

# Pocket Guide to Transportation 2025



Free Copy - Not Meant for Sale



U.S. Department of Transportation  
Office of the Secretary of Transportation

**Bureau of Transportation Statistics**

<https://www.bts.gov/pocketguide>

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

<https://doi.org/10.21949/1528174>

Product Orders

Internet: [www.bts.gov](http://www.bts.gov)

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

Information Service

Phone: 202-366-DATA

Email: [bts@dot.gov](mailto:bts@dot.gov)

January 2025

Free Copy - Not Meant for Sale

# Pocket Guide to Transportation 2025

Free Copy - Not Meant for Sale



U.S. Department of Transportation  
Office of the Secretary of Transportation

**Bureau of Transportation Statistics**

# ACKNOWLEDGMENTS

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

Robert C. Hampshire, PhD  
*Deputy Assistant Secretary  
for Research and  
Technology*

## **Bureau of Transportation Statistics**

Patricia Hu  
*Director*

Rolf Schmitt  
*Deputy Director*

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

Ramond Robinson  
*Director, Office of  
Transportation Analysis*

Sean Jahanmir  
*Project Manager*

Alpha Wingfield  
*Visual Information  
Specialist*

## **Major Contributors:**

Daniel Palumbo\*  
Hoa Thai\*

\*Spatial Front

# ABOUT THE *POCKET GUIDE TO TRANSPORTATION*

The BTS *Pocket Guide to Transportation* is a quick reference guide that provides transportation statistics at your fingertips. It provides key information and highlights major trends on the U.S. transportation system. Intended as a compact reference, the *Pocket Guide* supports the BTS mission to create, manage, and share transportation statistical knowledge.

Many of the tables and figures within this publication are derived from *National Transportation Statistics* available at [www.bts.gov](http://www.bts.gov). The *Pocket Guide* is also available online at <https://www.bts.gov/pocketguide>.

## CONTENTS

Major Trends .....	iv
Infrastructure .....	1
Moving People .....	7
Moving Goods.....	19
Safety.....	27
Performance.....	35
Economy .....	41
Environment.....	49
Glossary.....	57

# Major Trends

## Moving People: January 2000–May 2024

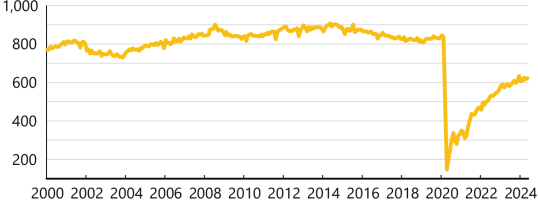
### Highway Passenger Travel (seasonally adjusted)

Vehicle-miles traveled (billions)



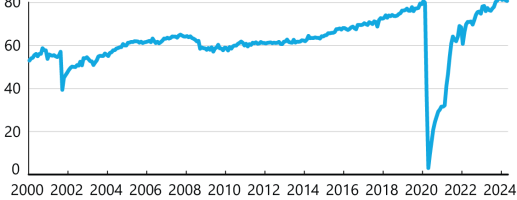
### Transit Ridership (seasonally adjusted)

Unlinked passenger trips (millions)



### U.S. Air Carrier Passenger Travel (seasonally adjusted)

Systemwide enplaned passengers (millions)



### Rail Passenger Travel (seasonally adjusted)

Revenue passenger-miles (millions)



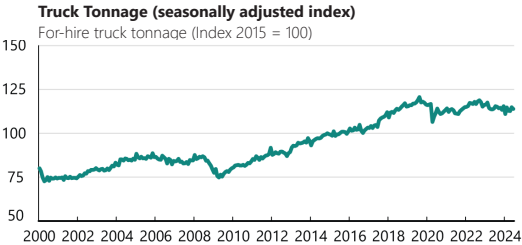
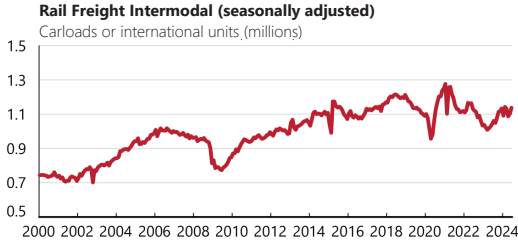
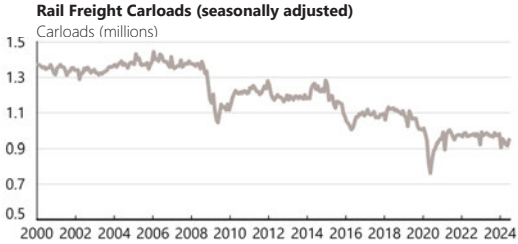
Source: **Seasonally adjusted transportation data**—U.S. Department of Transportation, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as August 2024.

Note: Graph scales are not comparable. **Rail freight intermodal**—Rail intermodal traffic includes shipping containers and truck trailers moved on rail cars.

**U.S. waterways freight**—Includes tonnage carried on internal U.S. waterways. As of September 2023, transit service levels, as measured by vehicle revenue miles, have returned to 91 percent of September 2019 levels.

# Major Trends

Moving Freight: January 2000–June 2024



Source: **Seasonally adjusted transportation data**—U.S. Department of Transportation, Bureau of Transportation Statistics, available at [www.bts.gov](http://www.bts.gov) as of August 2024.

Note: Graph scales are not comparable. **Carload**—the quantity of freight required for the application of a carload rate per the amount of cargo that fits in a rail car. **Rail freight intermodal**—Rail intermodal traffic includes shipping containers and truck trailers moved on rail cars. **U.S. waterways freight**—Includes tonnage carried on internal U.S. waterways.





# 1 INFRASTRUCTURE

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

## 1-1 Transportation Network Length

miles

Mode		2012	2021	2022
Highway	Public roads	4,092,730	4,187,440	4,197,446
	Public road lanes <sup>a</sup>	8,606,003	8,823,515	8,844,304
Pipeline	Gas distribution	1,247,552	1,341,329	1,356,473
	Gas transmission and gathering	319,914	318,672	413,093
Rail	Class I freight railroad	95,391	91,651	91,285
	Amtrak	21,334	21,124	21,220
Transit	Commuter rail <sup>b</sup>	7,722	7,951	7,934
	Heavy rail <sup>b</sup>	1,622	1,681	1,681
	Light rail <sup>b,c</sup>	1,724	2,098	2,127
Water	Navigable waterways <sup>d</sup>	25,000	25,000	25,000

Sources: **Highway, Pipeline, Rail, Transit, Water**—As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-1, 1-6, and 1-10, available at <https://www.bts.gov/nts> as of July 2024.

<sup>a</sup>Measured in lane-miles.

<sup>b</sup>Measured in directional route-miles.

<sup>c</sup>Light Rail was revised beginning in 2011 and includes light rail, streetcar rail, and hybrid rail.

<sup>d</sup>Estimated length of domestic waterways.

## 1-2 Transportation Facilities

number

Mode		2012	2022	2023
Air	Certificated airports <sup>a</sup>	542	517	517
	General aviation airports	19,169	19,452	19,514
Highway	Bridges	607,380	620,669	621,581
Pipeline	LNG facilities	130	175	177
Rail	Amtrak stations	512	528	528
	Commuter rail stations	1,234	1,315	U
Transit rail	Heavy rail stations	1,044	1,055	U
	Light rail stations <sup>b</sup>	928	1,414	U
	Ports <sup>c</sup>	180	204	U
Water	Cargo handling docks	8,214	8,042	U
	Lock chambers	239	237	U

Sources: **Air, Highway, Rail**—As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 1-3, 1-7, and 1-28, available at <https://www.bts.gov/nts> as of September 2024. **Pipeline**—U.S. Department of Transportation, Pipeline and Hazardous Materials Administration, available at <https://www.phmsa.dot.gov> as of September 2024. **Transit**—U.S. Department of Transportation, National Transit Database, available at <https://www.transit.dot.gov/ntd/> as of September 2024. **Water**—U.S. Army Corps of Engineers, Navigation Data Center, *Transportation Facts and Information*, available at <http://www.navigation-datacenter.us/> as of September 2024.

LNG = liquified natural gas; U = data are not available.

<sup>a</sup>Certificated airports serve air carrier operations with aircrafts seating more than nine passengers.

<sup>b</sup>Light Rail was revised beginning in 2011 and includes light rail, streetcar rail, and hybrid rail.

<sup>c</sup>Ports handling over 250,000 short tons.

## 1-3 Transportation Vehicles

number

Mode		2011	2021	2022
Air	Air carrier aircraft	7,168	5,815	6,852
	General aviation aircraft	220,453	209,194	209,540
Highway	Light-duty vehicle <sup>a</sup>	233,841,422	257,623,560	258,545,382
	Truck	10,270,693	13,856,404	14,333,821
	Motorcycle	8,437,502	9,795,491	9,567,664
Rail	Class I freight locomotive	24,250	23,264	23,184
	Class I freight car	380,699	243,087	251,997
	Amtrak locomotive	287	395	391
	Amtrak car	1,301	1,529	1,449
Transit rail	Commuter rail <sup>b</sup>	6,971	7,545	7,645
	Heavy rail <sup>b</sup>	14,942	10,942	10,880
	Light rail <sup>b, c</sup>	2,284	2,859	2,892
Water	Nonself-propelled vessel	32,454	34,364	35,004
	Self-propelled vessel	10,702	10,392	10,523
	Oceangoing vessel	214	183	178
	Recreational boat	12,173,935	11,957,886	11,770,383

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-11, available at <https://www.bts.gov/nts> as of July 2024.

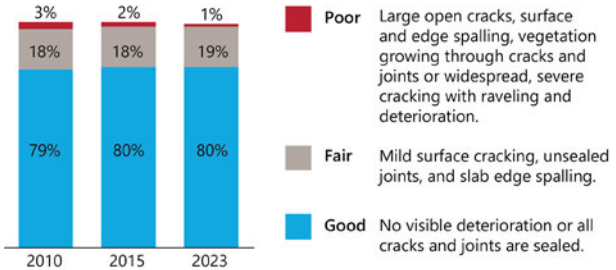
<sup>a</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles.

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

<sup>c</sup>Light Rail was revised beginning in 2011. Water denotes U.S. flagged vessels.

## 1-4 Airport Runway Pavement Condition

percent of NPIAS runways

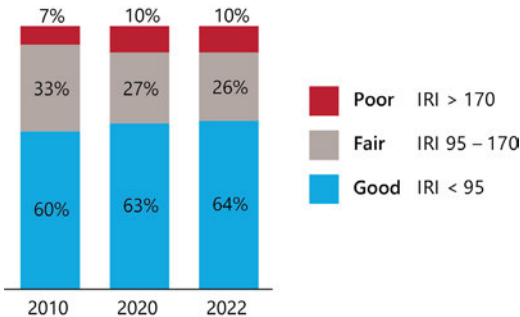


Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-25, available at <https://www.bts.gov/nts> as of September 2024.

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

## 1-5 National Highway System Pavement Condition

percent of NHS facility miles

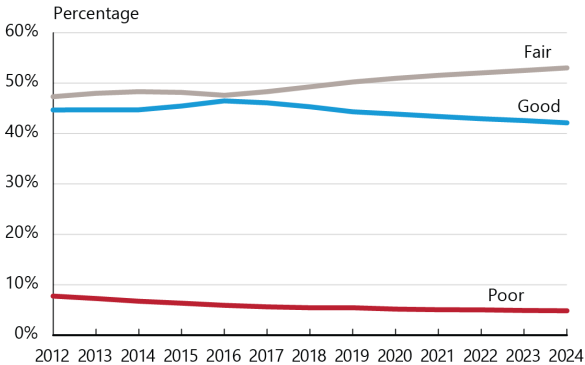


Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, table HM-47, available at <https://www.fhwa.dot.gov/policyinformation/statistics.cfm> as of July 2024.

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

## 1-6 Condition of Highway Bridges: 2012–2024

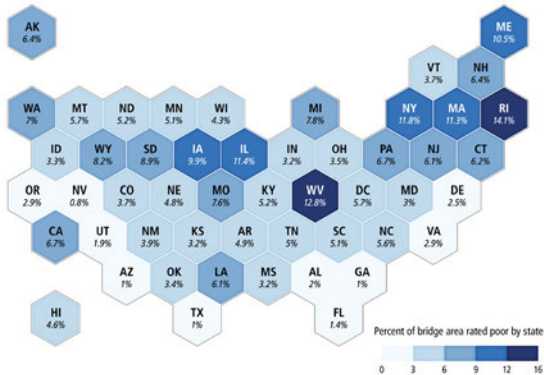
deck area percentage of good, fair, and poor bridges



Source: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at <https://www.fhwa.dot.gov/bridge/nbi.cfm> as of July 2024.

Note: The deck area calculation was changed as of 2018 in accordance with 23 CFR 490.409.

## 1-7 Condition of Highway Bridges by State: 2024



Source: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at <https://www.fhwa.dot.gov/bridge/nbi.cfm> as of July 2024.



## 2 MOVING PEOPLE

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

### 2-1 Passenger-Miles Traveled

millions

Mode		2011	2021	2022
Air	U.S. air carrier, domestic	565,614	573,404	708,960
	Light-duty vehicle <sup>a</sup>	4,436,788	4,639,316	4,291,909
Highway	Motorcycle	21,517	23,659	24,369
	Truck	267,594	327,026	331,272
	Bus	271,151	345,697	380,414
	Amtrak <sup>b</sup>	6,568	2,860	4,888
Passenger rail	Commuter rail	11,314	3,707	5,924
	Heavy rail	17,317	7,405	9,802
	Light rail <sup>c</sup>	2,363	1,041	1,474

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-40, available at <https://www.bts.gov/nts> as of July 2024.

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

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

<sup>c</sup>Light rail was revised beginning in 2011 and includes light rail, streetcar rail, and hybrid rail.

## 2-2 Aircraft, Vehicle, and Rail Car Miles of Travel

millions

Mode		2011	2021	2022
Air	U.S. air carrier, domestic <sup>a</sup>	6,005	5,650	6,191
	Light-duty vehicle <sup>b</sup>	2,650,458	2,768,999	2,822,664
Highway	Motorcycle	18,542	19,642	23,765
	Truck	267,594	327,026	331,272
	Bus	13,807	16,744	18,490
	Amtrak <sup>c</sup>	296	157	263
Passenger rail	Commuter rail <sup>c</sup>	366	303	343
	Heavy rail <sup>c</sup>	730	640	652
	Light rail <sup>c,d</sup>	147	112	120

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-35, available at <https://www.bts.gov/nts> as of July 2024.

<sup>a</sup>Measured in revenue aircraft-miles.

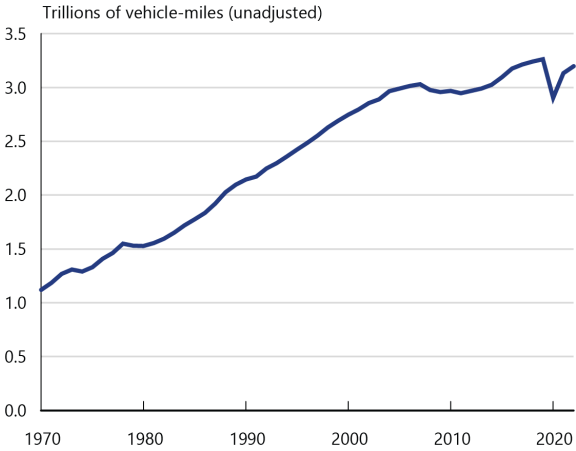
<sup>b</sup>Includes passenger cars, light trucks, vans, and sport utility vehicles.

<sup>c</sup>Measured in passenger car-miles.

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



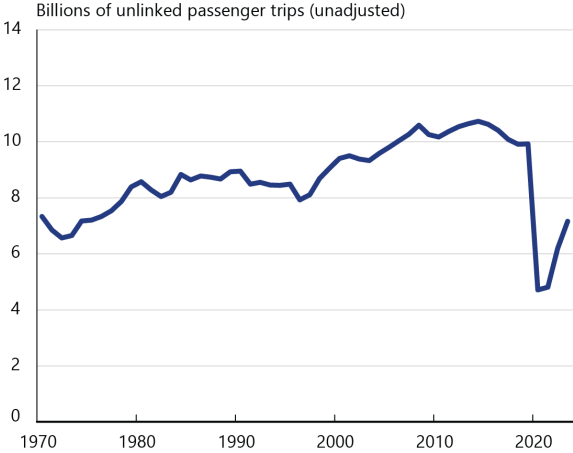
## 2-3 Highway Travel: 1970–2022



Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, available at <https://www.fhwa.dot.gov/policyinformation/statistics.cfm> as of July 2024.

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

## 2-4 Transit Ridership: 1970–2023



Sources: **1970–1989:** American Public Transportation Association, *Public Transportation Fact Book*, Appendix, available at <https://www.apta.com/Pages/default.aspx/> as of March 2020. **1990–2023:** American Public Transportation Association, *Ridership Report*, available at <https://www.apta.com/research-technical-resources/transit-statistics/ridership-report/> as of July 2024.

Note: Includes bus, commuter rail, demand response, heavy rail, light rail, trolley bus, ferry boat, aerial tramway, automated guideway, cable car, inclined plane, monorail, and other. As of September 2023, transit service levels, as measured by vehicle revenue miles, have returned to 91 percent of September 2019 levels.

## 2-5 Daily Household Travel

		2009	2017 <sup>a</sup>	2022
Travel per person	Daily person trips	3.8	3.4	U
	Daily person-miles	36.1	36.1	U
Travel per driver	Daily vehicle trips	3.0	2.7	U
	Daily vehicle-miles of travel	29.0	25.8	U
Average commute	Length in miles	11.8	11.5	13.2
	Travel time in minutes	23.9	26.6	21.3
Percent of work trips by usual mode	Private vehicles	89.4	87.5	86.9
	Public Transit <sup>b</sup>	5.1	6.9	4.3
	Walk	2.8	2.9	6.9
	Other <sup>c</sup>	2.7	2.7	1.9

Source: U.S. Department of Transportation, Federal Highway Administration, *2022 National Household Travel Survey, Summary of Travel Trends*, available at <https://nhts.ornl.gov/> as of July 2024.

Note: The usual mode is defined as the means of transportation usually used to go to work in the week prior to the travel day.

U = data are not available.

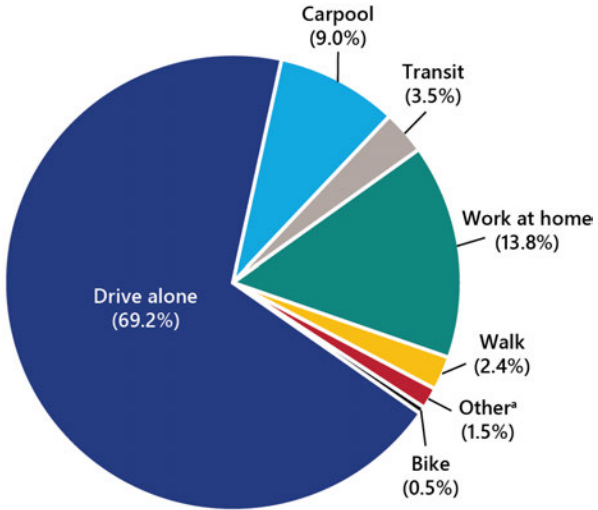
<sup>a</sup>The 2017 NHTS includes a different methodology compared to previous years such as an address-based sample including more urban and cell phone only households.

<sup>b</sup>Public transit includes local bus, commuter bus, commuter train, subway, trolley, and streetcar.

<sup>c</sup>“Other” includes travel modes not specifically cited, such as motorcycle, taxi, bike, truck, and other.

## 2-6 Commute Mode Share: 2023

percent of workers age 16 and older

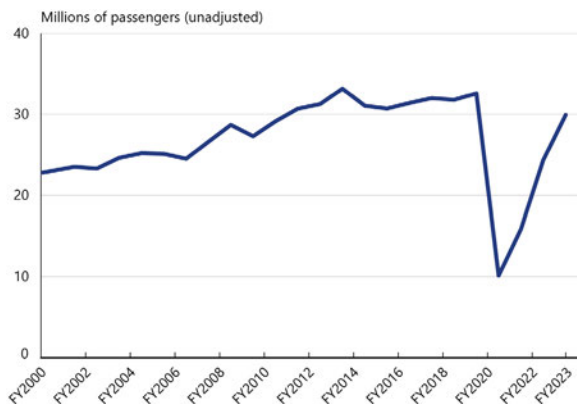


Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-41, available at [www.bts.gov](http://www.bts.gov) as of September 2024.

Note: Percents may not add to 100 due to rounding. The *American Community Survey* asks for the mode usually used by the respondent to get to work. For more than one mode of transportation, respondents select the mode used for most of the distance traveled.

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

## 2-7 Amtrak Ridership: FY2000–FY2023



Source: U.S. Department of Transportation, Federal Railroad Administration, available at <http://safetydata.fra.dot.gov/officeofsafety/default.aspx/> as of July 2024.

## 2-8 Top 10 Amtrak Stations: FY2023

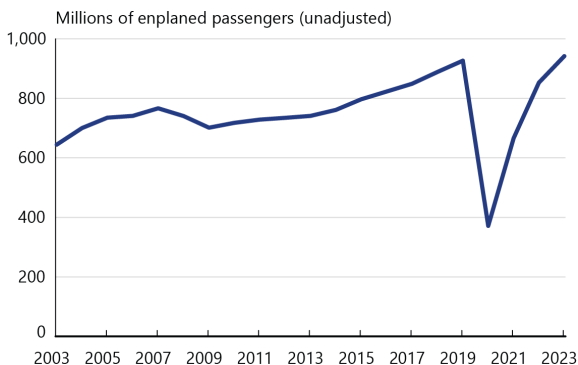
by passengers

Rank	Station	FY '22–FY '23 change	Millions of passengers
1	New York Penn Station, NY	▲ 97.2%	10.2
2	Washington, DC	▲ 106.5%	4.8
3	Philadelphia Gray 30th St., PA	▲ 103.9%	4.2
4	Chicago, IL	▲ 76.5%	2.7
5	Boston South Station, MA	▲ 79.1%	1.5
6	Baltimore, MD	▲ 99.1%	1.1
7	Los Angeles, CA	▲ 87.6%	1.0
8	New Haven Union Station, CT	▲ 68.9%	0.8
9	Albany-Rensselaer, NY	▲ 77.6%	0.8
10	Boston Back Bay Station, MA	▲ 88.0%	0.8

Source: Amtrak, *National Fact Sheet and State Fact Sheet*, available at <https://media.amtrak.com/fact-sheets/> as of July 2024.

Note: Includes passenger boardings and alightings.

## 2-9 U.S. Air Carrier Passenger Traffic: 2003–2023



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market data, available at [www.bts.gov](http://www.bts.gov) as of July 2024.

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

## 2-10 Top 10 U.S. Airports: 2023

by enplaned passengers

Rank	Airport	'22-'23 change	Millions of passengers
1	Atlanta, GA	▲ 12%	50.9
2	Dallas/Fort Worth, TX	▲ 11%	39.2
3	Denver, CO	▲ 12%	37.9
4	Los Angeles, CA	▲ 13%	36.7
5	Chicago O'Hare, IL	▲ 8%	35.8
6	New York JFK, NY	▲ 13%	30.5
7	Orlando, FL	▲ 15%	28.0
8	Las Vegas, NV	▲ 9%	27.8
9	Charlotte, NC	▲ 12%	25.9
10	Miami, FL	▲ 3%	24.7

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-44, available at <https://www.bts.gov/nts> as of July 2024.

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

## 2-11 Top 10 World Airports: 2023

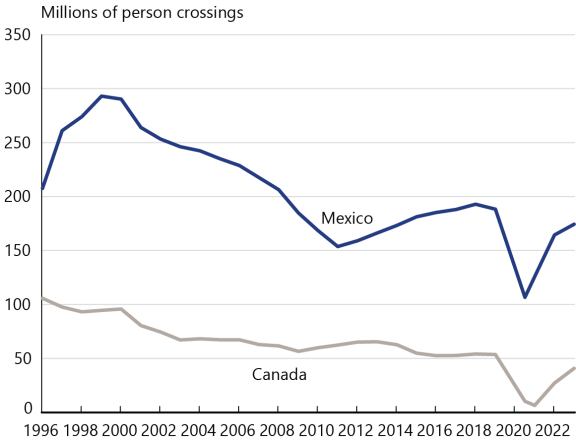
by enplaned, deplaned, and in-transit passengers

Rank	Airport	'22-'23 change	Millions of passengers
1	Atlanta, USA	▲ 11.7%	104.7
2	Dubai, United Arab Emirates	▲ 31.7%	87.0
3	Dallas/Fort Worth, USA	▲ 11.4%	81.8
4	London LHR, United Kingdom	▲ 28.5%	79.2
5	Tokyo Haneda, Japan	▲ 55.1%	78.7
6	Denver, USA	▲ 12.3%	77.8
7	Istanbul, Turkey	▲ 18.3%	76.0
8	Los Angeles, USA	▲ 13.8%	75.1
9	Chicago O'Hare, USA	▲ 8.1%	73.9
10	New Delhi, India	▲ 21.4%	72.2

Source: Airports Council International, available at <https://www.aci.aero/> as of July 2024.

LHR = London Heathrow Airport

## 2-12 Incoming Land Border Person Crossings: 1996–2023



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at <https://data.bts.gov/stories/s/jswi-2e7b> as of September 2024.

Note: Includes pedestrians and personal vehicle passengers. Excludes drivers and passengers in commercial trucks.



## 2-13 Top 5 Land Ports of Entry: 2023

by incoming personal vehicle passengers

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

Rank	Port	'22-'23 change	Number of person crossings
1	Buffalo-Niagara Falls, NY	▲ 57.9%	8,760,880
2	Detroit, MI	▲ 49.3%	6,093,032
3	Blaine, WA	▲ 49.6%	5,950,298
4	Champlain, NY	▲ 37.2%	2,141,415
5	Port Huron, MI	▲ 40.2%	1,994,236

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

Rank	Port	'22-'23 change	Number of person crossings
1	San Ysidro, CA	▲ 3.6%	25,819,825
2	El Paso, TX	▼ -1.7%	14,025,624
3	Laredo, TX	▲ 8.4%	9,512,794
4	Hidalgo, TX	▲ 9.8%	9,390,166
5	Otay Mesa, CA	▲ 1.4%	9,370,635

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at <https://data.bts.gov/stories/s/jswi-2e7b> as of July 2024.

Note: Excludes drivers and passengers in commercial trucks.

## 2-14 Top 20 U.S. Gateways for Nonstop International Air Travel

enplaned passengers

Gateway Airport	2022 Pax in 1,000s	2023 Pax in 1,000s	% Change 2022–2023
New York, NY (JFK)	26,436	32,856	24.3%
Los Angeles, CA (LAX)	16,210	21,633	33.5%
Miami, FL (MIA)	19,278	21,456	11.3%
Newark, NJ (EWR)	12,155	14,395	18.4%
San Francisco, CA (SFO)	9,769	13,765	40.9%
Chicago, IL (ORD)	11,171	13,143	17.7%
Atlanta, GA (ATL)	9,685	12,475	28.8%
Houston, TX (IAH)	9,312	11,306	21.4%
Dallas/Fort Worth, TX (DFW)	9,411	10,846	15.2%
Washington, DC (IAD)	7,163	9,203	28.5%
Boston, MA (BOS)	5,934	7,727	30.2%
Fort Lauderdale, FL (FLL)	6,260	7,445	18.9%
Orlando, FL (MCO)	5,341	6,708	25.6%
Seattle, WA (SEA)	4,254	5,562	30.8%
Charlotte, NC (CLT)	3,452	4,185	21.2%
Denver, CO (DEN)	3,281	3,970	21.0%
Philadelphia, PA (PHL)	3,065	3,552	15.9%
Las Vegas, NV (LAS)	2,555	3,191	24.9%
Honolulu, HI (HNL)	1,571	3,189	103.0%
Detroit, MI (DTW)	2,162	3,038	40.5%
<b>Total, top 20 U.S. international airports</b>	<b>168,464</b>	<b>209,646</b>	<b>24.4%</b>
<b>Top 20, percentage of total</b>	<b>89.5%</b>	<b>89.0%</b>	<b>-0.005</b>
<b>Total, all U.S. international airports</b>	<b>188,191</b>	<b>235,492</b>	<b>25.1%</b>

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, T-100 International Segment Data, special calculation, available at <https://data.bts.gov/stories/s/Traffic/itj6-vfiw> as of March 2024.

## 3 MOVING GOODS

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

### 3-1 Freight To, From, and Within the United States by Mode of Transportation

**Value of shipments** (billions of constant 2017 dollars)

Mode	2017	2023	2050
Truck	721	750	1,495
Rail	178	171	345
Water	1,632	1,781	3,366
Air and truck-air	1,067	1,119	2,167
Pipeline	78	92	158
Multiple modes <sup>a</sup>	106	123	240
Other <sup>b</sup>	43	43	91
<b>Total</b>	<b>3,825</b>	<b>4,079</b>	<b>7,862</b>

**Weight of shipments** (millions of tons)

Mode	2017	2023	2050
Truck	235	240	443
Rail	221	234	446
Water	1,557	1,651	2,458
Air and truck-air	10	11	21
Pipeline	263	349	564
Multiple modes <sup>a</sup>	15	22	31
Other <sup>b</sup>	9	9	17
<b>Total</b>	<b>2,310</b>	<b>2,516</b>	<b>3,980</b>

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

Mode	2017	2023	2050
Truck	160	167	317
Rail	208	215	398
Water	548	604	990
Air and truck-air	6	6	11
Pipeline	163	202	353
Multiple modes <sup>a</sup>	10	14	19
Other <sup>b</sup>	8	8	16
<b>Total</b>	<b>1,102</b>	<b>1,216</b>	<b>2,104</b>

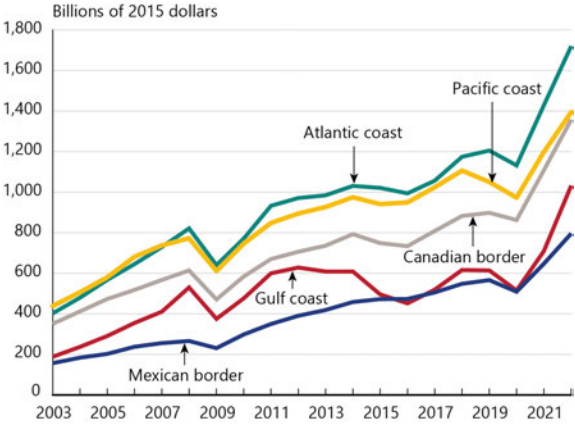
Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Freight Analysis Framework Data Visualization Tool: International Freight Flows, available at [https://explore.dot.gov/t/FHWA/views/FAF5\\_5\\_1VisualizationFinalv1\\_1\\_09\\_14\\_2023/InternationalFlowsDashboard](https://explore.dot.gov/t/FHWA/views/FAF5_5_1VisualizationFinalv1_1_09_14_2023/InternationalFlowsDashboard) as of July 2024.

Note: Details may not add to totals due to rounding. Includes domestic trade and the domestic portion of imports and exports. 2050 data are forecasted data.

<sup>a</sup>Includes mail.

<sup>b</sup>Includes other, unknown, and imported crude oil with no domestic mode.

### 3-2 U.S. Trade by Coasts and Borders: 2003–2022

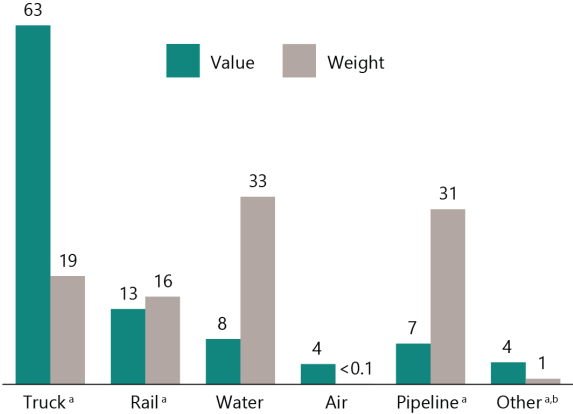


Sources: **Value**—U.S. Department of Commerce, Census Bureau, Foreign Trade Division, HS Port-Level Data (Washington, DC: annual issues) as of August 2024. **Implicit GDP Deflator**—Organization for Economic Co-operation and Development, GDP Implicit Price Deflator in United States [USAGDPDEFAISMEI], retrieved from FRED, Federal Reserve Bank of St. Louis; available at <https://fred.stlouisfed.org/series/USAGDPDEFAISMEI>, available at [www.bea.gov](http://www.bea.gov) as of August 2024.

Note: Includes U.S. International merchandise trade only.

### 3-3 U.S. Trade with Canada and Mexico by Mode: 2023

Percent of freight trade



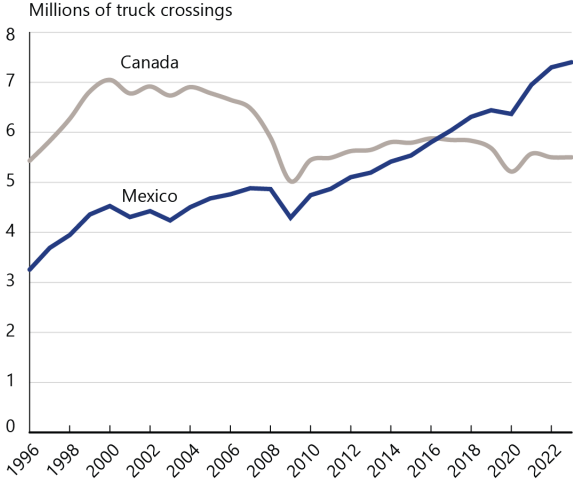
Source: U.S. Department of Transportation, Bureau of Transportation Statistics, North American Transborder Freight Data, special tabulation, available at <https://data.bts.gov/stories/s/myhq-rm6g> as of July 2024.

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

<sup>a</sup>Export weights for land modes are estimated by the Bureau of Transportation Statistics using value-to-weight ratios derived from import data.

<sup>b</sup>Includes mail, other, unknown, and shipments through Foreign Trade Zones.

### 3-4 Incoming Truck Border Crossings: 1996–2023



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at <https://data.bts.gov/stories/s/jswi-2e7b> as of July 2024.

### 3-5 Top 5 Truck Ports of Entry: 2023

by incoming truck crossings

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

Rank	Port	'22-'23 change	Millions of truck crossings
1	Detroit, MI	▲ 10.4%	1.6
2	Buffalo-Niagara Falls, NY	▲ 0.8%	0.9
3	Port Huron, MI	▼ -10.5%	0.8
4	Blaine, WA	▼ -1.8%	0.4
5	Champlain-Rouses Point, NY	▼ -5.7%	0.3

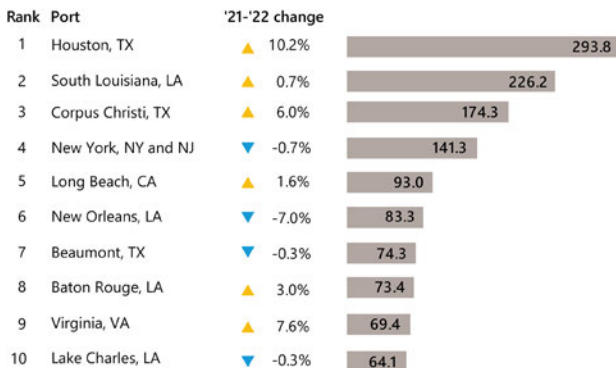
#### U.S.-Mexico ports of entry

Rank	Port	'22-'23 change	Millions of truck crossings
1	Laredo, TX	▲ 4.9%	2.9
2	Otay Mesa, CA	▼ -1.7%	1.0
3	Hidalgo, TX	▲ 5.2%	0.7
4	Ysleta, TX	▼ -1.5%	0.6
5	Calexico, CA	▲ 1.0%	0.5

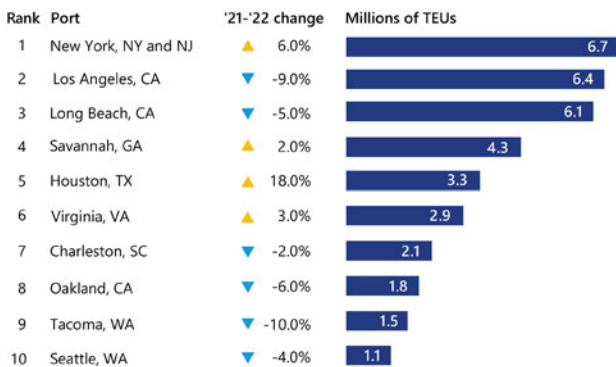
Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at <https://data.bts.gov/stories/s/jswi-2e7b> as of September 2024.

## 3-6 Top 10 U.S. Water Ports: 2022

by short tons



by container TEUs, excluding foreign empty TEUs



Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, *Ports and States Data* and *Annual U.S. Waterborne Container Traffic by Port/Waterway* as of August 2024.

Note: Includes domestic and foreign waterborne trade. Excludes foreign empty TEUs.  
TEU = twenty-foot equivalent unit.



### 3-7 Top 10 World Container Ports: 2023

by TEUs, including full and empty containers

Rank	Port	'22-'23 change	Millions of TEUs
1	Shanghai	▲ 3.9%	49.2
2	Singapore	▲ 4.6%	39.0
3	Ningbo-Zhoushan	▲ 5.8%	35.3
4	Shenzhen	▼ -0.5%	29.9
5	Qingdao	▲ 12.1%	28.8
6	Guangzhou	▲ 2.2%	25.4
7	Busan	▲ 4.4%	23.0
8	Tianjin	▲ 5.5%	22.2
9	Dubai	▲ 3.6%	14.5
10	Hong Kong	▼ -13.7%	14.4
Top U.S. container ports			
18	Los Angeles	▼ -12.9%	8.6
21	Long Beach	▼ -12.2%	8.0

Source: Lloyd's List, One Hundred Ports 2024, available at <https://www.lloydslist.com/one-hundred-container-ports-2024> as of September 2024.

TEU = twenty-foot equivalent unit.

### 3-8 Top 10 International Trade Gateways by Mode: 2023

by value of shipments

Rank	Port	Mode	
1	Laredo, TX	L	312.9
2	Los Angeles, CA	W	291.8
3	Chicago, IL	A	270.1
4	Houston, TX	W	226.4
5	Detroit, MI	L	157.2
6	Los Angeles International Airport, CA	A	130.1
7	Port Huron, MI	L	110.3
8	Long Beach, CA	W	107.8
9	Charleston, SC	W	94.9
10	Buffalo-Niagara Falls, NY	L	88.8

Source: Bureau of Transportation Statistics, adapted from U.S. Census Bureau: Economic Indicators Division USA Trade Online. U.S. Import and Export Merchandise trade statistics as of August 2024.

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

L = land port; W = water port; A = airport.

## 4 SAFETY

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

### 4-1 Transportation Fatalities by Mode

Mode		2012	2022	2023
Air	<b>Air total</b>	451	358	U
	U.S. air carrier	0	1	U
	Commuter carrier	0	10	U
	On-demand air taxi	12	8	U
	General aviation	439	339	U
Highway	<b>Highway total</b>	33,782	42,514	U
	Passenger car occupants	12,361	12,691	U
	Motorcyclists	4,986	6,218	U
	Light-truck occupants	9,418	12,729	U
	Heavy-truck occupants	697	1,097	U
	Bus occupants	39	26	U
	Pedestrians	4,818	7,522	U
	Pedalcyclists	734	1,105	U
	Other	744	1,110	U
Pipeline	<b>Pipeline total</b>	12	5	15
Rail	<b>Rail total</b>	669	906	998
	Train Accidents	9	11	8
	Highway-rail grade crossing <sup>a</sup>	231	271	248
	Trespassers	405	605	718
	Other	24	19	24
Transit <sup>b</sup>	<b>Transit total</b>	265	340	327
Water	<b>Water total</b>	765	686	U
	Freight vessel and Industrial/Other	30	17	U
	Passenger vessel and Recreational boating	735	669	U

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of July 2024.

U = data are not available.

<sup>a</sup>Individual modes don't add up to totals due to double counting in highway, rail, and transit grade crossings.

<sup>b</sup>Includes transit employee, contract worker, passenger, people waiting or leaving (revenue facility occupant), and other fatalities for all modes reported to the National Transit Database. Excludes commuter rail (reporting under FRA jurisdiction). Other transit fatalities are assumed to be counted under Highway or Rail categories.

## 4-2 Transportation Injuries by Mode

Mode		2012	2022	2023
Air	<b>Air total</b>	<b>274</b>	<b>259</b>	<b>U</b>
	U.S. air carrier	18	20	U
	Commuter carrier	0	0	U
	On-demand air taxi	9	27	U
	General aviation	247	212	U
Highway <sup>a</sup>	<b>Highway total</b>	<b>2,369,083</b>	<b>2,382,771</b>	<b>U</b>
	Passenger car occupants <sup>a</sup>	1,330,250	969,791	U
	Motorcyclists <sup>a</sup>	93,251	82,687	U
	Light-truck occupants <sup>a</sup>	766,295	930,748	U
	Heavy-truck occupants <sup>a</sup>	25,372	41,874	U
	Bus occupants <sup>a</sup>	12,410	10,556	U
	Pedestrians <sup>a</sup>	76,129	67,336	U
	Pedalcyclists <sup>a</sup>	49,300	46,195	U
	Other <sup>a</sup>	16,077	233,585	U
	Pipeline	<b>Pipeline total</b>	<b>57</b>	<b>21</b>
Rail	<b>Rail total</b>	<b>8,462</b>	<b>6,515</b>	<b>6,711</b>
	Train accidents	465	61	129
	Highway-rail grade crossing <sup>b</sup>	971	851	764
	Trespassers	410	553	662
	Other	6,616	5,050	5,156
Transit <sup>c</sup>	<b>Transit total</b>	<b>21,336</b>	<b>18,777</b>	<b>U</b>
Water	<b>Water total</b>	<b>3,327</b>	<b>2,576</b>	<b>2,126</b>
	Freight vessel and Industrial/Other	150	211	U
	Passenger vessel and			
	Recreational boating	3,177	2,365	2,126

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-2, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of August 2024.

Note: Highway numbers are estimates rather than actual counts. The estimates are calculated from data obtained from a nationally representative sample of crashes. NHTSA redesigned the nationally representative sample of police-reported traffic crashes, which estimates the number of police-reported injury and property-damage-only crashes in the US. The new system, CRSS, replaced the NASS GES in 2016 and has a different sample design. Thus, 2022 persons injured estimates are not comparable to earlier estimates.

U = data are not available.

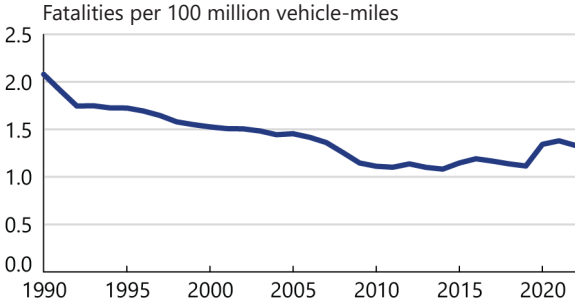
<sup>a</sup>2022 Crash Reporting Sampling System (CRSS) estimates for injuries are not comparable with 2012 and earlier NASS GES estimates because of different sampling designs.

<sup>b</sup>Excludes injuries involving motor vehicles at public highway-rail grade crossings, which are assumed to be counted under Highway categories.

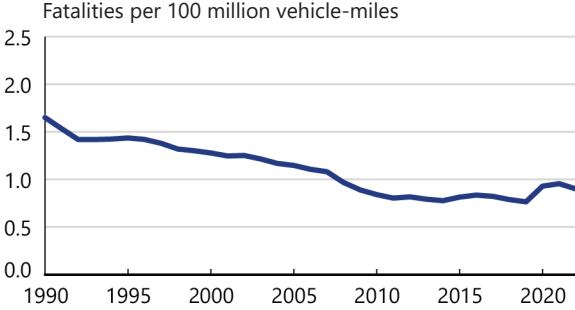
<sup>c</sup>Includes transit employee, contract worker, passenger, people waiting or leaving (revenue facility occupant), and other injuries for all modes reported to the National Transit Database. Excludes commuter rail (reporting under FRA jurisdiction). Other transit injuries are assumed to be counted under Highway or Rail categories.

### 4-3 Fatality Rates by Mode

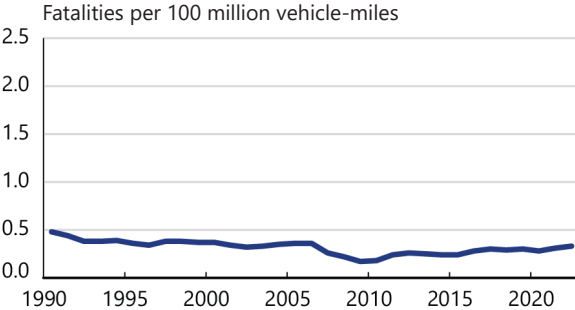
#### Highway: 1990–2022



#### Passenger car and light-truck occupants: 1990–2022



#### Large-truck occupants: 1990–2022

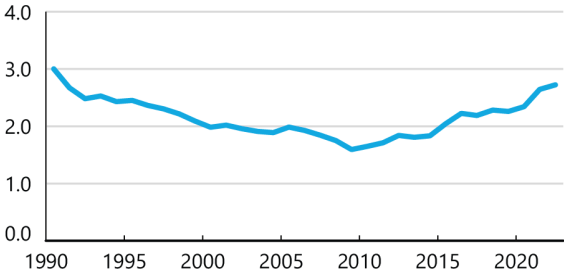


continued on next page

### 4-3 Fatality Rates by Mode (continued)

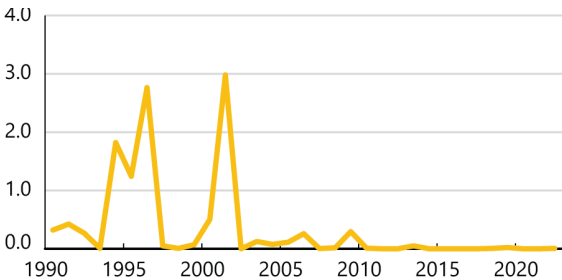
#### Highway nonoccupants: 1990–2022

Fatalities per 100,000 population



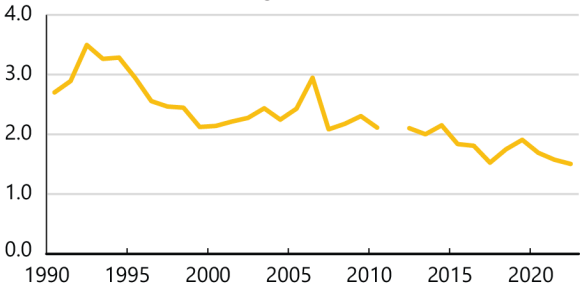
#### U.S. air carriers: 1990–2022

Fatalities per 100,000 flight hours



#### General aviation: 1990–2022

Fatalities per 100,000 flight hours

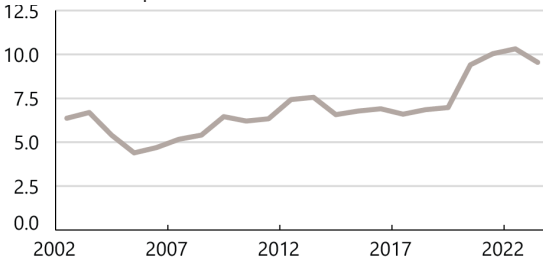


continued on next page

## 4-3 Fatality Rates by Mode (continued)

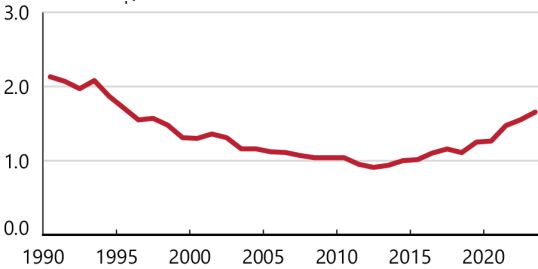
### Transit: 2002–2023

Fatalities per 100 million vehicle-miles



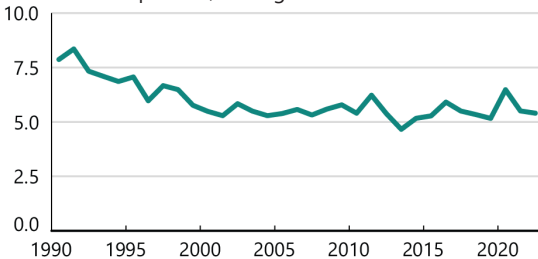
### Rail: 1990–2023

Fatalities per 100 million train-miles



### Recreational boating: 1990–2023

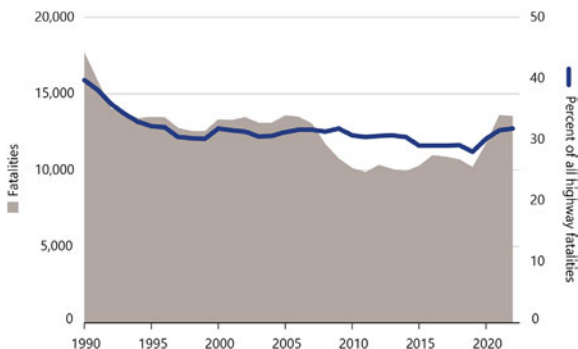
Fatalities per 100,000 registered boats



Sources: Highway, Passenger car and light-truck occupants, Highway-nonoccupants, Large-truck occupants, U.S. air carriers, General aviation, and Recreational boating—As cited in or calculated from U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, tables 2-9, 2-14, 2-17, 2-19, 2-21, 2-23, 2-47, and 3-10 available at [www.bts.gov/nts](https://www.bts.gov/nts) as of August 2024. Transit—U.S. Department of Transportation, Federal Transit Administration, NTD Safety & Security Time Series Data, available at <https://www.transit.dot.gov/ntd> as of August 2024. Rail—U.S. Department of Transportation, Federal Railroad Administration, table 1.12, available at <https://safetydata.fra.dot.gov/> as of August 2024.

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

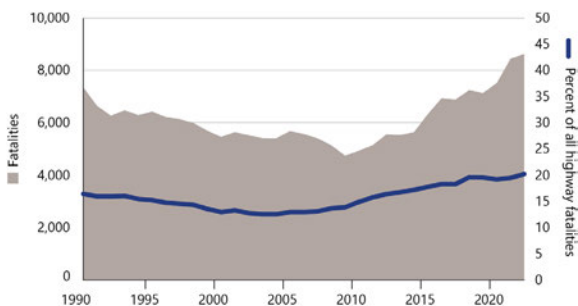
## 4-4 Alcohol-Impaired Driving Fatalities: 1990–2022



Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, Fatality and Injury Reporting System Tool (FIRST) as of July 2024, available at <https://cdan.dot.gov/query>

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

## 4-5 Pedestrian and Bicyclist Fatalities: 1990–2022

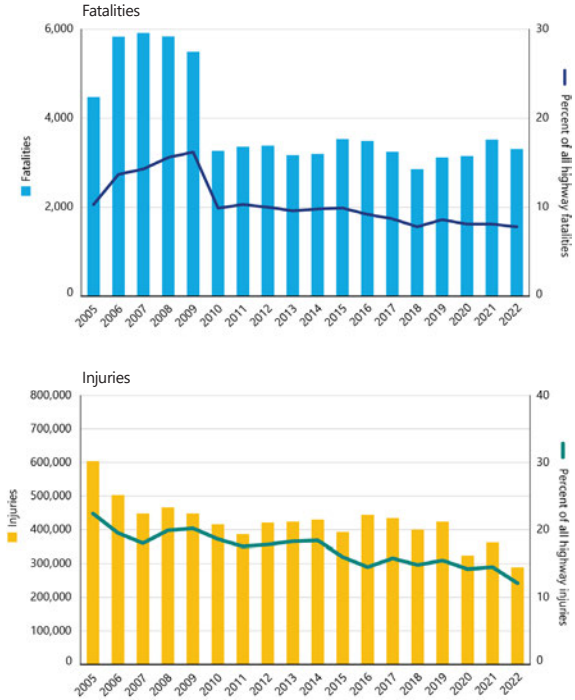


Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 2-1, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of August 2024.

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



## 4-6 Distracted Driving Fatalities and Injuries: 2005–2022



Sources: **Fatalities**—U.S. Department of Transportation, National Center for Statistics and Analysis, *Fatality and Injury Reporting System Tool (FIRST)*, available at [cdan.dot.gov](https://cdan.dot.gov); **Injuries**—U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts, Research Note, Distracted Driving 2022*, available at [www.crashstats.nhtsa.dot.gov](https://www.crashstats.nhtsa.dot.gov) as of August 2024.

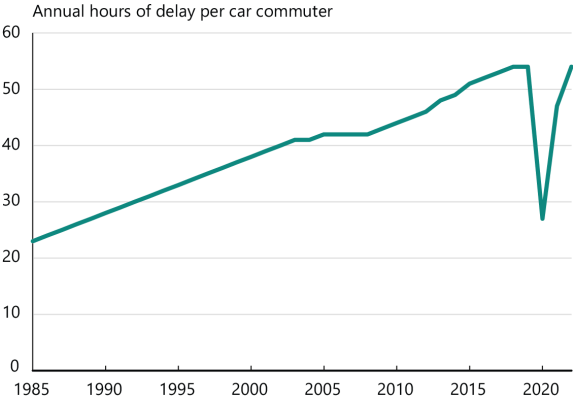
Note: Distracted driving involves any activity that could divert a person’s attention away from the primary task of driving, such as texting, using a cell phone, eating and drinking, grooming, using a navigation system, adjusting a radio, etc.



# 5 PERFORMANCE

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

## 5-1 Road Congestion: 1985–2022



Source: Texas A&M Transportation Institute, *Urban Mobility Report*, available at <https://mobility.tamu.edu/umr/report/> as of July 2024.

Note: **Annual hours of delay per car commuter**—The extra time spent during the year traveling at congested speeds rather than free-flow speeds by private vehicle drivers and passengers who typically travel in the peak periods.

The methodology to calculate congestion performance measures was updated to reflect more comprehensive data collection using INRIX data for each of the 494 U.S. urban areas. The congestion estimates for all study years are recalculated every time the methodology is altered to provide a consistent data trend. For a detailed explanation of the updated methodology, see the *Urban Mobility Report* at <http://mobility.tamu.edu/ums/report/>.

## 5-2 Top 10 Metropolitan Area Congestion Rankings: 2022

by calendar year, average minutes of congestion

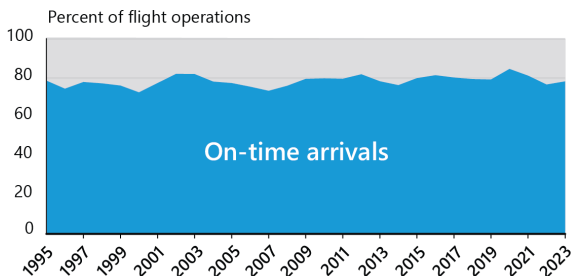
Rank	Urban area	Minutes of delay
1	Los Angeles, CA	381
2	Washington, DC	340
3	New York, NY	320
4	Seattle, WA	319
5	Portland, OR	313
6	Denver, CO	284
7	Miami, FL	281
8	Houston, TX	270
9	San Francisco, CA	259
10	Baltimore, MD	256
	<b>Average of Top 10 MSAs</b>	<b>302</b>

Source: U.S. Department of Transportation, Federal Highway Administration, *Urban Congestion Report*, personal communication, as of July 2024.

Note: **Minutes of Congestion**—the amount of time when freeways operate less than 90 percent of free-flow freeway speeds. Calculated by calendar year for an average duration of daily congestion.

MSA = Metropolitan Statistical Area

## 5-3 U.S. Airline On-time Performance: 1995–2023

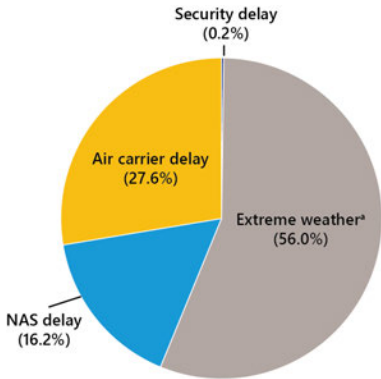


Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at [www.bts.gov](http://www.bts.gov) as of August, 2024.

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

## 5-4 U.S. Major Airport Delays by Cause: 2023

percent of delayed time



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Aviation Facts and Figures*, <https://data.bts.gov/stories/s/Aviation-Facts-and-Figures/2ub2-svfg>, as of July 2024.

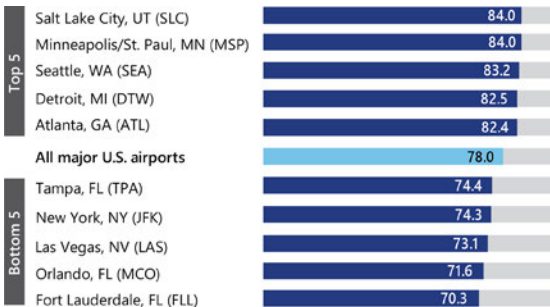
Note: Percents do not add to 100 due to rounding.

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

\*Includes weather events that prevent flying. Other weather delays that slow operations are included under other categories.

## 5-5 U.S. Major Airport Performance Rankings: 2023

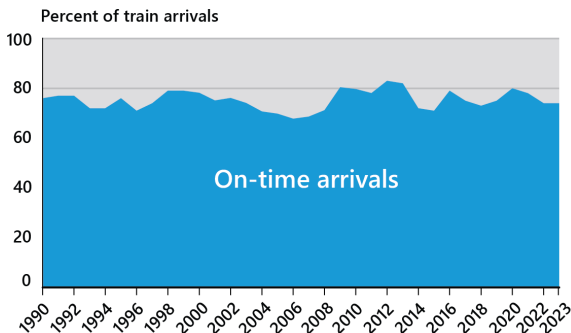
by percent of on-time arrivals



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at [transtats.bts.gov](https://transtats.bts.gov) as of August, 2024.

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

## 5-6 Amtrak On-time Performance: FY1990–FY2023



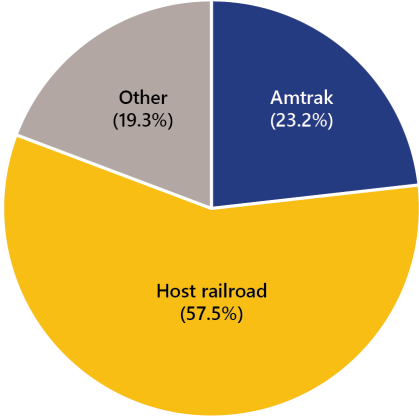
Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at [transtats.bts.gov](https://transtats.bts.gov) as of July 2024.

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

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

# 5-7 Amtrak Delays by Cause: FY2023

percent of delayed time



Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of July 2024.

Note: **Other**—delays not attributable to Amtrak or other host railroads, such as customs and immigration, law enforcement action, weather, or waiting for scheduled departure time.

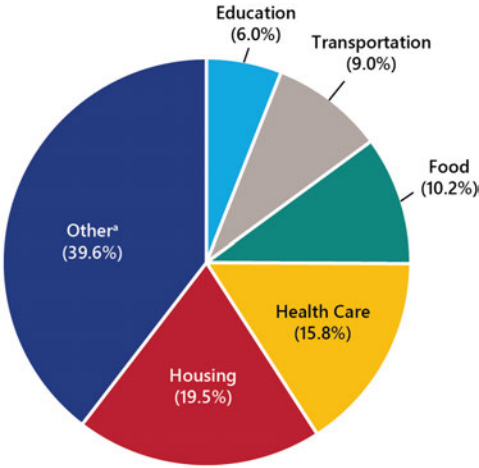




# 6 ECONOMY

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

## 6-1 U.S. GDP by Spending Category: 2022 percent of GDP



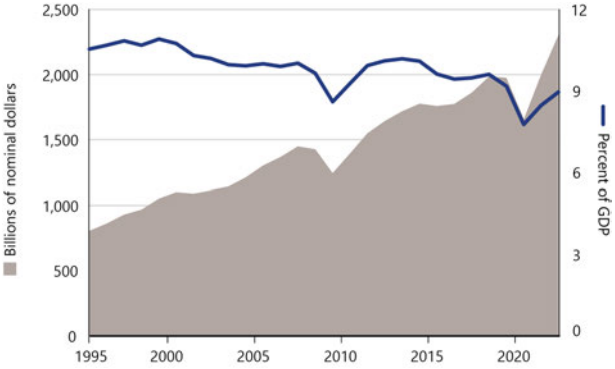
Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of August 2024.

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

GDP = Gross Domestic Product

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

## 6-2 U.S. Transportation Spending: 1995–2022



Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-9, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of August 2024.

GDP = gross domestic product

## 6-3 Transportation-Related Final Demand

billions of chained 2017 dollars

Category	2013	2023
<b>Personal consumption of transportation</b>	<b>1,143</b>	<b>1,460</b>
Motor vehicles and parts	415	602
Motor vehicle fuels, lubricants, and fluids	281	302
Transportation services	373	469
<b>Gross private domestic investment</b>	<b>270</b>	<b>U</b>
Transportation structures	12	U
Transportation equipment	258	U
<b>Government transportation-related purchases</b>	<b>314</b>	<b>U</b>
Federal purchases	41	U
State and local purchases	258	U
Defense-related purchases	15	11
<b>Exports ( + )</b>	<b>355</b>	<b>446</b>
<b>Imports ( - )</b>	<b>441</b>	<b>578</b>
<b>Total transportation-related GDP</b>	<b>1,662</b>	<b>U</b>
<b>U.S. GDP</b>	<b>17,812</b>	<b>22,377</b>

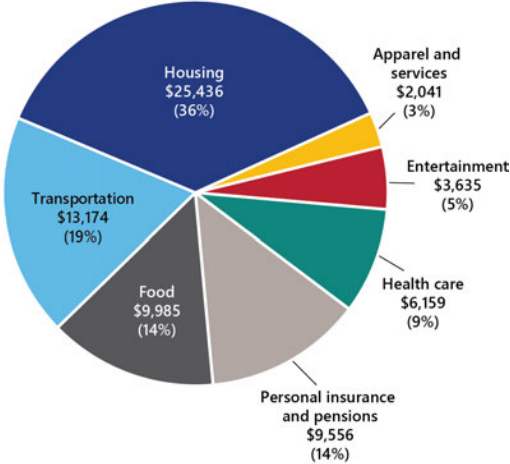
Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-4, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of September 2024.

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

GDP = gross domestic product; U = data are not available.

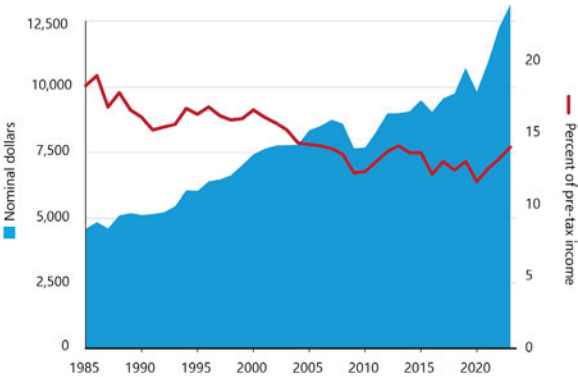
## 6-4 Household Expenses by Category: 2023

U.S. dollars



Source: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey*, available at [www.bls.gov/cex](http://www.bls.gov/cex) as of September 2024.

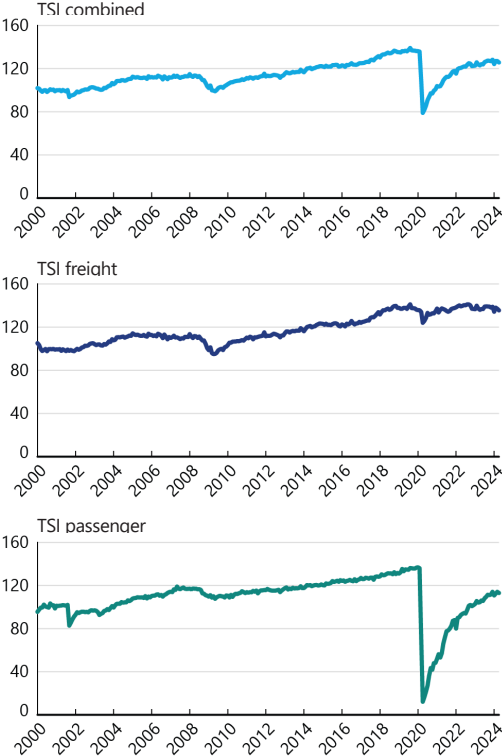
## 6-5 Household Transportation Expenses: 1985–2023



Source: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey*, available at [www.bls.gov/cex](http://www.bls.gov/cex) as of September 2024.

# 6-6 Transportation Services Index (TSI): 2000–2024

chain-type index: 2000 = 100, seasonally adjusted



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, available at <https://data.bts.gov/stories/s/Transportation-as-an-Economic-Indicator/9czv-tjte> as of July 2024.

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

## 6-7 Employment in Transportation-Related Industries

thousands

Category	2013	2023
<b>Total</b>	<b>4,486</b>	<b>6,565</b>
Air	444	506
Rail	196	153
Water	65	70
Truck	1,383	1,567
<b>For-hire transportation and warehousing</b>		
Transit and ground passenger	448	413
Pipeline	45	52
Scenic and sightseeing	29	30
Support activities	591	791
Couriers and messengers	544	1,083
Warehousing and storage	716	1,808
<b>Transportation-related manufacturing<sup>a</sup></b>	<b>1,800</b>	<b>2,092</b>
<b>Other transportation-related industries</b>	<b>5,119</b>	<b>5,903</b>
<b>Postal service</b>	<b>595</b>	<b>604</b>
<b>Government employment<sup>b</sup></b>	<b>890</b>	<b>U</b>
<b>Total transportation-related labor force</b>	<b>12,837</b>	<b>15,897</b>
<b>U.S. labor force</b>	<b>136,363</b>	<b>156,051</b>

Source: All data as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-23, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of August 2024.

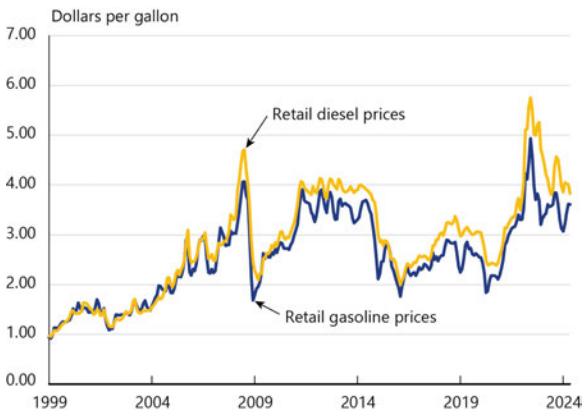
Note: Annual averages based on NAICS data. Details may not add to totals due to rounding.

U = data are not available.

<sup>a</sup>Includes transportation equipment; petroleum products; tires; rubber; plastics; search, detection, navigation, guidance, aeronautical, and nautical systems; and instrument manufacturing.

<sup>b</sup>Fiscal year data for federal, state, and local personnel.

## 6-8 Motor Vehicle Fuel Prices: 1999–2024



Source: U.S. Department of Energy, Energy Information Administration, available at <https://www.eia.gov/> as of July 2024.

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

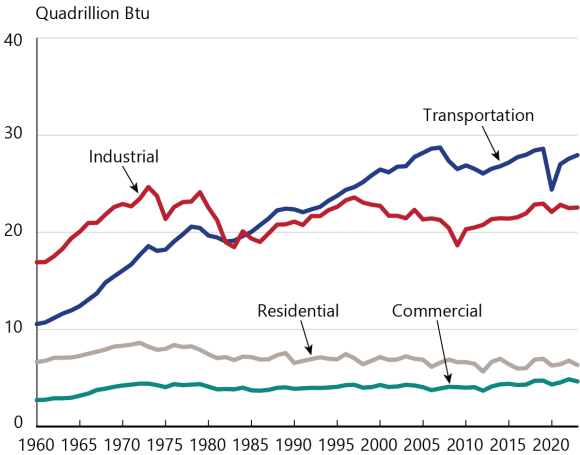




# 7 ENVIRONMENT

The U.S. transportation system is a major consumer of energy and has consequences for the environment.

## 7-1 Energy Consumption by Sector: 1960–2023



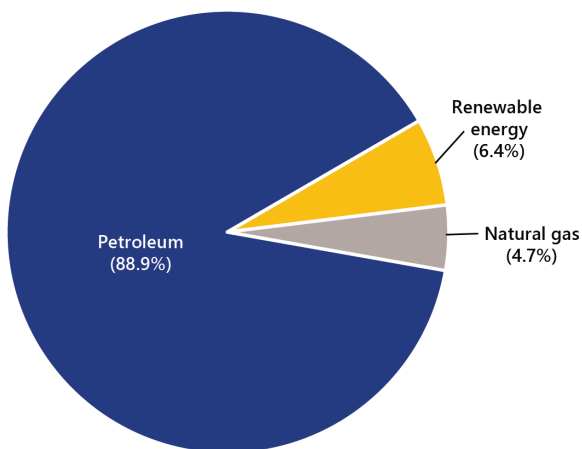
Source: U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly), Tables 2.1a, 2.1b as of July 2024.

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

Btu = British thermal unit.

## 7-2 Transportation Energy Consumption by Source: 2023

percent of Btu consumed

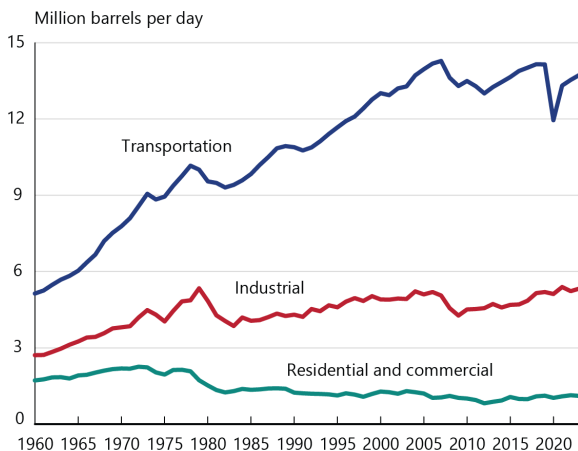


Source: U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly), Table 2.5, as of July 2024.

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

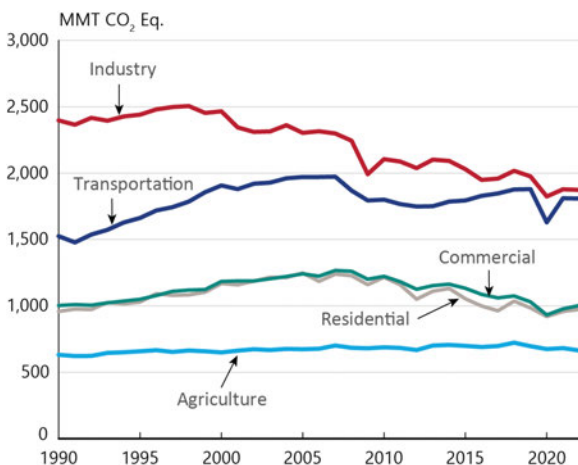
Btu = British thermal unit.

## 7-3 Petroleum Consumption by Sector: 1960–2023



Source: U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review*, available at [www.eia.gov/totalenergy/data/monthly](http://www.eia.gov/totalenergy/data/monthly), Tables 3.7, as of July 2024.

## 7-4 Greenhouse Gas Emissions by Sector: 1990–2022



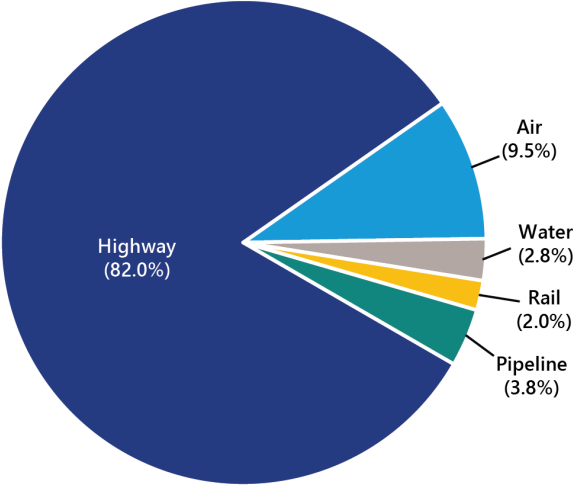
Source: U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: Report Tables*, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#transportation/entiresector/allgas/category/all>, as of July 2024.

Note: Electric power sector emissions are distributed across sectors. Emissions include Carbon dioxide (CO<sub>2</sub>), Hydrofluorocarbons (HFCs), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF<sub>6</sub>).

MMT CO<sub>2</sub> Eq. = million metric tons of carbon dioxide equivalent.

# 7-5 Greenhouse Gas Emissions by Transportation Mode: 2022

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



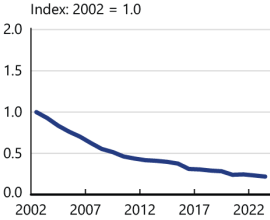
Source: U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks, Fast Facts: U.S. Transportation Sector GHG Emissions* (pdf), available at <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>, as of July 2024.

Note: Percents may not add to 100 due to rounding. Does not include international bunker fuels.

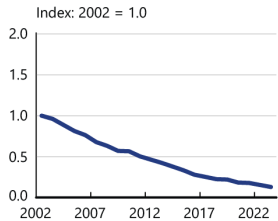
MMT CO<sub>2</sub> Eq. = million metric tons of carbon dioxide equivalent.

## 7-6 Highway Vehicle Air Pollutant Emissions: 2002–2023

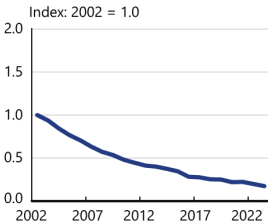
### Carbon monoxide



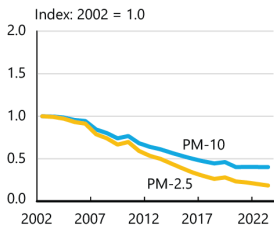
### Nitrogen oxide



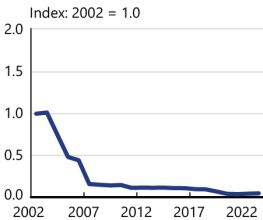
### Volatile organic compounds



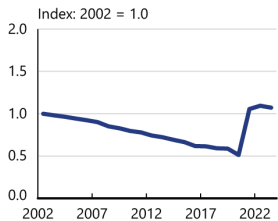
### Particulate matter



### Sulfur dioxide



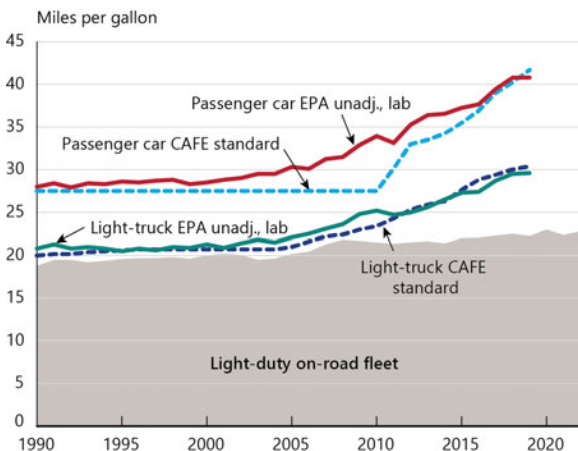
### Ammonia



Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 4-45 through 4-50, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of July 2024.

Note: Indices are calculated using data on highway vehicle emissions only. Particulate matters include PM without condensibles. Quaternary ammonium compounds (QACs) are active ingredients in over 200 disinfectants currently recommended by the U.S. EPA for use to inactivate the SARS-CoV-2 (COVID-19) virus. PM-10 = airborne particulates of less than 10 microns; PM-2.5 = airborne particulates of less than 2.5 microns.

## 7-7 Fuel Economy of Light-Duty Vehicles: 1990–2022

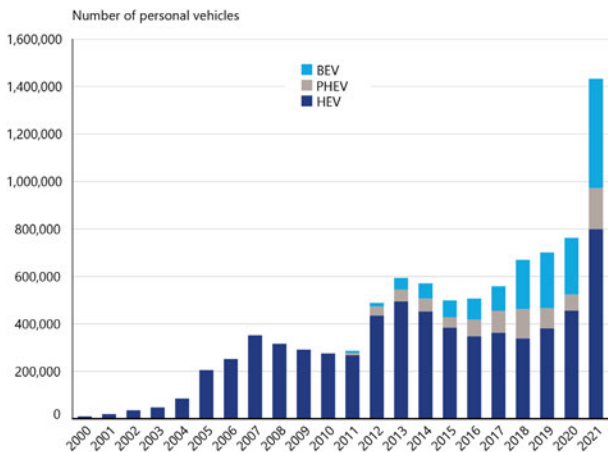


Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-23, available at [www.bts.gov/nts](http://www.bts.gov/nts) as of July 2024.

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

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

## 7-8 Sales of Hybrid, Plug-in Hybrid, and Battery Electric Vehicles: 2000–2021



Source: Oak Ridge National Laboratory, *Transportation Energy Data Book*, Annual Issues, available at [tedb.ornl.gov](https://tedb.ornl.gov), Table 6.02 as of July 2024.

BEV = Battery electric-only vehicles, HEV = Hybrid electric vehicle,  
PHEV = Plug-in hybrid electric vehicle



# GLOSSARY

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

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

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

**Class I railroad:** Railroads earning adjusted annual operating revenues for three consecutive years of \$250,000,000 or more, based on 1991 dollars with an adjustment factor applied to subsequent years.

**Commuter rail:** Urban/suburban passenger train service for short-distance travel between a central city and adjacent suburbs run on tracks of a traditional railroad system. Does not include heavy or light rail transit service.

**Demand response transit:** A nonfixed-route, nonfixed-schedule form of transportation that operates in response to calls from passengers or their agents to the transit operator or dispatcher.

**Directional route-miles:** The sum of the mileage in each direction over which transit vehicles travel while in revenue service.

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

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

**General aviation:** Civil aviation operations other than those air carriers holding a Certificate of Public Convenience and Necessity. Types of aircraft used in general aviation range from corporate, multi-engine jets piloted by a professional crew to amateur-built, single-engine, piston-driven, acrobatic planes.

**Gross domestic product:** The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the suppliers may be either U.S. residents or residents of foreign countries.

**Heavy-rail transit:** High-speed transit rail operated on rights-of-way that exclude all other vehicles and pedestrians.

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

**International Roughness Index (IRI):** A scale for pavement roughness based on the simulated response of a generic motor vehicle to the roughness in a single wheel path of the road surface. The IRI is calculated using a mathematical model of a vehicle's suspension, and is expressed in units of inches per mile (in/mi), meters per kilometer (m/km), or millimeters per kilometer (mm/km).

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

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

**Light-rail transit:** Urban transit rail operated on a reserved right-of-way that may be crossed by roads used by motor vehicles and pedestrians.

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

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

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

**Particulates:** Carbon particles formed by partial oxidation and reduction of hydrocarbon fuel. Also included are trace quantities of metal oxides and nitrides originating from engine wear, component degradation, and inorganic fuel additives.

**Passenger-mile:** One passenger transported one mile. For example, 1 vehicle traveling 3 miles carrying 5 passengers generates 15 passenger-miles.

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

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

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

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

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

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

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

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

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

**Ton-mile:** A unit of measure equal to movement of 1 ton over 1 mile.

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

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

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

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

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

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

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

Photos provided by Adobe Stock (<https://stock.adobe.com/>)

**MAJOR TRENDS**

**INFRASTRUCTURE**

**MOVING PEOPLE**

**MOVING GOODS**

**SAFETY**

**PERFORMANCE**

**ECONOMY**

**ENVIRONMENT**

**GLOSSARY**



Printed on paper containing recycled post  
consumer waste paper.