Summary of Travel Trends

2022 National Household Travel Survey

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16. Abstract

The 2022 National Household Travel Survey (NHTS) provides an inventory of daily personal travel in the United States. It is the only source of national-level multimodal statistics on personal travel in the United States. The survey series (conducted since 1969) includes demographic data on households, people, and vehicles as well as detailed information on daily travel by all modes of transportation and for all purposes.

NHTS survey data are collected from a random sample of households and expanded to provide estimates of trips and miles of travel by travel mode, trip purpose, and other important attributes for the noninstitutionalized population of the United States. When combined with historical data from earlier surveys (i.e., the 1969, 1977, 1983, 1990, and 1995 National Personal Transportation Surveys and the 2001, 2009, and 2017 NHTS), these data serve as a rich source of information on the trends in travel over time and provide important insights into adjustments in travel as the Nation recovers from the COVID-19 pandemic.

This report summarizes trends in household and personal travel patterns, including changes to the household-based vehicle fleet and commuting patterns. The report begins with a summary of changes in population, demographics, and related travel. Next, travel trends are examined at the household level, which is then followed by a summary of changes in travel at the person-level, including trips by purpose and miles of travel by age and sex. Following sections detail changes in vehicle availability and usage, commute travel patterns, temporal distribution, and the travel of special populations and emerging travel modes.

The 2022 NHTS was conducted using an address-based sample. Most respondents reported data in the web-based reporting tool, which differs from the 2017 NHTS that offered both online and phone options. While survey methods affect final results, efforts to minimize differences resulting from method changes have been applied to the data to maximize comparability. For details, please reference Appendix A and the data documentation at https://nhts.ornl.gov/. Researchers and data users are encouraged to further explore and assess how the change in methods might affect their estimates.

17. Key Words National Household Travel Survey, NHTS, U.S. travel, daily travel, means of travel, mode of travel, trip purpose, vehicle miles of travel, VMT, person miles of travel, PMT, demographics and travel, vehicle use trends, fleet changes, vehicle availability, commute data, commute patterns, travel purpose, travel patterns by age, travel patterns by sex	18. Distribution Statement No restrictions. This document is available to the public through the National Technical Information Service, Springfield, VA 22161. https://www.ntis.gov	
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Quality Assurance Statement

The 2022 National Household Travel Survey (NHTS) data collection effort is the first in a new cycle of data collection planned to take place approximately every 2 years, while prior survey cycles took place every 5–8 years. As such, the national sample is smaller (7,500 households), and some questions were removed to obtain more details on how households were responding to changes in work and school locations and availability of more online transactions, such as banking, medical appointments, and so forth. The results of the survey show lower trip rates than the 2017 NHTS. While some reduction could be attributed to changes in survey methods, the results strongly suggest that as of the time of the survey, Americans were still traveling less and ordering more items online[1]. The weighted results reflect a similar proportion of immobility as compared to the American Time Use Survey and of teleworking as compared to the American Community Survey.

Survey methods evolve over time, taking advantage of emerging technologies and adjusting in response to changes in respondent expectations. For the 2022 NHTS, the most impactful changes were (1) changing survey modes from the phone and web options in 2017 to web and mail options in 2022 and (2) employing a "push-to-web" single-stage survey where respondents reported their travel for "yesterday" as compared to the two-stage 2017 NHTS where respondents mailed in a recruitment survey then received instructions and a log to record their travel for a future travel date (although not all respondents used the provided log). The 2022 changes were made to reduce respondent burden.

For the 2022 NHTS, the method of obtaining trip length used a Google application programming interface (API) shortest path route between the reported origin and destination, which was the same method used in the 2017 NHTS. Within this report, distance-based measures were grouped according to survey year, where the 2017 and 2022 data show calculated distances, while 2009 and prior NHTS efforts show respondent-reported distances. The 2009 NHTS data are provided in both distance categories, with an adjustment applied to convert the 2009 respondent-reported to API-calculated distances as a bridge between the two methods. Users should consider the impacts identified here and do further analysis of their own to assess the best use of the data series for any specific application.

The data presented in this report are based on a sample of the population and are subject to sampling error. Sampling error is the calculated statistical imprecision due to interviewing a random sample instead of the entire population. The margin of error provides an estimate of how much the results of the sample may differ due to chance when compared to what would have been found if the entire population was interviewed. Sampling error is the only error that can be quantified, but there are other errors to which surveys are susceptible. Please refer to Appendix C for more details.

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[1] More research is needed to determine whether the commercial trips associated with these increased home deliveries account for a larger share of vehicle miles of travel than in the past.

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1.0. Introduction

Both policymakers and transportation decisionmakers rely on transportation statistics, including data on personal travel behavior, to formulate strategic transportation policies and improve the safety and efficiency of the U.S. transportation system. Policymakers, state departments of transportation, metropolitan planning organizations, industry professionals, and academic researchers use such data to gauge the extent and patterns of travel, plan new investments, and better understand the implications of travel trends on the Nation's transportation infrastructure and overall quality of life through equitable access for all Americans.

To address these data needs, the U.S. Department of Transportation (USDOT) initiated an effort to collect detailed data on personal travel in 1969. The 1969 survey was the first Nationwide Personal Transportation Survey (NPTS). The survey was conducted again in 1977, 1983, 1990, and 1995. In 2001, the survey was expanded by integrating the Federal Highway Administration (FHWA)-managed NPTS and the Bureau of Transportation Statistics (BTS)-sponsored American Travel Survey (ATS), and the survey was renamed the National Household Travel Survey (NHTS). The NHTS was conducted again in 2009, 2017, and 2022. The NPTS/NHTS data series is the only source of national travel behavior data that tracks trends in personal and household travel. The survey gathers trip-related data, such as mode of transportation, duration, distance, and trip purpose, and links the travel-related information to demographic, geographic, and economic data for analysis purposes.

NHTS data inform policy initiatives, provide context for decisionmaking, and benchmark progress for policies and programs.[2] More directly, NHTS data are inputs for statistical analyses and models related to transportation, equity, health, energy, and mobility. At the state and local levels, NHTS greatly impacts the development, calibration, and validation of travel demand models, which are used to inform transportation planning and project selection.

The 2022 NHTS (conducted from January 2022 through January 2023) is the most recent national inventory of daily travel and the authoritative source on the travel behavior of the American public. The 2022 NHTS design is a departure from the earlier cycles of conducting the survey every 5–8 years, reflecting the 2018 decision by FHWA to conduct the survey on a biennial cycle. By conducting a smaller sample more frequently, FHWA anticipates the ability to more promptly identify and analyze emerging issues in a rapidly changing technology and business environment.

During the survey period, researchers collected data from 7,893 households, which were sampled using an address-based sampling (ABS) frame. Sampled households were mailed a letter with a small incentive and asked to join the survey by logging onto the survey website and providing details about their household's characteristics, household fleet, and attitudes about emerging travel modes and current travel decisions during the COVID-19 pandemic (i.e., the pandemic) recovery period. After answering those questions, respondents were given instructions for recording their households' travel for the previous 24-hour period. Each participating household reported travel across all modes and purposes, with travel days encompassing 7 days of the week including

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[2] Chajka-Cadin, Petrella, and Trimmel et al., *Federal Highway Administration Research and Technology Evaluation: National Household Travel Survey Program Final Report*. FHWA-HRT-16-082 (August 2017): https://www.fhwa.dot.gov/publications/research/randt/evaluations/16082/index.cfm.

holidays. Weighting reflected the day of week and month of travel to allow comparisons of weekdays or seasons.

During the time that the 2022 NHTS was fielded, the United States was still recovering from the pandemic. According to the *Transportation Statistics Annual Report 2023*, "The 2022 trend picture of passenger travel continues an uneven recovery from the 2019 peak and points to an uncertain future due to factors such as the enduring growth in working at home, changes in electronic communications, declining population growth and locational shifts."[3] According to the publication, the following observations regarding personal travel are provided to help to frame the context in which travel took place and thus guide any assessment of the *2022 NHTS Summary of Travel Trends* with respect to overall levels of travel, continued high levels of telework and growing reliance on technology, and changes in settlement and land use patterns:

- Passenger travel continued to rebound, with most travel modes slowly returning to pre-pandemic levels in the second half of 2022. While transit ridership was slowly increasing, it has yet to return to pre-pandemic levels. Although a relatively small proportion of overall mode shares, the reduction in transit trips contributed to the overall decline in person trips as one transit trip typically includes reported access and egress trips as well.
- Travel patterns continued to shift, reflective of sustained levels of telework and the use of technology as a substitute for travel. Most notably, the shift to telework led to a decreased reliance on the workplace as a main anchor of daily travel as well as the relocation and/or closing of offices and related services and the substitution of technological options for long-distance business travel. The use of technology as a substitute for travel is reflected in the doubling of reported online shopping and potentially the decrease in trips for shopping and personal errands (banking, medical, groceries, etc.).
- Census data show an outmigration from urban areas into the suburbs and rural areas. Prior NHTS trends showed trip rates to be higher in urban areas and lower in rural areas. This outmigration may also be reflected in longer commute trips.

This report uses 2022 NHTS data to highlight current travel trends. The data are often compared to results from prior NHTS efforts. The comparisons across survey years vary based on the topic, with some tables presenting trends over 50 years of travel data for the United States, while other tables focus on the more immediate decade. This report has nine chapters, each representing a topic in travel behavior. Chapter 2 focuses on demographic trends of households, persons, vehicles, and workers. Chapter 3 focuses on overall household travel, while subsequent chapters present person travel, private vehicle travel, vehicle use, and commute travel patterns. The final chapter highlights travel behavior of special populations and some new data elements from the 2022 NHTS. The research findings in this report do not include a detailed analysis of the 2022 NHTS dataset in its entirety but provide a brief overview of available data.

This report relies on the work of previous authors and reproduces the analysis done as part of previous *Summary of Travel Trend* reports, which are available in the Publications tab of the NHTS website.[4] All potential errors or omissions in this current report are the authors' responsibility.

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[3] USDOT, BTS. 2023. *Transportation Statistics Annual Report 2023*: https://doi.org/10.21949/1529944.
[4] Refer to https://nhts.ornl.gov/publications.

1.1. Post-Pandemic Recovery Insights

In 2022, Americans traveled substantially less than they did in 2017 due to a combination of factors that include changes in daily life related to the pandemic and subsequent recovery; the rise of working from home; new opportunities to carry out errands such as shopping, banking, and grocery shopping online; and a decrease in personal trips. While the number of trips taken declined, the length of the trips increased, with the reduction in trips largely associated with personal errands. The 2022 NHTS included questions designed to obtain more details about the factors influencing recent changes in travel.

One set of questions focused on documenting whether respondents were unable to travel and if so, the reasons for that foregone travel. Approximately one in four respondents (28%) reported they took fewer trips in the previous 30 days than planned and were asked to name the reason for the difference (Figure 1-1). Just over a quarter of respondents (26%) listed concerns related to the pandemic as a reason. Other reasons included no time to travel (18%), health issues/unable to travel (17%), more home deliveries (16%), and could not afford the available options (16%).

Figure 1-1. Reasons for Taking Fewer Trips in the Past 30 Days in 2022
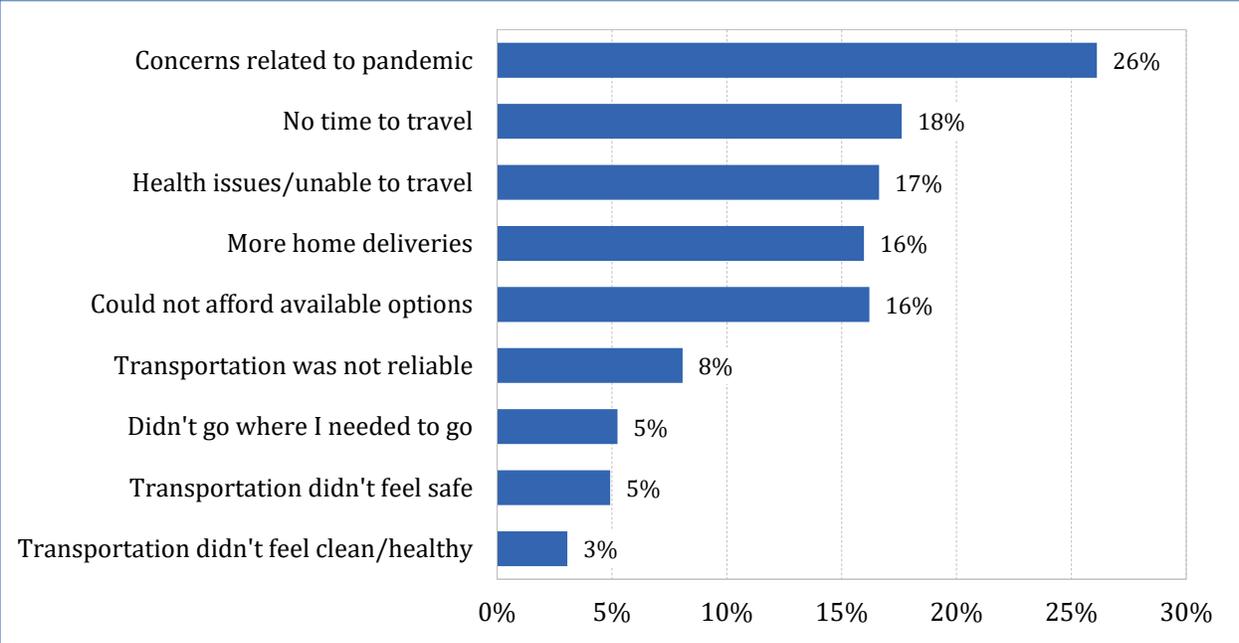
Respondents were asked how their travel to work or school has been impacted by the pandemic (Figure 1-2). The pandemic impacted 38% of workers, with 30% reporting that they traveled to work less often than prior to the pandemic. For students, 26% changed their travel to school, with 15% saying they traveled to school less often.

Figure 1-2. 2022 Change in Work and School Travel from Before the Pandemic
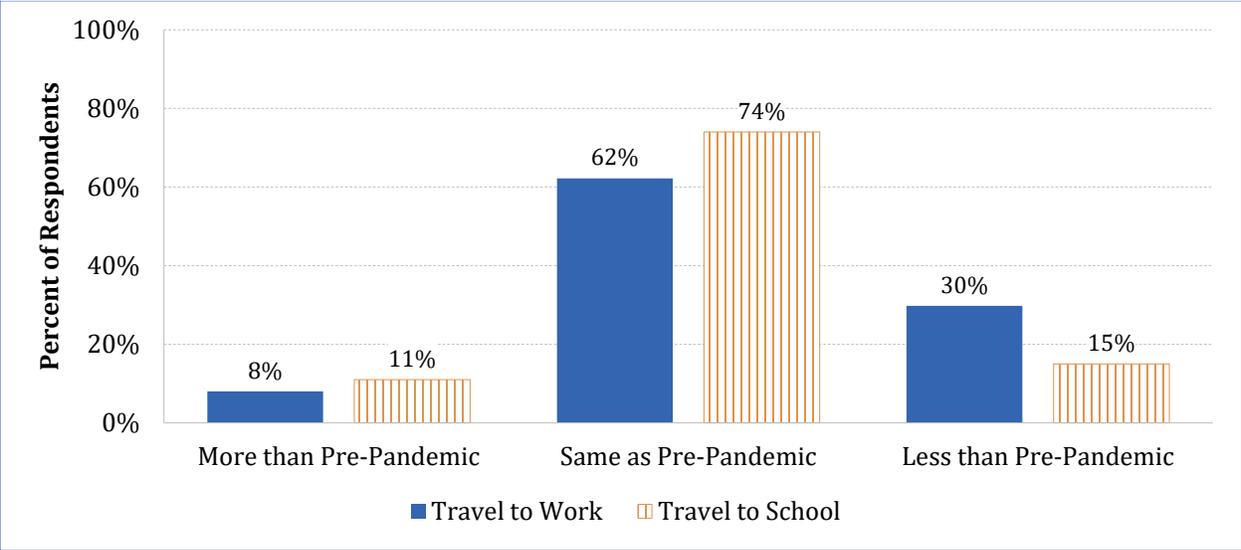
For those who reported a change in travel to work or school due to the pandemic, 70% of workers and 55% of students viewed the change as permanent rather than temporary (Figure 1-3).

Figure 1-3. Trends in Temporary or Permanent Work or School Change in 2022
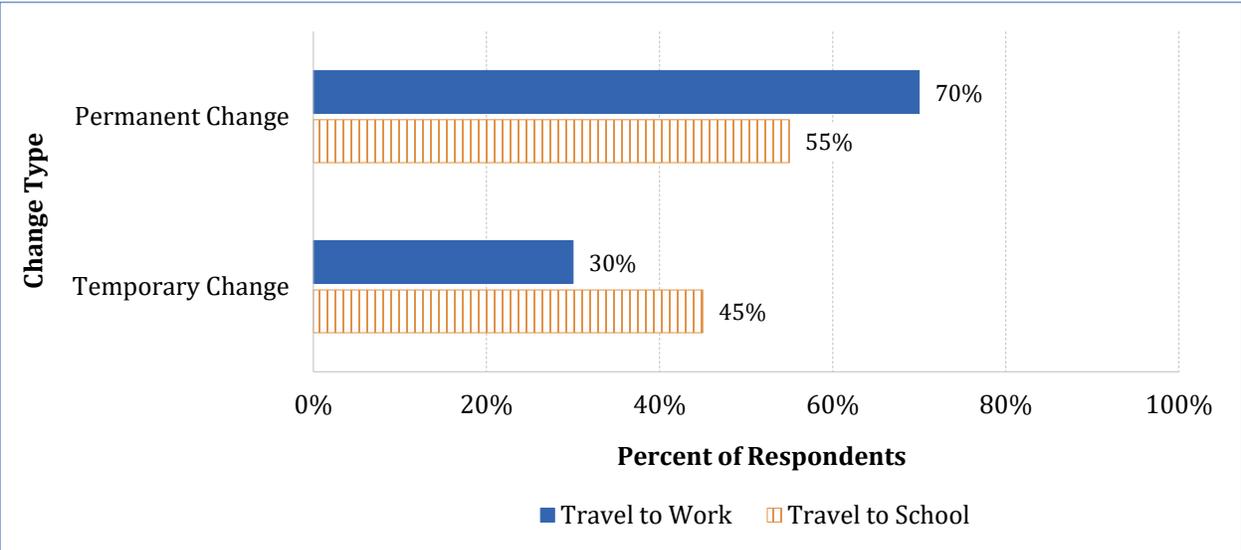
Respondents were asked if their use of public transit or frequency of online shopping has been affected by the pandemic (Figure 1-4). Almost two in five (38%) respondents reported that they used public transit less often than they did prior to the pandemic, while more than one in three respondents (36%) reported online shopping more often than before the pandemic.

Figure 1-4. 2022 Change in Transit Usage and Online Shopping from Before the Pandemic
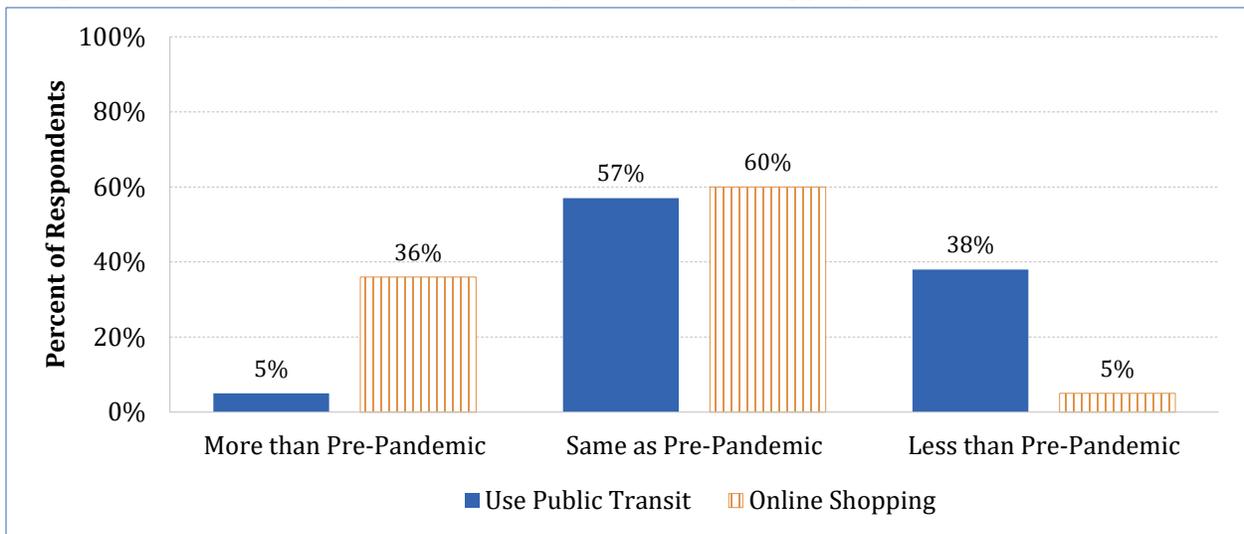
When asked if these changes were temporary or permanent, 83% of online shoppers reported that the change was permanent, while slightly less than half of public transit riders (48%) saw their modified use of transit as a permanent change (Figure 1-5).

Figure 1-5. Trends in Temporary or Permanent Public Transit Usage or Online Shopping Change in 2022
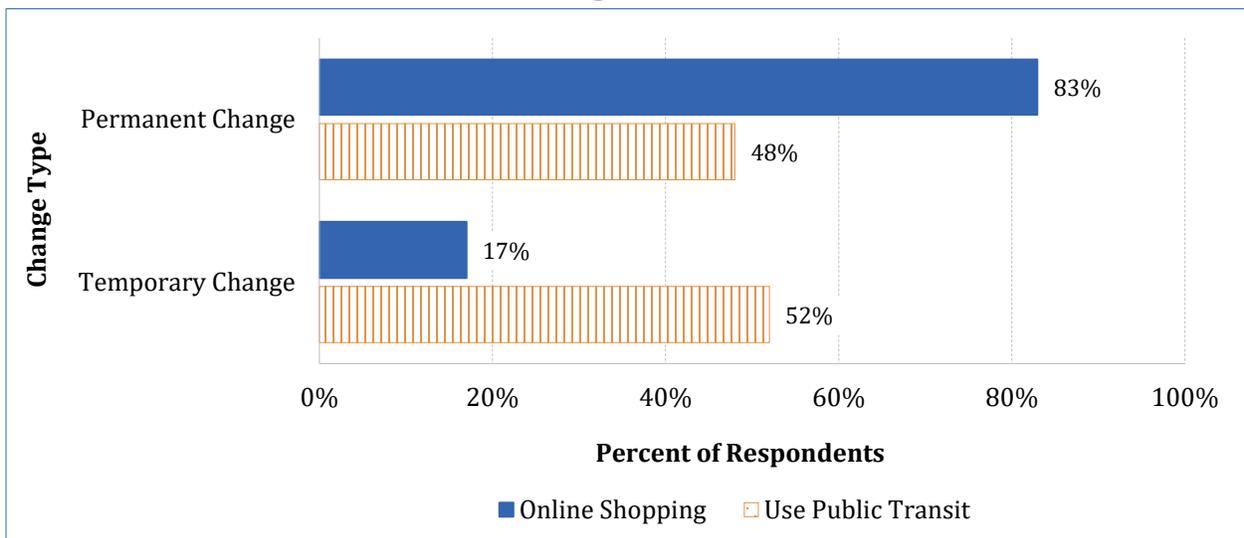
The number of online purchases delivered to the home in the past 30 days doubled for all households from 2017 to 2022 (Figure 1-6). This pattern is consistent regardless of whether there were children present in the household and the age range of the children.

Figure 1-6. Average Number of Household Online Purchases Delivered to Home in the Past 30 Days
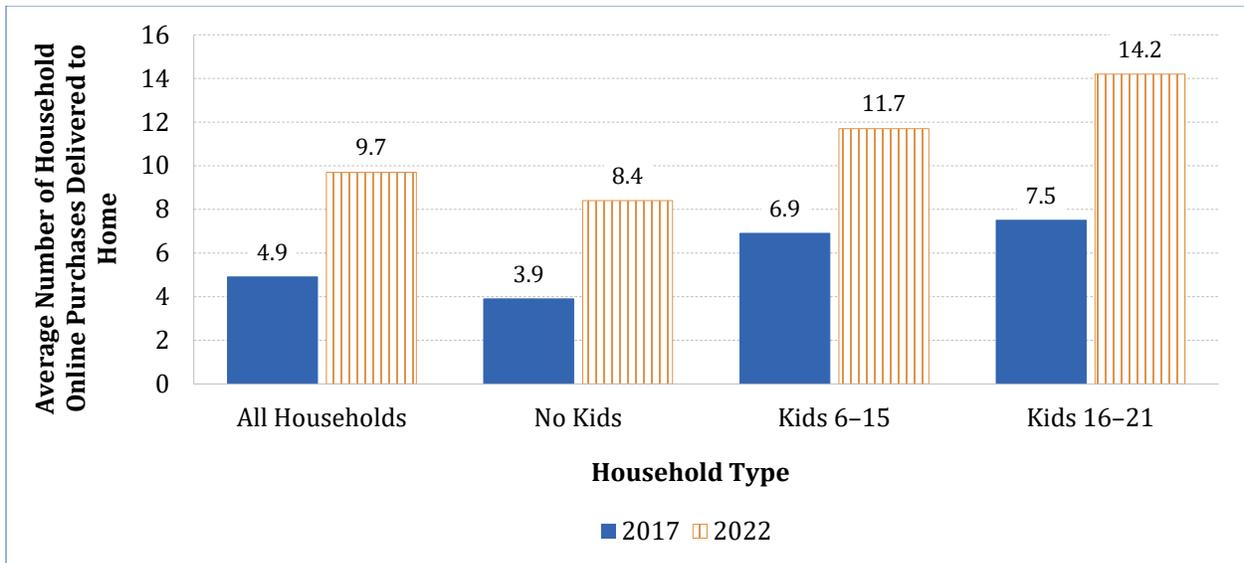
Respondents aged 16 or older were asked how often they personally made online purchases and had them delivered to their home (Figure 1-7). On average, people reported making 5 online purchases within the past 30 days. When broken out by type of service, the story is quite divergent. Those who ordered goods for delivery (Amazon, Walmart, etc.) made an average of 6 orders in the past 30 days. Other types of orders were far less frequent:

- Food deliveries (Uber Eats, Door Dash, etc.) were purchased between one and two times per month.
- Grocery deliveries (Instacart, Amazon Fresh, etc.) were purchased about once per month.
- Service deliveries (home health care, home schooling, etc.) were the least frequent purchases at 0.3 times per month.

Figure 1-7. Average Person-Level Online Purchases by Type in 2022
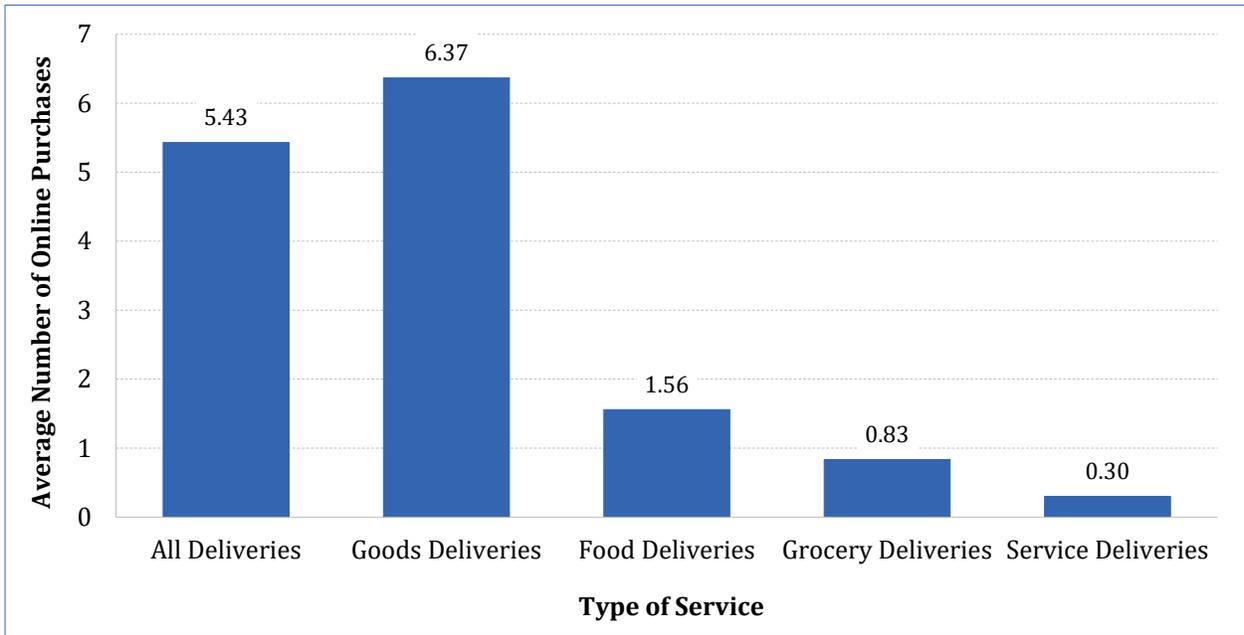
The rate of working from home has increased since the onset of the pandemic, with 62% of workers reporting they never worked from home in 2022, a decrease from 78% in 2017. The number of workers who worked from home for 5 or more days a week increased over 50%, from 12% in 2017 to 19% in 2022 (Table 1-1).

Table 1-1. How Often Workers Work from Home in 2022

Frequency of Working From Home	Survey Year (Percent)	
	2017	**2022**
Never	78	62
1 or 2 days a week	9	12
3 or 4 days a week	1	7
5 or more days a week	12	19
Total	100	100

Respondents who were enrolled in an academic program were asked if their instruction was in-person or online (Figure 1-8). There was a large difference in the proportion of respondents who took classes online as a part-time college student (70%) versus as a full-time college student (33%). A little over 4 in 10 vocational students (43%) took classes online.

Figure 1-8. Distribution of Attendance by Current Academic Program in 2022
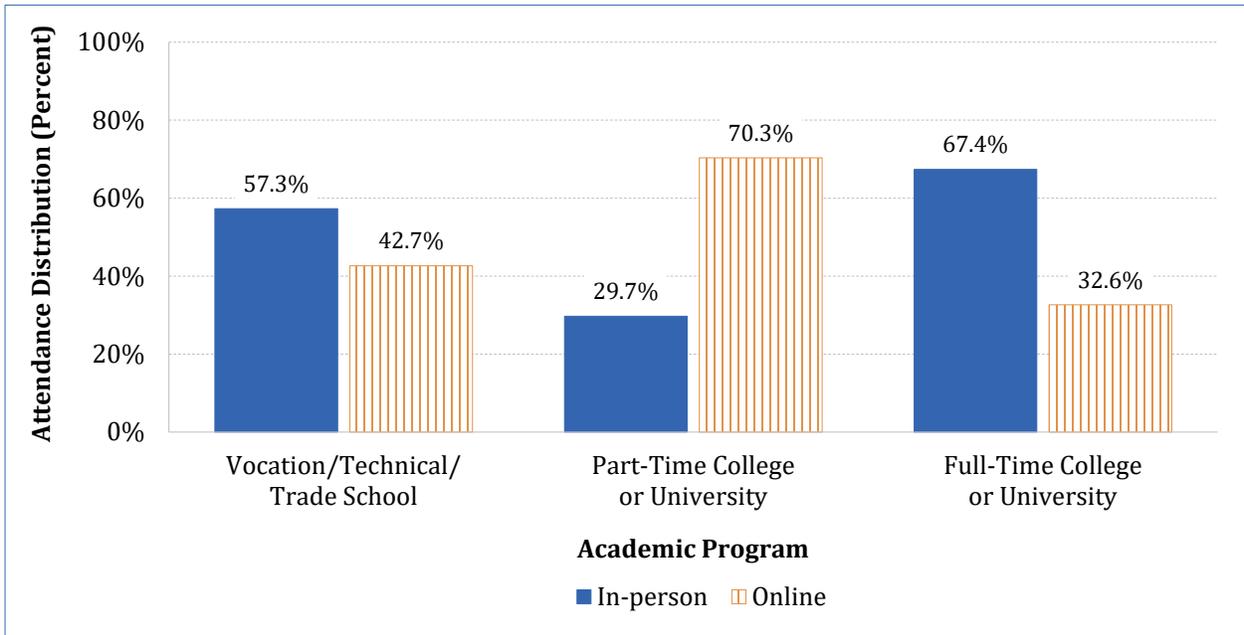
Consistent with the reports of reduced travel and the reasons as outlined in the previous figures, the proportion of households and persons reporting no travel was higher than that observed in prior NHTS results (Table 1-2).

Table 1-2. Reported Levels of Immobility by Survey Year

Survey Year	Households (Percent)	Persons (Percent)
1983	15.2	31.0
1990	16.0	21.5
1995	7.5	12.3
2001	7.4	12.2
2009	8.4	13.2
2017	8.8	17.1
2022	23.8	26.0

1.2. Changes in the NHTS Data Collection Method

Over the 50+ years of data collection activity, NHTS has undergone significant changes in the survey methods, sampling frames, and technologies used for data collection. This section provides a brief overview of the changes over time to aid in interpreting the trends presented in this report.

First, the primary survey mode used in each data collection cycle has evolved over time in accordance with the introduction of new technologies and advancements in general survey industry practices:

- 1969, 1973, and 1983 NPTS were conducted using in-home interviews, with some telephone follow-ups.
- 1990 and 1995 NPTS and 2001 and 2009 NHTS were telephone-based surveys.
- 2017 NHTS offered phone and web survey options (34% completed by phone, 66% online).
- 2022 NHTS offered web and mail survey options (99% completed online, 1% by mail).

In addition to the survey mode, the definition of a "completed household" has varied across NHTS data collection cycles. The following are the definitions of completed households for the most recent surveys (2009, 2017, and 2022) (note that adjustments may be required to directly compare results over time):

- In the 2009 NHTS, household members ages 5 years old or older were asked to report travel details. The dataset included households in which 50% or more of household adults completed the survey.
- In the 2017 NHTS, the dataset included only households in which all members ages 5 years old or older completed a survey.
- For the 2022 NHTS, households of one to three persons required participation by all household members ages 5 years old or older to be included in the data. Households of four or more persons were included in the data if at least 75% of members ages 5 years old or older completed the survey.

The 2022 NHTS marked the start of the Next Generation (i.e., NextGen) NHTS. This redesign reflects the desire to collect data more frequently. To accommodate more frequent data collection cycles, the survey sample size was reduced: instead of the traditional 26,000 households collected every 5–8 years, the NextGen NHTS design calls for the collection of data from 7,500 households on a biennial data collection cycle.

The 2022 survey utilized a mail/push-to-web design. As such, respondents first provided demographic details, were instructed on how to record their daily travel, and then were directed to a separate portion of the online program designed to obtain the core details of daily travel. With this design, respondents were not provided paper logs to take with them on their assigned travel day as in prior surveys[5] nor was a telephone (for interviewer-mediated trip reporting) an option. This change in method mirrors that used in many contemporary regional travel surveys, which employ push-to-web as the primary mode with some designs also offering telephone and smartphone application options for reporting travel. These same regional travel surveys are also moving away

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[5] Provision of a travel log does not imply usage of the device. For actual log usage rates, refer to the DIARY variable in prior NHTS datasets.

from providing travel logs. The change in survey mode (removing a telephone option) and method (not providing a travel log) may affect comparability with some metrics as reported in this report.

To that end, a trip adjustment factor was developed (as described in Appendix A). All 2022 trip-related data have been adjusted using the process described therein. In addition to the changes in survey mode and method, the United States itself has undergone significant changes in travel in these first few years following the pandemic. As such, trends should be interpreted cautiously, as what is being observed is a recovery from the pandemic, not a steady state. There is valid concern whether the 2022 survey method impacted the final results; however, the 2022 final data have been adjusted as described in Appendix A to minimize such effect.

Across time, changes in survey methods and data collection modes have required adjustments to survey results within the context of this *Summary of Travel Trends* report series. These adjustments have been carried forward into this report (indicated with "adj" in the respective table or figure and documented in prior reports) and are noted as follows:

1. **Trip Adjustments:** These adjustments only apply to trip frequency and not to trip attributes (e.g., trip length) nor to household, driver, or vehicle characteristics.
   a. For 1990 data, the number of trips were adjusted to provide forward comparison with the 1995 NPTS.
   b. 2022 trips were adjusted to account for changes in methods from 2017 to 2022 (see Appendix A for more information).
2. **Distance Traveled:**
   a. From 1969 to 2009, trip distance was self-reported from the respondent.
   b. For 2017 and 2022, trip distance was calculated for the shortest path between origin and destination using a Google application programming interface (API).
   c. To aid in trending, 2009 distances are included herein both in their original form (i.e., self-reported) but also in an adjusted format to allow for comparison with 2017 and 2022 network-distance calculations.
3. **Sampling/Sampling Frames:**
   a. The 2001 NHTS sample included children ages 0–4 in the survey. Unless otherwise noted, the 2001 data shown in this report exclude them to be comparable with other survey years.
   b. The 2009 NHTS sample did not include households without landline telephones. The 2017 and 2022 NHTS were ABS frames and included cellphone-only households.
4. **Respondent Instructions:**
   a. Changes in walk trips throughout the data series could be a result, at least in part, to questionnaire changes: the 2009 and 2017 NHTS explicitly prompted respondents to include walk and bike trips, including those for exercise, which was not the case in prior surveys. The 2022 NHTS did not explicitly prompt respondents to include walk and bike trips and instead focused on walking or bicycling as a transport mode (not for exercise).
   b. The 2017 and 2022 NHTS changed the definition of a trip to allow walk and bike trips to and from home (loop trips).

Unlike prior *Summary of Travel Trends* reports, these details will not be repeated under each table as notes. Instead, these and other method changes in the data series are outlined in Appendix B.

Unless otherwise noted, all data are weighted and expanded. The 2022 data used in this report are public release version 2.0.

2.0. Overview

This chapter provides an overview of trends for key demographic characteristics and key travel behavior metrics within the context of those same demographic characteristics. These trends are important as they provide a foundation for the data summarized in the following chapters.

> **Note:** Distance traveled is a key metric used to inform many policy questions. In the NHTS series up to 2009, respondents were asked to self-report travel. Beginning in 2017, distance was calculated using the shortest path routes between reported origins and destinations. In most tables where distance is reported, the data were categorized into survey years where distance was self-reported versus survey years where distance was calculated to enable a more refined evaluation of trends. In those tables, 2009 data were forward-adjusted (denoted with "adj" where applicable) to provide a three-survey comparison of trip length trends using the now standard method of calculating distance traveled.

Table 2-1 through Table 2-4 summarize the growth in households by size and persons by age, sex, worker, and driver status. Household size and the age, sex, worker, and driver status of each household member are considered the key factors associated with travel behavior in the United States. In each table, the totals reflect the weighted and expanded survey results and not any public data source.

Table 2-1. Summary Statistics on Demographic Characteristics by Household Size

| Category | Survey Year | Household Size | | | | |
		1 Person	2 Persons	3 Persons	4+ Persons	All*
Number of Households (thousands)	1969	10,980	18,448	10,746	22,330	62,504
	1977	16,214	22,925	13,046	23,227	75,412
	1983	19,354	27,169	14,756	24,092	85,371
	1990	22,999	30,114	16,128	24,106	93,347
	1995	24,732	31,834	16,827	25,597	98,990
	2001	27,718	35,032	17,749	26,867	107,365
	2009	31,741	37,728	18,104	25,528	113,101
	2017	32,952	40,056	18,521	26,679	118,208
	2022	36,409	44,751	19,001	27,384	127,545
Margins of error (MOEs)	2009	106	135	257	243	—
	2017	—	—	97	97	—
	2022	1,807	1,760	1,448	1,742	2,383

—Not applicable/not available.
*The count in the "All" column reflects the weighted and expanded survey totals. See Table 2-10 for a comparison of survey totals to secondary data sources.
Note: The count of all households can include cases that were not included in any table subcategory; for instance, people who did not report household size are included in the "All" column but not in any household size category.

Table 2-2. Summary Statistics on Demographic Characteristics per Person by Age

| Category | Survey Year | Age (Years) | | | | | |
		<16 Years	16–19	20–34	35–64	65+	All*
Number of Persons (thousands)	1969	60,100	14,598	40,060	62,982	19,473	197,213
	1977	54,958	16,552	52,252	66,988	22,391	213,141
	1983	53,682	15,268	60,788	75,353	24,362	229,453
	1990	54,303	13,851	59,517	82,480	26,955	239,416
	1995	61,411	14,074	59,494	93,766	31,249	259,994
	2001	44,985	14,296	57,680	103,296	32,884	277,203
	2009	44,724	19,414	50,844	129,202	38,870	283,054
	2017	45,498	17,755	64,339	126,350	47,657	321,419
	2022	46,151	16,600	62,988	125,341	54,482	305,561**
MOEs	2009	441	743	1,089	874	0	—
	2017	756	945	954	985	0	0
	2022	4,535	2,464	4,639	5,182	2,995	10,866

—Not applicable/not available.
*The count in the "All" column reflects the weighted and expanded survey totals. See Table 2-10 for a comparison of survey totals to secondary data sources.
**In 2022, the survey data were weighted and expanded to the noninstitutionalized U.S. population only as compared to the prior survey years where the data were weighted and expanded to the full U.S. population.
Note: The count of all persons can include cases that were not included in any table subcategory; for instance, people who did not report their age are included in the "All" column but not in any age category.

Table 2-3. Summary Statistics on Demographic Characteristics per Person by Sex and Age

| Category | Survey Year | Sex and Age (Years) | | | | | |
		All 16+*	All Male	All Male 16+	All Female	All Female 16+	All 5+
Number of Persons (thousands)	1969	137,113	94,465	66,652	102,748	73,526	—
	1977	158,183	102,521	74,542	110,620	83,721	198,434
	1983	175,771	111,514	83,645	117,939	92,080	212,932
	1990	182,803	114,441	86,432	124,975	96,371	222,101
	1995	198,583	126,553	95,627	133,441	102,956	241,675
	2001	208,155	125,321	100,308	132,240	107,847	257,560
	2009	238,330	139,257	116,421	143,797	121,908	283,054
	2017	256,101	148,039	124,903	153,560	131,198	321,419
	2022	259,410**	150,092	126,578	155,469	132,832	305,561
MOEs	2009	441	81	338	81	338	0
	2017	756	0	471	0	397	0
	2022	10,314	6,098	5,607	6,665	6,177	10,866

—Not applicable/not available.
*The count in the "All 16+" column reflects the weighted and expanded survey totals. See Table 2-10 for a comparison of survey totals to secondary data sources.
**In 2022, the survey data were weighted and expanded to the noninstitutionalized U.S. population only as compared to the prior survey years where the data were weighted and expanded to the full U.S. population.
Note: The count of all persons can include cases that were not included in any table subcategory; for instance, people who did not report their age are included in the "All Male" and "All Female" columns but not in any age-related column.

Table 2-4. Summary Statistics on Demographic Characteristics by Drivers and Workers

Category	Survey Year	Workers			Drivers		
		Male	Female	All*	Male	Female	All*
Number of drivers and workers (thousands)	1969	57,981	45,005	75,758	48,487	27,271	102,986
	1977	66,199	61,353	93,019	55,625	37,394	127,552
	1983	75,639	71,376	103,244	58,849	44,395	147,015
	1990	80,289	82,707	118,343	63,996	54,334	163,025
	1995	88,480	87,851	131,697	71,105	60,593	176,330
	2001	94,651	95,773	145,272	78,264	67,007	190,425
	2009	106,813	105,496	151,373	81,939	69,434	212,309
	2017	111,163	112,114	156,988	83,589	73,399	223,277
	2022	115,526	116,278	158,010	82,350	75,659	231,804
MOEs	2009	709	631	893	769	728	959
	2017	588	963	1,012	495	859	827
	2022	4,540	4,669	6,804	4,171	4,189	7,601

*The counts in the "All" columns reflect the weighted and expanded survey totals. See Table 2-10 for a comparison of survey totals to secondary data sources.
Note: The count of all persons can include cases that were not included in any table subcategory; for instance people who did not report their sex are included in the "All Drivers" column but not in the "Male" or "Female" columns.

Table 2-5 presents the growth in household vehicles owned over time and related key travel metrics of vehicle trips, vehicle miles of travel (VMT), person trips, and person miles of travel (PMT).

Table 2-5. Summary Statistics on Demographic Characteristics and Total Travel

Category	Survey Year	Travel Indicator				
		Household Vehicles (Thousands)	Household Vehicle Trips (Millions)	Household VMT (Millions)	Person Trips (Millions)	PMT (Millions)
Trends based on self-reported distance	1969	72,500	87,284	775,940	145,146	1,404,137
	1977	120,098	108,826	907,603	211,778	1,879,215
	1983	143,714	126,874	1,002,139	224,385	1,946,662
	1990 (adj)	165,221	193,916	1,695,290	304,471	2,829,936
	1995	176,067	229,745	2,068,368	378,930	3,411,122
	2001	201,308	233,030	2,274,769	384,485	3,783,979
	2009	210,778	233,849	2,245,111	392,023	3,732,791
Trends based on network-calculated distance	2009 (adj)	—	—	2,035,051	—	3,415,608
	2017	222,579	220,430	2,105,882	371,152	3,970,287
	2022	232,837	160,953	1,848,031	253,755	3,184,397
MOEs	2009 (adj)	—	—	50,580	—	135,010
	2017	917	2,561	88,113	4,395	150,877
	2022	6,135	7,134	124,934	114,790	278,532

—Not applicable/not available.
Note: For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

The data series in Table 2-6 and Table 2-7 show that over the last five decades, American households acquired more vehicles and drivers. In the United States in 1969, there were almost as many vehicles as workers. Vehicles then outpaced workers beginning in 1977, a trend that has persisted through 2022. As the average household size has stabilized, average vehicles per household, drivers per household, and workers per household have all remained rather stable over the last two decades with a slight dip in 2022.

Table 2-6. Major Travel Indicators by Survey Year

Survey Year	Travel Indicator (Average)					
	Person per Household	Vehicles per Household	Drivers per Household	Vehicles per driver	Workers per Household	Vehicles per Worker
1969	3.16	1.16	1.65	0.70	1.21	0.96
1977	2.83	1.59	1.69	0.94	1.23	1.29
1983	2.69	1.68	1.72	0.98	1.21	1.39
1990	2.56	1.77	1.75	1.01	1.27	1.40
1995	2.63	1.78	1.78	1.00	1.33	1.34
2001	2.58	1.89	1.77	1.06	1.35	1.39
2009	2.50	1.86	1.88	0.99	1.34	1.39
2017	2.55	1.88	1.89	1.00	1.33	1.42
2022	2.40	1.83	1.82	1.00	1.24	1.47

Note: In 1969, household vehicles did not include pickups or other light trucks.

As shown in Table 2-7, in 2022, the West Census region had the largest household size and driver rates in the country (states in each Census region are listed in Appendix D). The Midwest Census region had smaller households on average but had the most vehicles per household. The Northeast Census region had fewer vehicles and drivers per household. The South Census region had the fewest workers per household and the second most vehicles per worker.

Table 2-7. Major Travel Indicators by Census Region in 2022

Census Region	Travel Indicator (Average)					
	Persons per Household	Vehicles per Household	Drivers per Household	Vehicles per Driver	Workers per Household	Vehicles per Worker
All	2.40	1.83	1.82	1.00	1.24	1.47
Northeast	2.34	1.61	1.65	0.97	1.28	1.26
Midwest	2.29	1.96	1.82	1.08	1.22	1.61
South	2.40	1.80	1.81	0.99	1.18	1.52
West	2.54	1.91	1.95	0.98	1.32	1.45

Since 1969, the growth in the number of workers and drivers has outpaced the growth in the number of households and persons. However, as shown in Figure 2-1, the growth in the number of vehicles has outpaced all other indicators. Since 1969, the annual rate of increase in the number of personal vehicles was almost 1.5 times the annual rate of increase in the number of drivers.

Figure 2-1. Indexed Changes in Demographics
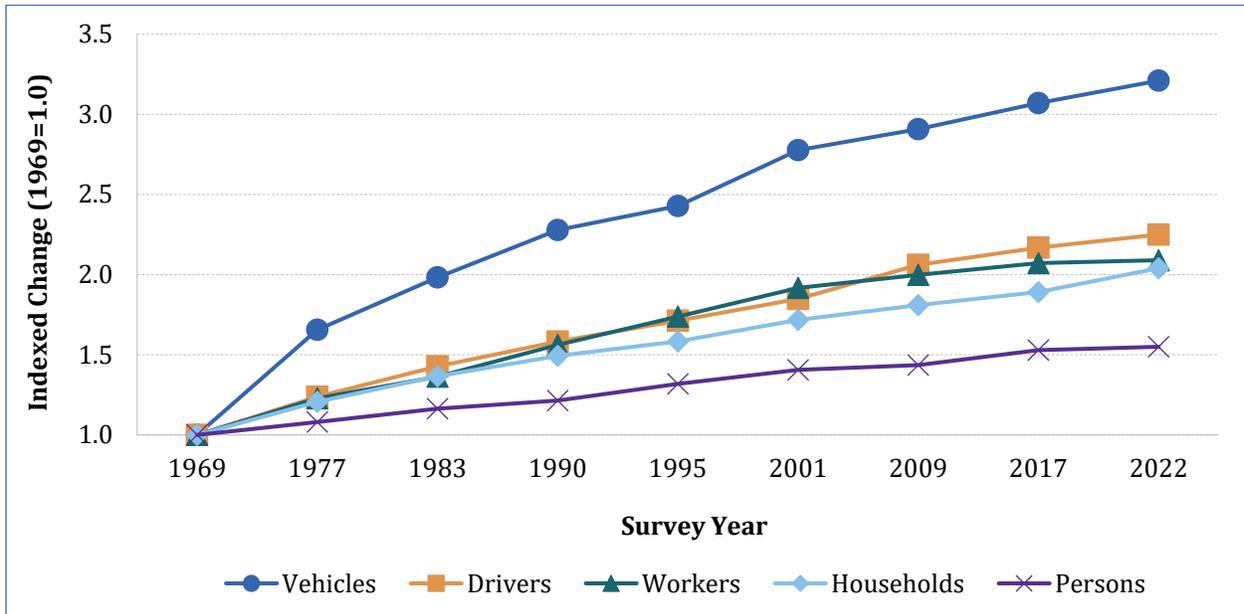
The per capita growth in travel that the United States experienced from 1969–1995 has not continued into the 21st century. Slight declines can be seen in 2001, 2009, and 2017, but the largest dip was in 2022. Americans did not travel nearly as often 2 years after the pandemic compared to prior survey years at either the household level (Table 2-8) or the person level (Table 2-9).

The estimates of travel for U.S. households show significant changes in trip-making. The estimates of person trips per household were 37% lower in 2022 than 2017, while vehicle trips per household were 32% lower over the same timeframe. The trend has been declining since 1995, but 2022 stands alone with a larger decline than any other year by far.

More research is needed to fully assess the temporary nature of this drop in travel. Had FHWA maintained its original survey cycle of conducting NHTS every 5–8 years, the changes in travel in this post-pandemic recovery period would not have been captured.

Table 2-8. Summary of Household Travel Statistics

Category	Survey Year	Household Travel Statistic			
		Average Daily Person Trips per Household	Average Daily PMT per Household	Average Daily Vehicle Trips per Household	Average Daily VMT per Household
Trends based on self-reported distance	1969	6.36	61.55	3.83	34.01
	1977	7.69	68.27	3.95	32.97
	1983	7.20	62.47	4.07	32.16
	1990 (adj)	8.94	83.06	5.69	49.76
	1995	10.49	94.41	6.36	57.25
	2001	9.66	95.24	5.95	58.05
	2009	9.50	90.42	5.66	54.38
Trends based on network-calculated distance	2009 (adj)	—	82.74	—	49.30
	2017	8.60	92.02	5.11	48.81
	2022	5.45	68.40	3.46	39.70
MOEs	2009 (adj)	—	3.27	—	1.23
	2017	0.10	3.50	0.06	2.04
	2022	0.23	5.93	0.14	2.63

—Not applicable/not available.
Note: For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 2-9. Summary of Person Travel Statistics

Category	Survey Year	Person Travel Statistic					
		Average Daily Person Trips per Person	Average Daily PMT per Person	Average Daily Vehicle Trips per Driver	Average Daily VMT per Driver	Average Person Trip Length (Miles)	Average Vehicle Trip Length (Miles)
Trends based on self-reported distance	1969	2.02	19.51	2.32	20.64	9.67	8.89
	1977	2.92	25.95	2.34	19.49	8.87	8.34
	1983	2.89	25.05	2.36	18.68	8.68	7.90
	1990 (adj)	3.76	34.91	3.26	28.49	9.47	8.85
	1995	4.30	38.67	3.57	32.14	9.13	9.06
	2001	4.09	36.89	3.35	32.73	10.04	9.87
	2009	3.79	36.13	3.02	28.97	9.75	9.72
Trends based on network-calculated distance	2009 (adj)	—	33.06	—	26.26	8.92	8.81
	2017	3.37	36.07	2.70	25.84	10.70	9.55
	2022	2.28	28.55	1.90	21.84	12.56	11.48
MOEs	2009 (adj)	—	1.31	—	0.65	0.34	0.20
	2017	0.04	1.47	0.03	1.04	0.40	0.37
	2022	0.06	2.39	0.05	1.34	1.04	0.69

—Not applicable/not available.
Note: For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 2-10 compares key survey variables for each NHTS with external sources. The other sources employed for the 2022 comparison are listed in the notes. Of note in this table is the range of values for the survey-measured VMT associated with household noncommercial travel and the external other sources of VMT for that same year. In 1983, the first year compared, the survey VMT was about 60% of the external source. In 1990, the survey VMT was 80% of the external source, and that measure increased to 97% of the external source in 1995. After 1995, the proportion of household VMT as compared to external sources decreased to 91% in 2001, 88% in 2009, and 80% in 2017. In 2022, the survey VMT reflects 71% of the external source VMT. While additional research is needed to assess the continued decline in household-generated VMT as compared to other sources, the simultaneous increases in reports of online purchases with home deliveries as well as growth in online banking, home health services, and telemedicine, among others, should be taken into account in interpreting this trend.

Table 2-10. Comparison of Survey Metrics With Other Sources

Survey Year	Source	Survey Metrics (Numbers in Thousands, Except VMT [Millions])					
		Households	Population	Drivers	Workers	Vehicles	VMT
1969	Other sources	61,806	199,145	108,306	—	89,174	—
	1969 NPTS	62,504	197,213	102,986	—	72,500	—
1977	Other sources	74,142	218,106	138,121	—	132,155	—
	1977 NPTS	75,412	213,141	127,552	—	120,098	—
1983	Other sources	83,918	232,086	154,389	—	152,070	1,652,788
	1983 NPTS	85,371	229,453	147,015	—	143,714	1,002,139
1990	Other sources	91,947	247,826	167,015	125,840	172,902	2,144,362
	1990 NPTS	93,347	239,416	163,025	118,343	165,221	1,695,290
1995	Other sources	97,386	261,538	176,628	132,300	180,735	2,139,307
	1995 NPTS	98,990	259,994	176,330	131,697	176,067	2,068,368
2001	Other sources	108,209	285,318	191,276	143,730	205,551	2,494,951
	2001 NHTS	107,365	277,203	186,280	142,850	202,586	2,274,769
2009	Other sources	117,181	307,007	208,321	154,140	231,490	2,562,305
	2009 NHTS	112,520	299,802	211,270	151,370	216,056	2,245,111
2017	Other sources	118,208	321,419	218,084	151,144	243,843	2,638,583
	2017 NHTS	118,208	321,419	223,277	156,988	222,579	2,105,882
2022	Other sources	125,736	333,287*	232,782	149,992	252,468	2,619,421
	2022 NHTS	127,545	305,561	231,804	158,010	232,837	1,848,031

—Not applicable/not available.
*Includes children under the age of 5 and those living in group quarters.
Note: Please refer to previous *Summary of Travel Trends* publications for the sources used for comparisons to prior surveys. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2. Other sources for 2022 comparisons include: **Households—**Census QuickFacts Table US Households 2018–2022, https://www.census.gov/quickfacts/fact/table/US/HSD410215#viewtop; **Population—**Population in Occupied Housing Units, estimate 2022, https://www.census.gov/quickfacts/fact/table/US/HSD410215#viewtop; **Drivers—**2021 estimate from Highway Statistics Table DL-22, https://www.fhwa.dot.gov/policyinformation/statistics/2021/dl22.cfm; **Workers—**2022 American Community Survey 1-year estimate, Table B18120, https://data.census.gov/table?q=B18120; and **Vehicles and VMT—**Light-duty vehicles (short wheelbase) plus motorcycles plus (based on the 2021 Vehicle Inventory and Use Survey [VIUS]) 75.3% of light-duty vehicles with wheelbases larger than 121 inches, note that the 2017 and 2009 estimates used the 2001 VIUS, http://www.fhwa.dot.gov/policyinformation/statistics/2021/vm1.cfm and https://data.census.gov/table/VIUSA2021.VIUS212A?q=vius21.

3.0. Household Travel

As the Nation continues to recover from the pandemic, households continue to adjust their travel in response to work and school location changes and more dependable hours and service levels for stores, restaurants, and other public places. As noted in Chapter 1, some of these adjustments equate to travel, while other households reported a permanent change to working from home and their volume of online orders for home delivery. Throughout this report, it is important to evaluate the trends in light of the transitions taking place across the United States in 2022 and not more current trends with return-to-office orders and so forth.

This chapter presents household-level travel metrics, including average annual PMT; person trip length; person trips; VMT; and vehicle trips by purpose, mode of transportation, metropolitan statistical area (MSA) size, and household income. As noted earlier, households generated fewer PMT in 2022 (Table 3-1) compared to 2017, a decrease of 26%. A similar decline can be seen in the annual number of household trips, a decrease of 37% (Table 3-2). The largest decline for PMT can be seen in shopping trips with a decrease of 53% from 2017 to 2022, which somewhat reflects earlier data showing online shopping with home deliveries doubled across that same time period.

While there were fewer trips made in 2022, the average length of each trip was longer compared to 2017 and previous NHTS years (Table 3-3). The average trip length increased from 11 miles in 2017 to 13 miles in 2022. This increase suggests that respondents may be cutting out shorter trips, which may be attributed to reduced commuting to work since many more people work from home due to the pandemic as well as online activities like shopping, banking, postage, and grocery orders for home delivery increasing in frequency. The increase in commute trip length could also be attributed to people moving further out since they are able to telework more.

Table 3-1. Average Annual PMT per Household by Trip Purpose

Category	Survey Year	Trip Purpose							
		To/From Work	Work-Related Business	Shopping	Other Family/Personal Errands	School/Church	Social and Recreational	Other	All
Trends based on self-reported distance	1983	4,586	1,354	2,567	3,311	1,522	8,964	500	22,802
	1990	5,637	1,043	3,343	7,167	1,599	11,308	214	30,316
	1995	7,740	1,987	4,659	7,381	1,973	10,571	131	34,459
	2001	6,706	2,987	4,887	6,671	2,060	10,586	1,216	35,244
	2009	6,256	2,078	4,620	5,134	2,049	9,989	2,878	33,004
Trends based on network-calculated distance	2009 (adj)	5,851	1,901	4,157	4,626	1,879	9,048	2,737	30,200
	2017	6,259	1,326	4,122	4,469	2,189	8,964	6,260	33,587
	2022	4,910	1,458	1,957	3,102	1,406	9,997	2,137	24,967
MOEs	2009 (adj)	163	233	165	203	112	552	862	1,194
	2017	205	326	343	254	394	362	971	1,276
	2022	543	523	232	359	230	1,638	964	2,144

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category can include cases where trip purpose was not provided. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 3-2. Average Annual Person Trips per Household by Trip Purpose

| Category | Survey Year | Trip Purpose | | | | | | | |
		To/From Work	Work Related Business	Shopping	Other Family/Personal Errands	School/Church	Social and Recreational	Other	All
Average annual person trips	1983	537	62	474	456	310	728	61	2,628
	1990 (adj)	539	38	630	854	304	874	22	3,262
	1995	676	100	775	981	337	953	6	3,828
	2001	565	109	707	863	351	952	30	3,581
	2009	541	106	725	748	333	952	61	3,466
	2017	546	51	580	628	341	866	128	3,140
	2022	366	70	337	364	225	588	40	1,990
MOEs	2009	7.9	7.4	14.6	13.9	9.8	14.1	4.1	31.8
	2017	11.3	3.5	14.1	13.8	8.1	22.0	3.1	37.2
	2022	23.7	12.0	27.3	29.6	27.1	34.5	9.1	79.9

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category can include cases where trip purpose was not provided. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 3-3. Average Person Trip Length by Trip Purpose

| Category | Survey Year | Trip Purpose | | | | | | | |
		To/From Work	Work-Related Business	Shopping	Other Family/Personal Errands	School/Church	Social and Recreational	Other	All
Trends based on self-reported distance	1983	8.5	21.8	5.4	7.3	4.9	12.3	8.2	8.7
	1990	10.7	28.2	5.4	8.6	5.4	13.2	10.3	9.5
	1995	11.6	20.3	6.1	7.6	6.0	11.3	22.8	9.1
	2001	12.1	28.3	7.0	7.8	6.0	11.4	43.1	10.0
	2009	11.8	20.0	6.5	7.0	6.3	10.7	51.5	9.7
Trends based on network-calculated distance	2009 (adj)	11.0	18.3	5.9	6.3	5.8	9.7	48.9	8.9
	2017	11.5	25.9	7.1	7.1	6.4	10.4	49.1	10.7
	2022	13.4	20.7	5.8	8.6	6.2	17.1	54.1	12.6
MOEs	2009 (adj)	0.3	1.9	0.2	0.3	0.3	0.6	14.3	0.3
	2017	0.3	6.4	0.5	0.3	1.2	0.5	7.3	0.4
	2022	1.3	6.5	0.5	0.9	0.8	2.7	24.0	1.0

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category can include cases where trip purpose was not provided. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 3-4 and Table 3-5 display trends in the average annual VMT and average trip length by select trip purposes. The 2022 estimates of overall VMT per household reflect the change in trip-making associated with pandemic recovery (continued work/school from home, increased use of telecommunications in lieu of shopping and personal errands, etc.). The same pattern as seen in

previous tables emerges in these as well, as only social and recreational trips saw an increase in 2022 compared to 2017 and 2009.

Table 3-4. Average Annual VMT by Selected Trip Purposes

| Category | Survey Year | Trip Purpose | | | | |
		To/From Work	Shopping	Other Family/ Personal Errands	Social and Recreational	All
Trends based on self-reported distance	1983	3,538	1,567	1,816	3,534	11,739
	1990	4,853	2,178	4,250	5,359	18,161
	1995	6,492	2,807	4,307	4,764	20,895
	2001	5,724	3,062	3,956	5,186	21,187
	2009	5,513	2,979	3,515	4,842	19,850
Trends based on network-calculated distance	2009 (adj)	5,135	2,671	3,153	4,342	17,993
	2017	5,379	2,618	2,982	4,327	17,815
	2022	4,357	1,320	2,220	4,551	14,489
MOEs	2009 (adj)	138.3	87.1	109.1	234.0	447.2
	2017	192.3	304.3	217.0	182.3	745.4
	2022	466.2	152.6	249.9	491.8	945.0

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category can include cases where trip purpose was not provided and those trip purposes not highlighted in this table. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 3-5. Average Trip Length by Selected Trip Purposes

| Category | Survey Year | Trip Purpose | | | | |
		To/From Work	Shopping	Other Family/ Personal Errands	Social and Recreational	All
Trends based on self-reported distance	1983	8.6	5.3	6.7	10.6	7.9
	1990	11.0	5.1	7.4	11.8	8.9
	1995	11.8	5.6	6.9	11.2	9.1
	2001	12.1	6.7	7.5	11.9	9.9
	2009	12.2	6.4	7.1	11.2	9.7
Trends based on network-calculated distance	2009 (adj)	11.3	5.8	6.4	10.1	8.8
	2017	12.0	7.0	6.9	10.6	9.6
	2022	13.5	5.8	8.7	14.0	11.5
MOEs	2009 (adj)	0.2	0.2	0.2	0.5	0.2
	2017	0.4	0.8	0.4	0.4	0.4
	2022	1.2	0.4	0.9	1.4	0.7

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category can include cases where trip purpose was not provided and those trip purposes not highlighted in this table. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Following the trends in person trips, in 2022, a typical household generated significantly fewer vehicle trips than in 2017 or any previous year (Table 3-6). Other family/personal errand trips saw the largest decline, with 41% fewer trips made in 2022 than in 2017, consistent with reports of

increased online shopping as well as increased availability of online options for banking, grocery orders, and so forth.

Table 3-6. Average Annual Vehicle Trips per Household by Selected Trip Purposes

Category	Survey Year	Trip Purpose				
		To/From Work	Shopping	Other Family/ Personal Errands	Social and Recreational	All
Average annual vehicle trips per household	1983	414	297	272	335	1,486
	1990 (adj)	448	431	579	460	2,077
	1995	553	501	626	427	2,321
	2001	479	459	537	441	2,171
	2009	457	468	500	436	2,068
	2017	450	372	434	410	1,865
	2022	324	229	258	326	1,262
MOEs	2009	7.8	9.2	9.2	8.4	20.8
	2017	9.6	10.2	11.0	10.6	21.7
	2022	22.2	19.0	21.1	19.7	49.8

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category can include cases where trip purpose was not provided and those trip purposes not highlighted in this table. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 3-7 displays the trends in average annual person trips per household by mode of transportation and MSA size. Regardless of the population of the area where a given household is located, personal vehicle has been by far the most utilized means of transportation.

Households in MSAs with 3 million or more people were much more likely to take public transit than other MSA sizes, although this makes up a small fraction of the modes used. The lower public transit mode share shown in this table is consistent with reports of reduced transit usage nationally as well as by respondents to the 2022 NHTS.

Table 3-7. Average Annual Person Trips per Household by Mode of Transportation and MSA Size

Category	Survey Year	MSA Size						
		Rural, Not in MSA	<250K	250K–500K	500K–<1M	1M–<3M	3M+	All
All modes	1983	2,766	2,889	2,891	2,542	2,463	2,326	2,628
	1990 (adj)	3,151	3,450	3,340	3,252	3,344	3,213	3,262
	1995	3,878	3,926	3,894	3,916	3,795	3,765	3,828
	2001	3,435	3,678	3,645	3,692	3,602	3,593	3,581
	2009	3,275	3,395	3,356	3,529	3,446	3,614	3,466
	2017	2,966	2,984	3,103	3,141	3,178	3,246	3,140
	2022	1,691	1,889	2,240	2,171	1,985	1,950	1,990
All modes MOEs	2009	77.0	128.0	144.2	151.1	78.1	55.2	31.8
	2017	85.0	128.3	127.9	79.1	99.9	42.7	37.2
	2022	289.9	180.8	310.1	251.2	162.3	133.7	79.9
Private vehicle	1983	2,322	2,375	2,443	2,140	2,031	1,691	2,152
	1990 (adj)	2,837	3,090	3,014	2,957	2,986	2,649	2,861
	1995	3,492	3,503	3,472	3,509	3,354	3,075	3,307
	2001	3,076	3,304	3,251	3,348	3,174	2,911	3,090
	2009	2,898	2,980	2,950	3,020	2,951	2,793	2,892
	2017	2,623	2,620	2,718	2,698	2,678	2,446	2,592
	2022	1,507	1,726	1,903	1,947	1,786	1,588	1,730
Private vehicle MOEs	2009	72.5	117.7	141.0	143.9	73.6	50.0	30.3
	2017	81.4	122.6	121.9	73.4	89.4	37.1	29.7
	2022	180.3	139.1	167.2	192.9	120.0	90.5	65.5
Public transit	1983	11	17	23	48	67	181	60
	1990 (adj)	14	30	22	33	52	124	58
	1995	9	23	18	33	37	137	67
	2001	6	12	18	11	36	128	58
	2009	4	14	15	41	39	148	66
	2017	6	33	34	42	50	170	80
	2022	7	14	15	11	23	56	29

Category	Survey Year	MSA Size						
		Rural, Not in MSA	<250K	250K–500K	500K–<1M	1M–<3M	3M+	All
Public transit MOEs	2009	1.8	8.2	6.9	17.0	8.5	11.0	4.3
	2017	2.3	8.0	11.9	9.2	9.4	8.0	3.6
	2022	9.1	14.6	13.2	9.9	15.5	19.4	7.9
Walk	1983	211	280	199	184	179	330	226
	1990 (adj)	175	212	203	161	207	337	234
	1995	134	138	152	138	162	301	205
	2001	221	248	251	224	275	423	309
	2009	239	270	268	314	313	514	362
	2017	204	217	228	274	303	479	329
	2022	76	86	121	124	108	204	136
Walk MOEs	2009	17.1	47.5	23.1	51.6	20.1	28.6	13.0
	2017	35.5	18.2	32.7	20.4	25.8	15.9	13.5
	2022	43.0	26.3	55.9	42.2	22.3	38.9	16.5

Note: The "Rural, Not in MSA" category includes only full counties designated as rural. There may also be rural pockets included within MSA boundaries. Public transit includes local bus, commuter bus, commuter train, subway, trolley, and streetcar. The "All" category can include cases where MSA status was not available. Trips reported for "All modes" can include cases that were not included in any table subcategory; for instance, trips by bicycle are included in the "All modes" trip rates but not in any subcategory. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

The data series in Table 3-8 shows that higher household income is related to greater travel. The highest-earning households annually produced 82% to 130% more person trips compared to the lowest-earning households from 1990–2017. However, in 2022, the gap widened even further, with the highest-earning households taking 191% more trips than the lowest-earning households.

Table 3-8. Number of Annual Person Trips per Household by Household Income

Category	Survey Year	Household Income							
		<$15K	$15K–<$25K	$25K–<$35K	$35K–<$50K	$50K–<$75K	$75K–<$100K	$100K+	All
Annual person trips per household	1990 (adj)	2,298	3,072	3,685	4,214	4,549	4,537	—	3,262
	1995	2,525	3,263	3,914	4,483	4,710	4,910	4,723	3,828
	2001	2,272	3,028	3,411	4,015	4,761	5,214	5,253	3,793
	2009	2,200	2,616	3,018	3,278	3,967	4,504	4,947	3,466
	2017	2,214	2,477	2,756	2,979	3,172	3,487	4,033	3,140
	2022	892	1,505	1,613	1,614	1,714	2,429	2,596	1,990
MOEs	2009	98.8	101.9	111.8	109.6	100.4	112.0	117.4	31.2
	2017	111.6	145.7	93.6	134.4	81.4	90.4	104.8	37.2
	2022	169.2	406.0	233.7	221.1	174.9	241.8	140.2	79.9

—Not applicable; the highest income category in the 1990 NPTS was "$80,000 or more."
Note: The "All" category includes those households that did not provide household income. The 2017 and 2022 NHTS asked about income in different categories than previous surveys, therefore this table will not match the *Summary of Travel Trends* 2009 and earlier. Incomes for 1990 and 1995 have been adjusted to 2001 dollars (https://www.bls.gov/data/inflation_calculator.htm). All other incomes are as reported in the respective survey year. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

4.0. Person Travel

The 2022 NHTS person travel estimates reflect changes in travel habits recovering from the pandemic, advances in telecommunication options, and online shopping and home delivery and services. As a result, the steepest decline, apart from the other trip purpose category, was seen in shopping and personal errands with a decrease of 37% from 2017 to 2022, which was followed by school/church trips with a decrease of 27% combined (individually, school trips declined by 18% while church trips declined by 40%). Similar trends are seen when limited to personal vehicle trips. However, with public transit, there was a significant decline regardless of trip purpose, and the same was true of walking trips. Table 4-1 and Table 4-2 display these findings.

Table 4-1. Annual Number (Millions) of Person Trips by Mode of Transportation and Trip Purpose

Category	Survey Year	Trip Purpose					
		To/From Work	Work-Related Business	Shopping and Personal Errands	School/ Church	Social and Recreational	Other
All modes	1990 (adj)	50,314	3,529	138,559	28,397	81,575	2,014
	1995	66,901	9,860	173,764	33,355	94,362	623
	2001	60,690	11,676	168,560	37,671	102,165	3,198
	2009	61,214	11,943	166,535	37,676	107,722	6,933
	2017	64,582	6,048	142,754	40,303	102,327	15,139
	2022	46,637	8,971	89,384	28,707	75,019	5,038
All modes MOEs	2009	901.9	849.2	2,536.5	1,119.2	1,617.9	468.3
	2017	1,333.0	409.3	1,469.3	955.6	2,605.5	362.8
	2022	3,287.6	1,550.9	6,145.9	3,555.6	4,967.5	1,172.3
Private vehicle	1990 (adj)	45,856	3,178	128,368	17,545	70,382	1,629
	1995	60,740	8,835	156,065	22,436	78,809	470
	2001	56,054	10,648	153,270	26,861	82,437	2,147
	2009	55,969	10,525	146,158	26,654	82,887	4,925
	2017	56,981	4,844	126,268	28,427	78,890	10,988
	2022	43,337	8,308	82,350	18,905	64,188	3,567
Private vehicle MOEs	2009	941.4	767.1	2,487.7	968.2	1,583.2	304.1
	2017	1,276.6	272.7	1,343.8	990.0	2,262.4	400.8
	2022	3,175.1	1,420.5	5,915.3	2,367.1	4,662.8	1,005.5
Public transit	1990 (adj)	1,992	92	1,318	1,076	946	35
	1995	2,328	123	2,000	826	1,350	11
	2001	2,271	213	1,776	800	989	134
	2009	2,247	264	2,344	829	1,426	409
	2017	3,537	208	2,586	1,009	1,618	487
	2022	1,167	65	1,236	304	619	310
Public transit MOEs	2009	254.2	93.7	264.7	131.8	195.0	114.5
	2017	214.3	72.2	198.5	182.0	131.0	82.5
	2022	454.0	54.8	666.5	192.0	273.2	319.2

Category	Survey Year	To/From Work	Work-Related Business	Shopping and Personal Errands	School/ Church	Social and Recreational	Other
				Trip Purpose			
Walk	1990 (adj)	1,999	154	7,722	3,649	8,090	265
	1995	1,510	240	8,756	2,925	6,845	47
	2001	1,715	487	11,936	3,630	14,824	507
	2009	1,854	684	15,174	3,542	18,833	874
	2017	2,523	510	11,496	4,146	18,483	1,790
	2022	1,179	263	4,567	2,790	7,951	640
Walk MOEs	2009	230.4	136.1	818.7	479.4	768.4	157.6
	2017	258.3	68.2	680.0	459.5	724.0	122.3
	2022	422.4	219.8	970.8	1,200.4	1,192.7	307.9

Note: The "Other" trip purpose category includes trips for purposes not shown and those not categorized. Trips reported for "All modes" can include cases that were not included in any table subcategory. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 4-2. Distribution of Person Trips by Trip Mode and Trip Purpose (Percent)

Category	Survey Year	To/From Work	Work-Related Business	Shopping and Personal Errands	School/ Church	Social and Recreational	Other	All
				Trip Purpose				
Private vehicle	1990 (adj)	91.2	90.3	92.7	61.9	86.3	81.4	87.8
	1995	92.8	91.9	92.6	69.6	87.6	83.2	89.3
	2001	92.4	91.2	90.9	71.3	80.7	67.2	86.3
	2009	91.4	88.1	87.8	70.7	76.9	71.0	83.4
	2017	88.2	80.1	88.5	70.5	77.1	72.6	82.6
	2022	92.9	92.6	92.1	65.9	85.6	70.8	87.0
Public	1990 (adj)	4.0	2.6	1.0	3.8	1.2	1.7	1.8
	1995	3.6	1.3	1.2	2.6	1.5	1.9	1.8
	2001	3.7	1.8	1.1	2.1	1.0	4.2	1.6
	2009	3.7	2.2	1.4	2.2	1.3	5.9	1.9
	2017	5.5	3.4	1.8	2.5	1.6	3.2	2.5
	2022	2.5	0.7	1.4	1.1	0.8	6.2	1.5
Walk	1990 (adj)	4.0	4.4	5.6	12.8	9.9	13.2	7.2
	1995	2.3	2.4	5.0	8.8	7.3	7.6	5.4
	2001	2.8	4.2	7.1	9.6	14.5	15.9	8.6
	2009	3.0	5.7	9.1	9.4	17.5	12.6	10.4
	2017	3.9	8.4	8.1	10.3	18.1	11.8	10.5
	2022	2.5	2.9	5.1	9.7	10.6	12.7	6.9

Note: Changes in walk trips throughout the data series could be a result, at least in part, to questionnaire changes. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

A similar decline in trips across most trip purposes can be seen for males and females in 2022 (Table 4-3). There is a persistent trend related to sex and trip purpose across survey years, with males more likely to make trips to and from work as well as work-related business trips and females more likely to make shopping trips and go on personal errands. These differences between males

and females persist in the 2022 data. In 2022, females and males took roughly the same number of trips overall.

Table 4-3. Annual Number of Person Trips per Person by Trip Purpose and Sex

Category	Survey Year	Trip Purpose						
		To/From Work	Work-Related Business	Shopping and Personal Errands	School/Church	Social and Recreational	Other	Total
All	1990 (adj)	210	15	579	119	341	8	1,371
	1995	257	38	668	128	363	2	1,568
	2001	219	42	608	136	369	12	1,469
	2009	216	42	588	133	381	24	1,385
	2017	214	20	473	134	339	50	1,231
	2022	153	29	293	94	246	16	830
All MOEs	2009	4.7	3.9	11.4	4.9	7.5	2.2	16.1
	2017	4.7	1.5	5.2	3.4	8.6	1.2	15.7
	2022	7.9	4.9	14.3	9.6	11.1	3.7	21.8
Males	1990 (adj)	259	21	549	123	377	9	1,339
	1995	327	60	648	134	406	2	1,579
	2001	273	66	590	141	405	13	1,491
	2009	241	58	529	128	386	26	1,368
	2017	240	25	420	132	335	58	1,210
	2022	173	39	258	96	248	18	832
Males MOEs	2009	4.6	5.2	10.7	5.3	7.9	2.4	15.7
	2017	6.9	2.4	9.9	4.3	10.9	2.4	23.2
	2022	12.0	7.3	16.0	11.8	13.1	4.9	24.9
Females	1990 (adj)	197	11	693	132	358	9	1,401
	1995	229	23	786	141	375	3	1,558
	2001	200	25	715	151	389	12	1,494
	2009	193	27	646	138	375	23	1,401
	2017	189	15	525	135	344	42	1,251
	2022	133	20	326	92	243	15	829
Females MOEs	2009	4.7	2.6	12.1	4.5	7.2	2.0	16.4
	2017	4.5	0.8	10.4	3.9	9.3	2.5	16.0
	2022	9.5	4.9	19.3	11.4	12.8	4.0	27.4

Note: The "Other" trip purpose category includes trips not categorized. The trips for "All" persons can include cases that were not included in any table subcategory due to nonreporting of sex. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

The proportion of certain trips (Table 4-4) remained very similar in 2022 compared to previous survey years for both males and females with two exceptions: (1) both males and females saw a slight decrease in the number of shopping trips and personal errands they ran in comparison to other trip purposes, and (2) they also saw a slight increase in work-related business trips.

Table 4-4. Distribution of Person Trips per Person by Trip Purpose and Sex

Category	Survey	Trip Purpose (Percent)					
		To/ From Work	Work-Related Business	Shopping and Personal Errands	School/ Church	Social and Recreational	Other
All	1990 (adj)	15.3	1.1	42.2	8.7	24.9	0.6
	1995	16.4	2.4	42.6	8.2	23.1	0.2
	2001	14.9	2.9	41.4	9.2	25.1	0.8
	2009	15.6	3.0	42.5	9.6	27.5	1.8
	2017	17.4	1.6	38.4	10.9	27.5	4.1
	2022	18.4	3.5	35.2	11.3	29.6	2.0
Males	1990 (adj)	19.3	1.6	41.0	9.2	28.2	0.7
	1995	20.7	3.8	41.0	8.5	25.7	0.1
	2001	18.3	4.4	39.6	9.5	27.2	0.9
	2009	17.6	4.2	38.7	9.4	28.2	1.9
	2017	19.8	2.1	34.7	10.9	27.7	4.8
	2022	20.8	4.6	31.0	11.6	29.8	2.2
Females	1990 (adj)	14.1	0.8	49.5	9.4	25.6	0.6
	1995	14.7	1.5	50.4	9.1	24.1	0.2
	2001	13.4	1.7	47.9	10.1	26.0	0.8
	2009	13.8	1.9	46.1	9.9	26.8	1.6
	2017	15.1	1.2	42.0	10.9	27.5	3.4
	2022	16.0	2.5	39.3	11.0	29.4	1.8

Note: The "Other" trip purpose category includes trips not categorized. The trips for "All" persons can include cases that were not included in any table subcategory due to nonreporting of sex. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Figure 4-1 shows the number of annual person trips by purpose for males and females from 1990–2022. The decline in the total number of trips per person from 1995–2017 appears to be mostly due to declines in the estimate of trips for shopping and errands. In 2022, this trend continues.

Figure 4-1. Number of Annual Person Trips per Person by Sex and Trip Purpose
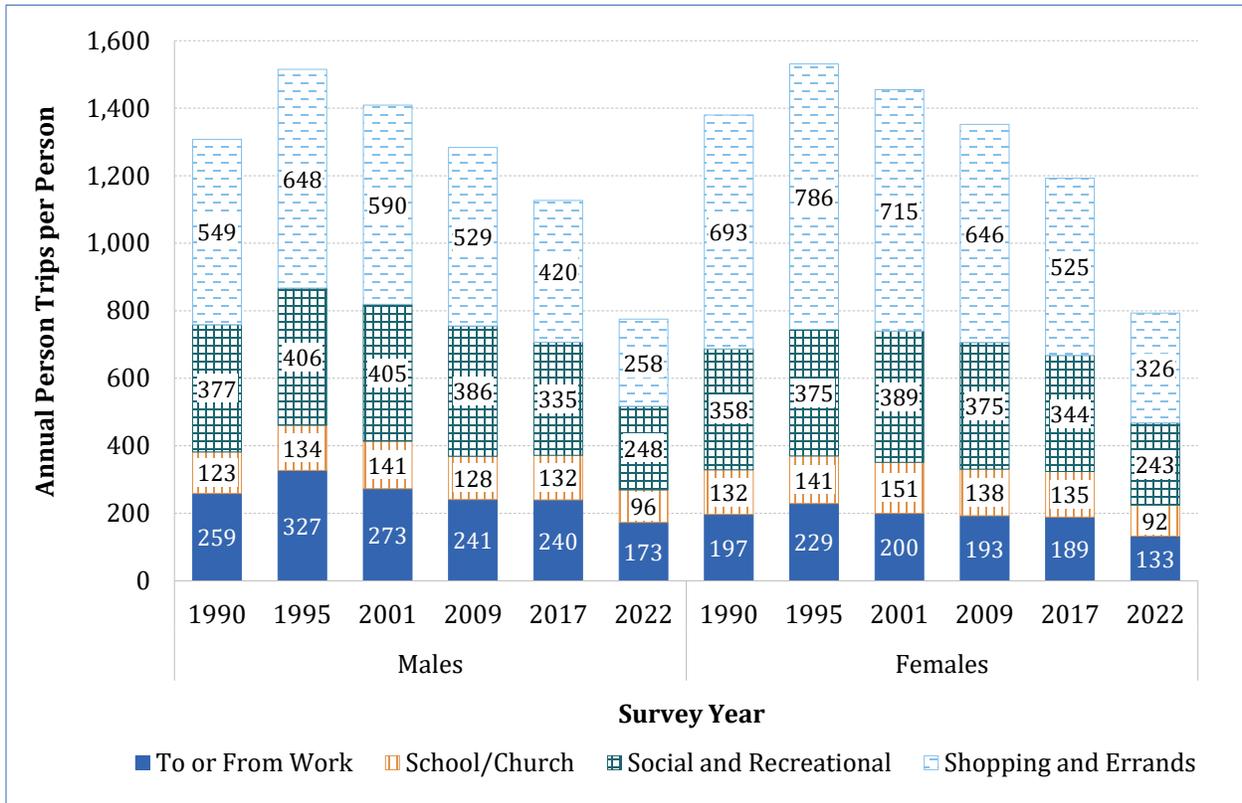
Note: The "Other" trip purpose category includes trips for work-related business and trips not categorized. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 4-5 and Table 4-6 display daily person trip rates and PMT per person by trip purpose in tabular form, while the same data is shown graphically in Figure 4-2 and Figure 4-3.

Table 4-5. Daily Trip Rates per Person by Trip Purpose

| Category | Survey Year | Trip Purpose | | | | | |
		To/From Work	Shopping and Errands	School/ Church	Social and Recreational	Other	Total
Daily trip rate per person	1990 (adj)	0.62	1.71	0.35	1.01	0.06	3.76
	1995	0.76	1.97	0.38	1.07	0.12	4.30
	2001	0.65	1.79	0.4	1.09	0.16	4.09
	2009	0.59	1.61	0.36	1.04	0.18	3.79
	2017	0.59	1.30	0.37	0.93	0.19	3.37
	2022	0.42	0.80	0.26	0.67	0.13	2.28
MOEs	2009	0.01	0.02	0.01	0.02	0.01	0.03
	2017	0.01	0.01	0.01	0.02	0.00	0.04
	2022	0.02	0.04	0.03	0.03	0.01	0.06

Note: The "Other" trip purpose category includes trips for work-related business and trips not categorized. Trip rates are calculated including travelers and nontravelers, resulting in travel estimates per-capita. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 4-6. Average PMT per Person by Trip Purpose

Category	Survey Year	Trip Purpose					
		To/From Work	Shopping and Errands	School/ Church	Social and Recreational	Other	Total
PMT per person	1990	6.49	12.10	1.84	13.02	1.46	34.91
	1995	8.69	13.51	2.21	11.86	2.39	38.67
	2001	7.66	13.20	2.35	12.09	4.80	40.25
	2009 (adj)	6.41	9.61	2.06	9.90	5.08	33.06
	2017	6.72	9.22	2.35	9.63	8.15	36.07
	2022	5.61	5.79	1.61	11.43	4.11	28.55
MOEs	2009 (adj)	0.18	0.29	0.12	0.60	0.99	1.31
	2017	0.24	0.50	0.45	0.39	0.99	1.47
	2022	0.59	0.45	0.25	1.83	1.10	2.39

Note: The "Other" trip purpose category includes trips for work-related business and trips not categorized. Trip metrics are calculated including travelers and nontravelers, resulting in travel estimates per-capita. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Figure 4-2. Daily Trip Rates per Person by Trip Purpose
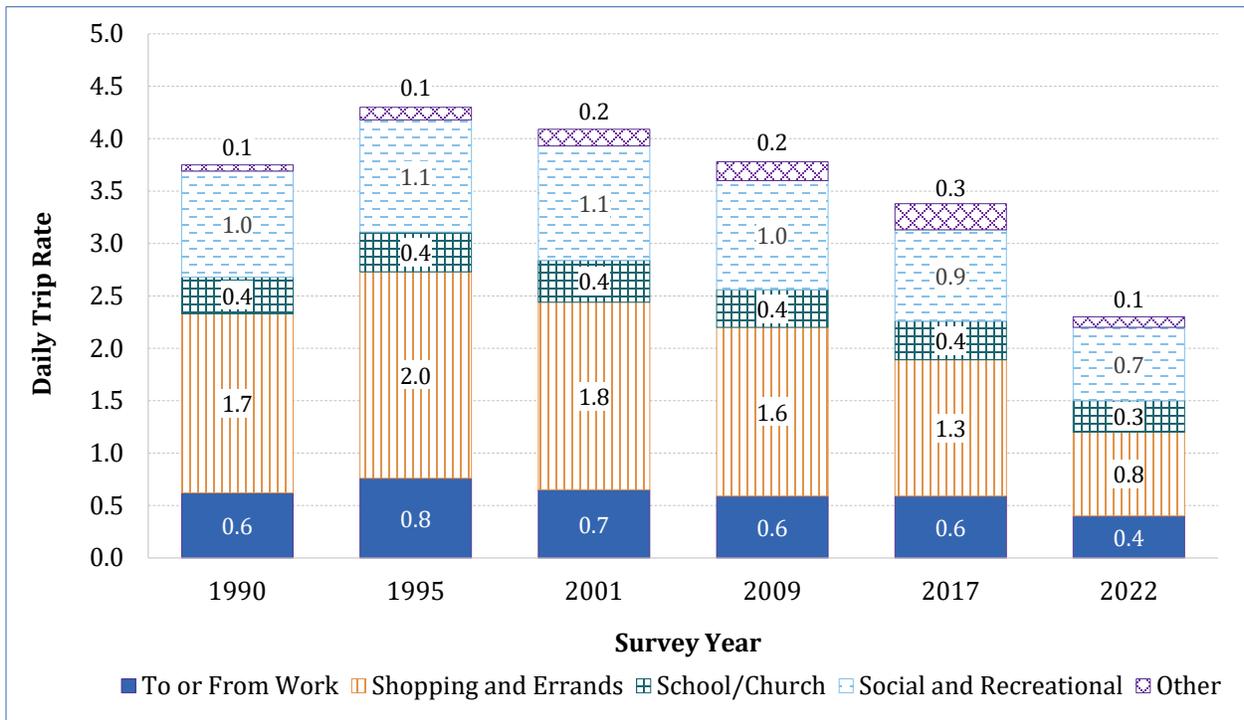
Note: The "Other" trip purpose category includes trips for work-related business and trips not categorized. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Figure 4-3. Daily PMT per Person by Trip Purpose
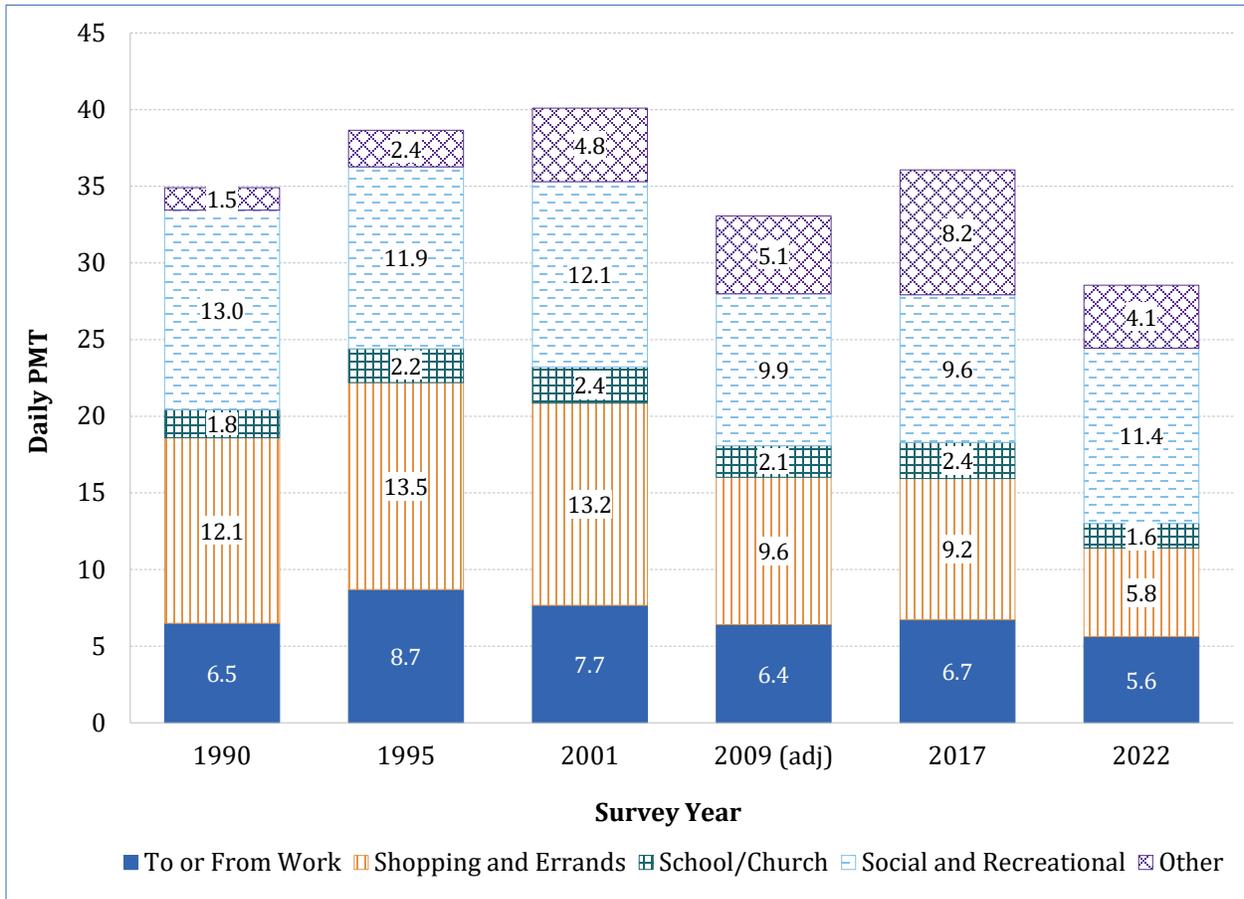
Bar chart showing Daily PMT (y-axis, 0 to 45) by Survey Year (x-axis: 1990, 1995, 2001, 2009 (adj), 2017, 2022), with stacked values by trip purpose:

Survey Year	To or From Work	Shopping and Errands	School/Church	Social and Recreational	Other
1990	6.5	12.1	1.8	13.0	1.5
1995	8.7	13.5	2.2	11.9	2.4
2001	7.7	13.2	2.4	12.1	4.8
2009 (adj)	6.4	9.6	2.1	9.9	5.1
2017	6.7	9.2	2.4	9.6	8.2
2022	5.6	5.8	1.6	11.4	4.1

Legend: ■ To or From Work ▨ Shopping and Errands ⊞ School/Church ⊟ Social and Recreational ⊠ Other

Note: The "Other" trip purpose category includes trips for work-related business and trips not categorized. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

As observed in previous survey years, personal vehicle is by far the most relied upon mode of transportation, making up 83% of all daily person miles in 2022 (Table 4-7). Work-related business trips utilized personal vehicles the most often at 98%. School/church trips utilized personal vehicles the least often (barring "other" trips) at 78%.

In terms of the proportion of trips by trip purpose, a similar pattern can be seen in 2022 compared to previous survey years (Table 4-8). There was an increase in the proportion of social and recreational trips as noted earlier, accompanied by a decrease in shopping and personal errands when compared to previous survey years.

Table 4-7. Daily PMT per Person by Mode of Transportation and Trip Purpose

| Category | Survey Year | Trip Purpose | | | | | | |
		To/ From Work	Work-Related Business	Shopping and Personal Errands	School/ Church	Social and Recreational	Other	All
All modes	1990	6.49	1.20	12.10	1.84	13.02	0.25	34.91
	1995	8.69	2.23	13.51	2.21	11.86	0.15	38.67
	2001	7.66	3.41	13.20	2.35	12.09	1.39	40.25
	2009 (adj)	6.41	2.08	9.61	2.06	9.90	3.00	33.06
	2017	6.72	1.42	9.22	2.35	9.63	6.72	36.07
	2022	5.61	1.67	5.79	1.61	11.43	2.44	28.55
All modes MOEs	2009 (adj)	0.18	0.26	0.29	0.12	0.60	0.94	1.31
	2017	0.22	0.35	0.46	0.42	0.39	1.04	1.37
	2022	0.59	0.59	0.46	0.25	1.84	1.10	2.39
Private vehicle	1990	6.15	0.63	11.39	1.32	11.12	0.23	30.85
	1995	8.09	1.85	12.70	1.68	10.83	0.10	35.26
	2001	7.11	2.27	12.77	1.87	11.01	0.36	35.49
	2009 (adj)	6.02	1.68	9.24	1.62	8.95	1.34	28.85
	2017	6.13	0.68	8.65	1.93	8.57	1.58	27.54
	2022	5.27	1.63	5.58	1.25	9.32	0.64	23.69
Private vehicle MOEs	2009 (adj)	0.16	0.19	0.29	0.12	0.47	0.32	0.80
	2017	0.21	0.06	0.45	0.41	0.42	0.20	0.80
	2022	0.54	0.59	0.45	0.22	1.16	0.31	1.33
Public transit	1990	0.27	0.01	0.14	0.12	0.18	0.01	0.74
	1995	0.30	0.02	0.19	0.07	0.24	0.00	0.82
	2001	0.24	0.01	0.10	0.04	0.07	0.00	0.47
	2009 (adj)	0.18	0.02	0.10	0.05	0.10	0.08	0.53
	2017	0.39	0.06	0.17	0.07	0.18	0.08	0.94
	2022	0.08	0.01	0.08	0.02	0.06	0.04	0.28
Public transit MOEs	2009 (adj)	0.04	0.01	0.02	0.01	0.03	0.09	0.11
	2017	0.04	0.05	0.02	0.01	0.06	0.02	0.10
	2022	0.04	0.01	0.06	0.02	0.03	0.04	0.08

Note: "Public transit" includes local bus, commuter bus, commuter train, subway, trolley, and streetcar. Trips reported for "All modes" can include cases that were not included in any table subcategory; for instance, trips by walking are included in the "All modes" trip rates but not in any subcategory. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 4-8. Distribution of Daily PMT per Person by Mode of Transportation and Trip Purpose

Category	Survey Year	Trip Purpose (Percent)					
		To/From Work	Work-Related Business	Shopping and Personal Errands	School/ Church	Social and Recreational	Other
All modes	1990	18.59	3.44	34.66	5.27	37.30	0.72
	1995	22.47	5.77	34.94	5.72	30.67	0.39
	2001	19.03	8.47	32.80	5.84	30.04	3.45
	2009 (adj)	19.38	6.30	29.08	6.22	29.96	9.06
	2017	18.63	3.94	25.56	6.52	26.70	18.63
	2022	19.67	5.84	20.26	5.63	40.04	8.56
Private vehicle	1990	17.62	1.80	32.63	3.78	31.85	0.66
	1995	20.92	4.78	32.84	4.34	28.01	0.26
	2001	17.66	5.64	31.73	4.65	27.35	0.89
	2009 (adj)	18.22	5.09	27.95	4.89	27.08	4.05
	2017	16.99	1.89	23.98	5.35	23.76	4.38
	2022	18.46	5.72	19.56	4.37	32.64	2.24
Public transit	1990	0.77	0.03	0.40	0.34	0.52	0.03
	1995	0.78	0.05	0.49	0.18	0.62	0.00
	2001	0.60	0.02	0.25	0.10	0.17	0.00
	2009 (adj)	0.56	0.05	0.30	0.14	0.29	0.25
	2017	1.08	0.17	0.47	0.19	0.50	0.22
	2022	0.28	0.02	0.27	0.08	0.20	0.13

Note: "Public transit" includes local bus, commuter bus, commuter train, subway, trolley, and streetcar. Trips reported for "All modes" can include cases that were not included in any table subcategory; for instance, trips by walking are included in the "All modes" trip rates but not in any subcategory. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Figure 4-4 shows person trips per person by age. The 36–65 age group saw the largest decline in daily person trips, with the average decreasing from 4.2 in 2009 to 3.7 in 2017 and then down to 2.5 in 2022, a decrease of 40% across the three survey years.

Figure 4-4. Average Daily Person Trips by Age Group
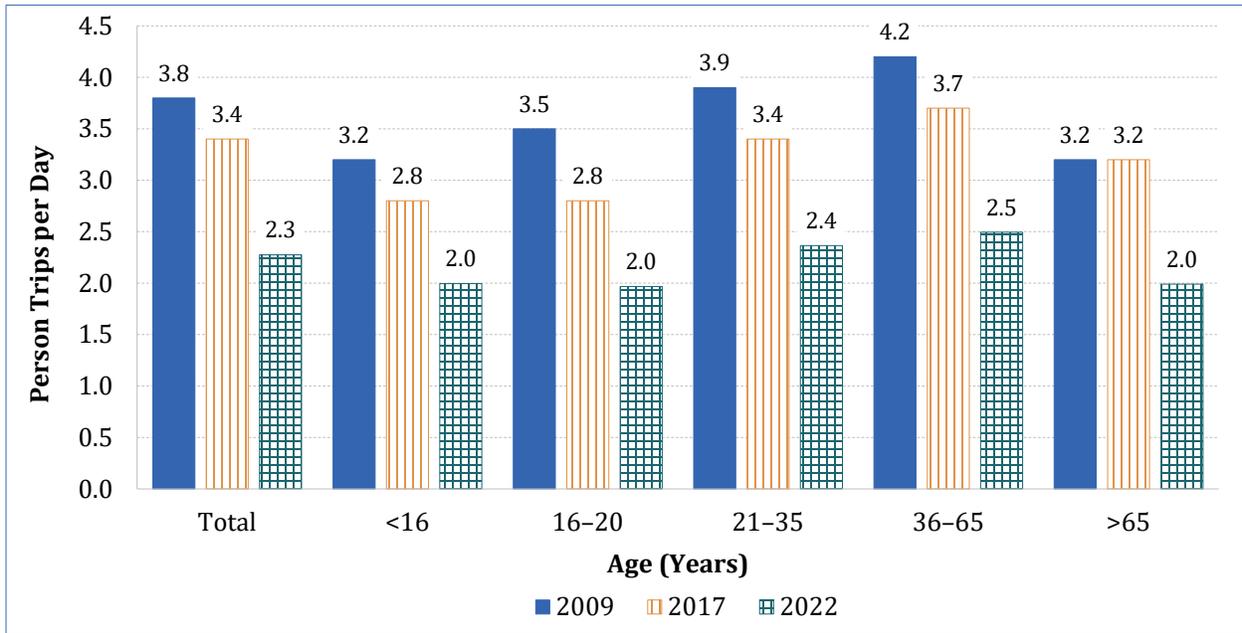
Note: The "Total" category includes trips reported by cases that were not included in any table subcategory; for instance, people who did not report their age. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

When considering both age and sex, since 2009, females report more trips than males, particularly those ages 21 to 35 (Table 4-9). The only exception to this is for those 65 or older.

Table 4-9. Average Number of Daily Person Trips by Age and Sex

Category	Survey Year	Age (Years)					
		<16	16–20	21–35	36–65	>65	Total
All	1990	3.1	4.2	4.4	3.9	2.4	3.8
	1995	3.7	4.6	4.6	4.6	3.4	4.3
	2001	3.4	4.1	4.3	4.5	3.4	4.1
	2009	3.2	3.5	3.9	4.2	3.2	3.8
	2017	2.8	2.8	3.4	3.7	3.2	3.4
	2022	2.0	2.0	2.4	2.5	2.0	2.3
All MOEs	2017	0.06	0.08	0.10	0.03	0.04	0.04
	2022	0.11	0.19	0.12	0.09	0.11	0.05
	2022	0.12	0.20	0.14	0.10	0.12	0.06
Male	1990	3.0	4.2	4.2	3.7	2.8	3.7
	1995	3.7	4.6	4.5	4.6	3.9	4.3
	2001	3.5	4.0	4.2	4.4	3.8	4.1
	2009	3.2	3.3	3.7	4.1	3.5	3.7
	2017	2.8	2.8	3.2	3.6	3.4	3.3
	2022	2.0	1.9	2.3	2.5	2.1	2.3
Male MOEs	2009	0.09	0.13	0.11	0.06	0.10	0.04
	2017	0.07	0.13	0.10	0.06	0.05	0.06
	2022	0.14	0.27	0.18	0.14	0.15	0.07

Category	Survey Year	Age (Years)					
		<16	16–20	21–35	36–65	>65	Total
Female	1990	3.1	4.2	4.6	4.1	2.2	3.8
	1995	3.8	4.7	4.8	4.6	3.0	4.3
	2001	3.4	4.2	4.5	4.5	3.1	4.1
	2009	3.2	3.7	4.1	4.3	2.9	3.8
	2017	2.8	2.8	3.6	3.8	3.0	3.4
	2022	2.0	2.0	2.5	2.5	1.9	2.3
Female MOEs	2009	0.10	0.15	0.12	0.06	0.09	0.04
	2017	0.07	0.12	0.12	0.04	0.06	0.04
	2022	0.18	0.22	0.17	0.12	0.17	0.08

Note: The trip rates of "All" persons can include cases that were not included in any table subcategory; for instance, people who did not report their age are included in the "Male Total" and "Female Total" cells but not in any age-related column. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Overall, the estimate of person miles per day in 2022 was 29 miles on average. These miles are reported for all modes of transportation and for all purposes and include people who traveled and those who did not.

In 2022, the estimate for average daily miles was 31 miles per day for males and 26 miles per day for females (Table 4-10).

Table 4-10. Average Daily PMT by Age and Sex

Category	Survey Year	Age (Years)					
		<16	16–20	21–35	36–65	65<	Total
All	1990	20.1	34.4	44.3	40.1	18.4	34.9
	1995	25.0	36.4	46.0	45.1	24.4	38.7
	2001	24.5	38.1	45.6	48.8	27.5	40.2
	2009 (adj)	23.1	26.9	34.5	40.3	21.8	33.1
	2017	22.9	27.3	41.4	41.7	30.1	36.1
	2022	18.2	27.5	29.9	34.4	22.0	28.6
All MOEs	2009 (adj)	3.4	1.7	1.8	1.8	1.1	1.3
	2017	2.8	2.0	5.7	1.6	2.8	1.4
	2022	3.6	14.8	4.2	3.7	3.2	2.4
Males	1990	20.3	36.9	48.2	43.4	22.5	38.0
	1995	23.7	37.6	51.3	53.2	31.7	43.9
	2001	24.6	34.1	49.8	57.7	32.9	45.0
	2009 (adj)	25.0	25.7	37.1	46.8	27.7	37.5
	2017	25.6	25.9	42.9	47.1	33.8	39.5
	2022	15.0	35.8	28.8	39.8	24.5	31.0
Males MOEs	2009 (adj)	6.1	2.1	2.6	2.8	1.8	2.1
	2017	4.8	3.1	5.4	2.3	4.0	1.4
	2022	3.1	28.4	4.3	5.7	3.9	3.2
Females	1990	19.9	32.2	40.7	37.0	15.3	32.1
	1995	26.2	35.0	40.8	37.5	19.2	33.8

Category	Survey Year	Age (Years)					
		<16	16–20	21–35	36–65	65<	Total
	2001	24.4	42.5	41.5	40.4	23.5	35.7
	2009 (adj)	21.2	28.2	32.0	33.8	17.5	28.7
	2017	20.2	28.8	39.8	36.4	27.2	32.8
	2022	21.4	19.5	30.9	29.2	19.8	26.2
Females MOEs	2009 (adj)	2.4	2.5	2.2	1.5	1.1	1.0
	2017	1.7	2.7	6.8	1.5	2.9	1.8
	2022	6.3	8.9	6.0	3.5	4.2	2.5

Note: The trip rates of "All" persons can include cases that were not included in any table subcategory; for instance, people who did not report their age are included in the "Male Total" and "Female Total" cells but not in any age-related column. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Figure 4-5 shows the average daily PMT by sex.

Figure 4-5. Average Daily PMT by Sex
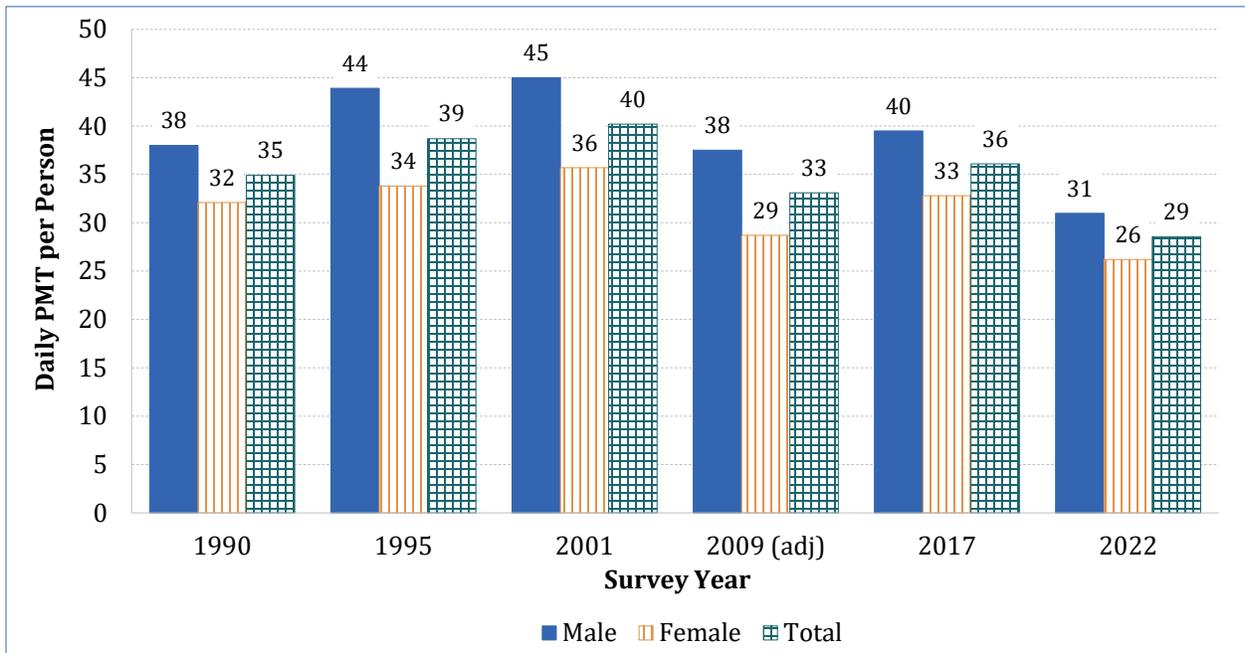
Note: The trip metrics in the "Total" category can include cases where sex was not reported. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Figure 4-6 shows the average daily PMT by age group. In 2022, the 36–65 age group traveled the most miles in a day on average (34 miles), while the under-16 age group traveled the least (18 miles). This same pattern can be seen across all the survey years. The number of miles traveled increase as age increases, up to age 65, and falls again for the 66-and-older age group.

Figure 4-6. Average Daily PMT by Age Group
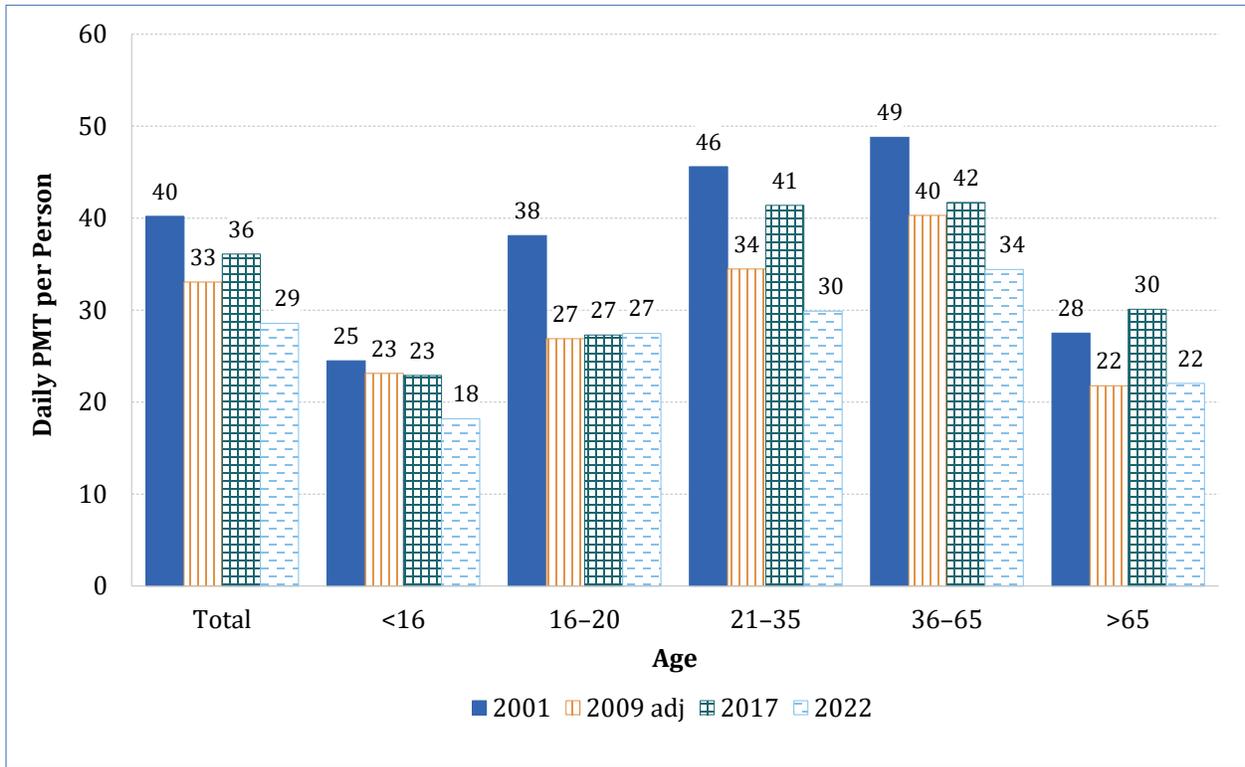
Note: The trip metrics in the "Total" category can include cases where age was not reported. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Including people who drive and those who are passengers in vehicles, the average American in 2022 spent 44 minutes a day in a vehicle (Figure 4-7). This estimate is 25% lower (15 minutes) compared to 2017 and 28% lower (17 minutes) compared to 2009. In 2022, people in their prime working and commuting lifecycle stage (i.e., ages 36–55) spent the most amount of time in a vehicle (54 minutes), while children under the age of 16 spend the least amount of time in a vehicle (28 minutes).

Figure 4-7. Time Spent in a Vehicle by Age Group (Minutes per Day)
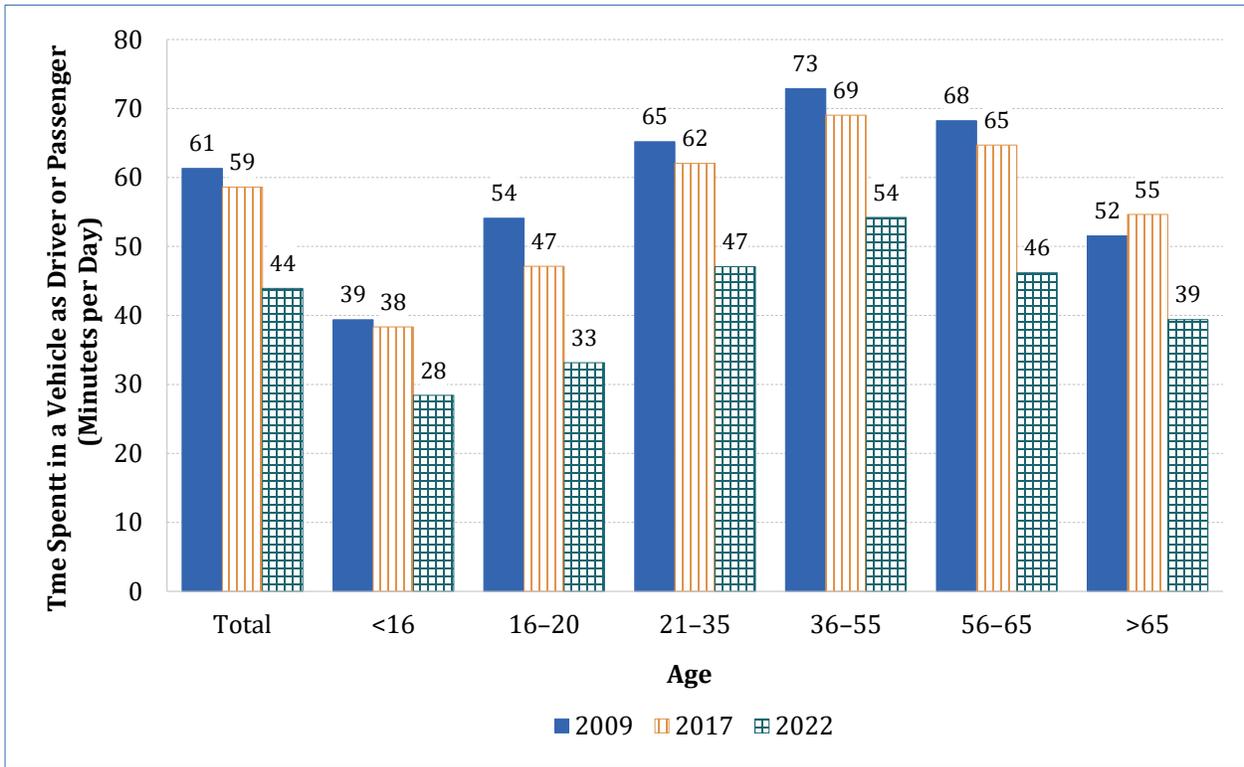
Note: The trip metrics in the "Total" category can include cases where age was not reported. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

5.0. Private Vehicle Travel

Private vehicle travel remains the dominant travel mode in the United States. Table 5-1 details trends in the average amount of time spent driving using two methods: (1) all drivers, which includes those who did not report driving on their assigned travel day, and (2) only persons who reported driving on their assigned travel day.

Results show that the time spent driving across all drivers declined by 36% from 2017 to 2022. When considering only persons who drove on the travel day, the decline was 22% over the same time period. When considering the earlier reports of vehicle trip trends, these decreases in average time spent driving appear to be a result of them taking less trips rather than taking shorter trips.

Table 5-1. Average Time (Minutes) Driving a Private Vehicle in a Typical Day by MSA Size

| Category | Survey Year | MSA Size | | | | | | |
		Rural, Not in MSA	<250K	250K–<500K	5K–<1M	1M–<3M	3M+	All
All drivers	1990	48.85	48.36	47.82	50.20	50.61	49.38	49.35
	1995	56.47	53.98	55.96	56.91	56.48	56.49	56.28
	2001	61.83	60.22	59.63	62.59	62.89	63.29	62.32
	2009	55.87	55.01	54.79	55.21	56.20	56.85	56.09
	2017	54.08	52.45	52.49	55.07	58.37	56.49	55.62
	2022	39.66	42.16	43.88	40.37	40.20	39.20	40.79
All drivers MOEs	2009	1.80	4.02	2.68	2.36	1.76	1.15	0.71
	2017	1.15	1.36	3.11	1.42	1.73	1.01	0.80
	2022	5.48	6.68	3.99	2.95	3.13	6.43	1.79
Only persons who drove	1990	69.20	67.94	71.66	72.42	74.38	71.08	71.88
	1995	72.96	69.35	71.72	73.35	72.19	75.02	73.24
	2001	81.74	76.40	76.50	79.34	79.55	85.12	81.35
	2009	76.28	73.30	72.55	73.57	73.64	80.48	76.37
	2017	78.45	72.69	72.94	76.55	79.19	83.22	78.91
	2022	62.95	66.82	64.68	61.44	67.55	64.05	64.63
Only persons who drove MOEs	2009	2.13	4.75	3.42	2.86	1.96	1.34	0.87
	2017	2.14	1.79	3.33	1.62	1.67	1.49	0.90
	2022	8.35	9.19	5.71	4.29	4.57	9.93	2.61

Note: The "Rural, Not in MSA" category includes only full counties designated as rural. There may also be rural pockets included within MSA boundaries.

Figure 5-1 displays the average driving time and distance traveled by American households by MSA size for the 2009, 2017, and 2022 NHTS.

Figure 5-1. Average Driving Time (Minutes) and Distance Traveled (Miles) by MSA Size
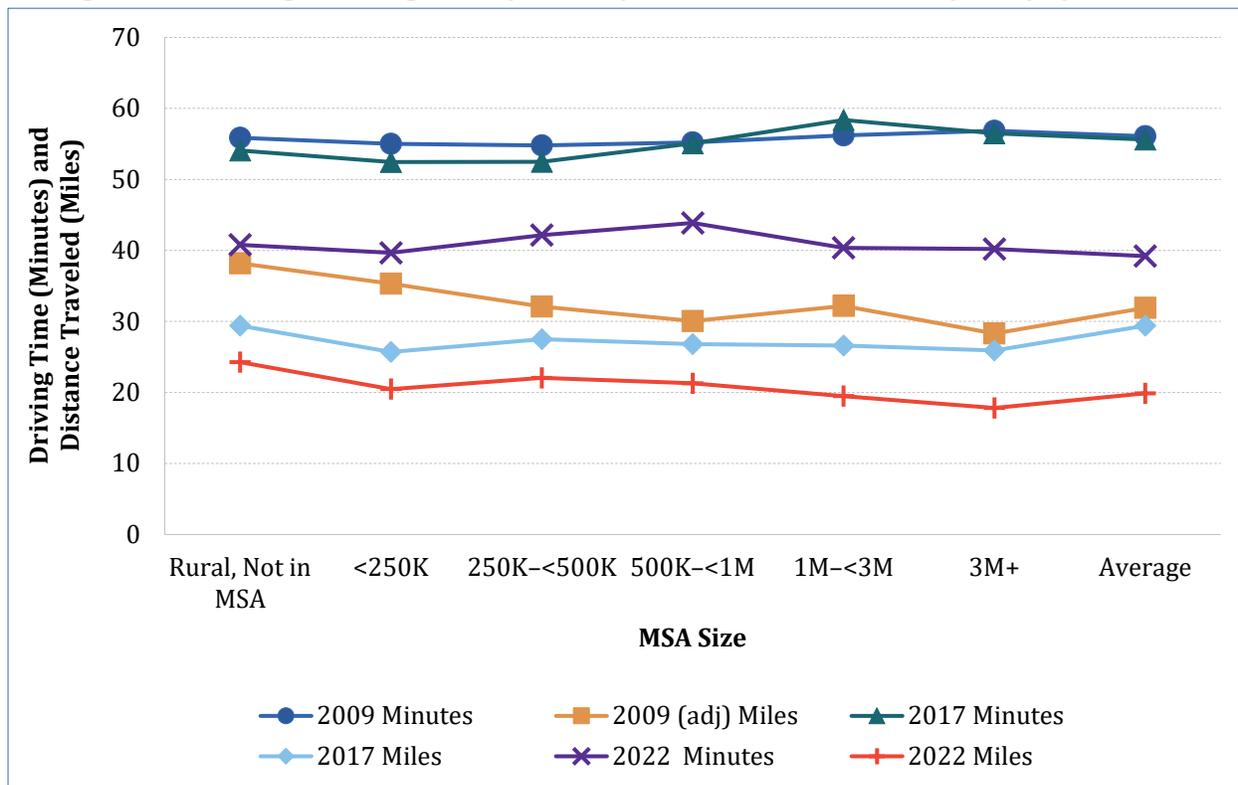
Note: The "Rural, Not in MSA" category includes only full counties designated as rural. There may also be rural pockets included within MSA boundaries. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

From 1990 through 2017, the vehicle occupancy estimates, measured as person miles per vehicle mile, have stayed about the same (Table 5-2). However, there was a decline across all trip purposes from 2017 to 2022. Considering the associated MOEs, these differences are statistically significant.

Table 5-2. Average Vehicle Occupancy for Selected Trip Purposes
(Person Mile per Vehicle Mile)

| Category | Survey Year | Trip Purpose | | | | |
		To/From Work	Shopping	Other Family/ Personal Errands	Social and Recreational	All
Average vehicle occupancy	1990 (adj)	1.14	1.71	1.84	2.08	1.64
	1995	1.14	1.74	1.78	2.04	1.59
	2001	1.14	1.79	1.83	2.03	1.63
	2009	1.13	1.78	1.84	2.20	1.67
	2017	1.18	1.82	1.82	2.10	1.67
	2022	1.08	1.53	1.60	1.99	1.52
MOEs	2009	0.01	0.05	0.04	0.06	0.03
	2017	0.01	0.05	0.13	0.04	0.04
	2022	0.04	0.09	0.07	0.19	0.08

Note: The "Other Family/Personal Errands" category includes trips such as to the post office, dry cleaners, or library. The "All" category includes other trip purposes not shown, such as trips to school, church, doctor, dentist, and work-related business trips. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

6.0. Vehicle Use and Availability

Nearly 9 in 10 households had a vehicle available to drive in 2022, while two-thirds had 2 or more vehicles available (Table 6-1). The number of households with zero vehicles remained steady from 2017 to 2022; however, the number of households with one vehicle and two vehicles increased.

The number of households with two vehicles increased the most between 2017 and 2022 from 39.1 million to 48.3 million households, respectively.

Table 6-1. Number of Households by Availability of Household Vehicles

| Category | Survey Year | Household Vehicle Availability | | | | | Average Vehicles per Household |
		0 Vehicles	1 Vehicle	2 Vehicles	3+ Vehicles	All	
Number of Households (thousands)	1969	12,876	30,252	16,501	2,875	62,504	1.16
	1977	11,538	26,092	25,942	11,840	75,412	1.59
	1983	11,548	28,780	28,632	16,411	85,371	1.68
	1990	8,573	30,654	35,872	18,248	93,347	1.77
	1995	7,989	32,064	40,024	18,914	98,990	1.78
	2001	8,716	33,757	39,938	24,955	107,365	1.89
	2009	9,828	36,509	41,077	25,688	113,101	1.86
	2017	10,567	39,648	39,125	28,869	118,208	1.88
	2022	10,712	42,271	48,347	26,214	127,545	1.83
MOEs	2009	49	302	274	270	0	—
	2017	0	0	272	272	0	—
	2022	1,197	1,905	1,921	1,567	2,383	—

—Not applicable/not available.
Note: In 1969, household vehicles did not include pickups or other light trucks. The "0 Vehicles" and "1 Vehicle" categories were used as controls in calibrating the weights according to the weighting plans for 2009 and 2017 and should have nearly no variance in the replicate weights, resulting in standard errors close to 0.

Out of the 128 million households in the United States, about 10.7 million were without a vehicle according to the 2022 NHTS (Figure 6-1).

Since 1969, the number of households that owned three or more vehicles has increased tenfold from nearly 3 million to nearly 29 million in 2017; however, this number decreased to 26 million in 2022. The percentage of households with three or more vehicles makes up just over one-fifth of all U.S. households.

Figure 6-1. Number of Households by Household Vehicle Availability
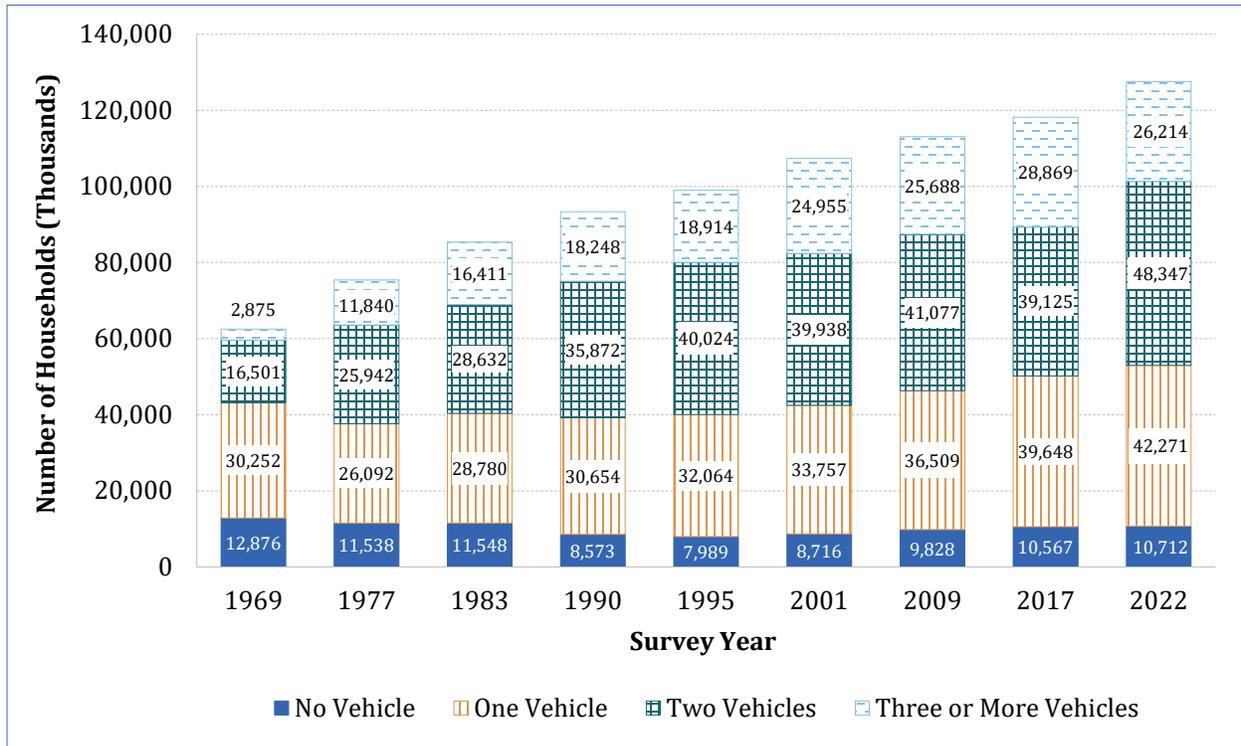
Note: In 1969, household vehicles did not include pickups or other light trucks.

Table 6-2 shows trends in the percent of households by availability of household vehicles. The proportion of households with zero vehicles has declined considerably since the first iteration of the survey. In 1969, over one-fifth of households did not have a vehicle available, while in 1990 and beyond, this number has fallen to less than one-tenth.

Likewise, households with one vehicle decreased dramatically from 1969 (48%) to 2022 (33%), and there are considerable increases in households with two vehicles and three or more over the same period.

Table 6-2. Distribution of Households by Household Vehicle Availability

Survey Year	Household Vehicle Availability (Percent)			
	0 Vehicles	1 Vehicle	2 Vehicles	3+ Vehicles
1969	20.6	48.4	26.4	4.6
1977	15.3	34.6	34.4	15.7
1983	13.5	33.7	33.5	19.2
1990	9.2	32.8	38.4	19.6
1995	8.1	32.4	40.4	19.1
2001	8.1	31.4	37.2	23.2
2009	8.7	32.3	36.3	22.7
2017	8.9	33.5	33.1	24.4
2022	8.4	33.1	37.9	20.6

Note: In 1969, household vehicles did not include pickups or other light trucks.

Figure 6-2 shows the increasing number of households with a vehicle in the United States. In 2022, the number of households with a vehicle nearly doubled since 1977. Automobiles have made up a smaller proportion of households in recent survey years as sport-utility vehicle (SUV) ownership has grown considerably.

Figure 6-2. Number of Household Vehicles by Vehicle Type
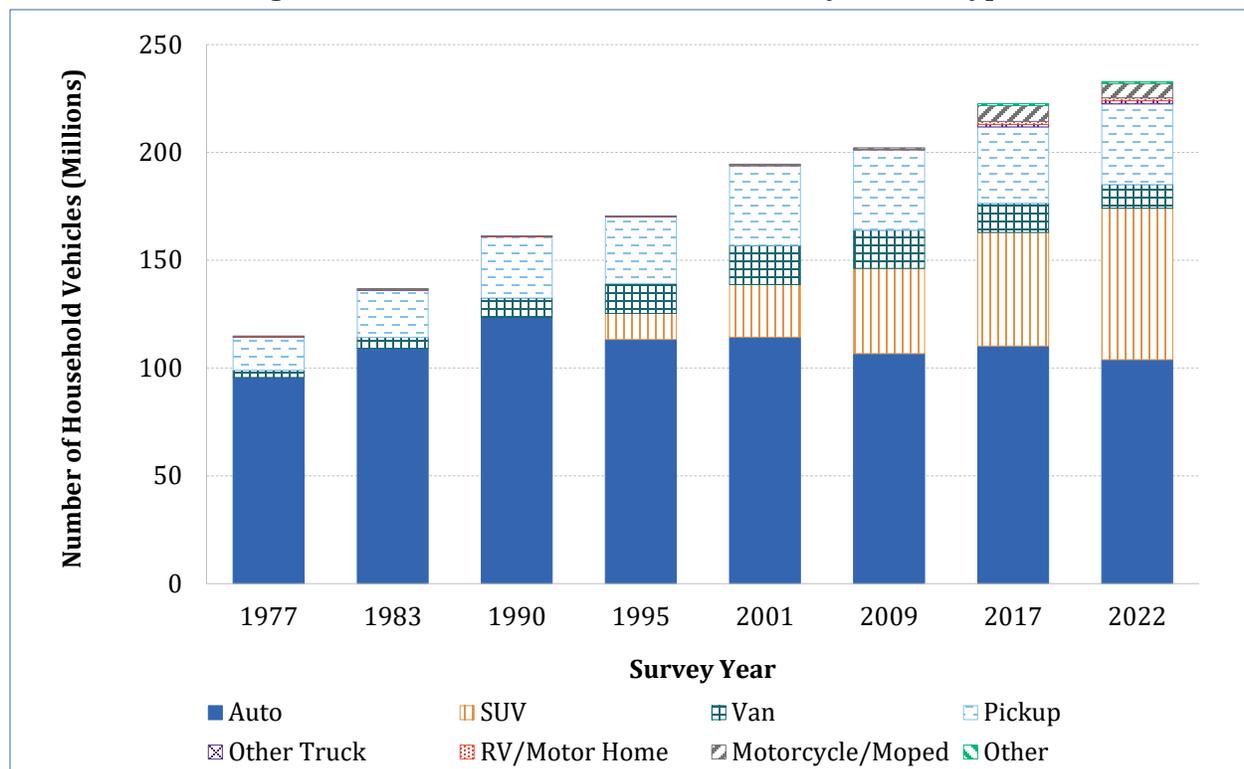
Table 6-3 shows that MSAs have higher proportions of households with no vehicles than smaller towns and rural areas due to other means of transportation being readily available in denser regions, such as public transit, taxis, and ride shares. Nonetheless, the proportion of zero vehicle households has continued to decline in all MSA sizes following the same trend overall.

Table 6-3. Distribution of Households Without a Vehicle by MSA Size

Category	Survey Year	MSA Size (percent)						
		Rural, Not in MSA	<250K	250K–<500K	500K–<1M	1–<3M	3M+	All
Households without a vehicle	2001	5.8	5.8	5.2	7.0	6.4	11.9	8.1
	2009	5.6	6.3	5.6	8.3	7.2	12.6	8.7
	2017	6.8	7.0	5.8	7.4	7.4	12.8	8.9
	2022	7.2	6.5	4.2	7.4	7.5	11.9	8.4
MOEs	2009	0.14	0.12	0.09	0.12	0.15	0.14	0.04
	2017	0.07	0.05	0.05	0.04	0.11	0.12	0.00
	2022	0.04	0.02	0.02	0.02	0.02	0.02	0.01

Note: In 1969, household vehicles did not include pickups or other light trucks. The "Rural, Not in MSA" category includes only full counties designated as rural. There may also be rural pockets included within MSA boundaries.

Table 6-4 shows vehicles in the household-based fleet by vehicle type and average age. The share of autos and vans in the household vehicle fleet declined in 2022, making up 45% and 5% of the household vehicles, respectively. In 2017, autos made up nearly 50% of household vehicles, while vans accounted for about 6%. The percentage of SUVs increased significantly once again and made up about 30% of household vehicles in 2022, a 27% increase.

Contrary to a previous trend, the age of household vehicles remained steady in 2022 compared to 2017, increasing by only 0.05 years, which falls within the MOE. Previously, there was a 6-month or greater increase in vehicle age from survey year to survey year. Automobiles continued to get older, while SUVs, pickups, and other trucks were younger in 2022 than they were in 2017.

New passenger car sales in the United States declined from 5.3 million vehicles in 2018 to 3.4 million in 2020 due to shortages of labor and vehicle components (especially electronics), resulting in reduced vehicle production and increased vehicle prices.

Table 6-4. Household-Based Vehicle Distribution and Vehicle Age by Vehicle Type

Category	Survey Year	Vehicle Type								
		Auto	Van	SUV	Pickup	Other Truck	RV/ Motor Home	Motor-cycle/ Moped	Other	All
Household vehicle distribution (percent)	2001	56.8	9.0	12.1	18.4	0.5	0.7	2.1	0.5	100.0
	2009	49.9	8.2	19.4	17.8	0.4	0.5	3.3	0.3	100.0
	2017	49.5	6.1	23.7	15.9	0.5	0.6	3.3	0.4	100.0
	2022	44.6	4.7	30.2	16.1	0.6	0.6	2.9	0.3	100.0
Household vehicle distribution MOEs	2009	0.45	0.28	0.35	0.29	0.08	0.06	0.24	0.05	0.00
	2017	0.44	0.28	0.46	0.21	0.10	0.70	0.14	0.04	0.00
	2022	0.00	0.45	0.63	0.59	0.39	0.16	0.45	0.14	0.00
Average vehicle age (years)	2001	8.98	7.56	6.44	10.05	17.72	13.49	—	—	8.87
	2009	9.57	8.68	7.09	11.10	17.76	15.46	—	—	9.38
	2017	10.10	10.65	8.34	13.12	17.29	15.77	—	—	10.27
	2022	10.67	10.68	7.81	12.91	12.30	14.44	—	—	10.32
Average vehicle age MOEs	2009	0.11	0.18	0.15	0.21	1.04	1.29	—	—	0.10
	2017	0.18	0.27	0.13	0.17	7.26	3.34	—	—	0.12
	2022	0.29	0.73	0.25	0.57	17.72	13.49	—	—	0.23

—Not applicable/not available.
Note: In 1969, household vehicles did not include pickups or other light trucks. SUVs were added as a vehicle class in the 1995 NHTS. In 2009, the survey included light electric vehicles (LEVs) as a separate classification. Motorcycles, mopeds, LEVs, and "other" privately operated vehicles were excluded from the calculation of vehicle age. Totals do not include any unreported vehicle ages but do include vehicle types (motorcycle, RV, etc.) that are not shown.

There is evidence of the household fleet getting older each time NHTS is administered (Table 6-5). In 1990, all vehicles that were 10 years old or older accounted for 31% of the household fleet, while in 2017, these accounted for 49% of household vehicles. For 2022, a decline was observed in vehicles that were 10 years old or older, as these made up 44% of all household vehicles.

Vehicles that were 6–9 years old were more prevalent in 2022 (23%) than they were in 2017 (19%), which is closer to the proportion of 6–9-year-old vehicles in previous survey years (ranging from 24% to 29% across the survey years of 1990 to 2009).

Table 6-5. Household-Based Vehicle Distribution and Vehicle Type by Vehicle Age

Category	Survey Year	Vehicle Type	Vehicle Age					Average Age (Years)
			0–2	3–5	6–9	10+	All	
Household vehicle distribution (percent)	1990	Auto	15.6	27.7	26.8	29.9	100.0	7.6
		Van/SUV/pickup	19.7	27.2	20.9	32.2	100.0	8.0
		All	16.6	27.5	25.3	30.6	100.0	7.7
	1995	Auto	14.9	21.7	30.3	33.1	100.0	8.2
		Van/SUV/pickup	19.2	21.6	25.5	33.7	100.0	8.3
		All	16.2	21.5	28.5	33.8	100.0	8.3
	2001	Auto	13.3	20.4	25.5	40.9	100.0	9.0
		Van/SUV/pickup	18.6	23.5	22.6	35.4	100.0	8.5
		All	15.4	21.5	24.1	39.0	100.0	8.9
	2009	Auto	12.4	19.7	27.0	40.9	100.0	9.6
		Van/SUV/pickup	12.8	23.6	27.1	36.6	100.0	9.0
		All	12.7	21.6	26.8	38.9	100.0	9.4
	2017	Auto	12.2	20.5	20.8	46.6	100.0	10.1
		Van/SUV/pickup	14.4	17.4	17.9	50.3	100.0	10.4
		All	13.2	18.9	19.4	48.5	100.0	10.3
	2022	Auto	9.3	17.0	26.6	47.0	100.0	10.7
		Van/SUV/pickup	17.4	21.5	20.9	40.2	100.0	9.7
		All	13.8	18.9	23.1	44.2	100.0	10.3
MOEs	2009	Auto	0.5	0.6	0.7	0.7	0.00	0.1
		Van/SUV/pickup	0.5	0.6	0.7	0.7	0.00	0.1
		All	0.4	0.4	0.5	0.5	0.00	0.1
	2017	Auto	0.2	0.3	0.3	0.5	0.00	0.2
		Van/SUV/pickup	0.3	0.2	0.4	0.3	0.00	0.1
		All	0.2	0.2	0.3	0.3	0.00	0.1
	2022	Auto	0.8	0.7	0.7	0.4	0.00	0.3
		Van/SUV/pickup	0.9	1.0	1.1	0.4	0.00	0.3
		All	0.8	0.7	0.7	0.4	0.00	0.2

Note: Motorcycles, mopeds, LEVs, and "other" privately owned vehicles are excluded from the calculation of vehicle age.

Figure 6-3 shows that SUVs appear to be the most popular vehicle type among newer vehicles. Car comes in second at 30%, and pickup is third at 14%.

Figure 6-3. Distribution of Household-Based Vehicles 2 Years Old or Newer by Vehicle Type in 2022
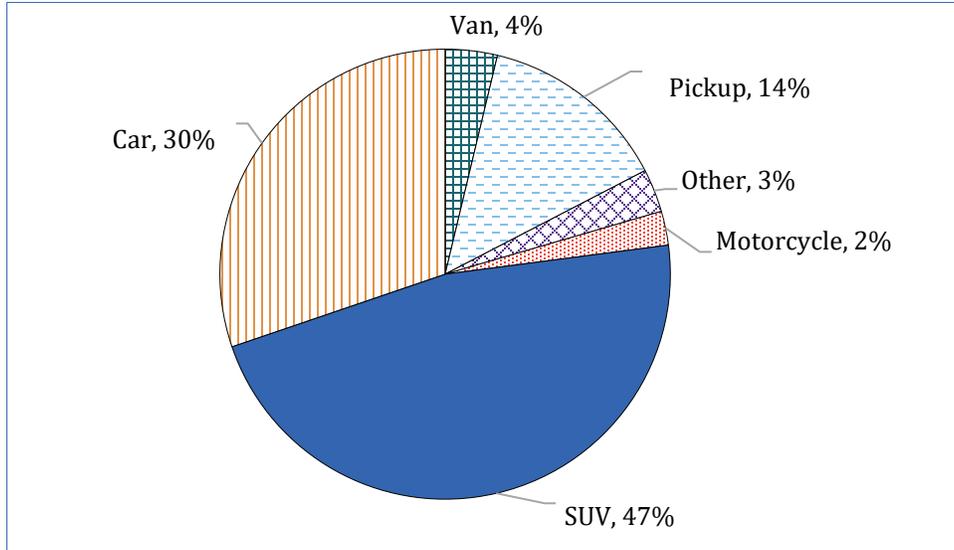
7.0. Commute Travel Patterns

The commute trip to and from work has been the cornerstone of transportation planning for more than 50 years. While one response to the pandemic was to work from home, essential workers still commuted to their workplaces to carry out their duties. It is important to remember when reviewing the trends in this chapter that most employers did not begin to recall workers back to the office until late 2022 or early 2023.

Table 7-1 shows that the number of vehicle trips to and from work declined from 53.1 million in 2017 to 41.3 million 2022, a 28% decrease. Despite this decrease, the proportion of commute VMT to total VMT remained the same in 2017 and 2022, around 30%.

The total number of estimated workers has remained fairly steady from 2017 to 2022 (i.e., 156,988 versus 158,010 workers, respectively).

Table 7-1. Commute Trips, VMT, and Workers

Category	Survey Year	Commute Trend					
		Commute Vehicle Trips (Millions)	Commute VMT (Millions)	Total VMT (Millions)	Percent Commute VMT to Total VMT	Workers (Thousands)	Annual Commute Vehicle Trips per Worker
Trends based on self-reported distance	1969	27,844	260,716	775,940	33.60%	75,758	368
	1977	31,886	287,710	907,603	31.70%	93,019	343
	1983	35,271	301,644	1,002,139	30.10%	103,244	342
	1990	41,792	453,042	1,695,290	26.72%	118,343	353
	1995	54,782	642,610	2,068,368	31.07%	131,697	416
	2001	51,395	614,548	2,274,797	27.02%	145,272	354
Trends based on network-calculated distance	2009 (adj)	—	580,771	2,035,051	28.54%	—	—
	2017	53,154	635,792	2,105,882	30.19%	156,988	339
	2022	41,289	555,715	1,848,031	30.07%	158,010	261
MOEs	2009 (adj)	—	15,644	50,580	—	—	—
	2017	1,131	22,741	88,132	—	1,088	—
	2022	3,050	61,318	124,934	—	6,804	—

—Not applicable/not available.
Note: For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

From 2001 to 2022, the vast majority of workers traveled to work in a privately owned vehicle (e.g., auto, truck, van, or SUV), where "usual commute mode" is defined as the means of transportation usually used to go to work in the week prior to the travel day (Figure 7-1 and Table 7-2). However, in 2017, the percentage of workers commuting by privately owned vehicle was lower (88%) than the 2009 estimate (89%). In 2022, this rose to 91% while there was a 41% decrease in the use of public transit for commute trips from 7% in 2017 to 4% in 2022. "Public transit" includes local bus, commuter bus, commuter train, subway, trolley, and streetcar, while "other" includes travel modes not specifically cited, such as motorcycle, taxi, rideshare, bike, and other.

Figure 7-1. Distribution of Workers by Usual Commute Mode
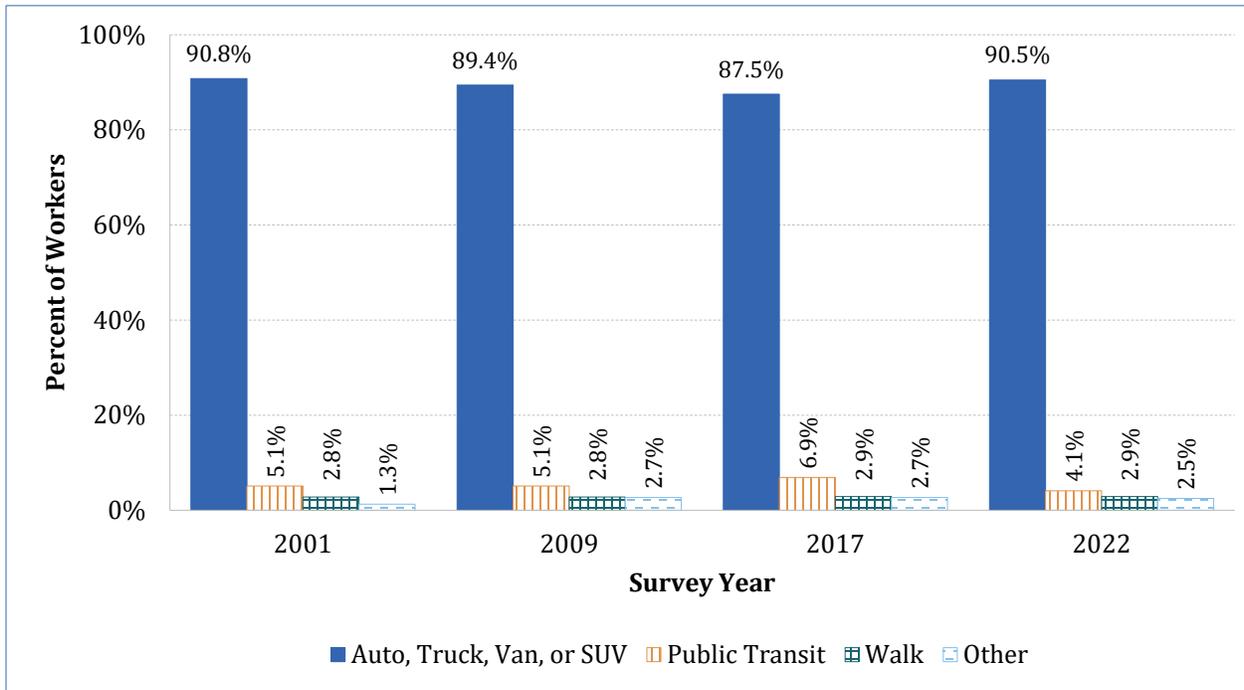
Note: "Usual commute mode" is defined as the means of transportation usually used to go to work in the week prior to the travel day. The "Other" category includes travel modes not specifically cited, such as motorcycle, taxi, bike, truck, and other. The "Public Transit" category includes local bus, commuter bus, commuter train, subway, trolley, and streetcar.

Table 7-2. Distribution of Workers by Usual Commute Mode

Category	Survey Year	Usual Commute Mode (Percent)				
		Auto, Truck, Van, or SUV	Public Transit	Walk	Other	All Modes
Usual commute mode	2001	90.8	5.1	2.8	1.3	100
	2009	89.4	5.1	2.8	2.7	100
	2017	87.5	6.9	2.9	2.7	100
	2022	90.5	4.1	2.9	2.5	100
MOEs	2009	0.52	0.41	0.34	0.25	—
	2017	0.53	0.32	0.34	0.28	—
	2022	0.00	0.79	0.76	0.54	—

—Not applicable/not available.
Note: "Usual commute mode" is defined as the means of transportation usually used to go to work in the week prior to the travel day. The "Other" category includes travel modes not specifically cited, such as motorcycle, taxi, bike, truck, and other. The "Public Transit" category includes local bus, commuter bus, commuter train, subway, trolley, and streetcar.

Table 7-3 compares the usual commute mode of a worker to the mode they actually used on their travel day. For the most part, the usual mode was the same as reported used on the travel day. For example, driving alone accounted for nearly 92% of the usual mode share, while it made up approximately 93% of the travel day mode share.

Table 7-3. Usual Commute Mode to Work Versus Actual Commute Mode on Travel Day

Usual Commute Mode	Actual Commute Mode on Travel Day (Percent)				
	Drive Alone	Transit	Walk	Bike	Usual Commute Mode Share
Driving alone	91.1	0.0	0.1	0.0	91.7
Public transit	0.5	2.0	0.5	0.0	3.1
Walk	0.8	0.1	1.9	—	2.8
Bike	0.4	0.1	0.0	0.6	1.1
Actual commute mode share	93.3	2.2	2.5	0.7	—

—Not applicable/not available.
Note: "Usual commute mode share" is defined as the means of transportation usually used to go to work in the week prior to the travel day, while "actual commute mode share" is the commute mode as reported on the travel day. Rows and columns reflect percentages only for those modes listed and thus do not sum to 100%.

Table 7-4 displays trends in average trip length, travel time, and speed across commute modes.

Table 7-4. Commute Patterns by Mode of Transportation

Category	Survey Year	Commute Details		
		Average Commute Trip Length (Miles)	Average Commute Travel Time (Minutes)	Average Commute Speed (Miles per Hour)
All modes	2009 (adj)	11.03	—	25.79
	2017	11.46	26.58	23.42
	2022	13.43	27.72	25.51
All modes MOEs	2009 (adj)	0.27	0.31	0.31
	2017	0.34	0.56	0.28
	2022	1.30	1.96	0.92
Privately owned vehicle	2009 (adj)	11.26	—	27.01
	2017	11.84	25.01	25.22
	2022	13.56	26.94	26.59
Privately owned vehicle MOEs	2009 (adj)	0.23	—	0.31
	2017	0.38	0.56	0.33
	2022	1.25	1.90	0.89
Public transit	2009 (adj)	10.18	—	11.42
	2017	12.09	58.11	11.63
	2022	7.53	43.05	10.68
Public transit MOEs	2009 (adj)	1.54	—	1.01
	2017	1.15	2.06	0.73
	2022	2.50	4.60	3.81
Walk	2009 (adj)	0.98	—	4.76
	2017	1.19	15.26	3.15
	2022	1.28	25.05	2.80
Walk MOEs	2009 (adj)	0.23	—	0.51
	2017	0.73	1.59	0.18
	2022	0.53	6.71	0.41

—Not applicable/not available.
Note: Trip miles and travel times were calculated using actual trips to and from work as reported in the travel day file. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2. Average commute speed was calculated using only those trips with both trip mileage and travel time information present. Average commute trip length was calculated using only those records with trip mileage information present. Commute time for public transit includes total trip time, including access and egress. Wait time is not included.

Table 7-5 shows the trends in the average commute speed across different MSA sizes. Although slight differences can be seen between 2017 and 2022, all fall within the MOEs and are not significant.

Table 7-5. Average Commute Speed (Miles per Hour) by MSA Size

Category	Survey Year	MSA Size					
		Rural, Not in MSA	<250K	250K–<500K	500K–<1M	1M–<3M	3M+
All modes (including privately owned vehicles)	2001	31.9	28.5	28.3	28.8	27.9	25.4
	2009 (adj)	29.5	25.9	26.5	26.5	26.0	23.3
	2017	27.6	25.8	26.2	25.7	26.5	23.2
	2022	31.4	25.8	26.2	25.7	26.5	23.2
MOEs	2009 (adj)	0.73	0.96	1.02	1.30	0.63	0.49
	2017	0.70	0.90	1.30	0.60	0.70	0.30
	2022	3.44	2.19	2.21	2.09	2.38	1.56

Note: Average commute speed was calculated using only trips with both trip mileage and travel time information present. The "Rural, Not in MSA" category includes only full counties designated as rural. There may also be rural pockets included within MSA boundaries. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

8.0. Temporal Distribution

Since most planning efforts are focused on addressing peak hour congestion, the temporal distribution of travel is an important metric. This chapter provides trends related to the distribution of travel by time of day, with a focus of more recent changes associated with the post-pandemic recovery adjustments observed in prior chapters.

Table 8-1 shows the percentage of person trips by time of day. The 2022 data show a notable increase in the percentage of trips during the morning peak period (6–9 a.m.). However, the distribution of trips by time of day has remained about the same over the past two decades.

The 2022 survey data show that almost half (47%) of all person trips started in the midday between 9 a.m. and 4 p.m., virtually the same as the estimates since 2001.

Table 8-1. Distribution of Person Trips by Trip Start Time

Category	Survey Year	Trip Start Time (Percent)						
		10 p.m.–1 a.m.	1 a.m.–6 a.m.	6 a.m.–9 a.m.	9 a.m.–1 p.m.	1 p.m.–4 p.m.	4 p.m.–7 p.m.	7 p.m.–10 p.m.
Person trips	2001	2.9	1.8	14.4	24.6	22.1	22.3	11.7
	2009	2.6	1.8	15.0	24.8	22.4	22.6	11.0
	2017	2.3	1.9	16.6	25.4	22.1	22.1	9.8
	2022	2.0	2.2	17.8	23.4	23.8	22.0	8.9
MOEs	2009	0.13	0.08	0.21	0.29	0.34	0.29	0.23
	2017	0.07	0.12	0.21	0.35	0.33	0.26	0.24
	2022	0.34	0.31	0.89	0.80	0.42	0.57	0.71

Figure 8-1 shows vehicle trips by time of day and purpose. As expected, in 2022, most vehicle commutes started between 6 a.m. and 9 a.m. and between 4 p.m. and 7 p.m. The data show that the morning and evening peak periods included not just commutes but shopping and family errands (which includes dropping children at school), and other nonwork trips. These vehicle trips add to the total number of vehicles traveling during peak periods.

Looking at 7 a.m. as an example, commute trips made up slightly less than half of all trips at that time. Other trips made at this time included shopping trips and personal errands. School/church trips as well as social and recreational trips were a lot less prevalent at this time.

Figure 8-1. 2022 Distribution of Vehicle Trips by Trip Purpose and Start Time of Trip
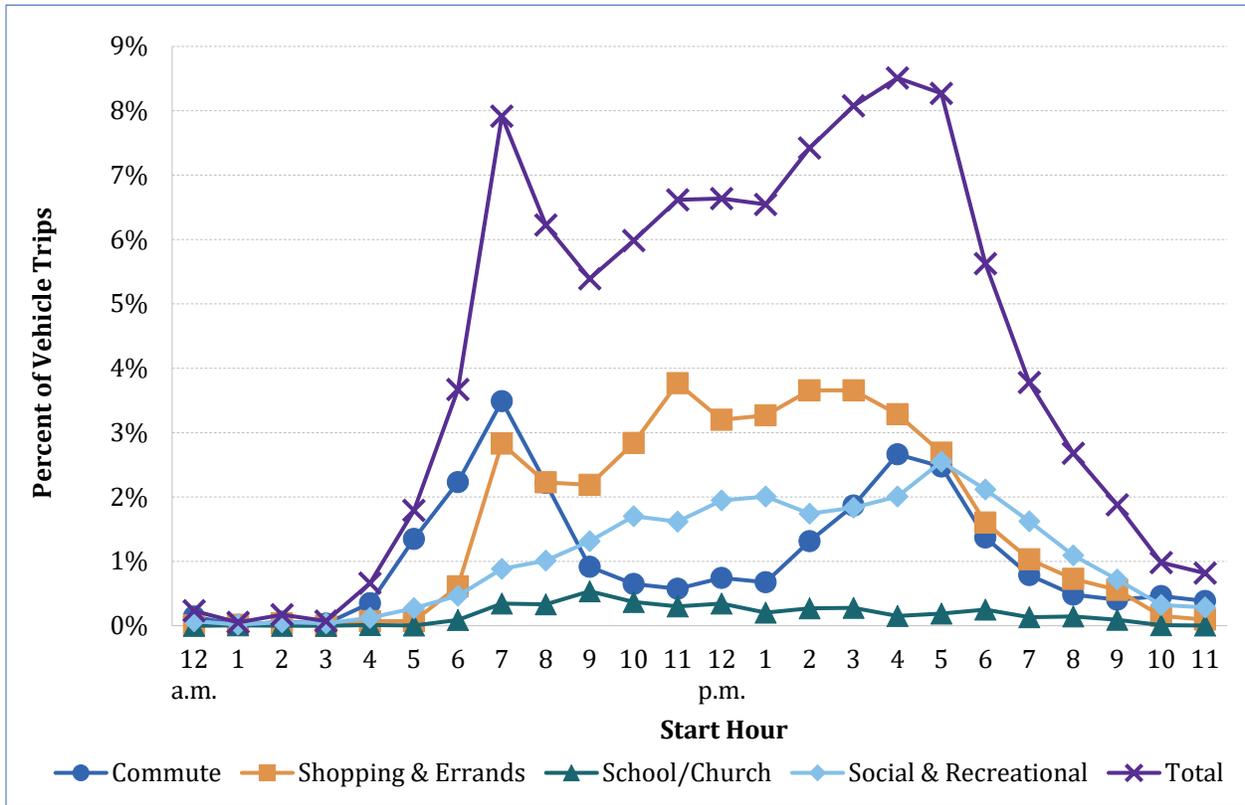

Table 8-2 displays trends for key travel characteristics for weekday and weekend travel.

Table 8-2. Travel Characteristics for Weekday Versus Weekend

Category	Survey Year	Day of Week	Travel Characteristic								
			Vehicle Trips per Driver	Work Trips (Percent)	Nonwork Trips (Percent)	VMT per Driver	Average Vehicle Trip Length (Miles)	Average Time Spent Driving (Minutes)	Average Number of Person Trips per Person	PMT per Person	Average Person Trip Length (Miles)
Trends based on network-calculated distance	2009 (adj)	Weekday	3.2	31.0	69.0	27.8	8.7	59.8	3.9	32.8	8.6
		Sat/Sun	2.5	10.1	89.9	22.5	9.0	46.7	3.5	33.7	9.8
	2017	Weekday	2.9	30.8	69.2	26.9	9.3	59.0	3.5	35.3	10.2
		Sat/Sun	2.3	11.3	88.7	23.2	10.3	47.3	3.1	38.1	12.2
	2022	Weekday	2.0	36.0	64.0	22.1	11.0	42.0	2.3	26.9	11.6
		Sat/Sun	1.6	13.0	87.0	21.1	12.8	37.8	2.2	32.6	15.0
MOEs	2009 (adj)	Weekday	0.03	0.58	0.58	0.81	0.24	0.84	0.04	1.24	0.31
		Sat/Sun	0.05	0.65	0.65	0.96	0.42	1.32	0.07	3.30	0.97
	2017	Weekday	0.04	0.48	0.48	1.46	0.49	0.91	0.06	2.03	0.58
		Sat/Sun	0.05	0.61	0.61	0.83	0.42	0.90	0.05	2.88	1.02
	2022	Weekday	0.06	8.86	16.28	1.58	0.77	1.91	0.07	2.56	1.10
		Sat/Sun	0.10	1.84	0.00	2.52	1.53	3.99	0.12	5.38	2.45

Note: Average time spent driving includes all drivers, even those who did not drive a private vehicle on the day in which the household was interviewed. Average trip length was calculated using only those records with trip mileage information present. The "Work Trips" category also includes work-related business. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

9.0. Special Topics

This chapter summarizes travel for special population groups as well as emerging travel modes. The population groups include those ages 65 and older, those ages 16–35 (younger drivers in particular), and those living in rural areas. Emerging travel modes consider reported usage of e-scooters, bicycles, bike sharing and walking.

9.1. Special Populations

Table 9-1 shows that the estimates of travel for people aged 65 and older presents a similar pattern as the general population in 2022.

On a daily basis, people aged 65 and older took almost one less vehicle trip per day than they did in 2017. In 1995, those aged 65 and older averaged close to three vehicle trips per day, with this number declining each survey since; however, the reduction from 2017 to 2022 was at a greater rate than previously noted. This trend is also consistent with regard to average person trips per day.

The estimate of VMT per drivers aged 65 and older in 2022 was 3 miles less than in 2017; however, it is on par with VMT per driver in 2009.

As seen previously, the average vehicle trip length in 2022 was significantly greater compared to all previous surveys and close to 3 miles longer than in 2017. This suggests that drivers aged 65 and older cut out shorter vehicle trips, which is similar to what was observed with the full population. This increase in trip length holds true at the person level as well, with an increase of close to 2 miles in 2022 compared to 2017.

Table 9-1. Daily Travel Statistics for People Aged 65 and Older

Category	Survey Year	Travel Statistic								
		Vehicle Trips per Driver	Work Trips (Percent)	Nonwork Trips (Percent)	VMT per Driver	Average Vehicle Trip Length	Average Time Spent Driving (Minutes)	Person Trips per Person	PMT per Person	Average Person Trip Length
Daily travel statistics of people 65+	1990	2.27	4.80	95.20	14.83	6.61	30.83	2.5	19.9	8.1
	1995	2.94	8.50	91.50	19.56	6.69	42.89	3.4	25.2	7.5
	2001	2.84	6.20	93.80	21.13	7.51	49.11	3.4	28	8.4
	2009 (adj)	2.67	10.60	89.40	17.72	6.71	46.37	3.2	22.6	7.2
	2017	2.55	8.60	91.40	20.21	7.91	48.29	3.2	31.6	9.9
	2022	1.64	11.30	88.70	17.27	10.53	34.1	2	23.3	11.7
MOEs	2009 (adj)	0.05	1	1	0.69	0.29	1.26	0.1	1.2	0.4
	2017	0.04	0.7	0.7	1.13	0.41	1.48	0	2.6	0.7
	2022	0.11	3.1	13.8	2.08	0.26	2.66	0.1	4.2	2.1

Note: The "Average Time Spent Driving" category includes all drivers, even those who did not drive a private vehicle on the day in which the household was interviewed. Average trip length was calculated using only those records with trip mileage information present. The "Work Trips" category also includes work-related business. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 9-2 through Table 9-4 display additional characteristics for older persons.

Table 9-2. Selected Data for Males and Females Aged 50 and Older

| Survey Year | Characteristic | Age (Years) | | | | All Age Groups 50+ |
		50–59	60–69	70–79	80+	
2009	Percent drivers	93.7	91.4	83.0	61.7	87.9
	2009 MOE	0.7	0.9	1.3	2.2	0.5
2017	Percent drivers	91.2	89.5	85.8	63.5	87.3
	2017 MOE	0.6	0.6	0.4	0.3	0.4
2022	Percent drivers	93.34	93.97	91.55	67.13	91.15
	2022 MOE	0.1	0.1	0.1	0.1	0.0
2009	Vehicle miles/driver (adj)	28.59	24.96	16.89	10.82	24.28
	2009 MOE	1.18	1.08	1.04	0.94	0.61
2017	Vehicle miles/driver	28.28	24.22	20.08	12.94	24.43
	2017 MOE	1.47	1.09	1.35	1.83	0.79
2022	Vehicle miles/driver	27.03	21.58	15.36	12.63	21.68
	2022 MOE	4.04	2.35	2.52	6.21	1.79
2009	Percent with zero vehicles available	4.9	6.8	10.3	17.6	7.7
	2009 MOE	0.5	0.9	1.3	1.8	0.4
2017	Percent with zero vehicles available	6.9	7.7	7.1	12.6	7.7
	2017 MOE	0.1	0.3	0.2	0.1	0.4
2022	Percent with zero vehicles available	4.34	4.63	3.52	10.23	4.70
	2022 MOE	0.0	0.0	0.0	0.0	0.0
2009	Percent who did not travel on travel day	11.2	14.9	24.3	38.0	17.3
	2009 MOE	0.7	0.9	1.6	2.9	0.6
2017	Percent who did not travel on travel day	14.6	18.4	24.8	37.3	19.7
	2017 MOE	0.5	0.2	0.2	0.2	0.6
2022	Percent who did not travel on travel day	23.4	30.0	35.4	48.9	30.3
	2017 2022	0.0	0.0	0.0	0.0	0.0
2009	Percent with disability	10.9	15.8	22.6	41.3	17.5
	2009 MOE	0.9	0.9	1.3	2.1	0.5
2017	Percent with disability	8.0	11.2	15.1	48.9	13.9
	2017 MOE	0.3	0.3	0.2	0.2	0.4
2022	Percent with disability	5.21	5.39	7.06	52.56	9.31
	2022 MOE	0.0	0.0	0.0	0.0	0.0

Note: "Percent with disability" is based on respondents who answered that they had a temporary or permanent condition that makes it difficult for them to travel outside of the home. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 9-3. Selected Data for Males Aged 50 and Older

| Survey Year | Characteristic | Age (Years) | | | | |
		All Age Groups 50+	50–59	60–69	70–79	80+
2009	Percent drivers	93.2	95.7	95.1	90.8	77.4
	2009 MOE	0.5	0.7	0.9	1.4	2.8
2017	Percent drivers	91.2	92.4	92.4	91.6	77.6
	2017 MOE	0.5	0.7	0.8	0.4	0.2
2022	Percent drivers	94.1	93.7	95.8	94.8	85.6
	2022 MOE	0.1	0.1	0.1	0.1	0.1
2009	Vehicle miles/driver (adj)	30.36	34.15	31.27	23.84	15.26
	2009 MOE	1.04	1.61	2.05	1.99	2.01
2017	Vehicle miles/driver	30.06	33.85	30.14	25.72	16.42
	2017 MOE	1.24	2.03	2.21	2.06	2.64
2022	Vehicle miles/driver	27.72	33.03	28.33	21.09	17.62
	2022 MOE	3.10	7.08	4.12	4.15	10.39
2009	Percent with zero vehicles available	5.2	4.5	5.2	5.4	9.0
	2009 MOE	0.5	0.7	1.1	1.3	2.8
2017	Percent with zero vehicles available	6.1	6.5	6.4	4.5	6.7
	2017 MOE	0.6	0.3	0.5	0.2	0.1
2022	Percent with zero vehicles available	3.6	4.5	3.7	2.4	2.7
	2022 MOE	0.0	0.0	0.0	0.0	0.0
2009	Percent who did not travel on travel day	14.3	10.8	12.8	18.3	31.2
	2009 MOE	0.8	1.1	1.1	1.9	3.9
2017	Percent who did not travel on travel day	16.9	13.2	15.9	21.7	31.5
	2017 MOE	0.8	0.6	0.4	0.3	0.3
2022	Percent who did not travel on travel day	25.8	21.2	25.2	29.5	39.9
	2017 2022	0.0	0.0	0.0	0.0	0.1
2009	Percent with disability	14.4	9.9	13.5	18.6	34.2
	2009 MOE	0.7	1.2	1.3	1.7	3.0
2017	Percent with disability	11.6	7.1	9.5	12.7	44.9
	2017 MOE	0.5	0.4	0.3	0.3	0.2
2022	Percent with disability	8.5	6.3	4.7	5.6	47.2
	2022 MOE	0.0	0.0	0.0	0.0	0.0

Note: "Percent with disability" is based on respondents who answered that they had a temporary or permanent condition that makes it difficult for them to travel outside of the home. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 9-4. Selected Data for Females Aged 50 and Older

Survey Year	Characteristic	Age (Years)				
		50–59	60–69	70–79	80+	All Age Groups 50+
2009	Percent drivers	91.8	88.2	77.1	52.4	83.3
	2009 MOE	1.2	1.5	2.0	2.7	0.9
2017	Percent drivers	90.0	87.0	81.0	54.3	83.8
	2017 MOE	0.9	1.1	0.5	0.5	0.9
2022	Percent drivers	93.0	92.2	88.5	51.7	88.4
	2022 MOE	0.1	0.1	0.1	0.1	0.0
2009	Vehicle miles/driver (adj)	22.9	18.9	10.7	7.0	18.4
	2009 MOE	1.7	1.1	0.7	0.7	0.8
2017	Vehicle miles/driver	22.79	18.62	14.93	9.66	19.05
	2017 MOE	1.59	1.26	2.23	2.36	0.94
2022	Vehicle miles/driver	21.11	14.90	9.64	5.73	15.58
	2022 MOE	3.33	2.08	2.78	2.50	1.59
2009	Percent with zero vehicles available	5.2	8.3	14.0	22.7	9.9
	2009 MOE	0.9	1.2	1.9	2.2	0.6
2017	Percent with zero vehicles available	7.3	8.9	9.1	16.4	9.1
	2017 MOE	0.3	0.4	0.2	0.2	0.8
2022	Percent with zero vehicles available	4.2	5.5	4.6	16.6	5.7
	2022 MOE	0.0	0.0	0.0	0.1	0.0
2009	Percent who did not travel on travel day	11.7	16.7	28.9	42.1	20.0
	2009 MOE	0.8	1.4	2.1	3.4	0.8
2017	Percent who did not travel on travel day	15.9	20.6	27.3	41.1	22.1
	2017 MOE	0.5	0.2	0.3	0.4	0.7
2022	Percent who did not travel on travel day	25.5	34.5	40.8	56.5	34.5
	2022 MOE	0.0	0.0	0.0	0.0	0.0
2009	Percent with disability	11.8	17.9	25.7	45.4	20.2
	2009 MOE	1.3	1.2	2.0	2.8	0.7
2017	Percent with disability	9.0	12.7	17.0	51.5	15.9
	2017 MOE	0.3	0.6	0.3	0.3	0.6
2022	Percent with disability	4.1	6.1	8.4	57.1	10.1
	2022 MOE	0.0	0.0	0.0	0.0	0.0

Note: "Percent with disability" is based on respondents who answered that they had a temporary or permanent condition that makes it difficult for them to travel outside of the home. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Overall, younger drivers reported driving 3 miles fewer per capita (including drivers who drove on the travel day and those who did not) in 2022 compared to 2017 and 4 miles fewer compared to 2009 (Table 9-5).

In urbanized areas, all age groups experienced a sharp decline in VMT in 2022 when compared to 2009 or 2017. This decline was more pronounced for those under 45 years of age than for those who were older.

In rural areas, VMT per driver did not decrease in 2022. This was due to a substantial increase in VMT for the 35–44 age group, which increased close to 10 miles in 2022 compared to 2017.

Table 9-5. VMT Trends for Younger People by Household Location and Age

Household Location	Survey Year	Average Daily VMT	Age (Years)			
			16–24	25–34	35–44	45+
All areas	2009 (adj)	23.4	15.8	24.3	29.5	22.8
	2017	22.5	14.9	26.0	27.1	22.2
	2022	19.5	11.0	19.7	25.2	19.9
All areas MOEs	2009 (adj)	0.6	1.0	1.5	1.6	0.7
	2017	1.0	1.2	4.8	1.8	0.7
	2022	1.2	2.0	2.6	4.8	1.6
Urban areas	2009 (adj)	21.0	13.2	22.3	27.3	20.3
	2017	20.8	13.3	25.0	25.2	20.2
	2022	17.0	9.4	17.6	20.7	17.6
Urban areas MOEs	2009 (adj)	0.7	0.9	1.8	1.9	0.8
	2017	1.2	1.5	5.3	1.5	0.8
	2022	1.1	2.0	2.4	3.6	1.4
Rural areas	2009 (adj)	31.0	23.4	31.4	36.8	31.0
	2017	30.3	22.4	32.8	37.0	30.3
	2022	30.0	19.1	31.3	46.5	27.8
Rural areas MOEs	2009 (adj)	1.1	2.8	2.4	2.9	1.6
	2017	0.8	3.1	3.0	4.4	1.6
	2022	4.3	4.9	9.7	21.0	4.9

Note: "Rural areas" encompass all territories not included within a Census Bureau classified urban area. For explanations of adjustments as well as specific differences in survey methods over time, please refer to Section 1.2.

Table 9-6 shows select travel characteristics by urban and rural areas for the 2022 NHTS.

Table 9-6. Travel Characteristics of People in Urban and Rural Areas in 2022

Category	Travel Characteristic	Living Area			
		Living in Urban Areas	MOE Urban	Living in Rural Areas	MOE Rural
Travel characteristic (percent)	Overall people ages 16 and older	80.6	0.0	19.4	0.0
	Drivers	88.1	0.0	94.2	0.1
	Workers	61.6	0.0	58.2	0.1
	With children (<21 years old) in household	43.7	0.0	39.5	0.0
	Zero vehicles available	6.8	0.0	1.3	0.0
	Did not travel on travel day	25.7	0.0	27.2	0.0
Person trips by age group (number of trips)	All 16+	2.3	0.1	2.3	0.2
	Ages 16–19	2.1	0.3	1.7	0.3
	Ages 20–34	2.3	0.2	2.4	0.4
	Ages 35–54	2.6	0.1	2.6	0.3
	Ages 55–64	2.4	0.2	2.3	0.4
	Ages 65+	2.0	0.1	1.9	0.3

Note: "Rural areas" encompass all territories not included within a Census Bureau classified urban area.

9.2. Emerging Travel Trends

Table 9-7 displays select characteristics for users of transportation network companies in 2017 compared to 2022.

Table 9-7. Distribution of Travel Characteristics of Users of Transportation Network Companies (Uber/Lyft) (Percent)

Travel Characteristic	Survey Year			
	2017	2017 MOE	2022	2022 MOE
Overall people ages 16 and over who used rideshare	9.8	0.4	17.2	0.0
Drivers	87.6	0.4	85.2	0.1
Workers	81.3	0.4	76.9	0.1
Urban	96.5	0.4	93.6	0.1
With children (<21) in household	36.4	0.2	45.5	0.0
Zero vehicles available	12.3	0.1	13.5	0.0
Did not travel on travel day	10.2	0.1	17.2	0.0

Across all micromobility modes (i.e., e-scooters, bicycles, bikeshare, and walking), those living in urban areas in 2022 were more likely to use them compared to those in rural areas (Table 9-8). Looking specifically at bicycle usage and walking, urban dwellers were twice as likely as those in rural areas to ride a bicycle within the past 30 days and 50% more likely to have walked.

Table 9-8. Urban and Rural Micromobility Usage in 2022

Travel Mode	Persons 16+ Who Used Mode in Past 30 Days (Percent)			Average Number of Days Used		
	Urban	Rural	Total	Urban	Rural	Total
E-scooter	2.3	0.5	1.9	3.6	**	3.7
Bike	11.6	5.7	10.5	6.2	4.2	6.0
Bikeshare*	6.8	2.6	6.4	3.5	**	3.6
Walk	45.8	30.1	42.7	9.8	7.6	9.5

*Only asked of those who indicated they used a bicycle.
**Fewer than 30 observations.
Note: Urban/rural designation reflects where the household was located, not necessarily where the travel using these modes took place.

Table 9-9 presents the demographic characteristics of micromobility users.

Table 9-9. Demographics of Micromobility Users in 2022

Category	Characteristic	User Demographic
E-scooter	Gender	64% were male
	Age	46% were ages 25–34, 32% were ages 35–54
	Worker	82% were workers
	Student	14% were students
	Education	52% had a bachelor's degree or higher
	Race	39% were non-White
	Ethnicity	23% were of Hispanic origin
	Home location	69% lived in an MSA of 1 million+
	Household income	40% reported household incomes under $75,000
	Home own	47% did not own their home
Bicycle	Gender	60% were male
	Age	39% were ages 35–54, 31% are ages 55+
	Worker	70% were workers
	Student	10% were students
	Education	51% had a bachelor's degree or higher
	Race	75% were White, 8% were Black/African American, 7% were Asian
	Ethnicity	23% were of Hispanic origin
	Home location	60% lived in an MSA of 1 million+
	Household income	40% reported household incomes under $75,000
	Home own	30% did not own their home
Bikeshare	Gender	52% were male
	Age	32% were ages 25–34, 48% were ages 35–54
	Worker	86% were workers
	Student	*
	Education	*
	Race	*
	Ethnicity	*
	Home location	57% lived in an MSA of 3 million+
	Household income	45% reported household incomes under $125,000

Category	Characteristic	User Demographic
	Home own	62% did not own their home
Walk	Gender	50% were male
	Age	36% were ages 35–54, 34% were ages 55+
	Worker	65% were workers
	Student	10% were students
	Education	43% had a bachelor's degree or higher
	Race	70% were White, 12% were Black/African American, 8% were Asian
	Ethnicity	18% were of Hispanic origin
	Home location	61% lived in MSA of 1 million+
	Household income	44% reported household incomes under $75,000
	Home own	36% did not own their home

*Fewer than 30 observations.

Appendix A. Changes in Survey Methodology and the Adjustment of Trip Counts

Introduction

Since 1969, FHWA has been collecting travel behavior data to answer evolving questions related to how, why, when, and where people travel through a probability-based random sampling survey approach. The 2022 NextGen NHTS is the ninth and most recent survey in this series.

As its name implies, NextGen NHTS reflects several important changes to the NHTS program:

- **More frequent surveys:** The NextGen NHTS design aims to provide timely data on an ongoing basis to capture emerging trends and changes in travel.
- **Smaller samples:** Each NextGen NHTS survey cycle will collect data from 7,500 households. This lower sample means that survey data are not representative at lower levels of geography, such as state or local areas. However, over an 8–10-year period, the total number of households surveyed will equal or surpass that collected in the past.
- **More focused questions:** To fulfill its objectives, the NextGen NHTS will focus on obtaining details to understand emerging trends and inform priority policy questions.

The 2022 NexGen NHTS survey documents the demographic, attitudinal, and travel behavior for all members across 7,893 households, as collected from January 2022 through January 2023. Daily travel details provide insights into work and school commutes, nonemergency medical trips, shopping trips, and even how travel differs in the summer and on weekends as compared to the typical weekday when school is in session. When statistically weighted to adjust for survey biases, the data demographically represents Americans living in nongroup quarters and is appropriate for analysis at the national, Census region, and Census division levels.

The importance of the 2022 NHTS effort is twofold. First, it marks the first in the NHTS series to be conducted during a time when the United States is recovering from the pandemic. During this recovery period, the Nation continues to experience adjustments in terms of where work and school take place, the continued substitution of online activities in lieu of travel, and an increased need for data to understand the extent to which the recovery in VMT levels reflects personal versus commercial deliveries associated with the doubling of online shopping. Second, the 2022 NHTS documents travel in this time of transition. Had FHWA waited until a full pandemic recovery or steady state or continued with the cycle of data collection every 5–8 years, this reduced level of trip-making would not have been captured, and important questions regarding travel during this time would have gone unanswered.

The changes in travel from 2017–2022 are markedly different. Across the board, the volume of trip-making is lower, and with that decreased trip-making, related metrics associated with miles traveled are also reduced.

History of Adjusting NHTS Data

As a reference, when the methods changed between the 1990 NPTS (which used a recall of "yesterday") and the 1995 NPTS (which used a two-stage survey with a travel log), the earlier survey was given an adjustment (in that case, applied to the weights) to bring the trip reporting in line with the 1995 NPTS.

The adjusted data were provided on the dataset and in the 1995 documentation along with the original estimate until 2001 when the *Summary of Travel Trends* dropped the original estimate for 1990 and only included the adjusted estimates. Documentation of the adjustment can be found in Appendix 2 of the 1995 *Summary of Travel Trends* (http://nhts.ornl.gov/1995/Doc/trends_report.pdf).

More recently, the 2017 NHTS modified the method for estimating travel distance. The move to a web-based survey in the 2017 survey allowed for an improvement in how trip distances were estimated. Specifically, the web-based survey incorporated a Google API that automatically calculated the shortest-path distance between each trip's origin and destination. The resulting distance was shorter than the respondent reported distances, so an adjustment factor was developed that was applied to the 2017 data that allowed for back-trending with prior NHTS results.

For this report, since the 2017 and 2022 NHTS both used the Google API to estimate trip distance, the 2017 unadjusted distances were used. However, as a bridge to prior NHTS years, the 2009 distance was reported both unadjusted (i.e., self-reported distance) and adjusted (i.e., factored to forward-trend with 2017 and 2022).

2022 NHTS Data Assessment and Adjustment

The 2022 NHTS had the following specific design changes:

- For the 2022 NHTS, households of one to three persons required participation by all household members ages 5 years old or older to be included in the data. Households of four or more persons were included in the data if at least 75% of members ages 5 years old or older completed the survey. This was a change in the definition of a completed household from prior years.
- Although the 2022 NHTS utilized an ABS frame (the same as was used in 2017), the resulting expansion factors bring the expanded total to the sum of the noninstitutionalized population of the United States. This change is estimated to reduce results by a difference of 2.5% as compared to 2017, as the 2017 weights expanded the results to the full population (including the noninstitutionalized population).
- The 2022 survey mode was push-to-web with a mail option upon request. The majority (99%) of households completed the survey via the web, where respondents were presented with an example of a travel day and instructions on how to translate one's own travel into the trip reporting format of the online program. The 2017 NHTS offered both web and phone options, with the phone option offering interviewer-mediated surveys. Two-thirds (66%) of the 2017 survey were completed by web.
- With the change to a push-to-web design, respondents were not provided a travel log (consistent with changes in most regional travel surveys in the United States).

Each cycle of NHTS data collection has experienced some change in methods. For the 2022 version, an adjustment factor was developed to account for the move to a web-only survey with no advance provision of a travel log.

Consistent with adjustments calculated when changes in survey methods were implemented, the 2022 trip data received an adjustment to reflect the change to online surveys only (no interviewer-mediated telephone surveys) and the change to a single-stage survey (no travel log).

The method used to estimate this adjustment parallels that used for the 1990 adjustment process. Specifically, the 2017 NHTS was evaluated for differences in trip rates when the respondent reported using a travel log versus when they did not. This relied on the use of the responses to the DIARY variable. The analysis considered various demographic and behavioral combinations, with all pointing to a 10–12% adjustment of trips. Ultimately, and consistent with the 2017 trip distance calculations, a 2022 trip adjustment factor was developed based on the difference in number of trips reported by trip purpose when a travel log was reported used or not.

Once trip purpose was identified as the basis for the adjustment factor, the following three-step process was used:

1. Determine the difference in trips reported by purpose based on whether the respondent reported using a travel log:
   a. First, a cross-tabulation of WHYTRP90 by DIARY in the 2017 NHTS trip file was run (Table A-1).

Table A-1. 2017 NHTS Trip Purpose by Reported Travel Log Usage

Travel Day Trip Purpose Consistent With 1990 NPTS Design	Travel Log Usage Status		
	Yes	No	Total
To/from work	46,801,979,292	17,779,648,440	64,581,627,732
Work-related business	4,811,298,381	1,236,212,179	6,047,510,560
Shopping	50,814,659,116	17,734,574,054	68,549,233,170
Other family/personal business	49,463,529,701	15,703,391,270	65,166,920,971
School/church	27,813,313,707	12,489,308,446	40,302,622,153
Medical/dental	6,365,998,114	2,671,726,074	9,037,724,188
Visit friends/relatives	17,021,591,000	7,231,674,278	24,253,265,278
Other social/recreational	58,614,894,359	19,458,887,540	78,073,781,899
Other	10,908,409,221	4,059,858,168	14,968,267,389
Refused/don't know	68,796,743	102,221,440	171,018,183
Total	272,684,469,634	98,467,501,889	371,151,971,523

b. Second, a count of persons who reported using the travel log (DIARY) in the person file was run (Table A-2).

Table A-2. 2017 NHTS Reported Travel Log Usage (Person Level)

Category	Number
Yes	202,392,160
No	99,207,009
Total	301,599,169

c. Finally, the results from Table A-1 were divided by those in Table A-2, then by 365 (conversion factor from annual trip levels to daily trip levels) to arrive at the 2017 average daily person trip rate per person by trip purpose and reported travel log usage (Table A-3).

Table A-3. 2017 NHTS Average Daily Person Trips by Purpose and Reported Travel Log Usage

	Travel Log Completion Status		
Trip Purpose	Yes	No	Total
To/from work	0.634	0.491	0.587
Work-related business	0.065	0.034	0.055
Shopping	0.688	0.490	0.623
Other family/personal business	0.670	0.434	0.592
School/church	0.377	0.345	0.366
Medical/dental	0.086	0.074	0.082
Visit friends/relatives	0.230	0.200	0.220
Other social/recreational	0.793	0.537	0.709
Other + refused/don't know	0.149	0.115	0.138
Total	3.691	2.719	3.372

2. Calculate the trip adjustment factor:
   a. The trip adjustment factor was calculated as the proportion of trips reported using a diary to the overall averaged daily person trip rate (Table A-4).

Table A-4. Trip Adjustment Factors

Trip Purpose	Trip Adjustment Factor
To/from work	0.079920
Work-related business	0.185556
Shopping	0.104645
Other family/personal business	0.131083
School/church	0.028385
Medical/dental	0.049648
Visit friends/relatives	0.045843
Other social/recreational	0.118766
Other + refused/don't know	0.080495
Total	0.094826

3. Apply the trip adjustment factor:
    a. The trip adjustment factor was applied to each trip based on trip purpose. This was done by creating a new weight (WTTRDFIN_Adj) that adjusted each trip's original weight (WTTRDFIN) using the following logic:

    IF (WHYTRP90 = 01) WTTRDFIN_Adj = WTTRDFIN × 1.079920.
    IF (WHYTRP90 = 02) WTTRDFIN_Adj = WTTRDFIN × 1.185556.
    IF (WHYTRP90 = 03) WTTRDFIN_Adj = WTTRDFIN × 1.104645.
    IF (WHYTRP90 = 04) WTTRDFIN_Adj = WTTRDFIN × 1.131083.
    IF (WHYTRP90 = 05) WTTRDFIN_Adj = WTTRDFIN × 1.028385.
    IF (WHYTRP90 = 06) WTTRDFIN_Adj = WTTRDFIN × 1.049648.
    IF (WHYTRP90 = 08) WTTRDFIN_Adj = WTTRDFIN × 1.045843.
    IF (WHYTRP90 = 10) WTTRDFIN_Adj = WTTRDFIN × 1.118766.
    IF (WHYTRP90 = 10 OR WHYTRP90 = 99) WTTRDFIN_Adj = WTTRDFIN × 1.080495.

Appendix B. Key Changes

Table B-1. Key Changes in NHTS Survey Methodology and Content

Category	NHTS Data Series			
	2022 NHTS	**2017 NHTS**	**2009 NHTS**	**2001 NHTS**
Number of households	27,290 (7,893 national and 19,397 add-ons).	129,696 (26,099 national and 103,597 add-ons).	150,147 (25,510 national and 124,637 add-ons).	66,038 (26,038 national and approximately 40,000 add-ons).
Sample selection	Random sample of residential addresses selected from the U.S. Postal Service formed an ABS.	Random sample of residential addresses selected from the U.S. Postal Service formed an ABS.	List-assisted sample of telephone numbers formed a random digit dialing (RDD) sample.	List-assisted sample of telephone numbers formed an RDD sample.
Interview methods	Mail push-to-web recruitment letter with link and login information for a single-stage web instrument. Option to request paper survey.	Mail-back (recruit survey), web and telephone for both recruit and retrieval surveys carried out in two stages, recruitment and log.	Telephone interviews in two stages, recruitment and log.	Telephone interviews in two stages, recruitment and log.
Number of contacts	Two: one survey at the household level and one for each person in the household 5 years of age and older.	Two: one survey at the household level and one for each person in the household 5 years of age and older.	Two: one interview at the household level and one for each person in the household 5 years of age and older.	Two: one interview at the household level and one for each person in the household 5 years of age and older.
Contractor	Ipsos Public Affairs, Washington, DC.	Westat, Rockville, MD	Westat, Rockville, MD.	Westat, Rockville, MD.
Travel day data	Retrospective recorded travel day (1 day prior).	Travel log used for 1 day.	Travel log used for 1 day.	Travel log used for 1 day.
Long-distance travel definition	A count of all trips of 50 miles or more and details on the most recent trip of 50 miles or more with a return home during the 30 days preceding and including travel day.	No data collection to specifically record long-distance trips.	No data collection to specifically record long-distance trips.	All trips of 50 miles or more with a return home during the 28 days preceding and including travel day.

Category	NHTS Data Series			
	2022 NHTS	**2017 NHTS**	**2009 NHTS**	**2001 NHTS**
Unique attributes	Trip distance calculated using Google API based upon traffic patterns and likely route during time and date of trip. Shared trip information auto-filled for accompanying household members.	Online geocoding in real time with Google API by participant or interviewer. Trip distance was calculated by shortest distance along path and trips starting and ending at the same location are collected as loop trips.	Geocoding of addresses was conducted online during the CATI retrieval interview An experimental cellphone only household sample of 1,254 (discussed separate from the main survey).	First time the long trip survey (ATS) was combined with the daily trip survey (NPTS).
Response rate (percent)	11.3	15.6	19.8%	41.0

Appendix C. Reliability of the Estimates

An estimate based on a sample survey has two types of errors: a nonsampling error and a sampling error. The estimated standard errors provided approximate the true sampling errors. They do incorporate the effect of some nonsampling errors in response and enumeration but do not account for any systematic biases in the data. The following defines each in greater detail.

Nonsampling error. The full extent of nonsampling errors is unknown, but special studies have quantified some sources of nonsampling errors. Some sources of nonsampling errors in surveys include the inability to obtain information about all persons in the sample, differences in the interpretation of questions, inability or unwillingness of respondents to provide correct information, inability of respondents to recall information, errors made in collecting and processing the data, errors made in estimating values for missing data, and failure to represent all sample households and all persons within sample households (undercoverage).

In a national sample such as that used for NHTS, undercoverage can occur when households reside in very newly constructed homes whose addresses are not yet available on the sampling frame, households have simplified addresses (e.g., John Doe, Anytown, MD 12345), or the household respondent either accidentally or purposely does not report all the people living in the household. The weighting process adjusts for some nonresponse and matches independent age-sex-race-ethnicity population controls, which partially corrects for the biases due to survey undercoverage. However, biases exist in the estimates to the extent that missed persons in missed households or missed persons in interviewed households have travel characteristics different from those of interviewed persons in the same age-sex-race-origin group.

Sampling error. When a portion of the population is surveyed rather than the entire population, estimates differ from the true population values that they represent. This difference, known as the sampling error, occurs by chance, and variability is measured by the standard error of the estimate. The standard error is the MOE, which is the half-confidence interval at the 95% confidence level.

Sample estimates from a given survey design are unbiased when an average of the estimates from all possible samples would yield, hypothetically, the true population value. In this case, the sample estimate and its MOE can be used to construct approximate confidence intervals, or ranges of values that include the true population value with known probabilities.

The MOE in this report is given at the 95 percent confidence level. To construct the bounds of the MOE—that is, a high estimate and a low estimate—the MOE shown in tables is added to and subtracted from the estimate given.

For example, if the estimate is 500 and the MOE is 2, then in 95 repeated samples the estimates obtained would fall between 498 and 502; therefore, if the survey were conducted 100 times with the same protocols, 95 percent of the time the true population estimate would fall between 498 and 502. It is important to determine the significant differences from those estimates that are a product of the known sample error when analyzing these data. When comparing values, if the ranges of two estimates overlap, then there is no significant difference in the estimated values.

Users should be cautious when computing estimates for smaller population groups, such as specific geographies, groups of people, or even less common forms of transportation, like bicycle, Uber/Lyft,

or public transit. While the weights support a large variety of travel-related estimates, caution should be taken for estimates generated from a small number of responding households or persons. Computing the confidence interval or MOE is especially important for such analyses to ascertain whether any apparent nominal differences are statistically significant.

On the other hand, the NHTS sample can produce robust estimates of major travel indicators at the Census region or Census division level (as shown in Table 2-7) or by MSA size (as shown in Table 7-5), and for specific groups of travelers (refer to Chapter 9). Using the data appropriately is the responsibility of the analyst. The data trends shown here are just a small sample of the analysis possible with NHTS data, and each of the topics presented could be the subject of a more in-depth and stringent analysis.

Public-use national data from the 2022 NHTS, as well as previous administrations of the NHTS, are available for download and for online analysis on the NHTS website (http://nhts.ornl.gov). Weights and replicates are included for each of the data files. Weights match the sample of households and persons to the population for demographic characteristics and geographic levels. Use replicate weights to calculate the MOE of each estimate.

Appendix D. Travel Concepts and Glossary of Terms

Travel Concepts

Concept	Definition
Person trip	A person trip is movement from one point to another on a respondent's travel day. It does not matter which member of the household, how far they went, where they began or where they went—movement from one point to another is a trip. This includes something like a jog or walking a pet, where the origin and destination are the same. A trip is starting and ending movement from one location to another using any mode of transportation over any period of time.
	For example, two household members traveling together in one car is counted as two person trips. Three household members walking to the store together is counted as three person trips. One person who left home (A), dropped off lunch at school (B), and then drove to the office (C) would be two person trips (from points A to B and from points B to C).
Person miles of travel (PMT)	PMT is the total number of miles traveled by each person utilizing any mode of transportation.
	For example, if 2 people traveling together take a 6-mile subway trip to the airport, that trip results in 12 PMT. A 4-mile van trip with a driver and three passengers counts as 16 PMT (4 people times 4 miles).
Vehicle trip	A vehicle trip involves a single privately owned vehicle by a household regardless of the number of persons in the vehicle.
	To be considered a vehicle trip in NHTS, the trip must have been made in a privately owned vehicle, namely a household car, van, SUV, pickup truck, other truck, recreational vehicle, or motorcycle. This can be a vehicle owned by the household or a vehicle that is rented or accessed through a carshare program. Given the focus on household-based travel, a vehicle trip does not include trips made in other highway vehicles, such as buses, streetcars, taxis (including Uber/Lyft), or school buses.
	Vehicle trips are calculated by filtering for privately owned vehicle trips where a household member was the driver (DRVR_FLG = 01 and TRPTRANS = (01, 02, 03, 04, 06, 07)).
	For example, two people traveling together in a household SUV would be counted as one vehicle trip. Similarly, four people going to a restaurant in the same household vehicle is considered one vehicle trip.
Vehicle miles of travel (VMT)	VMT is the total number of miles traveled associated with a vehicle trip.
	VMT is calculated by filtering for privately owned vehicle trips where a household member was the driver and where distance traveled was captured in the survey (DRVR_FLG = 01 and TRPTRANS = (01, 02, 03, 04, 06, 07) and TRPMILES>–1).
	For example, when 1 person drives 12 miles to work in a household vehicle, that equals 12 VMT. If 2 people travel 3 miles by household pickup, that equals 3 VMT.

Concept	Definition
Vehicle occupancy	Vehicle occupancy is defined as the number of people in a single vehicle on a single trip.
	For NHTS data, vehicle occupancy is generally computed as PMT per VMT (referred to as the travel method). Note that the other commonly used definition of vehicle occupancy is persons per vehicle trip (referred to as the trip method).
	Because longer trips often have higher occupancies, the distance-based method generally yields a higher rate than the trip-based method. The calculation of the distance-based method requires that trip distance be included in the record. In the 2022 NHTS, distance is the shortest-path calculated distance based on the reported trip origin and destination.
	For example, four friends traveling to lunch in a personal vehicle (owned by the driver of the vehicle) would be a vehicle occupancy of four.

Glossary of Terms

This glossary provides the most commonly used terms in this report and the NHTS survey and their definitions to assist readers in the interpretation of the NHTS data and tables.

Term	Definition
Adult	For NHTS, this is deined as a person 18 years of age or older.
Census region and division	The U.S. Census Bureau divides States into four regions and nine divisions. Note that the divisions are wholly contained within a region (i.e., region lines do not split division lines). The regions and their component divisions are as follows: **Northeast Region:** • *New England Division*: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. • *Middle Atlantic Division*: New Jersey, New York, and Pennsylvania. **Midwest Region:** • *East North Central Division*: Illinois, Indiana, Michigan, Ohio, and Wisconsin. • *West North Central Division*: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. **South Region:** • *South Atlantic Division*: Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia. • *East South Central Division*: Alabama, Kentucky, Mississippi, and Tennessee. • *West South Central Division*: Arkansas, Louisiana, Oklahoma, and Texas. **West Region:** • *Mountain Division*: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. • *Pacific Division*: Alaska, California, Hawaii, Oregon, and Washington.
Destination	For travel day trips, the destination is the endpoint of each reported trip.
Driver	A driver is a person who operates a motorized vehicle. NHTS does not specifically ask about license status.
Employed (worker)	A person is considered a worker/employed if they worked for pay, either full time or part time, during the week before the interview.
Education level	Education level refers to the number of years of regular schooling completed in graded public, private, or parochial schools or in colleges, universities, or professional schools, whether day school or night school. Regular schooling advances a person toward an elementary or high school diploma or a college, university, or professional school degree.

Term	Definition
Household	A household is a group of persons whose usual place of residence is a specific housing unit (nongroup quarters); these persons may or may not be related to each other. The total of all U.S. households represents the total civilian noninstitutionalized population.
Household income	Household income is the money earned by all family members in a household, including those temporarily absent. Annual income is the income earned 12 months preceding the interview.
Household members	Household members include all persons, whether present or temporarily absent, whose usual place of residence is in the sample unit. Household members also include persons staying in the sample unit who have no other usual place of residence elsewhere and do not include anyone who usually lives somewhere else or is just visiting, such as a college student away at school.
Household vehicle	A household vehicle is a motorized vehicle that is owned, leased, rented, or company-owned and available to be used regularly by household members. Household vehicles 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, etc.). Household vehicles include all vehicles that were owned or available for use by members of the household during the travel day. Vehicles excluded from household vehicles are those that were not working and were not expected to be working and vehicles that were purchased or received after the designated travel day.
Means of transportation	A means of transportation is a mode of travel used for going from one place (origin) to another (destination). It includes private and public modes as well as walking. The following transportation modes, grouped by major mode, are included in the NHTS data: **Private Vehicle:** • *Car*: A privately owned and/or operated licensed motorized vehicle including cars and station wagons. Leased and rented cars are included if they are privately operated and not used for picking up passengers in return for fare. • *Van*: A privately owned and/or operated van or minivan designed to carry 5 to 13 passengers or to haul cargo. • *SUV*: A privately owned and/or operated vehicle that is a hybrid of design elements from a van, a pickup truck, and a station wagon. Examples include a Chevrolet Blazer, Ford Bronco, Jeep Cherokee, or Nissan Pathfinder. • *Pickup truck*: A pickup truck is a motorized vehicle that is privately owned and/or operated with an enclosed cab that usually accommodates two to three passengers and an open cargo area in the rear. Later model pickups often have a back seat that allows for total seating of four to six passengers. Pickup trucks usually have the same size of wheelbase as a full-size station wagon. This category also includes pickups with campers. • *Motorcycle*: This category includes large, medium, and small motorcycles. • *Golf cart/Segway*: This category consists of self-powered small vehicles, generally LEVs, and any two-wheeled motorized personal vehicle consisting of a platform for the feet mounted above an axle and an upright post surmounted by handles. • *Recreational Vehicle (RV) (i.e., motor home, all-terrain vehicle, snowmobile)*: This category includes a self-powered RV that is operated as a unit without being towed by another vehicle (e.g., a Winnebago motor home). **Public Transportation:** • *Public or commuter bus*: This category includes buses that are part of transit systems or private service buses operating on a fixed schedule to serve commuters.

Term	Definition
	• *Streetcar or trolley car*: This includes any transit service operated on guide way system; vehicles that run on a fixed rail system powered by electricity obtained from an overhead power distribution system. • *Subway/elevated rail*: This includes any transit service operated on a fixed rail. • *Commuter rail*: This category includes all commuter trains and passenger trains except those operated by Amtrak. • *Amtrak*: This category includes all commuter trains and passenger trains operated by Amtrak. • *Paratransit/dial-a-ride*: This category includes publicly operated on-call transit services for qualified individuals. **Nonmotorized:** • *Walk*: This category includes walking and jogging. • *Bicycle*: This category includes bicycles of all speeds and sizes, including electric bikes. **Other Modes:** • *Ferryboat*: This includes travel by ferries. • *Airplane*: This includes commercial airplanes and smaller planes that are available for use by the public in exchange for a fare. Private and corporate planes and helicopters are also included. • *Taxicab or limo service*: This category includes the use of a mobility service by a passenger for fare but does not include other ridesharing services, such as Uber or Lyft. • *Other ridesharing service*: This category includes the use of a mobility service by a passenger for fare that is accessed exclusively by a smartphone app, also commonly referred to ride-hailing services. Commonly known companies include Uber and Lyft, although other companies also provide these services. • *E-scooter*: A motorized scooter powered by either a small internal combustion engine or electric hub motor in its front and/or rear wheel. E-scooters can be privately owned or rented. • *School bus*: A school bus is any type of bus owned, leased, contracted to, or operated by a school or school district. It is regularly used to transport students to and from school or school-related activities.
Metropolitan statistical area (MSA)	Geographic areas managed by the Office of Management and Budget to categorize official population estimates. 2022 NHTS derived MSA variables use the 2020 Census geography for the home address.
Margin of error (MOE)	MOE is the 95% confidence interval of the estimate, which is calculated in this report by multiplying a factor of 1.984 to the standard error of the estimate. Add and subtract the MOE to the estimate to determine the range of values that the statistic would fall into 95% of the time.
Motorized vehicle	Motorized vehicles are all vehicles that are licensed for highway driving.
Nationwide Personal Transportation Survey (NPTS)	The name of the national survey program responsible for data collected in 1969, 1977, 1983, 1990, and 1995.
Occupancy	Occupancy is the number of persons, including driver and passenger(s), in a vehicle. NHTS occupancy rates are generally calculated as person miles divided by vehicle miles. Refer to Vehicle Occupancy in Travel Concepts.
Origin	The starting point of a trip.
Passenger	For a specific trip, a passenger is any occupant of a motorized vehicle other than the driver.

Term	Definition
Person miles of travel (PMT)	PMT is a primary measure of person travel. When a person travels 1 mile, PMT is 1. When two or more persons travel together in the same vehicle, each person makes the same number of PMT as the VMT. Therefore, 4 persons traveling 5 miles in the same vehicle results in 20 PMT (4 × 5 = 20).
Person trip	A person trip is a trip by one or more persons in any mode of transportation. Each person is considered as making one person trip. For example, four persons traveling together in one automobile are counted as four person trips.
Privately Owned Vehicle	A privately owned vehicle or privately operated vehicle. Either way, the intent here is that this is not a vehicle available to the public for a fee, such as a bus, subway, taxi, rideshare, bikeshare, e-scooter, etc.
Travel day	A travel day is a 24-hour period from 4:00 a.m. to 3:59 a.m. designated as the reference period for studying trips and travel by members of a sampled household.
Travel day trip	A travel day trip is defined as any time the respondent went from one address to another by any travel mode and for any purpose.
Trip purpose	A trip purpose is the main reason that motivates a trip. For each trip in the dataset, the trip purpose is recorded in terms of the purpose at the origin (WHYFROM) and purpose at the destination (WHYTO). In addition to the list of trip purposes provided to the respondent to choose from while reporting their travel, the data set includes two "legacy" formats where trip purpose is aggregated into categories that provide for comparing trip purpose across the NPTS/NHTS data series (WHYTRP90 and WHYTRP1S). Refer to the Derived Variables Memo (https://nhts.ornl.gov/assets/2022/doc/2022%20NextGen%20NHTS%20Derived%20Variables-PubUse.pdf) for more details regarding the derivation of these variables.
Urbanized area	Urbanized areas in the 2022 NHTS are defined according to the 2020 Census geography for the home location.
Vehicle miles of travel (VMT)	VMT is a unit to measure vehicle travel made by a private vehicle, such as an automobile, van, pickup truck, or motorcycle. Each mile traveled is counted as 1 VMT regardless of the number of persons in the vehicle.
Vehicle occupancy	Vehicle occupancy is the number of persons, including driver and passenger(s) in a vehicle; also includes persons who did not complete a whole trip. NHTS occupancy rates are generally calculated as PMT divided by VMT.
Vehicle trip	A vehicle trip involves a single privately owned vehicle by a household regardless of the number of persons in the vehicle.