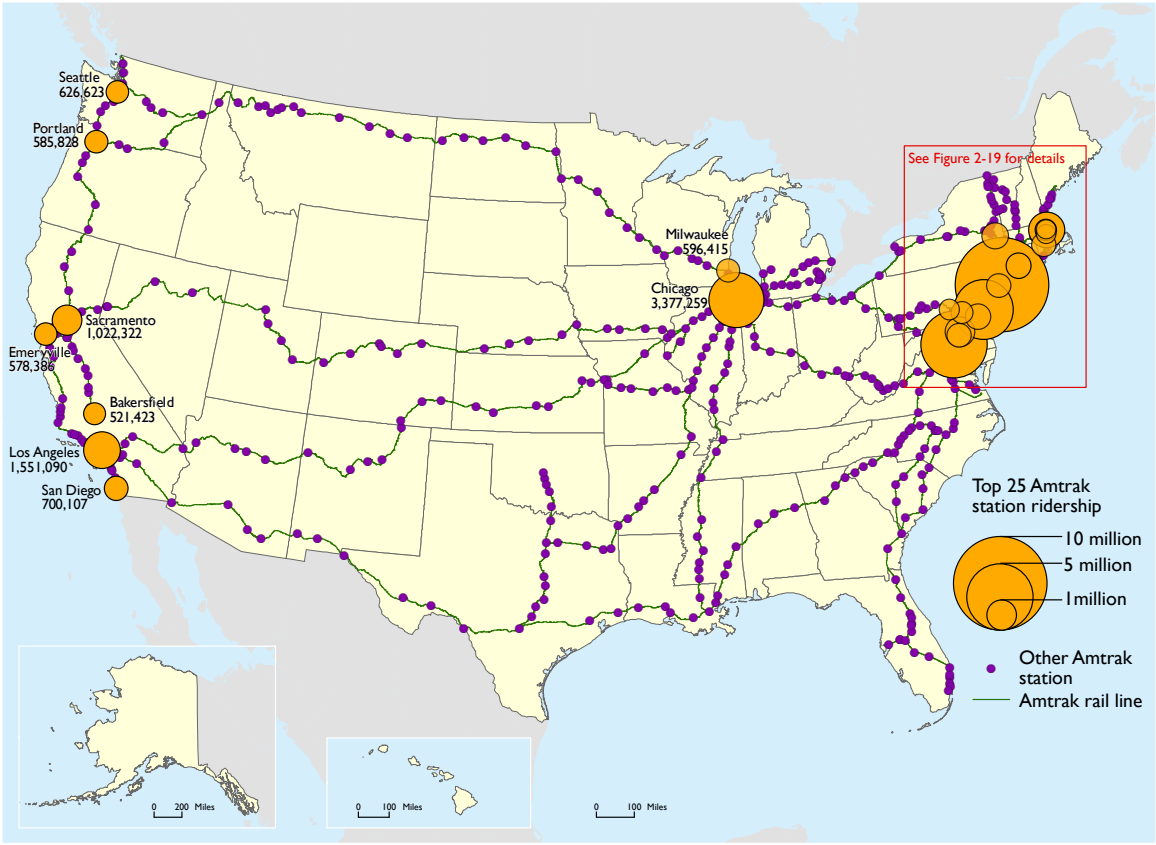
Figure 2-17 Amtrak Ridership: FY2000–FY2014



SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety Analysis, as cited in USDOT, Bureau of Transportation Statistics, *Multimodal Transportation Statistics*, available at www.bts.gov as of March 2015.

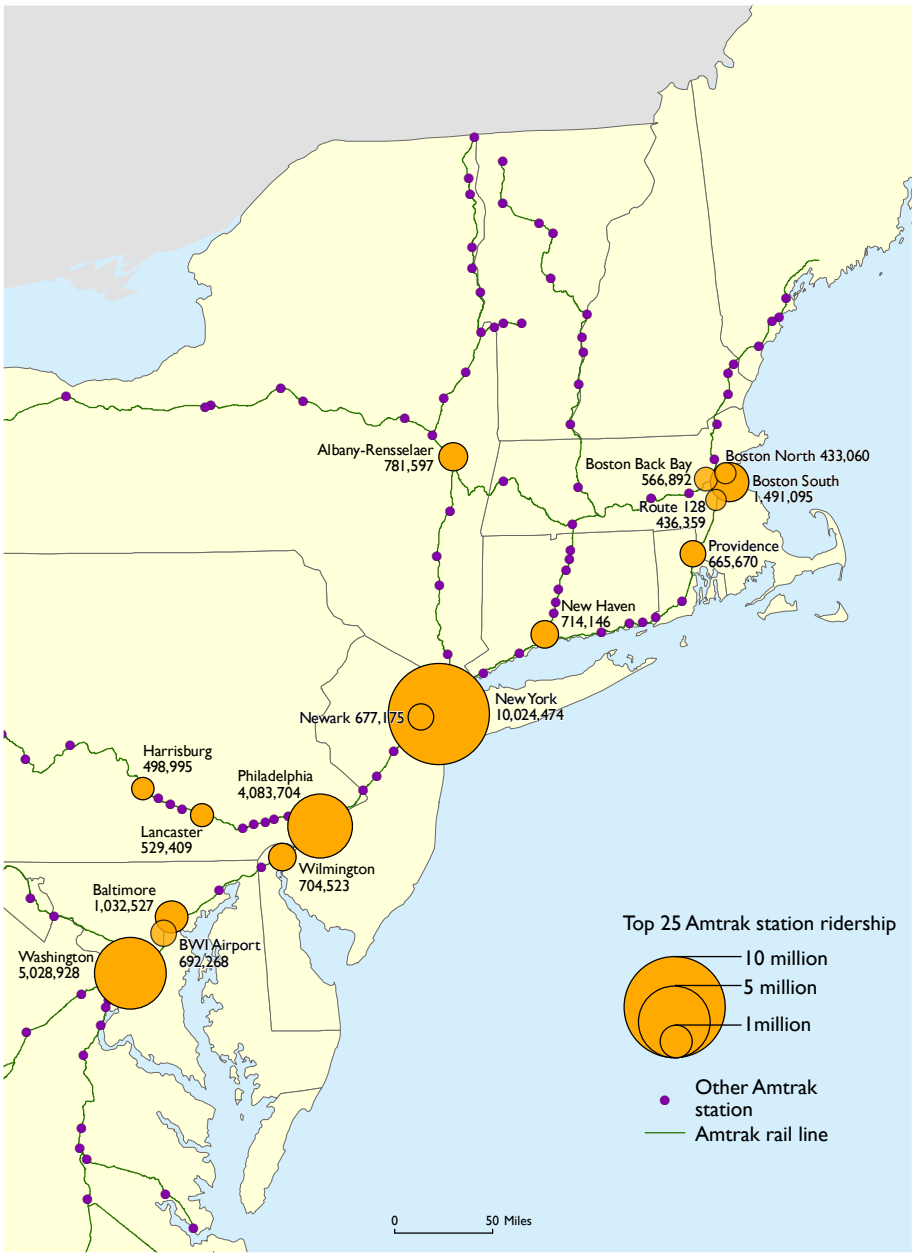
In fiscal year 2014, 12 of the Nation's 25 busiest Amtrak stations served the Northeast Corridor. Passengers along the Northeast Corridor accounted for well over one-third of systemwide ridership. The busiest station within the entire Amtrak network was New York City's Penn Station. Ridership was also high in Chicago as well as at several locations in California and the Pacific Northwest.

Figure 2-18 Top 25 Busiest Amtrak Stations: FY2014



SOURCE: Amtrak, *National Fact Sheet* and *State Fact Sheets*, available at www.amtrak.com as of March 2015.

Figure 2-19 Amtrak Stations Along the Northeast Corridor: FY2014

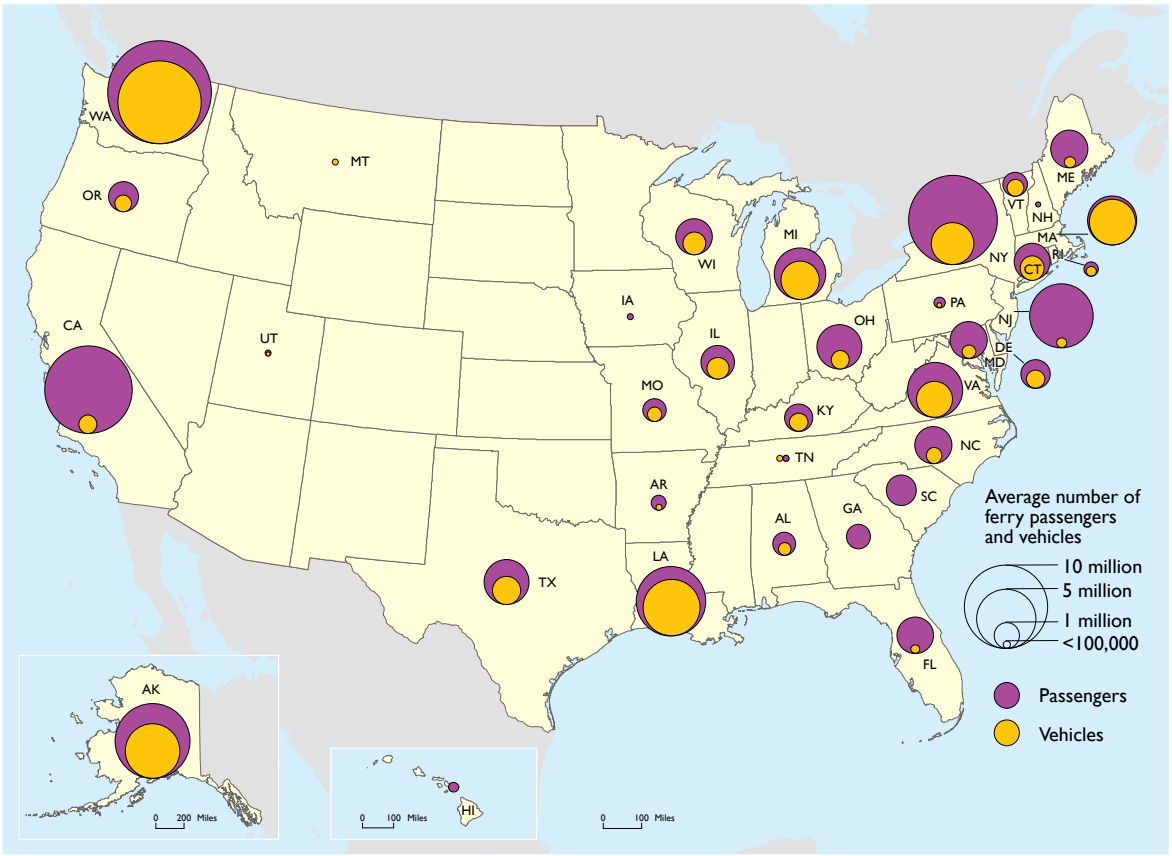


SOURCE: Amtrak, *National Fact Sheet* and *State Fact Sheets*, available at www.amtrak.com as of March 2015.

Waterborne Travel

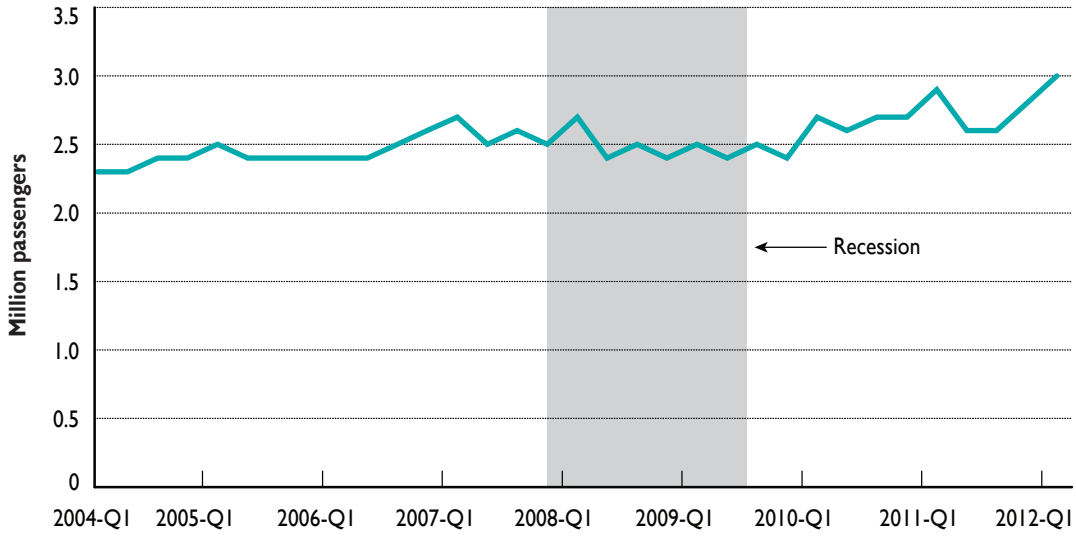
U.S. ferries carried an estimated 103 million passengers and just over 37 million vehicles in 2009. Washington, New York, and California had the greatest number of ferry passengers, accounting for 15.0, 6.8, and 7.7 percent of total passengers, respectively. Ferries in Washington carried the greatest proportion of vehicles as a percent of total vehicle boardings (26.9 percent), followed by Louisiana (12.4 percent) and Alaska (11.6 percent). The states with the most ferry vessels were California (62 vessels), New York (56 vessels), Massachusetts (52 vessels), and Washington (46 vessels). Nearly all of the vessels carried passengers (93.4 percent), while less than half carried vehicles (43.6 percent), and less than a quarter carried freight (22.2 percent).

Figure 2-20 Average Number of Ferry Passengers and Vehicles: 2009



SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Census of Ferry Operators*, as of April 2015.

Figure 2-21 North American Cruise Passengers: 2004-Q1 to 2012-Q1



SOURCE: U.S. Department of Transportation, Maritime Administration, *Cruise Statistics*, available at www.marad.dot.gov/library_landing_page/data_and_statistics/Data_and_Statistics.htm as of March 2015.

The North American cruise industry embarked 17.6 million passengers in 2013, a 3.9 percent increase from 2012[5]. While the number of cruise passengers dipped slightly in 2008 and 2009, passenger levels returned to prerecession levels by 2010 and have continued to grow.

[5] Cruise Lines International Association (CLIA), *The Contribution of the North American Cruise Industry to the U.S. Economy in 2013* (September 2014), available at www.cruising.org as of April 2015.

Table 2-10 North American Cruises by Destination: 2005, 2010, and 2011

Destination	2005	2010	2011
Total	**4,462**	**4,216**	**4,222**
Caribbean	2,268	2,069	2,012
Western Caribbean	1,335	1,156	1,141
Southern Caribbean	401	388	443
Eastern Caribbean	532	525	428
Bahamas	591	791	879
Alaska	487	443	441
Mexico (Pacific)	491	326	269
Bermuda	137	115	139
Canada/New England	99	113	118
Hawaii	161	87	99
Transatlantic	90	87	98
Trans-Panama Canal	83	111	95
Pacific Coast	32	22	28
South Pacific/Far East	11	21	23
South America	7	23	16
Cruise to nowhere	5	8	5

NOTES: *Western Caribbean* – West of Haiti, includes ports in Mexico, Central America, and Columbia. *Southern Caribbean* – South of St. Martin to northern coast of South America as far as Aruba. *Eastern Caribbean* – Southeast of Bahamas to St. Martin, and west of St. Martin to Haiti.

SOURCE: U.S. Department of Transportation, Maritime Administration, *Cruise Statistics*, available at www.marad.dot.gov/library_landing_page/data_and_statistics/Data_and_Statistics.htm as of March 2015.

In 2011 the top North American cruise destination was the Western Caribbean followed by the Bahamas, accounting for 27.0 percent and 20.8 percent of total cruise ship visits, respectively. Between 2005 and 2011, visits to the Bahamas almost doubled, with 48.7 percent more visits. Mexico saw the greatest decline in cruise ship traffic with almost half as many visits in 2011 as in 2005.

Foreign Travel

In 2014 U.S residents made 68.3 million overnight trips to other countries, a 12.3 percent increase from 2000. Over half, 54.9 percent, of overnight international travel by U.S. residents was to neighboring countries: 25.4 million visits to Mexico and 12.1 million visits to Canada. The busiest month for overnight international trips in 2014 was July (7.6 million), and the least busy was February (4.4 million).

U.S. residents made 30.8 million overnight visits to countries outside of North America in 2014. Between 2000 and 2014, travel to overseas countries grew by 14.6 percent. Travel to Europe fell by 9.4 percent, while visits to the Middle East nearly tripled since 2000.

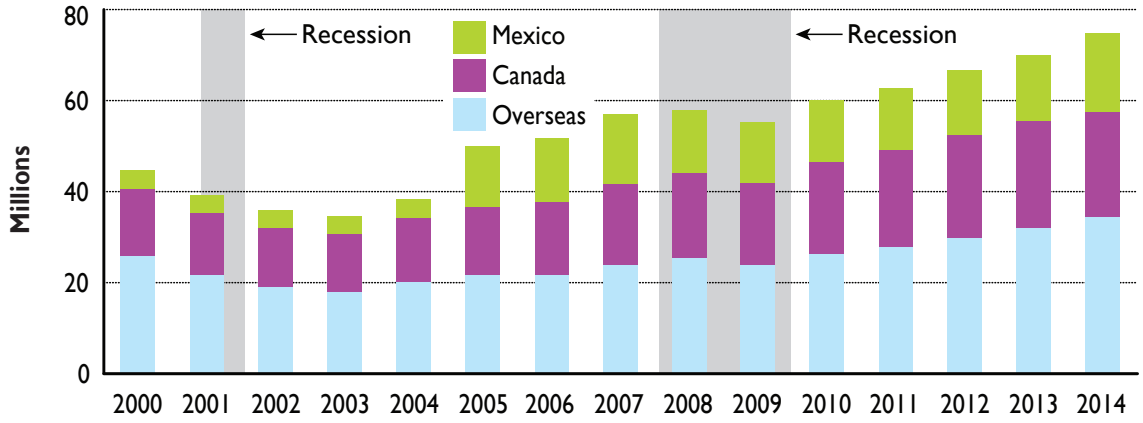
Table 2-11 Top 10 International Travel Destinations Visited by U.S. Residents: 2000 and 2014

Region	Thousands of travelers: 2000	Rank	Rank	2014	Region	Percent change, 2000 to 2014
Mexico	18,849	1	1	25,410	Mexico	34.8
Canada	15,114	2	2	12,113	Canada	-19.9
Europe	13,122	3	3	11,892	Europe	-9.4
Caribbean	4,682	4	4	7,172	Caribbean	53.2
Asia	4,001	5	5	4,509	Asia	12.7
South America	1,880	6	6	2,697	Central America	67.9
Central America	1,607	7	7	1,780	Middle East	298.5
Oceania	886	8	8	1,772	South America	-5.8
Middle East	447	9	9	601	Oceania	-32.1
Africa	230	10	10	358	Africa	55.6
Total	**60,816**			**68,303**	**Total**	**12.3**

NOTE: Blue shading denotes largest percent change.

SOURCE: U.S. Department of Commerce, International Trade Administration, Office of Travel & Tourism Industries, *Outbound Overview*, available at travel.trade.gov/outreachpages as of March 2015.

Figure 2-22 Foreign Visits by Main Markets: 2000–2014



NOTES: Data prior to 2005 are not comparable to later years due to a change in methodology for counting visitors from Mexico. Data for 2014 are not comparable to previous years due to the inclusion of one-night stay overseas travelers in 2014.

SOURCE: U.S. Department of Commerce, Office of Travel and Tourism Industries, *U.S. Monthly Arrivals Trend Line: Overseas, Canada, Mexico & International,* available at travel.trade.gov as of March 2015.

A record 74.7 million foreign travelers visited the United States in 2014, up 6.9 percent from the previous year. International visitation grew every year since the end of the recession in 2009. The largest visitor markets in 2014 were Canada (30.7 percent) and Mexico (23.2 percent).

Travelers from countries outside of North America accounted for 46.1 percent of international visitation in 2014. The top tourist-generating countries outside North America were the United Kingdom (5.3 percent), Japan (4.8 percent), Brazil (3.0 percent), and China (2.9 percent). Combined with Canada and Mexico, these six markets accounted for 70.0 percent of all 2014 international visits. In 2000 China was the 24th largest market for international visitors to the United States. By 2014 visitation from China increased by over 700 percent, and the country is now the 6th largest market.

Table 2-12 Top 10 Tourist-Generating Countries: 2000 and 2014

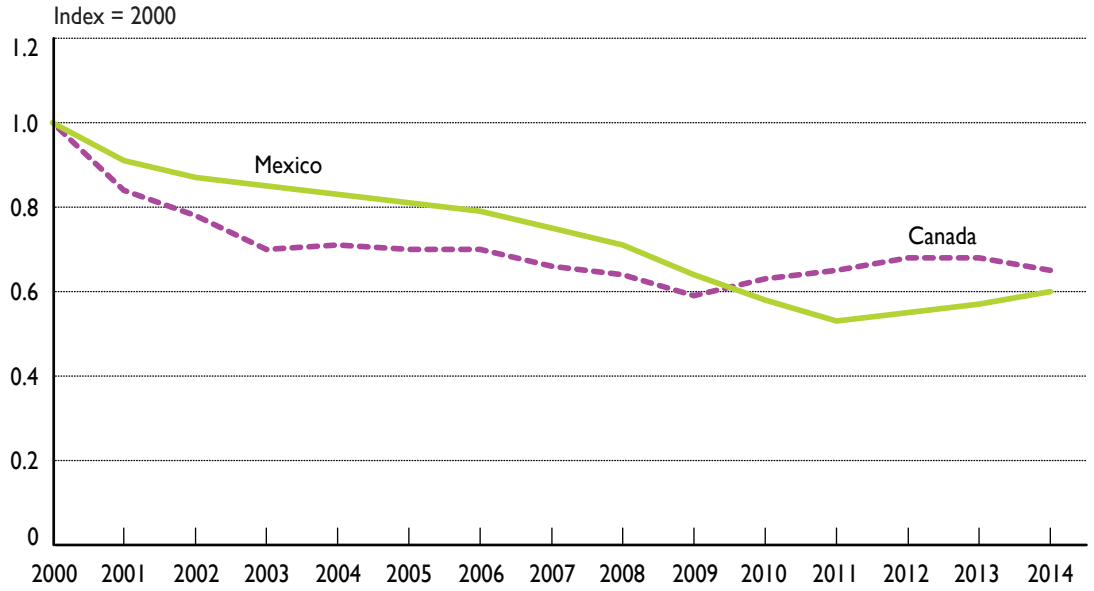
	Thousands of travelers					
Country	**2000**	**Rank**	**Rank**	**2014**	**Country**	**Percent change, 2000 to 2014**
Canada	14,594	1	1	22,975	Canada	57.4
Mexico	10,322	2	2	17,334	Mexico	67.9
Japan	5,061	3	3	3,973	United Kingdom	-15.5
United Kingdom	4,703	4	4	3,579	Japan	-29.3
Germany	1,786	5	5	2,264	Brazil	207.0
France	1,087	6	6	2,188	China[a]	777.5
Brazil	737	7	7	1,969	Germany	10.2
South Korea	662	8	8	1,625	France	49.4
Australia	540	12	9	1,450	South Korea	119.0
China	249	24	10	1,276	Australia	136.5
Total	**50,890**			**74,729**	**Total**	**46.8**

[a]Arrivals for 2014 excludes Hong Kong.

NOTES: Blue shading denotes largest percent change. Beginning in 2014, overseas data include one-night stay travelers.

SOURCE: U.S. Department of Commerce, International Trade Administration, Office of Travel & Tourism Industries, *International Visitation in the United States*, available at travel.trade.gov/outreachpages as of March 2015.

Figure 2-23 Index of Incoming Persons Crossing U.S. Land Borders: 2000–2014



NOTES: Truck crossings are not included because they are primarily freight related.

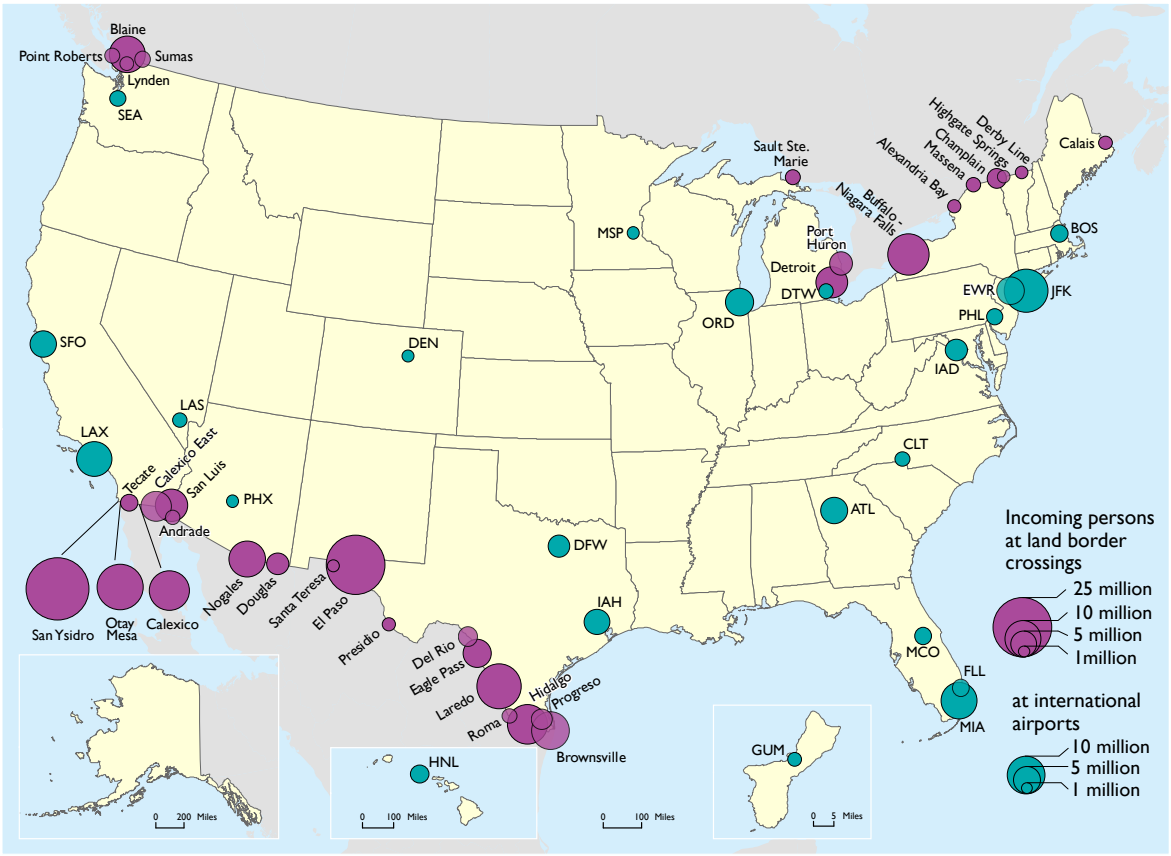
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing/Entry Database*, available at transborder.bts.gov/programs/international/transborder/TBDR_BC/TBDR_BC_Index.html as of March 2015.

Although Canada and Mexico are the largest visitor markets, incoming persons at the U.S.-Canada and U.S.-Mexico land borders have declined since 2000. In 2014, 73.5 percent of incoming person crossings were along the U.S.-Mexico border, and 26.5 percent of crossings occurred through ports of entry along the U.S.- Canada border. Along the U.S.-Canada Border, person crossings reached a low of 56.6 million crossings in 2009 before rising to 62.6 million crossings in 2014.

In 2014 more than one million persons crossed into the United States through 33 border ports of entry: 19 along the U.S.–Mexico border and 14 along the U.S.–Canada border. Texas is home to 11 Customs border ports of entry with a total of 80.3 million person crossings. Along the U.S.–Mexico border, California had the second most person crossings with 67.9 million persons crossing at 6 ports of entry. Along the U.S.–Canada border, the State of New York had the greatest number of crossings with 19.7 million persons crossing at 6 ports of entry. Washington had the second highest number of crossings with 16.3 million persons crossing at 15 ports of entry.

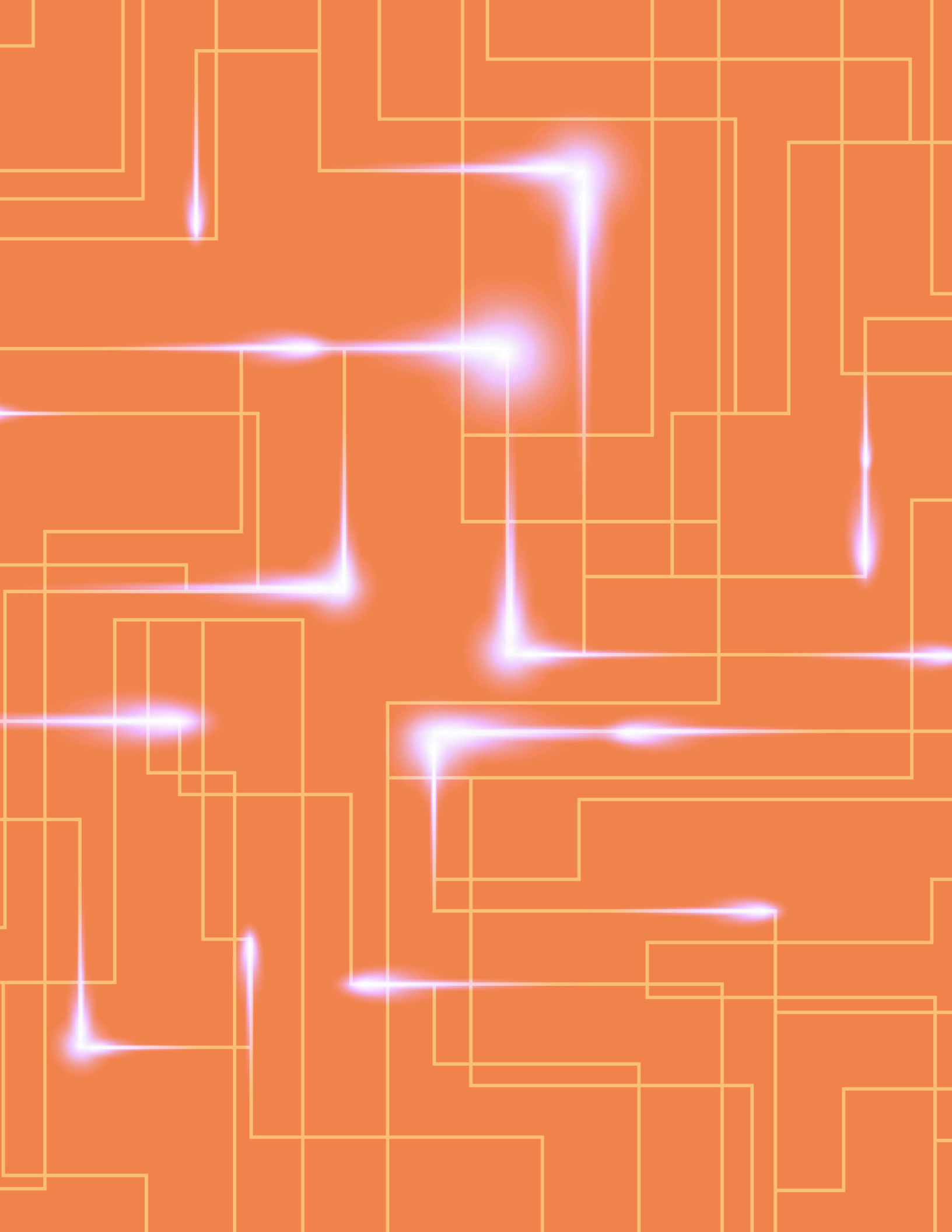
There were 23 airports in 2014 with more than one million incoming passengers from international origins. New York (JFK), Miami, and Los Angeles airports received the most international passengers, with 13.6, 9.6, and 8.9 million passengers, respectively. From 2013 to 2014, the largest increase in international passengers was at Fort Lauderdale–Hollywood International Airport, up 18.4 percent, with Denver International Airport second at 10.7 percent. Although ranking second for the most incoming international passengers, Miami International Airport had the greatest decrease, down 5.0 percent.

Figure 2-24 Persons Traveling Into the United States at Land Border Crossings and International Airports: 2014



NOTE: Truck crossings are not included because they are primarily freight related.

SOURCES: **Person crossings**–U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing/Entry Database*, available at transborder.bts.gov/programs/international/transborder/TBDR_BC/TBDR_BC_Index.html as of March 2015. **Air passengers**–U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Data*, available at www.transtats.bts.gov as of March 2015.



3 Passenger Transportation System

Overview of the Passenger Transportation System

The passenger transportation system is a network of highways, railroads, airports, public transit systems, and waterways that serves over 300 million U.S. residents and foreign visitors. It comprises more than 4 million miles of roads, 11,000 miles of transit rail directional route-miles, 21,000 miles of Amtrak routes, 11,000 airports, and about 25,000 miles of navigable waterways.

Table 3-1 Passenger Transportation Infrastructure: 2000, 2010, and 2013

	2000	2010	2013
Public roads (miles)	3,936,222	4,067,076	4,115,462
Public road lanes[a] (miles)	8,224,245	8,581,158	8,656,070
Transit rail[b] (miles)	7,601	10,744	11,190
Amtrak[c] (miles)	23,000	21,178	U
Airports	19,281	19,802	19,453
Navigable waterways[d] (miles)	25,000	25,000	25,000

[a]Measured in lane-miles. [b]Measured in directional route-miles. Includes commuter rail, heavy rail, and light rail. [c]Miles of road operated by Amtrak. Amtrak, freight railroads, and commuter rail networks share common trackage. [d]Estimated length of domestic waterways.

KEY: U = Data are unavailable.

SOURCES: **Public roads**–U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Highway Statistics (multiple years), as cited in the USDOT, Bureau of Transportation Statistics (BTS), *National Transportation Statistics* (NTS), tables 1-5 and 1-6, available at www.bts.gov as of March 2015. **Transit rail**–USDOT, Federal Transit Administration, *National Transit Database*, as cited in USDOT, BTS, NTS, table 1-1, available at www.bts.gov as of March 2015. **Amtrak**–Amtrak as cited in USDOT, BTS, NTS, table 1-1, available at www.bts.gov as of March 2015. **Airports**–USDOT, Federal Aviation Administration as cited in USDOT, BTS, NTS, table 1-3, available at www.bts.gov as of March 2015. **Navigable waterways**–U.S. Army Corps of Engineers, Institute for Water Resources, Navigation Data Center, as cited in USDOT, BTS, NTS, table 1-1, available at www.bts.gov as of March 2015.

Public Roads and Vehicles

Composed of over 4.1 million miles of interstate highways, arterials, and local routes, the highway network has expanded in the last decade. Between 2000 and 2013, miles of public road grew by 4.6 percent and lane-miles increased by 5.3 percent, while traffic volume grew 8.0 percent. Local roads are by far the most extensive, comprising 2.8 million miles (69.2 percent of total system miles.) Interstate highways handled the highest volumes of traffic as measured by vehicle-miles traveled, 24.8 percent in 2013, but accounted for only 1.2 percent (about 47,500) of total system miles.

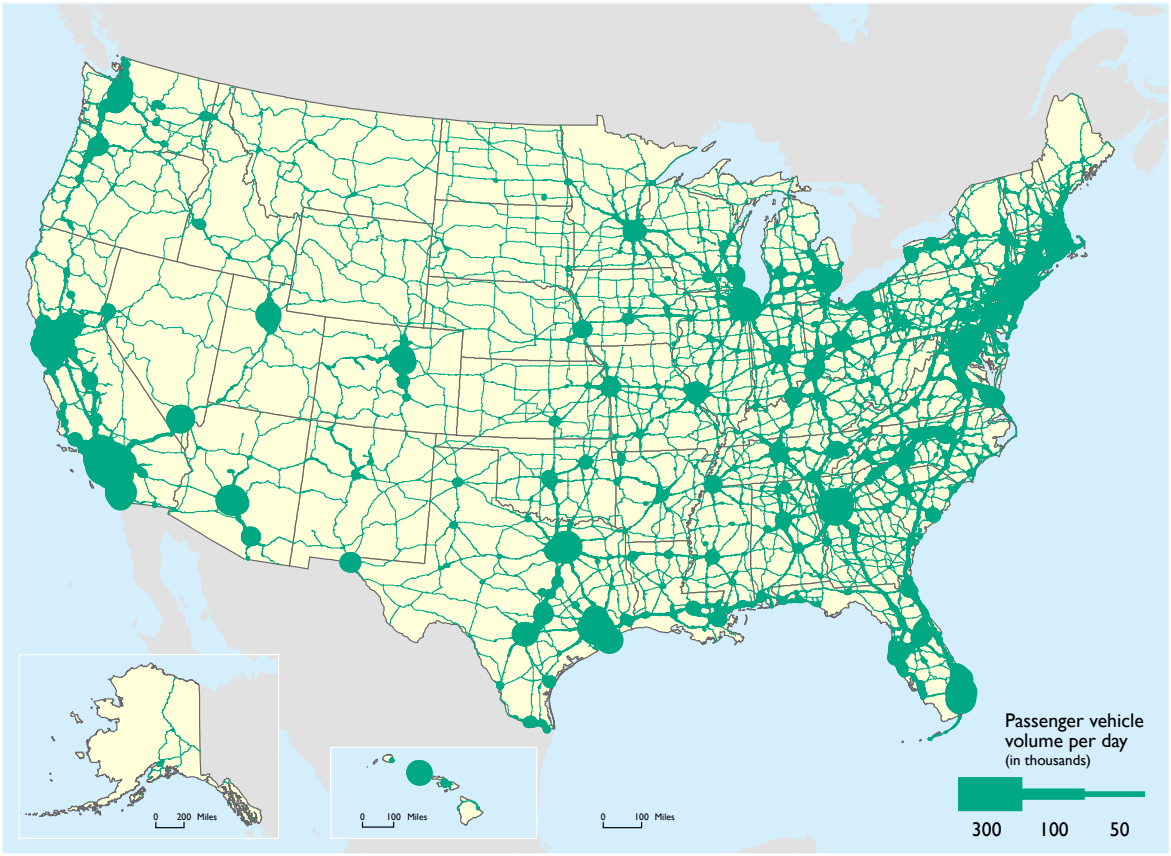
Table 3-2 Highway Transportation System: 2000, 2010, and 2013

	2000	2010	2013
Miles of public roads, total	**3,936,222**	**4,067,076**	**4,115,462**
Interstate	46,427	46,900	47,575
Other freeways and expressways	9,140	11,319	11,602
Other principal arterial	152,233	160,493	161,757
Minor arterial	227,364	242,815	243,872
Collectors	793,124	799,226	803,807
Local	2,707,934	2,806,322	2,846,848
Lane-miles of public roads, total	**8,224,245**	**8,581,158**	**8,656,070**
Number of bridges	**587,135**	**604,460**	**607,708**
Number of passenger vehicle registrations, total	**217,798,592**	**239,299,994**	**245,279,466**
Light-duty vehicle	212,706,399	230,444,440	236,010,230
Motorcycle	4,346,068	8,009,503	8,404,687
Bus	746,125	846,051	864,549

NOTE: *Light-duty vehicles* include passenger cars, light trucks, vans and sport utility vehicles regardless of wheelbase.

SOURCES: U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Highway Statistics (multiple years), as cited in the USDOT. Bureau of Transportation Statistics (BTS). *National Transportation Statistics* (NTS), tables 1-5, 1-6, 1-11, and 1-28, available at www.bts.gov as of March 2015.

Figure 3-1 Passenger Vehicle Traffic on the National Highway System: 2011

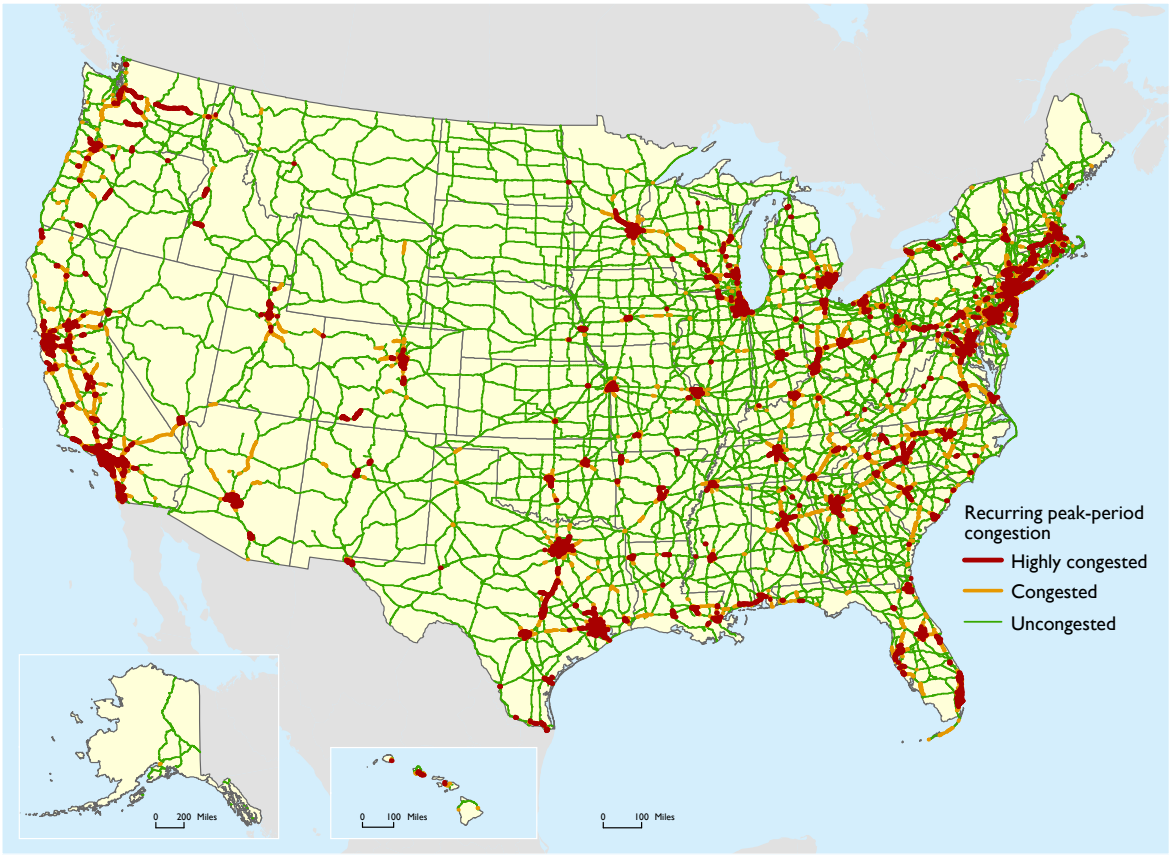


SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System, and Office of Freight Management and Operations, Freight Analysis Framework, version 3.4, 2013.

The National Highway System (NHS) is a network of about 230,000 miles of interstates and other roads essential to the Nation's economy, defense, and mobility. While only 5.5 percent of the Nation's total route mileage and 9.0 percent of the total lane-miles were on the NHS, these roads carried 54.9 percent of total vehicle-miles traveled in 2013. Passenger vehicle traffic on the NHS, excluding large trucks and buses, is concentrated in and around large cities. In 2011, 28.4 percent of passenger vehicle traffic was on the NHS. While the majority (69.9 percent) of NHS mileage is rural, only 8.1 percent of passenger vehicle traffic took place in a rural setting.

Road congestion is one of the major causes of travel time delay and negatively impacts transportation system reliability. In 2011 peak-period congestion resulted in traffic dropping below posted speed limits on 13,500 miles, or 6 percent, of the NHS. This congestion created stop-and-go conditions on an additional 8,700 miles of road.

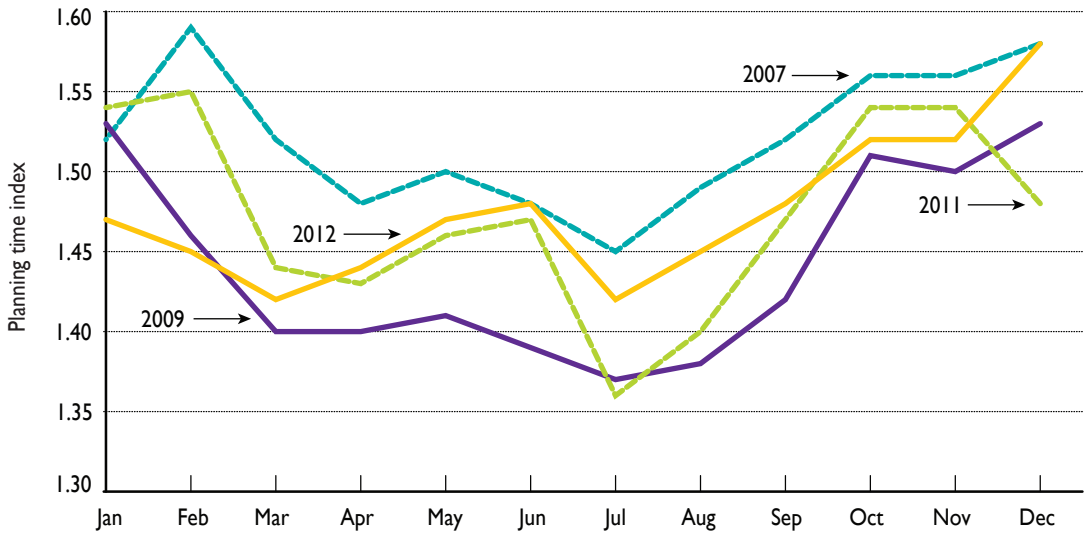
Figure 3-2 Peak-Period Congestion on the National Highway System: 2011



NOTES: Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segment have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95. The volume/service flow ratio is estimated using the procedures outlined in the HPMS Field Manual, Appendix N. Congestion levels are based on all vehicle traffic.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System, and Office of Freight Management and Operations, *Freight Analysis Framework,* version 3.4, 2013.

Figure 3-3 Highway Reliability as Measured by the Planning Time Index in 18 Cities: January–December 2007, 2009, 2011, and 2012



NOTES: Multicity average is weighted by VMT in these respective cities: Boston, MA; Chicago, IL; Detroit, MI; Houston, TX; Los Angeles, CA; Minneapolis-St. Paul, MN; Oklahoma City, OK; Orange County, CA; Philadelphia, PA; Pittsburgh, PA; Portland, OR; Providence, RI; Riverside-San Bernardino, CA; Sacramento, CA; St. Louis, MO; Salt Lake City, UT; San Diego, CA; San Francisco, CA; and Tampa, FL. *Planning Time Index*-the ratio of travel time or the worst day of the month compared to the time required to make the same trip at free-flow speeds. A value of 1.8, for example, indicates a 20-minute free-flow trip requires 36 minutes during the worst peak period.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, *Urban Congestion Report*, January 2013-March 2013 (FY 2013, Q2), available at http://www.ops.fhwa.dot.gov/perf_measurement/ucr/reports/fy2013_q2.htm as of November 2013.

The Planning Time Index (PTI) is a reliability measure that estimates the extra time one should plan for a trip. For example, for a PTI of 1.5, a traveler should allow 50 percent more time in order to arrive on time 19 out of 20 times. In other words, 30 extra minutes should be budgeted for a trip that would typically take 60 minutes in free flow conditions.

Based on PTI data collected from 18 cities between 2007 and 2012, travelers would have to plan a minimum of about 40 percent more travel time to arrive "on-time" for 19 out of 20 trips. From 2007 to 2012, roadway congestion improved, resulting in a drop in the PTI and an increase in highway reliability. Travel on highways was generally less reliable in winter than in summer months.

In the Nation's urban areas, commuters spent 5.5 billion hours in congestion, wasting 2.9 billion gallons of fuel in 2011. This congestion cost the economy an estimated $121.2 billion. Overall measures of congestion delay and cost have increased since 2000, although the recession that ended in 2009 had a dampening effect on what had been a steady increase. Despite a slight decrease in delay per commuter, total delay increased from 4.5 to 5.5 billion hours.

Table 3-3 Estimated Annual Congestion Delay and Costs: 2000, 2010, and 2011

Year	2000	2010	2011	Percent change, 2000 to 2011
Travel Time Index	1.19	1.18	1.18	-0.8
Delay per commuter (hours)	38.7	37.6	38.0	-1.8
Total delay (billion hours)	4.5	5.5	5.5	22.7
Commuters (millions)	87.3	110.3	111.5	27.6
Fuel wasted (billion gallons)	2.4	2.9	2.9	20.5
Total cost (billion, 2011 U.S. dollars)	**94.2**	**120.0**	**121.2**	**28.7**

NOTE: Includes 498 urban areas: 15 very large urban areas (population over 3 million), 32 large urban areas (population over 1 million but less than 3 million), 33 medium urban areas (population over 500,000 but less than 1 million), 21 small urban areas (population less than 500,000), and 397 other urban areas. *Travel Time Index* is the ratio of the travel time during the peak travel period to the time required to make the same trip at free-flow speeds.

SOURCE: Texas Transportation Institute, *2012 Urban Mobility Report*, available at mobility.tamu.edu/ums, as of March 2015.

Table 3-4 Most Congested Urban Areas by Annual Hours of Delay per Auto Commuter: 2000, 2010, and 2011

	2000	2010	2011
Very large urban areas	**55**	**53**	**52**
Washington, DC-VA-MD	65	66	67
Los Angeles-Long Beach-Santa Ana, CA	72	61	61
San Francisco-Oakland, CA	72	60	61
Large urban areas	**39**	**38**	**37**
Nashville-Davidson, TN	48	46	47
Denver-Aurora, CO	42	44	45
Orlando, FL	55	44	45
Medium urban areas	**30**	**30**	**29**
Honolulu, HI	34	45	45
Baton Rouge, LA	36	42	42
Bridgeport-Stamford, CT-NY	51	42	42
Small urban areas	**22**	**23**	**23**
Worcester, MA-CT	40	33	33
Cape Coral, FL	29	29	30
Columbia, SC	20	30	30

KEY: *Very large urban areas* – 3 million and over population; *Large urban areas* – 1 million to less than 3 million population; *Medium urban areas* – 500,000 to less than 1 million population; *Small urban areas* – less than 500,000 population.

NOTE: Annual delay per auto commuter is calculated by dividing the extra travel time during the year by the number of people who commute in private vehicles in the urban area.

SOURCE: Texas Transportation Institute, *2012 Urban Mobility Report*, available at mobility.tamu.edu/ums as of March 2015.

In 2011 the Washington, DC, area averaged 67 hours of average annual delay per auto commuter. This delay was the highest of the 498 urban areas included in the study and 3.1 percent higher than in 2000. The Los Angeles-Long Beach-Santa Ana, CA, and San Francisco-Oakland, CA, urban areas both experienced an estimated 61 hours of delay per auto commuter and a 15.3 percent decrease from 2000.

Aviation

In 2013 there were over 540 certificated airports in the United States. These airports serve commercial air carriers and aircrafts seating more than 9 passengers. Over 18,000 additional airports across the Nation serve general aviation aircraft.

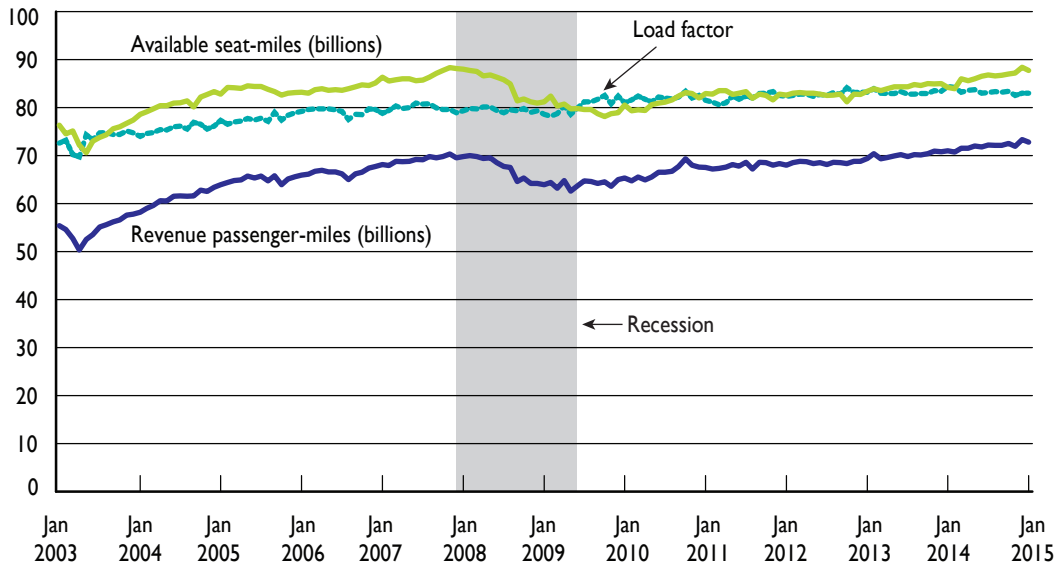
Table 3-5 Air Transportation System: 2000, 2010, and 2013

	2000	2010	2013
Number of airports, total	**19,281**	**19,802**	**19,453**
Certificated[a]	651	551	542
General aviation	18,630	19,251	18,911
Number of aircraft, total	**225,359**	**230,555**	**206,660**
Commercial aircraft[b]	7,826	7,185	6,733
General aviation aircraft[c]	217,533	223,370	199,927
Number of pilots	**625,581**	**627,588**	**599,086**

[a]Certificated airports serve air carrier operations with aircraft seating more than 9 passengers. [b]Commercial Aircraft includes mainline and regional aircraft. [c]The Federal Aviation Administration estimated the 2011 numbers of General Aviation aircraft, including air taxis.

SOURCES: **Airports and Aircraft**—U.S. Department of Transportation (USDOT), Federal Aviation Administration (FAA) as cited in USDOT, Bureau of Transportation Statistics (BTS), *National Transportation Statistics*, tables 1-3 and 1-11, available at www.bts.gov as of March 2015. **Pilots**—USDOT, FAA, *FAA Aerospace Forecast*, fiscal years (multiple issues), available at www.faa.gov as of March 2015.

Figure 3-4 U.S. Airline Revenue Passenger-Miles, Available Seat-Miles, and Load Factor: January 2003–January 2015



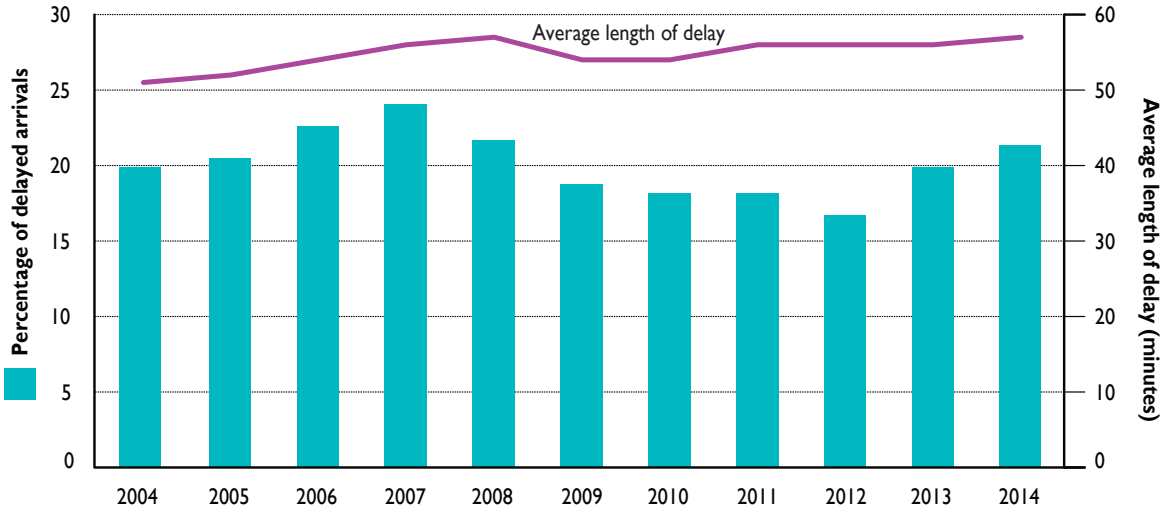
NOTES: Includes domestic and international scheduled services. Revenue passenger-miles (RPM) are a measure of the volume of air passenger transportation. An RPM is equal to one paying passenger carried one mile. Available seat-miles (ASM) are a measure of capacity of air passenger transportation. An ASM is equal to one aircraft seat carried one mile. Load factor is a measure of the use of aircraft capacity that compares RPMs as a proportion of ASMs.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Segment Data*, available at www.transtats.bts.gov as of April 2015.

The U.S. airline passenger load factor—an indicator of capacity utilization—rose from 72.6 in January 2003 to 83.0 in January 2015. After the recent recession, the load factor generally increased because use, measured in revenue passenger-miles, increased at a faster pace than capacity, measured in available seat-miles. In December 2014 use and capacity returned to prerecession levels, reaching all-time, seasonally adjusted highs of 73.3 revenue passenger-miles and 88.4 available seat-miles.

During the last decade, U.S. airline on-time performance was at its lowest in 2007 when 26.6 percent of flights did not arrive on time. The percentage of delayed flights declined to 16.7 percent in 2012, before rising to 21.3 percent in 2014. The average length of flight delays remained above 50 minutes, averaging 57 minutes in 2014.

Figure 3-5 Percentage of Flights Delayed and Average Length of Delay: 2004–2014

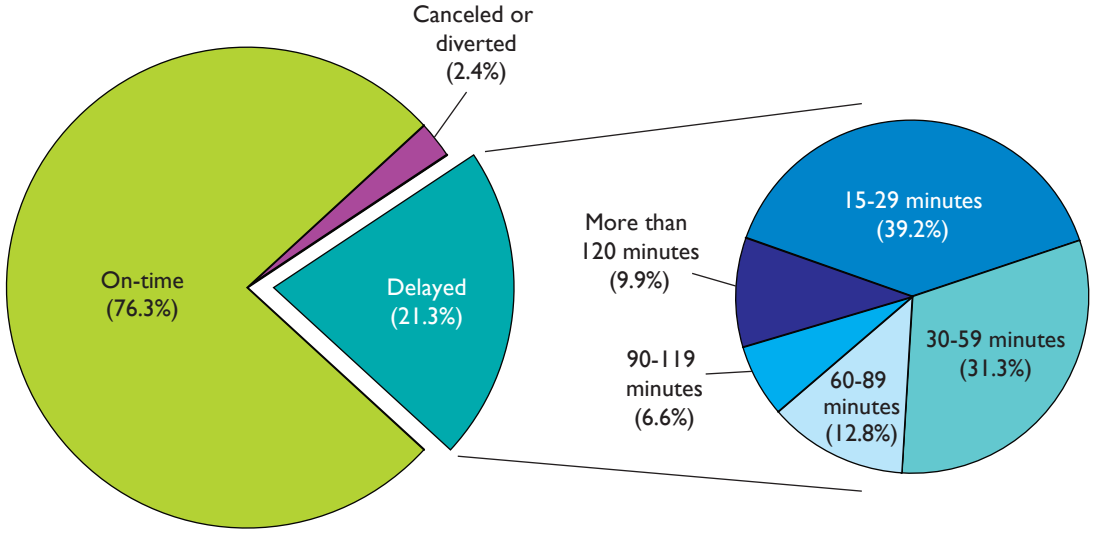


NOTES: For the monthly number of carriers reporting, please refer to the *Air Travel Consumer Reports* available at http://airconsumer.dot.gov/reports/index.htm. A flight is considered delayed when it arrived 15 or more minutes later than scheduled. Arriving flights consists of scheduled operations less canceled and diverted flights. Average minutes are calculated for delayed flights only.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *On-Time Performance Data*, available at www.transtats.bts.gov as of April 2015.

Figure 3-6 Delayed Flights by Length of Time Delayed: 2014

Percent of arrivals



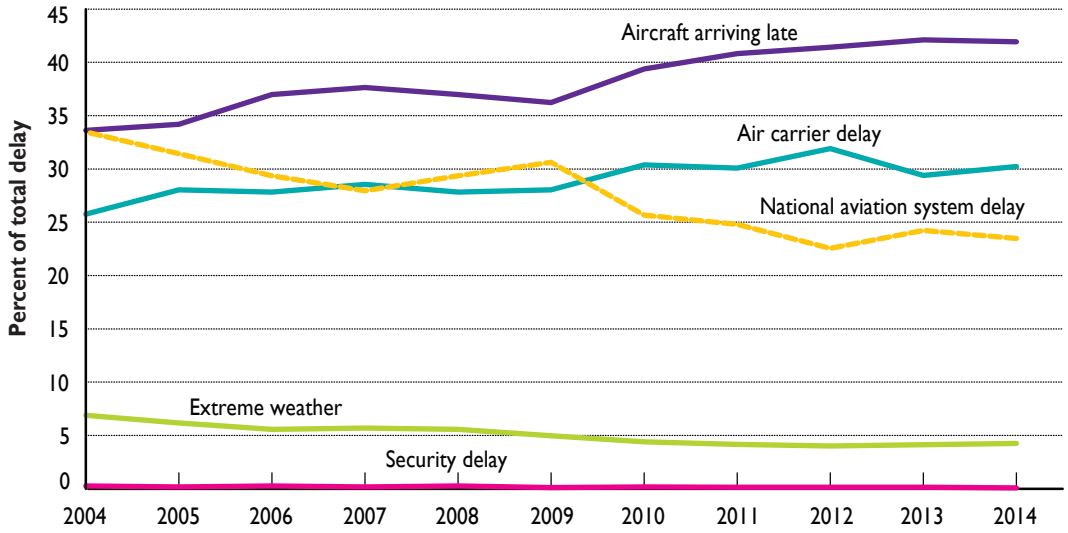
NOTES: A flight is considered delayed when it arrived 15 or more minutes later than scheduled. Average minutes are calculated for delayed flights only. Percents may not add to 100 due to rounding.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *On-Time Performance Data*, available at www.transtats.bts.gov as of April 2015.

In 2014, 39.2 percent of the delayed arrivals were delayed for less than 30 minutes. Slightly fewer flights, 31.3 percent of delayed arrivals, were delayed between 30 and 59 minutes, while almost 10 percent of delayed arrivals were delayed for more than 2 hours.

Flight delays are caused by a variety of reasons, ranging from extreme weather to disruptions in airline carrier operations. The combined effects of nonextreme weather conditions, airport operations, heavy traffic volume, and air traffic control (i.e., National Aviation System) contributed to 23.5 percent of delays in 2014, a 10.0 percentage point improvement over 2004. Flight delays can ripple through the U.S. aviation system as late arriving flights delay subsequent flights. Late arrivals were the cause of 41.9 percent of delays in 2014.

Figure 3-7 National Flight Delays by Cause: 2004–2014



SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *On-Time Performance Data*, available at www.transtats.bts.gov as of April 2015.

Table 3-6 Average On-Time Arrivals and Cancellations by Month: January 2003–February 2015

Month	On-time (percent)	Canceled (percent)
January	76.4	2.8
February	75.6	3.3
March	78.1	1.7
April	80.6	1.3
May	79.9	1.2
June	74.5	1.7
July	75.1	1.7
August	77.8	1.5
September	83.1	1.5
October	81.3	1.2
November	82.0	1.0
December	72.1	2.5

SOURCE: U.S Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Data*, available at www.bts.gov as of June 2015.

Table 3-7 Top 10 Worst Months for Canceled Flights Due to Weather: January 2003–February 2015

Year	Month	Total scheduled flights	Flights canceled due to weather	Percent of flights canceled due to weather
2010	February	483,270	20,214	4.2
2014	January	471,949	19,108	4.0
2014	February	430,602	16,762	3.9
2011	February	455,516	16,403	3.6
2015	February	429,191	15,447	3.6
2007	February	565,604	15,872	2.8
2005	January	594,924	15,748	2.7
2011	January	494,400	12,578	2.5
2012	October	515,254	11,985	2.3
2010	December	539,382	12,279	2.3

NOTE: Weather cancellations are contributed to significant meteorological conditions that delays or prevents the operation of a flight.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *Airline On-Time Data*, available at www.transtats.bts.gov as of April 2015.

Flight cancellations are more likely to occur in the winter due to the impact of snow and ice on flight operations. Nine of the top 10 months for flight cancellations between January 2003 and February 2015 occurred in the winter; the only exception was October 2012.

Table 3-8 Top 10 Small, Medium, and Large Airports by Overall Delays: 2014

Rank	Airport	Percent of arrivals		
		Delayed	On-time	Canceled
Large airports				
1	San Francisco, CA	27.9	69.2	2.7
2	Chicago O'Hare, IL	27.1	67.6	5.0
3	Newark Liberty, NJ	24.8	70.2	4.7
4	Fort Lauderdale-Hollywood, FL	24.3	74.0	1.4
5	New York LaGuardia, NY	23.8	71.3	4.5
6	Chicago Midway, IL	22.2	74.4	2.7
7	New York John F. Kennedy, NY	22.1	75.1	2.4
8	Tampa, FL	21.9	76.8	1.1
9	Orlando, FL	21.8	76.8	1.1
10	Denver, CO	21.6	76.5	1.6
Medium airports				
1	Oklahoma City, OK	26.7	71.0	2.1
2	Albuquerque, NM	25.8	72.9	1.1
3	Port Columbus, OH	25.7	71.3	2.8
4	Oakland, CA	25.2	73.3	1.4
5	San Antonio, TX	24.8	73.8	1.1
6	Palm Beach, FL	24.7	73.2	1.8
7	Ontario, CA	24.4	74.2	1.3
8	Omaha Eppley Airfield, NE	24.2	73.1	2.3
9	Milwaukee General Mitchell, WI	24.1	73.2	2.6
10	Memphis, TN	23.8	73.5	2.5
Small airports				
1	Guam, GU	33.3	64.8	1.6
2	Trenton Mercer, NJ	31.6	67.1	1.2
3	Sioux Falls Joe Foss Field, SD	30.3	65.5	3.9
4	Long Island MacArthur, NY	29.9	67.7	2.1
5	Knoxville McGhee Tyson, TN	29.0	66.7	4.1
6	Rick Husband Amarillo, TX	28.8	67.8	3.1
7	Cedar Rapids Eastern Iowa, IA	28.4	67.1	4.2
8	Moline Quad City, IL	28.3	66.5	5.0
9	Des Moines, IA	28.1	68.0	3.8
10	Springfield-Branson, MO	28.0	68.4	3.2

NOTES: Airports are categorized based on their share of total enplaned passengers: Large–1% or more; Medium–0.25%-0.99%; and Small–0.05%-0.24%.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *Air Carrier Airport Activity Statistics* and *On-time Performance Data,* available at www.transtats.bts.gov as of June 2015.

Among large airports, San Francisco International Airport had the highest percentage of flights delayed in 2014. Will Rogers World Airport, located in Oklahoma City, OK, had the most delayed flights for medium-sized airports, with 26.7 percent of flights delayed. Topping the list for small airports was Guam International Airport, with 33.3 percent of flights delayed.

Public Transit

More than 800 urban transit agencies and 1,500 rural and tribal government transit agencies offer transit service. Since 2000 rail transit (commuter rail, heavy rail, and light rail) has expanded to cover over 11,000 directional route-miles and include over 3,000 rail transit stations. Buses accounted for about half, 49.2 percent, of the over 136,000 transit vehicles in 2013.

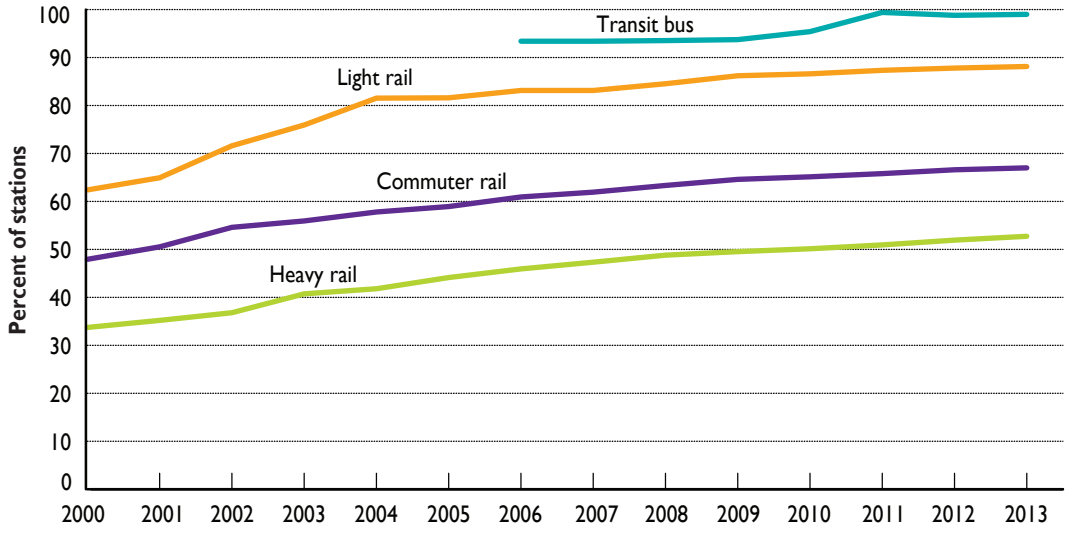
Table 3-9 Public Transit System: 2000, 2010, and 2013

	2000	2010	2013
Directional route-miles of rail transit, total	**7,601**	**10,744**	**11,190**
Commuter rail	5,209	7,630	7,731
Heavy rail	1,558	1,617	1,622
Light rail	834	1,497	1,836
Number of rail transit stations, total	**2,595**	**3,216**	**3,227**
Commuter rail	983	1,244	1,242
Heavy rail	1,009	1,044	1,044
Light rail	603	928	941
Number of transit vehicles, total	**106,136**	**135,674**	**136,981**
Commuter rail cars and locomotives	5,497	6,768	7,150
Heavy rail cars	10,311	11,510	10,380
Light rail cars	1,306	2,096	2,842
Motor bus	59,230	63,679	67,383
Demand response	22,087	33,555	31,433
Ferry boat	98	134	156
Other	7,607	17,932	17,637

NOTES: *Light Rail* includes light rail, streetcar rail, and hybrid rail. *Motor bus* includes bus, commuter bus, bus rapid transit, and trolley bus. *Demand response* includes demand response and demand response taxi.

SOURCES: U.S. Department of Transportation (USDOT), Federal Transit Administration, *National Transit Database* as cited in USDOT, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-1, 1-7, and 1-11, available at www.bts.gov as of March 2015.

Figure 3-8 Stations Compliant with the Americans with Disability Act: 2000–2013



NOTES: *Transit bus* data for years before 2006 are omitted because they are not comparable to later years due to a change in the number of reported stations. *Transit bus* includes local motor bus, commuter bus, and bus rapid transit. *Light rail* includes light rail, streetcar rail, and hybrid rail. Starting in 2012, data for Small System Waiver agencies that do not list mode are reported under *Transit bus*. Data reported under the hybrid rail mode are reported under classifications used prior to 2012.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, *National Transit Database*, available at www.ntdprogram.gov as of March 2015.

Based on results from the *American Community Survey*, 12.6 percent of the U.S. population self-identified as having a disability in 2013. In 2013, 78.8 percent of transit stations complied with the Americans with Disabilities Act (ADA), which requires agencies to provide accommodations for individuals with disabilities at public transit facilities. The number of accessible stations has increased steadily since 2000. In 2013, 99.0 percent of bus stations and 88.1 percent of light rail stations were compliant with the ADA.

Passenger Rail

Amtrak is the primary operator of intercity passenger rail service in the United States. Amtrak operated over 21,300 route miles in 2012 and more than 500 stations that served 46 states and Washington, DC. Amtrak's fleet of rail cars and locomotives decreased by 32.7 and 25.4 percent, respectively, from 2000 to 2010, but increased in 2012 since Amtrak is in the process of acquiring new equipment to replace its aging fleet.

Table 3-10 Passenger Rail System: 2000, 2010, and 2012

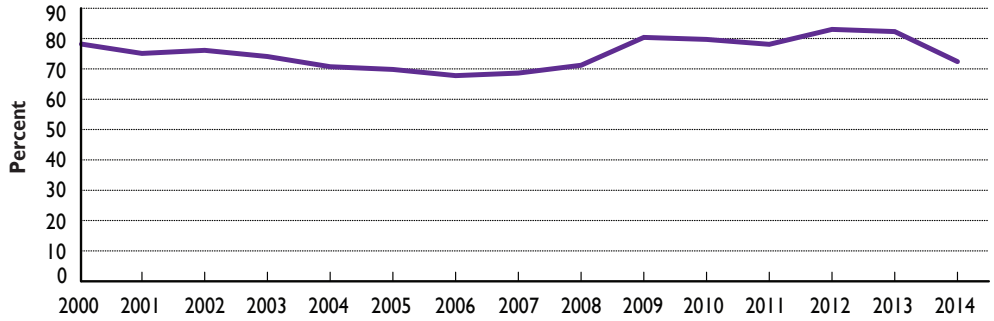
Amtrak	2000	2010	2012
System mileage	23,000	21,178	21,334
Locomotives	378	282	485
Passenger cars	1,894	1,274	2,090
Stations	515	519	518

KEY: U = Data are unavailable.

SOURCE: Amtrak as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-1, 1-7 and 1-11, available at www.bts.gov as of March 2015.

In fiscal year (FY) 2014, Amtrak achieved 72.4 percent on-time performance, down 9.9 percentage points from the previous year. Delays were more likely to occur on track owned by another (host) railroad than on track owned by Amtrak. In FY2014 host railroads were responsible for 64.0 percent of delayed time, and Amtrak was responsible for 24.9 percent.

Figure 3-9 Amtrak On-Time Performance: FY2000–FY2014



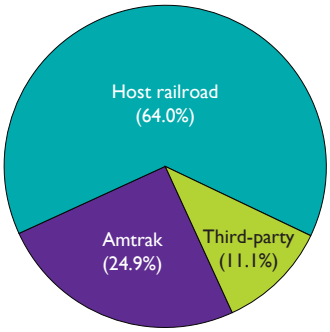
NOTES: On-time performance is a percentage measure of train performance. A train is considered on-time if it arrives at the final destination, or end-point, within an allowed number of minutes, or tolerance, of its scheduled arrival time. Trains are allowed a certain tolerance at the end-point based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

Trip length:	**Train must arrive 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: Amtrak, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at www.bts.gov as of March 2015.

Figure 3-10 Amtrak Delay by Responsible Party: FY2014

Percent of delayed time



NOTES: *Amtrak*-responsible delays include all delays that occur when operating on Amtrak-owned tracks and all delays for mechanical failure, passenger handling, holding for connections, train servicing, and mail/baggage handling when on tracks of a host railroad. *Host railroad* delays include operating delays not attributable to Amtrak when operating on tracks of a host railroad, such as track and signal related delays, power failures, freight and commuter train interference, routing delays, etc. *Third-party* delays are not attributable to Amtrak or other host railroads, such as customs and immigration, law enforcement action, weather, or waiting for scheduled departure time.

SOURCE: Amtrak, personal communication, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at www.bts.gov as of March 2015.

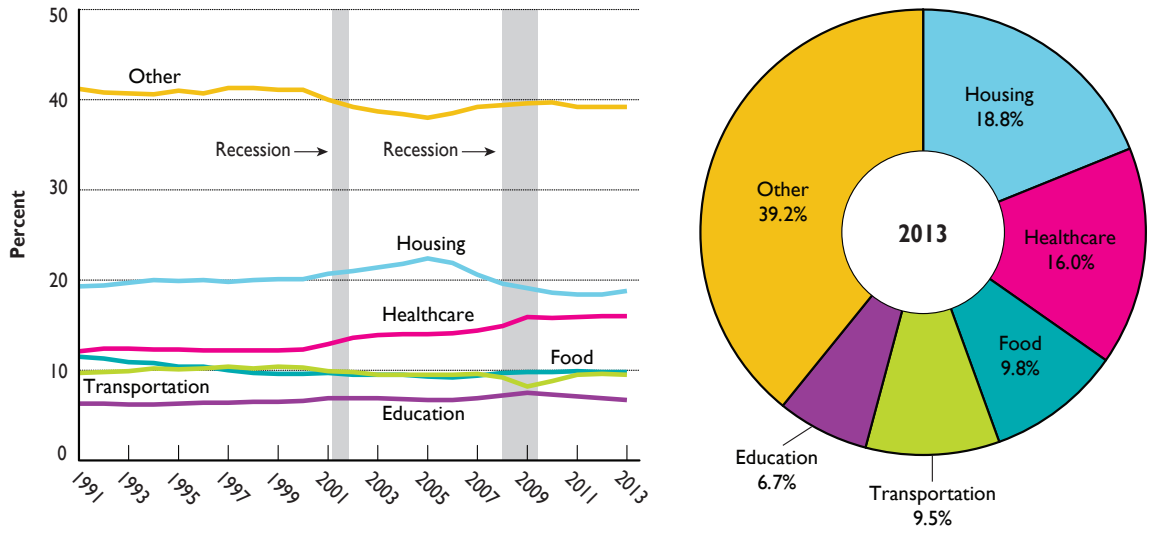
4 Economic Characteristics of Passenger Travel and Tourism

Economic Trends in Passenger Travel

In 2013 transportation overall contributed to 9.5 percent of the Nation's gross domestic product (GDP), amounting to nearly $1.6 trillion spent on transportation annually. Over the last two decades, the share of spending on transportation goods and services has remained relatively stable at about 9 to 10 percent of GDP. However, during the economic downturn in 2009, expenditures on transportation dropped to below 9 percent of total GDP. Not only was there less spending and economic activity overall during this time period, but the share of total GDP spending increased for necessities, such as food and healthcare, while decreasing for transportation and nonessential goods and services. As the economy gradually improved after 2010, spending on transportation both as an amount of GDP and a share of GDP increased, showing that transportation is growing.

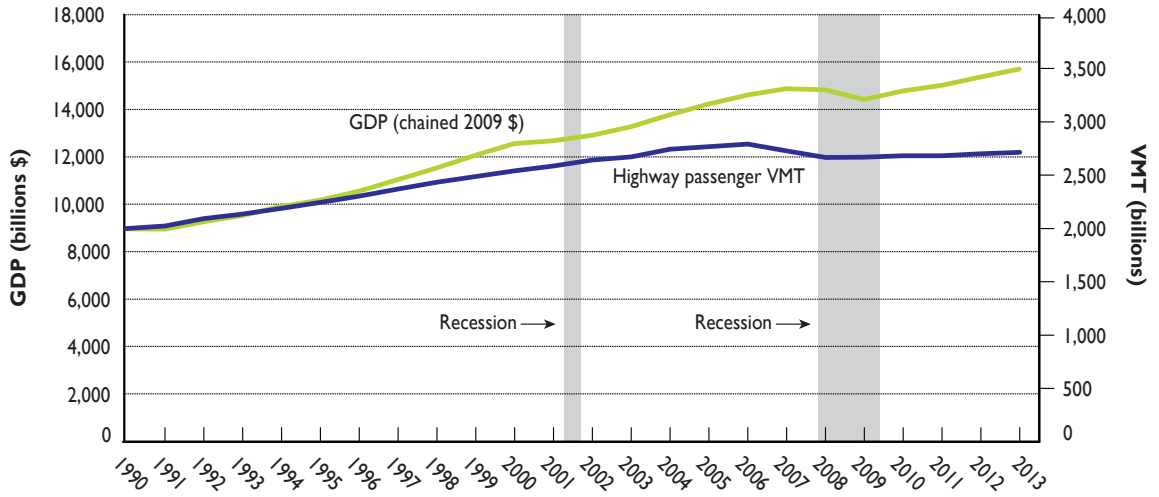
Figure 4-1 Percent of GDP by Spending Category: 1991–2013

Current dollars



SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, calculated based on data from U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Account Tables, 1.1.5, 2.4.5, 3.11.5, 3.15.5, 4.2.5, 5.4.5, 5.5.5, and 5.7.5B, available at http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/index.html as of April 2015.

Figure 4-2 Gross Domestic Product (GDP) and Highway Vehicle-Miles Traveled (VMT): 1990–2013

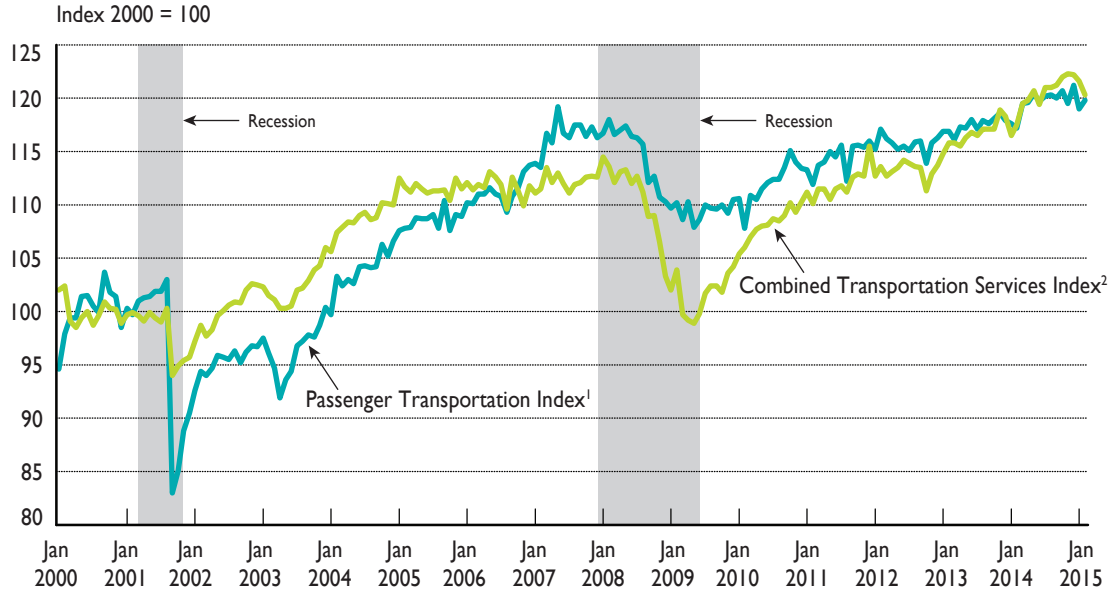


NOTE: VMT data are based on State highway agency estimates reported for the various functional systems and include the 50 States and the District of Columbia.

SOURCES: **GDP**—U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts. **Highway VMT**—U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2013 as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-35 and 3-10, available at www.bts.gov as of April 2015.

Use of the Nation's highways has generally grown over time but not as quickly as the economy as a whole. Overall, highway passenger vehicle-miles traveled (VMT) have steadily increased since 1990 before dropping during the recent economic recession. Between 1990 and the economy peak of 2006, GDP and passenger VMT grew an average of 3.9 and 2.9 percent per year, respectively. When the economy slowed in 2007, discretionary travel on highways diminished, contributing to a 1.8 percent drop in VMT (between 2007 and 2008). After 2009 the economy began a period of slow recovery, with VMT remaining relatively unchanged. In 2012 and 2013 VMT began to increase slightly but at a slower rate than GDP, showing economic growth was outpacing the growth of travel on the Nation's highways at a greater rate than prior to the recession.

Figure 4-3 Passenger Transportation Services Index: January 2000–February 2015



[1] The passenger Transportation Services Index (TSI) includes local transit, intercity passenger rail, and passenger air transportation, that have been weighted to yield a monthly measure of transportation services output.

[2] The combined 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.

NOTES: 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.

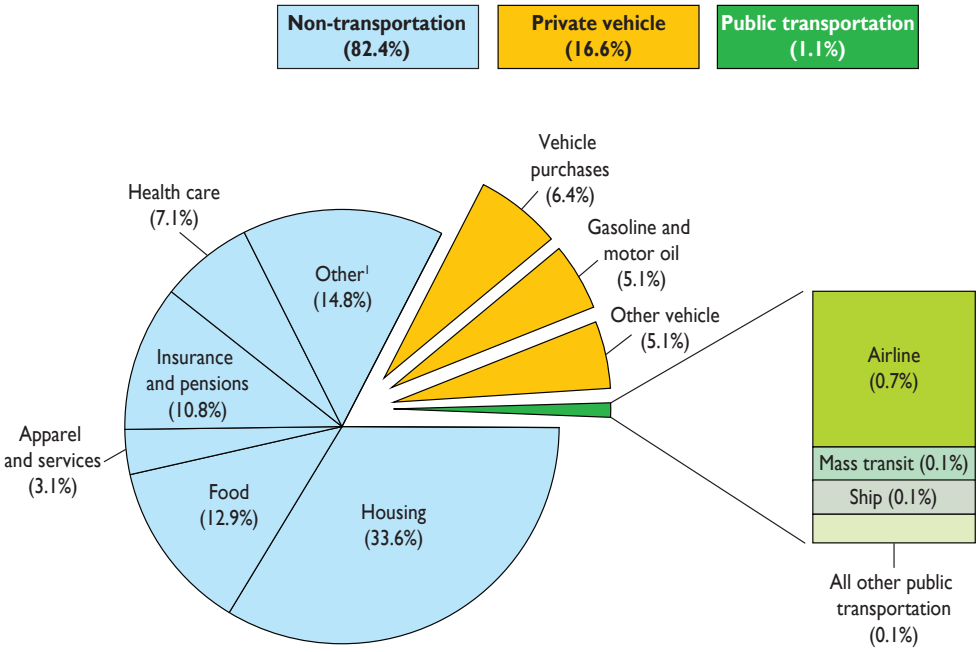
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transportation Services Index, available at www.bts.gov as of April 2015.

Passenger travel by air, rail, and transit has grown over the past 15 years. One way to measure this is the passenger Transportation Service Index (TSI). The passenger TSI measures the movement of passengers, while the total TSI measures both passengers and freight. Since 2000 both the passenger TSI and total TSI show greater volumes of both goods and people throughout the Nation. The volume of transportation activity dropped during the most recent recession; however, the passenger TSI fell less than the total TSI, suggesting that passenger travel was less sensitive to the economic downturn than overall transportation services. Both indexes grew during the sluggish period of economic growth to follow, with the passenger TSI reaching an all-time high at the end of 2014. By December 2014 the passenger TSI had risen 12.3 percent from its low point during the recession, showing an increase in demand for the for-hire passenger transportation sector.

Spending on Passenger Travel

In 2013 there were over 122 million households in the United States, with many spending a larger share of their expenditures on transportation than in previous years (16.0 percent in 2010 and 17.6 percent in 2013). In 2013 the average American household spent about $9,004 on transportation, accounting for about 17.6 percent of their total household expenditures. The highest transportation cost for households was to own and operate private vehicles, including about $3,270 on vehicle purchases, $2,610 for gasoline and motor oil, and $2,580 for other expenses. The average household only spent about 1.1% of their expenses on public transportation.

Figure 4-4 Average Household Expenditures by Spending Category: 2013



Spending category	Cost (current dollars)	Share
Transportation	$9,004	17.6%
Private vehicles	$8,466	16.6%
Vehicle purchases	$3,271	6.4%
Gasoline and motor oil	$2,611	5.1%
Other vehicle expenses	$2,584	5.1%
Public transportation[2]	$537.00	1.1%
Airline	$343.14	0.7%
Mass transit	$75.66	0.1%
Ship	$49.87	0.1%
All other public transportation	$68.35	0.1%
Taxi	$24.70	<0.1%
Intercity train	$20.69	<0.1%
Local trans. on out-of-town trips	$10.74	<0.1%
Intercity bus	$11.18	<0.1%
School bus	$1.04	<0.1%
Non-transportation	$42,096	82.4%
Total	$51,100	100.0%

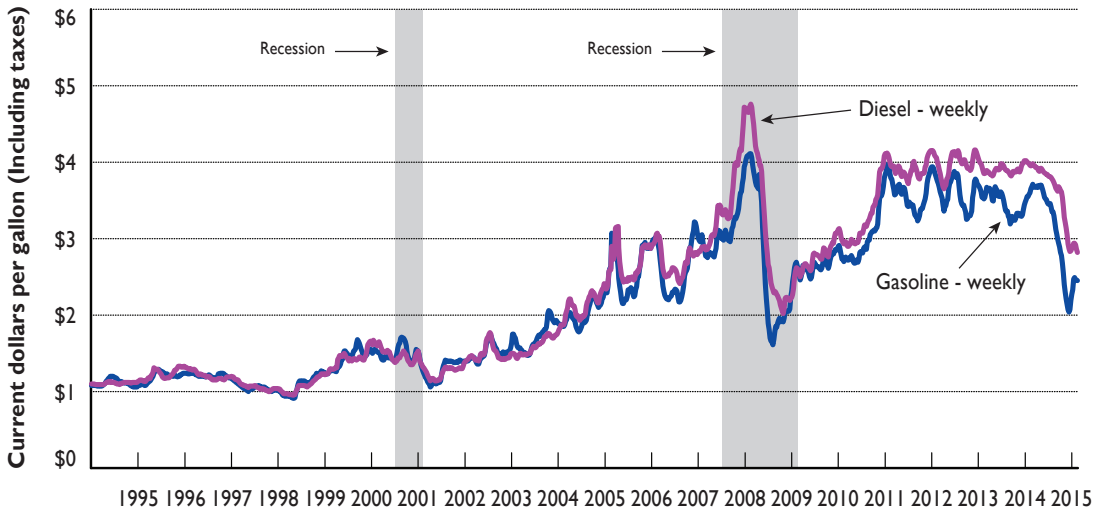
[1] Includes alcoholic beverages, entertainment, personal care products and services, reading, education, tobacco products and smoking, miscellaneous, cash contributions and others. [2] Values for public transportation are subject to very large standard errors due to the small sample size associated with some categories.

NOTE: Totals may not sum due to rounding. Average includes households without vehicles and households that may have more than one vehicle.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey, Consumer Expenditures in 2013* dated February 2015, available at http://www.bls.gov/cex/ and from personal communication as of April 2015.

The past decade has generally seen steady increases in transportation prices, especially those related to travel by private automobiles. However, in 2014 a major dynamic impacted passenger travel and transportation as a whole. That year gasoline and diesel prices dropped to levels not seen since before 2005 and again, briefly, during the trough of the last recession in January 2009. This recent drop in gasoline and fuel prices contributed to a decrease in the overall cost of transportation for consumers.

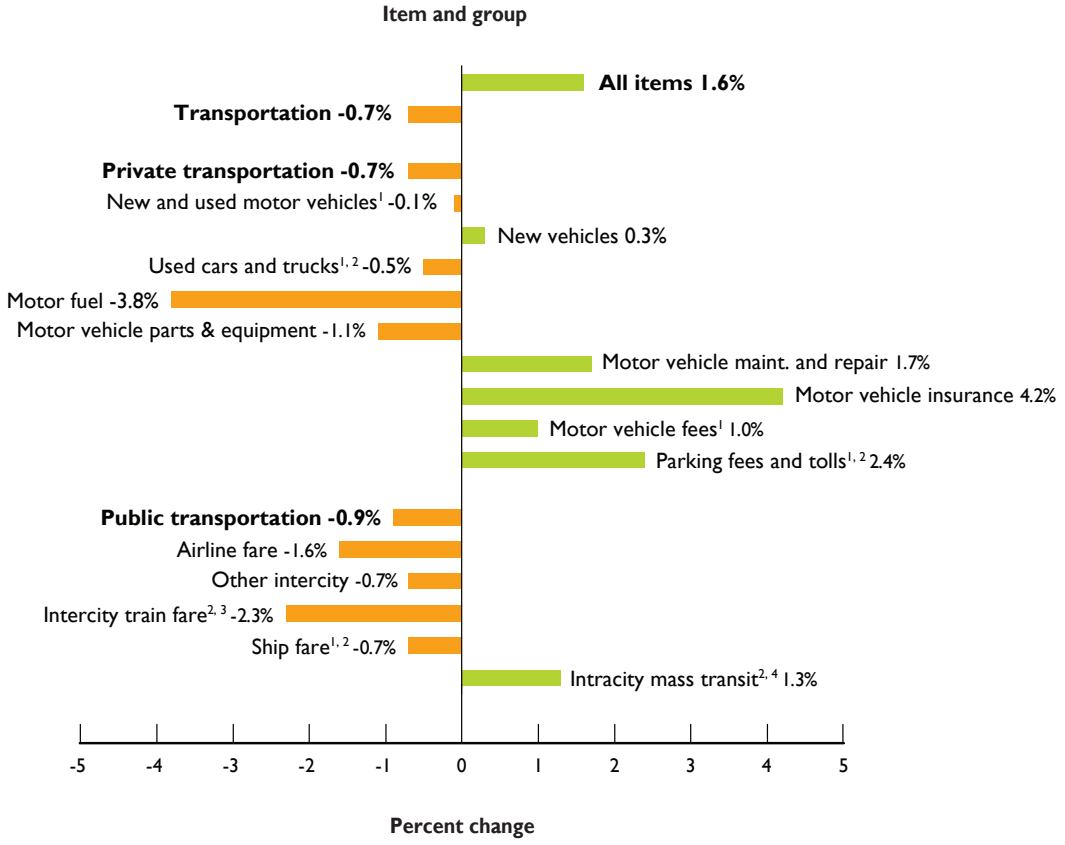
Figure 4-5 Gasoline and Diesel Retail Prices: January 1995–April 2015



NOTE: *Gasoline* includes unleaded regular gasoline, U.S. city average retail price. *Diesel* includes on-highway diesel fuel price.

SOURCE: U.S. Department of Energy, Energy Information Agency, *Retail Motor Gasoline and On-Highway Diesel Fuel Prices*, available at http://www.eia.gov/totalenergy/data/monthly/#prices as of April 2015.

Figure 4-6 Percent Change in Consumer Prices: 2013–2014



[1] Indexes on a December 1997 = 100 base. [2] Special index based on a substantially smaller sample. [3] Indexes on a December 2007 = 100 base. [4] Indexes on a December 2009 = 100 base.

NOTES: Based on Consumer Price Index for all urban consumers (CPI-U), U.S. city average, by detailed expenditure category and commodity and service group, uses index 1982-84=100 unless otherwise noted.

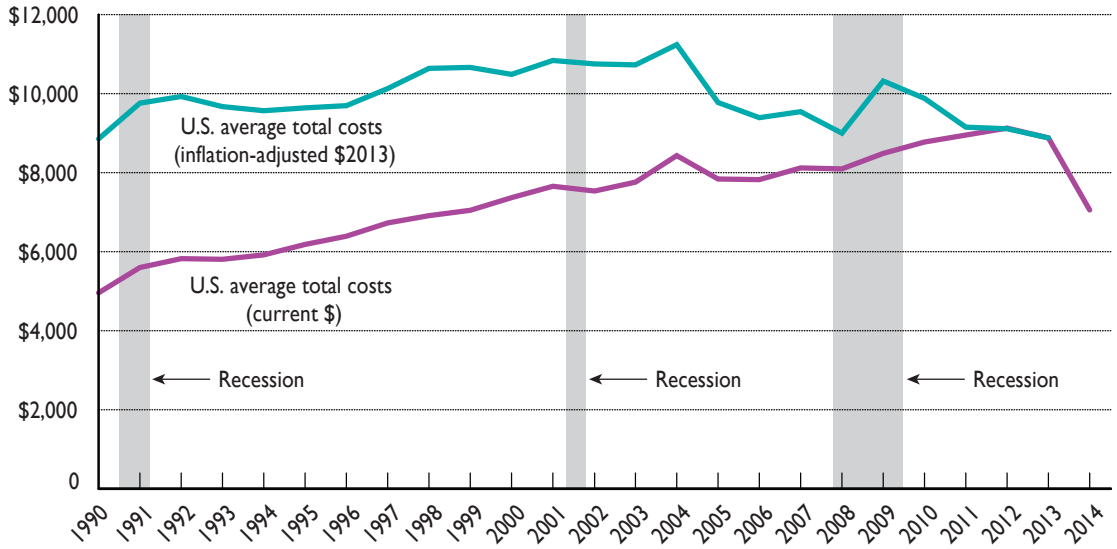
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, CPI detailed report, table 1A and 3A, data for January 2015, available at www.bls.gov/cpi/cpid1501.pdf as of April 2015.

Recent trends show a 0.7 percent drop in transportation prices between 2013 and 2014, while the overall prices for goods and services increased 1.6 percent. Motor fuels led the decline in transportation prices, dropping 3.8 percent. The price of motor vehicle parts and equipment (-1.1 percent) and used cars and trucks (-0.5 percent) also went down. Overall, public transportation (including fares for mass transit, buses, trains, airlines, taxis, school buses for which a fee is charged, and boats) prices also declined during this time period, with fares for airlines (-1.6 percent), intercity train (-2.3 percent), and ship (-0.7 percent) decreasing. However, prices in other areas of transportation increased, with motor vehicle insurance, parking fees and tolls, maintenance and repair, and intracity mass transit (local mass transit) becoming more expensive.

Costs of Passenger Travel

The average cost to own and operate an automobile has increased slightly over the past two decades. Assuming the average vehicle is driven 15,000 miles per year, the cost of ownership (insurance, license, registration, taxes, depreciation, and finance charges) and operation (fuel, maintenance, and tires) was about $8,860 per year in 1990, $10,500 in 2000, and $9,100 in 2012 (in inflation-adjusted 2013 dollars). Due to the recent drop in gasoline prices and other automobile-related prices, the average cost of owning and operating an automobile dropped to $8,900 per year in 2013.

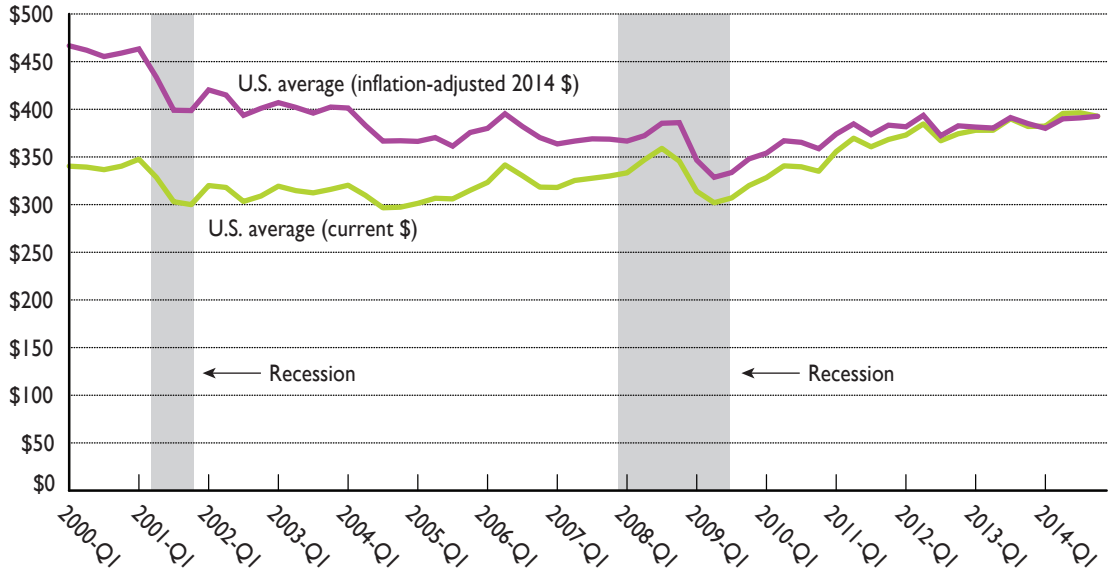
Figure 4-7 Average Total Cost of Owning and Operating an Automobile: 1990–2014



NOTES: U.S. average total costs include fixed ownership costs (insurance, license, registration, taxes, depreciation, and finance charges) plus variable operating costs (fuel, maintenance, and tires). All figures reflect the average cost of operating a vehicle 15,000 miles per year in stop and go conditions. Inflation-adjustments are based on CPI for all urban consumers (CPI-U), U.S. city average, (1982-84=100) annual average index for private transportation.

SOURCES: **Costs**—American Automobile Association, Your Driving Costs, available at www.aaapublicaffairs.com as of April 2015 and Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-17, available at www.bts.gov as of April 2015. **Inflation-adjustments**—U.S. Department of Labor, Bureau of Labor Statistics, CPI detailed report, table 1A and 3A, data for January 2015, available at http://www.bls.gov/cpi/cpid1501.pdf as of April 2015.

Figure 4-8 Average Airfare for Domestic Flights: 2000-Q1–2014-Q4

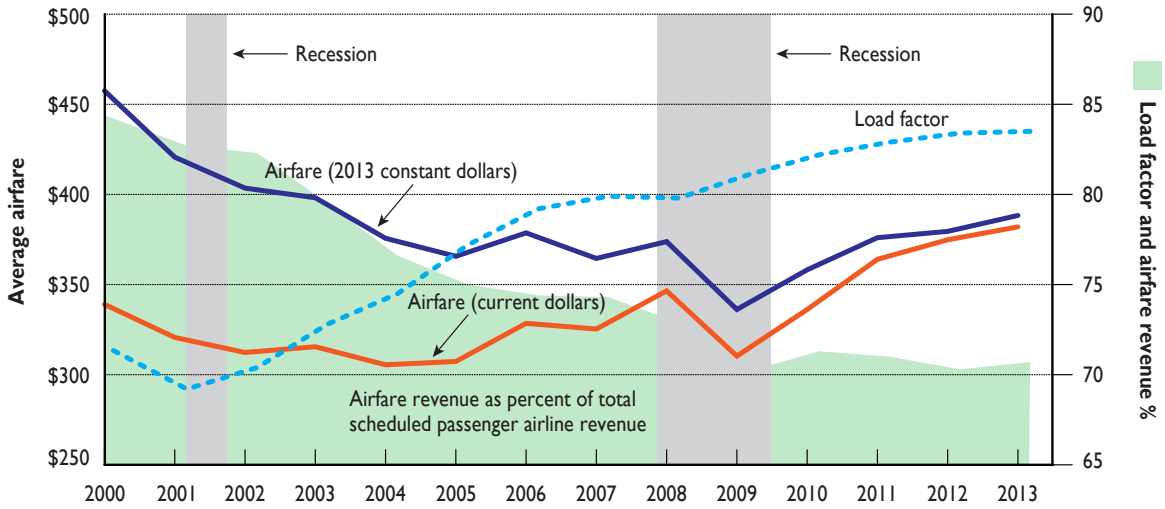


NOTE: Inflation-adjusted air fares are calculated using dollars for the year of the most recent fare release.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, *Origin and Destination (O&D) Survey,* available at www.bts.gov as of April 2015.

The average airfare has fluctuated over time. Although prices appear to have increased slightly since 2000 in terms of what comes out of one's wallet, accounting for inflation, airfare has actually decreased. At the end of 2014, the average airfare of a domestic flight was about $393. In current dollars, this is up $52 from the beginning of 2000 but down approximately $74 when accounting for inflation. Over the past year, airfare has increased 2.8 percent in current terms and 2.0 percent if adjusting for inflation.

Figure 4-9 Load Factor and Average Airfare: 2000–2013



NOTES: Load factor calculated by dividing the total revenue passenger miles by available seat miles. Total scheduled passenger airline revenue is the sum of the following Schedule P12 accounts with account numbers: Reservation cancellation fees (3919.1), Baggage fees (3906.2), Miscellaneous Operating Revenue (3919.2), Transport-Related Revenue (4898) and Passenger Revenue (airfares) (3901).

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *T-100 Domestic Segment Data and Origin & Destination Survey*, available at www.transtats.bts.gov as of April 2015.

Since 2000 airlines have been transporting more passengers per mile, increasing load factors by about 17 percent. In economic terms, air carriers are becoming more efficient, fitting more and more passengers on each plane. At the same time, faced with rising fuel prices and other costs, airlines sought new sources of revenue in recent years, including fees on service such as baggage and reservation changes, which led to a reduction in fare revenues as a share of total scheduled passenger airline revenue.

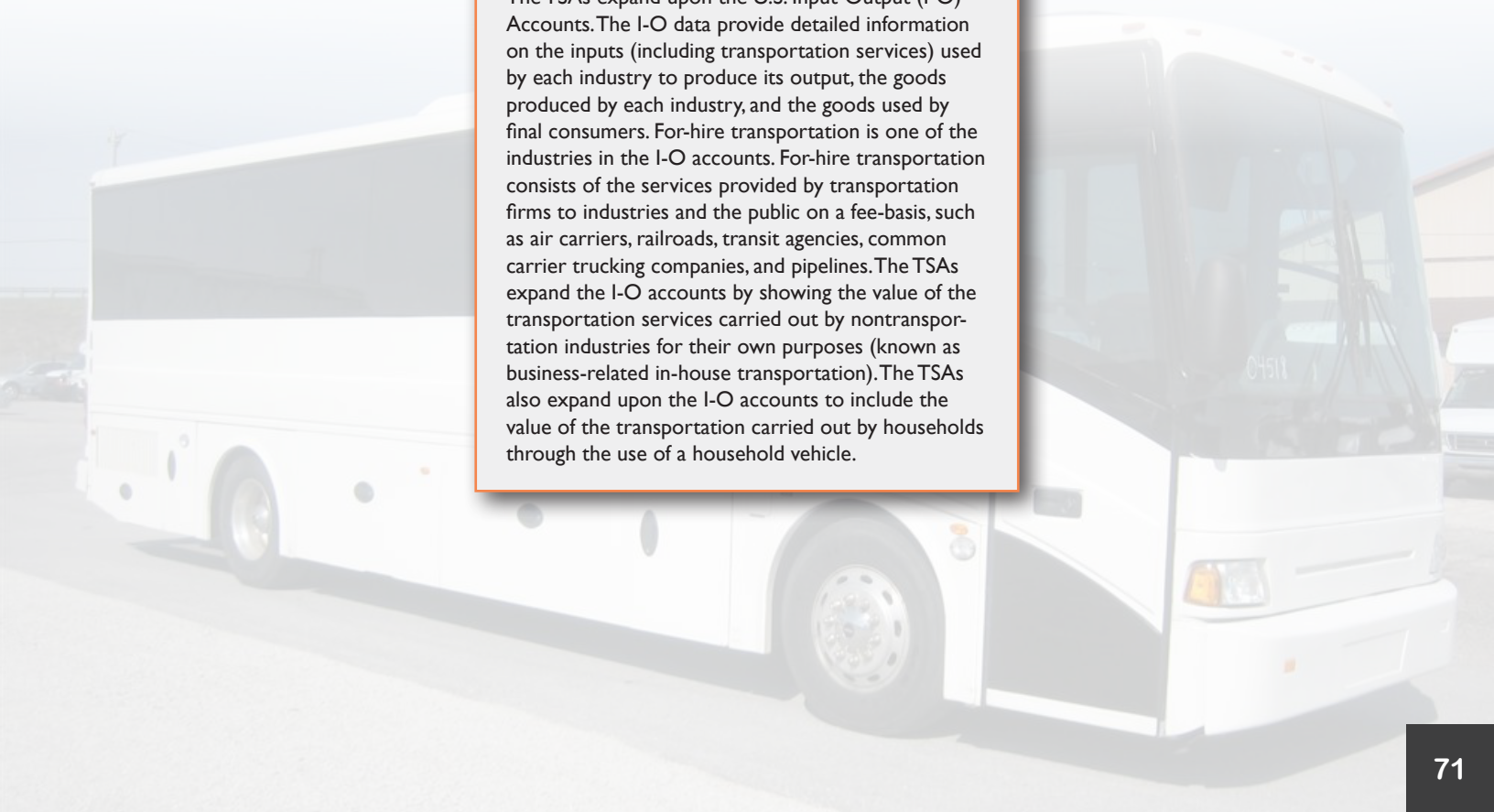
Economic Contribution and Output of Passenger and Tourism Travel

Satellite accounts provide a means for measuring the contribution and output of passenger and tourism travel to the economy. The Transportation Satellite Accounts (TSAs) show the contribution of transportation carried out by for-hire transportation firms (e.g., air carriers, railroads, and transit agencies), nontransportation industries for their own purposes (known as business-related in-house transportation), and by households through the use of a vehicle. The Travel and Tourism Satellite Accounts (TTSAs) provide a detailed picture of travel and tourism activity and its role in the U.S. economy.

Box 4-A Transportation Satellite Accounts: 2012

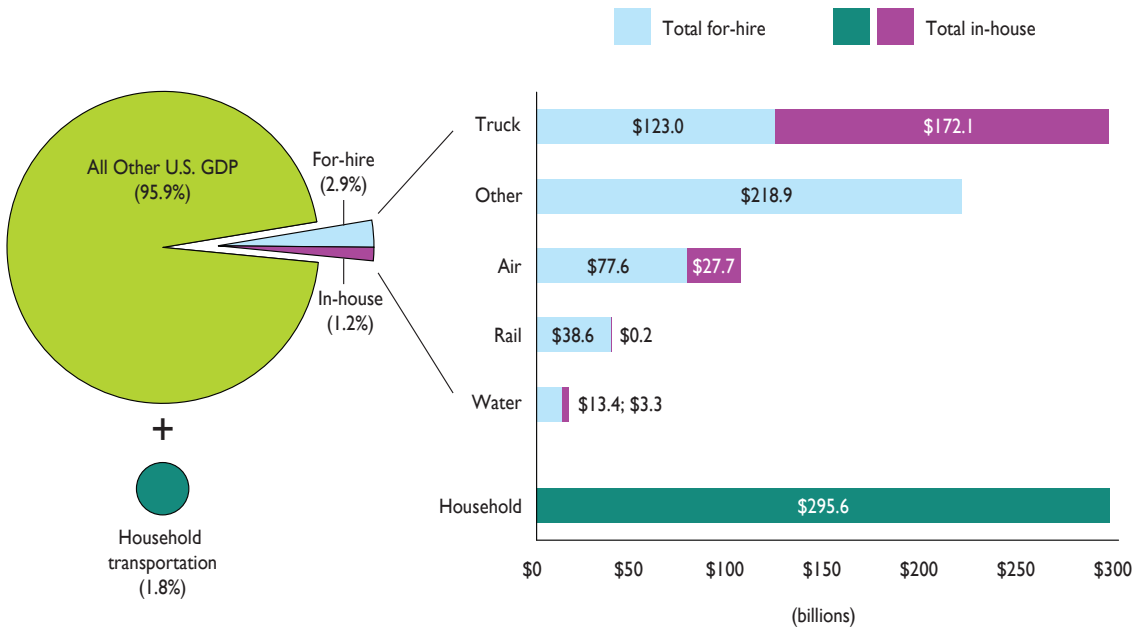
The Transportation Satellite Accounts (TSAs), developed by the Bureau of Transportation Statistics (BTS), belong to the group of satellite industry accounts. Satellite industry accounts expand upon the national income and product accounts and the input-output accounts and supplement these accounts by focusing on a particular aspect of economic activity. The TSAs seek to capture transportation carried out by nontransportation industries for their own purposes and transportation carried out by households through the use of an automobile.

The TSAs expand upon the U.S. Input-Output (I-O) Accounts. The I-O data provide detailed information on the inputs (including transportation services) used by each industry to produce its output, the goods produced by each industry, and the goods used by final consumers. For-hire transportation is one of the industries in the I-O accounts. For-hire transportation consists of the services provided by transportation firms to industries and the public on a fee-basis, such as air carriers, railroads, transit agencies, common carrier trucking companies, and pipelines. The TSAs expand the I-O accounts by showing the value of the transportation services carried out by nontransportation industries for their own purposes (known as business-related in-house transportation). The TSAs also expand upon the I-O accounts to include the value of the transportation carried out by households through the use of a household vehicle.



The TSAs show the importance of transportation to the national economy. For-hire transportation contributed about 3 percent to the national economy in 2012, while business-related in-house transportation contributed an additional 1 percent. Households contributed $295.6 billion (or an additional 1.8 percent) to the national economy through the use of private vehicles. For-hire and in-house transportation includes both freight and passenger data because the individual contributions of for-hire and in-house passenger transportation are not available.

Figure 4-10 GDP Attributed to Transportation Mode: 2012



NOTES: For-hire transportation consists of the services provided by transportation firms to industries and the public on a fee-basis. In-house transportation consists of the services provided by nontransportation industries, including households, for their use. Business in-house transportation includes privately owned and operated vehicles of all body types, used primarily on public rights of way, and the supportive services to store, maintain, and operate those vehicles. Household transportation covers transportation provided by households for their own use through the use of an automobile. Other for-hire transportation includes: pipeline, transit and ground passenger transportation, including State and local government passenger transit; sightseeing transportation and transportation support; courier and messenger services; and warehousing and storage. It should be noted that passenger travel cannot be separated from total transportation by using this estimation method.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Transportation Satellite Accounts*, available at www.bts.gov as of April 2015.

Table 4-1 Real Output by Transportation Related Tourism Services and Commodities: 2010 and 2013

	GDP (millions of chained 2009 dollars)		Percent change,
	2010	2013	2010–2013
Passenger air transportation	**113,403**	**123,507**	**8.9%**
Domestic passenger air transportation services	74,673	79,968	7.1%
International passenger air transportation services	38,778	43,529	12.3%
All other transportation-related services and commodities	**158,114**	**186,627**	**18.0%**
Passenger rail transportation services	1,836	1,924	4.8%
Passenger water transportation services	10,768	13,400	24.4%
Intercity bus services	1,309	1,446	10.5%
Intercity charter bus services	1,309	1,446	10.5%
Local bus and other transportation services	4,046	3,976	-1.7%
Taxicab services	3,953	3,967	0.4%
Scenic and sightseeing transportation services	2,455	2,576	4.9%
Automotive rental and leasing	28,255	35,036	24.0%
Other vehicle rental and leasing	747	760	1.7%
Automotive repair services	12,150	11,128	-8.4%
Parking	2,261	2,036	-10.0%
Highway tolls	667	618	-7.3%
Travel arrangement and reservation services	36,568	42,339	15.8%
Gasoline	51,829	65,205	25.8%
All transportation related tourism goods and services	**271,478**	**310,134**	**14.2%**

NOTE: Individual categories may not add to subtotals due to inflation adjustment of the numbers. The *U.S. Travel and Tourism Satellite Accounts* (TTSA) measure the economic activity associated with the broader travel and tourism industry. The TTSA can also be used to show how economic activity in passenger-related travel and tourism services is changing.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. Travel and Tourism Satellite Accounts for 2010–2013*, available at www.bea.gov as of April 2015.

Between 2010 and 2013 the value of transportation-related tourism goods and services increased by 14.2 percent to $310.1 billion, reflecting growth in tourism travel. In 2013 passengers spent $124 billion on air travel and $65 billion on gasoline purchases. Categories with the largest percent growth between 2010 and 2013 were gasoline (26 percent), passenger water transportation services (24 percent), and automotive rental and leasing (24 percent).

Employment and Occupations in Passenger Travel

In 2013 the entire transportation-related labor force employed 12.8 million people, occupying about 9.4 percent of the labor force in the national economy. In the for-hire transportation sector, which measures businesses that participate in transportation travel for a fee, air travel employs the largest number of employees in passenger travel, occupying about 449,000 jobs in 2013. Transit and ground passenger transportation employed the second largest number of jobs (445,800), with 185,500 jobs in school and employee buses third. Employment in nearly all for-hire transportation industries increased between 2000 and 2013, except air transportation, which dropped by 27 percent.

Table 4-2 Employment in For-Hire Transportation and Selected Transportation-Related Industries: 2000, 2010 and 2013

	Annual average employment (thousands)			Percent change,
	2000	2010	2013	2000–2013
TOTAL U.S. labor force[1]	**132,019**	**130,275**	**136,368**	**3.3**
Transportation related labor force	**13,915**	**12,097**	**12,794**	**-8.1**
Transportation share of total U.S. labor force	**10.5**	**9.3**	**9.4**	
Transportation and warehousing (48-49)[2]	**4,410**	**4,191**	**4,495**	**1.9**
Air transportation (481)	614	458	449	-26.9
Rail transportation (482)	232	216	232	0.1
Water transportation (483)	56	62	66	17.0
Transit and ground passenger transportation (485)	372	430	446	19.8
Scenic and sightseeing transportation (487)	28	27	29	5.1
Support activities for transportation (488)	537	543	594	10.5
Other transportation related industries				
Motor vehicle parts dealers (441)	1,847	1,629	1,792	-3.0
Gasoline stations (447)	936	819	865	-7.5
Automotive equipment rental and leasing (5321)	208	161	179	-14.2
Travel arrangement and reservation services (5615)	299	186	195	-34.7
Other ambulatory health care services (6219)	173	251	271	56.6
Automotive repair and maintenance (8111)	888	801	842	-5.2

[1]Excludes farm employment. [2]Does not include postal service.

NOTES: Details may not add to totals due to independent rounding. Annual average employment data was compiled by North American Industry Classification System (NAICS) codes.

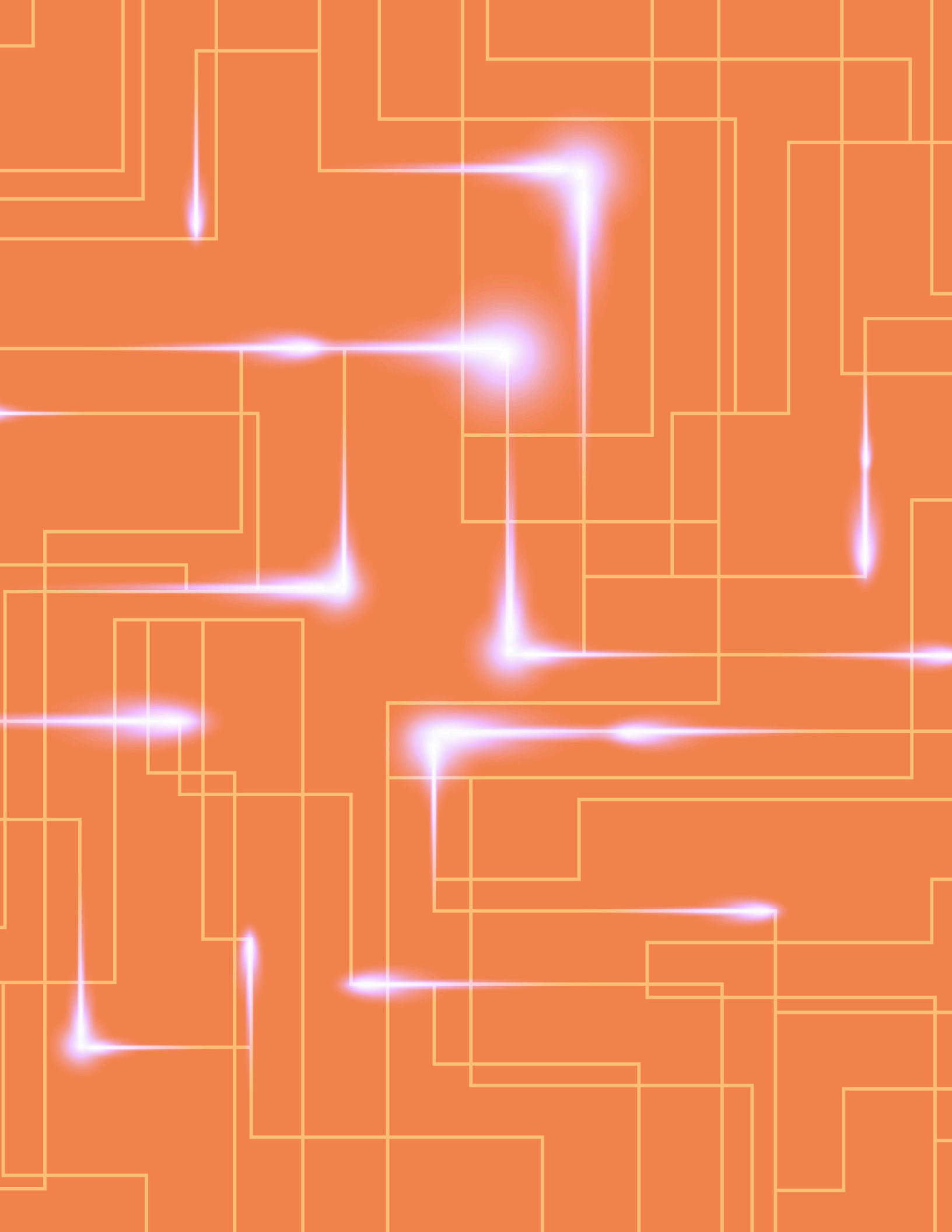
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics Data, *National Employment Hours and Earnings* as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-23, available at www.bts.gov as of April 2015.

Figure 4-11 Employment and Wages for Select Occupations in Passenger Travel: 2013

NOTES: Data was compiled by OES detailed occupational groups (to the six-digit level) for occupations that are traditionally considered transportation. **Total employment** includes the estimated total occupational employment for the nation, excluding self-employed. **Annual mean wage** is the estimated mean hourly wage of an occupation multiplied by 2,080 hours. Actual annual wages for many occupations may vary based on numerous factors. **Employment growth** was calculated based on annual employment growth rates between 2000 and 2013.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics (OES) Survey as cited in U.S. DOT, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-24, available at www.bts.gov, as of April 2015.

Various occupations support the movement of people. In 2013 the largest occupations by total employment in passenger transportation were school or special client bus drivers (496,100), taxi drivers and chauffeurs (170,000), and transit and intercity bus drivers (157,800). However, although occupying a large number of jobs, many of these workers also make a relatively low wage. Additionally, many of these occupations, such as taxi drivers and parking lot attendants, may work part-time or in more than one job, skewing their actual salary from what is shown in the data. In 2013 airplane pilots and flight engineers made the highest salaries, bringing in an average of $129,600 per year.



5 Safety, Energy, and Environmental Impacts of Passenger Travel

The number of passenger transportation fatalities has declined in recent decades. Compared to 1990, there were about 12,500 fewer fatalities in 2013—94.5 percent of this reduction is attributable to highway travel. Highway safety enhancements, which include human factors, roadway design and maintenance, and advanced safety technologies, have contributed significantly to this decline.

Table 5-1 Fatalities by Selected Passenger Transportation Mode: 1990, 2000, 2010, and 2013

	1990	2000	2010	2013
TOTAL passenger fatalities[a]	**45,948**	**42,989**	**34,020**	**33,394**
Air, total	**866**	**764**	**476**	**429**
U.S. air carrier	39	92	2	9
Commuter carrier	6	5	0	6
On-demand air taxi	51	71	17	27
General aviation	770	596	457	387
Highway passenger, total[b]	**43,894**	**41,191**	**32,469**	**32,028**
Passenger car occupants	24,092	20,699	12,491	11,977
Motorcyclists	3,244	2,897	4,518	4,668
Light truck occupants	8,601	11,526	9,782	9,155
Bus occupants	32	22	44	48
Pedestrians	6,482	4,763	4,302	4,735
Pedalcyclists	859	693	623	743
Other	584	591	709	702
Rail passenger, total	**202**	**220**	**215**	**198**
Train accidents	0	2	4	5
Highway-rail grade crossing[c]	74	72	74	76
Trespassers	117	135	131	110
Other incidents	11	11	6	7
Transit, total[d]	**339**	**295**	**221**	**266**
Transit, non-rail[e]	110	98	100	122
Transit, rail[f]	229	197	120	144
Water passenger, total	**876**	**716**	**759**	**617**
Passenger vessel[g]	11	15	87	57
Recreational boating	865	701	672	560

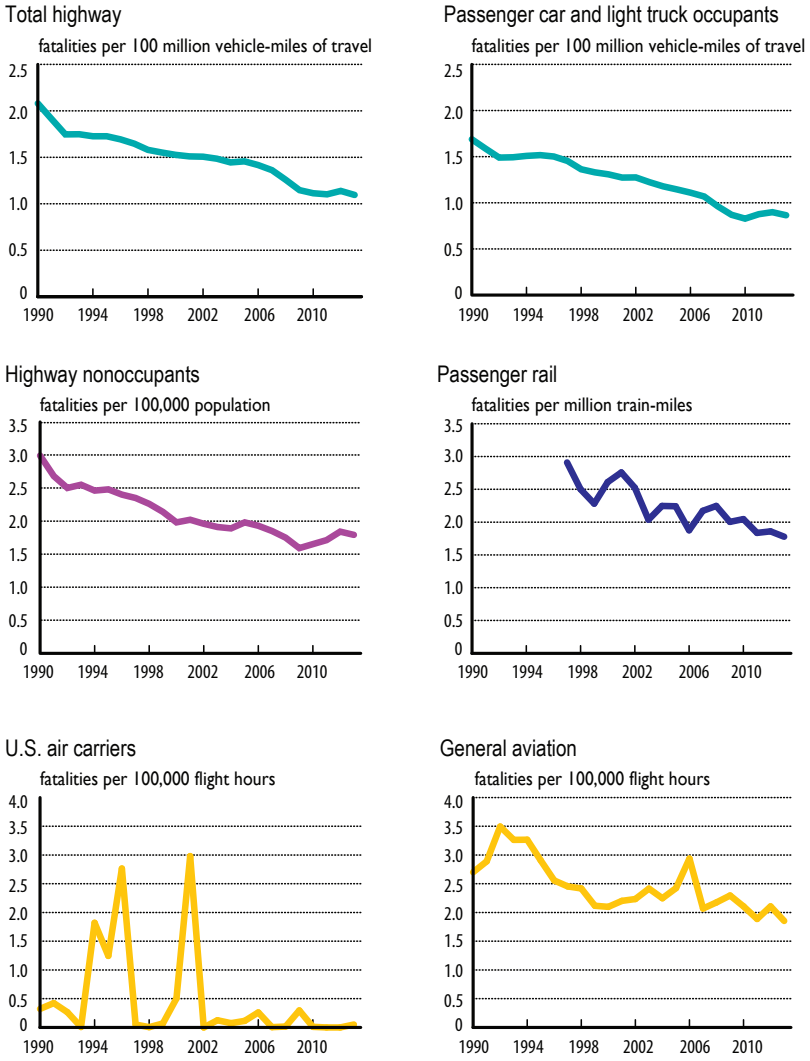
[a] May include fatalities double counted under *Highway* and *Passenger rail*. To reduce double counting, *Total fatalities* excludes *Transit, rail* fatalities, which are assumed to be included under *Passenger* rail. [b] Excludes large truck occupants. [c] Includes passenger train collisions with vehicles and people at all public and private highway-rail grade crossings. [d] Transit data prior to 2002 are not comparable with later years due to a change in the reporting system. [e] Includes aerial tramway, bus, bus rapid transit, commuter bus, demand response, demand taxi, ferryboat, jitney, publico, trolleybus, and vanpool. [f] Includes Alaska Railroad, cable car, commuter rail, heavy rail, hybrid rail, inclined plane, light rail, monorail/automated guideway transit, and streetcar. [g] Data for 2002 and on include passenger ships, research vessels, and school ships. Data prior to 2002 were tabulated using a different reporting system and are not directly comparable with later years.

SOURCES: **Air**—National Transportation Safety Board. **Highway**—National Highway Traffic Safety Administration. **Railroad**—Federal Railroad Administration. **Transit**—Federal Transit Administration. **Waterborne**—U.S. Coast Guard. **Recreational boating**—U.S. Coast Guard, Office of Boating Safety. As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at www.bts.gov as of June 2015.

Fatalities

Between 1990 and 2013, the highway fatality rate, measured by deaths per 100 million vehicle-miles of travel, declined 47.4 percent. The number of passenger car and light-truck occupant fatalities fell 48.8 percent during this period. Measuring by fatalities per capita, the nonoccupant fatality rate declined 40.1 percent. During this same period, the general aviation fatality rate, measured by fatalities per 100,000 flight hours, decreased by 31.4 percent, while the fatality rate for air carriers remained stable and low. Between 1997 and 2013, the passenger rail fatality rate, measured by deaths per million train-miles, decreased by 38.9 percent.

Figure 5-1 Fatality Rates for Selected Transportation Modes: 1990–2013

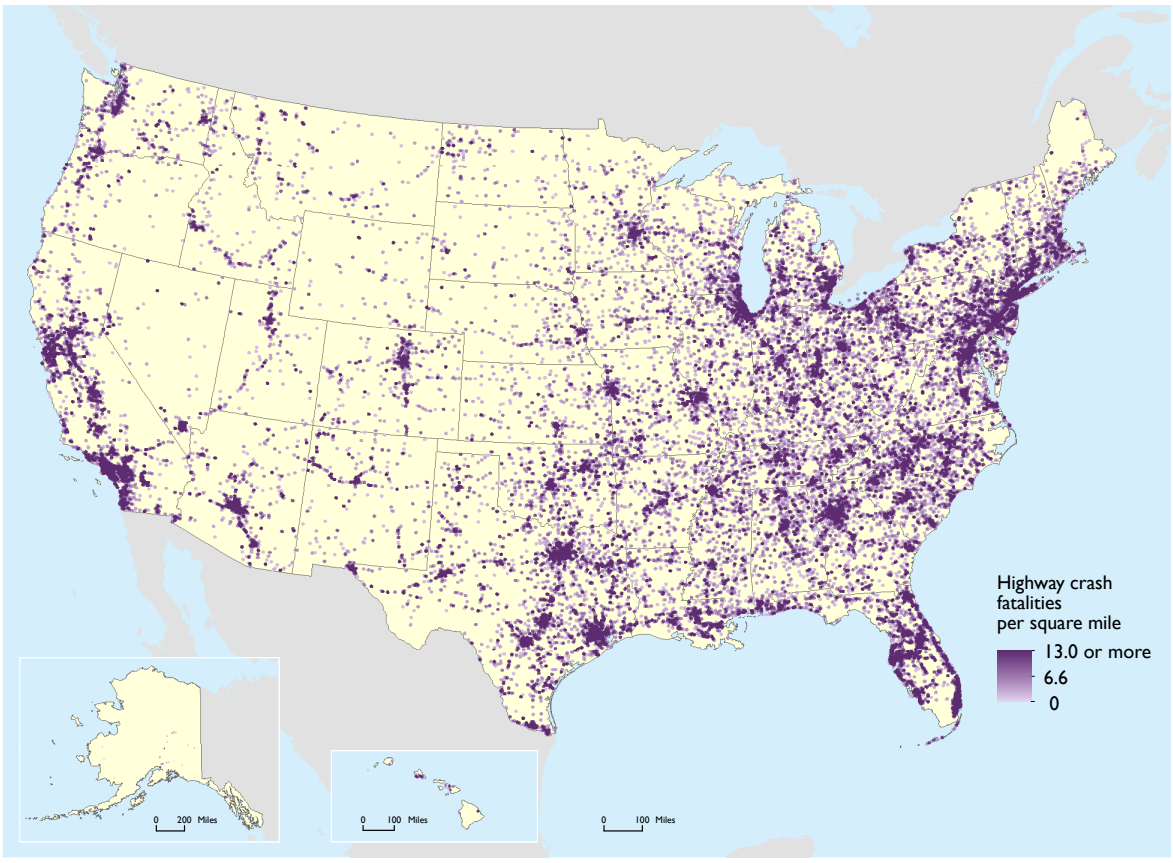


NOTES: Graphs with same color trend lines have identical scales. *Air carrier* fatalities resulting from the Sept. 11, 2001 terrorist acts include only onboard fatalities. *Nonoccupant* includes pedestrians and riders of nonmotorized bicycles and other pedal-powered vehicles and is measured on a per capita basis because exposure based estimates are not available. Passenger rail data for years before 1997 are not available.

SOURCES: **Highway and Air**—Calculated by U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS) based upon multiple sources as cited in USDOT, BTS, *National Transportation Statistic*, tables 2-9, 2-14, 2-17, 2-19, 2-21, and 2-23, available at www.bts.gov as of April 2015. **Rail**—USDOT, Federal Railroad Administration, Office of Safety Analysis, table 1-13, available at safetydata.fra.dot.gov/OfficeofSafety as of April 2015.

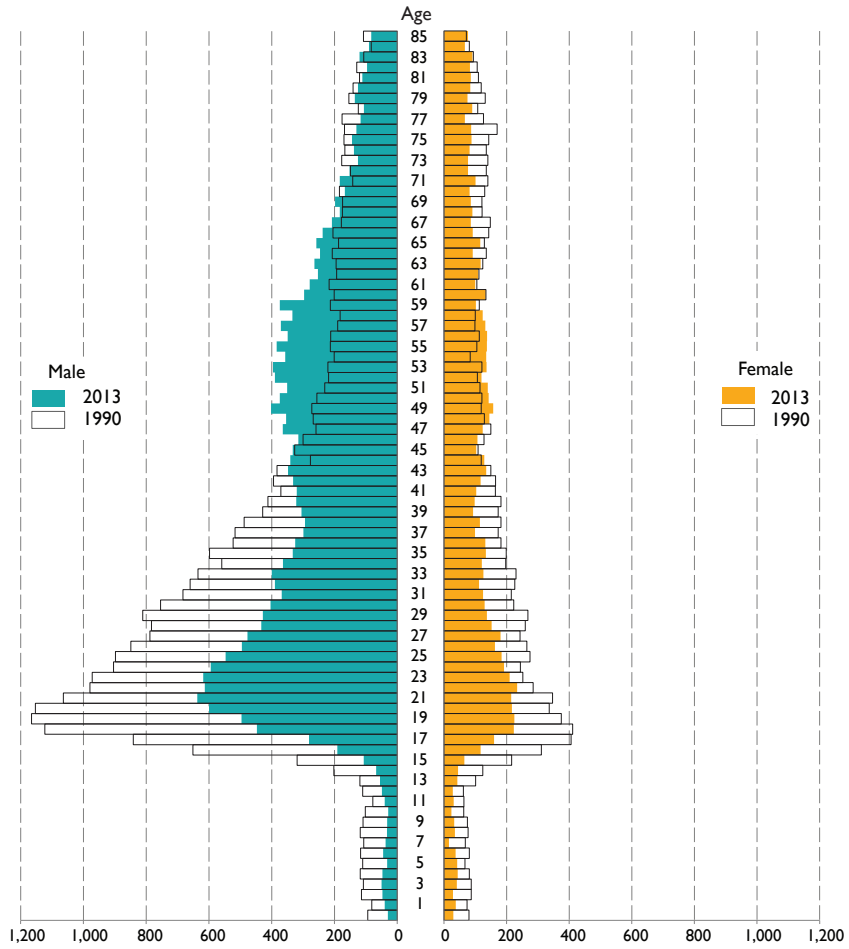
Highway fatalities in 2013 were concentrated along the major corridors in the highly populated areas of California, Florida, Illinois, Texas, and throughout the populous Northeast region from New England, near Boston, MA, down to the Middle Atlantic region, near Washington, DC. In addition, fatalities were also highly concentrated along major highway corridors and around urban areas in the South Atlantic region.

Figure 5-2 Highway Crash Fatalities: 2013



SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*, available at www-fars.nhtsa.dot.gov as of March 2015.

Figure 5-3 Number of Highway Fatalities by Age and Gender: 1990 and 2013



SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*, available at ftp.nhtsa.dot.gov as of March 2015.

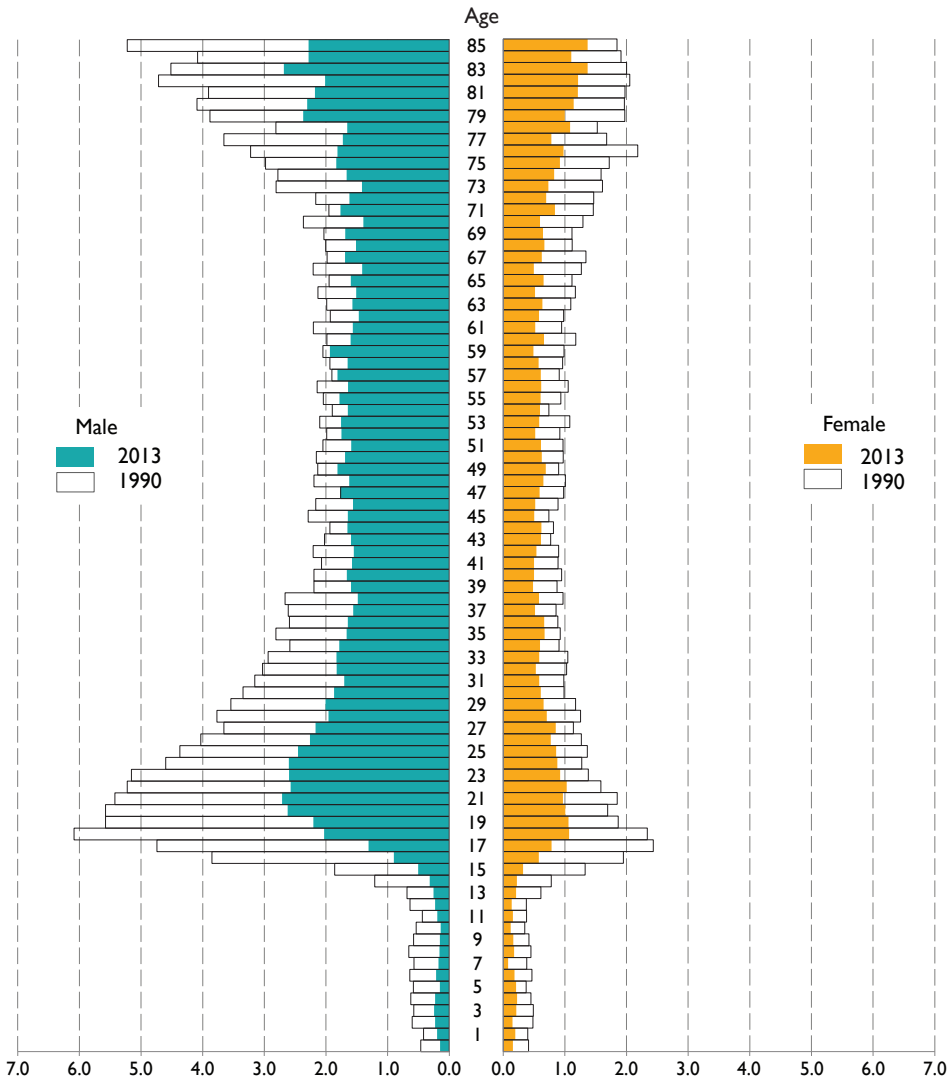
As in 1990, the number of males killed on U.S. highways exceeded the number of female fatalities for most age groups in 2013. Overall, males comprised 69.3 percent of highway fatalities in 1990 and 70.7 percent in 2013. Persons under the age of 30 continued to have the highest fatality numbers in 2013, although deaths for that age group have declined significantly. The number of highway fatalities for males in their mid-40s to late 60s (i.e., today's Baby Boomers[1]) was higher in 2013 than it was for the men who were in the same age group in 1990. Compared to their 1990 cohorts, the 2013 Baby Boomers comprised a larger share of the population and drove more miles—factors that likely contributed to the higher number of fatalities.

[1] Baby Boomer refers to persons born in the United States between the mid-1940s and mid-1960s.

Since 1990 there has been a considerable decrease in highway fatalities per capita across all age groups for both genders. The greatest numbers of fatalities per capita in both 2013 and 1990 were among males under the age of 30 and over the age of 80. Female fatalities per capita in both 2013 and 1990 peaked for those under the age of 27 and also for those over the age of 80. The 1990 rates were again higher.

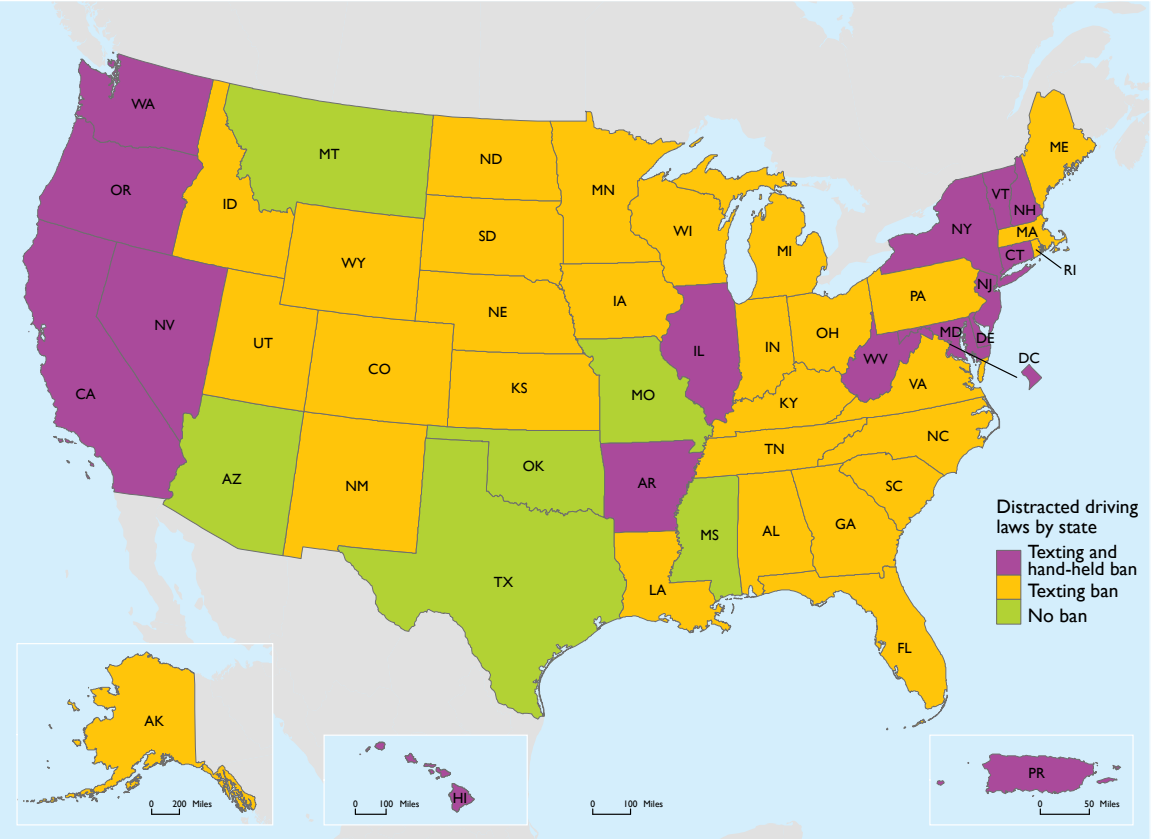
Figure 5-4 Rate of Highway Fatalities by Age and Gender: 1990 and 2013

Fatalities per 10,000 persons



SOURCES: **Fatality Data**–U.S. Department of Transportation, National Highway Traffic Safety Administration, Fatality Analysis Reporting System, available at ftp.nhtsa.dot.gov, as of March 2015. **Population Data**–U.S. Department of Commerce, U.S. Census Bureau, available at www.census.gov as of March 2015.

Figure 5-5 State Laws on Distracted Driving Ban on Hand-Held Devices and Texting While Driving: March 2015



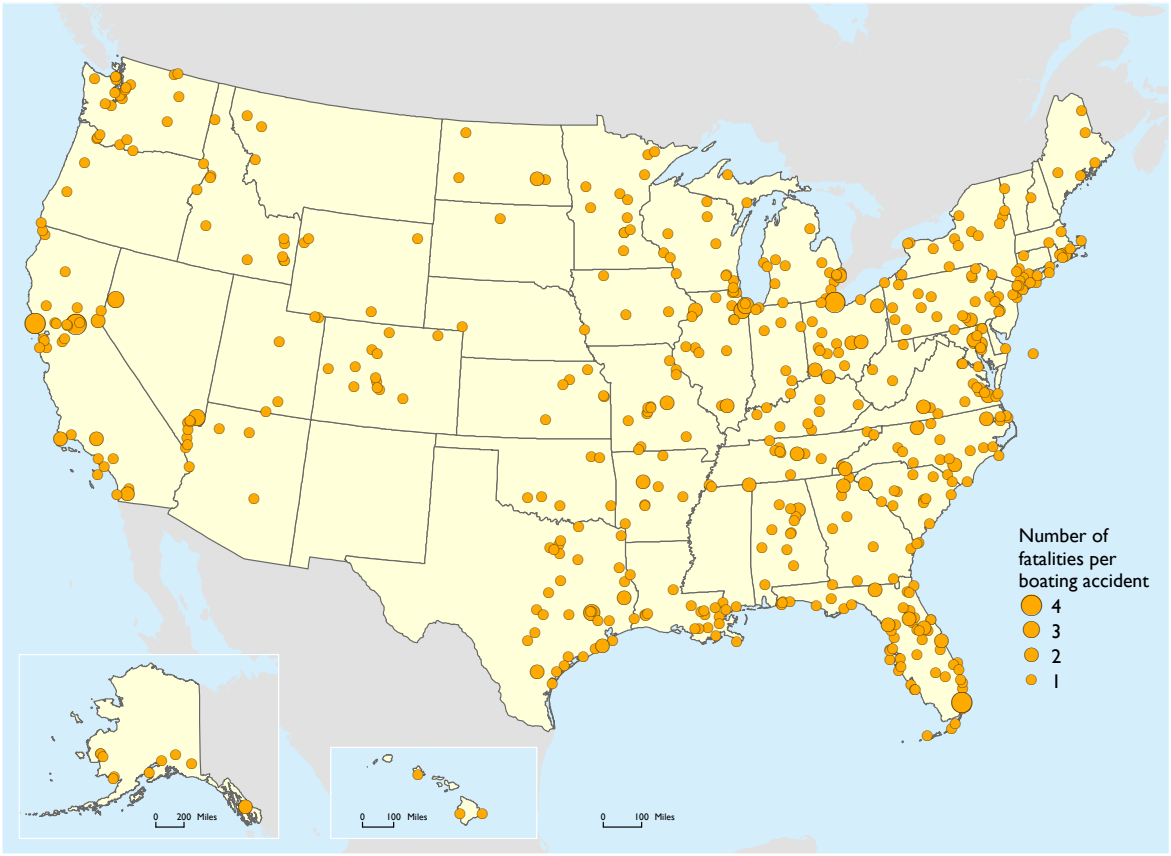
NOTES: A primary law means that an officer can ticket the driver for the offense without any other traffic violation taking place. A secondary law means an officer can only issue a ticket if a driver has been pulled over for another violation (like speeding). *Hand-held Cell Phone Use:* 14 states, D.C., Puerto Rico, Guam and the U.S. Virgin Islands prohibit all drivers from using hand-held cell phones while driving. *Text Messaging:* Washington was the first state to pass a texting ban in 2007. Currently 46 states, D.C., Puerto Rico, Guam and the U.S. Virgin Islands ban text messsaging for all drivers.

SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, State Laws, available at http://www.distraction.gov/get-the-facts/state-laws.html as of June 2015.

The National Highway Traffic Safety Administration estimates that 9.9 percent of highway fatalities in 2012 involved drivers who were distracted by such activities as using a cell phone, texting, eating or drinking, using navigation systems or a map, or grooming themselves. As of March 2015, 45 states and the District of Columbia had laws banning texting while driving, and 14 states and the District of Columbia prohibit driver use of handheld cell phones.

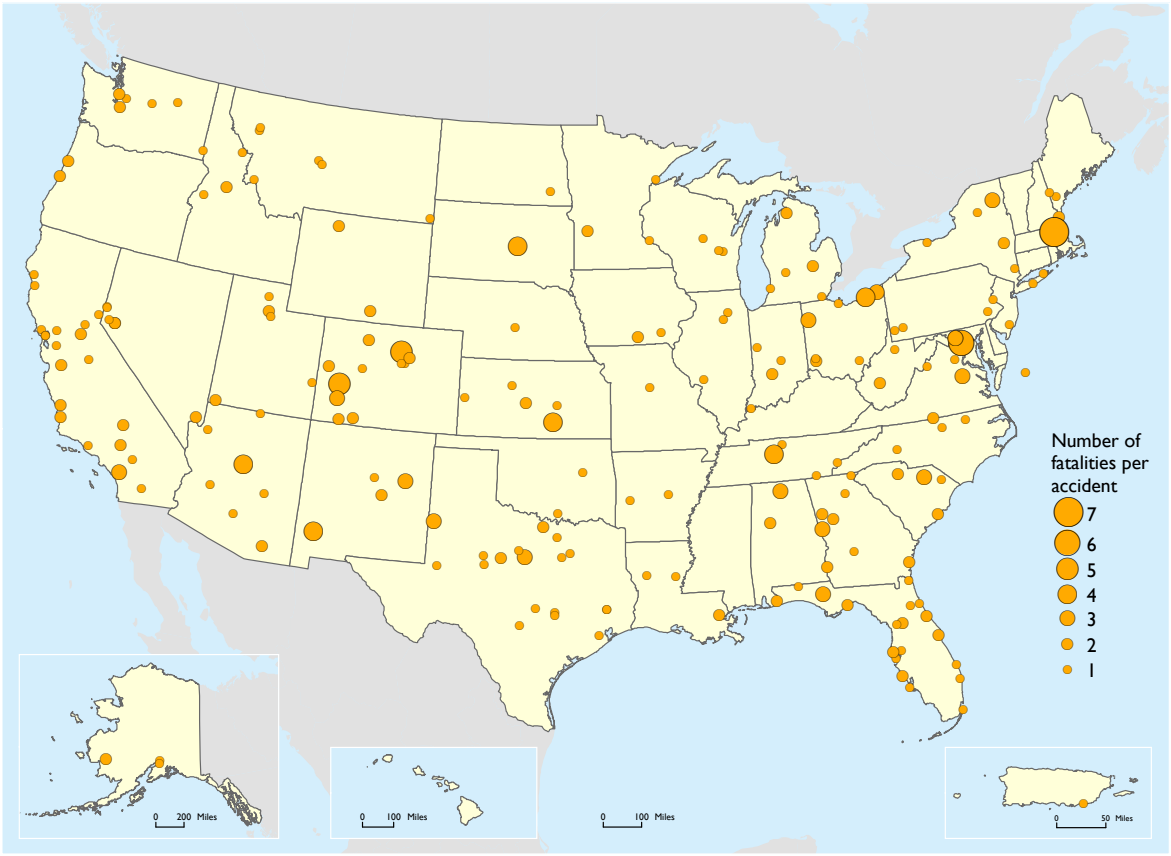
In 2014 the greatest concentrations of boating fatalities occurred in the Atlantic, Gulf, and Pacific coast states, predominately those east of the Mississippi River or along the Pacific coast. The fatality rate was 5.2 deaths per 100,000 registered recreational vessels, a 10.6 percent increase from the previous year.

Figure 5-6 Recreational Boating Fatalities: 2014



SOURCE: U.S. Department of Homeland Security, U.S. Coast Guard, Fifth Coast Guard District based upon Recreational Boat and Accident Reporting, available at http://www.dhs.gov/recreational-boat-and-accident-reporting/ as of July 2015.

Figure 5-7 General Aviation Fatalities: 2014



SOURCE: National Transportation Safety Board, *Aviation Accident Database*, available at http://www.ntsb.gov/ as of July 2015.

Fatal general aviation accidents were widely dispersed across the country in 2014. Nearly two-thirds of fatal general aviation accidents resulted in a single fatality, another quarter resulted in two fatalities, and the remainder yielded multiple fatalities.

Box 5-A Fatality Definition/Reporting by Mode

The timeframe and definitions used to attribute a fatality to a transportation crash or accident differ among modes according to their data collection methods, reporting periods, and information management systems. For example, a death that occurs within 30 days of an incident involving highway vehicles is considered a highway fatality, while a death that occurs within 180 days of a rail incident is considered a rail death. Such definitional differences pose challenges when comparing safety records across modes of transportation. The table below shows fatality reporting requirements for several modes of transportation.

Mode (Source)	Definition	Citation
Air (National Transportation Safety Board)	Fatal injury means any injury which results in death within 30 days of the accident.	49 CFR 830.2
Hazardous Material (USDOT/Pipeline and Hazardous Materials Safety Administration)	A Hazardous Materials Incident Report must be updated within one year of the date of occurrence of the incident whenever a death results from injury caused by a hazardous material.	49 CFR 171.16
Highway/Commercial Motor Vehicle (USDOT/Federal Motor Carrier Safety Administration)	Fatality means any injury which results in the death of a person at the time of the motor vehicle accident or within 30 days of the accident.	49 CFR 390.5
Pipeline (USDOT/Pipeline and Hazardous Materials Safety Administration)	Accident reports must be submitted not more than 30 days after detection of an incident required to be reported.	49 CFR 191.3 & 195.50
Railroad (USDOT/Federal Railroad Administration)	Person dies within 180 days from the date of the injury.	FRA Guide for Preparing Accident/ Incident Reports
Rail transit (USDOT/Federal Transit Administration)	A fatality at the scene; or where an individual is confirmed dead within thirty (30) days of a rail transit-related incident;	49 CFR 659.33
Recreational Boating (USDHS/United States Coast Guard)	At least one person in this accident died. 48 hours (if injury, disappearance or death)	33 CFR 173 & 174
Water (National Transportation Safety Board and the Coast Guard)	…a written report the fact of the casualty within five days of the casualty.	46 CFR 4.05-1046 CFR 4.05-10

KEY: USDOT = U.S. Department of Transportation; USDHS = U.S. Department of Homeland Security.

Injuries

Compared to 1990, there were 28.1 percent fewer passenger transportation injuries in 2013. As for fatalities, the majority of passenger transportation injuries are highway-related, accounting for 99.9 percent of all injuries in 2013. Much of the decrease in highway-related injuries occurred between 2000 and 2010, when the number of injuries declined 27.5 percent. Injuries among passenger-car occupants were down 45.5 percent from 1990 to 2013 but up 3.4 percent from 2010 to 2013.

Table 5-2 Injured Persons by Selected Passenger Transportation Mode: 1990, 2000, 2010, and 2013

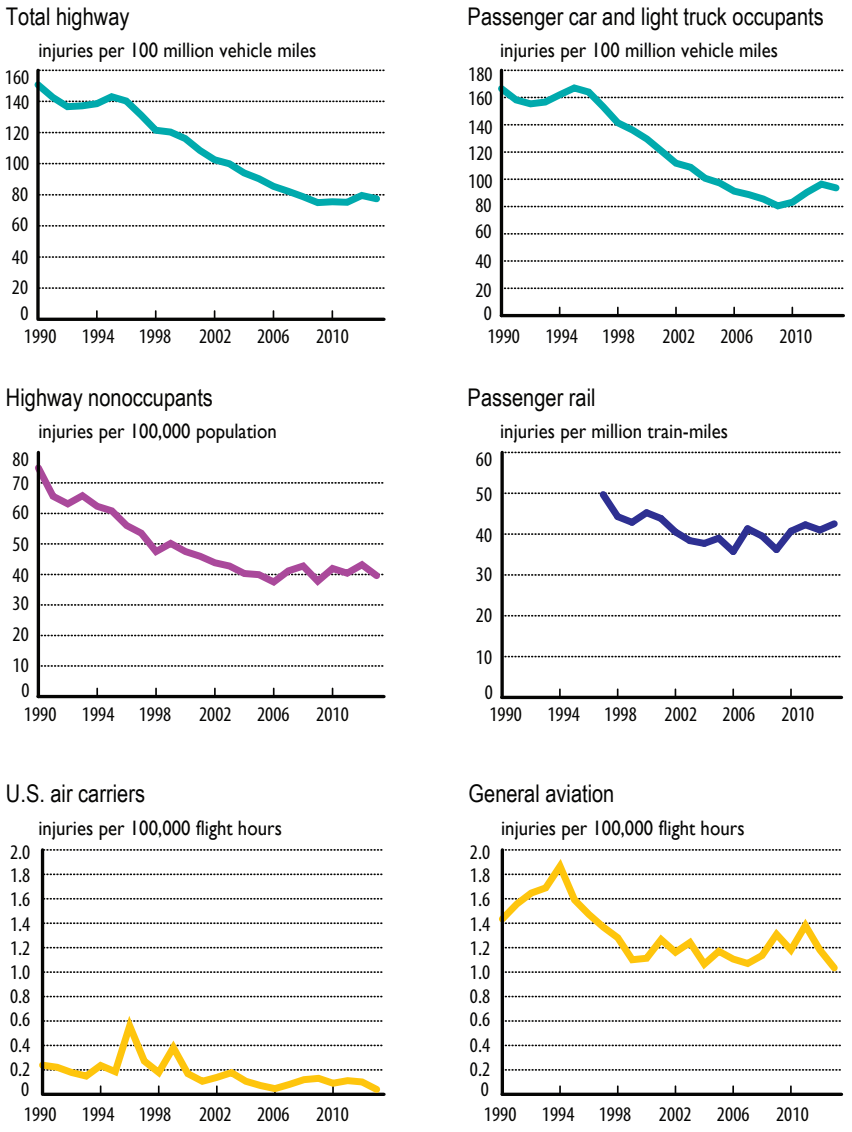
	1990	2000	2010	2013
TOTAL injuries[a]	**3,239,000**	**3,209,000**	**2,244,000**	**2,312,000**
Air, total	**485**	**359**	**278**	**250**
U.S. air carrier	29	31	17	9
Commuter carrier	11	7	2	9
On-demand air taxi	36	12	3	16
General aviation	409	309	256	216
Highway passenger, total[b]	**3,189,000**	**3,158,000**	**2,219,000**	**2,289,000**
Passenger car occupants	2,376,000	2,052,000	1,253,000	1,296,000
Motorcyclists	84,000	58,000	82,000	88,000
Truck occupants, light	505,000	887,000	733,000	750,000
Bus occupants	33,000	18,000	17,000	23,000
Pedestrians	105,000	78,000	70,000	66,000
Pedalcyclists	75,000	51,000	52,000	48,000
Other	11,000	15,000	13,000	16,000
Rail passenger, total	**4,872**	**3,812**	**4,280**	**4,735**
Train accidents	241	150	57	256
Highway-rail grade crossing[c]	131	120	222	220
Trespassers	70	52	80	78
Other incidents	4,430	3,490	3,921	4,181
Transit, total[d]	**54,556**	**56,697**	**25,222**	**24,622**
Transit, non-rail[e]	40,834	42,713	16,697	15,805
Transit, rail[f]	13,722	13,984	8,436	8,817
Water passenger, total	**3,834**	**4,451**	**3,363**	**2,668**
Passenger vessel[g]	12	96	210	48
Recreational boating	3,822	4,355	3,153	2,620

[a] May include injuries double counted under *Highway* and *Passenger rail*. To reduce double counting, *Total injuries* excludes *Transit, rail* injuries, which are assumed to be included under *Passenger rail*. [b] Excludes large truck occupants. Individual categories may not sum to total because injuries are rounded estimates. [c] Includes passenger train collisions with vehicles and people at all public and private highway-rail grade crossings. [d] Transit data prior to 2002 are not comparable with later years due to a change in the reporting system. [e] Includes aerial tramway, bus, bus rapid transit, commuter bus, demand response, demand taxi, ferryboat, jitney, publico, trolleybus, and vanpool. [f] Includes Alaska Railroad, cable car, commuter rail, heavy rail, hybrid rail, inclined plane, light rail, monorail/automated guideway transit, and streetcar. [g] Data for 2002 and on include passenger ships, research vessels, and school ships. Data prior to 2002 were tabulated using a different reporting system and are not directly comparable with later years.

SOURCES: **Air**—National Transportation Safety Board. **Highway**—National Highway Traffic Safety Administration. **Railroad**—Federal Railroad Administration. **Transit**—Federal Transit Administration. **Waterborne**—U.S. Coast Guard. **Recreational boating**—U.S. Coast Guard, Office of Boating Safety. As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-2, available at www.bts.gov as of June 2015.

The 2013 total highway injury rate was about half the 1990 rate. Injuries for passenger car and light-truck occupants were down 43.8 percent during this period. Measuring by injuries per capita, highway nonoccupant injuries per capita declined 47.1 percent. The air carrier injury rate remained low and stable. While the general aviation injury rate decreased by 27.9 percent over this same period, it remained 10 times higher than that of air carriers. Between 1997 and 2013, the passenger rail injury rate, measured by deaths per million train-miles, decreased by 14.4 percent.

Figure 5-8 Injury Rates for Select Transportation Modes: 1990–2013



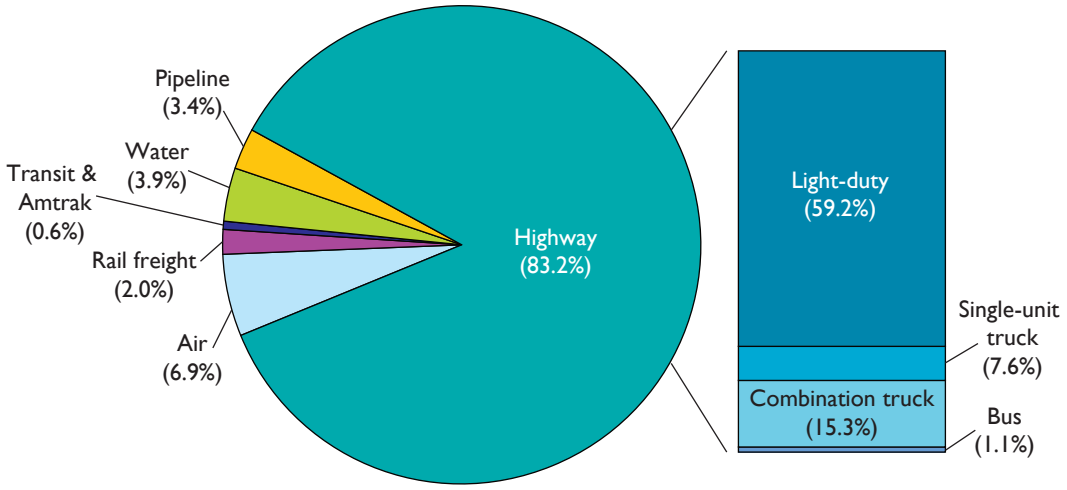
NOTES: Graphs with same color trend lines have identical scales. *Light-duty* vehicles includes passenger car and light truck occupants. *Air* includes serious injuries only. *Nonoccupant* includes pedestrians and riders of non-motorized bicycles and other pedal-powered vehicles and is measured on a per capita basis because exposure based estimates are not available. Passenger rail data for years before 1997 are not available.

SOURCES: **Highway and Air**–Calculated by U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS) based upon multiple sources as cited in USDOT, BTS, *National Transportation Statistic*, tables 2-9, 2-14, 2-17, 2-19, 2-21, and 2-23, available at www.bts.gov as of April 2015. Rail–USDOT, Federal Railroad Administration, Office of Safety Analysis, table 1-13, available at safetydata.fra.dot.gov/OfficeofSafety as of April 2015.

Passenger Travel and Energy

In 2013 transportation used about 26 quadrillion Btu's of energy, making it the second largest sector for fuel and electricity consumption. Highway use continues to dominate transportation fuel consumption, accounting for 83.2 percent of total energy use. Light-duty vehicles (consisting of passenger cars, light trucks, vans, and sport utility vehicles) accounted for the largest share of energy use at 59.2 percent.

Figure 5-9 Energy Use by Transportation Mode: 2013
Total = 26 quadrillion Btu



SOURCES: Calculated by the Bureau of Transportation Statistics based on data from **Air**–Bureau of Transportation Statistics, Office of Airline Information. **Rail Freight**–Association of American Railroads. **Transit**–Federal Transit Administration. **Amtrak**–National Railroad Passenger Corporation (Amtrak), personal communication with Energy Management Department and Government Affairs Department. **Water**–U.S. Department of Energy, Energy Information Administration and U.S. Department of Transportation, Federal Highway Administration. **Pipeline**–U.S. Department of Energy, Energy Information Administration. **Highway**–Federal Highway Administration as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-6, available at http://www.bts.gov as of March 2015.

Light-duty highway vehicles used about 2.2 billion fewer gallons of gasoline in 2013 than in 2000. General aviation gasoline showed the largest percent decrease in fuel consumption from 2000 to 2013, a decrease of 39.2 percent. Additionally, certificated air carriers also experienced a decrease, consuming about 2.1 billion fewer gallons of jet fuel in 2013 than in 2000, a 15.0 percent drop. These trends suggest that technological advances and the implementation of stricter CAFE[2] standards have contributed to increased fuel efficiency.

[2] Corporate Average Fuel Economy (CAFE) is the sales weighted average fuel economy (expressed mpg) of a manufacturer's fleet of cars or light trucks with a gross weight rating of 8,500 pounds or less, and manufactured for sale in the United States for a given year. The Energy Policy Conservation Act of 1975 (Public Law 94-163) established the first CAFE standards in response to the 1973-1974 Arab oil embargo.

Table 5-3 Fuel and Electricity Consumption by Transportation Mode: 2000, 2010, and 2013

Units vary by mode

				Percent Change, 2000–2013	
	2000	2010	2013	Number	Percent
Air					
Certificated carriers[a]					
Jet fuel (million gallons)	13,904	11,973	11,812	-2,092	-15.0%
General aviation[b]					
Aviation gasoline (million gallons)	333	221	202	-130	-39.2%
Jet fuel (million gallons)	972	1,435	1,413	441	45.4%
Highway					
Gasoline, diesel, and other fuels (million gallons)					
Light-duty vehicle[c]	126,004	123,466	123,770	-2,234	-1.8%
Bus	1,112	1,921	2,117	1,005	90.3%
Transit					
Electricity (million kWh)	5,382	6,414	6,651	1,269	23.6%
Motor fuel (million gallons)					
Diesel[d]	591	633	609	18	3.0%
Gasoline and other nondiesel fuels[e]	24	98	107	83	351.1%
Compressed natural gas	44	126	132	88	202.0%
Amtrak					
Electricity (million kWh)	470	559	525	55	11.7%
Distillate / diesel fuel (million gallons)	95	63	66	-29	30.5%
Water					
Residual fuel oil (million gallons)	6,410	5,143	4,212	-2,198	-34.3%
Distillate / diesel fuel oil (million gallons)	2,261	2,003	1,676	-586	-25.9%
Gasoline (million gallons)	1,124	1,167	1,223	98	8.7%

KEY: kWh = kilowatt-hour

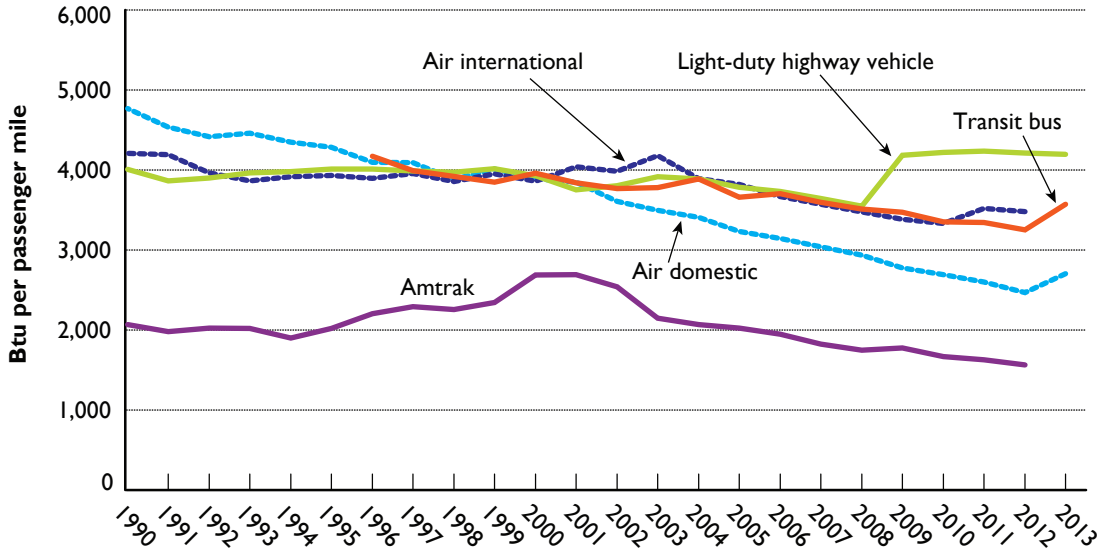
[a] Domestic operations only. [b] General aviation includes fuel used in air taxi operations, but not commuter operations. Data for 1996 are estimated using new information on non-respondents and are therefore not comparable to earlier years. See the accuracy statement in the appendix for more detailed information. [c] *Light-duty vehicle* includes all passenger cars, light trucks, vans and sport utility vehicles. [d] *Diesel* includes diesel and bio-diesel [e] *Gasoline and all other nondiesel fuels* include gasoline, liquefied petroleum gas, liquefied natural gas, methane, ethanol, bunker fuel, kerosene, grain additive, hydrogen, and other fuel.

SOURCES: **Air**—Bureau of Transportation Statistics, Office of Airline Information. **Highway**—Federal Highway Administration. **Transit**—Federal Transit Administration. **Amtrak**—National Railroad Passenger Corporation (Amtrak), personal communication with Energy Management Department and Government Affairs Department. **Water (Residual and distillate / diesel fuel oil)**—U.S. Department of Energy, Energy Information Administration. **Water (Gasoline)**—U.S. Department of Transportation, Federal Highway Administration as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-5, available at http://www.bts.gov as of March 2015.

However, some transportation modes, such as transit, have showed increases in energy consumption. Likely, this is attributed to several factors, such as increases in transit use as well as additional vehicles and extended transit facilities, routes, and services as shown in table 3-9 in chapter 3.

The energy intensities of passenger modes, or the energy used per passenger-mile, generally have declined over time except for those of privately owned vehicles. Transit motor buses typically use the most energy per passenger-mile (although this can vary), followed by certificated air carriers and rail transit modes, such as commuter rail, Amtrak, street car, and light rail.

Figure 5-10 Energy Intensity of Passenger Modes: 1990–2013

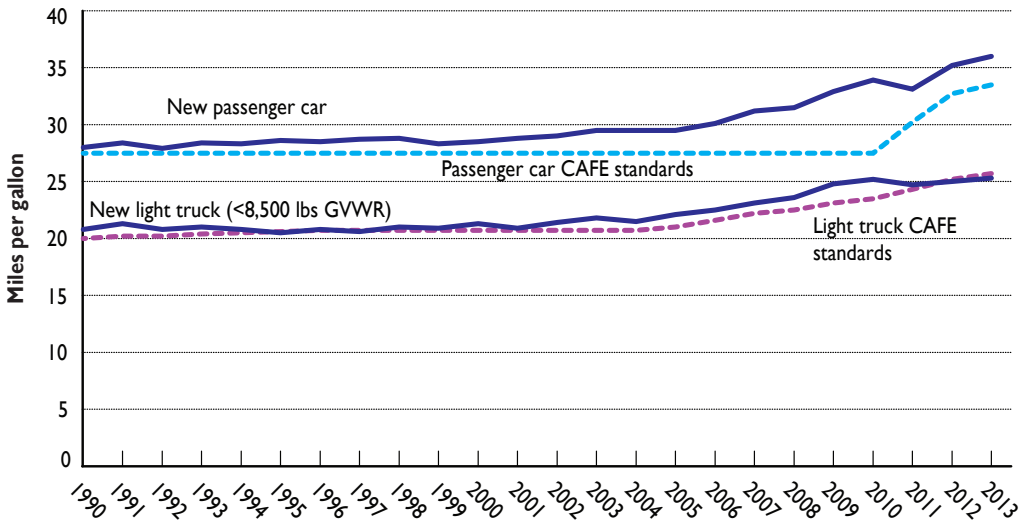


KEY: Btu = Britsh thermal unit

NOTES: *Light-duty highway* includes passenger cars, light trucks, vans, and sport utility vehicles. Highway data for 2007-2011 were calculated using a new methodology and are not comparable to previous years. A change in vehicle occupancy rates derived from the National Household Travel Surveys results in a shift of highway passenger-miles between 2008 and 2009. Energy Intensity (Btu per passenger-mile) = Energy Use (Btu) / passenger-miles; Energy Use calculated by using fuel and electricity usage and converting to energy by using BTS conversion rates. The following conversion rates were used: Diesel =138,700 Btu/gallon. Compressed natural gas = 22,500 Btu/gallon. Bio-Diesel = 126,200 Btu/gallon. Liquefied natural gas = 84,800 Btu/gallon. Gasoline = 125,000 Btu/gallon. Liquefied petroleum gas = 91,300 Btu/gallon. Methanol = 64,600 Btu/gallon. Ethanol = 84,600 Btu/gallon. Bunker fuel = 149,700 Btu/gallon. Kerosene = 135,000 Btu/gallon. Grain additive = 120,900 Btu/gallon. Electricity 1KWH = 3,412 Btu, negating electrical system losses. This table includes approximate electrical system losses, and thus the conversion factor is multiplied by 3.

SOURCES: **Highway**–Federal Highway Administration. **Air**–Bureau of Transportation Statistics, Office of Airline Information. **Amtrak**–National Railroad Passenger Corporation (Amtrak), personal communication with Energy Management Department and Government Affairs Department and Association of American Railroads. **Transit**–Federal Transit Administration as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-21, 4-22, 4-24, and 4-16, available at www.bts.gov as of March 2015.

Figure 5-11 Average Fuel Efficiency of U.S. Passenger Cars and Light Trucks, 1990–2013



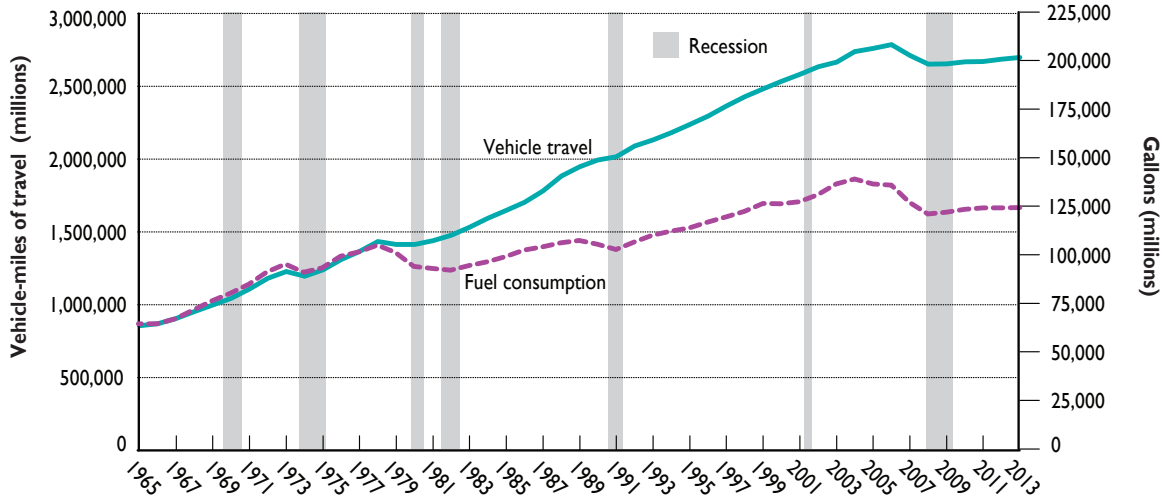
KEY: CAFE = Corporate Average Fuel Economy; GVWR = Gross vehicle weight rating; U = data are unavailable.

NOTE: *New vehicle fuel efficiency* and *CAFE standards* assume 55% city and 45% highway-miles. Beginning with model year 2008, *Light truck* manufacturers have the option to comply with the existing standard values or the new revised standard values based upon each manufacturer unique vehicle fleet characteristics. In model years 2008-2010, the values shown for *CAFE standards* for *Light truck* are the standard values applicable under the existing CAFE program.

SOURCE: **New vehicle fuel efficiency** (based on model year production) and **CAFE standards**: National Highway Traffic Safety Administration as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-23, available at www.bts.gov as of March 2015.

The average fuel efficiency of the total U.S. passenger-car and light-truck fleet improved since 1990 as new vehicle efficiency increased. Stricter CAFE standards for fuel efficiency in passenger cars and light trucks have pushed automakers to produce vehicles with better fuel efficiency. The fuel efficiency of new passenger cars rose by 28.6 percent, from 28.0 mpg in 1990 to 36.0 mpg in 2013. New light trucks, which include vehicles such as pickup trucks, minivans, and SUVs, increased 21.6 percent from 20.8 mpg in 1990 to 25.3 mpg in 2013.

Figure 5-12 Vehicle-Miles of Travel and Fuel Use by Personal Vehicles: 1965–2013



NOTE: Includes passenger cars, light trucks and motorcycles. The definition of a light-duty vehicle was changed after 2006, affecting the vehicle types incuded in the personal vehicle category.

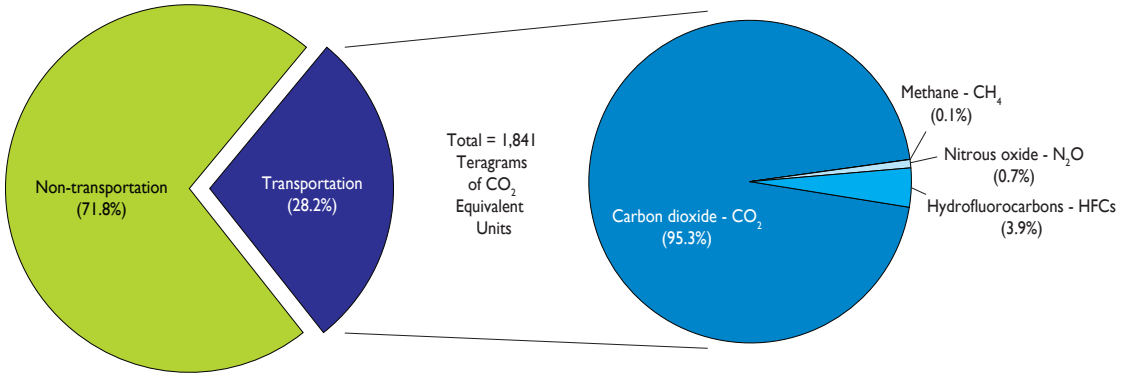
SOURCE: U.S. Department of Transportation, Federal Highway Administration as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-5 and 1-35, available at https:/bts.gov/ as of March 2015.

Before 1975 personal vehicle travel and fuel use typically moved in similar trajectories. Fuel economy improvements after 1975 broke this close connection as the amount of fuel used per vehicle-mile of travel steadily decreased. The gap widened further as higher miles per gallon vehicles came to dominate the on-road fleet. Also, economic cycles can influence passenger travel, which, in turn, influences overall fuel use. Economic downturns generally lead to slower vehicle-miles traveled growth, resulting in slower increases in fuel consumption or even reductions.

Passenger Travel and Air Emissions

The transportation sector is a large producer of greenhouse gas (GHG) emissions, accounting for 28.2 percent of total GHG emissions in 2012. Carbon Dioxide (CO_2), which is produced by the combustion of fossil fuels in internal combustion engines, is the predominant GHG emitted by the transportation sector.

Figure 5-13 Transportation-Related Greenhouse Gas Emissions: 2012

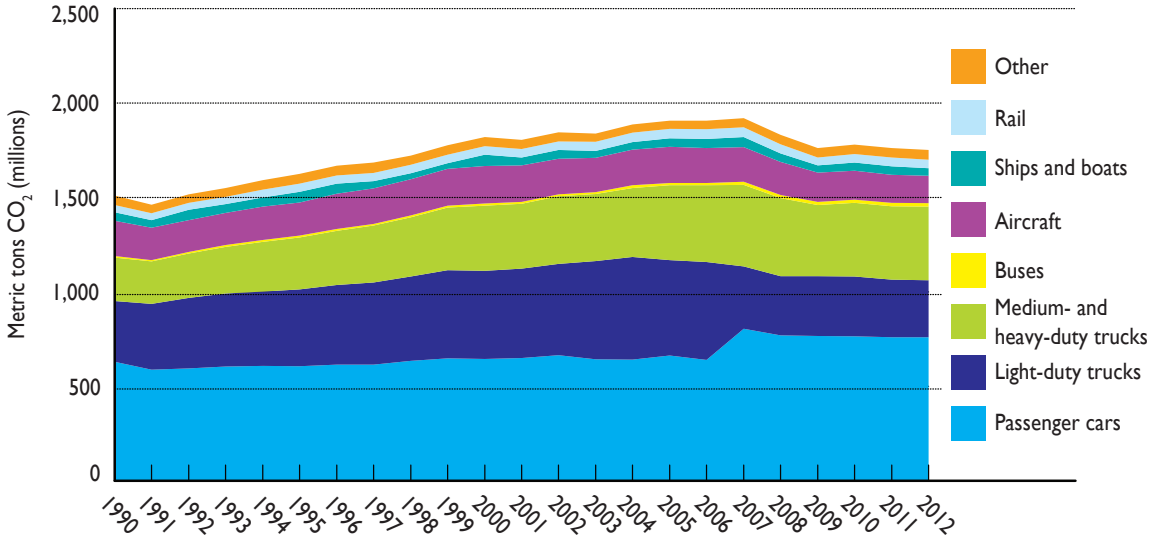


NOTE: Percents may not add to 100 due to rounding. *Transportation* includes only fossil and renewable fuels consumed directly. *Non-transportation* includes the residential, commercial, and industrial sectors, which include only fossil fuels consumed directly, and electric utilities , which includes all fuels (fossil, nuclear, geothermal, hydro, and other renewables) used by electric utilities. Most renewable fuels are not included.

SOURCE: U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks (2012), table 2-15 and table ES-8, available at http://epa.gov/climatechange/emissions/usinventoryreport.html as of March 2015.

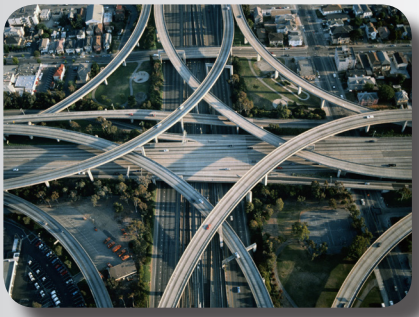
GHG emissions generally track transportation energy use because fossil fuels are the primary source of transportation's energy. Passenger cars use the largest share of fuel and emit the largest share of CO_2. The next largest CO_2 emitters are light-duty trucks, aircraft, ships and boats, rail, and buses. Total transportation CO_2 emissions peaked in 2007 and have since steadily declined. By 2012, CO_2 emission levels for all transportation modes decreased by 8.8 percent compared to 2007. From 2007 to 2012, CO_2 emissions from passenger cars and light duty trucks declined by 5.5 and 8.8 percent, respectively.

Figure 5-14 CO_2 GHG Emissions by Mode: 1990–2012



NOTES: Other greenhouse gas emissions are from motorcycles, pipelines, and lubricants. International bunker fuel emissions (not included in the total) result from the combustion of fuels purchased in the United States but used for international aviation and maritime transportation. U.S. Total, all modes; Aircraft; and Ships and boats include emissions data for only domestic activity only as do all other data shown. International emissions from bunker fuels purchased in the United States are not included. Alternative-fuel vehicle emissions are allocated to the specific vehicle types in which they were classified (i.e., Passenger cars, Light-duty trucks, All other trucks, and Buses). CO_2 emissions from the individual modes of other, rail, ships and boats, and aircraft include a portion of total CO_2 emissions due to passenger travel since passenger travel could not be segregated from total CO_2 emissions. The U.S. Environmental Protection Agency (EPA) changed the definitions of passenger cars and light trucks in 2007. Many vehicles formerly classified as light trucks, but designated predominantly for passenger transportation, were reclassified as passenger cars, causing an apparent jump in passenger car emissions that were offset by a compensating drop in light truck emissions.

SOURCE: U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (2012), table 2-15, available at http://epa.gov/climatechange/emissions/usinventoryreport.html as of March 2015.



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