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2025

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Abstract

Recognizing the importance of transportation and objective statistics for transportation decision-making, Congress requires the U.S. Department of Transportation's Director of the Bureau of Transportation Statistics (BTS) to provide the Transportation Statistics Annual Report (TSAR) to Congress and the President. TSAR describes critical information, such as BTS' methods for ensuring quality data and the director's recommendations for improvement. BTS published the first TSAR in 1994.

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Quality Assurance Statement
The Bureau of Transportation Statistics (BTS) provides high quality information to serve government, industry, and the public in a manner that promotes public understanding. Standards and policies are used to ensure and maximize the quality, objectivity, utility, and integrity of its information. BTS reviews quality issues on a regular basis and adjusts its programs and processes to ensure continuous quality improvement.

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Introduction

The transportation system greatly impacts America's economic prosperity and residents' quality of life. The Bureau of Transportation Statistics (BTS) provides data to help decision-makers maintain and enhance this system. Data-driven decisions promote an efficient and resilient transportation system and its seamless operation, which underpins the overall efficiency and resilience of the economy.

Recognizing the importance of transportation and objective statistics for transportation decision-making, Congress requires the U.S. Department of Transportation's (USDOT's) Director of BTS to provide the Transportation Statistics Annual Report (TSAR) to Congress and the President. Chapter 5 provides specific information required in the mandate for this report, including information on the progress of BTS in carrying out the duties described in the Bureau's authorizing legislation; documentation of the methods used to obtain and ensure the quality of the statistics presented in this report; and any recommendations of the Director for improving transportation statistical information [Title 49].

TSAR has taken several forms over the last 3 decades, most typically as a large book with extensive descriptive text. Recognizing that reader preferences appear to be shifting to more concise formats, this edition is streamlined to focus on providing a sense of scale for the various components and aspects of transportation. BTS looks forward to reader comments as we continue to refine the format.

BTS welcomes comments on TSAR and the Bureau's other products. Comments, questions, and requests for printed copies of this publication should be sent to bts@dot.gov or the following address:

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REFERENCES

Title 49 U.S.C. § 6312, Transportation Statistics Annual Report. https://uscode.house.gov/view.xhtml?req=granuleid%3AUSC-prelim-title49-section6312&num=0&edition=prelim. Last accessed November 26, 2025.

Chapter 1. Transportation System

The United States spans a continent and requires an enormous, complex transportation system to connect 3.8 million square miles of domestic locations and link those places with the rest of the world. In 2024, the U.S. transportation system served 340 million U.S. residents residing in 132.7 million households. Transportation is used to commute to work, obtain goods and services, visit with family and friends, and travel for leisure and work. It also drives the economy, connecting 8.3 million business establishments with customers, suppliers, and workers [Census 2025].

1.1. SYSTEM EXTENT AND COMPONENTS

The U.S. transportation system is vast by many measures, including continentwide networks summarized in Table 1, equipment that travels over those networks as summarized in Table 2, and companies that operate much of that equipment highlighted in Table 3. The transportation system is a combination of modal systems that work together to serve the nation.

Table 1. System Mileage Within the United States (in Statute Miles)

Mode		1985	1990	2000	2010	2020	2022	2023
Highway		3,863,912	3,866,926	3,936,222	4,067,077	4,172,562	4,197,446	4,199,209
Class I rail		145,764	119,758	99,250	95,700	91,773	91,285	91,089
Amtrak		24,000	24,000	23,000	21,178	20,787	21,220	21,383
Transit	Commuter rail	3,574	4,132	5,209	7,630	7,930	7,934	7,963
	Heavy rail	1,293	1,351	1,558	1,617	1,663	1,681	1,688
	Light rail	384	483	834	1,497	2,096	2,127	2,161
Navigable channels		25,000	25,000	25,000	25,000	25,000	25,000	25,000
Oil pipeline		N	N	N	181,836	229,391	229,398	228,712
Gas pipeline		1,640,950	1,871,286	2,114,618	2,426,941	2,603,968	2,735,086	2,762,207

N = data do not exist.
Source: Data from BTS 2025, Table 1-1.

Table 2. Number of U.S. Aircraft, Vehicles, Vessels, and Other Conveyances

	Mode	1960	1980	2000	2020	2022	2023	2024
Air	Air carrier	2,135	3,808	7,826	5,884	6,852	7,572	7,387
	General aviation (active fleet)	76,549	211,045	217,533	204,140	209,540	214,222	214,940
Highway, total (registered vehicles)	Light-duty vehicle, short wheelbase	61,671,390	127,294,783	133,621,420	194,788,825	196,467,427	197,134,299	U
	Motorcycle	U	U	4,346,068	8,347,435	9,186,256	9,516,910	U
	Light-duty vehicle, long wheelbase	U	27,875,934	79,084,979	58,890,431	61,273,790	62,103,995	U
	Truck, single-unit 2-axle 6--tire or more	U	4,373,784	5,926,030	9,908,410	11,049,522	11,567,428	U
	Truck, combination	11,914,249	1,416,869	2,096,619	2,990,962	3,239,716	3,324,112	U
	Bus	272,129	528,789	746,125	1,010,304	958,055	967,525	U
Transit	Motor bus	49,600	59,411	58,578	63,903	62,766	61,131	60,998
	Light rail cars	2,856	1,013	1,306	2,799	2,892	2,964	3,009
	Heavy rail cars	9,010	9,641	10,311	11,064	10,880	11,069	11,076
	Trolley bus	3,826	823	652	633	563	535	535
	Commuter rail cars and locomotives	N	4,500	5,497	7,524	7,645	7,603	7,643
	Demand response	N	N	22,087	34,633	31,777	32,423	34,458
	Other	N	N	7,705	17,511	13,451	14,245	14,147
Rail	Class I, freight cars	1,658,292	1,168,114	560,154	252,400	251,997	258,001	U
	Class I, locomotive	29,031	28,094	20,028	23,544	23,184	23,156	U
	Non-Class I freight cars	32,104	102,161	132,448	N	N	N	N
	Car companies and shippers freight cars	275,090	440,552	688,194	N	N	N	N
	Amtrak, passenger train car	N	2,128	1,894	1,313	1,344	1,353	U
	Amtrak, locomotive	N	419	378	384	391	413	U
Water	Nonself-propelled vessels	16,777	31,662	35,008	34,209	35,076	35,255	U
	Self-propelled vessels	6,543	7,126	10,410	10,339	10,522	10,518	U
	Oceangoing self-propelled vessels (1,000 gross tons and over)	2,926	864	282	185	178	177	185
	Recreational boats	2,450,484	8,577,857	12,782,143	11,838,188	11,770,383	11,546,512	11,674,073

N = data do not exist; U = data are not available.

Note: The Transit Motor bus figure is included in the Highway, total, category's bus row. In this table, "Bus" and "Demand response" refer to a mode of service, not to a specific vehicle type. Demand-response service, which is defined as a roadway service directly from an origin to a destination determined by the rider and not following a fixed route, is usually provided by vans, small buses, and in a limited number of cases, large buses. Bus service is a variety of roadway services that share the characteristic of being entirely or partially fixed routes. Bus service includes local service, express service, subscription service, diversionary route service, loop service, and other types. Although Bus service is normally provided by buses, it can be provided by smaller vehicles that may be considered large vans.

Source: Data from BTS 2025, Table 1-11.

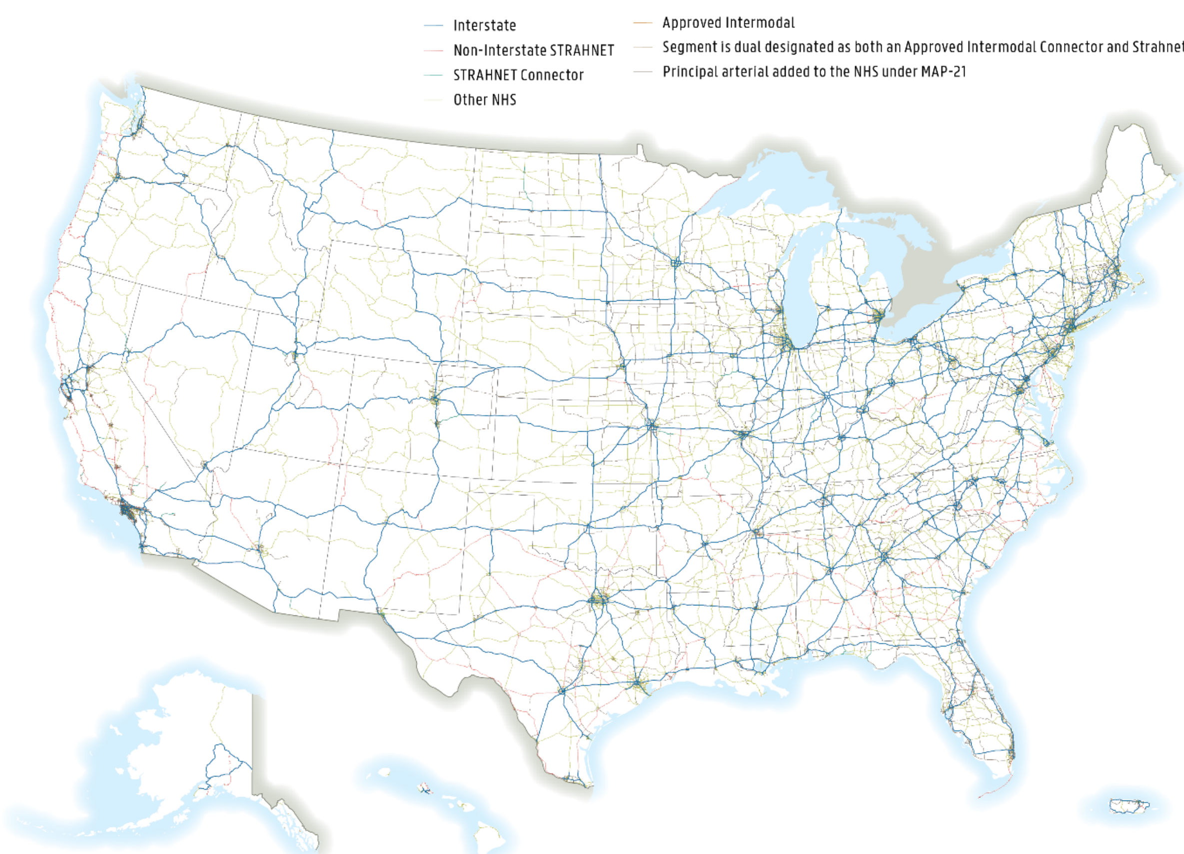
Table 3. Number of Air Carriers, Railroads, Interstate Motor Carriers, Marine Vessel Operators, and Pipeline Operators

Mode	1980	2000	2010	2020	2021	2022	2023
Air carriers	63	91	77	59	59	N	63
Major air carriers	N	15	21	18	18	N	19
Other air carriers	N	76	56	41	41	N	44
Railroads	480	560	565	U	621	624	627
Class I railroads	39	8	7	U	6	7	6
Other railroads	441	552	558	U	615	617	621
Interstate motor carriers	N	560,393	739,421	601,095	719,209	773,886	745,829
Marine vessel operators	N	1,114	603	429	422	414	U
Pipeline operators	2,243	2,157	2,393	2,827	2,802	2,881	2,846
Hazardous liquid	N	220	379	565	569	566	553
Natural gas transmission	474	844	1,046	1,331	1,313	1,406	1,398
Natural gas distribution	1,932	1,363	1,338	1,354	1,341	1,347	1,324

N = data do not exist; U = data are not available.
Source: BTS 2025, Table 1-2.

Figure 1 illustrates the Nation's 48,415 miles of major arterial highways. An additional approximately 3.9 million miles are publicly owned local roads and streets. States own and operate most major arterials, including the Interstate Highway System; the federal government only owns and operates 6,600 miles of highways, mostly through the National Park Service.

Figure 1. Interstate Highways and Other Principal Arterials: 2025



MAP-21 = Moving Ahead for Progress in the 21st Century Act; STRAHNET = the Strategic Highway Network.
Source: BTS, data from FHWA 2025.

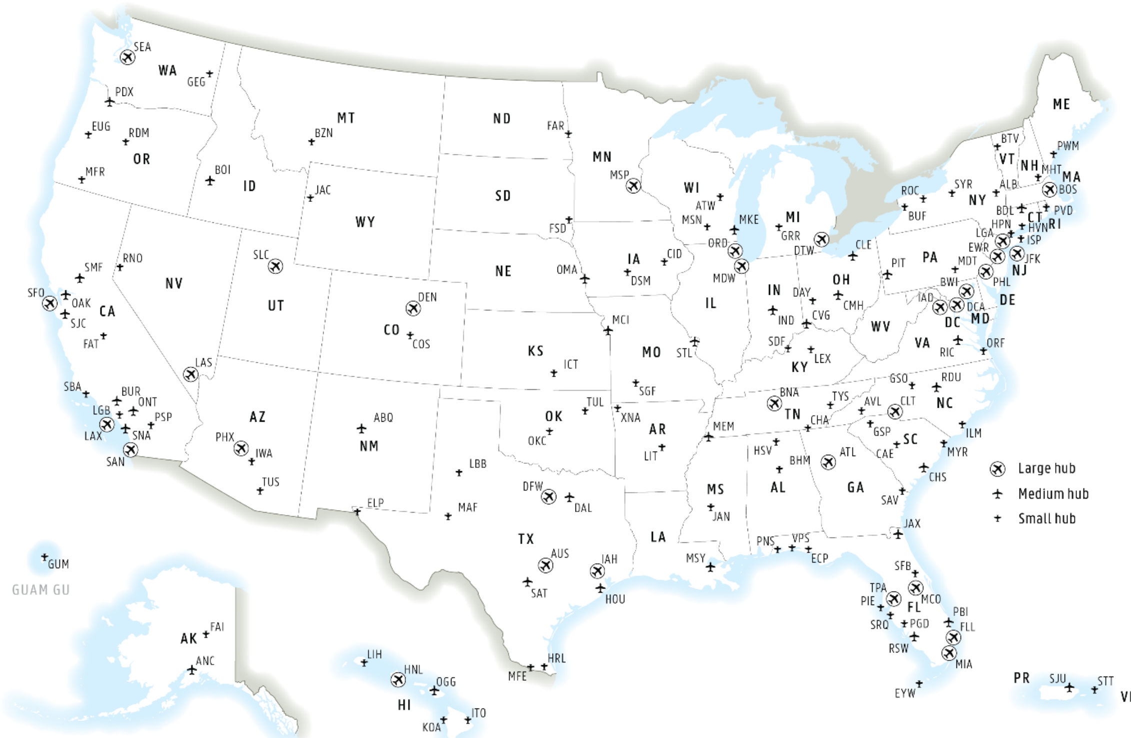
Figure 2 shows that the total railroad mileage in the United States has declined from 191,520 miles in 1975 to roughly 91,000 miles today. The major railroads, officially designated as Class I have consolidated in number and mileage over the last 50 years. In 1975, seven Class I railroads were in operation. Today, only six Class I railroads are in operation, including Amtrak. Most of today's railroad mileage is operated by privately owned short-line railroads (Figure 2).

The transportation system includes approximately 5,000 public-use airports, heliports, and seaplane bases, and 14,400 private-use airports, including military bases that are closed to the public. Approximately 3,300 of these public-use facilities are included in the National Plan of Integrated Airport Systems. Of the public-use airports, 31 are classified as major hubs (Figure 3). Public regional authorities own and operate 566 public-use airports, and municipal and county governments operate 20. Airport towers and in-flight air traffic control are operated by the Federal Aviation Administration.

Figure 2. Amtrak and Class I Freight Railroads: 2024

Source: BTS, data from FRA 2025.

Figure 3. Major Hubs and Other Public-Use Airports



Note: Large hubs receive over 1 percent of annual U.S. commercial enplanements, medium hubs receive 0.25–1.0 percent, and small hubs receive 0.05–0.24 percent.
Source: BTS, data from FAA 2024.

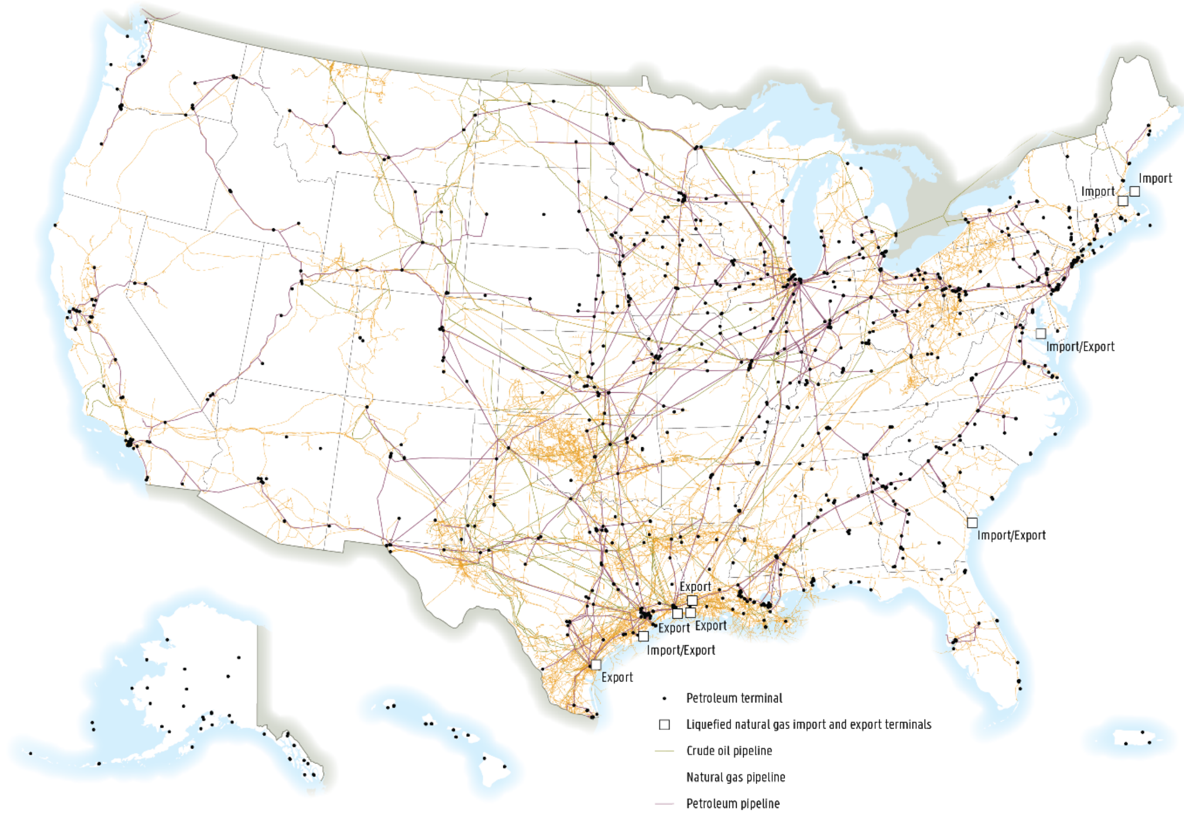
The Nation's maritime transportation system comprises 299 ports, including 150 major ports that handle more than one million short tons of cargo per year (Figure 4). These numbers include ports in Hawaii, Alaska, Puerto Rico, and the Virgin Islands, as well as coastlines, navigable inland waterways, and the St. Lawrence Seaway and Great Lakes system.

In 2024, pipeline mileage includes 83,200 miles of crude petroleum pipelines, 64,200 miles of pipelines that carry petroleum products, 300,900 miles of natural gas transmission lines, 591,200 miles of natural gas gathering lines, and 1.4 million miles of natural gas distribution mains (Figure 5). Energy extraction and transmission companies in the private sector own over 80 percent of these pipelines.

Figure 4. Top 150 Principal Ports and Navigable Waterways

Source: BTS, data from USACE 2023.

Figure 5. Petroleum Pipelines and Natural Gas Transmission Lines: 2025



Source: BTS 2025, data from Department of Energy 2025.

1.2. SYSTEM SIZE IN ECONOMIC TERMS

The transportation system and its components are a key element of the national economy. Spending on transportation as part of the final demand that comprises the Gross Domestic Product (GDP) was $2.5 trillion in 2024 (Table 4). This spending creates 10.8 percent of the Nation's economic output and masks the $359 billion in private business investment in transportation equipment and facilities. Such investments are intermediate steps to creating final demand (Figure 6).

The role of transportation in the economy is complicated to measure because the transportation system serves as a necessary catalyst for economic activity spread across the continent, and transportation is deeply embedded in other industries. The for-hire transportation industry does not include the transportation provided in shipper-owned equipment, such as the trucks that are operated by grocery stores. This mix of transportation as an economic activity and as an industry is captured in the employment statistics shown in Figure 8.

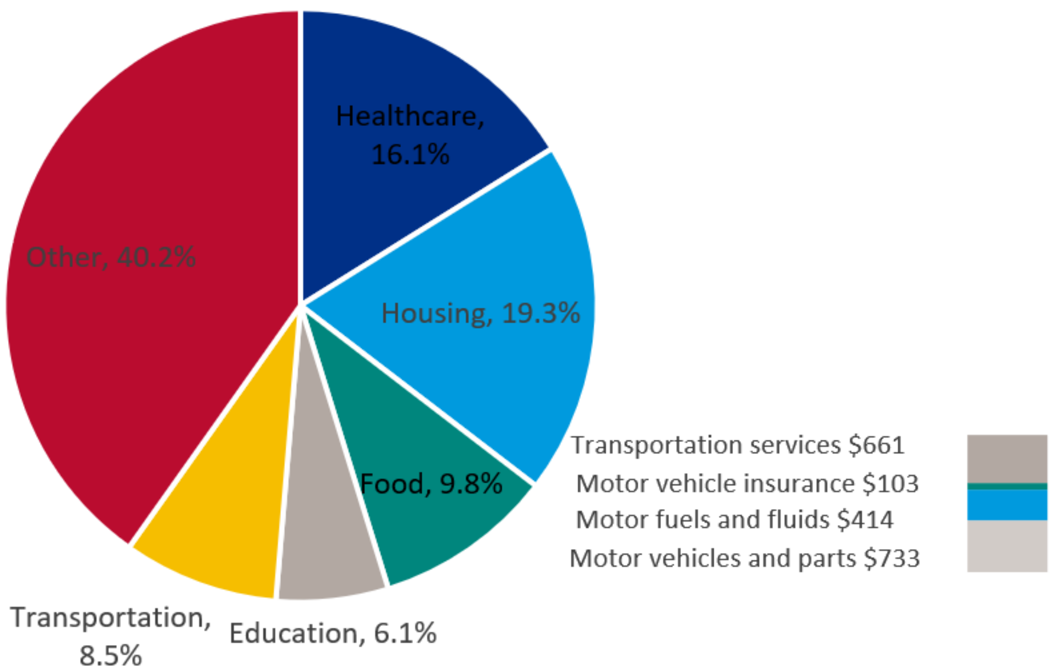
While access to the transportation system is rarely a sufficient condition for stimulating economic activity, it is almost always a necessary condition for connecting businesses to sources of supply and to their employees as well as to markets for their goods and services. Access to the transportation system is also a necessary condition for connecting people to most economic activities, whether for travel to those activities or delivery of goods and services to the home. Transportation as an enabler of economic activity is best represented by passenger travel (Chapter 2) and freight movement (Chapter 3).

Table 4. Transportation as Part of Final Demand: 2024

Transportation expenditures	Dollars (in billions)
Personal (household) consumption expenditures on motor vehicles and parts	733
Personal (household) consumption expenditures on motor vehicle fuels, lubricants, and fluids	414
Personal (household) consumption expenditures on motor vehicle and other transportation insurance	103
Personal (household) consumption expenditures on transportation services (e.g., local public transit, passenger airfare)	661
Government investment in transportation infrastructure and purchases of transportation goods and services	476
Private domestic investment in transportation infrastructure and equipment	359
Change in retailers' inventories of motor vehicles and parts	32
Net exports (exports minus imports) related to transportation goods and services	−293
Total	2,485

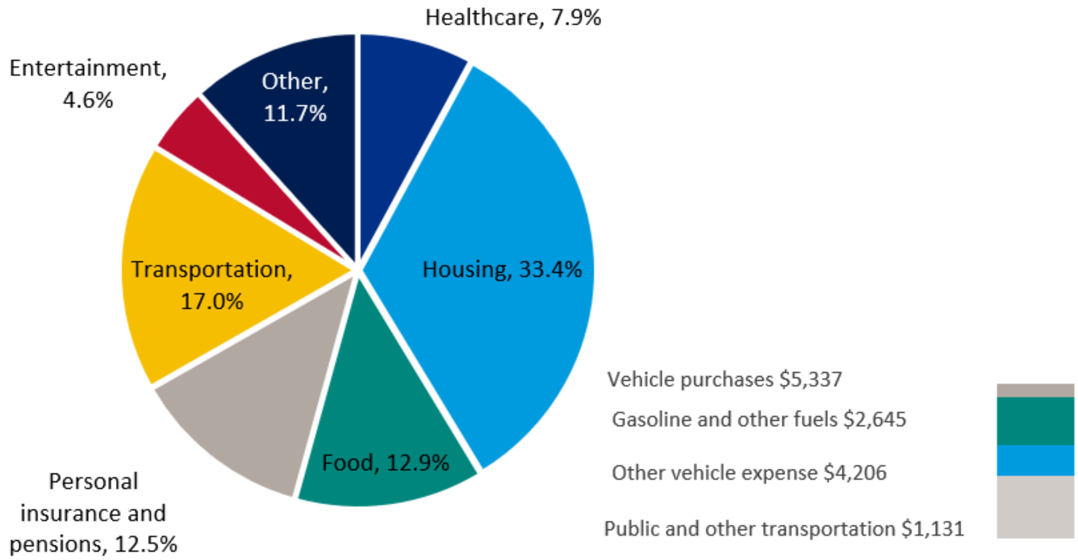
Source: Data from BEA 2025, tables 1.1.5, 2.4.5, 3.11.5, 3.15.5, 4.2.5, 5.4.5, 5.5.5, and 5.7.5B.

Figure 6. Transportation as a Share of GDP Measured as Final Demand: 2024 Total GDP Equals $29.3 Trillion



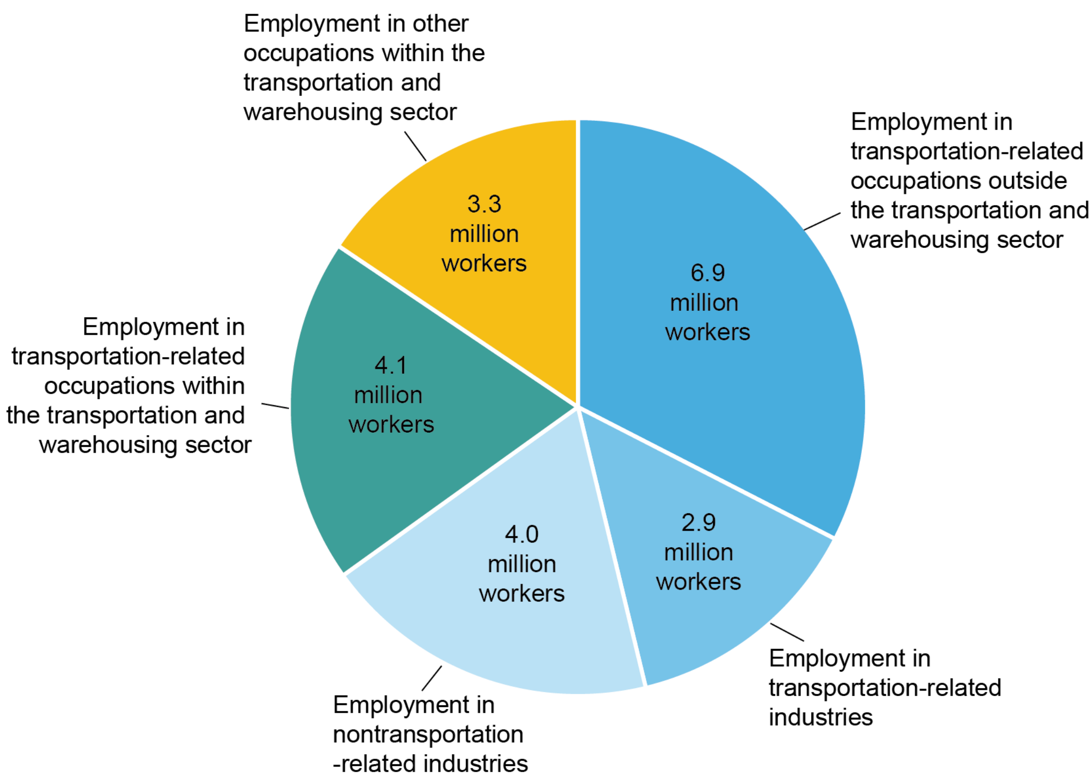
Note: Percents may not add to 100 due to rounding. (Transportation breakout is in billions)
Source: BTS, data from BEA 2025, tables 1.1.5, 2.4.5, 3.11.5, 3.15.5, 4.2.5, 5.4.5, 5.5.5, and 5.7.5B.

Figure 7. Average Household Expenditures as Percent of Total Household Expenditures: 2024



Source: BTS, data from BLS Consumer Expenditure Survey 2024.

Figure 8. Transportation Employment: 2024



Note: In 2024, total employment in transportation-related occupations (all sectors) was 11.0 million. Total employment in the transportation and warehousing sector was 7.4 million. Data do not include self-employed or independent contractors and, therefore, differ from the Bureau of Labor Statistics' occupational employment projections (https://www.bls.gov/emp/), which include these workers. Totals differ because occupational statistics were collected from a different survey than the survey used to collect annual industrial employment. Transportation-related occupations refer to these occupations.
Source: BTS, data from BLS 2025.

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Chapter 2. Passenger Travel

Passenger travel occurs in two settings: local and long-distance. Local travel, for most households, is frequent and follows recurring patterns for trips to work, the store, and other local destinations. Modes of local travel range from personal motor vehicles and public transit to bicycles and walking. Congested peaks in local travel typically involve daily and weekly patterns. Long-distance travel is infrequent for most households and involves aviation, intercity bus and rail services, cruise ships, as well as personal motor vehicles. Congested peaks in long-distance travel typically involve seasonal patterns, vacations, and special events. Long-distance travel affects many local transportation systems, either because out-of-town visitors are passing through or are traveling locally for business meetings, recreational and educational activities, and visits to friends and relatives.

2.1. POPULATION CHANGE: A DRIVER OF LONG-TERM TRAVEL TRENDS

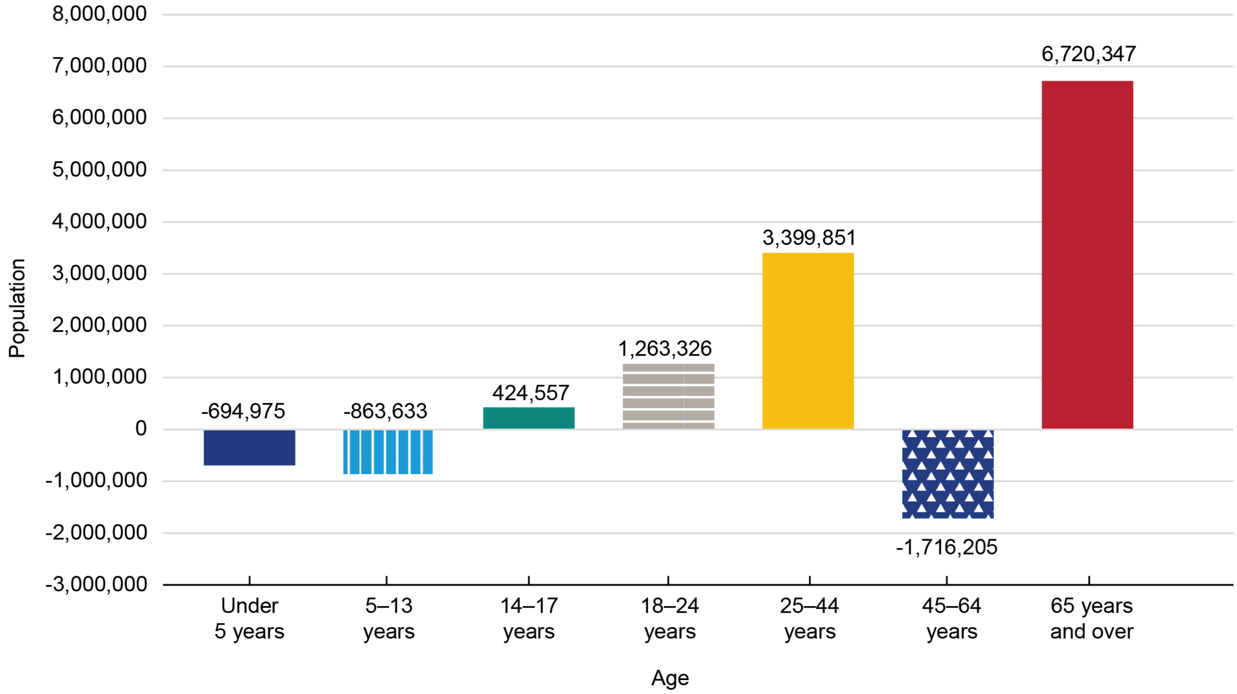
Passenger travel demand is fundamentally driven by the size and geographic distribution of the population. Age of the population is also a major element in the demand for passenger travel.

The overall U.S. population in midyear 2024 reached 340 million. The United States is now the third-largest country in the world, by population, after China and India. Figure 9 shows the distinct changes by age of population [Census 2024a].

Metro areas saw a population growth of 73 percent, and approximately 60 percent of counties had population growth [Census 2024d]. Of the metro areas with a population of a million or more that obtained growth, 11 grew because of increases in their Hispanic population, while non-Hispanic populations decreased [Census Bureau, 2024e]. Races with significant metro growth included Asians (2.3 percent), African Americans (0.6 percent), and American Indians and Alaskan natives (0.3 percent) [Census 2024e].

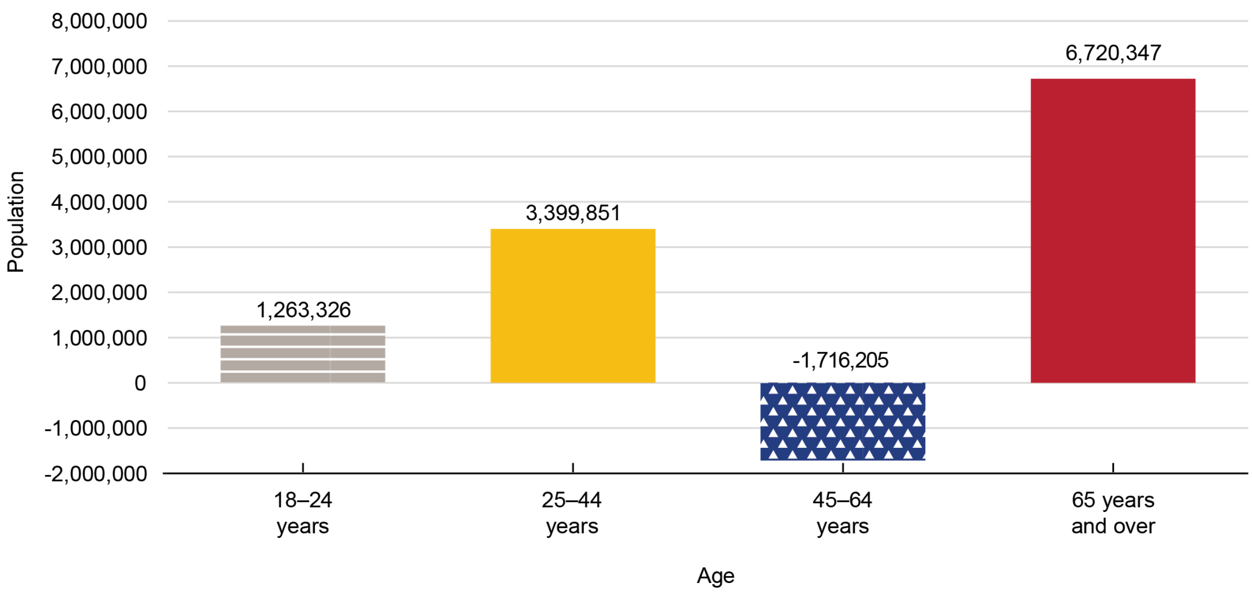
The most significant demographic shift affecting transportation, and the economy is the decline of the working-age population. As shown in Figure 10, the final cohort of the baby boomer generation will surpass age 65 this decade, transitioning a massive segment of the workforce from the 45–64 age bracket into the over-65 population. Mitigating the resulting economic impact will depend heavily on incentivizing these individuals to remain in the workforce. This shift is further supported by the improving health of older adults and the increasing flexibility of modern employment, which allows many to continue working later in life.

Figure 9. Change in Population by Age Group: 2020–2024



Source: BTS, data from Census 2025.

Figure 10. Change in Working Age Population 18–65+ Years Old: 2020–2024



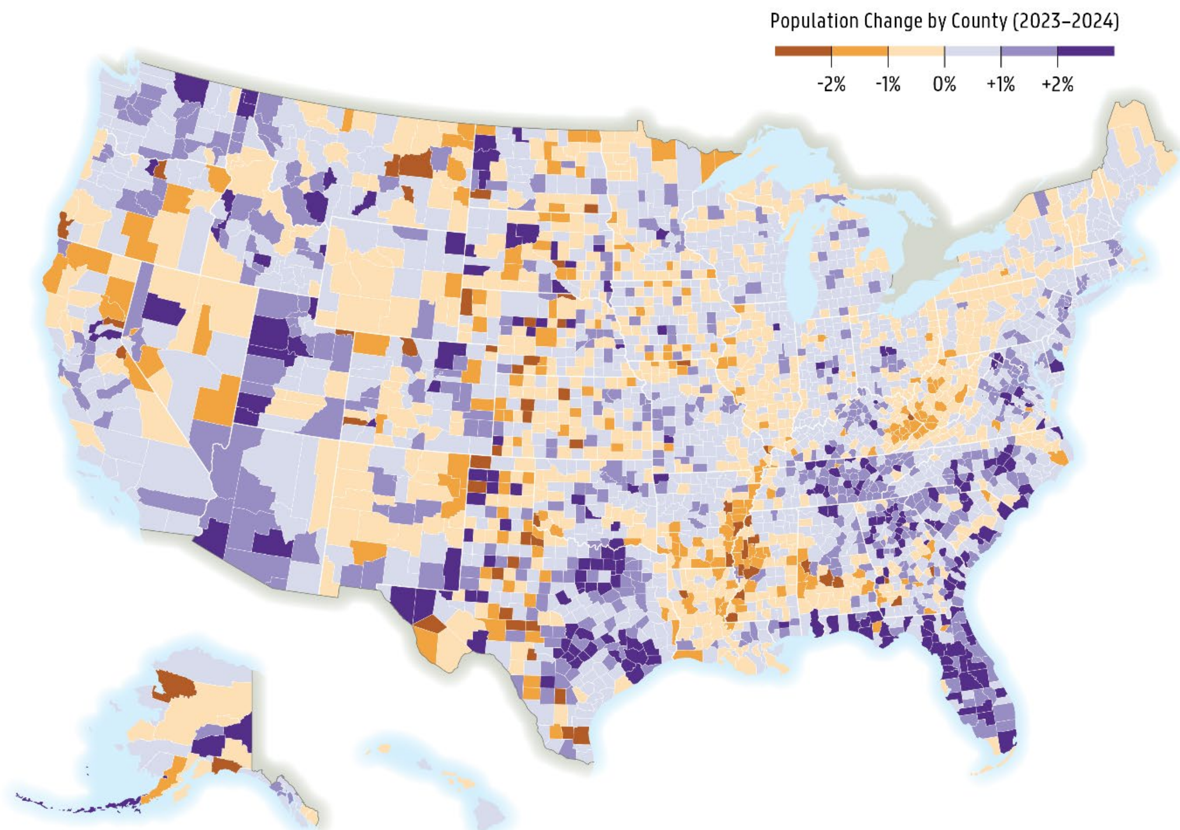
Source: BTS, data from Census 2025.

These trends matter because the amount and purpose of travel shift by age. Youth replace school with commuting as they enter the work force, and retirees replace journeys to work with travel for other purposes. According to the 2022 National Household Travel Survey (NHTS), Americans across all age groups traveled an average of 28.6 miles per person daily. The peak travel distance was observed in the 36 to 65 age group, averaging 34.4 miles per person daily, making them the demographic that traveled the most.

The geographic distribution of population matters because passenger travel starts where people live. U.S. counties experienced more population gains than losses in 2023. Counties in the South saw faster growth, and more Northeast and Midwest counties had population losses turn to gains, according to the U.S. Census Bureau's vintage 2023 estimates of population and components of change released in March 2024 [Census Bureau 2024f]

As illustrated by Figure 11, approximately 60 percent (1,876) of U.S. counties gained population from 2022 to 2023, an increase from the 52 percent of counties (1,649) that experienced population growth between 2021 and 2022. Among the Nation's 3,144 counties, the average change from 2022 to 2023 was 0.29 percent, up from 0.17 percent the previous year [Census Bureau 2024f].

Figure 11. Population Change by County: 2023–2024

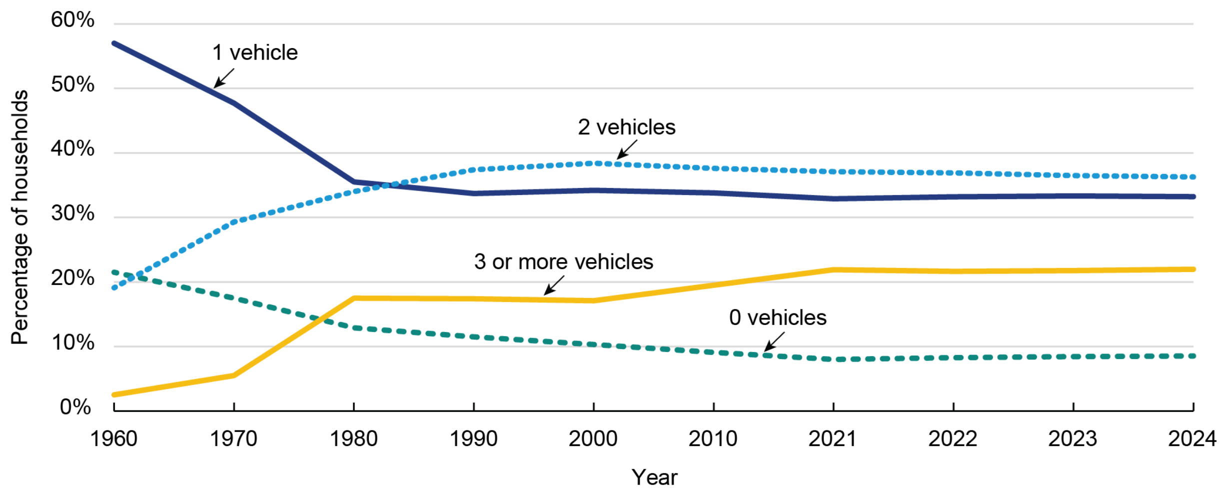


Source: BTS, data from Census 2025.

2.2. VEHICLE OWNERSHIP: A MAJOR ELEMENT OF LOCAL AND LONG-DISTANCE TRAVEL

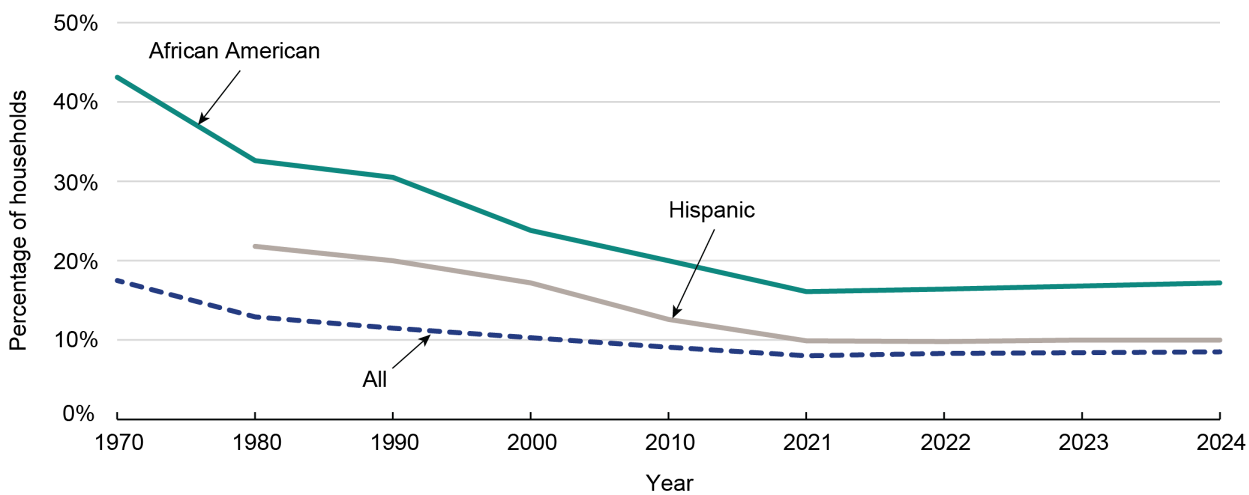
Most local travel and a substantial share of long-distance travel are accomplished by personal motor vehicle. Figure 12 shows that households without vehicles available declined from over 20 percent of all households in 1960 to less than 10 percent in 2010 and to 2024, while households with 2 or more vehicles available grew from about 20 percent in 1960 to over half of all households today. The decline in households without a vehicle available is even more dramatic for African Americans, dropping from 43.1 percent in 1960 to 16 percent in 2024 (Figure 13).

Figure 12. Share of Households by Number of Vehicles Available: 1960–2024



Source: BTS, data from Census 2025.

Figure 13. Long-Term Trends in Zero-Vehicle Households: 1970–2024



Source: BTS, data from Census 2025, Table S0201.

2.3. LOCAL TRAVEL

Local travel typically involves repetitive trips to work, to the store, to school, and to other nearby destinations. Most local travel occurs in personal motor vehicles, accounting for 86.8 percent of trips and 82.8 percent of miles traveled [NHTS 2022]. Public transit's share was 1.5 percent of trips and 1.2 percent of miles.

Daily trips per person, in 2022, slid back to the levels of the 1980s and 1990s. Table 5 shows a significant decline in the number of work trips, particularly between 2017 and 2022, when the National Household Travel Survey was last conducted. Notable declines in local trip types include shopping and errands, with declines in 2017 and then further declines in 2022. Social and recreational travel had been stable from 1990 to 2017, but was down about 25 percent from 2017 to 2022. School and Church travel declined sharply, falling from approximately 130 annual trips per person to under 100 in 2022. This change is largely attributable to shifts stemming from pandemic lockdowns and subsequent changes in school patterns.

One of the causes of the decline in shopping and errands travel has been the boom in online shopping with home delivery. The effect on total traffic of substituting delivery services for personal-vehicle use is not clear.

Table 5. Annual Person Trips per Person by Trip Purpose: 2024

Year	To or from work	Work-related business	Shopping and errands	School or church	Social and recreational	Other
1990	210	15	579	119	341	8
1995	257	38	668	128	363	2
2001	219	42	608	136	369	12
2009	216	42	588	133	381	24
2017	214	20	473	134	339	50
2022	153	29	293	94	246	16

Source: Data from FHWA 2024, table 4-3.

2.3.1. Travel to Work

While travel to work accounts for only 21.9 percent of all local travel, peak-hour commuting is a major element of recurring urban congestion [NHTS 2022]. Table 6 shows that driving alone remains the most popular form of commuting.

Working at home, historically a small share of workers dominated by farmers, became a major substitute for local travel during the COVID-19 pandemic (Figure 14). These workers tend to be in higher-income occupations (Figure 15). The peak age group for working at home is 25–44 years of age, accounting for almost 48 percent of work-at-home workers, followed by those 45–54 years of age with 21.2 percent. The median age of all work-at-home workers is 43.5 years [Census Bureau 2024h].

Table 6, Figure 14, and Figure 15 are based on Census Bureau questions about residents' typical means of transportation to work during the week before data collection. The percentages of those working from home were higher when asked about work on the previous day, capturing home-based work that happens less than half the work week (Figure 16).

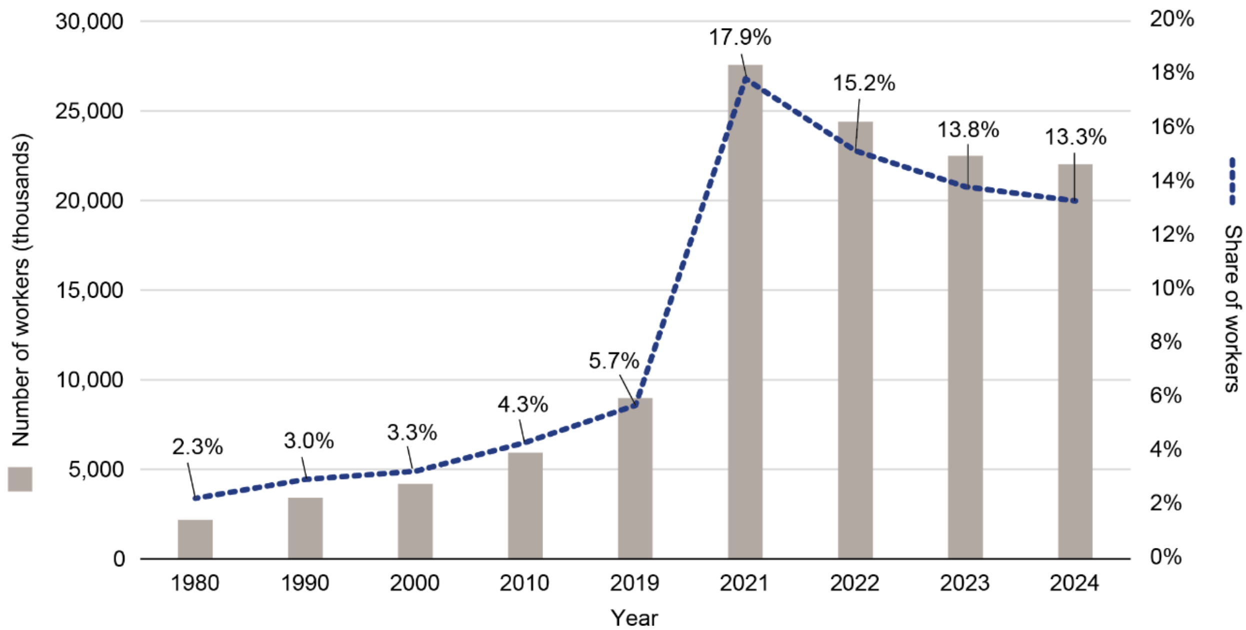
Whether work travel is reduced by working at home or by working compressed work weeks (e.g., 10 hours per day for 4 days rather than 8 hours per day for 5 days), the result is a significant decline in commuting over the year with potential consequences for transit use and local congestion.

Table 6. Mode of Transportation to Work Change: 2019 and 2021–2024

Mode	2019 (Pre-pandemic)		2021 (1st pandemic year)		2022 (2nd pandemic year)		2023 (1st post-pandemic year)		2024 (2nd post-pandemic year)		Change from 2019 to 2024
	Count	Share (%)	Count	Share (%)	Count	Share (%)	Count	Share (%)	Count	Share (%)	
Total	156,941,346	100	154,314,179	100	160,577,736	100	162,434,675	100	165,360,450	100	8,419,104
Work at home	8,970,800	5.72	27,568,098	17.86	24,381,732	15.18	22,486,510	13.84	22,026,371	13.32	13,055,571
Car, truck, or van	133,054,328	84.78	116,668,475	75.6	124,126,435	77.3	126,985,709	78.18	129,643,168	78.40	−3,411,160
Drove alone	119,153,349	75.92	104,650,121	67.82	110,245,368	68.66	112,376,082	69.18	114,469,546	69.22	−4,683,803
Carpooling	13,900,979	8.86	12,018,354	7.79	13,881,067	8.64	14,609,627	8.99	15,173,622	9.18	1,272,643
2-person carpool	10,469,892	6.67	9,050,049	5.86	10,240,427	6.38	10,696,703	6.59	11,066,823	6.69	596,931
3-person carpool	1,982,471	1.26	1,776,397	1.15	2,173,594	1.35	2,325,425	1.43	2,382,096	1.44	399,625
4-or-more-person carpool	1,448,616	0.92	1,191,908	0.77	1,467,046	0.91	1,587,499	0.98	1,724,703	1.04	276,087
Public transportation	7,778,444	4.96	3,793,329	2.46	5,013,135	3.12	5,735,258	3.53	6,097,425	3.69	−1,681,019
Bus	3,601,403	2.29	1,971,235	1.28	2,401,748	1.5	2,636,607	1.62	2,771,518	1.68	−829,885
Streetcar or trolley car	2,935,633	1.87	1,400,185	0.91	1,952,645	1.22	2,242,806	1.38	2,411,200	1.46	−524,433
Subway or elevated rail	921,391	0.59	294,566	0.19	466,508	0.29	626,481	0.39	677,146	0.41	−244,245
Railroad	242,776	0.15	82,915	0.05	129,309	0.08	155,455	0.1	167,493	0.10	−75,283
Ferryboat	77,241	0.05	44,428	0.03	62,925	0.04	73,909	0.05	70,068	0.04	−7,173
Taxicab	385,756	0.25	296,457	0.19	382,417	0.24	405,531	0.25	693,439	0.42	307,683
Motorcycle	221,923	0.14	166,676	0.11	217,325	0.14	215,105	0.13	211,280	0.13	−10,643
Bicycle	805,722	0.51	616,153	0.4	731,272	0.46	761,757	0.47	803,184	0.49	−2,538
Walking	4,153,050	2.65	3,399,405	2.2	3,855,075	2.4	3,966,159	2.44	4,048,560	2.45	−104,490
Other means	1,571,323	1	1,805,586	1.17	1,870,345	1.16	1,878,646	1.16	1,837,023	1.11	265,700

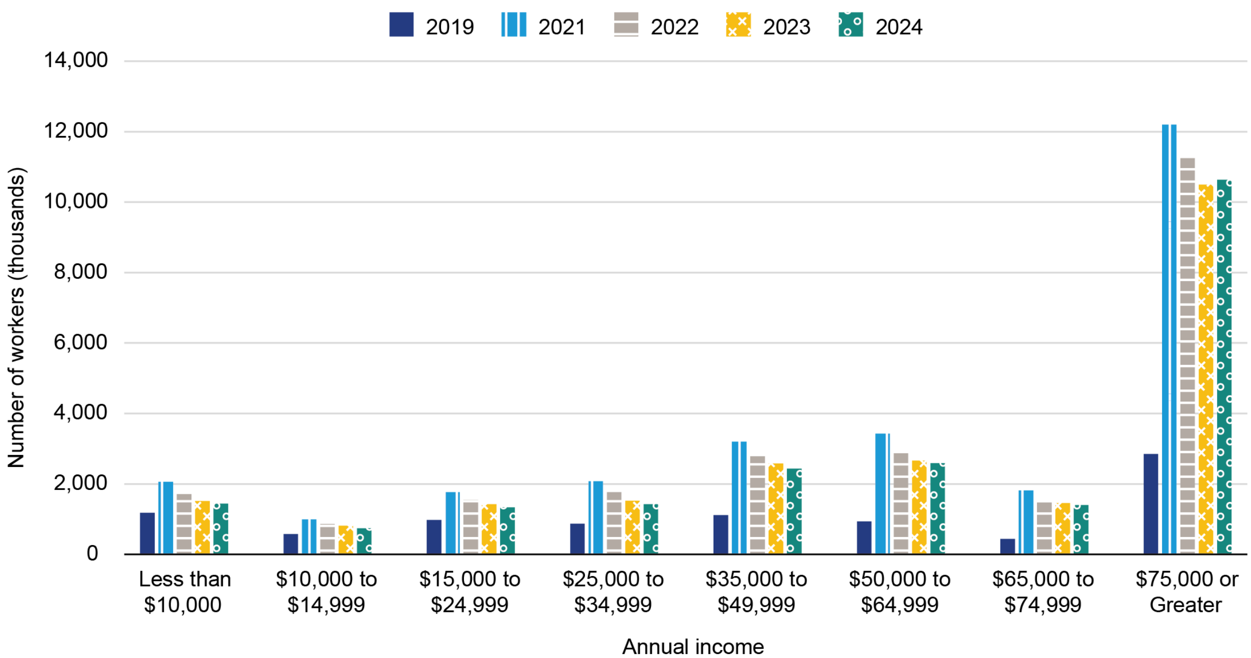
Note: The American Community Survey was not conducted in 2020.
Source: Data from Census 2025, Table B08301.

Figure 14. Long-Term Trend in Working at Home: 1980–2024



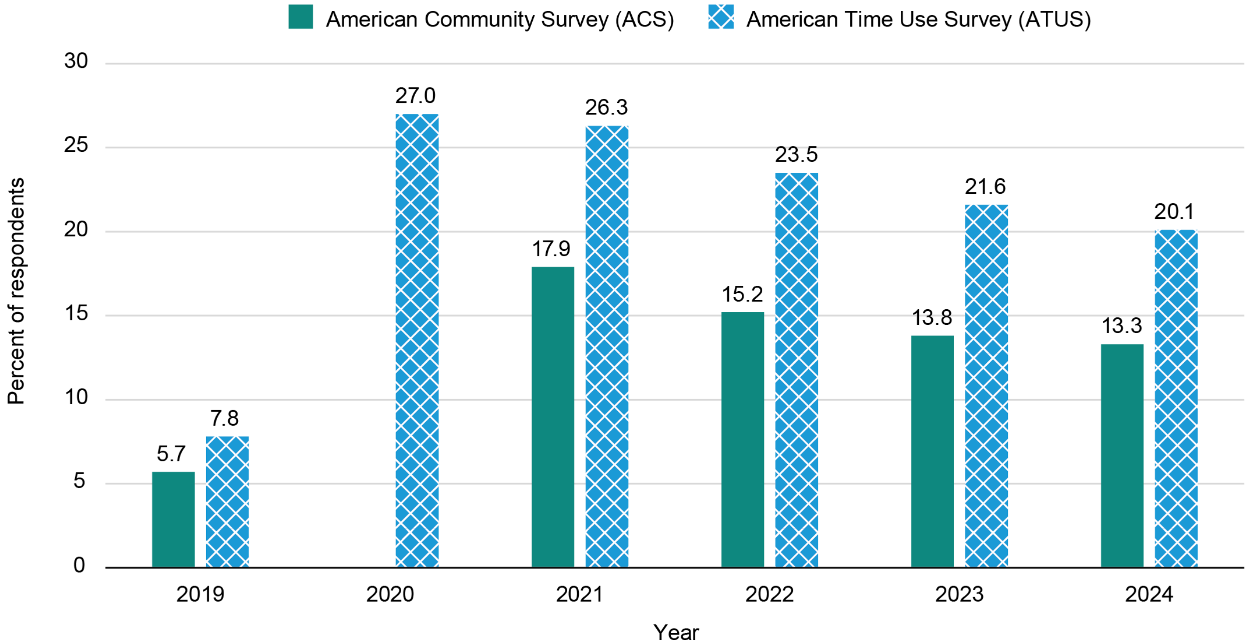
Note: The American Community Survey was not conducted in 2020.
Source: BTS, data from Census 2025, Table S0801.

Figure 15. Workers Working at Home by Income: 2019–2024



Note: The American Community Survey was not conducted in 2020.
Source: BTS, data from Census 2025, Table B08119.

Figure 16. Working From Home in the Prior Week of the American Community Survey Versus the Survey Day of the American Time Use Survey: 2019–2024



Note: The American Community Survey did not report in 2020; the COVID-19 pandemic impacted data collection. The American Time Use Survey data include only full-time workers who were working on the survey day.
Source: BTS, data from The University of Texas at Austin 2025.

2.3.2. Travel to School

Travel to school has only been measured nationally once in an experimental survey of 4,000 public elementary, middle, high, and combined-grade schools. School leaders of the sampled schools were asked to provide requested data monthly on selected education-related topics during the 2023–2024 school year, including the modes of transportation available to students. This rough approximation of travel by means of transportation is summarized in Table 7.

2.4. LONG-DISTANCE TRAVEL

Long-distance travel includes business, personal, and vacation travel within the United States, foreign travel of U.S. residents, and foreign visitors to the United States. The last comprehensive nationwide survey of long-distance travel by U.S. residents was conducted in 1995 and showed that the personal vehicle was the dominant form of transportation for trips of between 100 and 1,000 miles (Figure 17).

While long-distance travel by all forms of transportation has not been measured since 1995, visitation to National Parks is a reasonable surrogate indicator of total travel to distant places. After a sharp 2020 decline amid park closings, recovery came quickly, partly due to the attractiveness of being outdoors, not placing visitors in confined spaces with other people, and largely accessible by personal vehicles or campers (Figure 18).

Table 7. Modes of Transportation Available for and Used by Students to Travel to and From School

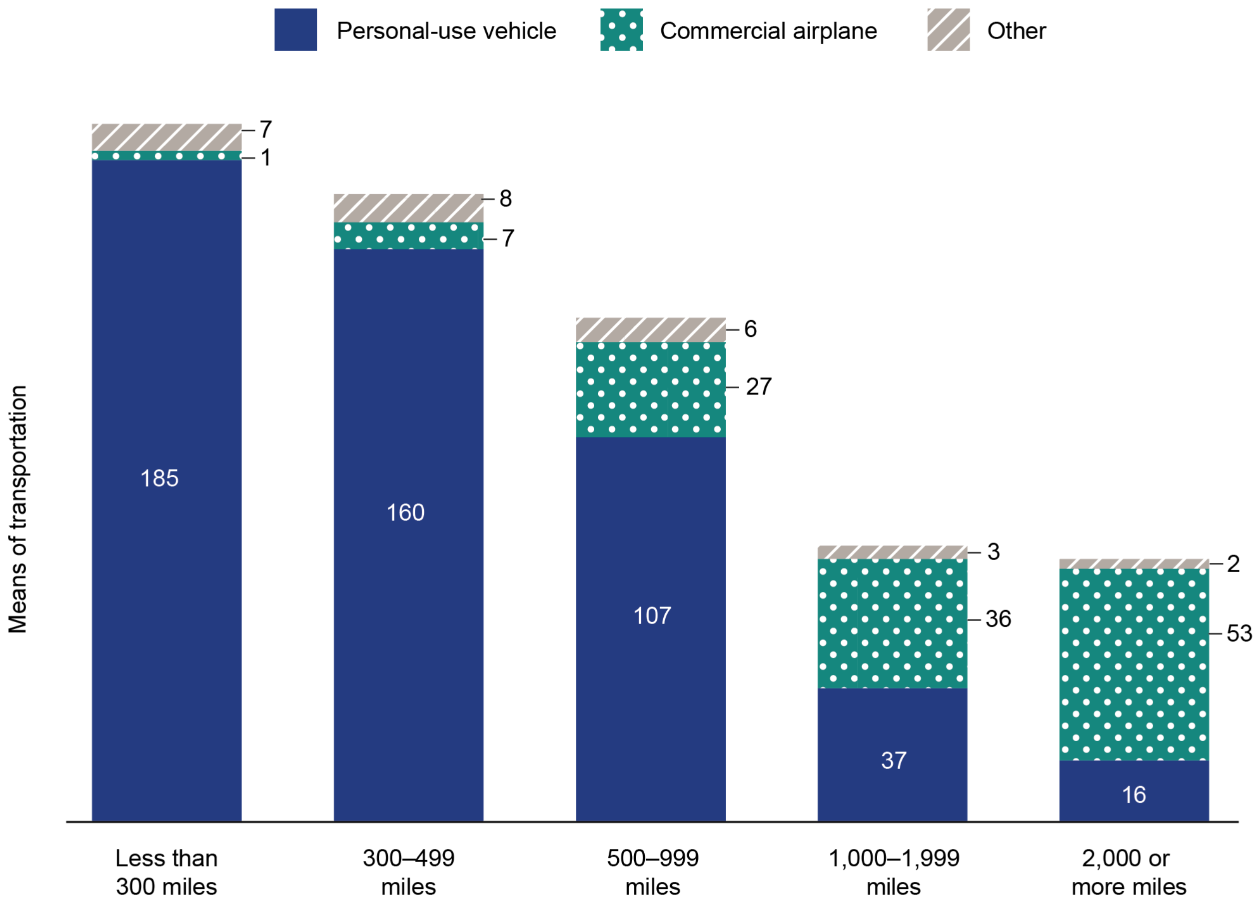
Mode	Availability			Used by students (%)
	Yes (%)	No (%)	Missing rate (%)	
School bus	87	13	1	40
Public transportation	30	70	6	2
Bike, scooter, skateboard, other	79	21	2	3
Walking	87	13	1	12
Auto drop-off/pick-up	99	1	‡	33
Drive car	33	67	7	7
Other	21	79	55	#

‡ Reporting standard not met.

Rounds to zero.

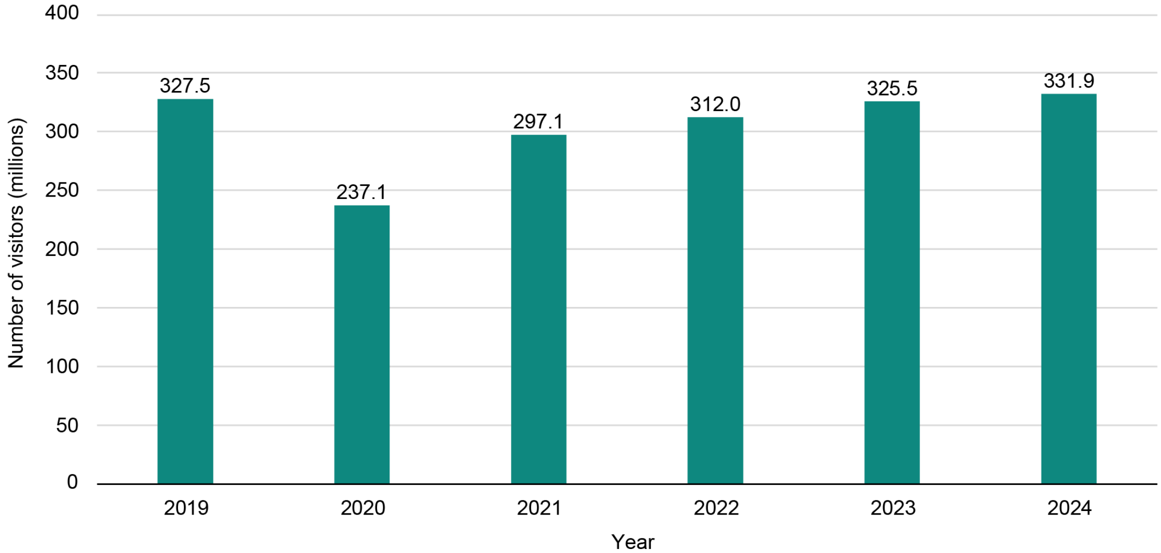
Source: Data from NCES 2023–2024.

Figure 17. Modal Shares of Long-Distance Trips by Round-Trip Distance (Millions): 1995



Source: BTS, data from BTS 1997, Figure 3.

Figure 18. National Park Visits: 2019–2024



Source: BTS, data from NPS 2025.

2.4.1. Long-Distance Travel by Commercial Carriers

As shown in Table 8, air travel has recovered from its dramatic drop during COVID and has returned to its long-term growth as the major form of long-distance travel by for-hire carriers.

Air travel has evolved from a limited experience for the population to the point that 86 percent of U.S. adults have flown at least once in their lifetime, and half of the total population has flown in the last 12 months, as shown in Figure 19 [Airlines for America, 2023, 2024].

Travel by rail has also increased. In fiscal year (FY) 2024 (i.e., October 1, 2023–September 30, 2024), Amtrak observed a 15-percent increase in ridership from FY 2023 [Amtrak 2025]. About 32.8 million customers rode Amtrak services nationwide—almost 89,881 trips on an average day in 2024. This increase was largely the product of Northeast Corridor growth, where ridership was often back to pre-COVID levels. Of the top 10 Amtrak stations, only 2 (i.e., Chicago, IL, and Los Angeles, CA) are outside the Northeast United States. In FY 2024, state-supported ridership covered 44.2 percent of total Amtrak ridership. State-supported ridership grew nearly 23 percent on some routes in the Amtrak system, including thruway connecting services, which include transportation provided by bus, train, ferry, van, or taxi via a variety of operators.

Travel on scheduled intercity buses is poorly measured, and travel by charter buses is likely to be larger but not measured at all. In 2023, the average household expenditure on intercity bus travel cost 13 dollars per unit for less than 0.1 percent of the overall cost of transportation [U.S. Bureau of Labor Statistics 2023].

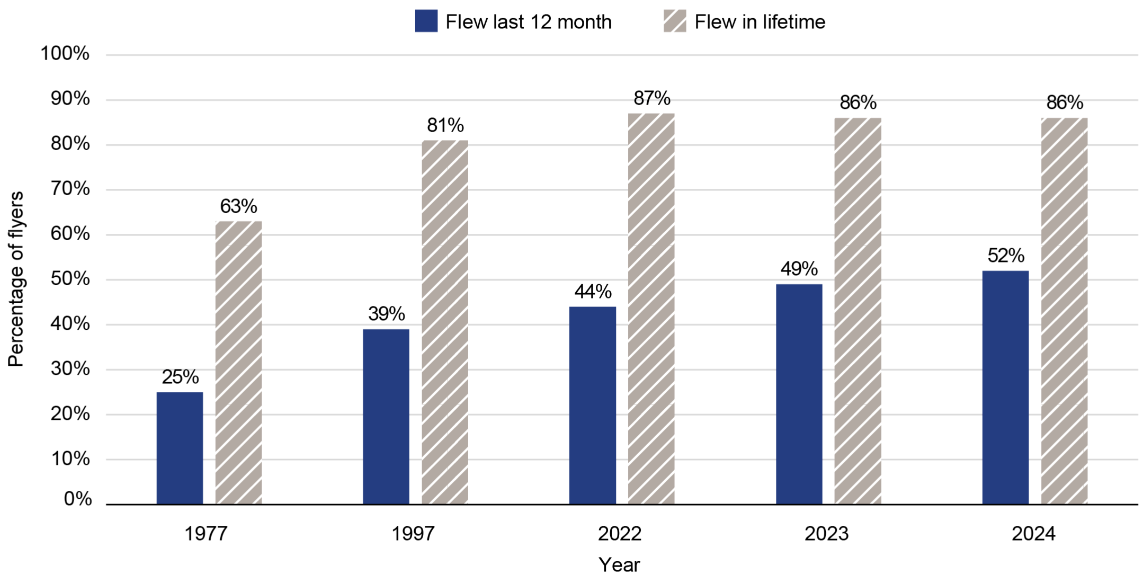
Long-distance travel includes trips to participate in ocean and inland waterway cruises. According to the Cruise Line Industry Association, North America, with 20.5 million passengers in 2024, surpassed the 2019 base year by more than 5.1 million cruisers. This increase is significant after a zero increase in 2020 and a very small gain in 2021, as shown in Figure 20. An average stay of 6.8 days aboard a ship is consistent with 2019 trends. About 67 percent of cruises are destined to the Caribbean, making Florida the nation’s center of cruise departures. The second largest destination, at 7.8 percent, is Alaska, with origins on the West Coast. The Mediterranean comes in third at about 7 percent of cruises in North America.

Table 8. U.S. Domestic and International Air Travel: 2019–2024

Year	Domestic enplanements	International enplanements	Total enplanements
2019	811,545,260	241,419,751	1,052,965,011
2020	337,519,065	63,049,602	400,568,667
2021	605,935,383	94,624,181	700,559,564
2022	750,558,998	186,808,094	937,367,092
2023	819,333,204	233,976,597	1,053,309,801
2024	852,113,256	255,846,108	1,107,959,364

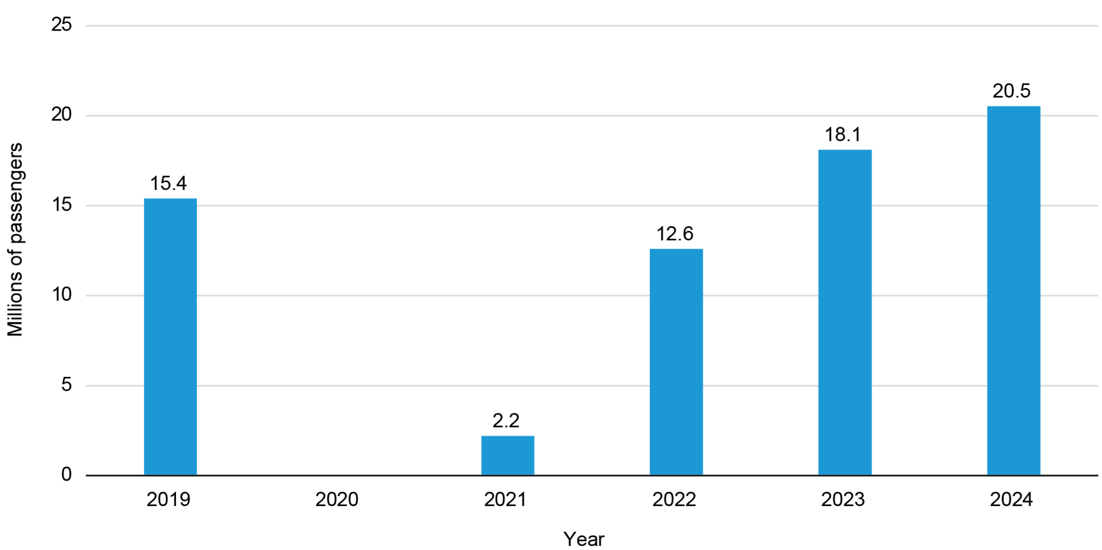
Source: Data from BTS n.d.

Figure 19. Share of U.S. Adults Who Have Flown in an Airplane



Source: BTS, data from Airlines for America 2025.

Figure 20. North American Cruise-Departures Trends Post-COVID



Source: BTS, data from CLIA 2025.

2.4.2. U.S. Citizen Departures From the United States in 2024

Total U.S. citizen departures in 2024 were 107.7 million. The increase was 9.1 million (more than 9.2 percent) from 98.6 million in 2023. The change reflects a 108.5 percent difference from the 99.3 million departures in 2019 as shown in Figure 21.

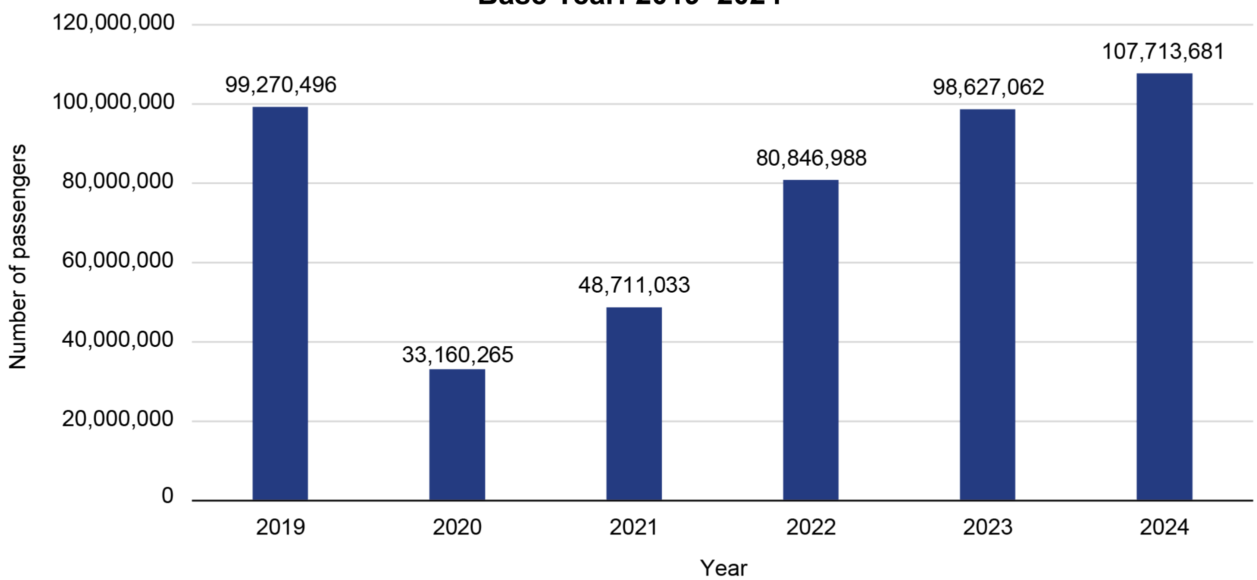
Table 9 shows the flows from the United States to other parts of the world in 2024. It differentiates overseas travel from land border crossings to Mexico and Canada.

2.4.3. International Inbound Travel in 2024

Table 10 presents a measure of current international land border crossing visits to the United States from Canada and Mexico, which have not recovered from the pandemic. Most visitors arrive in personal vehicles and, in the case of Mexico, pedestrians, reflecting that significant travel at the border is local rather than long-distance. The total number of land passenger crossings from both countries shows a clear impact from the pandemic, followed by a steady recovery.

Personal vehicle passengers represent 79.2 percent of total crossings, while pedestrians account for 19.4 percent. Bus and train passengers combined account for less than 1.5 percent of the total, with train passengers at 0.1 percent.

Figure 21. U.S. Citizen International Departures Recovery Trend from Pre-COVID Base Year: 2019–2024



Source: BTS, data from NTTO 2025.

Table 9. U.S. Citizen Travel to International Regions: 2024

Regions	Total	% Change	Market share
Total overseas[1]	53,762,818	9.80%	49.91%
Europe	22,235,839	10.90%	20.60%
Caribbean	11,337,403	5.60%	10.50%
Asia	6,747,207	20.90%	6.30%
South America	3,304,041	8.80%	3.10%
Central America	5,009,966	15.00%	4.70%
Oceania	903,572	9.90%	0.80%
Middle East	3,342,726	−6.90%	3.10%
Africa	882,064	13.50%	0.80%
Total North America	53,950,863	8.63%	50.09%
Mexico (total)[2, P]	39,868,088	8.10%	37.00%
Mexico (air)[1]	13,807,586	3.10%	[4]
Canada (total)[3]	14,082,775	10.20%	13.10%
Canada (air)[3]	5,272,745	14.40%	[4]
Grand total	107,713,681	9.21%	100.00%

[1]Overseas and Mexico air traffic (nonstop from U.S. port to foreign port).
[2]Mexico aggregate total (Including air, land and border 1 or more nights).
[3]Canadian aggregate total (including air, land and border 1 or more nights).
[4]Market Share of Air travel compared to all United States–international air travel: Mexico-air 19 percent; Canada-air 7.2 percent year to date.
[P]Preliminary 2022 data.
Source: Data from NTTO 2025.

Table 10. U.S. Border Land-Passenger Gateways Entering the United States (Thousands): 2019–2024

Country by year		Personal vehicle passengers	Pedestrians	Bus passengers	Train passengers	Personal vehicles	Buses
2019	Total	188,067	49,699	3,866	294	99,818	228
	Mexico	136,890	49,176	2,153	10	73,085	152
	Canada	51,177	523	1,713	285	26,733	77
2020	Total	90,647	25,046	1,153	64	56,833	64
	Mexico	80,591	24,999	992	7	50,605	7
	Canada	10,056	48	161	57	6,229	57
2021	Total	102,952	27,972	1,385	65	62,979	65
	Mexico	96,562	27,935	1,350	17	58,548	17
	Canada	6,389	37	35	47	4,431	47
2022	Total	155,366	36,071	2,314	49	87,510	49
	Mexico	128,472	35,887	1,822	3	73,245	3
	Canada	26,894	184	492	46	14,265	46
2023	Total	175,547	39,638	3,412	251	96,500	251
	Mexico	134,928	39,422	2,454	5	75,892	5
	Canada	40,619	216	958	246	20,608	246
2024	Total	183,133	41,036	3,289	319	99,448	319
	Mexico	138,371	40,769	2,210	27	76,885	27
	Canada	44,762	267	1,079	293	22,563	293

Source: Data from BTS 2025.

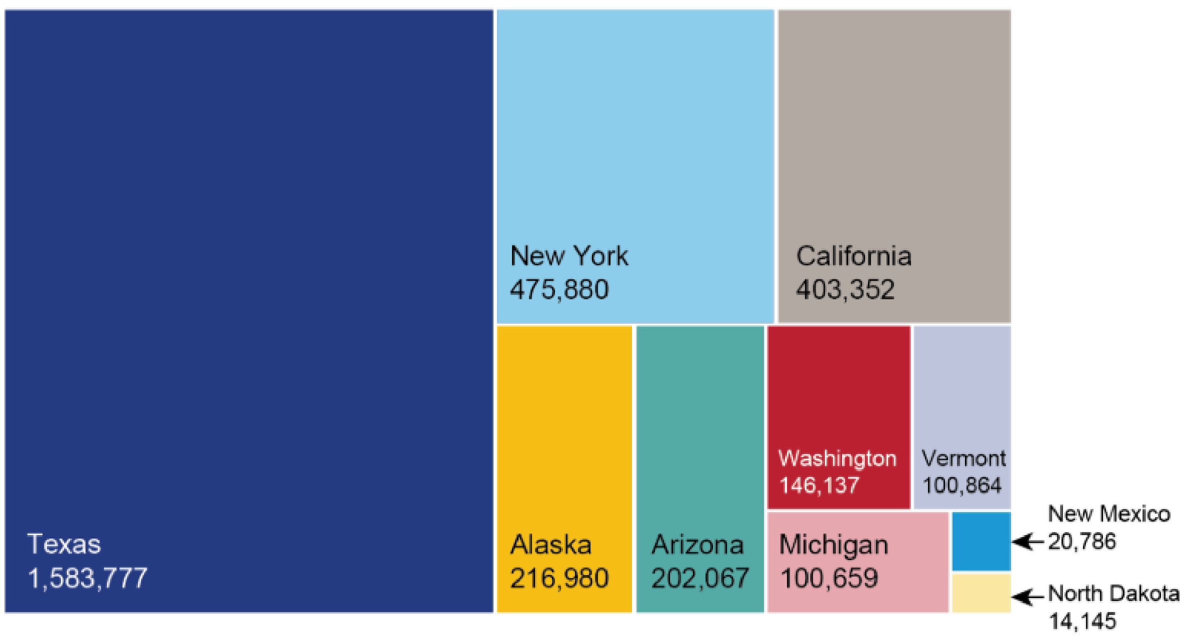
Box 1: Trends in Bus and Bus Passengers Border Crossing

The Border Crossing data program provides monthly and annual statistics for trucks, trains, containers, buses, personal vehicles, passengers, and pedestrians entering the United States at land ports of entry.

From 2019 to 2024, the number of incoming persons crossing by all modes of transportation declined by 13.5 percent from Canada and 0.7 percent from Mexico. In the same period, the number of buses from both Canada and Mexico decreased 34.5 and 12.4 percent, respectively. The number of bus passengers from Canada declined 37.0 percent and increased 2.6 percent from Mexico.

The United States–Canada border was closed to all nonessential travel in 2020 and reopened in both directions to all travel after 19 months. Since then, the number of bus passengers per bus from Canada has increased sharply at 145.3 percent while increasing 17.9 percent from Mexico.

Figure 22. Bus Passengers by Top 10 States of Destination: 2024



Source: BTS 2025.

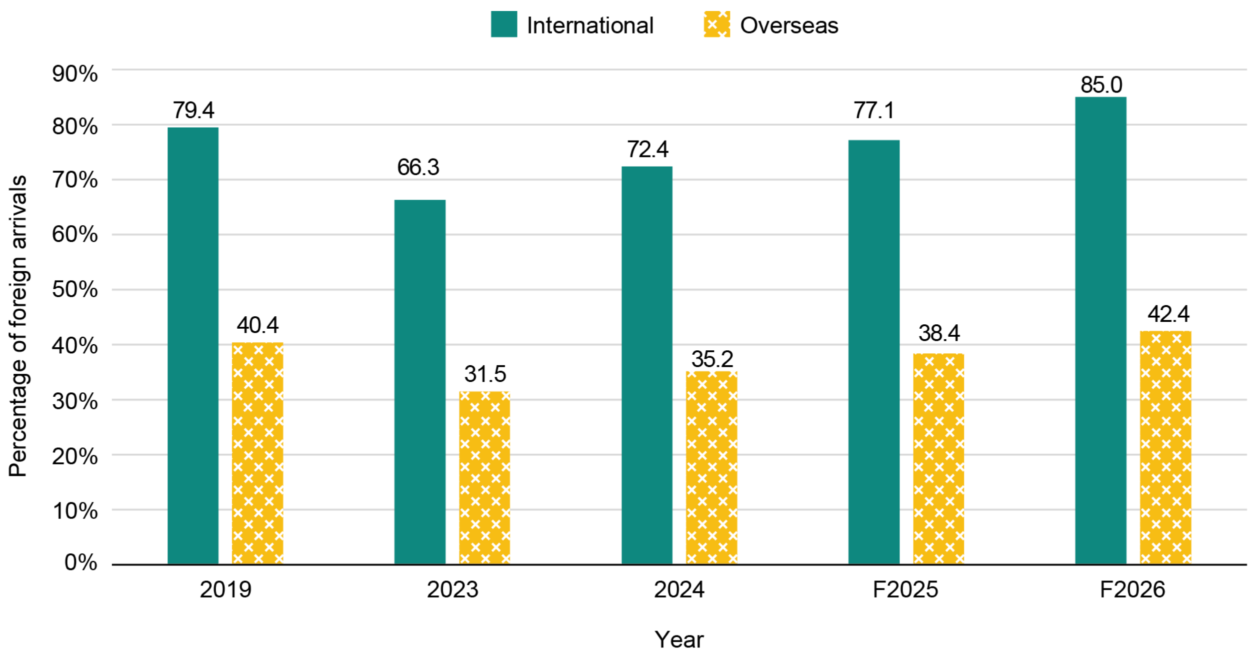
In 2024, the United States welcomed over 72.4 million international tourists with overnight stays—a 9.1-percent increase from 2023 at 66.3 million [NTTO 2024a]. However, this total was still 8.8 percent below the 79.4 million visitors experienced in 2019. At 72.4 million visitors, the United States was the third most visited country, after France (over 100 million) and Spain (94 million) and first in spending by visitors, often a product of longer stays. Figure 23 summarizes these changes for the United States.

2.5. SYSTEM PERFORMANCE FOR PASSENGER TRAVEL: THE CASE OF COMMERCIAL AVIATION

From the traveler's perspective, the basic performance measure for aviation is whether their flight arrived at the destination at the scheduled time. In the 12 months ending in July 2025, 7,690,799 flights by the top 10 carriers were delayed [BTS OAI 2025]. Tarmac delays of over 1 hour affected 717 flights. The causes of delay are shown in Figure 24.

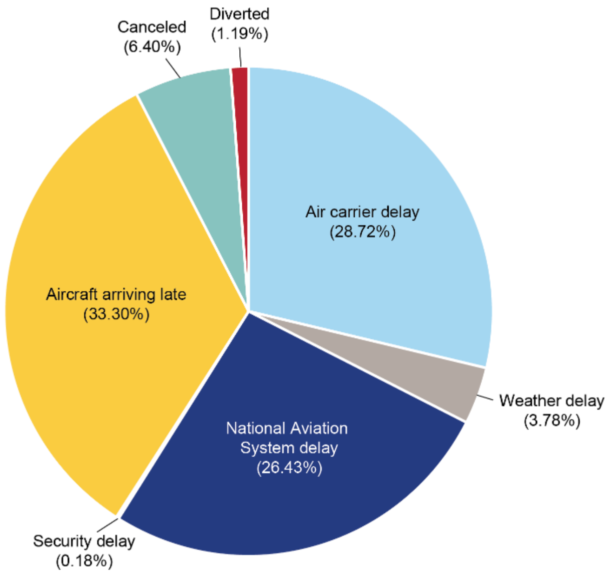
Passengers also expect to receive their luggage and other personal equipment at the destination airport without damage. In the 12 months ending in July 2025, the major airlines reported 2,859,325 cases of missing or damaged luggage and 11,463 cases of damaged wheelchairs and scooters [BTS OAI 2025].

Figure 23. Total Foreign Arrivals: 2019–2026



F = Forecast year
Source: BTS, data from International Trade Administration 2025.

Figure 24. Causes of Delay: August 2024–July 2025



Source: BTS, data from BTS 2025.

2.6. COST OF TRAVEL TO HOUSEHOLDS

The cost of passenger travel to households is reflected in household expenditures as measured by the Bureau of Labor Statistics. The transportation components of the Consumer Expenditure Survey are highlighted in Table 11. Major items include airline fares, intercity bus fares, local transportation on out-of-town trips, intercity train fares, ship fares, taxi fares, and limousine services on trips [BLS 2024].

Households spent an average of $13,318 on transportation in 2024—the second largest household expenditure category after housing (excluding spending on behalf of households, such as healthcare benefits). Transportation expenditures grew by 1.1 percent, growing slightly less than all expenditures, which grew 1.6 percent in 2024, but more than the 0.6 percent growth in healthcare spending. Households in the lowest income quintile spent the least on transportation ($5,105 versus $ 25,378 by households in the highest income quintile) and faced a larger transportation cost burden, spending 30.6 percent of their before-tax income on transportation compared to 9.6 percent by the highest income quintile in 2024.

All income quintiles spent roughly the same amount of their before-tax income on transportation in 2024 as in 2023. The third income quintile experienced the largest change, with their before-tax transportation cost burden falling 1.1 percentage points. The decline follows a reduction in transportation spending in 2024. All other income quintiles spent more on transportation in 2024 than in 2023, but their before-tax transportation cost burden changed by less than one percentage point.

In 2024, rural households spent slightly more on transportation ($14,418) and more of their after-tax income on transportation (14.2 percent) than urban households ($13,057 and 12.4 percent, respectively). Rural households faced a higher after-tax transportation cost burden in 2024 (14.2 percent versus 15.0 percent in 2023) whereas urban households faced roughly, the same burden (12.4 percent versus 12.5 percent in 2023).

Table 11. Average Annual Household Expenditures on Intercity Transportation (2024 Dollars): 2020–2024

Transportation purchased	All consumer units	Hispanic or Latino	Black or African American	Asian
2020 public and other transportation	$263.58	$292.32	$224.71	$432.11
Airline fares	$159.89	$150.8	$69.7	$261.01
Intercity bus fares	$2.23	$4.23	$0.38	$2.15
Local transportation on out-of-town trips	$6.89	$4.21	$3.55	$6.79
Taxi fares and limousine services on trips	$4.05	$2.48	$2.08	$3.99
Intercity train fares	$8.12	$6.63	$2.75	$7.58
Ship fares	$11.24	$9.63	$1.65	$12.84
2021 public and other transportation	$483	$424.54	$472.77	$753.12
Airline fares	$321.99	$257.83	$236.74	$512.80
Intercity bus fares	$4.18	$4.94	$2.57	$4.93
Local transportation on out-of-town trips	$14.21	$8.82	$9.47	$19.31
Taxi fares and limousine services on trips	$8.35	$5.18	$5.56	$11.34
Intercity train fares	$11.16	$6.92	$7.94	$19.74
Ship fares	$19.51	$10.14	$10.17	$19.06
2022 public and other transportation	$845.17	$671.56	$595.14	$1,648.72
Airline fares	$606.41	$442.03	$362.05	$1,187.21
Intercity bus fares	$9.25	$11.12	$4.31	$12.41
Local transportation on out-of-town trips	$24.81	$15.61	$20.36	$41.73
Taxi fares and limousine services on trips	$14.57	$9.17	$11.96	$24.51
Intercity train fares	$24.24	$10.85	$15.77	$34.56
Ship fares	$37.64	$12.85	$21.60	$39.38
2023 public and other transportation	$1,095.60	$834.42	$820.30	$2,658.04
Airline fares	$690.25	$480.53	$332.77	$1,855.89
Intercity bus fares	$12.76	$7.53	$9.21	$35.05
Local transportation on out-of-town trips	$28.6	$19.51	$14.69	$75.10
Taxi fares and limousine services on trips	$16.79	$11.46	$8.63	$44.11
Intercity train fares	$31.01	$10.75	$24.44	$73.47
Ship fares	$127.27	$39.80	$61.73	$247.99
2024 public and other transportation	$1,129.44	$847.45	$1,050.66	$2,574.32
Airline fares	$681.83	$488.21	$459.85	$1,821.92
Intercity bus fares	$11.77	$7.36	$6.20	$16.10
Local trans. on out-of-town trips	$1.68	$0.10	$0.07	$8.17
Taxi fares and limousine services on trips	$0.99	$0.06	$0.04	$4.80
Intercity train fares	$25.98	$9.50	$14.80	$43.77
Ship fares	$161.72	$37.26	$150.40	$146.50

Source: Data from BTS 2025.

2.7. REFERENCES

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Chapter 3. Freight Transportation and Supply Chains

In 2024, the U.S. freight transportation system handled approximately 20.0 billion tons of goods valued at $25.0 trillion (in current dollars). On average, the system carried 54.8 million tons worth $68.4 billion every day [BTS FAF 2025]. This volume of freight movement is supported by capital assets valued at $11.1 trillion in 2023, including critical infrastructure, such as ports, highways, rail systems, airports, and pipelines [BTS 2025].

Freight moves on two overlapping systems. One carries high-value, high-velocity freight, such as electronics and fruit. This type of freight has a high value per, and the cost of movement is a small portion of the total value of the commodity. The other system carries bulk commodities, such as grain and gravel, for which speed is not important, and the low cost per ton to move is a large portion of the total value of the commodity.

3.1. TOTAL FREIGHT BY MODE

The total freight moved to, from, and within the United States is estimated by mode in Table 12. The importance of each mode to domestic, export, and import freight is shown in Table 13, and the importance of domestic, export, and import freight to each mode is shown on Table 14. These tables show the importance of trucking to freight movement and the relatively small slice of freight movement that is attributed to foreign trade. The latter is understated since a large but unmeasured share of domestic movements involve freight that is reshipped or manufactured from imports or is reprocessed and reshipped to foreign locations.

These tables include the category multiple modes and mail, which is dominated in domestic modes by multimodal delivery services that can use combinations of truck, air, and rail. These estimates are based primarily on data received from shippers, who will not know what modes a multimodal carrier will use to transport smaller shipments (typically less than 150 pounds).

The importance of each mode of transportation depends on the distance of the shipment. Figure 25 shows that tonnage moves mostly in short distances and that rail, pipeline, and multiple modes handle a substantial share of the shipments for distances over 500 miles. Figure 26 shows that higher valued shipments tend to move longer distances and that multiple modes and mail plays a greater role at longer distances.

The two freight systems for high-value, high-velocity goods and bulk goods become apparent in the movement of goods over the transportation network. Figure 27 shows a concentration of tonnage for rail shipments of coal from Wyoming and various bulk products on the Mississippi River and its tributaries, while Figure 28 shows the geographic spread of rail container movements that reflect high-value, high-velocity goods. Figure 29 shows that high-tonnage ports are concentrated on the Gulf Coast.

Table 12. Freight Tons and Value by Mode: 2024

Mode	Tons (in millions)				Value (billions in current dollars)			
	Total	Domestic	Exports[1]	Imports[1]	Total	Domestic	Exports[1]	Imports[1]
Total	19,895	17,656	1,258	981	24,908	19,789	2,046	3,074
Truck	12,844	11,905	477	461	18,079	14,740	1,233	2,106
Rail	1,533	1,048	319	165	752	298	178	276
Water	772	621	110	41	363	251	65	48
Air, air and truck	7	2	3	2	809	191	304	314
Multiple modes and mail	634	523	59	53	3,333	3,027	86	219
Pipeline	4,025	3,486	283	257	1,527	1,280	147	99
Other and unknown	80	72	7	2	45	2	33	10

[1]Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.
Note: Numbers may not add to totals due to rounding. Data in this table are not comparable to similar data in previous years because of updates to the Freight Analysis Framework. All truck, rail, water, and pipeline movements that involve more than one mode, including exports and imports that change mode at international gateways, are included in multiple modes and mail to avoid double counting. As a consequence, rail and water totals in this table are less than other published sources.
Source: Data from BTS, FHWA 2025.

Table 13. Freight Tons and Value Percentages by Mode: 2024

Mode	Tons (in millions)				% of value			
	Total	Domestic	Exports[1]	Imports[1]	Total	Domestic	Exports[1]	Imports[1]
Total	100	100	100	100	100	100	100	100
Truck	65	67	38	47	73	74	60	69
Rail	8	6	25	17	3	2	9	9
Water	4	4	9	4	1	1	3	2
Air, air and truck	0	0	0	0	3	1	15	10
Multiple modes and mail	3	3	5	5	13	15	4	7
Pipeline	20	20	22	26	6	6	7	3
Other and unknown	0	0	1	0	0	0	2	0

[1]Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.
Note: Numbers may not add to totals due to rounding. Data in this table are not comparable to similar data in previous years because of updates to the Freight Analysis Framework. All truck, rail, water, and pipeline movements that involve more than one mode, including exports and imports that change mode at international gateways, are included in multiple modes and mail to avoid double-counting. As a consequence, rail and water totals in this table are less than other published sources.
Source: Data from BTS, FHWA 2025.

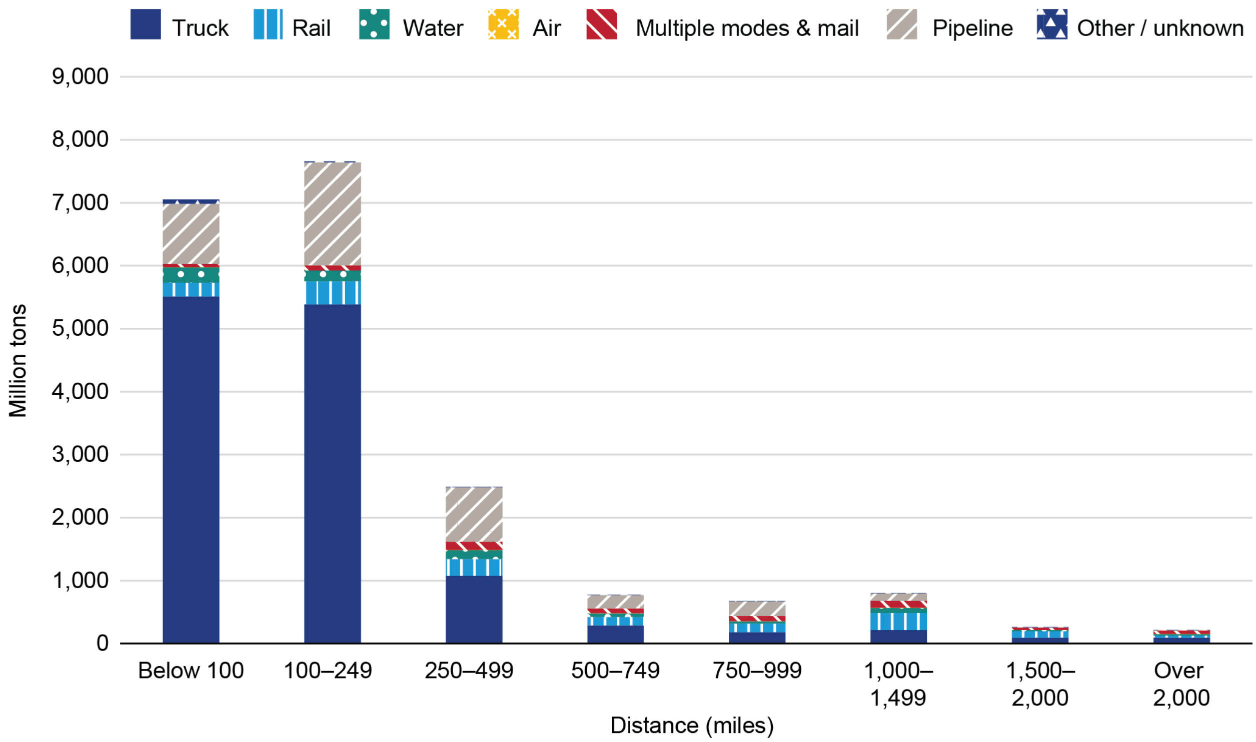
Table 14. Share of Domestic, Exports, and Imports by Mode: 2024

Mode	% of tons				% of value (current dollars)			
	Total	Domestic	Exports[1]	Imports[1]	Total	Domestic	Exports[1]	Imports[1]
Total	100	88.7	6.3	4.9	100	79.4	8.2	12.3
Truck	100	92.7	3.7	3.6	100	81.5	6.8	11.6
Rail	100	68.4	20.8	10.8	100	39.6	23.6	36.7
Water	100	80.5	14.2	5.3	100	69.0	17.8	13.2
Air, air and truck	100	30.1	42.6	27.3	100	23.5	37.6	38.8
Multiple modes and mail	100	82.4	9.3	8.4	100	90.8	2.6	6.6
Pipeline	100	86.6	7.0	6.4	100	83.8	9.6	6.5
Other and unknown	100	89.3	8.5	2.1	100	4.9	72.8	22.3

[1]Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.
Note: Numbers may not add to totals due to rounding. Data in this table are not comparable to similar data in previous years because of updates to the Freight Analysis Framework. All truck, rail, water, and pipeline movements that involve more than one mode, including exports and imports that change mode at international gateways, are included in multiple modes and mail to avoid double-counting. As a consequence, rail and water totals in this table are less than other published sources.
Source: Data from BTS, FHWA 2025.

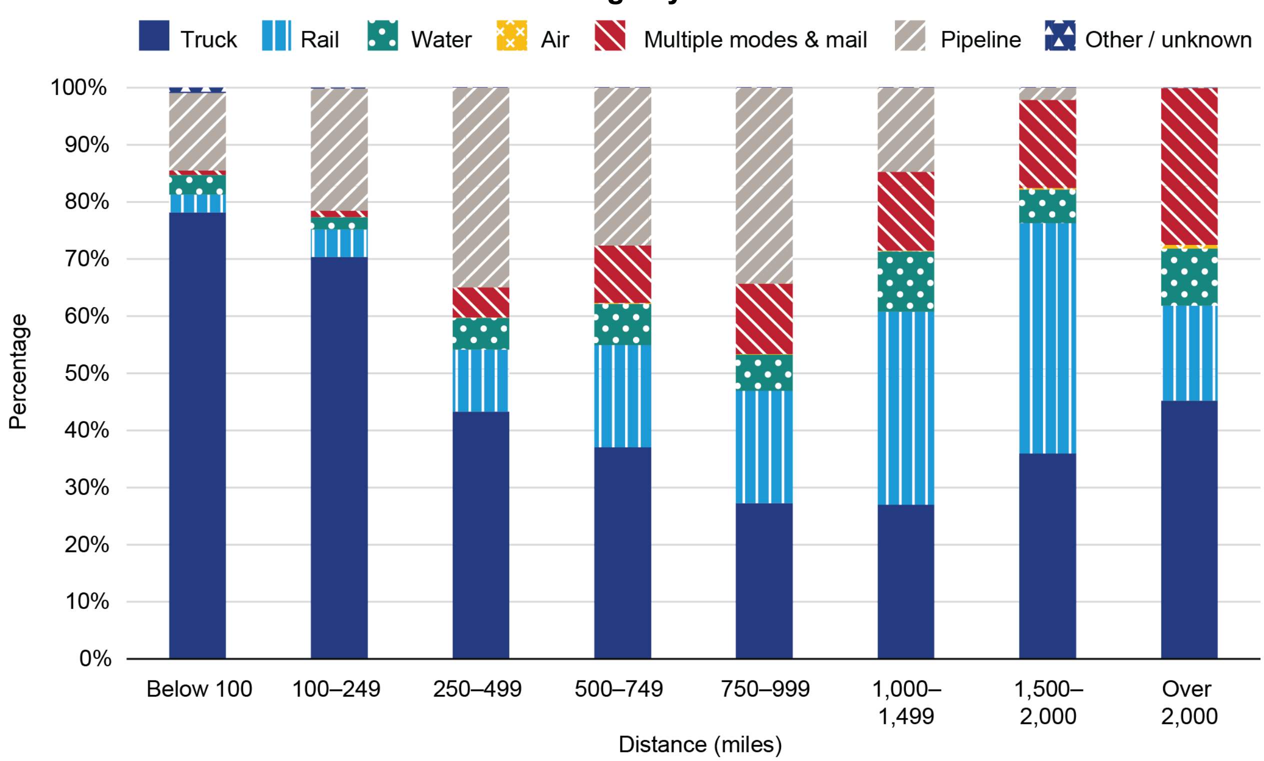
Figure 25. Tonnage by Distance Traveled: 2024

A. Total by Distance



Source: BTS, data from BTS, FHWA 2025.

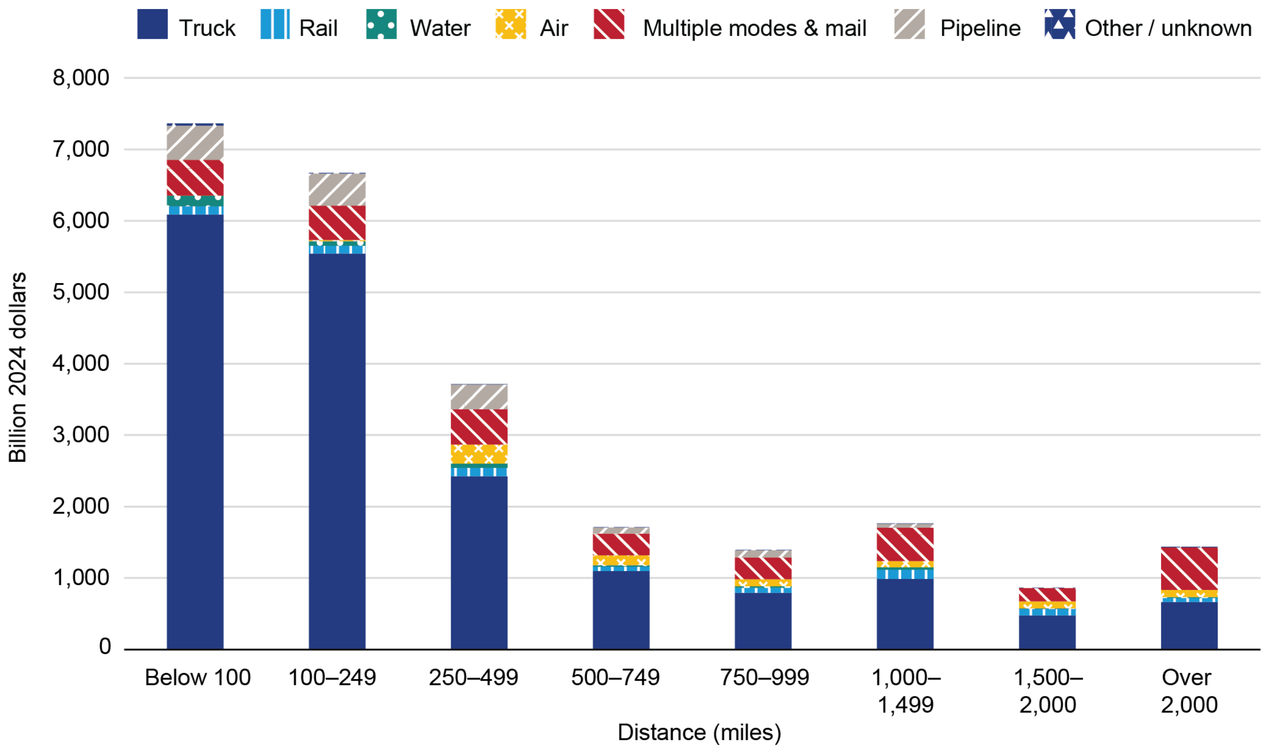
B. Percentage by Distance



Source: BTS, data from BTS, FHWA 2025.

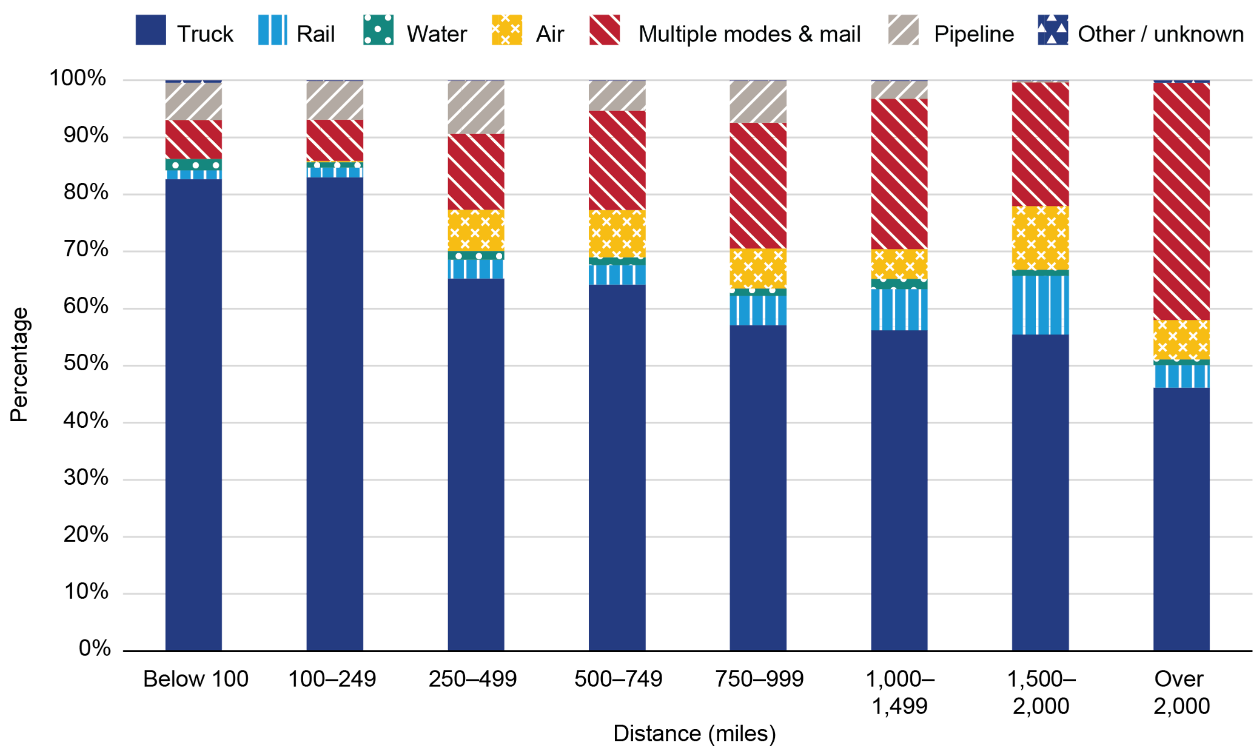
Figure 26. Value by Distance Traveled: 2024

A. Total by Distance



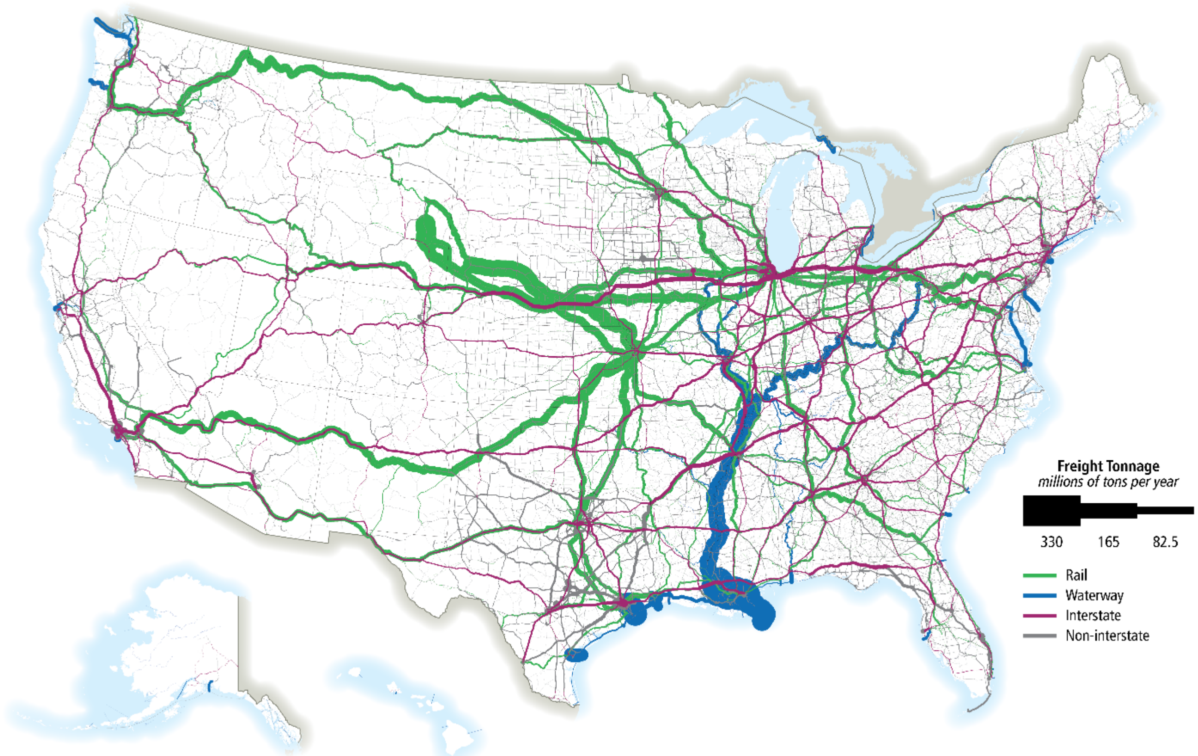
Source: BTS, data from BTS, FHWA 2025.

B. Percentage by Distance



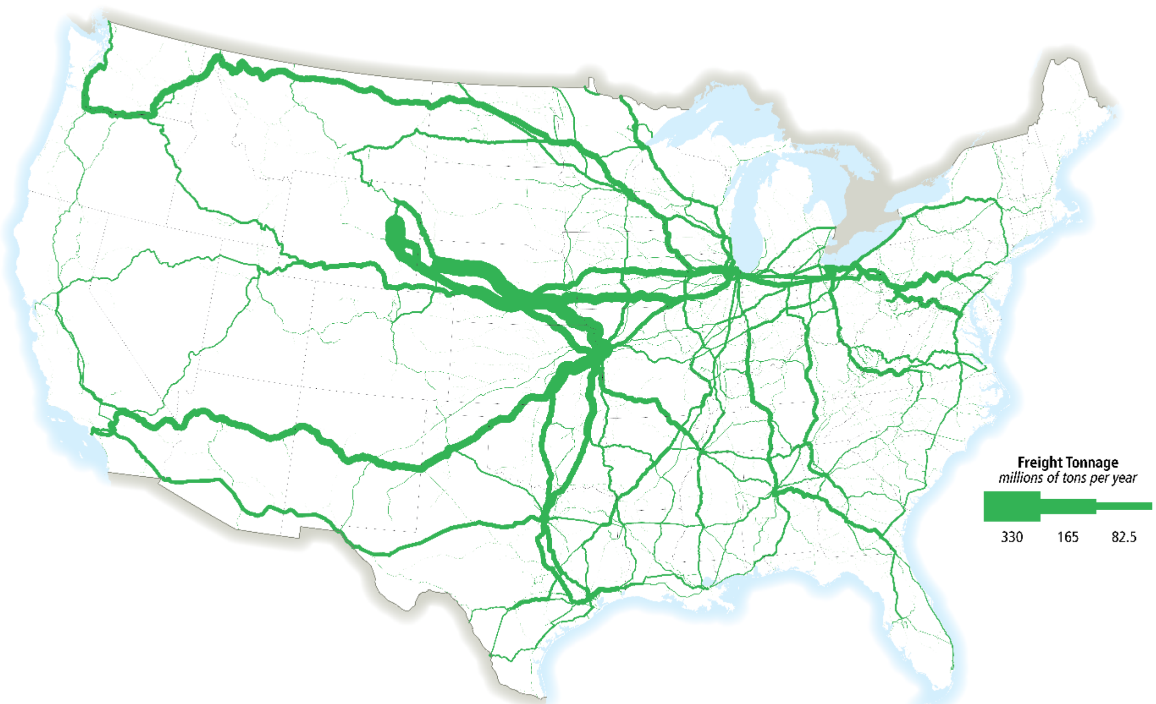
Source: BTS, data from BTS, FHWA 2025.

Figure 27. Tonnage Over the Freight Network



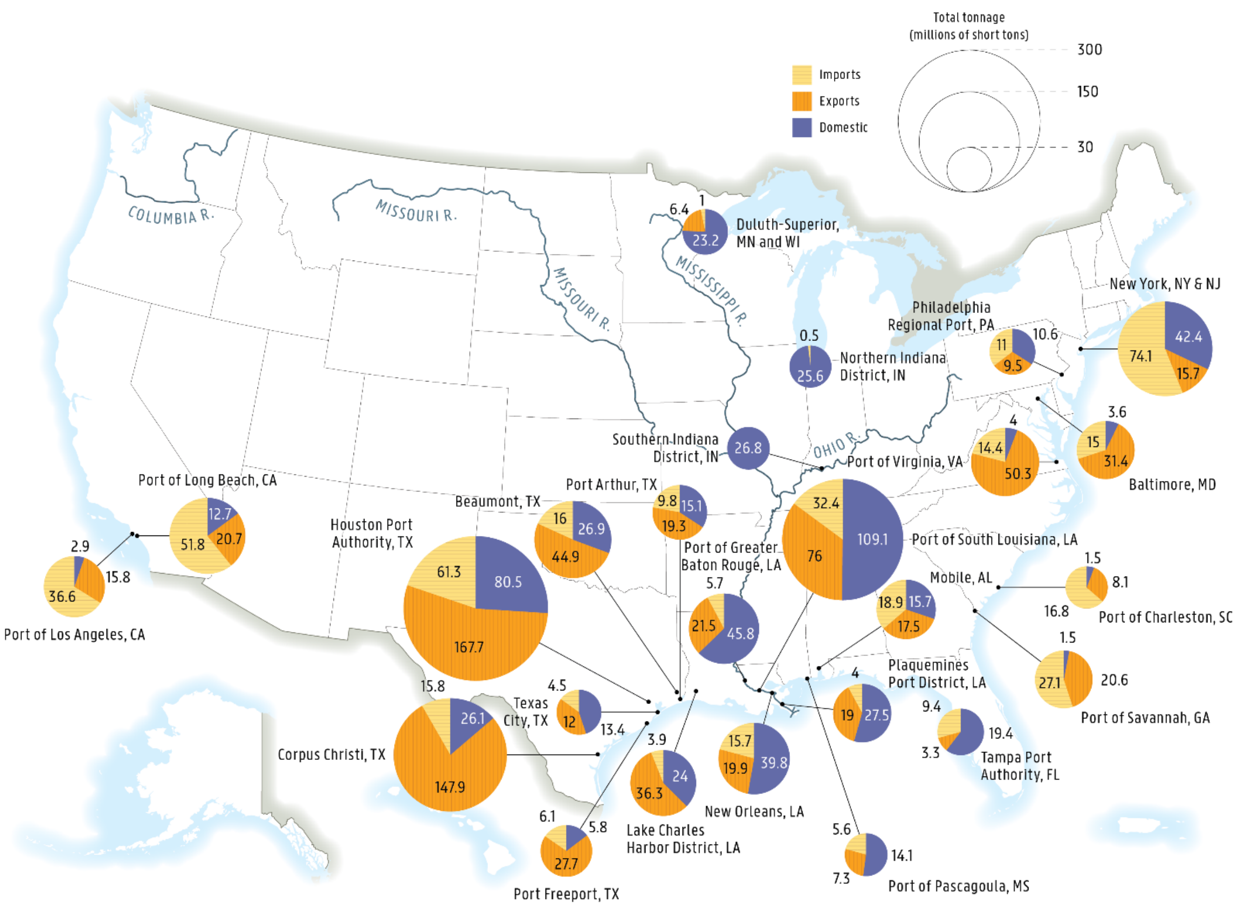
Source: BTS 2024, data from FRA 2019.

Figure 28. Freight Tonnage by Rail



Source: BTS 2024, data from FRA 2019.

Figure 29. Tonnage by Port (Water)



Source: BTS, 2025, data from USACE 2023.

3.2. FREIGHT BY COMMODITY

The differences in transporting high-value, high-velocity goods and bulk goods become apparent in the following tables and graphs on freight movement by commodity. The top 10 commodities by weight in

Table 15 include energy products, grain, and gravel. The top 10 commodities by value are dominated by manufactured goods. Figure 30 shows the tonnage of the top 10 commodities by weight carried by each transportation mode, and Figure 31 shows the ton-miles of the top 10 commodities by weight carried by each transportation mode. These figures show that the heavier commodities carried by trucking move shorter distances and create fewer ton-miles. Figure 32 shows the value carried by each transportation mode for the top 10 commodities by value. Trucking is a major element in moving most of the top 10 commodities by value, except for liquid and gases that move by pipeline.

Table 15. Top 10 Commodities by Weight and Share: 2024

Commodities by weight	Thousands of tons
Natural gas and other fossil products	3,081,943
Gravel	1,961,488
Gasoline	1,459,974
Cereal grains	1,326,135
Crude petroleum	1,219,860
Nonmetal mineral products	1,153,381
Fuel oils	975,731
Other agricultural products	741,892
Waste/scrap	722,852
Natural sands	694,230
Total, Top 10	13,337,486
Total of all commodities	20,011,503
Top 10 share of total	66.6%

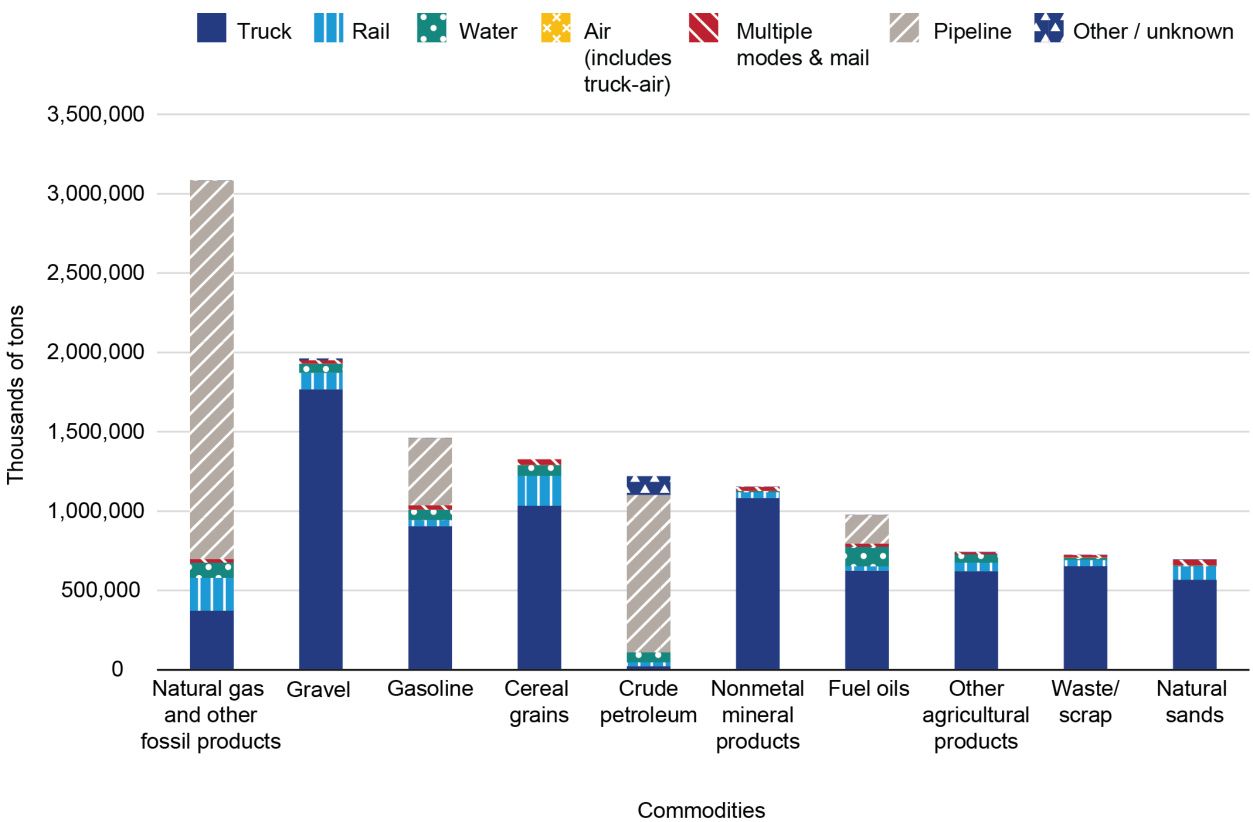
Source: Data from BTS, FHWA 2025.

Table 16. Top 10 Commodities by Value and Share: 2024

Commodities by value	Millions of 2024 dollars
Electronics	2,330,443
Mixed freight	2,048,025
Pharmaceuticals	1,915,526
Motorized vehicles	1,879,480
Machinery	1,564,366
Gasoline	1,084,985
Miscellaneous manufacturing products	1,069,926
Plastics/rubber	1,054,099
Other foodstuffs	963,751
Natural gas and other fossil products	905,977
Total, Top 10	14,816,578
Total of all commodities	20,011,503
Top 10 share of total	74.0%

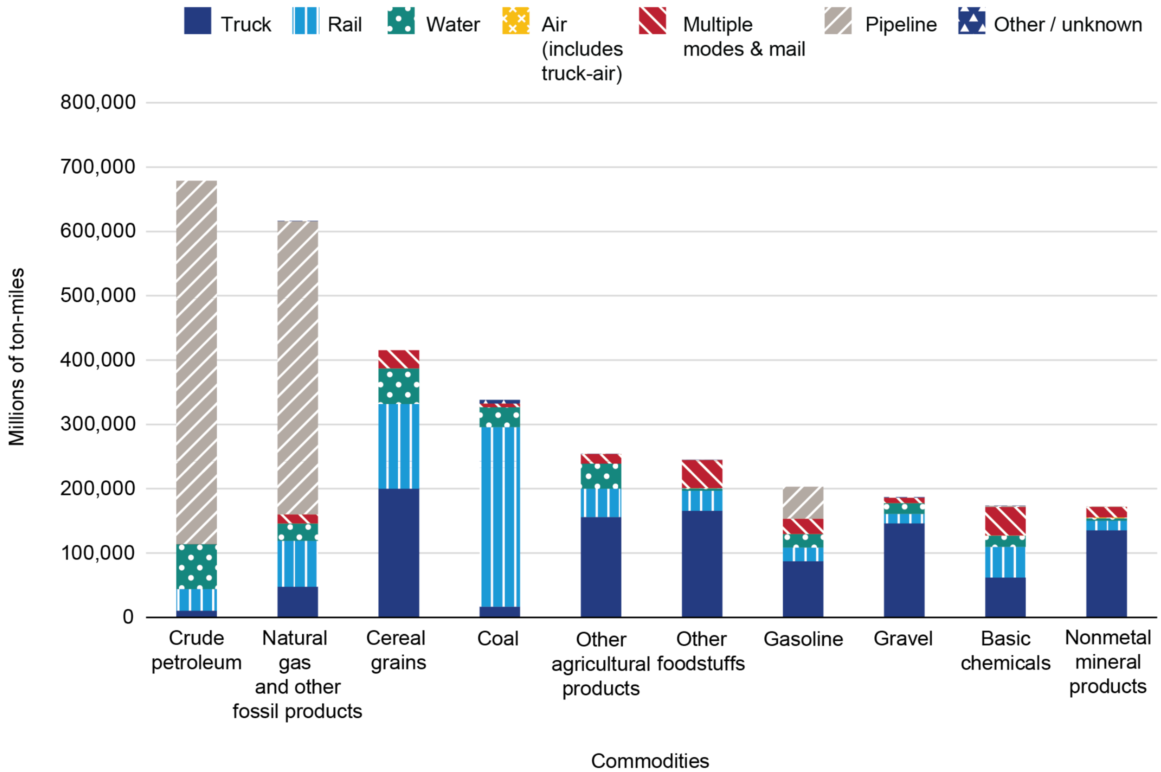
Source: Data from BTS, FHWA 2025.

Figure 30. Transportation Mode by Tonnage of the Top 10 Commodities by Weight: 2024



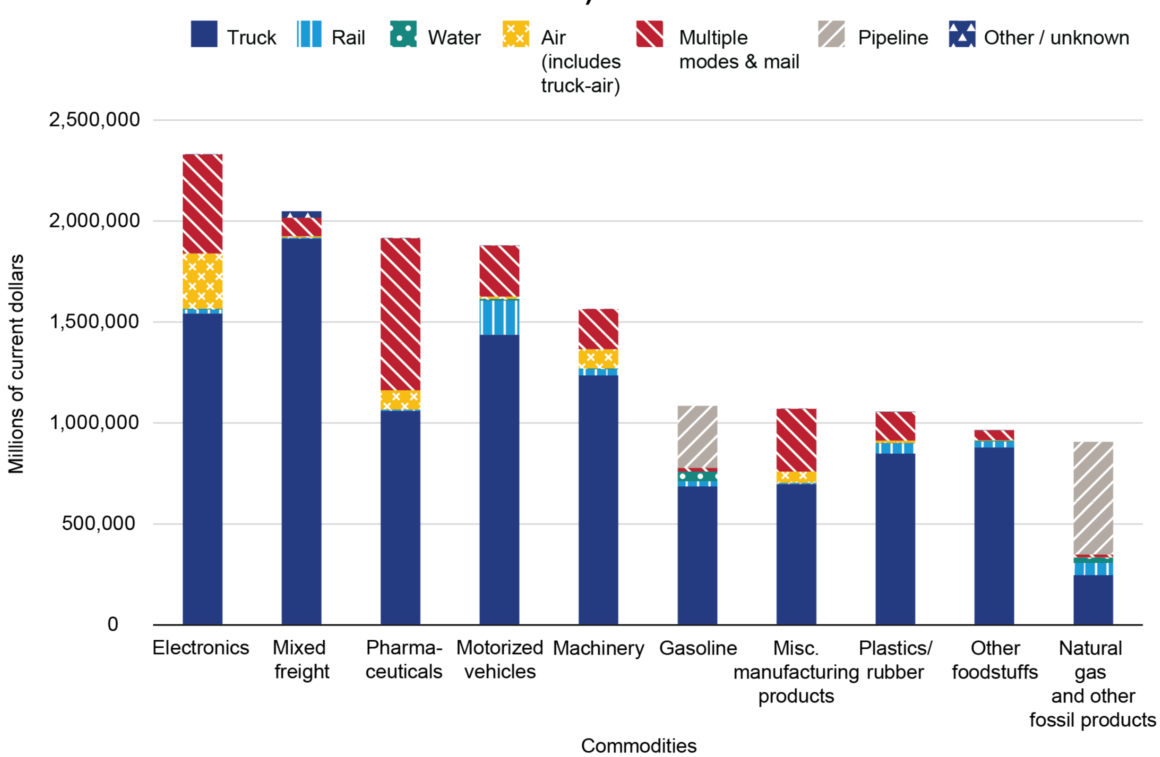
Source: BTS, data from BTS, FHWA 2025.

Figure 31. Transportation Mode by Ton-Miles of the Top 10 Commodities by Weight: 2024



Source: BTS, data from BTS, FHWA 2025.

Figure 32. Transportation Mode by Value of the Top 10 Commodities (Millions of Dollars): 2024



Source: BTS, data from BTS, FHWA 2025.

3.3. INTERNATIONAL FREIGHT

While international freight accounts for only 11.8 percent of the tonnage and 20.7 percent of the value of total shipments to, from, and within the United States, imports and exports are key elements of many supply chains and generate domestic shipments as imports are repackaged or transformed into goods for domestic movements. Table 17 provides a breakdown of U.S. international freight flows by geography and transportation mode in terms of freight value. Vessel transport dominates trade with Asia, with the value of goods moved by vessels amounting to $1.13 trillion in 2024. Vessel freight flows serving the United States–Asia trades represent 52.4 percent of all vessel freight flows between the United States and global markets. Vessel transport represents 60.6 percent of the value of freight flows between the United States and Asia.

Air transport shows a 27.4 percent share of all modes serving U.S. international trade. This value contrasts sharply with air transport's share of 34.6 percent for the United States–Asia trade. The total value of United States–Asia air freight reached $728.3 million in 2024, underscoring the ongoing importance of air transport for time-sensitive and high-value goods, even as maritime transport gains a larger share of the market.

Trade with Europe has a more balanced distribution between air and vessel transport. The value of goods transported by air reached $631.0 billion in 2024, while vessel transport accounted for $554.9 billion the same year. This balance underscores the competitive dynamics between air and maritime transport in United States–Europe trade, with air transport holding a slight edge in market share.

Trade with Canada and Mexico, the United States' largest trading partners by land, continues to be dominated by truck transport, which carried $422.8 billion worth of goods to Canada and $609.0 billion to Mexico in 2024. Rail and pipeline modes also play significant roles, particularly in trade with Canada, where they accounted for a combined $205.7 billion in freight value. These modes are essential for the movement of bulk commodities and energy products, which are key components of trade with Canada.

Table 18 provides a breakdown of U.S. international freight flows by geography and transportation mode in terms of tonnage. The total tonnage of U.S. international freight reached approximately 1.2 billion tons in 2024. This value represents the physical volume of goods moved across various transportation modes between the United States and its trading partners. Although tonnage provides an alternative metric to value for understanding trade, certain modes, such as pipelines and vessels, transport much heavier cargo compared to others, like air transport. This weight disparity reflects the composition of goods moved internationally, where merchandise goods and bulk commodities, such as petroleum and agricultural products often dominate.

Table 17. Value of U.S.–International Freight Flows by Geography and Transportation Mode: 2024 (Millions of Dollars)

Geography	Mode					Total
	Truck	Rail	Pipeline	Air	Vessel	
Total	1,031,807	203,093	106,604	1,589,195	2,287,434	5,397,800
Canada	422,798	104,842	100,862	34,615	38,367	701,484
Mexico	609,009	98,251	5,742	21,531	81,730	816,263
Asia	NA	NA	NA	728,258	1,134,781	1,954,973
Europe	NA	NA	NA	631,038	554,864	1,273,635
Other	NA	NA	NA	173,752	477,693	651,445

NA = not applicable.
Note: Mode represents the means by which freight arrived to or departed from the United States. Therefore, truck, rail, and pipeline are the only modes available for the United States' freight flows with Canada and Mexico.
Source: Data from BTS 2025 and Census 2025.

Table 18. Weight of U.S.–International Freight Flows by Geography and Transportation Mode (Thousands of Short Tons): 2024

Geography	Mode					Total
	Truck	Rail	Pipeline	Air	Vessel	
Total	126,699	101,694	205,087	4,187	764,478	1,202,144
Canada	63,994	81,644	204,933	102	44,116	394,790
Mexico	62,704	20,049	153	62	48,009	130,978
Asia	NA	NA	NA	1,874	304,744	306,618
Europe	NA	NA	NA	1,395	178,623	180,018
Other	NA	NA	NA	755	188,985	189,740

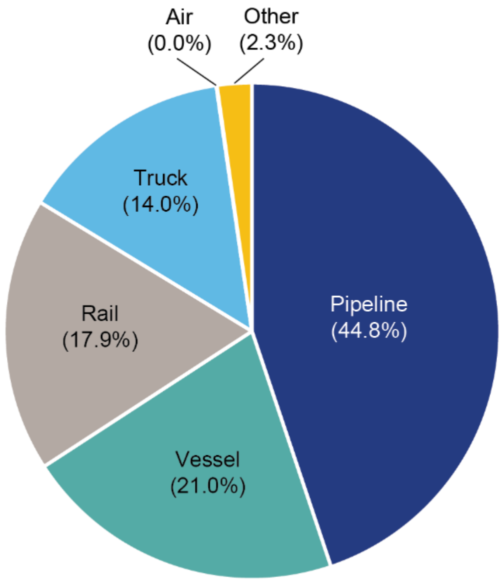
NA = not applicable.
Note: Mode represents the means by which freight arrived at or departed from the United States. Therefore, truck, rail, and pipeline are the only modes available for the United States' freight flows with Canada and Mexico.
Source: Data from BTS 2025 and Census 2025.

Vessel transport dominates the United States–Asia trade, with 304.7 million tons of goods moved by vessels in 2024. This share of tonnage is the largest among all regions and modes, reflecting Asia's extensive involvement in the United States' imports and exports. Similarly, vessel transport between the United States and Europe accounted for 178.6 million tons, emphasizing the continued importance of maritime transport for transatlantic trade.

Air transport, while moving smaller volumes of tonnage compared to other modes, still plays a leading role in the movement of high-value, time-sensitive goods. In 2024, air freight transported 1.9 million tons between the United States and Asia and 1.4 million tons between the United States and Europe. Although these figures are relatively small, they underscore the significance of air freight for the transport of goods, such as electronics and pharmaceuticals.

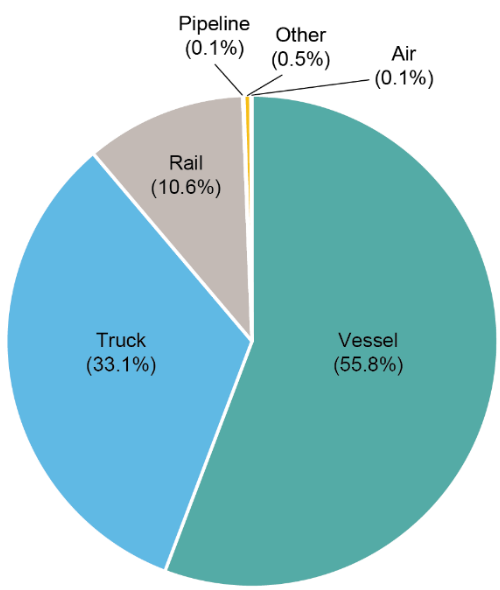
Within North America, land-based modes, particularly trucks, rail, and pipelines, play a dominant role in the United States' trade with Canada and Mexico. In 2024, truck transport accounted for 64.0 million tons and 62.7 million tons of freight to Canada and Mexico, respectively. Additionally, pipelines moved significant volumes, particularly in United States–Canada trade, for which 204.9 million tons of goods were transported by this mode, largely reflecting energy product flows. Mexico, by contrast, saw the movement of just 153,447 tons via pipeline, with most goods transported by truck and vessel. These modal shares are shown in Figure 33 and Figure 34.

Figure 33. Modal Shares of the United States' Trade With Canada: 2024



Note: "Other" includes imports into free trade zones, mail, and unknown. Total may not add to 100 due to rounding.
Source: BTS, data from BTS 2025.

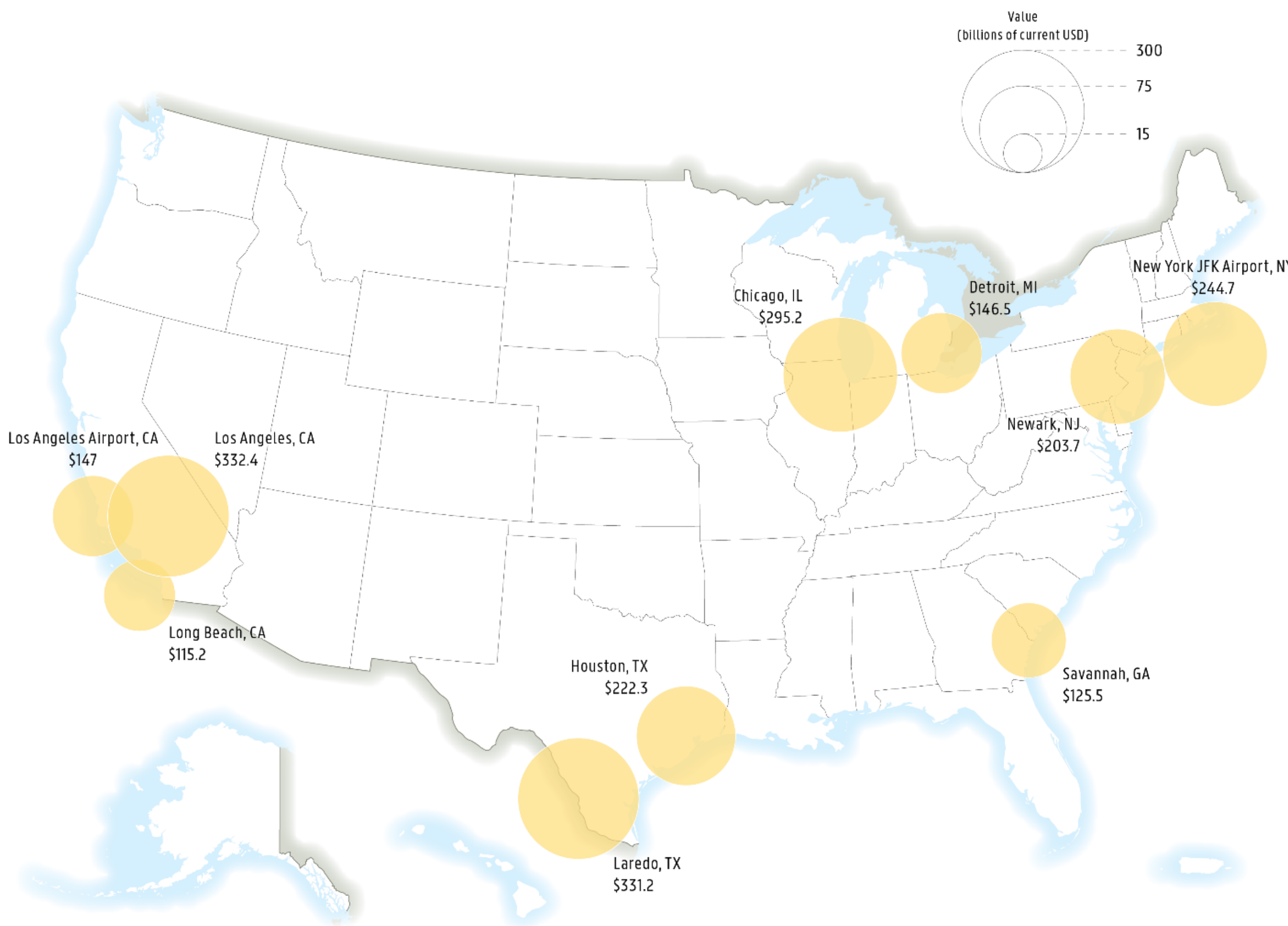
Figure 34. Modal Shares of the United States' Trade With Mexico: 2024



Note: "Other" includes imports into free trade zones, mail, and unknown. Total may not add to 100 due to rounding.
Source: BTS, data from BTS 2025.

Figure 35 highlights the prominence of the Nation's top 10 multimodal freight gateways in 2024. Los Angeles, CA, emerged as the leading gateway, processing a substantial $332.4 billion in combined export and import freight value. The second-ranked gateway was Laredo, TX, with $331.2 billion of cross-border freight. This value reflects the significant land freight volumes between the United States and Mexico. The Chicago area intermodal gateway processed $295.2 billion of freight, solidifying its role as a major rail and air cargo hub. The fourth and fifth largest gateways are the John F Kennedy International Airport (JFK) in New York, at $244.7 billion, and Houston, TX, at $222.3 billion, underscoring the vital importance of air cargo and Gulf Coast maritime ports to U.S. international trade. The overall concentration of value among these top five gateways demonstrates their critical contribution to the national trade flow. The difference in processed value between the top-ranked Los Angeles gateway and the fifth-ranked Houston gateway is approximately $110 billion, illustrating the variance in scale even among the Nation's busiest transportation hubs. Furthermore, the inclusion of gateways focused on different modes, such as land (Laredo), air (JFK), and maritime and intermodal (Los Angeles, Houston and Chicago), demonstrates the diversified infrastructure supporting U.S. freight movement.

Figure 35. Top 10 U.S. International Multimodal Freight Gateways by Freight Value: 2024



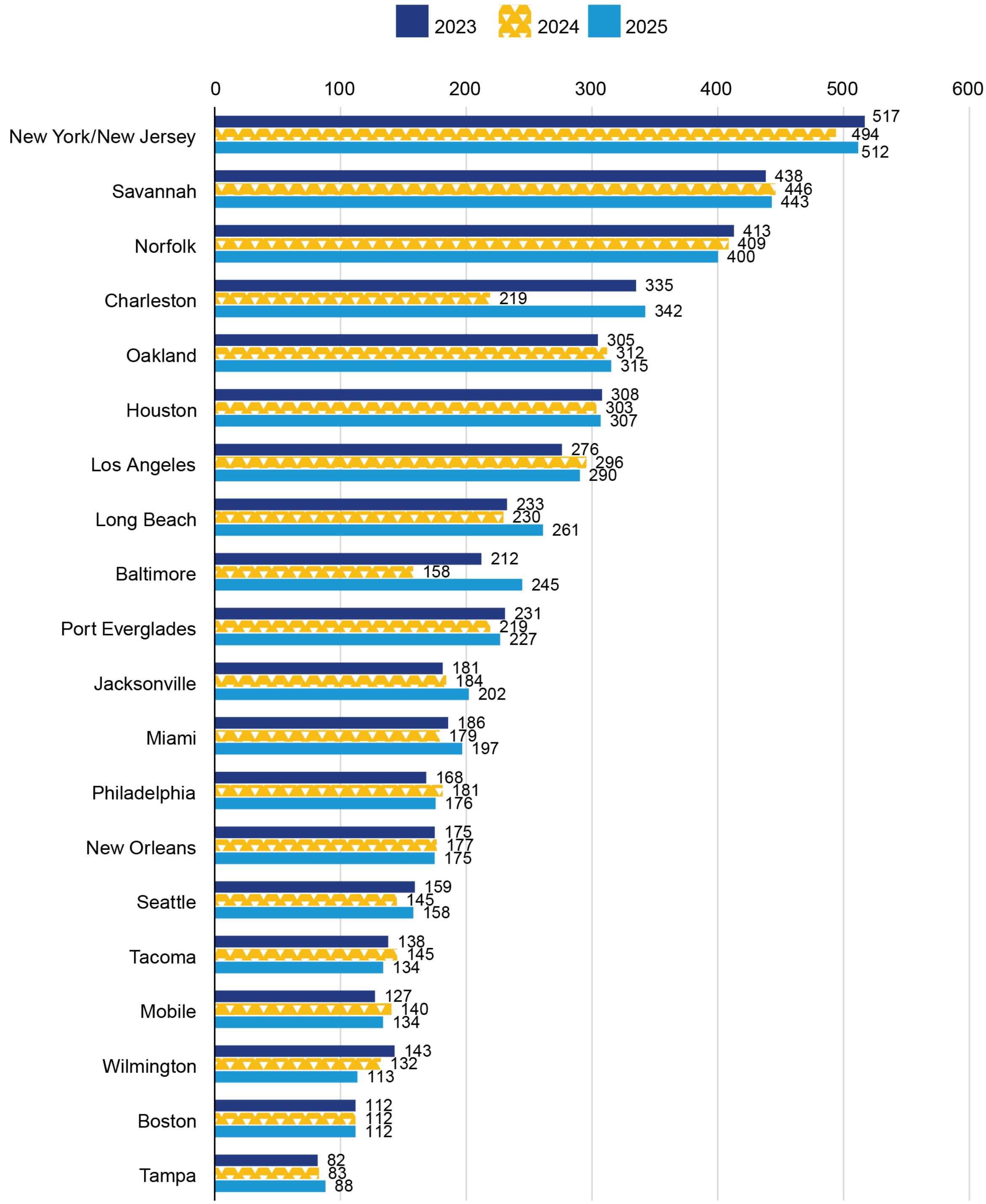
Source: BTS, data from Census BTS 2024 (land), and Census 2024 (water).

The United Nations Conference on Trade and Development's liner shipping connectivity index (LSCI), developed in 2004, is a critical gauge for assessing the connectivity of global shipping networks among countries and ports. High scores on this index indicate superior connectivity, offering ports competitive advantages in providing diverse and efficient shipping options.

In 2025, as shown in the latest LSCI data in Figure 36, the Port of New York/New Jersey (PNY) continued to lead with the highest connectivity score among U.S. ports, marking an increase to 512 from 494 in 2024. This progression underscores its robust integration into global shipping networks and its pivotal role in managing an expanding share of containerized imports.

Following New York/New Jersey, the Ports of Charleston and Baltimore also exhibited growth in their LSCI scores, reflecting connectivity enhancements. Charleston's score increased to 342 from 219, and Baltimore's score improved to 245 from 158. These gains demonstrate ongoing developments in their service offerings that bolster their positions in the shipping industry. However, other East Coast ports, like Savannah and Norfolk, displayed a decline in their connectivity scores, although they remained in second and third place, respectively, from 2024 to 2025 for U.S. ports.

Figure 36. U.S. Top 20 LSCI Ports: 2023–2025



Source: BTS, data from UN trade & development 2025.

Significant ports on the U.S. West Coast displayed an increase in their connectivity scores. The Ports of Oakland, Long Beach, and Seattle made gains. In contrast, the Port of Los Angeles decreased by 6 points.

In the Gulf Coast, Houston's score increased to 307 from 303 in 2024. It remains a critical node due to its strategic enhancements and capacity to handle neo-Panamax vessels, reflecting broader efforts to adapt to new shipping routes and improve intermodal connections.

Overall, the 2025 LSCI data illustrate the highest connectivity at East Coast ports. This trend suggests these ports are critical hubs in the global supply chain.

3.4. FREIGHT TRANSPORTATION PERFORMANCE

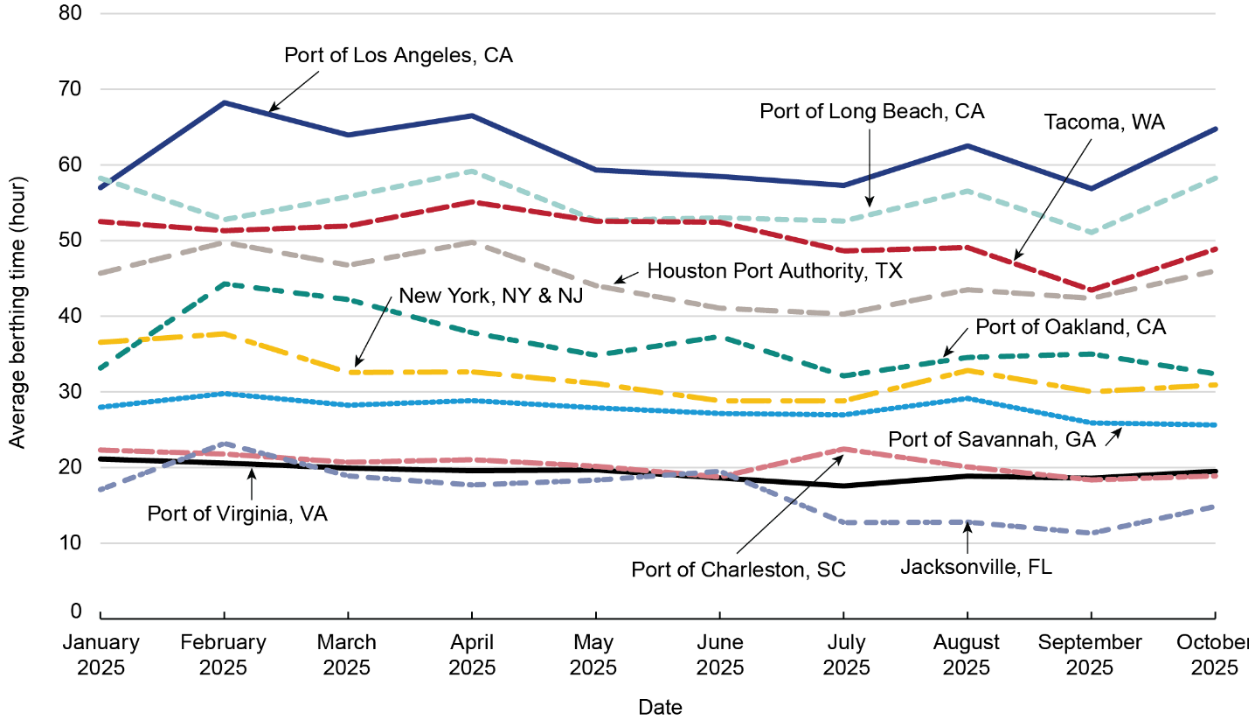
The United States' freight transportation infrastructure is an intricate network consisting of multiple nodes and links, each susceptible to becoming choke points that may hinder overall system efficiency. The COVID-19 pandemic underscored the vulnerability of these supply chain choke points. Monitoring the flow of marine containers through this network offers a clear lens on supply chain efficiency. This flow involves several stages, including transit via ships, trucks, trains, and barges, and passes through critical points, such as marine terminals, customs, border posts, free zones, and distribution centers. In port areas, the movement is particularly complex as container ships maneuver from the entrance buoy to the berths, where containers are handled, stored, and processed. Recent disruptions have significantly strained these components of the network, with some critical areas being monitored by the Bureau of Transportation Statistics (BTS), which employs various indicators to measure freight performance.

3.4.1. Container Port Berthing Time

In the realm of port operations, a suite of performance indicators is important for assessing the efficiency of marine terminal operations. One such critical metric is container vessel berthing time, which is calculated using Automatic Identification System (AIS) data. This system identifies, tracks, and records the speed, direction, and location of vessels, pinpointing which port a vessel is calling at. BTS utilizes AIS data to monitor the time vessels spend at the berth—known as container-vessel dwell time.

Containership berthing time was estimated for the top 10 ports by loaded twenty-foot equivalent units (TEUs) for January 2025–October 2025. As shown in Figure 37, the average monthly time at berth varied by port and was highest at West Coast ports. Multiple ports had highs in February, April, and August, although these months did not have the highest TEUs. Thus, other factors must have contributed to the increased berthing times. Looking at the 10 months of data for each port, the port with the highest standard deviation of berthing time is the Port of Los Angeles at 33 hours. The Port of Virginia had the lowest berthing time standard deviation at 8 hours.

Figure 37. Average Container Vessel Berthing Times for the Top 10 U.S. Container Ports: January–October 2025



Note: Vessel calls of less than 4 hours or more than 120 hours were excluded as representing calls either too short for significant cargo handling or too long for normal operations.
Source: BTS, data from BTS 2025

3.4.2. Vessel Size, Efficiency, and Productivity

The relationship between the size of container vessels and operational efficiency at ports is illustrated by historical data from the Ports of Los Angeles and Long Beach. Between 2005 and 2024, these ports demonstrated significant trends in vessel size categories and the corresponding average container throughput per call, as depicted in Figure 38. During this period, the total number of ship calls decreased, from 2,811 in 2005 to 1,828 in 2024, indicating a trend toward fewer but larger-capacity vessel visits. Concurrently, the average container volume per ship call significantly increased, more than doubling from 5,050 TEUs per call in 2005 to 10,912 TEUs per call in 2024. This trend reflects a shift in operational strategies toward accommodating larger vessels capable of carrying more containers.

Notably, the composition of vessel sizes calling at these ports evolved dramatically. In 2005, most vessels fell into smaller size categories (1,000–5,000 TEUs), but by 2024, much larger vessels had a significant presence (10,000–14,000 TEUs and 15,000 or more TEUs). Even from 2023 to 2024, the number of greater than 15,000 TEU vessels increased from 45 to 69.

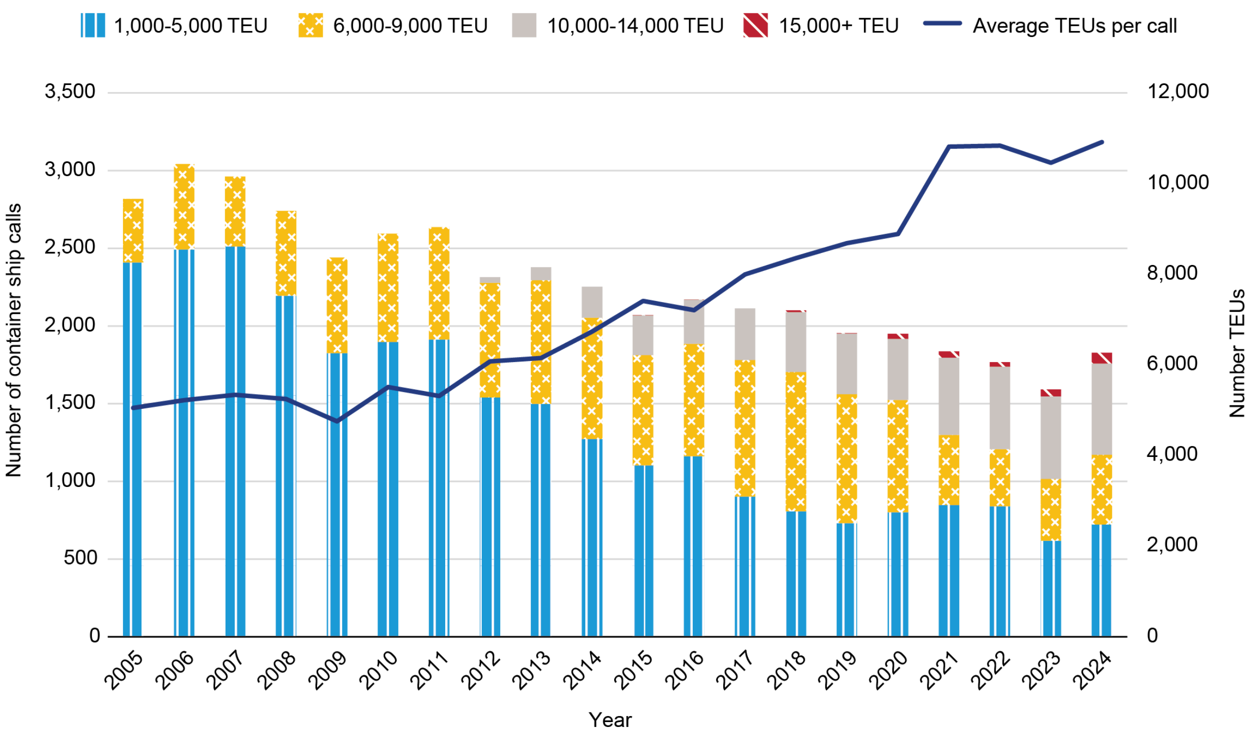
This shift toward larger vessels has facilitated increased efficiency in port operations as larger vessels mean more cargo moved per operation, reducing the relative cost and time per TEU handled.

Box 2: Tanker Vessel Calls at U.S. Ports

A net exporter via vessels of crude oil in 2024, exporting 208 million short tons, the United States also imported 150 million short tons of crude oil via vessels. By value, 67 percent of crude oil was transported via vessels, compared to other modes.

In 2024, crude oil was imported and exported via vessel at 34 U.S. seaports. These ports included 9 on the East Coast (30.3 million short tons), 14 on the Gulf Coast (274.8 million short tons), 10 on the West Coast (52 million short tons), and one in Alaska (1.1 million short tons). The top three ports were Corpus Christi, TX; Houston, TX; and Long Beach, CA [Census 2025]. In 2025, the number of tankers anchoring at U.S. ports and the amount of time each tanker remains anchored have changed. The data cited in this spotlight can also be used to track other types of shipping that are important to supply chains. The Port Performance Freight Statistics Program will continue to monitor vessel activity to provide an overview of port throughput and capacity.

Figure 38. Vessel Size and Call Trends, and Average Container Throughput per Call at Ports of Los Angeles and Long Beach: 2005–2024



Source: BTS, data from Port of Los Angeles 2025 and Port of Long Beach 2025 (vessel call data and size category) and Port of Los Angeles 2025 and Port of Long Beach 2025 (TEU volume data).

3.4.3. Top 25 U.S. Container Ports

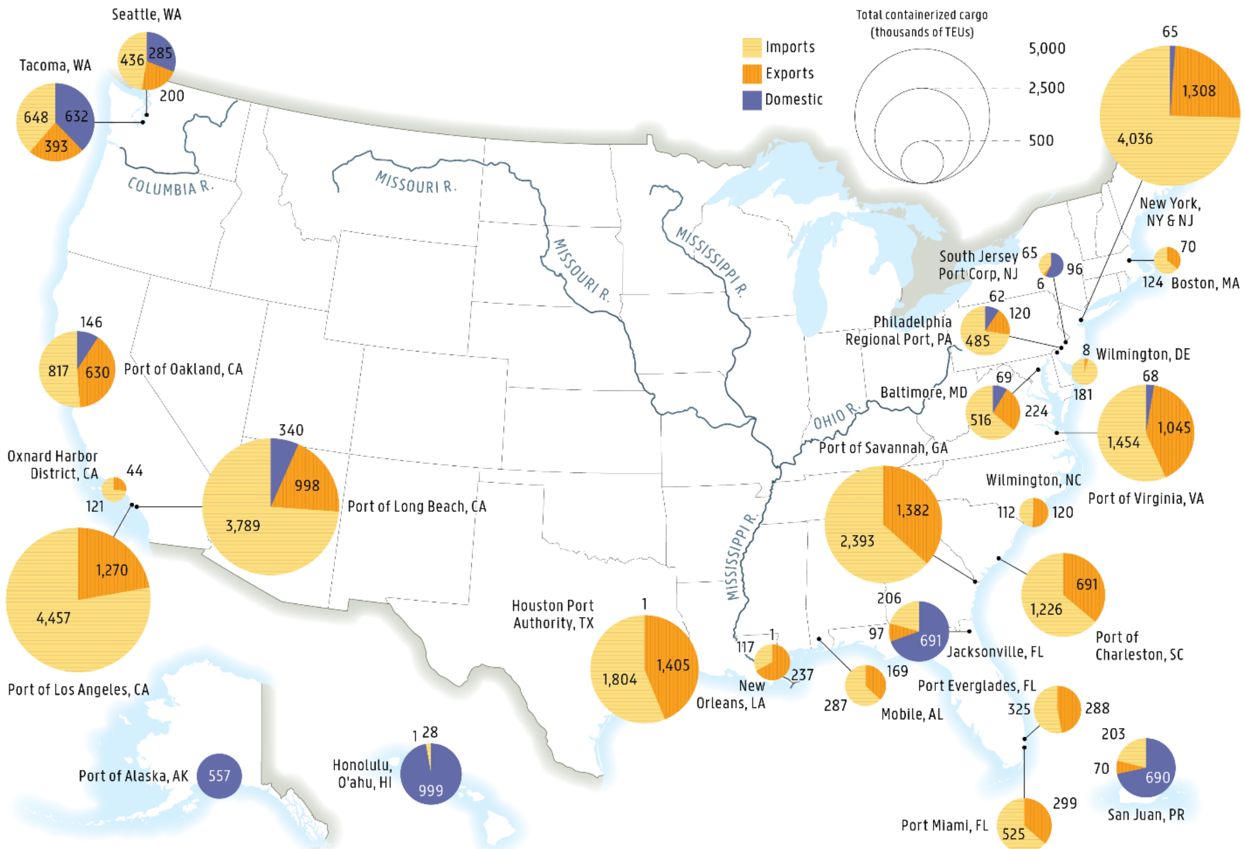
Figure 39 shows the top 25 U.S. container ports ranked by TEUs for 2023, highlighting the leading positions of the Port of Los Angeles, the Port Authority of New York and New Jersey, and the Port of Long Beach. These ports are pivotal in importing goods, and the volume of imports emphasize their strategic role in global shipping. The Port of Los Angeles, for instance, handled over 4.4 million TEUs in imports, closely followed by the Port Authority of New York and New Jersey and the Port of Long Beach, showing a significant focus on accommodating large-scale international trade.

Additionally, the Port of Savannah and the Port of Houston have emerged as significant players, with Savannah processing over 3.7 million TEUs and Houston more than 3.2 million TEUs while showcasing a strong balance between imports and exports. Ports like Alaska, Honolulu, San Juan, Seattle, Tacoma, and Jacksonville highlight substantial portions of domestic TEUs, pointing to their strategic roles in facilitating regional trade and distribution networks within the United States. The Port of New Orleans stands out for a unique trade balance, handling more exports than imports, which might indicate a specialized market focus.

The increasing prominence of U.S. East Coast ports, largely driven by Asian and European cargoes, reflects a strategic diversification of entry points into the United States, providing shippers with broader options to directly reach high-density population centers. Enhanced capabilities of the Suez Canal and infrastructural improvements at East Coast ports have made these routes more competitive, raising their attractiveness to cargo owners relative to West Coast ports for certain routes. This shift not only shortens overall shipping times but also reduces inland transportation costs and complexities, offering a compelling economic incentive for shippers. The increasing use of East Coast ports, thus, reflects not just logistical efficiencies but also strategic risk management and economic optimization by shippers looking to capitalize on closer proximity to major U.S. markets and better distribution networks.

Other ports, such as the Ports of Virginia, and Charleston, are also noteworthy for their substantial import and export activities, suggesting past and ongoing developments, such as larger container cranes, new trans loaders facilities, with investments aimed at expanding their roles in global shipping networks are paying off.

Figure 39. Top 25 U.S. Container Ports by TEU: 2023



Source: BTS, data from USACE.

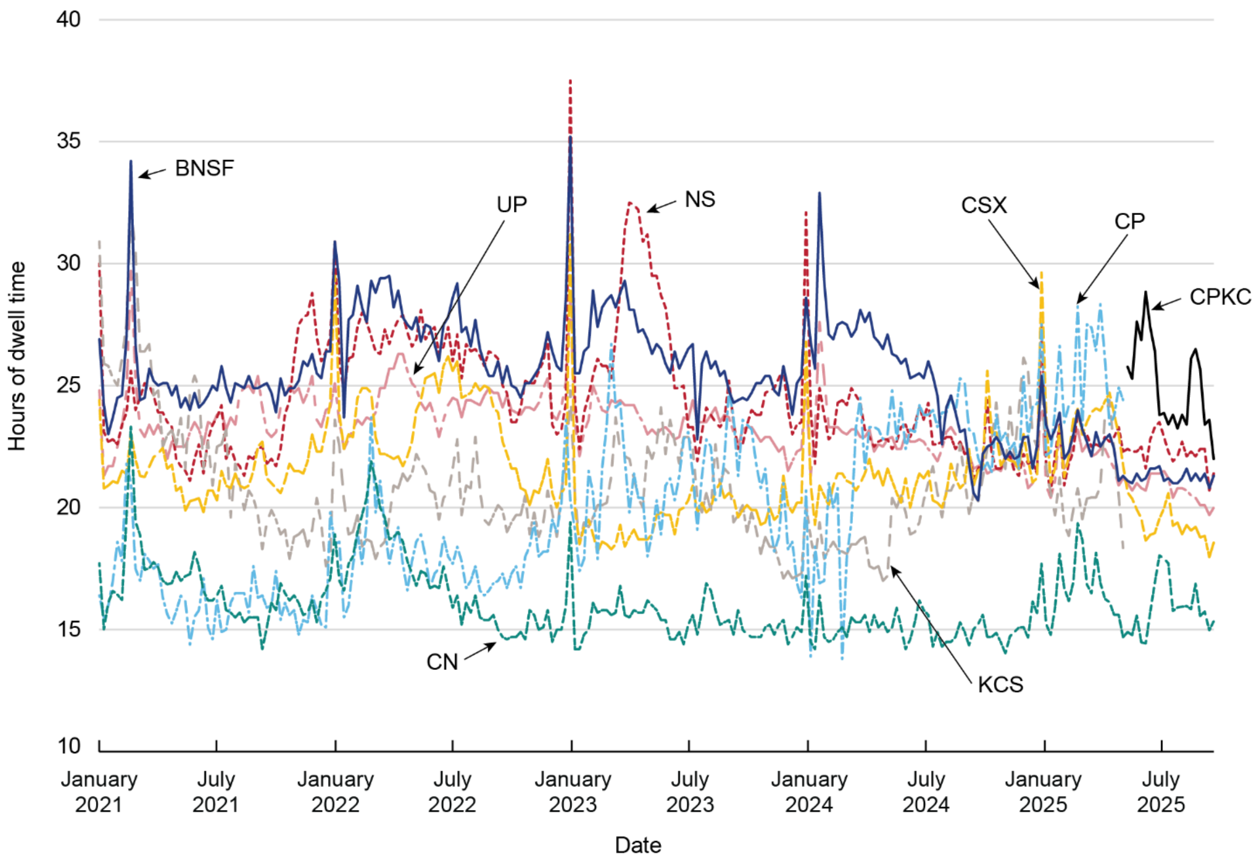
3.4.4. Rail and Truck Performance

Dwell time, an essential performance metric, indicates the average duration a freight car remains within a rail terminal's boundaries. This measure starts with the train's arrival, customer release, or interchange receipt and concludes with its departure, the customer receiving the car, or its transfer to another railway. The average rail terminal dwell time for all railroads in 2023 was 21.7 hours, an increase of 0.7 hours from 2022 [TSAR 2024].

Throughout Figure 40, the data communicate that the rail operators demonstrated varying trends in dwell times. Notably, Norfolk Southern (NS), Burlington Northern and Santa Fe Railway (BNSF), and Chessie System and Seaboard Coast Line Railroad (CSX) experienced peak dwell times around the end of December 2022, with recorded times of 37.5, 35.2, and 31.2 hours, respectively. Other significant observations include the Kansas City Southern Railway Company (KCS), Union Pacific (UP), and Canadian National Railway (CN) marking their highest dwell times in February 2021, with KCS reaching 32.1 hours, UP peaking at 29.7 hours, and CN at 23.3 hours. Canadian Pacific (CP) recorded its highest dwell time in March 2023 at 26.7 hours, while UP noted a significant dwell time of 29.7 hours in February 2021.

The data also show a general trend of increased dwell times across most rail operators during the first quarter of each year, potentially reflecting seasonal operational challenges. However, in 2024, a slight decrease in dwell times occurred, suggesting improvements in handling efficiency or changes in operational strategies to mitigate delays.

Figure 40. Average Rail Terminal Dwell Time in Hours: January 2, 2021–September 20, 2025



Source: BTS, data from BTS 2025.

Table 19 details the average system-wide annual dwell times for major U.S. railroad systems from 2020 to 2023, capturing shifts in the performance metrics across different regional rail networks.

Across the western railroads, BNSF and UP showed a general stability in dwell times, with minor fluctuations. BNSF recorded a slight decrease from 27.2 hours in 2022 to 26.2 hours in 2023, indicating an improvement in terminal operations. UP also demonstrated a reduction in dwell time from 24.4 hours in 2022 to 23.4 hours in 2023, reflecting an improvement in their operations.

Table 19. Average Railroad System-Wide Annual Dwell Time (Hours): 2021–2024

Location	Railroad system	Average dwell times (hours)			
		2021	2022	2023	2024
Western railroads	BNSF	25.2	27.2	26.2	25.0
	UP	23.7	24.4	23.4	22.6
Central railroads	CP	16.5	18.2	20.9	22.4
	CN	16.7	16.9	15.3	15.1
	KCS	22.5	20.3	20.4	20.4
Eastern railroads	CSX	21.5	23.4	19.7	21.5
	NS	23.8	26.4	25.7	23.0

Source: Data from BTS 2025.

The central railroads presented a mixed response, with CP showing a significant increase in dwell times, rising from 18.2 hours in 2022 to 20.9 hours in 2023, which could indicate operational challenges or increased freight volumes. Conversely, CN saw a decrease in dwell time in 2023, improving to 15.3 hours from 16.9 hours in 2022. KCS maintained relatively stable dwell times of around 20 hours over the years.

Eastern railroads experienced more substantial variations, with both CSX and NS reporting decreases in dwell times in 2023 compared to the previous year. CSX improved from 23.4 hours in 2022 to 19.7 hours in 2023, and NS decreased from 26.4 hours in 2022 to 25.7 hours in 2023.

Table 20 reveals the progression of average truck speeds within 5 miles of two significant U.S. ports, highlighting variations that suggest differences in congestion levels and operational efficiencies. Over the 5 years of 2020–2024, the Port of Los Angeles/Long Beach (PLA) consistently exhibited higher average speeds compared to the PNY, pointing to smoother traffic flows, less traffic congestion, and potentially more efficient cargo handling operations at PLA.

From 2020 to 2024, both ports displayed a trend of generally increasing truck speeds, with a peak sometimes occurring in the second quarter each year, possibly reflecting seasonal adjustments in port operations and cargo handling. However, the data for 2023 show a noticeable dip in average speeds for PNY in all quarters, ending the year with an average speed of 18.95 mph, which is lower than its 5-year average. This reduction may indicate rising congestion or operational challenges that have emerged over the year, partly as a result of the shift of Asian-related container trades to the U.S. East Coast from the U.S. West Coast.

Conversely, PLA not only maintained but slightly increased its average speeds across the years, culminating in a higher average of 20.96 mph in 2023. This consistent performance underscores ongoing improvements and possibly better traffic management strategies at PLA compared to PNY. The quarter-by-quarter analysis further supports this conclusion, showing PLA with a stable or increasing trend in speeds, particularly in the third and fourth quarters, reflecting effective responses to operational demands.

Table 20. Average Truck Speeds in PLA and PNY: 2020–2024

Port	Year	Average speed by quarter (mph) 1st	2nd	3rd	4th	Average annual speed (mph)
PLA	2020	19.61	20.43	19.88	20.07	20.00
	2021	20.87	20.65	20.28	20.38	20.55
	2022	20.59	20.73	21.03	20.87	20.81
	2023	20.83	20.97	21.13	20.90	20.96
	2024	20.73	20.90	19.97	20.20	20.45
	2020–2024 average speed by quarter	20.27	20.48	20.34	20.27	20.34
PNY	2020	18.59	20.31	19.42	19.17	19.37
	2021	19.99	19.96	19.74	19.33	19.75
	2022	19.90	19.33	19.60	19.00	19.46
	2023	19.70	19.20	18.67	18.23	18.95
	2024	18.70	18.50	18.63	18.10	18.48
	2020–2024 average speed by quarter	19.37	19.46	19.21	18.77	19.20

Source: Data from BTS 2025.

3.5. COSTS OF MOVING FREIGHT

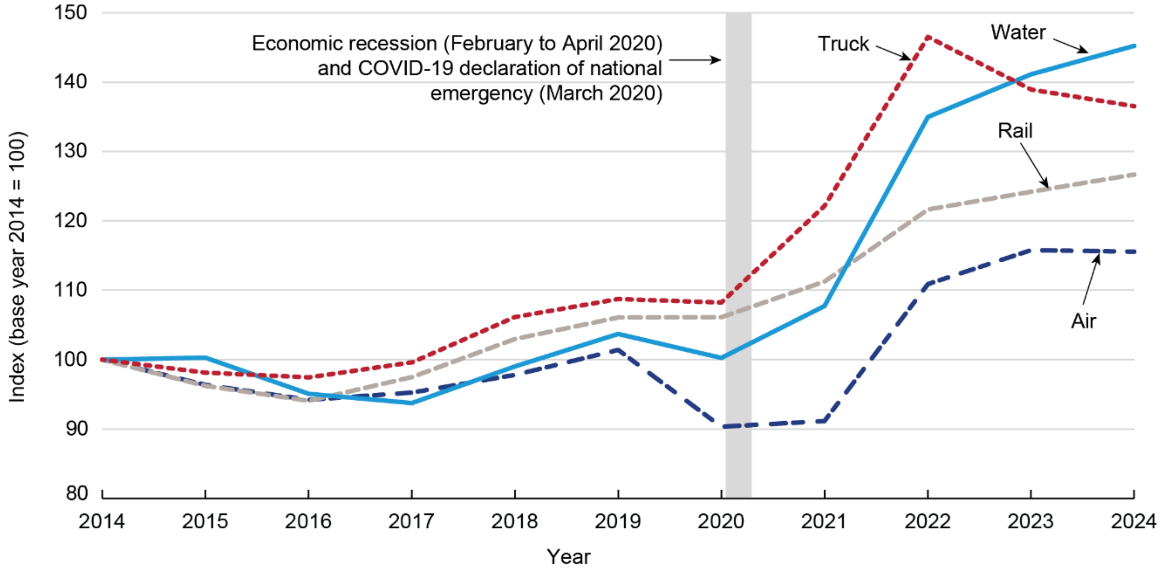
Fuel, labor, and shipping rates, among other factors, affect the prices for-hire transportation providers charge for their services. The Producer Price Index (PPI) measures the average change, over time, in the amount producers receive for their output [BLS 2025]. The amount producers received for selling their transportation services (e.g., airfares) is an indicator of the prices faced by households and businesses purchasing transportation services (e.g., airfare and shipping rates). In 2022, the costs for air, rail, truck, and water transportation services reached their all-time highest levels, suggesting an increase in the costs businesses face for providing these transportation services. Water transportation service saw the largest year-over-year price increase (25.3 percent) from 2021 to 2022, followed by air (21.6 percent), truck transportation (20.0 percent), and rail (9.3 percent) (Figure 41). When faced by higher prices for labor, businesses may raise the prices they charge consumers for goods and services when they face higher prices for purchased transportation services.

In 2022, transportation providers faced increasing fuel and transportation equipment costs, and as a result, producers saw price increases for transportation services. As external factors influencing those price increases, such as supply chain issues and COVID-19, have subsided, prices have declined in 2023 across multiple modes.

Truck spot rates experienced a significant surge from mid-2020—recovering from a decline during the March–May 2020 economic recession—through early 2022. This upward trend corresponded with rising diesel fuel prices, which peaked in June 2022 (Figure 42). Following this peak, spot rates began a steady decline from late 2021 through 2023, eventually nearing pre-pandemic levels. By October 2025, spot rates were substantially lower compared to the same period in 2022: dry van spot rates dropped 14.9 percent, refrigerated truck spot rates fell 11.1 percent, flatbed truck spot rates were down 11.9 percent [BTS DAT].

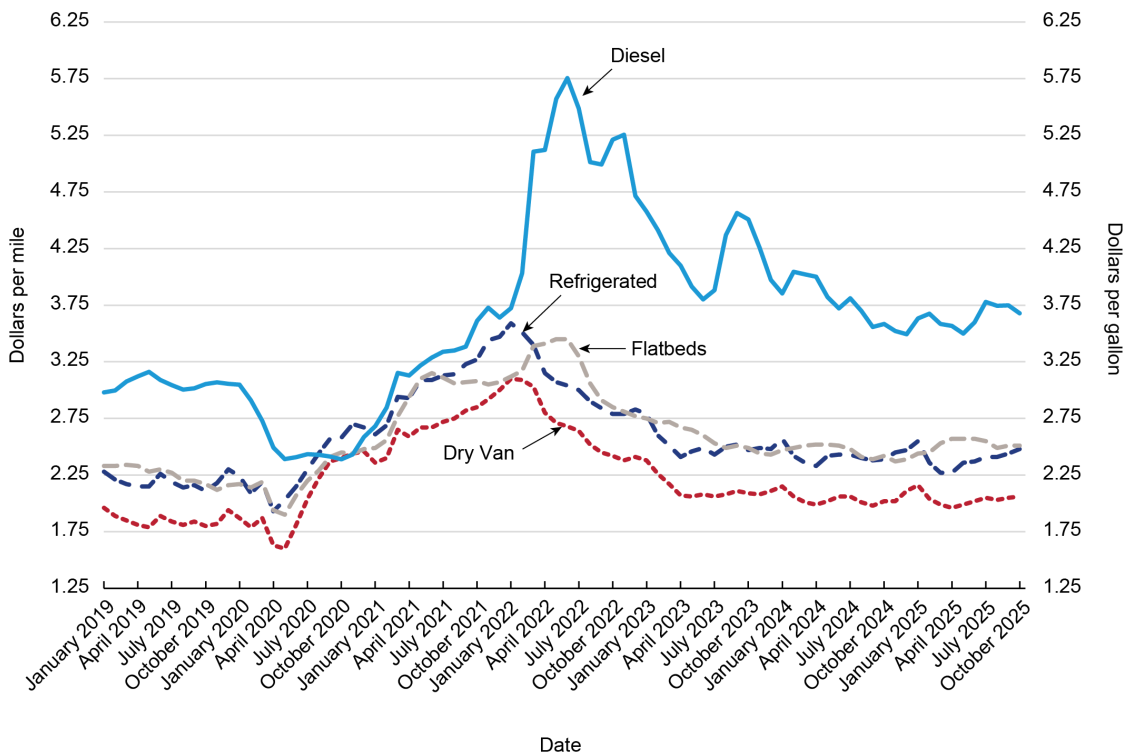
Downbound barge rates peaked in the fall of 2022, when the Mississippi River fell to record low levels (Figure 43), but have since become more stable, hovering around $20 per ton [BTS USDA].

Figure 41. PPIs for Producers of Selected Transportation and Warehousing Services: 2014–2024



Source: BTS, data from BLS 2025.

Figure 42. National Truck Spot Rates and Diesel Sale Retail Price: January 2019–October 2025

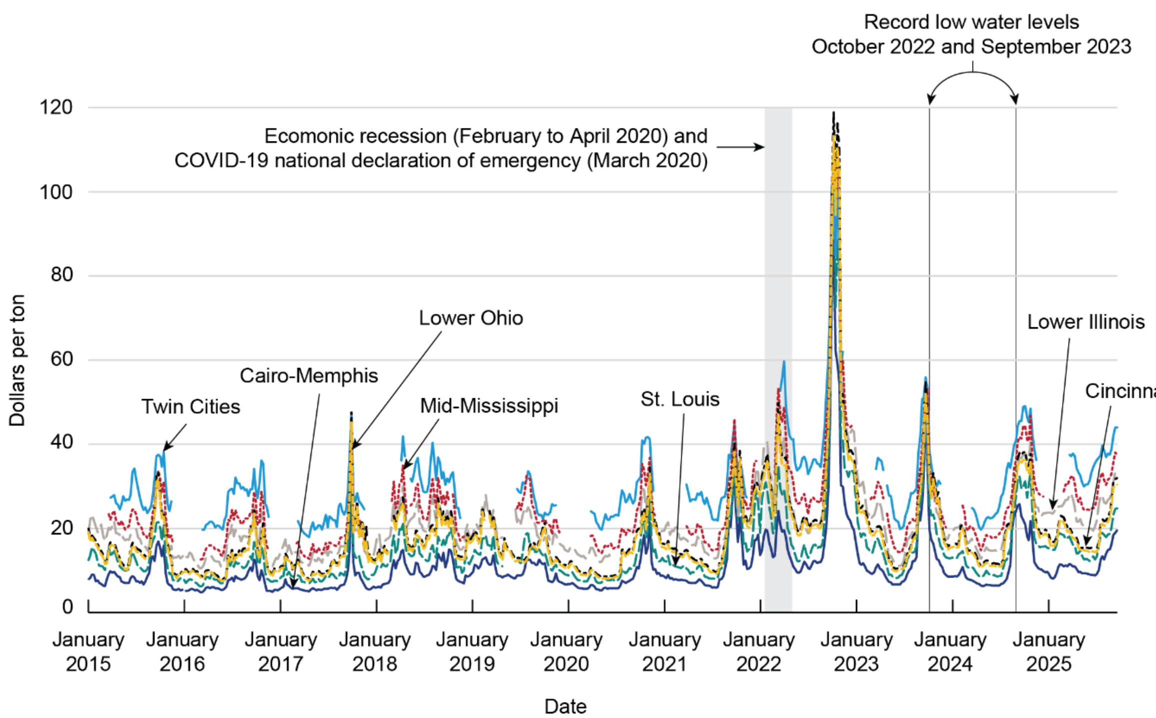


Note: The National Truck Spot rate is for national average spot market trucking loads (including fuel surcharges), which is approximately one-tenth of the overall common carrier trucking market. The data provider (DAT) is the largest clearinghouse for shipments that are not part of a pre-existing hauling contract. Dry van includes freight transported in enclosed cargo holds.
Source: BTS, data from DAT Freight Analytics 2025 (truck spot rates) and EIA 2025(diesel fuel).

Spot ocean freight rates both to and from Shanghai fell in 2023 from their 2022 levels. Freight rates from Shanghai to the United States' West Coast were down 79.3 percent in June 2023 from June 2022, and rates from the West Coast to Shanghai were down 31.2 percent from June 2022 to June 2023 (Figure 44). Declines correspond with decreased demand for imports and reduced port congestion. In June 2023, U.S. imports were 9.6 percent below June 2022 (nominal dollars). Port congestion declined, with the number of containerships awaiting berths at U.S. ports nearing the lowest numbers in August 2023 since tracking began, and the capacity of containerships at U.S. ports reaching peaks in July 2023 not seen since 2019.

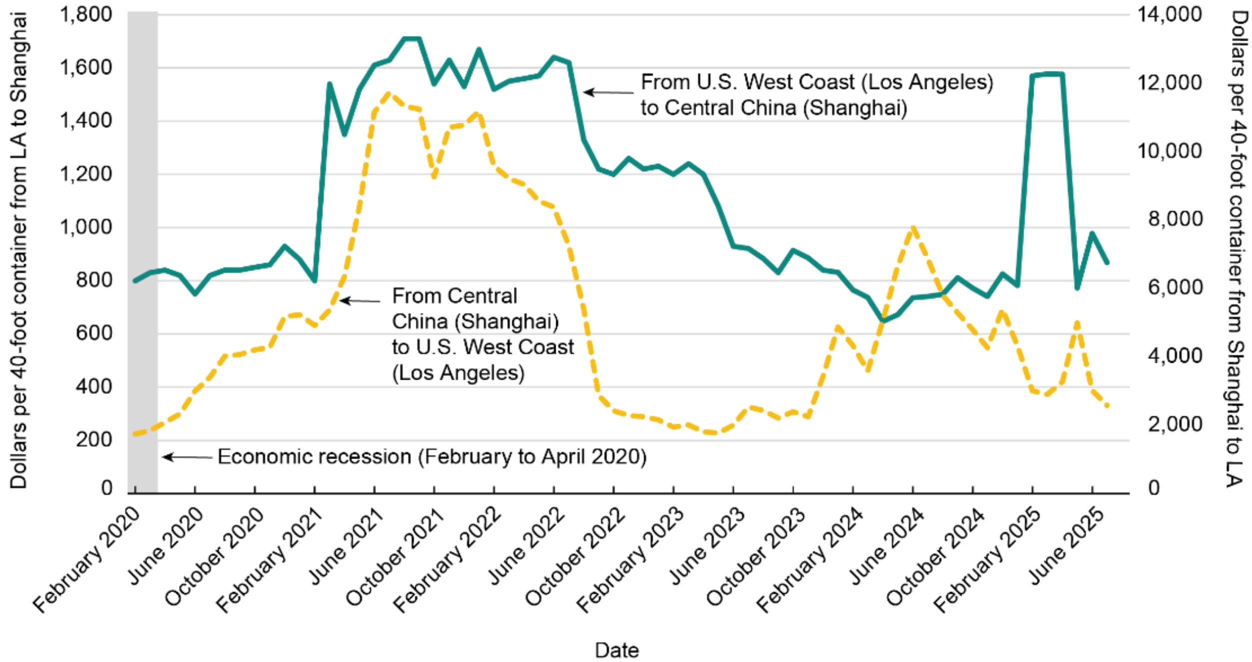
Producers, such as automotive manufacturers, purchase a variety of services to acquire raw materials, produce goods and services, and move their products to market. From August 2022 through July 2023, transportation and related services, such as freight forwarding, contributed a decreasing share to the year-over-year increase in the price for all services purchased by producers. Transportation and related services have dampened increases to overall inflation since April 2023, contributing its lowest share in July 2023 (Figure 45).

Figure 43. Downbound Grain Barge Rates (Dollars per Ton): January 2015–September 2025



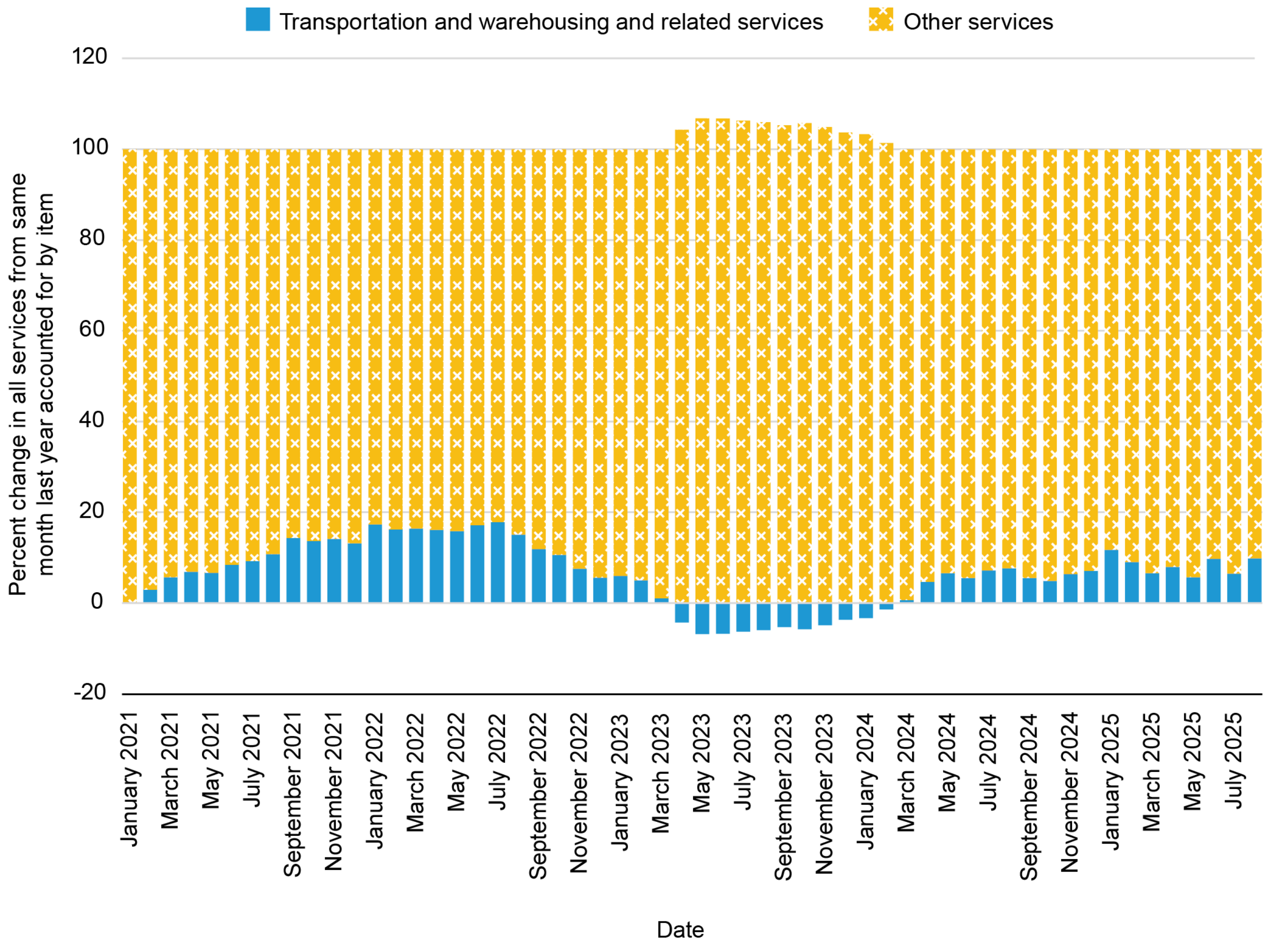
Note: Weekly barge rates are for downbound freight originating from seven locations along the Mississippi River System, which includes the Mississippi River and its tributaries (e.g., Upper Mississippi River, Illinois River, Ohio River). The seven locations are: (1) Twin Cities, a stretch along the Upper Mississippi; (2) Mid-Mississippi, a stretch between eastern Iowa and western Illinois; (3) Lower Illinois, which falls along the lower portion of the Illinois River; (4) St. Louis; (5) Cincinnati, which falls along the middle third of the Ohio River; (6) Lower Ohio, which is approximately the final third of the Ohio River; and (7) Cairo-Memphis, which stretches from Cairo, IL, to Memphis, TN. Under the percent-of-tariff system, which is used to determine barge rates, each city on the river has its own benchmark, with the northernmost cities having the highest benchmarks. From north to south, these benchmarks follow: Twin Cities = 619 percent; Mid--Mississippi = 532 percent, St. Louis = 399 percent; Illinois = 464 percent; Cincinnati = 469 percent; Lower Ohio = 446 percent; and Cairo-Memphis = 314 percent. Breaks in the lines indicate no rate record for that week at that location.
Source: BTS, data from USDA 2025.

Figure 44. Freight Rates in Dollars per 40-Foot Container for East Bound (Central China [Shanghai] to the United States' West Coast [Los Angeles, CA]) and West Bound (Los Angeles to Shanghai): February 2020–August 2025



Note: Spot ocean freight rates for a single container transaction in the selected eastbound transpacific trade routes.
Source: BTS, data from USDA 2025.

Figure 45. Contribution of Transportation and Related Services to Inflation Faced by Producers of Goods and Services: January 2021–August 2025



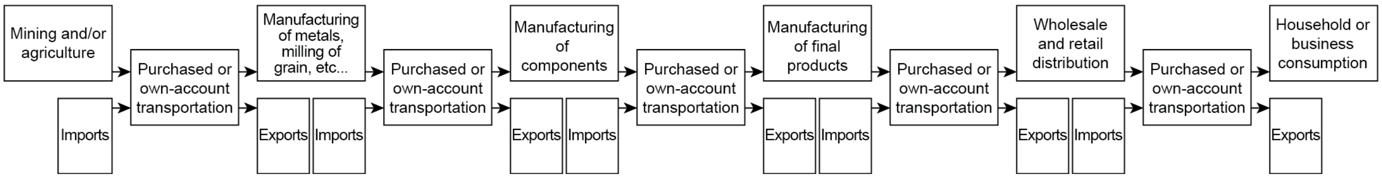
Note: These data include air transportation of freight; airline passenger services; rail transportation of freight and mail; rail transportation of passengers; truck transportation of freight; courier and messenger services (except air); U.S. postal service; arrangement of freight and cargo; marine cargo handling; operation of port waterfront terminals; airport operations (excluding aircraft maintenance and repair); towing, tugging, docking, and related services; freight forwarding; warehousing, storage, and related services purchased by industries to produce output.
Source: BTS, data from BLS 2025, PPI (Current Series), Unadjusted WPU301601, WPU301602, WPU3021, WPU3022, WPU3011, WPU3012, WPUFD42, WPU3131, WPU3132, WPU3211, WPU3111, WPU3112, WPU3113, and WPU3121.

Transportation is a key component of the Nation's supply chains, but it is only a portion of the supply chain issues that affected the United States during COVID. Many of the reported shortages were due to loss of manufacturing capacity, not the availability of transportation services to move the goods.

Figure 46 shows different views of supply chains. From a total supply chain perspective (Figure 46-A), the U.S. supply chains run from raw materials, through initial processing of raw materials, through manufacturing and assembly, through wholesale distributors, through retailers, to final consumers. Goods arrive as imports or are exported from the various steps of the process. The transportation view of supply chains (Figure 46-B) is how carriers and shipper-owned equipment move goods between locations directly or through terminals and warehousing. While supply chain issues can occur at any step in the larger picture, the transportation component is critical since it occurs between each step of the total supply chain. The movement of material multiple times in a year, such as grain moving to the mill to become flour that moves to a bakery to become bread that moves to the grocery store, explains why the value of freight that moves in a year is greater than the size of the economy measured as the value of final output.

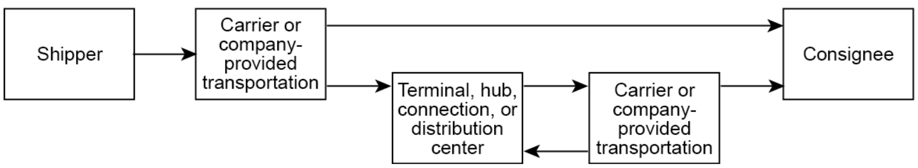
Figure 46. Perspectives on Supply Chains

A. Total Supply Chain



Source: BTS.

B. Transportation Supply Chain Within Each "Purchased or Own-Account Transportation" Box



Source: BTS.

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Chapter 4. Safety and Other Costs of Transportation

For all the benefits of transportation, the movement of people and goods has costs. Monetary costs to households and businesses are noted in preceding chapters. The safety costs of transportation in fatalities and injuries, the costs in energy consumption, and the energy costs are outlined in this chapter.

4.1. SAFETY

The number of fatalities and injuries by mode over the last 5 years are summarized in Table 21. Highways accounted for 95 percent of the fatalities, including pedestrians and pedalcyclists (people on bikes), and a higher percentage of injuries.

Historically, 9 out of 10 fatalities and injuries in air transportation involve general aviation, and over 85 percent of the fatalities and injuries in water transportation involve recreational boating.

Fatality and injury data come from many sources that take time to capture and process, so data for 2024 are limited. Railroad fatalities increased by 1.2 percent, and rail-highway grade crossing fatalities increased by 9.4 percent between 2023 and 2024. The 9-percent increase in transit use was reflected in an 8-percent increase in the number of transit fatalities, and a 20-percent increase in water transportation fatalities was driven by a 25-percent increase in fatalities involving recreational boating.

Table 21. Transportation Fatalities and Injuries by Mode: 2018, 2023, 2024

Mode	Fatalities			Injuries		
	2018	2023	2024	2018	2023	2024
Total	38,755	42,920	NA	2,727,510	2,457,134	NA
Air	396	327	NA	271	233	NA
Highway	36,835	40,901	(EE) 39,345	2,710,059	2,442,581	NA
Railroad[1]	661	846	885	7,728	6,209	5,969
Transit[2]	260	330	345	6,370	5,627	5,817
Water	682	616	NA	3,004	2,448	NA
Pipeline	7	17	13	78	36	35

[1]These values include Amtrak data. Fatalities include those resulting from train accidents, highway-rail crossing incidents, and other incidents.
[2]These values include transit employee, contract worker, passenger, revenue facility occupant, and other fatalities for all modes reported in the National Transit Database.
NA = data not available at the time of publication; EE = early estimate based on statistical projection.
Source: Data from BTS, NTS, 2025, tables 2-1 and 2-2.

Box 3: Filling a Gap in Precursor Safety Data

Title III of the Evidence Act, also known as the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) [Pub. L. 115-435], authorizes the Bureau of Transportation Statistics (BTS) and its agents to protect respondents to BTS data collections from direct or indirect identification. BTS uses this confidentiality protection in its near-miss and other precursor safety data programs to encourage voluntary reports of safety problems from employees and companies without fear of discovery and retaliation. BTS agents analyze individual reports and summarize them into statistical assessments that inform sponsoring organizations of problems while protecting the confidentiality of the respondent. The precursor safety program collects information about near-miss events, which include narrowly avoided accidents (i.e., close calls) that could have occurred but did not. With an original focus on the railroad industry, the program has been expanded to include transit, offshore energy, and maritime.

Information on near-miss and other precursor safety events is an important resource for developing preventive measures to lower the risk of more serious events; however, companies and individuals are sometimes hesitant to share potentially sensitive precursor safety information due to business and legal concerns. As a principal federal statistical agency, BTS has the authority to mitigate these concerns by administering data collection programs under CIPSEA. Under CIPSEA, BTS pledges data will be used only for statistical purposes and protected from subpoena and legal discovery. Example programs follow.

The Confidential Close Call Reporting Program (administered by BTS and enabled by BTS' authority to protect data under CIPSEA) provides employees of the Washington Metropolitan Area Transit Authority with a confidential platform to report precursor safety events voluntarily, without fear of disciplinary action. Information from the program is used to inform preventive safety actions and avoid future adverse events. The program completed its 12th year in 2025.

Safe Outer Continental Shelf (administered by BTS and sponsored by the Department of the Interior's Bureau of Safety and Environmental Enforcement) is a precursor safety event reporting program for the offshore oil and gas industry. It includes mandatory reporting of equipment failure events and voluntary reporting of near-miss and other safety events. In 2024, BTS worked with key stakeholders to successfully implement data-collection enhancements, including establishing a secure application-programming-interface connection for data transfer, to reduce respondent reporting burden.

The Safe Maritime Transportation System (administered by BTS and sponsored by the Maritime Administration) provides a trusted, proactive means for the maritime industry to report information about near-miss events, enabling early identification of potential safety issues. In 2025, BTS launched an effort to securely leverage artificial intelligence methodologies to reduce reporting burden and increase analytical value to participants.

The Crash Causal Factors Program (led by the Federal Motor Carrier Safety Administration [FMCSA]) facilitates in-depth research to better understand key factors that contribute to crashes involving large trucks and buses. FMCSA partnered with BTS to conduct forthcoming CIPSEA-protected interviews with carriers and drivers as part of the program's Heavy-Duty Truck Study. The interviews will address topics like scheduling, vehicle inspection and maintenance, driver hiring practices, driver compensation and benefits, distracted driving, truck stop and rest area availability, and others.

4.2. ENERGY AND OTHER CONSEQUENCES

Transportation accounts for a large share of energy consumption and related emissions. While the downturn in transportation activity following the arrival of COVID-19 has reduced energy use and emissions, the continuing recovery of transportation activity is accompanied by a rebound in air pollution and GHG emissions.

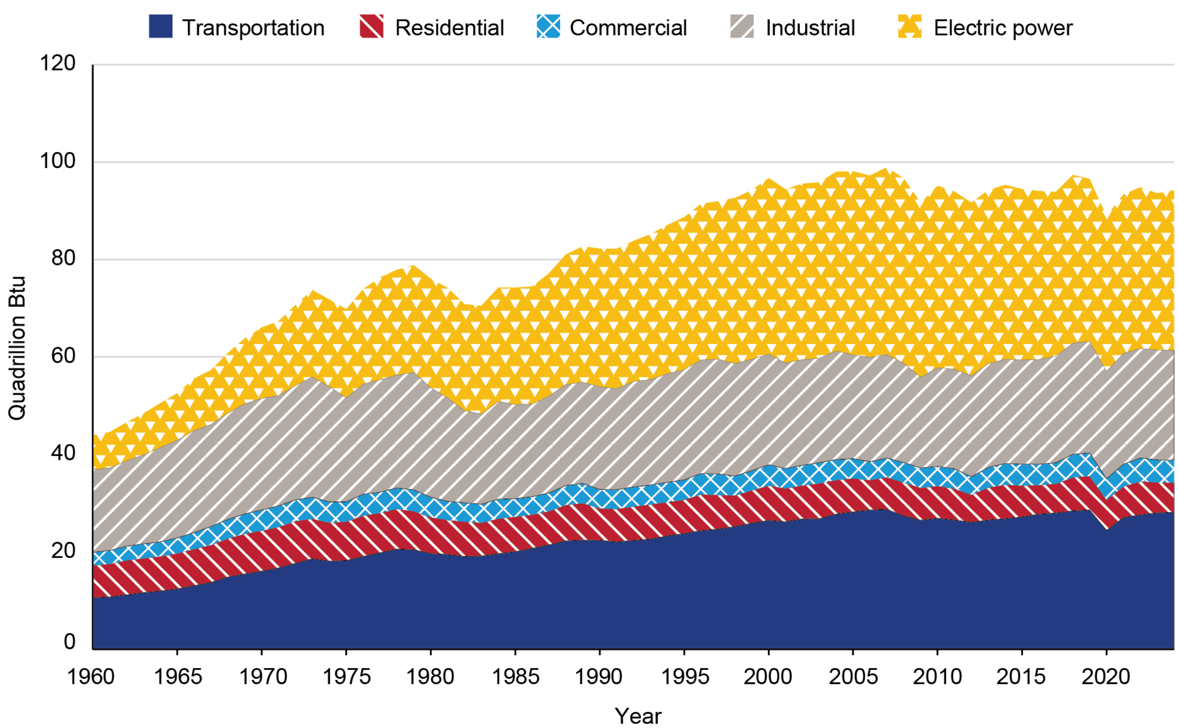
Transportation has exceeded annual commercial and residential uses of energy for the last 7 decades and has been surpassed only by industrial uses (Figure 47 and Figure 48). While the decline in energy use following COVID-19 was far greater in transportation than in the other sectors, transportation remained above residential consumption in months excluding the winter heating seasons.

As of May 2025, total transportation energy consumption was not back to pre-pandemic levels, but the traditional seasonal pattern of increases in the spring and summer and declines in the fall and winter had resumed (Figure 48). Total transportation energy consumption in the first 6 months of 2020 was 18 percent below the first 6 months of 2019. Total transportation energy consumption in the first 6 months of 2025 recovered some of the 2020 declines, reaching 91 percent of the 2019 level.

Petroleum remains the dominant source of energy consumed by transportation, dwarfing both natural gas and renewable energy (Figure 49). Total energy consumption in transportation is typically lowest in February and highest in August (Figure 50).

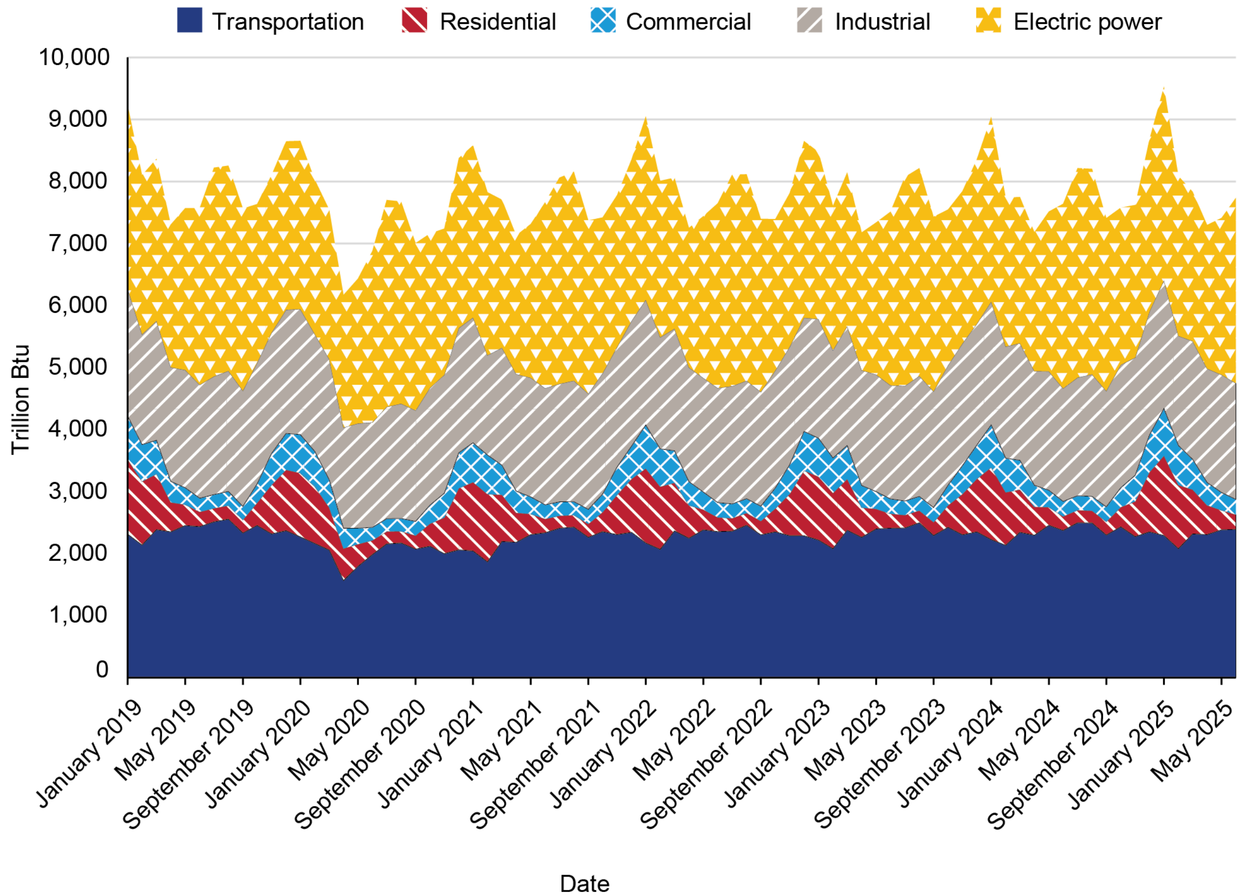
Among other consequences, transportation is a major source of noise throughout the Nation. Figure 51 shows the concentrations of noise from aviation, railroads, and major highways.

Figure 47. U.S. Consumption of Energy From Primary Sources by Sector: 1960–2024



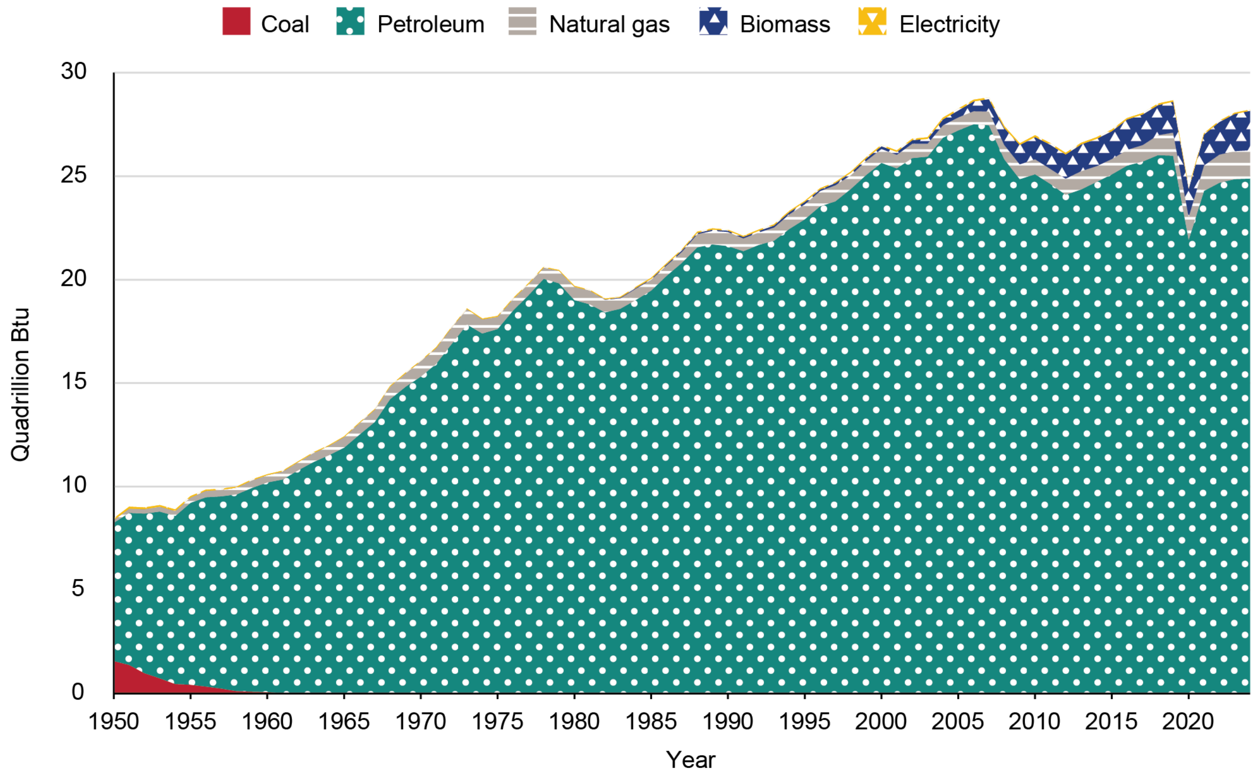
Btu = British thermal unit.
Source: BTS, data from BTS, NTS, 2025, table 4-2.

Figure 48. U.S. Consumption of Energy from Primary Sources by Sector: 2019–2025



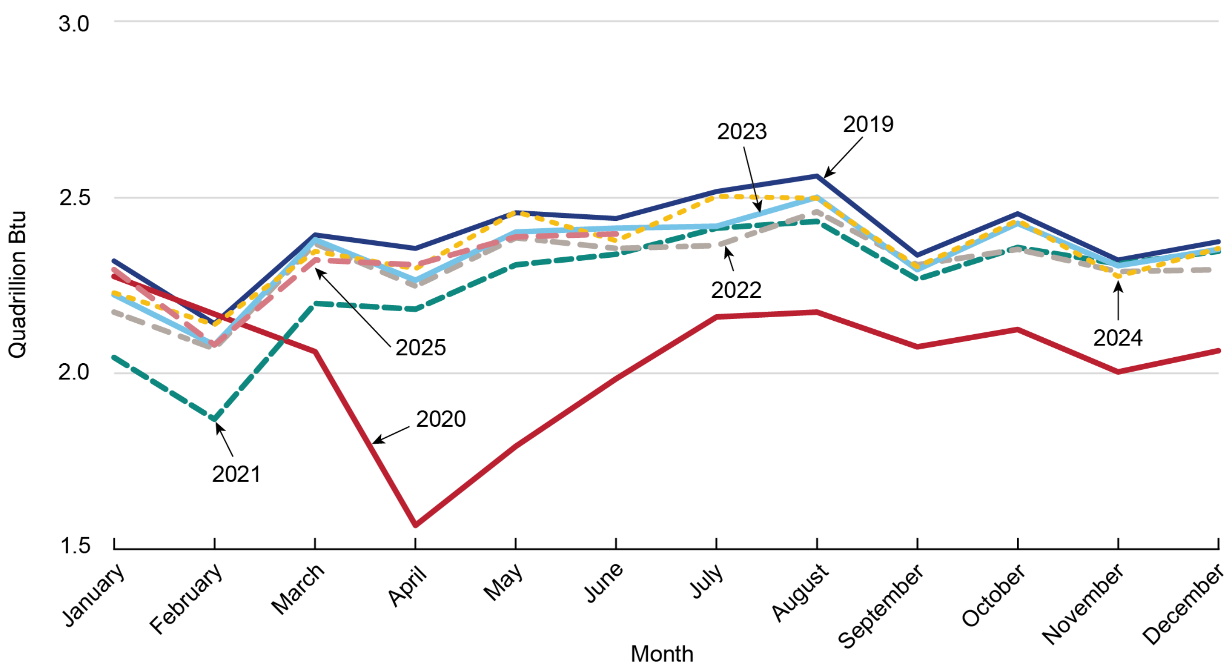
Btu = British thermal unit.
Source: BTS, NTS, 2025

Figure 49. Transportation Energy Use by Fuel Type: 1950–2024



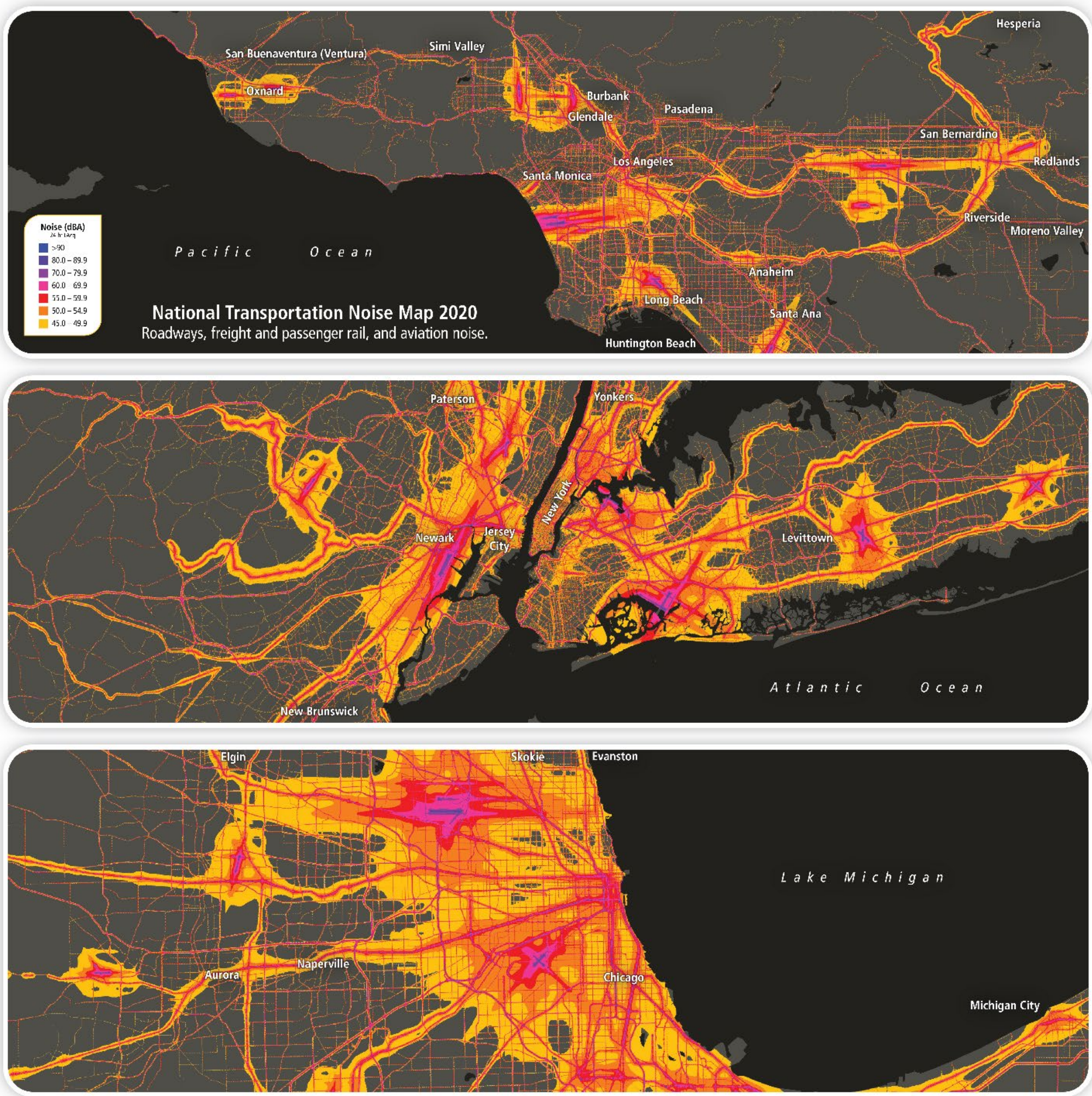
Btu = British thermal unit.
Source: BTS, NTS, 2025.

Figure 50. Month-to Month Total Energy Consumed by the Transportation Sector: 2019–2025



Btu = British thermal unit.
Source: BTS, NTS, 2025

Figure 51. Major Cities in the National Transportation Noise Map



Source: BTS 2020.

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Chapter 5. State of Transportation Statistics

While the previous chapters examined current knowledge regarding the transportation system and its impacts, this chapter explores the evolving demand for transportation data. It reviews existing data sources and analytical methods, assesses how these processes are transforming, and details ongoing efforts to improve the quality of information. Finally, it identifies remaining gaps that must be addressed to ensure decision-makers, and the public have the reliable insights needed to manage and navigate the Nation's transportation system.

5.1. EVOLVING INFORMATION NEEDS

BTS and its partners provide decision-makers with objective, accurate, and timely information on the changing logistical demands of the economy and of households, which are altering traditional patterns of freight movement and passenger travel, and on the ability of the transportation network to serve those patterns. The traditional emphasis on measuring historic trends to support comprehensive transportation plans and guide investments in long-lasting infrastructure is shifting to measuring current conditions and implications for near-term futures to support improved operation of the transportation system.

Many data needs are longstanding.

To guide and support investments in freight transportation and management of freight transportation services, decision-makers and the public need basic statistics on the quantity and value of freight movement by type of commodity and geography, the cost and timeliness of freight movement, and the economic activities served to understand whether the logistical needs of society and the economy are being met effectively; whether the transportation system is strengthening interstate commerce, national defense, and international competitiveness; and whether freight movement is impeding passenger travel, affecting safety, or contributing to negative consequences. Extensive statistics are available for long-distance freight movement, but little is known about local freight movement and relatively limited data exist on the cost of freight transportation.

To guide and support investments in passenger transportation and management of passenger transportation services, decision-makers and the public need basic statistics on the quantity and geography of passenger travel by purpose of travel, the cost and timeliness of travel, and the demographic and economic characteristics of travelers to understand whether the transportation system supports personal fulfillment and healthy communities across all spectrums of society; whether the transportation system is delivering workers and tourists to support the national, regional, and local economies; and whether passenger travel is impeding freight movement, affecting safety, or contributing to other problems. Extensive statistics are available for local travel to work and for long-distance trips by commercial airlines, but little is known about the geography of local travel for other purposes and about long-distance travel for any purpose by personal vehicles and other surface modes of transportation.

Safety is an issue that transcends the passenger and freight transportation systems. While extensive statistics on crashes, fatalities, and injuries exist for all forms of transportation, little information exists on close calls and other forms of safety incident precursors other than for commercial aviation.

Some data needs have become more pressing in recent years. For example, data on the diffusion and performance of new vehicle technology, including electrification and autonomous operation, help decision-makers anticipate the societal and other consequences of the new technology.

More timely and granular information on freight movement and shipper characteristics is central to anticipating temporal and geographic variability in transportation demands and understanding the economic consequences of supply chains.

5.2. EVOLVING DATA SOURCES AND ANALYTICAL METHODS

The traditional world of statistical agencies is undergoing a period of profound change. The 100-year dependence on surveys for data is undermined by increased costs to conduct surveys and declining respondent cooperation. At the same time, potential sources of data are emerging with the growth of computer-based administrative records, especially involving financial transactions, the widespread adoption of technology (e.g., cell phones and onboard vehicle systems) that can be tracked, the frequent and widespread coverage of high-resolution satellite imagery, and roadside sensors. These data sources typically require sifting through massive amounts of unstructured data to infer characteristics of transportation availability, use, and users.

Data science, artificial intelligence (AI), and related methodological developments are extending traditional methods of statistical analysis with new opportunities to extract useful information from large amounts of structured and unstructured data. For example, AI enables the processing of aerial imagery to locate and classify transportation facilities quickly and accurately from continuously orbiting satellites. Machine learning methods continually improve models used for preliminary estimates of transportation activity by automatically recalibrating the model each time new data are available for comparison to the preliminary estimate. New information technology enables analysts to find and extract key statistics from multiple data files and thousands of documents in seconds. Speech recognition and large language models can turn a spoken question into a sophisticated data query.

While new data sources and new analytical methods offer great promise, they require experimentation and careful evaluation to uncover potential biases and other pitfalls: Does a cluster of cell phone tracks indicate a group of travelers or a single traveler with multiple devices? Do the data used to train models based on machine learning contain biases that will propagate through applications of the models? Does the query generated from a spoken sentence incorporate the nuances of the data that traditionally require subject-matter expertise to manage?

5.3. PROGRESS OF THE STATISTICAL AND TRANSPORTATION COMMUNITIES IN MEETING INFORMATION NEEDS

A large community of federal agencies has been working to meet the information needs of decision-makers in transportation since Treasury Secretary Gallatin's report of 1808 on road and canal investment [Gallatin,1808] and the early government surveys of potential railroad routes through the West. The Army U.S. Army Corps of Engineers has been publishing statistics for harbors since at least 1868 [USACE,1868]. The Interstate Commerce Commission collected extensive statistics on railroads and trucking throughout its history from 1887 to 1996. The Census Bureau launched a Census of Transportation in 1963, and the 2-year-old U.S. Department of Transportation (USDOT) articulated its first assessment of needed transportation statistics in 1969 [USDOT, 1969]. The federal statistical and transportation agencies created foundational information for policymakers, businesses, researchers, and the public with comprehensive, reliable statistics that often provide the context for narrower, deeper data developed by the private sector.

After setbacks in the creation of foundational information during the 1980s, BTS was created in 1991–1992 to establish multimodal databases on the passenger and freight flows and on the extent and performance of the transportation network. In its first three decades, BTS built a comprehensive view of freight movement through the Freight Analysis Framework [BTS FAF 2025]. This system integrates over 100 layers of geographic data from the National Transportation Atlas Database [BTS NTAD 2025] and established the Port Performance Freight Statistics program [BTS Ports]. Furthermore, BTS pioneered national economic accounting to measure how for-hire and shipper-owned transportation to support other industries [BTS TSA]. BTS also led the industry in using CD-ROMs and the internet for data distribution.

When the COVID-19 pandemic disrupted global logistics, BTS pivoted from monthly and annual reporting to publishing weekly indicators that tracked rapid shifts in travel and freight demand. The value of this real-time capability was demonstrated during the Francis Scott Key Bridge collapse. Leveraging its readily available data, BTS published detailed information on Baltimore Harbor traffic impacts within just 12 hours of the incident [BTS Data Spotlights 2025].

Within the world of departmental data programs and the programs of other federal statistical agencies, BTS serves five basic roles in meeting statistical information needs. First, BTS collects data and estimates statistics on topics that transcend the Department or fall between the operating administrations. The former is illustrated by the Commodity Flow Survey and FAF, which measure freight movements across all forms of transportation. The latter is illustrated by the National Census of Ferry Operators, which falls between the highway, transit and maritime worlds. Second, BTS represents interests of the transportation community among the other statistical agencies, such as Census and the Bureau of Labor Statistics, leveraging the federal statistical system whenever possible to meet the information needs of the transportation community. Third, BTS works with its partners in and beyond USDOT to encourage standardization and quality of data products. Fourth, BTS uses its special authorities for protecting the confidentiality of data collected under the Confidential Information Protection and Statistical Efficiency Act [Public Law, 2018] including close calls and near misses [BTS,2021], and to support the Freight Logistics Optimization Works initiative, in which shippers, carriers, terminal operators, and other players in supply chains share their confidential data on container volumes and capacities to improve supply chain efficiency [BTS 2023]. Finally, BTS offers a portal to the wide world of transportation across many agencies and disciplines through its compilations, such as the tables in National Transportation Statistics, and through the digital repository of the National Transportation Library.

5.4. PRIORITY INFORMATION NEEDS

While BTS and its partners provide a wealth of statistics on the transportation system and its use, several key information needs remain:

- Statistics on the market penetration, efficiency, safety, and infrastructure requirements of new technologies, such as autonomous vehicles and unmanned aerial systems

- Daily and weekly freight flows and the ability of the transportation system to handle temporal surges and geographic concentrations of freight movement
- Data on the domestic transportation of U.S. foreign trade, domestic and international shipping costs, and last-mile freight movements
- Comprehensive measures of the volume of passenger movement, especially involving long-distance travel, that reflect temporal and geographic fluctuations over the transportation network
- Measures of transportation industry health and characteristics of emerging and nontraditional forms of transportation employment, such as drivers for ridesharing and food delivery services
- Timely statistics on government revenues and expenditures related to transportation, including an effective accounting of innovative finance in transportation such as public–private partnerships.

5.5. THE DATA QUALITY ISSUE

New data sources and analytical methods are not free of the potential for bias and error that statisticians have managed in survey data for decades. BTS and the rest of the federal statistical system are considering the accuracy, timeliness, relevance, and other aspects of data quality to develop the best possible statistics from traditional surveys, new data sources, AI, and other new analytical methods, and to understand the fitness of use for those statistics. BTS played a major role in the development of a government-wide framework for understanding the quality of traditional and new types of data [FCSM].

BTS reviews the sources and reliability of the statistics proposed by the heads of the operating administrations of USDOT to measure outputs and outcomes as required by the Government Performance and Results Act of 1993 [Public Law, 1993]. This assessment is included in the department's annual budget and performance documents [USDOT, 2025].

5.6. LOOKING AHEAD

BTS anticipates that current issues confronting decision-makers and the potential availability of very large datasets from the transportation industry will shift the BTS' emphasis from measuring historic trends to forward-looking indicators of transportation use and performance. BTS is also responding to requests for statistical information beyond its traditional topics of multimodal freight transportation, commercial aviation, and transportation economics. As BTS expands its activities, it must continue to fulfill its mandates and deliver its current product portfolio, including benchmarks that establish the transportation universe for subject-specific measures.

To meet these growing demands, BTS is developing partnerships to obtain and share data from new sources, modernizing its infrastructure to ingest and manage massive amounts of data, developing tools to access and analyze the very large new datasets, and streamlining the development and publication of statistical products. BTS is exploring AI-enhanced search and tabulation tools to provide more effective user access to data and research information with the BTS website. BTS is resurrecting "The Week in Transportation" on its website to restore timely measures of transportation system use and performance that BTS pioneered during COVID. BTS is also designing a predictive performance metrics program, starting with commercial aviation and long-haul trucking.

5.7. CONCLUSION

When BTS was created 3 decades ago, statistics were used primarily as an input to transportation planning and to justify investments and regulations. During the early years of BTS, an increased emphasis of public agencies and private companies on managing and operating transportation assets created demands for large amounts of timely data on the condition and performance of the transportation system. Supply chain disruptions during the COVID pandemic and the subsequent pace of economic change placed even greater demands for timely data to identify large, rapid changes affecting transportation.

Throughout its history, BTS has worked with its partners to create increasingly robust, timely, and credible products in each of the topic areas identified in legislative mandates and in the goals of USDOT. BTS endeavors to produce statistics that are useful and used throughout the Nation, fulfilling Abraham Lincoln's vision that: "Statistics will save us from doing what we do, in wrong places" [Lincoln,1848].

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Appendix A. Legislative Responsibilities

BTS compiles statistics as required by Title 49 U.S. Code § 6302. Bureau of Transportation Statistics, which requires information on the following:

I. Transportation safety across all modes and intermodally.

II. The state of good repair of the United States transportation infrastructure.

III. The extent, connectivity, and condition of the transportation system, building on the national transportation atlas database developed under section 6309.

IV. Economic efficiency across the entire transportation sector.

V. Employment in the transportation sector.

VI. The effects of the transportation system, including advanced technologies and automation, on global and domestic economic competitiveness.

VII. Demographic, economic, and other variables influencing travel behavior, including choice of transportation mode and goods movement.

VIII. Transportation-related variables that influence the domestic economy and global competitiveness.

IX. Economic costs and impacts for passenger travel and freight movement.

X. Intermodal and multimodal passenger movement.

XI. Intermodal and multimodal freight movement.

XII. Consequences of transportation for the human and natural environment.

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Appendix B. Why Fatality and Injury Data Differ by Source

FATALITY DATA

Several federal transportation agencies collect fatality, injury, and accident and incident data from reports by state, local, or corporate (e.g., pipeline companies, railroads) entities for the specific transportation mode under their purview. These agencies, including the National Highway Traffic Safety Administration (NHTSA), Federal Railroad Administration, Federal Transit Administration, Federal Aviation Administration, Pipeline and Hazardous Materials Administration, and U.S. Coast Guard in the Department of Homeland Security, often have different reporting thresholds (e.g., the time period after a crash to ascribe the death to a transportation incident, the dollar amount of property damage or injury severity that needs to be reported). Thus, data for different modes may not be comparable in all respects.

Different sources can also produce different estimates even for something as seemingly definitive as death. In the case of motor vehicle fatalities, NHTSA, through its Fatality Analysis Reporting System (FARS), collects a census of fatal motor vehicle traffic crashes provided by the 50 states, the District of Columbia, and Puerto Rico and taken from police crash reports and other sources. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway customarily open to the public and must result in the death of an occupant of a vehicle or a nonoccupant within 30 days of the crash.

NHTSA's fatality data differ from those taken from the National Center for Health Statistics (NCHS), part of the Centers for Disease Control and Prevention, which obtains and annually updates cause of death information from death certificates and other sources. These data may identify people who are fatally injured in transportation crashes many months or up to a year after the incident, not just 30 days later. Also, the NCHS data include transportation-related deaths that occur anywhere, not just those reported on U.S. public roadways as in FARS. The differences might seem to be substantial: using NCHS data, for example, the National Safety Council found that there were 46,020 motor vehicle-related deaths in 2021. This value compares to 42,939 public trafficway deaths in FARS—a difference of about 3,100. Please note that neither estimate is wrong; each reflects a different definition of geographic coverage and time period after a crash to ascribe a death to the crash in this report does not include the 3,100 motor vehicle deaths that occurred outside public roadways (e.g., on residential driveways).

INJURY AND PROPERTY-DAMAGE-ONLY CRASHES

Millions of highway crashes of all severity levels occur every year in the United States. These range from property-damage-only crashes, such as most fender-benders, which account for the lion's share of accidents, to nonfatal injury crashes (with ascending levels of injury from minor to incapacitating or life-threatening), to fatal crashes in which one or more people die, whether inside or outside the vehicle. Because the total number of crashes is so high—police reported 6.1 million motor vehicle crashes in 2021—NHTSA estimates the number of nonfatal crashes using a sampling system subject to variability. (In contrast, FARS contains data collected from all fatal crashes on public trafficways in the 50 states, the District of Columbia, and Puerto Rico).

NHTSA's injury estimates for 2016 and beyond are obtained from a new sample design and are not comparable to prior years' estimates from a different sampling system. NHTSA's current estimation procedure is called the Crash Report Sampling System (CRSS); it replaced the National Automotive Sampling System (NASS) General Estimates System (GES), used from 1988 through its replacement with CRSS in 2016. NHTSA cautions against comparing CRSS estimates (2016 and later) with those made in 2015 and before using the NASS GES methodology. These systems use different sampling designs and were designed more than 30 years apart. For more information, refer to NHTSA's Overview of the 2022 Crash Investigation Sampling System [NHTSA 2023].

TIMING OF DATA RELEASES

The compilation and vetting of fatality data takes place according to schedules that can take 2 years or more to finalize from initial estimate reporting. Provisional or initial data may be issued based on projections or estimation procedures but have greater uncertainty associated with their accuracy.

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Appendix C. Glossary

Air carrier: Certificated provider of scheduled and nonscheduled services.

Alternative fuel (vehicle): Nonconventional or advanced fuels or any materials or substances, such as biodiesel, electric charging, ethanol, natural gas, and hydrogen, that can be used in place of conventional fuels, such as gasoline and diesel.

Arterial: A class of roads serving major traffic movements (high-speed, high volume) for travel between major points.

BEV: Battery Electric Vehicles, also called all-electric vehicles, obtain all their energy from a battery that is charged by plugging the vehicle into an electrical outlet or charging equipment. These vehicles always operate in all-electric mode.

Block hours: The time elapsed from the moment an aircraft pushes back from the departure gate until the moment of engine shutoff at the arrival gate following its landing.

Bus: Large motor vehicle used to carry more than 10 passengers, including school buses, intercity buses, and transit buses.

Capital stock (transportation): Includes structures owned by either the public or private sectors, such as bridges, stations, highways, streets, and ports; and equipment, such as automobiles, aircraft, and ships.

Chained dollars: A method of inflation adjustment that allows for comparing in dollar values changes between years.

Class I railroad: Railroads earning adjusted annual operating revenues for 3 consecutive years of $250,000,000 or more, based on 1991 dollars, with an adjustment factor applied to subsequent years.

Commercial air carrier: An air carrier certificated in accordance with Federal Aviation Regulations Part 121 or Part 127 to conduct scheduled services on specified routes.

Commuter rail: Urban and 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.

Consumer Price Index (CPI): Measures changes in the prices paid by urban consumers for a representative basket of goods and services.

Current dollars: Represents the dollar value of a good or service in terms of prices current at the time the good or service is sold.

Deadweight tons: The number of tons of 2,240 pounds that a vessel can transport of cargo, stores, and bunker fuel. It is the difference between the number of tons of water a vessel displaces "light" and the number of tons it displaces when submerged to the "load line."

Demand response: A roadway service directly from an origin to a destination determined by the rider and not following a fixed route, is usually provided by vans, small buses, and in a limited number of cases, large buses.

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

Directly operated service: Transportation service provided directly by a transit agency, using their employees to supply the necessary labor to operate the revenue vehicles.

Distribution pipeline: Delivers natural gas to individual homes and businesses.

E85: A gasoline-ethanol mixture that may contain anywhere from 51 to 85 percent ethanol. Because fuel ethanol is denatured with approximately 2 to 3 percent gasoline, E85 is typically no more than 83 percent ethanol.

Energy intensity: The amount of energy used to produce a given level of output or activity, e.g., energy use per passenger-mile of travel. A decline in energy intensity indicates an improvement in energy efficiency, while an increase in energy intensity indicates a drop in energy efficiency.

Enplanements: Total number of revenue passengers boarding aircraft.

Expressway: A controlled-access, divided arterial highway for through traffic, the intersections of which are usually separated from other roadways by differing grades.

EV: Electric Vehicles typically refer to BEVs and PHEVs.

Ferry boat: A vessel that provides fixed-route service across a body of water and is primarily engaged in transporting passengers or vehicles.

Flex fuel vehicle: A type of alternative fuel vehicle that can use conventional gasoline or gasoline-ethanol mixtures of up to 85 percent ethanol (E85).

Footprint (vehicle): The size of a vehicle is defined as the rectangular "footprint" formed by its four tires. A vehicle's footprint is its track (width) multiplied by its wheelbase (length).

For-hire (transportation): 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.

Freeway: All urban principal arterial roads with limited control of access not on the interstate system.

Functionally obsolete bridge: does not meet current design standards (for criteria such as lane width), either because the volume of traffic carried by the bridge exceeds the level anticipated when the bridge was constructed and/or the relevant design standards have been revised.

GDP (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.

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, multiengine jets piloted by a professional crew to amateur-built, single-engine, piston-driven, acrobatic planes.

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

HEV: Hybrid Electric Vehicles are powered by an internal combustion engine and one or more electric motors that uses energy stored in a battery. All the energy to propel the HEV ultimately comes from the gasoline used to operate the internal combustion engine, and the battery is charged through regenerative braking, not by plugging in.

Hybrid vehicle: Hybrid electric vehicles combine features of internal combustion engines and electric motors. Unlike 100-percent 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.

Own-account (transportation): Includes transportation services provided within a firm whose main business is not transportation, such as grocery stores that use their own truck fleets to move goods from warehouses to retail outlets.

Interstate: Limited access divided facility of at least four lanes designated by the Federal Highway Administration as part of the Interstate System.

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

Lane-mile: Equals 1 mile of 1-lane road, thus 3 miles of a 3-lane road would equal 9 lane-miles.

Large certificated air carrier: Carriers operating aircraft with a maximum passenger capacity of more than 60 seats or a maximum payload of more than 18,000 pounds. These carriers are also grouped by annual operating revenues: majors—more than $1 billion; nationals—between $100 million and $1 billion; large regionals—between $20 million and $99,999,999; and medium regionals—less than $20 million.

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

Light-duty vehicle, long wheelbase: Passenger cars, light trucks, vans, pickup trucks, and sport and utility vehicles with wheelbases longer than 121 inches.

Light-duty vehicle, short wheelbase: Passenger cars, light trucks, vans, pickup trucks, and sport and utility vehicles with wheelbases equal to or less than 121 inches and typically with a gross weight of less than 10,000 lb.

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

Linked trip: A trip from the origin to the destination on the transit system. Even if a passenger must make several transfers during a journey, the trip is counted as one linked trip on the system.

Local road: Any road not defined as an arterial or collector; primarily provides access to land with little or no through movement.

Long-distance travel: As used in this report, trips of more than 50 miles. Such trips are primarily served by air carriers and privately owned vehicles.

Major collector: Collector roads that tend to serve higher traffic volumes than other collector roads. Major collector roads typically link arterials. Traffic volumes and speeds are typically lower than those of arterials.

Minor arterial: Roads linking cities and larger towns in rural areas. In urban areas, they are roads that link, but do not enter, neighborhoods within a community.

Minor collector: Collector roads that tend to serve lower traffic volumes than other collector roads. Traffic volumes and speeds are typically lower than those of major collector roads.

Motorcoach: A vehicle designed for long-distance transportation of passengers, characterized by integral construction with an elevated passenger deck located over a baggage compartment. It is at least 35 feet in length with a capacity of more than 30 passengers.

Motorcycle: A two- or three-wheeled vehicle, including motorscooters, minibikes, and mopeds, designed to transport one or two people.

Multiple modes and mail: The Freight Analysis Framework and the Commodity Flow Survey (CFS) use “Multiple Modes and Mail” rather than “Intermodal” to represent commodities that move by more than one mode. Intermodal typically refers to containerized cargo that moves between ship and surface modes or between truck and rail, and repeated efforts to identify containerized cargo in the CFS have proved unsuccessful. Multiple-mode shipments can include anything from containerized cargo to bulk goods, such as coal moving from a mine to a railhead by truck and then by rail to a seaport. Mail shipments include parcel delivery services where shippers typically do not know what modes were involved after the shipment was picked up.

National Highway System (NHS): A system of highways designated and approved in accordance with the provisions of 23 United States Code 103b *Federal-aid systems.*

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

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.

Offshore gathering line: A pipeline that collects oil and natural gas from an offshore source, such as the Gulf of Mexico. Natural gas is collected by gathering lines that convey the resource to transmission lines, which in turn carry it to treatment plants that remove impurities from the gas. On the petroleum side, gathering pipelines collect crude oil from onshore and offshore wells. The oil is transported from the gathering lines to a trunk-line system that connects with processing facilities in regional markets.

Offshore transmission line (gas): A pipeline other than a gathering line that is located offshore for the purpose of transporting gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center.

Onshore gathering line: A pipeline that collects oil and natural gas from an onshore source, such as an oil field. Natural gas is collected by gathering lines that convey the resource to transmission lines, which in turn carry it to treatment plants that remove impurities from the gas. On the petroleum side, gathering pipelines collect crude oil from onshore and offshore wells. The oil is transported from the gathering lines to a trunk-line system that connects with processing facilities in regional markets.

Onshore transmission line (gas): A pipeline other than a gathering line that is located onshore for the purpose of transporting gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center.

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

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

Person-miles: 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. For instance, four persons traveling 25 miles would accumulate 100 person-miles. They include the driver and passenger in personal vehicles, but do not include the operator or crew for air, rail, and transit modes.

Person trip: A trip taken by an individual. For example, if three persons from the same household travel together, the trip is counted as one household trip and three person trips.

Personal vehicle: A motorized vehicle that is privately owned, leased, rented or company-owned and available to be used regularly by a household, which may include vehicles used solely for business purposes or business-owned vehicles, so long as they are driven home and can be used for the home to work trip (e.g., taxicabs, police cars).

PEV: Plug-in Electric Vehicle, also refers to BEVs and PHEVs, because both can obtain electricity by plugging in.

PHEV: Plug-in Hybrid Electric Vehicles are powered by an internal combustion engine and an electric motor that uses energy stored in a battery. PHEVs can operate in all-electric (or charge-depleting) mode or in internal combustion engine (charge-sustaining) mode. To enable operation in all-electric mode, PHEVs require a larger battery than an HEV, which can be plugged in to an electric power source to charge.

Planning Time Index (PTI): The ratio of travel time on the worst day of the month compared to the time required to make the same trip at free-flow speeds.

Post Panamax vessel: Vessels exceeding the length or width of the lock chambers in the Panama Canal. The Panama Canal expansion project, slated for completion in 2015, is intended to double the canal's capacity by creating a new lane of traffic for more and larger ships.

Real dollars: Value adjusted for changes in prices over time due to inflation.

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

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

Structurally deficient (bridge): Characterized by deteriorated conditions of significant bridge elements and potentially reduced load-carrying capacity. A "structurally deficient" designation does not imply that a bridge is unsafe, but such bridges typically require significant maintenance and repair to remain in service and would eventually require major rehabilitation or replacement to address the underlying deficiency.

TEU (twenty-foot equivalent unit): A TEU is a nominal unit of measure equivalent to a 20-foot by 8-foot by 8-foot shipping container. For example, a 50-foot container equals 2.5 TEUs.

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

Trainset: One or more powered cars mated with a number of passenger or freight cars that operate as one entity.

Transit bus: A bus designed for frequent stop service with front and center doors, normally with a rear-mounted diesel engine, low-back seating, and without luggage storage compartments or restroom facilities. Includes motor and trolley bus.

Transmission line: A pipeline used to transport natural gas from a gathering, processing, or storage facility to a processing or storage facility, large volume customer, or distribution system.

Transportation Services Index (TSI): A monthly measure indicating the relative change in the volume of services over time performed by the for-hire transportation sector. Change is shown relative to a base year, which is given a value of 100. The TSI covers the activities of for-hire freight carriers, for-hire passenger carriers, and a combination of the two [BTS 2025], available at https://data.bts.gov/stories/s/Transportation-as-an-Economic-Indicator/9czv-tjte.

Travel Time Index: The ratio of the travel time during the peak traffic period to the time required to make the same trip at free-flow speeds.

Trip-chaining: The practice of adding daily errands and other activities, such as shopping or going to a fitness center, to commutes to and from work.

Trolley bus: Refer to transit bus.

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

Vehicle-mile: Measures the distance traveled by a private vehicle, such as an automobile, van, pickup truck, or motorcycle. Each mile traveled is counted as one vehicle-mile regardless of number of passengers.

Appendix D. Abbreviations and Acronyms

ADAS advanced driver-assistance systems

ADS Automated Driving Systems

AI artificial intelligence

AIS Automatic Identification System

AV automated vehicle

BEV battery electric vehicle

BNSF Burlington Northern and Santa Fe Railway

BTS Bureau of Transportation Statistics

Btu British thermal unit

CFS Commodity Flow Survey

CIPSEA Confidential Information Protection and Statistical Efficiency Act

CN Canadian National Railway

CO_2 carbon dioxide

CP Canadian Pacific

CPI Consumer Price Index

CRSS Crash Report Sampling System

CSX Chessie System and Seaboard Coast Line Railroad

EE early estimate based on statistical projection

FAF Freight Analysis Framework

FARS Fatality Analysis Reporting System

FMCSA Federal Motor Carrier Safety Administration

FY fiscal year

GDP gross domestic product

GES General Estimates System

GHG greenhouse gas

HEV hybrid electric vehicle

IRI International Roughness Index

KCS Kansas City Southern Railway Company

LSCI liner shipping connectivity index

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N data do not exist

NA not applicable

NASS National Automotive Sampling System

NCHS National Center for Health Statistics

NHS National Highway System

NHTSA National Highway Traffic Safety Administration

NS Norfolk Southern

NTTO National Travel and Tourism Office

PEV plug-in electric vehicle

PHEV plug-in electric hybrid vehicles

PLA	Port of Los Angeles/Long Beach
PNY	Port of New York/New Jersey
PPI	Producer Price Index
SAE	Society of Automotive Engineers
STRAHNET	Strategic Highway Network
TEU	twenty-foot equivalent unit
TSAR	Transportation Statistics Annual Report
TSI	Transportation Services Index
U	data are not available
UP	Union Pacific
USDOT	U.S. Department of Transportation