

## ©

U.S. Department of Transportation

Federal Highway Administration

The information in this publication provides a condensed overview of facts and figures about the Nation's highways. This publication is designed to be of interest to the average citizen. The Federal Highway Administration (FHWA) is the source of the data, except where noted. State governments collect and provide these data to the FHWA each year. Unless otherwise stated, 1998 data are displayed in this publication. For more detailed data on many of the subjects covered, refer to the publication series, Highway Statistics, published annually by the FHWA Office of Highway Policy Information.

Data for this booklet, the Highway Statistics series, and many other publications may also be viewed and downloaded at the FHWA Office of Highway Policy Information website:
http://www.fhwa.dot.gov/ohim

The highway system is vital to the Nation's economy. Eighty-nine percent of total dollars of freight was transported over the highways in 1997.

## Air Quality

Most of the reduction in atmospheric concentrations of carbon monoxide, volatile organic compound, and nitrogen oxide emissions can be attributed to reduced emissions by motor vehicles.
(9) The Vehicle Fleet

The 1998 cost-per-mile for operating an intermediate-size vehicle was 44.3 cents.
ใ 3 Licensed Drivers
Of the 185 million licensed drivers in the United States in 1998, the largest number of drivers falls in the age group of 35-39 year-olds. (11.4\%)
TE The Highway System
The United States has 3.9 million miles of roadway, of which 3 million miles are rural roads. The Interstate System accounts for only $1.2 \%$ of total mileage but carries $23.8 \%$ of total travel.
17 National Highway System
The National Highway System consists of over 160,000 miles which includes the Interstate System and portions of other functional systems.
18 Conditions, Performance, and Safety
The fatality rate on the Interstate System has consistently dropped since 1970 and was at an all-time low in 1998.

25 Motor-Fuel Use
In 1998, 158 billion gallons of fuel were consumed for highway use, averaging about 603 gallons per motor vehicle or 17.1 miles per gallon.
25 Travel
Motor vehicle travel in 1998 reached 2.6 trillion vehicle-miles, an average of 11,844 miles per vehicle per year. Automobiles are responsible for $64 \%$ of this travel.

29 Highway Funding and Expenditures
Although expenditures for highways now exceed $\$ 101$ billion a year, this amounts to less than 3.9 cents per vehicle-mile traveled.
35 Selected State and Urbanized Area Statistics
42 Publication Listing

## Transportation Expenditures at the Household Level

After housing (33\%), transportation (18.6\%) accounts for the largest single household expenditure. Of the $18.6 \%$ transportation expenditures, the largest expenditure is vehicle purchases (48\%). Other transportation expenditures, which includes maintenance and insurance, is the second largest transportation expenditure ( $36 \%$ ), followed by the purchase of gasoline and oil.


SOURCE: Bureau of Labor Statistics, Consumer Expenditures Survey, 1998

## Personal Travel by Mode of Transportation

The personal motor vehicle
Private Vehicles ( $91.2 \%$ )
(automobile, light truck, van,

- Auto, Station Wagon, Van-67.5\% and motorcycle) is the predominant form of personal transportation. Privately owned vehicles are used for $91.2 \%$ of all personal travel. Adding school bus (1.3\%), bus/streetcar (1.4\%), taxi ( $0.1 \%$ ) and private vehicles (91.2\%) together shows that $94 \%$ of personal transportation uses the highways.
- Utility Vehicle - 7.0\%
- Pick-Up-13.8\%


Public Transportation
(2.1\%)

- Airplane-3.4\% - Arntrak - 0.1\%
- Bus, Streetcar - 1.4\%
- Walking - $0.3 \%$ - Other $-1.4 \%$ - Commuter Train - 0.4\%
- Bike-0.1\% - Subway - 0.3\%


## Highway Expenditures per Vehicle-Mile of Travel



In 1998, highway capital expenditures were $1.97 \$$ per vehicle-mile of travel (VMT) as compared to $1.04 \pm$ per VMT in 1970 - an $89 \%$ increase. After accounting for inflation, however, 1998 capital expenditures were only $0.54 \$$ per VMT, a $48 \%$ decrease from 1970 's capital expenditures. In 1998, total highway expenditures were $4.08 \$$ per VMT as compared to $1.88 \$$ per VMT in 1970 - a $117 \%$ increase. After adjusting for inflation, total 1998 highway expenditures were only $1.04 \$$ per VMT, a $45 \%$ decrease from 1970 's total highway expenditures. In effect, 1998's highway expenditures by all units of government, with inflation removed, were about $55 \%$ of what they were 28 years ago for each vehicle-mile of travel.

Gross Domestic Product and Travel Relationship


There is a strong relationship between the Nation's economy and travel on the Nation's highway system. Since the 1930's, growth in the Gross Domestic Product (GDP) and vehicle-miles of travel (VMT) reflect strikingly similar patterns, including the period of energy disruptions during the 1970's.
$\qquad$

## U.S. Telecommuting Population



SOURCE: Cyber Dialogue.
The number of telecommuters in the U.S. rose to 15.7 million in mid-1998. Although telecommuting fluctuated in the early 1990s, this trend has been rising steadily since 1996, with more telecommuters using PCs and going online from home. Demographically, telecommuters in 1998 were around 42 years of age, ( $51 \%$ female and $49 \%$ male) with a median household income of about $\$ 45,200$. Full-time employees tend to be more male (57\%) and slightly younger and earning $\$ 49,500$. Long-term telecommuting trends indicate that by the year 2000, 18 million people could be telecommuting, depending on the overall level of employment in the economy. This will directly affect daily traffic by reducing traffic congestion.

## Commute Profile



SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.
The 1995 Nationwide Personal Transportation Survey data show a continuation of the increase in commute trip length without a corresponding increase in travel time. While commuting trips are $37 \%$ longer in miles since 1983 , travel time increased only by $14 \%$. The three reasons most often cited for this situation are the continued decentralization of metropolitan areas, expansion of the peak travel period, and the shift from transit and carpool to single-occupant vehicles. All three factors would contribute to commuters being able to travel longer distances and make those trips at a greater speed than in the past.

Annual Automobile Vehicle-Miles of Travel per Capita and Number of Automobiles per Capita


Americans travel much more than citizens of the other countries. The myth of Americans' love affair with our cars may actually be a marriage of convenience. Contemporary land use patterns require the use of private vehicles, whether or not we love those vehicles. Americans own more vehicles than the citizens of other countries. Not shown here is the huge increase in SUVs, Vans, and Pickup trucks, which are increasingly used as household vehicles in both the United States and Canada.

Annual vehicle-miles for automobiles follow a more pronounced pattern with per capita miles for the U.S. exceeding 5,500 and for Canada exceeding 4,800 . Sweden, Germany, the U.K., and France follow each with between 3,000 and 4,000 per capita miles.


National Emission Trends


SOURCE: Environmental Protection Agency, National Air Pollutant Emission Trends, 1990-1998, Office of Air Quality Planning and Standards, Research Triangle Park, NC, March 2000, Publication No. 454/R-00-002, Tables A-1, A-2, and A-3.

Most of the reduction in emissions can be attributed to reductions from motor vehicles. Emissions controls for cars and trucks have significantly reduced their emissions of carbon monoxide and volatile organic compounds (a primary ingredient of ozone) since 1970, even though travel more than doubled over the past 25 years. Emissions of these pollutants from other sources have fallen only slightly. At the same time, motor vehicle nitrogen oxide emissions-which contribute to ozone - have held about their 1970 levels, while those from all other sources have increased slightly.

## Air Quality Trends



SOURCE: 1975-1995 data were tabulated from individual monitor records in EPA Aerometric information Retrieval Service (AIRS) database. These data are for the subset of monitors having complete data for a least 15 of the 21 years included in that period. Supplemental $1994-1999$ data were tabulated from EPA AIRSDATA Monitor Trends Report, which can be found on the Internet at: http:/www.epa.gov/airsdata/montrnd.htm.
Residents of the Nation's urban areas are breathing easier these days. Atmospheric levels of ozone and carbon monoxide (CO) have declined consistently for several decades. Violations of the National Standards for Carbon Monoxide have been virtually eliminated. Controlling ground-level ozone (or "smog") has proven more challenging, but violations of the Federal 1-hour ozone standard have also been sharply reduced.

Cost of Owning and Operating Automobiles, Vans, and Light Trucks - 1998

|  | Cents Per Mile ${ }^{1}$ |  |  |
| :---: | :---: | :---: | :---: |
|  | Size | Cost ${ }^{2}$ | Characteristics ${ }^{3}$ |
|  | Subcompact | 31.3 | 4 cylinder Avg MPG = 32 |
| 0 | Compact | 35.6 | 4 cylinder Avg MPG $=23$ |
| $\mathrm{O} \times \mathrm{O}$ | Intermediate | 44.3 | 6 cylinder Avg MPG $=22$ |
| $0$ | Full-Size Vehicle | 49.2 | 6 cylinder Avg MPG $=19$ |
| $\mathrm{O}^{\prime} \mathrm{O}^{\prime}$ | Compact Pickup | 36.2 | 4 cylinder Avg MPG $=17$ |
|  | Full-Size Pickup | 40.7 | 8 cylinder Avg MPG $=15$ |
|  | Compact Utility | 38.7 | 4 cylinder Avg MPG $=15$ |
| 0 | Intermediate Utility | 48.5 | 6 cylinder Avg MPG $=15$ |
|  | Full-size Utility | 50.8 | 8 cylinder $A v g M P G=13$ |
| 0 | Mini-Van | 47.1 | 6 cylinder Avg MPG $=18$ |
| $10 \quad-0$ | Full-Size Van | 48.3 | 6 cylinder Avg MPG $=14$ |

Includes depreciation, financing, insurance, registration fees, taxes, fuel maintenance and repairs. ${ }^{2}$ Total costs over 5 years, based on 70,000 miles.
${ }^{3}$ Average MPG retlects city driving estimates, excluding highway driving.
SOURCE: Federal Highway Administration estimates based on the 1998 editions of The Complete Small Truck Guide and The Complete Car Cost Guide, from InteliChoice, Inc., and sales figures from Automotive News.
$\square$

## Licensed Drivers, Population, and Motor Vehicles



In 1998, $89 \%$ of the driving age population was licensed to drive a motor vehicle. Compared to 1950 , which was $57 \%$, this is an increase of 122 million drivers on our highways in the past 48 years. In 1975, the number of registered vehicles surpassed the number of licensed drivers-that trend has continued to this day. In fact, registered vehicles has surpassed even the driving age population since 1996.

Average Annual Miles per Driver by Age Group


SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.
Despite significant increases in women's driving, men still average 6,408 miles more per year than women. The disparity is closing for younger drivers, and it is expected that this gap will close considerably in the future.
$\qquad$

Total Road Mileage and Travel by Functional System - 1998


Roads and streets are grouped into functional systems according to the type of service they provide. The arterial system (including the Interstate System) accounts for about 11.1\% of the Nation's total road and street mileage but carries $72.1 \%$ of total travel.

The Interstate System accounts for only $1.2 \%$ of the Nation's total miles of roadway; however, $23.9 \%$ of total travel occurs on this system. Conversely, local functional system roads account for $68.6 \%$ of the Nation's total road and street mileage but serve only $13.1 \%$ of total travel.

## Functional Classification

Interstate System - The Interstate System consists of all presently designated freeway routes meeting the Interstate geometric and construction standards for future traffic, except for portions in Alaska and Puerto Rico. The Interstate System is the highest classification of arterial roads and streets and provides the highest level of mobility, at the highest speed, for a long uninterrupted distance.

Other Arterials - These consist of limited-access freeways, multi-lane highways, and other important highways supplementing the Interstate System that connect, as directly as practicable, the Nation's principal urbanized areas, cities, and industrial centers; serve the national defense; and connect at suitable border points with routes of continental importance.

Collectors - The collectors provide both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas, and downtown city centers. Collectors connect local roads and streets with arterials and provide less mobility than arterials at lower speeds and for a shorter distance.

Locals - The local roads and streets provide a high level of access to abutting land but limited mobility.

## Ownership of U.S. Roads and Streets

| Jurisdiction | Rural <br> Mileage | $\%$ | Urban <br> Mileage | $\%$ | Total <br> Mileage | $\%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| State | 662,805 | 21.6 | 111,359 | 13.1 | 774,164 | 19.7 |
| Local | $2,291,098$ | 74.6 | 735,863 | 86.7 | $3,026,961$ | $\mathbf{7 7 . 2}$ |
| Federal | 118,369 | 3.9 | 1,485 | 0.2 | 119,854 | 3.1 |
| Total | $3,072,272$ | 100.0 | 848,707 | 100.0 | $3,920,979$ | 100.0 |

The vast majority ( $77.2 \%$ ) of the Nation's roadways are owned by units of local government (town, city, county). Only 3.1\% are owned by the Federal Government; this includes roads in national forests and parks and on military and Indian reservations. The rest of the roadways ( $19.7 \%$ ), including most of the Interstate System, are owned by the States.

## Functional Systems Mileage

| Functional System | Rural | $\begin{aligned} & \% \text { Change } \\ & 1988-1998 \end{aligned}$ | Urban | $\left\|\begin{array}{l} \% \text { Change } \\ 1988-1988 \end{array}\right\|$ | Total | $\left\|\begin{array}{l} \% \text { Change } \\ 1988-1998 \end{array}\right\|$ | $\%$ of Total Mileage |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interstate | 32,910 | -1.4 | 13,424 | 17.3 | 46,334 | 3.4 | 1.2 |
| Other Freeways/ | 32,910 | - | 9,213 | 20.9 | 9,213 | 20.9 | 0.2 |
| Expressways Other Principal Arterial | 98,956 | 18.3 | 53,373 | 4.2 | 152,329 | 15.4 | 3.9 |
| Minor Arterial | 137,599 | -6.8 | 90,006 | 19.5 | 227,605 | 2.1 | 5.8 |
| Major Collector | 433,205 | -0.9 | - | - | 433,205 | -0.9 | 11.0 |
| Minor Collector | 272,822 | -7.4 | - | - | 272,822 | -7.4 | 7.0 |
| Collector | - | - | 88,674 | 13.6 | 88,674 | 13.6 | 2.3 |
| Local | 2,096,779 | -2.1 | 594,008 | 14.1 | 2,690,787 | 1.0 | 68.6 |
| Total | 3,072,271 | $-2.0$ | 848,698 | 14.0 | 3,920,969 | 1.0 | 100.0 |

Roads and streets are grouped into functional systems according to the type of service they provide, and on how much traffic they carry. Although functional classification may change over time to better describe the changing role that a particular road or street may be playing, the total mileage changes only slightly over time.
Decreases in rural systems mileage are the result of the expansion of urban boundaries and the functional reclassification of roads from rural to urban.

## Annual Vehicle-Miles of Travel (millions)

| Functional System | Rural | $\left\|\begin{array}{c} \% \text { Change } \\ 1988-1998 \end{array}\right\|$ | Urban | $\left\|\begin{array}{l} \% \text { Change } \\ 1988-1998 \end{array}\right\|$ | Total | $\left\|\begin{array}{l} \% \text { Change } \\ 1988-1998 \end{array}\right\|$ | \% of Total Travel |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| interstate | 252,317 | 39.2 | 377,840 | 46.1 | 630,157 | 43.2 | 23.9 |
| Other Freeways/ Expressways | 1 | - | 167,357 | 43.1 | 167,357 | 43.1 | 6.3 |
| Other Principal Arterial | 238,193 | 48.6 | 390,830 | 22.4 | 629,023 | 31.2 | 23.8 |
| Minor Arterial | 166,633 | 9.8 | 310,126 | 33.8 | 476,759 | 24.3 | 18.0 |
| Major Collector | 204,623 | 11.5 | - | - | 204,623 | 11.5 | 7.7 |
| Minor Collector | 54,773 | 16.5 | - | - | 54,773 | 16.5 | 2.1 |
| Collector | - | - | 132,393 | 33.4 | 132,393 | 33.4 | 5.0 |
| Local | 120,985 | 29.2 | 225,821 | 23.8 | 346,806 | 25.6 | 13.1 |
| Total | 1,037,524 | 26.9 | 1,604,367 | 32.8 | 2,641,891 | 30.4 | 100.0 |

Since 1988 , total miles has increased only $1.0 \%$, while travel has increased $30.4 \%$. The urban travel increase of $32.8 \%$ has outpaced the rural $26.9 \%$ increase due to the Nation's continued growth in urbanization and expanded urban boundaries. The rural Other Principal Arterial system has had the greatest travel growth (48.6\%) during the 1988 to 1998 time period.
$\qquad$

## National Highway System



The National Highway System (NHS) is the network of nationally significant highways approved by Congress. It includes the Interstate System and over 100,000 miles of arterial and other roads. Designation of the NHS was completed on November 28, 1995, when President Clinton signed the National Highway System Designation Act of 1995 (Public Law 104-59).

The NHS represents only about 4\% of the Nation's total public road miles and 7\% of its lane miles, but carries over $44 \%$ of the travel. Most travel on the NHS takes place in urban areas even though there are more NHS miles in rural areas.


NHS MILEAGE


NHS TRAVEL

## National Highway System



Of the 160,093 NHS miles, $29 \%$ are made up of the Interstate System (IS). The NHS encompasses all of the Strategic Highway Network (STRAHNET), a system of national defense roadways that includes the IS and approximately 10,000 miles of non-IS mileage. The NHS also includes 2,255 miles of designated intermodal connectors (see below).

## Intermodal Facility Connections



The NHS provides the key connections to our Nation's intermodal facilities. Over 1,400 are linked by more than 2,000 miles of NHS connectors to our Nation's highways. Public transit facilities have the most NHS connections while Port facilities have the most associated mileage of NHS connectors.

## Pavement Surface Condition of the NHS and Interstate System



Pavement condition overall has improved on the Interstate system and the NHS over the past several years. In 1998, $95.1 \%$ of the Interstate system and $92.1 \%$ of the NHS was at acceptable ride quality as measured by the International Roughness Index (IRI). IRI is an objective instru-ment-based rating system that has been used as an indicator of pavement performance as measured by rideability. Pavements with $\mathrm{IRI}<170$ can be considered to have an acceptable ride quality, while those with an $\mathrm{IRI}<95$ can be considered to have a good or very good ride quality.

## Bridge Conditions (as of June 1998)

| Conditions | NHS ${ }^{1}$ |  | Other FA Highweys ${ }^{2}$ |  | Non-FA Highways ${ }^{3}$ |  | Total Highways |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | \% | No. | \% | No. | \% | No. | \% |
| Structurally Deficlent | 8,895 | 6.9 | 21,197 | 12.4 | 62,984 | 22.3 | 93,076 | 16.0 |
| Functionally Obsolete | 20,953 | 16.2 | 23,724 | 13.9 | 34,829 | 12.3 | 79,506 | 13.6 |
| All Other Bridges | 99,149 | 76.9 | 126,091 | 73.7 | 185,147 | 65.4 | 410,387 | 70.4 |
| Total Bridges in Inventory | 128,997 | 1000 | 171,012 | 100.0 | 282,960 | 100.0 | 582,969 | 100.0 |

Includes all interstate and other principal arterials.
2Includes all other highways except minor collectors and local roads and streets.
${ }^{3}$ Includes rural minor collectors and local roads and streets.

SOURCE: Federal Highway Administration, Office of Engineering, National Bridge Inventory Data.
Twenty six percent of the Nation's estimated 582,969 bridges are structurally deficient or functionally obsolete. Twenty-three percent of the 128,997 bridges on the NHS (Interstate and all other principal arterials) are structurally deficient or functionally obsolete.
A structurally deficient bridge is closed or restricted to light vehicles only because of deteriorated structural components. Structurally deficient bridges are not necessarily unsafe. Strict observance of signs limiting traffic or speed on bridges will generally provide adequate safeguards for those using the bridges.
A functionally obsolete bridge is one that cannot safely service the volume or type of traffic using it. These bridges are not unsafe for all vehicles, but have older design features that prevent them from accommodating current traffic volumes and modern vehicle sizes and weights.


Travel Congestion on the Urban Interstate System and Urban NHS



Peak period travel congestion on the urban Interstate System and other urban NHS rose slightly to about $56 \%$ and $47 \%$, respectively in 1998. The measure of congestion used in this analysis is the Volume/Service Flow (V/SF) Ratio. As this ratio gets larger, traffic slows and eventually stops as the theoretical value of 1.00 is approached (the volume of traffic $=$ service flow capability of the facility). V/SF ratio of greater than or equal to 0.80 is used here to indicate congestion.
$\qquad$



## Highway Fuel Use



From 1970 to 1998 , highway fuel consumption increased $67 \%$ to 154.9 billion gallons. The highway use of gasoline, which includes gasohol, is predominately by automobiles while the highway use of diesel fuel is predominately by trucks.

During this period, the highway use of gasoline increased $45.7 \%$ from 85.6 to 124.7 billion gallons. As population and the number of automobiles increased, the highway use of gasoline increased overall through the 1980's and into the 1990's despite improved automotive fuel economy.

## Vehicle-Miles of Travel, Highway Motor-Fuel Use and Miles Per

 Gallon of Fuel for All Vehicles

Indices for vehicle-miles of travel, highway fuel use, and average vehicle fuel economy (miles per gallon) have increased significantly through the last decade. Average fuel economy for all vehicles has increased from 12.0 miles per gallon (mpg) in 1970 to 17.0 in 1998, a 41.1\% increase. This improved fuel efficiency made it possible to have a $137 \%$ increase in vehicle-miles of travel with only a $68 \%$ increase in fuel use.
$\qquad$

## Annual Vehicle-Miles of Travel



Annual travel on the Nation's highways reached an estimated 2.6 trillion vehicle-miles in 1998, or nearly four times the level in 1960. Travel grew about 47\% during the 1960's, another $38 \%$ in the 1970 's, and another $37 \%$ in the 1980 's.

Annual travel on roads and streets in urban areas accounted for 1.6 trillion vehicle-miles in 1998 or $60 \%$ of total travel compared to $44 \%$ in 1960 . Compared to the urban travel growth of $45 \%$ in the 1980 's, rural travel grew $27 \%$. Much of the urban travel growth can be attributed to expanding urban boundaries.

Travel by Vehicle Type


Travel by all motor vehicles has increased by $137 \%$ compared to 1970 . Truck travel has increased $215 \%$ since 1970. This includes travel by combination trucks and single-unit trucks. Combination truck travel is up over $264 \%$ and now accounts for $4.9 \%$ of total annual vehicle-miles of travel versus $3.2 \%$ in 1970. The most dramatic increase in travel has been by other 2 -axle, 4 -tire vehicles with an increase of $603 \%$ since 1970 . This rapid increase is due to the popularity of minivans, pickup trucks, and sport utility vehicles. The percentage of annual travel by passenger cars in relation to travel by all vehicles has decreased from $82.6 \%$ in 1970 to $58.8 \%$ in 1998.

Rural Interstate Travel by Vehicle Type (Distribution of Average Daily Traffic Volumes and Equivalent Axle Loads ${ }^{1}$ on the Rural Interstate System as a Percent of Total)

${ }^{\text {i }}$ Equivalent axle loads provide a means of measuring vehicle wear on pavements by relating them to an 80 kilonewton ( 18,000 pound) single axle load.
${ }^{2}$ All 2-axle, 4-tire trucks. Includes pickup trucks, vans, and other vehicles (such as campers, motor homes, etc.).
${ }^{3}$ All vehicles on a single frame having either 2 axles and 6 tires or 3 or more axles (including camping and recreational vehicles and motor homes).

On rural Interstate routes in 1998, combination trucks with 5 or more axles accounted for $18 \%$ of average daily traffic but $89 \%$ of equivalent axle loads. All other vehicles accounted for $82 \%$ of average daily traffic but only $11 \%$ of traffic loads. From 1988 to 1998, traffic on the rural Interstate routes increased by $47 \%$ and the equivalent axle loads increased by $58 \%$.
$\qquad$


SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.
The 1995 NPTS data provides information on the reasons for travel. Family and personal business, which includes shopping and services such as haircuts, car repair and banking, accounts for $46 \%$ of all person trips and about $35 \%$ of person miles. Social and recreational trips, which include visiting friends and relatives, attending movies and parties, and participating in sports, comprise $25 \%$ of all trips and account for $31 \%$ of all miles. Trips to work and for work-related purposes, such as attending a meeting constitute 20\% of person trips and $28 \%$ of person miles. The average person trip length, encompassing all trip purposes is 9.1 miles, and the average commute to work is 11.6 miles.

## Walk/Bike Trips by Purpose



SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.
The data from the 1995 NPTS shows that there are approximately 56 million daily walk trips in the U.S. Family and personal business trips, which are usually the shortest trips, account for just over $43 \%$ of all walk trips. Social and recreational activities share another $34 \%$, with the remainder of walk trips for going to school, church or work.
The majority of bike trips, $60 \%$, are for visiting friends and relatives and other social and recreational activities. Another $22 \%$ are for shopping and other family and personal business. Only $8 \%$ are for travel to and from work, which is not surprising given increasing work trip lengths and weather considerations.

## Travel for Work

| Worktrip Length Ey Mode Average Length In Miles |  |  |  | Worktrip Time By Mode Average Time in Minutes |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | All |  | Male | Female | All |
| POV | 13.49 | 9.58 | 11.84 | POV | 22.09 | 17.40 | 20.10 |
| Public Transit | 14.10 | 11.47 | 12.88 | Public Transit | 43.41 | 40.38 | 41.95 |
| Walk | 0.81 | 0.66 | 0.74 | Walk | 10.86 | 10.87 | 10.86 |
| All Modes | 13.28 | 9.35 | 11.60 | All Modes | 22.44 | 18.22 | 20.65 |

SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.
Although work travel is not the most prevalent travel in our very mobile society, and over the years its share of travel has decreased slightly, its impact on the economy is very important and its predictable concentrations at certain times of the day are important. More than $90 \%$ of work trips take place in privately owned vehicles (POVs) (increasingly this is in singleoccupant vehicles at the expense of car pooling and transit). Somewhat more than $3 \%$ take place on transit, and another $2 \%$ are walk trips. They average 12 miles in POVs and 13 miles on transit; walk trips average less than a mile. The preference for the POV is clearly linked to the travel times for these modes. While the average travel time for the POV is 20.1 minutes at an average speed of 35 mph , that for public transit is 42.0 (average speed of 18 mph ). The overall average travel time is 20.7 minutes with an average speed of 33.7 mph .

Trips by Time of Day and Work/Nonwork Purpose


SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.
There is a general perception that most trips during the traditional "rush hour" are for work. Data from the 1995 NPTS show that the share of trips for work does not support this perception. Only $36 \%$ of all trips starting between 6 AM and 9 AM are for work, and this share drops to $20 \%$ in the $4 \mathrm{PM}-7 \mathrm{PM}$ time period.
Note that the NPTS defines a trip as travel from one address to another. Those incidental trips we make on the way to work are classified as their own purposes.
$\qquad$

Highway Funding by Category \& Highway Expenditures by Function


Total highway funding by all units of government reached $\$ 109.9$ billion in 1998 - a $211 \%$ increase compared to 1978. At $63.0 \%$, highway-user fees make up the largest share of revenues used to fund highways. When compared to the $62.7 \%$ in 1978, the present share has slightly increased. The General Fund share of highway funding has decreased from $17.7 \%$ in 1978 to $12.6 \%$ in 1997. Other taxes, investment income and bond proceeds account for $24.4 \%$ of the total highway funding as compared to $19.6 \%$ in 1978.

Capital expenditures currently account for $48.2 \%$ of highway expenditures compared to $44.6 \%$ in 1978; maintenance accounts for $25.4 \%$ compared to $29.3 \%$ in 1978. Expenditures for administration, highway patrol, and bond interest account for a slightly increased share of total expenditures - $21.6 \%$ in 1998 versus $21.3 \%$ in 1978. Debt retirement accounts for $4.9 \%$ of total expenditures which is a slight increase from $4.8 \%$ in 1978.

Total State Disbursements for Highways in $1998-\$ 80.5$ Billion


In 1998, States spent about $\$ 80.5$ billion for highways, including Federal-aid. The largest single component of State spending is for capital improvements to existing highways ( $\$ 29.2$ billion or $36.3 \%$ ).

Highway Funding and Expenditures by Governmental Unit (billions of dollars)


NOTE: Expenditures by the Federal Government only reflect direct expenditures by Federal agencies. Federal transfers are included with expenditures shown for State and local governments.
State governments account for the largest shares of highway funding and highway expenditures. Local governments account for the next largest share of highway funding and highway expenditures. The Federal share of highway expenditures is the smallest as most Federal funds are transferred to State and local governments for expenditure in their highway programs. Over the past 20 years, the relative share of Federal funding has decreased from $27.0 \%$ in 1978 to $22.4 \%$ in 1998.
$\qquad$

## Using Data for Comparisons

Even when data are consistently collected and reported, users need to recognize that highway statistical information is not necessarily comparable across all States. For many of the data items reported in Highway Statistics (HS'98), a user should not expect to find consistency among all States, due to many State-to-State differences. When making State level comparisons, it is inappropriate to use these statistics without recognizing those differences that impact comparability.

Use of reported State maintenance expenditures provides a clear example. Maintenance expenditures per mile can vary between States depending upon a number of factors including differences such as climate and geography, how each State defines maintenance versus capital expenditures, traffic intensity and percent trucks, degree of urbanization, types of pavement being maintained, and the level of system responsibility retained by the State versus that given to other levels of government. It would be inappropriate, therefore, when using data from Highway Statistics to compare per mile maintenance costs across all States to draw any conclusions without taking into account the differences that should be expected in these parameters based upon differing State conditions.

If choosing to compare State data, the user must be prepared to thoughtfully select a set of peer States that have similar characteristics in relationship to the specific comparison being made. Improperly selected peer States are likely to yield invalid data comparisons.

Differences that the user needs to consider in determining suitability of peer States for data comparison purposes include characteristics such as urban/rural similarities, population density, degree of urbanization, climate, geography, differing State laws and practices that influence data definitions, administration control of the public road system, similarity of the basic State economies, traffic volume similarities, and the degree of State functional centralization.

Beginning in 1994, FHWA provided a two-page "Peer State" table in each edition of Highway Statistics that lists some of these characteristics so that the data user might be made more aware of possible problems that may arise when comparing State-by-State data.

Selected Statistics by State

| State | Resident Population (thousands) (HS'98. Fable DL.1C) | Driving-Age Population (thousands) <br>  | Highway Motor Fuel Use (thousands of gallons) (HSsse Table MF24) | Total Lane Miles <br>  | Total Road and Street Mileage (Hรsse, Table flu-20) | Annual Vehicle-Miles of Travel (millions) ( H S Fs , Table via-2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 4,352 | 3,397 | 3,089,276 | 195,118 | 94,227 | 55,205 |
| Alaska | 614 | 443 | 345,790 | 25,697 | 12,680 | 4,514 |
| Arizona | 4,669 | 3,541 | 2,803,347 | 116,235 | 53,968 | 45,486 |
| Arkansas | 2,539 | , 1,963 | 1,926,982 | 192,946 | 95,110 | 28,346 |
| California | 33,772 | 24,663 | 16,102,917 | 373,834 | 165,948 | 286,442 |
| Colorado | 3,971 | 3,051 | 2,251,687 | 176,606 | 85,270 | 39,283 |
| Connecticut | 5,821 | 2,566 | 1,596,697 | 43,975 | 20,726 | 29,322 |
| Delaware | 739 | 584 | 436,340 | 12,442 | 5,733 | 8,204 |
| Dist. of Columbia | 523 | 430 | 183,111 | 3,450 | 1,421 | 3,307 |
| Florida | 14,916 | 11,755 | 8,129,947 | 249,888 | 115,415 | 137,495 |
| Georgia | 7,642 | 5,845 | 5,696,748 | 238,608 | 113,554 | 97,030 |
| Hawail | 2,005 | 927 | 410,499 | 9,108 | 4,218 | 7,987 |
| Idaho | 1,229 | 922 | 807,227 | 94,455 | 46,108 | 13,433 |
| Minois | 12,056 | 9,208 | 5,808,157 | 288,272 | 137,963 | 101,273 |
| Indiana | 5,545 | 4,561 | 4,086,149 | 192,799 | 93,344 | 68,865 |
| lowa | 2,862 | 2,232 | 1,981,613 | 231,111 | 112,810 | 28,912 |
| Kansas | 2,629 | 2,016 | 1,672,230 | 272,482 | 133,825 | 27,095 |
| Kentucky | 5,294 | 3,068 | 2,780,196 | 152,594 | 73,635 | 46,577 |
| Louisiana | 4,332 | 3,326 | 2,605,566 | 127,576 | 60,747 | 40,326 |
| Maine | 1,241 | 989 | 772,091 | 46,279 | 22,638 | 13,540 |
| Maryland | 5,059 | 3,985 | 2,707,712 | 66,359 | 30,188 | 48,343 |
| Massachusetts | 6,147 | 4,843 | 2,961,857 | 74,400 | 35,254 | 51,829 |
| Michigan | 9,740 | 7,562 | 5,682,608 | 255,066 | 121,482 | 93,916 |
| Minnesota | 4,759 | 3,617 | 2,883,041 | 269,129 | 131,188 | 49,628 |
| Mississippi | 2,574 | 2,088 | 2,015,172 | 151,830 | 73,295 | 34,210 |
| Missouri | 5,439 | 4,199 | 3,900,483 | 251,701 | 122,847 | 64,534 |
| Montana | 880 | 686 | 642,080 | 142,628 | 69,890 | 9,589 |
| Nebraska | 11.637 | 1,272 | 1,172,943 | 188,062 | 92,743 | 17,558 |
| Nevada | 1,856 | 1,327 | 1,139,956 | 74,076 | 35,413 | 17,295 |
| New Hampshire | 1,538 | + 920 | 730,812 | 31,146 | 15,124 | 11,573 |
| New Jersey | 8,115 | 6,333 | 4,544,212 | 77,654 | 35,920 | 64,510 |
| New Mexico | 1,755 | 1,291 | 1,297,042 | 124,783 | 59,914 | 22,193 |
| New York | 18,176 | 14,147 | 6,415,679 | 238,509 | 112,525 | 123,376 |
| North Carolina | 7,546 | 5,832 | 4,801,571 | 206,318 | 98,608 | 85,283 |
| North Dakota | 638 | 497 | 484,727 | 175,335 | 86,603 | 7,333 |
| Ohio | 11,207 | 8,702 | 6,343,642 | 244,659 | 116,221 | 104,924 |
| Oklahoma | 3,307 | 2,575 | 2,329,665 | 232,038 | 112,524 | 42,032 |
| Oregon | \% 3,268 | 2,555 | 1,917,930 | 140,597 | 68,478 | 33,374 |
| Pennsylvania | 12,052 | 9,475 | 6,136,083 | 248,481 | 119,281 | 99,908 |
| Rhode lsiand | 1,862 | 776 | 441,406 | 12,887 | 6,048 | 7,983 |
| South Carolina | 3,836 | 2,989 | 2,696,310 | 135,938 | 64,895 | 42,821 |
| South Dakota | 747 | 563 | 565,395 | 168,983 | 83,412 | 8,097 |
| Tennessee | 5,431 | 4,254 | 3,628,402 | 181,492 | 86,601 | 62,562 |
| Texas | 19,934 | 14,760 | 12,215,649 | 629,092 | 296,581 | 206,023 |
| Utah | 2,100 | 1,483 | 1,249,729 | 86,407 | 41,341 | 21,270 |
| Vermont | 591 | 467 | 389,528 | 29,296 | 14,251 | 6,596 |
| Virginia | 6,791 | 5,332 | 4,317,971 | 151,270 | 69,860 | 70,686 |
| Washington | 5,687 | 4,388 | 3,003,216 | 165,801 | 80,229 | 51,927 |
| West Virginia | 1,811 | 1,461 | 1,095,078 | 73,736 | 35,829 | 18,666 |
| Wisconsin | 5,107 | 4,039 | 3,103,713 | 230,647 | 111,951 | 56,655 |
| Wyoming | 481 | 369 | 583,378 | 59,041 | 28,456 | 8,031 |
| U.S. Total | 276,822 | 208,277 | 154,883,560 | 8,160,836 | 3,906,292 | 2,625,367 |

HS'98 = Highway Statistics, 1998; HTF $=$ Highway Trust Fund

| Total Highway Fatalities HS98. Tatble flo 10 | Fatalities (per 100 million VMT) | State Motor Fuel Taxes and Other Related Receipts (HS"e8. Tabie MF-1) | Total Highway Capital Outlay (thousands) $\{1+8 \%$, Table SF- 2$\}$ | Total <br> Disbursements for Highways (thousands) [HS'98, Tabie ©F-2) | Payments into the Federal HTF (thousands) (HE 38 , Table FE-28i) | Apportionments from the Federal HTF (thousands) (HS ge, Tatie FE-22i) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,071 | 1.94 | 555,347 | 535,282 | 1,053,279 | 593,144 | 474,373 |
| 71 | 1.57 | 23,403 | 224,607 | 403,786 | 50,546 | 293,518 |
| 980 | 2.15 | 511,544 | 649,427 | 1,430,492 | 506,320 | 366,554 |
| 625 | 2.20 | 347,929 | 491,817 | 815,014 | 402,494 | 306,798 |
| 3,494 | 1.22 | 2,780,012 | 2,669,580 | 6,574,436 | 2,872,266 | 2,254,699 |
| 628 | 1.60 | 480,714 | 609,823 | 1,165,583 | 343,503 | 300,736 |
| 329 | 1.12 | 523,974 | 502,141 | 1,426,791 | 296,289 | 347,058 |
| -115 | 1.40 | 101,519 | 248,520 | 646,824 | 79,315 | 101,561 |
| 54 | 1.63 | 30,639 | 115,387 | 259,399 | 34,725 | 96,724 |
| 2,824 | 2.05 | 1,476,947 | 2,448,044 | 4,024,261 | 1,474,794 | 1,055,949 |
| 1,569 | 1.62 | 421,171 | 1,111,114 | 1,613,446 | 1,089,701 | 805,729 |
| 120 | 1.50 | 66,917 | 194,746 | 326,450 | 72,645 | 117,807 |
| 265 | 1.97 | 195,510 | 209,119 | 414,274 | 169,787 | 215,407 |
| 1,393 | 1.38 | 1,170,197 | 1,472,402 | 3,305,665 | 912,383 | 776,165 |
| 978 | 1.42 | 716,788 | 785,504 | 1,652,221 | 726,233 | 541,973 |
| 449 | 1.55 | 393,217 | 505,566 | 1,177,155 | 320,786 | 280,336 |
| 493 | 1.82 | 315,606 | 637,165 | 1,305,627 | 328,458 | 268,182 |
| 858 | 1.84 | 453,667 | 777,719 | 1,480,678 | 551,260 | 398,330 |
| 922 | 2.29 | 530,527 | 643,033 | 1,400,318 | 490,244 | 367,164 |
| 192 | 1.42 | 152,897 | 187,691 | 484,760 | 155,240 | 130,535 |
| 606 | 1.25 | 633,246 | 588,224 | 1,491,869 | 503,179 | 353,299 |
| 406 | 0.78 | 605,312 | 1,853,968 | 3,351,131 | 536,141 | 426,958 |
| 1,367 | 1.46 | 1,004,936 | 965,723 | 2,745,030 | 1,005,790 | 722,839 |
| 650 | 1.31 | 543,893 | 561,994 | 1,377,045 | 352,575 | 362,521 |
| 948 | 2.77 | 363,268 | 564,335 | 843,443 | 383,999 | 284,156 |
| 1,169 | 1.81 | 645,898 | 791,672 | 1,438,351 | 759,721 | 539,709 |
| 237 | 2.47 | 167,669 | 211,567 | 377,599 | 133,014 | 248,352 |
| 315 | 1.79 | 270,128 | 271,469 | 589,126 | 214,298 | 177,861 |
| 361 | 2.09 | 292,127 | 218,907 | 445,538 | 193,230 | 179,686 |
| 128 | 1.11 | 126,759 | 168,936 | 370,913 | 138,770 | 118,644 |
| 743 | 1.15 | 492,810 | 775,648 | 2,512,675 | 822,744 | 592,754 |
| 424 | 1.91 | 244,098 | 269,662 | 570,433 | 238,405 | 233,235 |
| 1,498 | 1.21 | 1,462,799 | 2,551,865 | 6,050,952 | 1,171,703 | 1,195,520 |
| -1,596 | 1.87 | 1,030,093 | 1,355,164 | 2,351,786 | 865,261 | 657,909 |
| 92 | 1.25 | 94,822 | 189,898 | 305,979 | 96,882 | 183,059 |
| 1,422 | 1.36 | 1,421,259 | 1,464,561 | 3,326,527 | 1,071,233 | 795,089 |
| 755 | 1.80 | 394,756 | 459,817 | 943,633 | 472,832 | 351,232 |
| 538 | 1.61 | 383,221 | 450,821 | 1,050,919 | 360,794 | 297,727 |
| 1,481 | 1.48 | 1,663,007 | 1,546,071 | 3,902,210 | 1,133,518 | 1,166,826 |
| 74 | 0.93 | 128,983 | 180,173 | 339,227 | 77,739 | 135,626 |
| 1,002 | 2.34 | 406,115 | 465,434 | 765,785 | 511,540 | 365,515 |
| -165 | 2.04 | 108,570 | 203,678 | 305,266 | 94,170 | 176,954 |
| 1,216 | 1.94 | 696,329 | 772,521 | 1,420,018 | 708,091 | 533,445 |
| 3,577 | 1.74 | 2,517,785 | 2,368,058 | 4,295,119 | 2,335,122 | 1,644,394 |
| 350 | 1.65 | 295,486 | 820,138 | 1,129,169 | 247,854 | 192,429 |
| 104 | 1.58 | 84,442 | 99,873 | 221,864 | 77,821 | 112,317 |
| 935 | 1.32 | 746,902 | 1,244,313 | 2,619,010 | 801,023 | 618,151 |
| 660 | 127 | 702,612 | 692,370 | 1,805,365 | 545,247 | 442,849 |
| 354 | 1.90 | 297,039 | 499,433 | 892,702 | 219,203 | 264,793 |
| 714 | 126 | 727,042 | 709,128 | 1,397,701 | 514,292 | 464,455 |
| 154 | 1.92 | 60,526 | 200,559 | 321,452 | 135,325 | 172,423 |
| 41,471 | 1.58 | 29,860,457 | 38,534,667 | 80,518,296 | 28,191,649 | 23,510,325 |

Population, Drivers, Vehicles, Fuel and Travel by State

| State | Total Registered Vehicles (HS'き8, Table MU-1) | Total Licensed Drivers (HS98, Table DL-22) | Licensed Drivers per 1,000 DrivingAge Population | $\begin{aligned} & \text { Motor Vehicles } \\ & \text { per } 1,000 \\ & \text { Population } \end{aligned}$ | Motor Vehicle per Licensec Driver |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 3,858,928 | 3,434,117 | 1,011 | 887 | 1.12 |
| Alaska | 545,865 | 456,891 | 1.1031 | 889 | 1.19 |
| Arizona | 2,944,016 | 3,198,276 | 903 | 631 | 0.92 |
| Arkansas | 1,754,215 | 1,918,451 | 977 | 691 | 0.91 |
| California | 25,600,250 | 20,498,902 | 831 | 758 | 1.25 |
| Colorado | 3,466,094 | 2,946,476 | 966 | 873 | 1.18 |
| Connecticut | 2,700,633 | 2,349,286 | 915 | 464 | 1.15 |
| Delaware | 616,492 | 545,872 | 934 | - 834 | 113 |
| Dist. of Columbia | 228,716 | 349,835 | 814 | 437 | 0.65 |
| Florida | 11,276,389 | 12,026,947 | 1,023 | 756 | 0.94 |
| Georgia | 6,893,319 | 5,315,739 | 909 | 902 | 1.30 |
| Hawall | 703,836 | 746,329 | 805 | 351 | 0.94 |
| Idaho | 1,118,893 | 862,674 | 935 | 910 | 1.30 |
| Illinois | 9,306,710 | 7,700,880 | 836 | 772 | 1.21 |
| Indiana | 5,371,653 | 3,976,241 | 872 | 969 | 1.35 |
| lowa | 3,053,135 | 1,950,374 | 874 | 1,067 | 1.57 |
| Kansas | 2,121,410 | 1,851,449 | 918 | 807 | 1.15 |
| Kentucky | 2,844,612 | 2,640,335 | 861 | 537 | 1.08 |
| Louisiana | 3,430,717 | 2,736,305 | 823 | 792 | 1.25 |
| Maine | 929,605 | 912,506 | 923 | 749 | 1.02 |
| Maryland | 3,750,275 | 3,177,783 | 797 | 741 | 1.18 |
| Massachusetts | 5,159,168 | 4,394,355 | 907 | $\square 839$ | 1.17 |
| Michigan | 8,128,150 | 6,802,704 | 900 | 835 | 1.19 |
| Minnesota, | 4,177,841 | 2,868,002 | 793 | 878 | 1.46 |
| Mississippi | 2,255,744 | 1,758,293 | 842 | 876 | 1.28 |
| Missourl | 4,377,520 | 3,798,096 | 905 | 805 | 1.15 |
| Montana | 988,277 | 646,512 | 942 | 1,123 | 1.53 |
| Nebraska | 1,525,998 | 1,185,794 | 932 | . 932 | 1,29 |
| Nevada | 1,220,277 | 1,245,905 | 939 | 657 | 0.98 |
| New Hampshire | 1,038,465 | 4.907,479 | 986 | - 675 | 1.14 |
| New Jersey | 5,780,336 | 5,563,492 | 878 | 712 | 1.04 |
| New Mexico. | 1,594,792 | 1,203;869 | 932 | + 909 | 1,32 |
| New York | 10,422,033 | 10,554,098 | 746 | 573 | 0.99 |
| North Carolina | 5,861,830 | 5,534,284 | 949 | 777 | 1.06 |
| North Dakota | 672,158 | 454,933 | 915 | 1,054 | 1.48 |
| Ohio . ${ }^{\text {a }}$, | 10,039,488 | 7,941,479 | 913 | 896 | 1.26 |
| Oklahoma | 2,919,186 | 2,305,361 | 895 | 883 | 1.27 |
| Oregon . | 2,980,064 | 2,417,002 | 946 | $\bigcirc 912$ | 1.23 |
| Pennsylvania | 8,978,814 | 8,404,689 | 887 | 745 | 1.07 |
| Bhode Island | 715,017 | 681,832 | 878 | 384 | 1.05 . |
| South Carolina | 2,893,061 | 2,679,131 | 896 | 754 | 1.08 |
| South Dakota). | \%,768,507 | 535,339 | 951 | $\square 1,029$ | . 1.44. |
| Tennessee | 4,469,065 | 4,072,836 | 957 | 823 | 1.10 |
| Texas \%ive. | 13,324,167 | 13,322,911 | 903 | 668 | 100 . |
| Utah | 1,532,253 | 1,393,242 | 939 | 730 | 1.10 |
| Vermont | 496,153 | 497,172 | 1,064 | $\bigcirc 840$ | 1.00 |
| Virginia | 5,818,294 | 4,787,150 | 898 | 857 | 1.22 |
| Washington , | 4,823,987 | 4, $4,078,895$ | 930 | 848 | 1.18 |
| West Virginia | 1,377,835 | 1,280,539 | 877 | 761 | 1.08 |
| Wisconsin . | 4,203,319 | 3,709,957 | 919 | 823 | 1.13. |
| Wyoming | 558,991 | 359,158 | 972 | 1,162 | 1.56 |
| U.S. Total | 211,616,553 | 184,980,177 | 888 | 764 | 1.14 |
| HS'98 = Highway Statistics, 1998. |  |  |  |  |  |
| 38 |  |  |  |  |  |


| Persons per Registered Motor Vehicle | Gallons of Fuel per Vehicle | Miles per Gallon | Annual Miles per Vehicle | Vehicle-Miles per Capita | Vehicle-Miles per Licensed Driver |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1.13 | 801 | 17.87 | 14,306 | 12,685 | 16,075 |
| -1,12 | 633 | 13.05 | 8,269 | 7,352 | 9,880 |
| 1.59 | 952 | 16.23 | 15,450 | 9,742 | 14,222 |
| ,4.454 | 1098 | 14.71 | 16,159 | 11,164 | 14,775 |
| -1.32 | 629 | 17.79 | 11,189 | 8,482 | 13,974 |
| $115$ | 650 | 17.45 | 11,334 | 9,892 | 13,332 |
| $2.16$ | 591 | 18.36 | 10,857 | 5,037 | 12,481 |
| \% $\quad 1.20$ | 708 | 18.80 | 13,308 | 11,101 | 15,029 |
| 2.29 | 801 | 18.06 | 14,459 | 6,323 | 9,453 |
| ) 1.32 | 721 | 16.91 | 12,193 | 9,218 | 11,432 |
| 1.11 | 826 | 17.03 | 14,076 | 12,697 | 18,253 |
| Y, 2.85 | 583 | 19.46 | 11,348 | 3,984 | 10,702 |
| 1.10 | 721 | 16.64 | 12,006 | 10,930 | 15,571 |
| צ $\quad 1.30$ | 624 | 17.44 | 10,882 | 8,400 | 13,151 |
| $1.03$ | 761 | 16.85 | 12,820 | 12,419 | 17,319 |
| \% 0.0 .94 | 649 | 14.59 | 9,470 | 10,102 | 14,824 |
| 1.24 | 788 | 16.20 | 12,772 | 10,306 | 14,634 |
| $\bigcirc 1.86$ | 977 | 16.75 | 16,374 | 8,798 | 17,641 |
| 1.26 | 759 | 15.48 | 11,754 | 9,309 | 14,737 |
| - $\quad 1.33$ | 831 | 17.54 | 14,565 | 10,911 | 14,838 |
| 1.35 | 722 | 17.85 | 12,891 | 9,556 | 15,213 |
| , < $\quad 1.19$ | 574 | 17.50 | 10.046 | 8,432 | 11,794 |
| 1.20 | 699 | 16.53 | 11,554 | 9,642 | 13,806 |
| $\square 1.14$ | 650 | 17.21 | 11,879 | 10,428 | 17,304 |
| 1.14 | 893 | 16.98 | 15,166 | 13,291 | 19,456 |
| W) 1.1 .24 | 891 | 16.55 | 14,742 | 11,865 | 16,991 |
| 0.89 | 650 | 14.93 | 9,703 | 10,897 | 14,832 |
| - 1.07 | 769 | 14.97 | 11,506 | 10,726 | 14,807 |
| 1.52 | 934 | 15.17 | 14,173 | 9,318 | 13,881 |
| 11.48 | 704 | 15.84 | 11,144 | 7.525 | 12,753 |
| 1.40 | 786 | 14.20 | 11,160 | 7,949 | 11,595 |
| $\square 1.110$ | 813 | 17.11 | 13,916 | 12,646 | 18,435 |
| 1.74 | 616 | 19.23 | 11,838 | 6,788 | 11,690 |
| \% $\quad 1.29$ | 819 | 17.76 | 14,549 | 11,302 | 15,410 |
| 0.95 | 721 | 15.13 | 10,910 | 11,494 | 16,119 |
| ¢ $\quad 1.12$ | 632 | 16.54 | 10,451 | 9,362 | 13,212 |
| 1.13 | 798 | 18.04 | 14,399 | 12,710 | 18,232 |
| $1.10$ | 644 | 17.40 | 11,199 | 10,212 | 13,808 |
| 11.34 | 683 | 16.28 | 11,127 | 8,290 | 11,887 |
| TM $\quad 2.260$ | 617 | 18.09 | 11,165 | 4,287 | 11,708 |
| 1.33 | 932 | 15.88 | 14,801 | 11,163 | 15,983 |
| Y. ${ }^{\text {a }} 0.0 .97$ | 736 | 14.32 | 10,536 | 10,839 | 15,125 |
| 1.22 | 812 | 17.24 | 13,999 | 11,519 | 15,361 |
| \% ${ }^{1} 1.50$ | 917 | 16.87 | 15,462 | 10,335 | 15,464 |
| 1.37 | 816 | 17.02 | 13,882 | 10,129 | 15,267 |
| $1.19$ | 785 | 16.93 | 13,294 | 11,161 | 13,267 |
| 1.17 | 742 | 16.37 | 12,149 | 10,409 | 14,766 |
| V7) 1.18 | 623 | 17.29 | 10,764 | 9,131 | 12.731 |
| 1.31 | 795 | 17.05 | 13,547 | 10,307 | 14,577 |
| - 121 | 738 | 18.25 | 13,479 | 11,094 | 15,271 |
| 0.86 | 1044 | 13.77 | 14,367 | 16,696 | 22,361 |
| 1.31 | 732 | 16.95 | 12,406 | 9,484 | 14,193 |

Urbanized Areas with Populations Above 750,000

| Urbanized Area | Location |  | Estimated Urbanized Population (thousands) | Federal-Aid Urbanized Land Area (sq.miles) | Persons per Square Mile | Total Highway Mileage |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State | State(s) |  |  |  |  |
| New York-Northeastern NJ | NY | NJ | 16,407 | 3,962 | 4,141 | 37,581 |
| Los Angeles | CA |  | 12,600 | 2,231 | 5,648 | 26,716 |
| Chicago-Northwestern $\mathbb{N}^{1}$ | IL | $\mathbb{N}$ | 8,070 | 2,730 | 2,956 | 23,697 |
| Philadelphial ${ }^{\text {a }}$, | PA | NJ | 4,546 | 1,350 | 3,367 | 13,389 |
| San Francisco-Oakland | CA |  | 4,017 | 1,203 | 3,339 | 9,323 |
| Detroit | M |  | 3,852 | 1,304 | 2,954 | 12.945 |
| Dallas-Fort Worth | TX |  | 3,722 | 1,712 | 2,174 | 17,866 |
| Washington | DC | MD, VA | 3,442 | 999 | 3,445 | 10,212 |
| Boston | MA |  | 2,904 | 1,138 | 2,552 | 10,125 |
| Atlanta | GA |  | 2,806 | 1,757 | 1,597 | 13,005 |
| San Diego | CA |  | 2,683 | 733 | 3,660 | 5,926 |
| Phoenix | AZ |  | 2,482 | 1,054 | 2,355 | 9,556 |
| Houston | TX |  | 2,396 | 1,537 | 1,559 | 15,498 |
| Minneapolis-St. Paul | MN |  | 2,322 | 1,192 | 1,948 | 10,706 |
| Baltimore | MD |  | 2,107 | 712 | 2,959 | 6,532 |
| Miamirhialeah | FL |  | 2,066 | 545 | 3,791 | 5,607 |
| St. Louis | MO | IL. | 2,000 | 1,123 | 1,781 | 8,039 |
| Seattle | WA |  | 1,980 | 844 | 2.346 | 6,938 |
| Tampa-St Pete-Clearwater | FL |  | 1,863 | 1,294 | 1,440 | 7,406 |
| Denver | CO |  | 1,828 | 720 | 2,539 | 6,842 |
| Pittsburgh | PA |  | 1,768 | 1,112 | 1,590 | 8,386 |
| Cleveland | OH |  | 1,748 | 838 | 2,086 | 5,571 |
| San Jose | CA |  | 1,653 | 365 | 4,529 | 4,111 |
| Portland-Vancouver | OR | WA | 1,471 | 468 | 3,143 | 5,535 |
| Norfolk-VA Beach-Newport News | VA |  | 1,453 | 952 | 1,526 | 5,479 |
| Fort Lauderdale-HollywoodPompano Beach | FL |  | 1,441 | 489 | 2,947 | 4,206 |
| Riverside-San Bernardino | CA |  | 1,396 | 514 | 2,716 | 4,727 |
| Kansas City | MO | Ks | 1,375 | 1,034 | 1,330 | 7,541 |
| Sacramento | CA |  | 1,353 | 383 | 3,533 | 4,205 |
| San Juan | PR |  | 1,322 | 274 | 4,825 | 2792 |
| Las Vegas | NV |  | 1,283 | 270 | 4,752 | 2,946 |
| Miwaukee | WI |  | 1,243 | 512 | 2.428 | 5,023 |
| San Antonio | TX |  | 1,229 | 485 | 2,534 | 5,155 |
| Cincinnati | OH | KY | 1,203 | 630 | 1,910 | 5,325 |
| Orlando ${ }^{1}$ | FL |  | 1,075 | 667 | 1,612 | 3,577 |
| Buffalo-Niagara Falls | NY |  | 1,072 | 564 | 1,901 | 3,968 |
| New Orleans | LA |  | 1,065 | 269 | 3,959 | 3,286 |
| Oklahoma Clty | OK |  | 1,030 | 711 | 1,449 | 4,639 |
| West Palm Beach-Boca RatonDelray Beach | FL. |  | 939 | 556 | 1,689 | 2,592 |
| Memphis , , | TN | AR,MS | 933 | 409 | 2,281 | 3,253 |
| Indianapolis | IN |  | 915 | 422 | 2,168 | 4,191 |
| Columbus. | OH |  | 912 | 476 | 1,916 | 3,408 |
| Providence-Pawtucket | RI | MA | 900 | 515 | 1,748 | 4,357 |
| Salt Lake City | UT |  | 888 | 353 | 2,516 | 3,194 |
| Jacksonville | FL |  | 839 | 727 | 1,154 | 3,666 |
| Louisvile. . ${ }_{\text {l }}$ | KY | IN | 798 | 384 | 2,081 | 3,628 |
| Tulsa | OK |  | 760 | 394 | 1,929 | 2,743 |

*Annual average daily traffic.
${ }^{1}$ Some urbanized area data are inconsistently reported; for example, the Pennsylvania portion of Wimington, Delaware is reported with Round Lake Beach are reported with Chicago. Other anomalies may exist.
SOURCE: All data reported by States through the Highway Performance Monitoring System. Numbers may differ from subsequently pu

| Total Freeway/ Expressway Mileage | Total Freeway Miles per Urbanized Population | Total Daily Highway Vehicle-Miles (thousands) | Total Daily Freeway Vehicle-Miles (thousands) | Daily Vehicle-wiles per Capita | Average AADT* Total | \% of Travel Served by Freeways | Average AADT on Freeways |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,142 | 69.6 | 257,041 | 96,808 | 15.7 | 6,840 | 37.7 | 84,794 |
| 643 | 51.0 | 273,161 | 121.554 | 21.7 | 10,225 | 44.5 | 189,167 |
| 477 | 59.1 | 159,107 | 48,426 | 19.7 | 6,714 | 30.4 | 101,451 |
| 352 | 77.4 | 76,464 | 23,555 | 16.8 | 5,711 | 30.8 | 66,918 |
| 338 | 84.1 | 85,039 | 45,146 | 21.2 | 9,121 | 53.1 | 133,608 |
| 282 | 73.2 | 88,802 | 30,867 | 23.1 | 6,860 | 34.8 | 109,507 |
| 583 | 156.6 | 108,542 | 46,737 | 29.2 | 6,075 | 43.1 | 80,216 |
| + 309 | 89.8 | 81,642 | 33,931 | 23.7 | 7,995 | 41.6 | 109,932 |
| 215 | 74.0 | 59,540 | 22,254 | 20.5 | 5,880 | 37.4 | 103,409 |
| 306 | 109.1 | 100,461 | 40,597 | 35.8 | 7,725 | 40.4 | 132,528 |
| 239 | 89.1 | 57,625 | 29,877 | 21.5 | 9,724 | 51.8 | 124,995 |
| 139 | 56.0 | 53,396 | 15,894 | 21.5 | 5,588 | 29.8 | 114,345 |
| 400 | 166.9 | 91,925 | 39,567 | 38.4 | 5,931 | 43.0 | 98,995 |
| 311 | 133.9 | 56,256 | 25,503 | 24.2 | 5,255 | 45.3 | 81,932 |
| 278 | 131.9 | 44,136 | 21,288 | 20.9 | 6,757 | 48.2 | 76,623 |
| 120 | 58.1 | 38,389 | 12,546 | 18.6 | 6,847 | 32.7 | 104,204 |
| 320 | 160.0 | 58,416 | 24,961 | 29.2 | 7,267 | 42.7 | 78,003 |
| 240 | 121.2 | 50,578 | 23,318 | 25.5 | 7,290 | 46.1 | 97,173 |
| 125 | 67.1 | 40,180 | 8,149 | 21.6 | 5,425 | 20.3 | 65,409 |
| 206 | 1127 | 41,043 | 16,170 | 22.5 | 5,999 | 39.4 | 78,630 |
| 284 | 160.6 | 35,836 | 10,911 | 20.3 | 4,273 | 30.4 | 38,419 |
| - 227 | 129.9 | 38,846 | 17,121 | 22.2 | 6,973 | 44.1 | 75,423 |
| 175 | 105.9 | 36,749 | 17,652 | 22.2 | 8,939 | 48.0 | 100,869 |
| 137 | 93.1 | 31,090 | 12,021 | 21.1 | 5,617 | 38.7 | 87,717 |
| 161 | 110.8 | 32,765 | 10,757 | 22.5 | 5,980 | 32.8 | 66,814 |
| $109$ | 75.6 | 32,579 | 11,228 | 22.6 | 7,746 | 34.5 | 103,440 |
| $\begin{array}{r}139 \\ \hline 184\end{array}$ | 99.6 | 31,487 | 15,579 | 22.6 | 6,661 | 49.5 | 111,905 |
| 374 | 272.0 | 40,145 | 18,222 | 29.2 | 5,324 | 45.4 | 48,713 |
| 105 | 77.6 | 27,734 | 11,142 | 20.5 | 6,595 | 40.2 | 106,434 |
| $\bigcirc 64$ | 48.4 | 16,634 | 5,730 | 12.6 | 5,958 | 34.4 | 89,415 |
| 77 | 60.0 | 21,323 | 5,880 | 16.6 | 7,238 | 27.6 | 76,364 |
| 114 | 91.7 | 31,621 | 8,859 | 25.4 | 6,295 | 28.0 | 77,880 |
| 211 | 171.7 | 31,281 | 14,513 | 25.5 | 6,068 | 46.4 | 68,854 |
| 174 | 144.6 | 32,645 | 15,197 | 27.1 | 6,131 | 46.6 | 87,339 |
| 148 | 137.7 | 29,106 | 8,666 | 27.1 | 8,137 | 29.8 | 58,750 |
| - 139 | 1297 | 20,269 | 5,796 | 18.9 | 5,108 | 28.6 | 41,792 |
| 75 | 70.4 | 15,367 | 5,745 | 14.4 | 4,677 | 37.4 | 76,311 |
| 147 | 142.7 | 25,151 | 8,731 | 24.4 | 5,422 | 34.7 | 59,593 |
| 87 | 92.7 | 20,287 | 7,474 | 21.6 | 7,827 | 36.8 | 85,886 |
| T+ 89 | 95.4 | 22,120 | 6,370 | 23.7 | 6,800 | 28.8 | 71,761 |
| 130 | 142.1 | 28,209 | 10,967 | 30.8 | 6,731 | 38.9 | 84,172 |
| 149 | 163.4 | 24,929 | 11,678 | 27.3 | 7,315 | 46.8 | 78,376 |
| 117 | 130.0 | 19,368 | 7,904 | 21.5 | 4,445 | 40.8 | 67,568 |
| - 79 | 89.0 | 19,576 | 6,171 | 22.0 | 6,129 | 31.5 | 78,114 |
| 145 | 172.8 | 23,347 | 9,026 | 27.8 | 6,369 | 38.7 | 62,127 |
| 137 | 171.5 | 23,457 | 9,897 | 29.4 | 6,466 | 42.2 | 72,066 |
| 112 | 147.4 | 16,964 | 5,846 | 22.3 | 6,184 | 34.5 | 52,064 |

hiladetphia; Kissimmee, Florida is reported with Orlando; and the llinois portions of Aurora, Damille, Elgin, Crystal Lake, Joliet and
ished 1090 Census data.

The following Office of Highway Policy Information (OHPI) printed publications may be obtained by contacting the Federal Highway Administration R\&T Report Center at (301) 577-0818, or FAX your request to (301) $577-1421$. If you have questions concerning the contents of any of the reports, please call (202) 366-0180. Unless otherwise noted, all reports can be found on the OHPI website at: http $/ /$ www.fhwa.dot.gov/ohim

1. Highway Statistics Summary to 1995, FHWA-PL-97-009
2. Highway Taxes and Fees, How They are Collected and Distributed, 1998
(Biennial), FHWA PL-98-036
3. Highway Statistics 1998, FHWA-PL-99-017
4. Traffic Monitoring Guide, February 1995, FHWA-PL-95-031
5. Nationwide Personal Transportation Survey (NPTS) Reports:

## 1990 NPTS

5.1 Data Volume Book I, FHWA-PL-94-010A
5.2 Data Volume Book II, FHWA-PL-94-010B
5.3 Urban Travel Patterns, FHWA-PL-94-018
5.4 Travel Mode Special Reports, FHWA-PL-94-019
5.5 Demographic Special Reports, FHWA-PL-95-032
5.6 Special Report on Trip \& Vehicle Attributes, FHWA-PL-95-033
5.7 Summary of Travel Trends, FHWA-92-027
5.8 Travel Behavior Issues in the 90's, FHWA-93-012

## 1995 NPTS

5.9 Our Nation's Travel - 1995 NPTS Early Results Report, FHWA-PL-97-028
5.10 Transportation User's View of Quality, FHWA-98-013
5.11 Summary of Travel Trends, FHWA-PL-00-006

NPTS Electronic Media:
1983-1990 NPTS CD-ROM (For copies call 202-366-3640)
1995 NPTS Training and Data CD-ROM: (For copies call 202-366-0160
or FAX 202-366-7742), FHWA-PL-00-005
1990 NPTS Website: http:/www-cta.ornl.gov/npts/1990/index.html
1995 NPTS Website: http://www-cta.ornl.gov/npts/1995/index.html
6. Driver License Administration Requirements and Fees, 1999 (For copies call 202-366-0160 or FAX 202-366-7742.)
7. Journey-To-Work Trends in the United States and its Major Metropolitan Areas 1960-1990, FHWA-PL-94-012
8. New Perspectives in Commuting, 1992, FHWA-PL-92-026*
9. A Guide to Reporting Highway Statistics, FHWA-PL-00-012 (For copies call 202-366-0160 or FAX 202-366-7742).
10. Monthly Motor Fuel Reported by States, (Monthly) (For copies call 202-366-0160 or FAX (202) 366-7742
11. Toll Facilities in the United States, 1999, FHWA-PL-99-011
12. Traffic Volume Trends (Monthly)
13. Highway Funding Bulletin - 1997-2000

* This publication is not on the OHPI website.

43

US. Department of Transportation Federal Highway Administration
Office of Highway Policy Information
Publication No. FHWA-PL-00-014 HPPI $40 / 10-00(20 \mathrm{M})$

