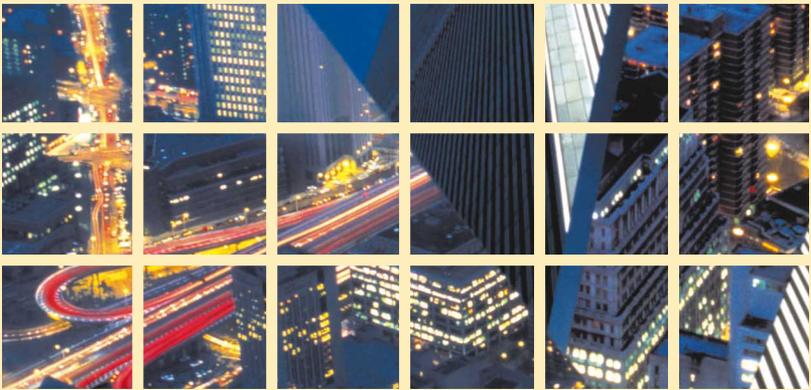




# OUR NATION'S HIGHWAYS



## SELECTED FACTS AND FIGURES



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>**

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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.

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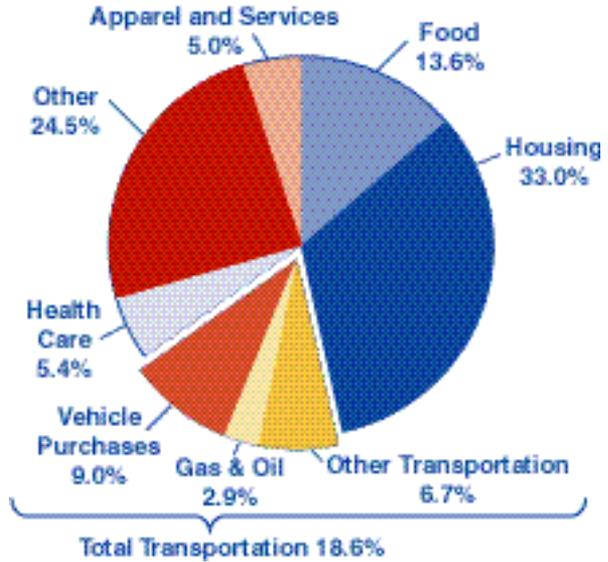
Although expenditures for highways now exceed \$101 billion a year, this amounts to less than 3.9 cents per vehicle-mile traveled.

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## Transportation Expenditures at the Household Level

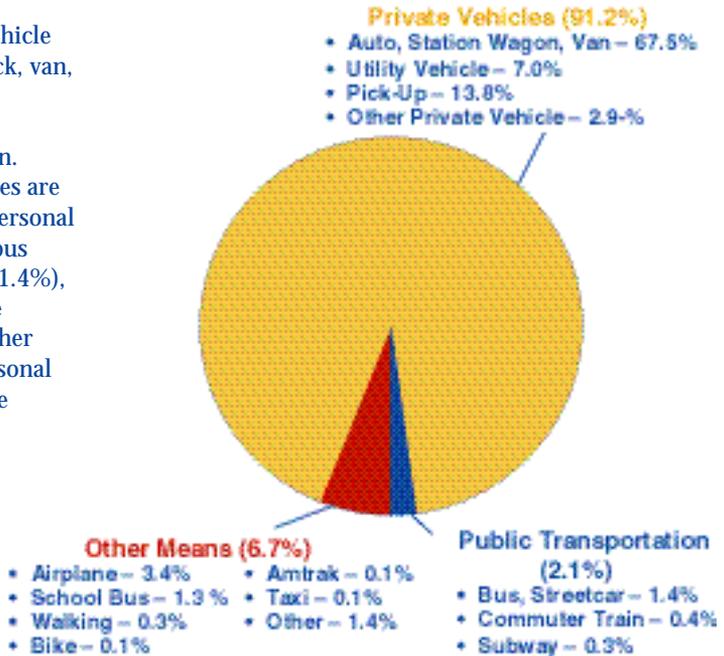
After housing (33%), transportation (18.6%) accounts for the largest single household expenditure. Of the 18.6% transportation expenditures, the largest expenditure is vehicle purchases (48%). Other transportation expenditures, which includes maintenance and insurance, is the second largest transportation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



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

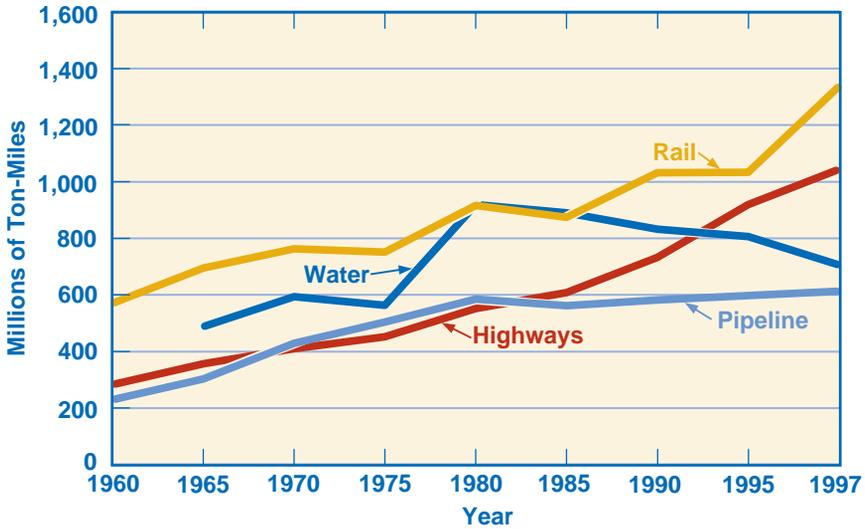
## Personal Travel by Mode of Transportation

The personal motor vehicle (automobile, light truck, van, 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.



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

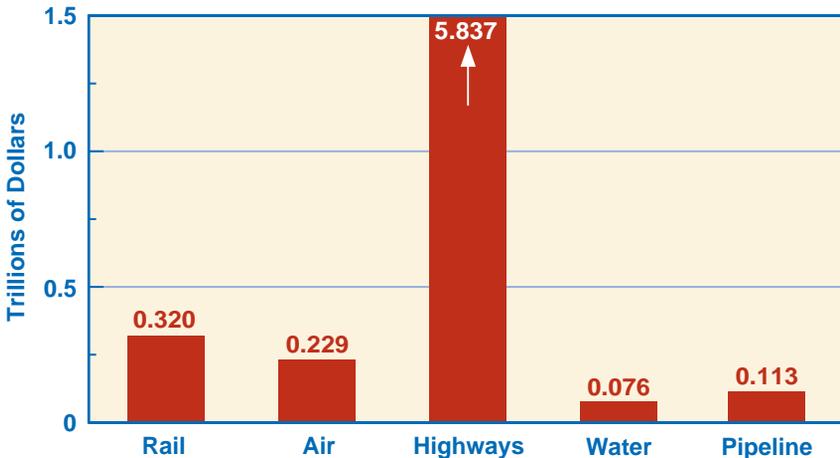
### Freight Transportation by Mode



SOURCE: Bureau of Transportation Statistics, *National Transportation Statistics 1999*.

The nation's highway system carried 28% of the total revenue ton-miles of freight in 1997, compared to 19% in 1960. More significant is that almost 89% of the total dollar value of freight in 1997 was highway transportation.

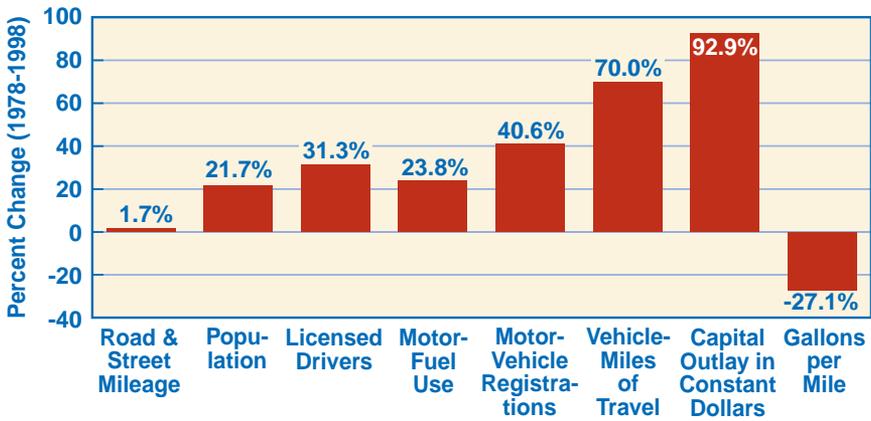
### Freight Transportation Value by Single Mode – 1997



NOTE: The survey excludes establishments classified in the Standard Industrial Classification as farms, forestry, fisheries, oil and gas extraction, governments, construction, transportation, households, and some retail and service businesses.

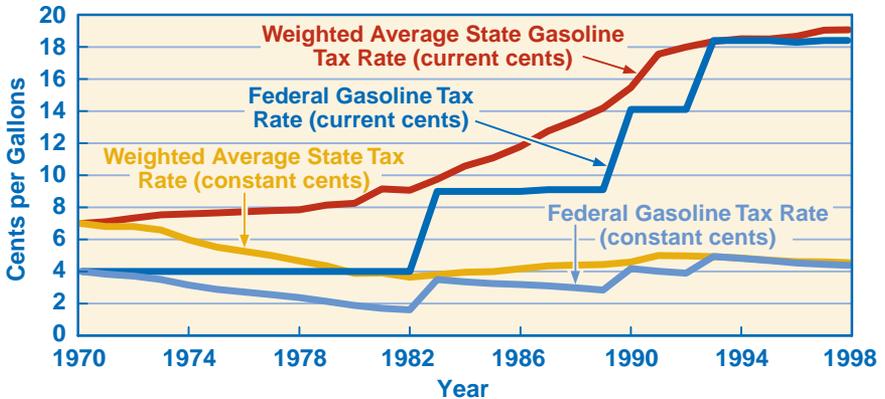
SOURCE: Bureau of Transportation Statistics, *Transportation - Commodity Flow Survey 1997*.

### Highway Indicators



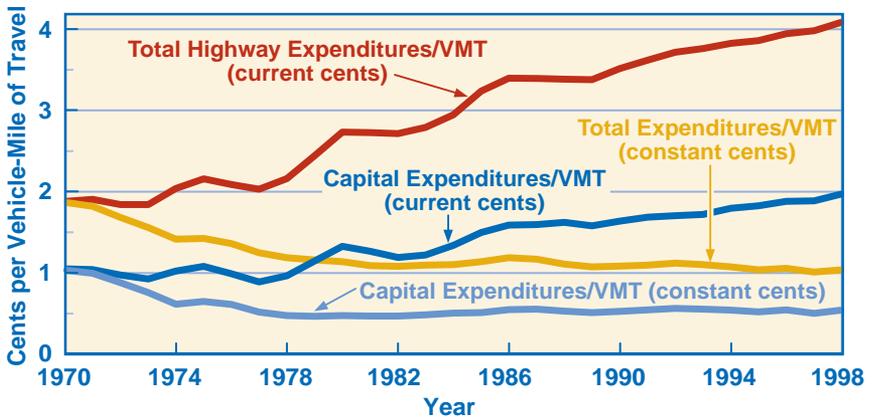
Road and street mileage increased only 1.7% since 1978, but the number of vehicles using those roads and streets has increased 40.6% and vehicle-miles of travel increased by 70%. Highway capital outlay expressed in constant 1987 dollars has increased by 92.9% while the percent change from 1978 to 1998 for gallons of motor fuel per mile actually decreased by 27.1%.

### Federal and State Gasoline Tax Rates



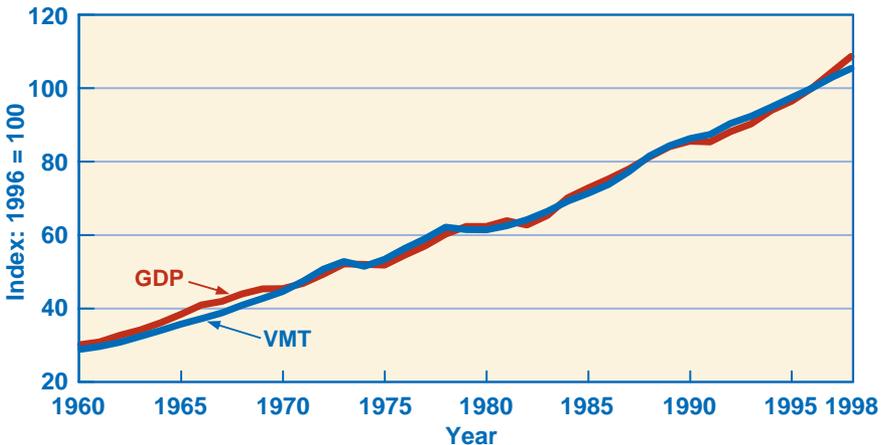
Despite significant increases in State motor-fuel tax rates during the 1980's, the weighted average gasoline tax rate expressed in constant 1970¢ actually decreased by about 35% from 7.02¢ per gallon in 1970 to 4.54¢ per gallon in 1998. Recent data indicates that State tax rates have risen slightly over the 1990's decade. Over the same 1970 to 1998 period, the Federal gasoline tax rate, expressed in constant 1970¢, increased by 9.5%, from 4.00¢ per gallon to 4.38¢ per gallon, as the nominal rate increased from 4.00¢ per gallon to 18.4¢ per gallon on October 1, 1993. During the 1990's, amounts between 2.5 and 6.8¢ per gallon were diverted from the Highway Trust Fund for deficit reduction. As of October 1, 1997, these provisions were eliminated. While the deficit reduction impact does not affect the tax rate, it has resulted in additional revenue to the Highway Trust Fund.

### 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¢ 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.

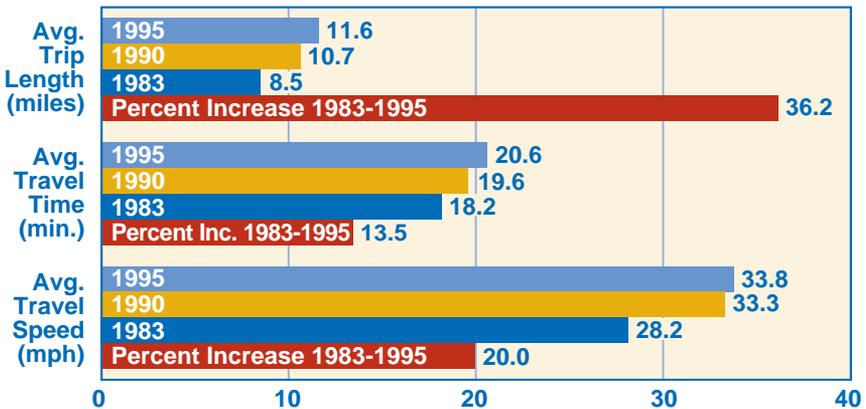
## U.S. Telecommuting Population



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.

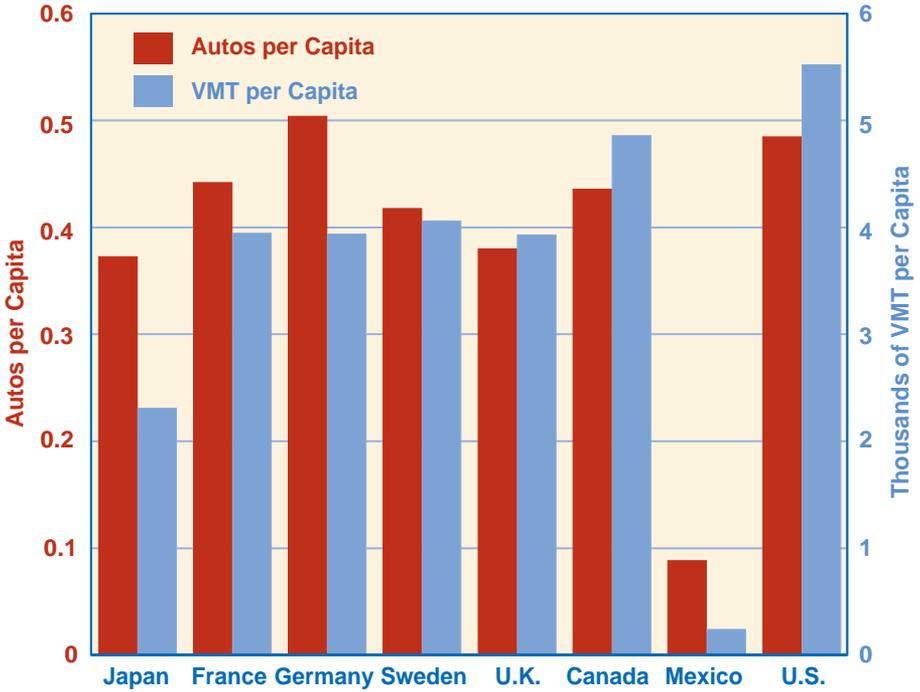
## Commute Profile



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.

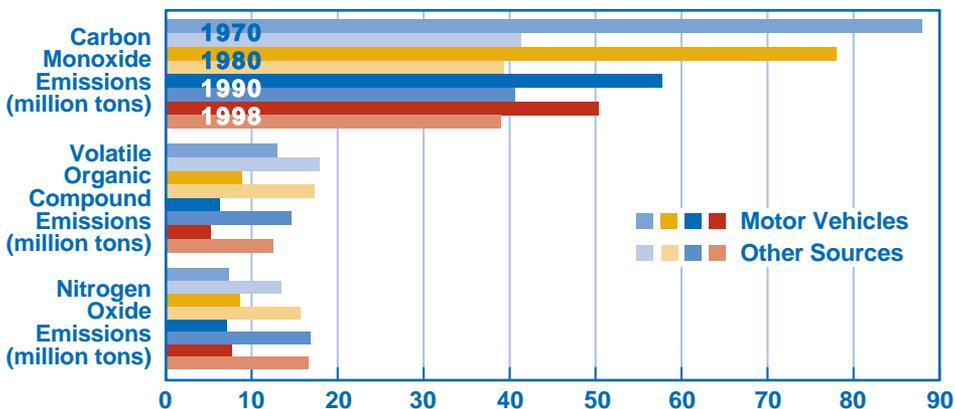
*Annual Automobile Vehicle-Miles of Travel per Capita and Number of Automobiles per Capita*



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.

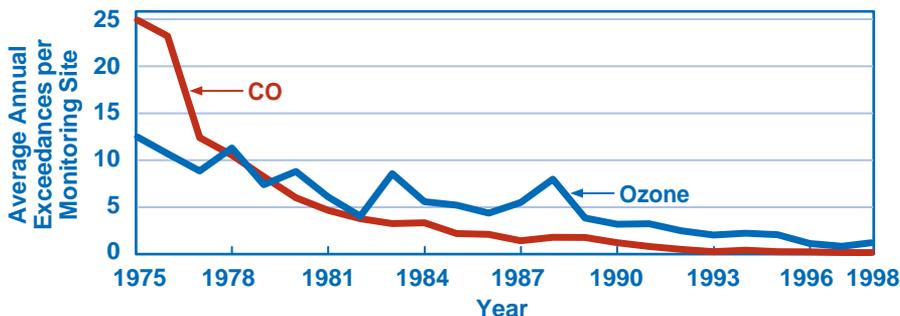
## National Emission Trends



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



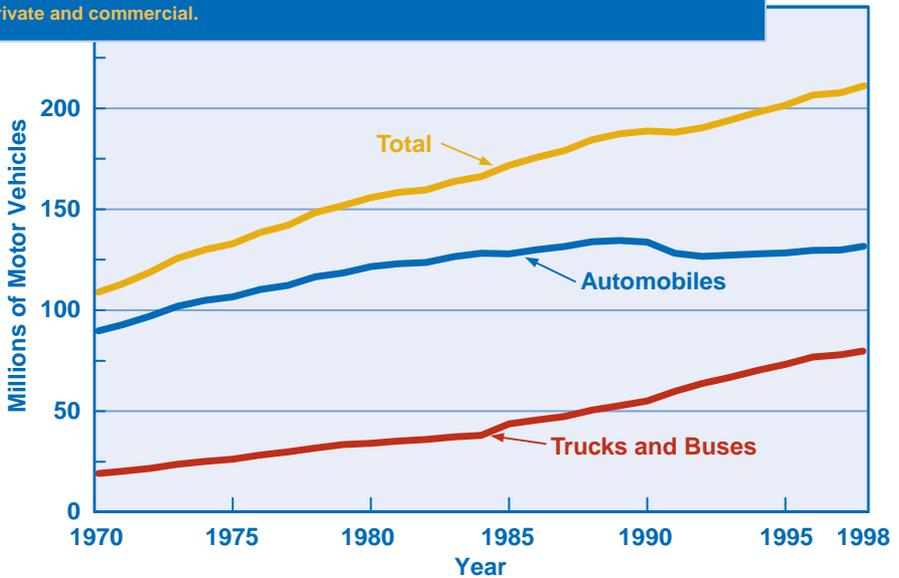
SOURCE: 1975-1995 data were tabulated from individual monitor records in EPA Aerometric Information Retrieval Service (AIRS) database. These data are for the subset of monitors having complete data for a least 15 of the 21 years included in that period. Supplemental 1994-1999 data were tabulated from 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.

## Motor-Vehicle Registrations

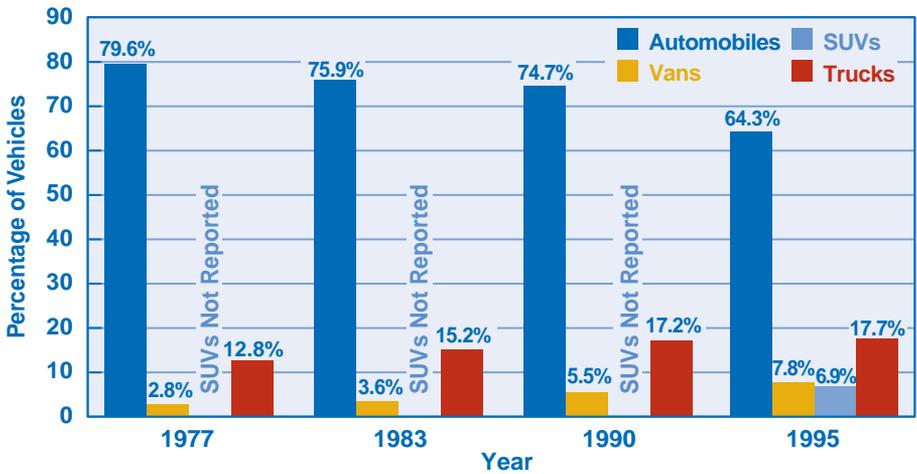
	(in millions)		Change (%) 1988/1998
	1988	1998	
Automobiles	133.8	131.8	-1.5
Buses	0.6	0.7	16.7
Trucks	50.0	79.1	58.2
P & C Light Trucks <sup>1</sup>	43.1	70.1	62.6
P & C Truck Tractors <sup>1</sup>	1.2	1.5	25.0
Other Single-Unit Trucks and Publicly-Owned Trucks	5.7	7.5	31.6
<b>Total</b>	<b>184.4</b>	<b>211.6</b>	<b>14.8</b>
Motorcycles	4.6	3.9	-15.2

<sup>1</sup>Private and commercial.



The number of registered motor vehicles continues to increase steadily. However, automobile registrations have decreased slightly (-1.5% or 2.0 million vehicles) since 1988 while truck registrations have increased significantly (58.2% or 29.1 million vehicles). Light single-unit trucks have seen a phenomenal growth in popularity and now account for 33.1% of total registered motor vehicles. In addition, prior to 1985, automobile registrations included personal passenger vans, passenger minivans, and utility-type vehicles. However, beginning with the 1985 data, these vehicles are included with truck registrations. Reference *Highway Statistics Summary to 1995* for corrections or revisions made to previous published data.

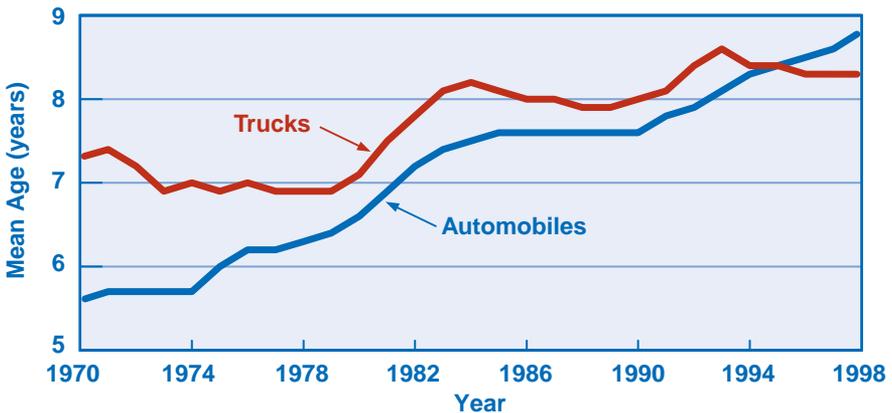
### Distribution of Vehicles by Vehicle Type



SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.

Automobiles continue to lose their market share of private vehicles, from 80% in 1977 to 65% in 1995. Minivans and sport utility vehicles (SUVs) are claiming a larger market share of privately owned vehicles.

### Average Age of Automobiles and Trucks in Use



NOTE: The mean age is the sum of the products of units multiplied by age; divided by the total units.

SOURCE: Ward's Communications, *Ward's Motor Vehicle Facts and Figures 1999*, compiled from The Polk Company data.

The average age of automobiles has been increasing throughout the 1990s, though the average age of trucks has not increased since 1993. The increasing popularity of pickups, vans, and sport utility vehicles as personal vehicles may be influencing the age of trucks.

## Cost of Owning and Operating Automobiles, Vans, and Light Trucks – 1998

Cents Per Mile <sup>1</sup>			
	Size	Cost <sup>2</sup>	Characteristics <sup>3</sup>
	Subcompact	31.3	4 cylinder Avg MPG = 32
	Compact	35.6	4 cylinder Avg MPG = 23
	Intermediate	44.3	6 cylinder Avg MPG = 22
	Full-Size Vehicle	49.2	6 cylinder Avg MPG = 19
	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
	Intermediate Utility	48.5	6 cylinder Avg MPG = 15
	Full-size Utility	50.8	8 cylinder Avg MPG = 13
	Mini-Van	47.1	6 cylinder Avg MPG = 18
	Full-Size Van	48.3	6 cylinder Avg MPG = 14

<sup>1</sup> Includes depreciation, financing, insurance, registration fees, taxes, fuel maintenance and repairs.

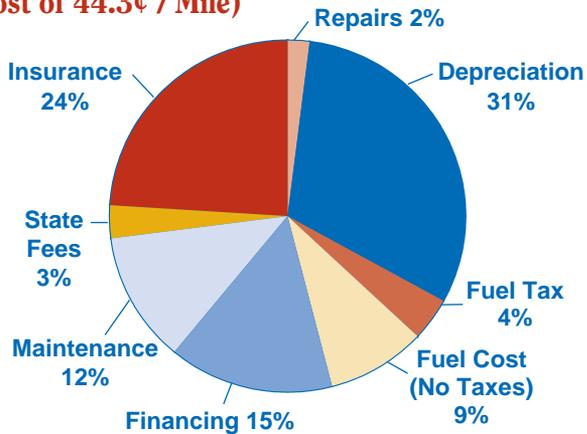
<sup>2</sup> Total costs over 5 years, based on 70,000 miles.

<sup>3</sup> Average MPG reflects 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 IntelliChoice, Inc., and sales figures from *Automotive News*.

**Ownership and Operating Costs by Category – Intermediate Size Vehicle – 1998 (Based on Average Cost of 44.3¢ / Mile)**

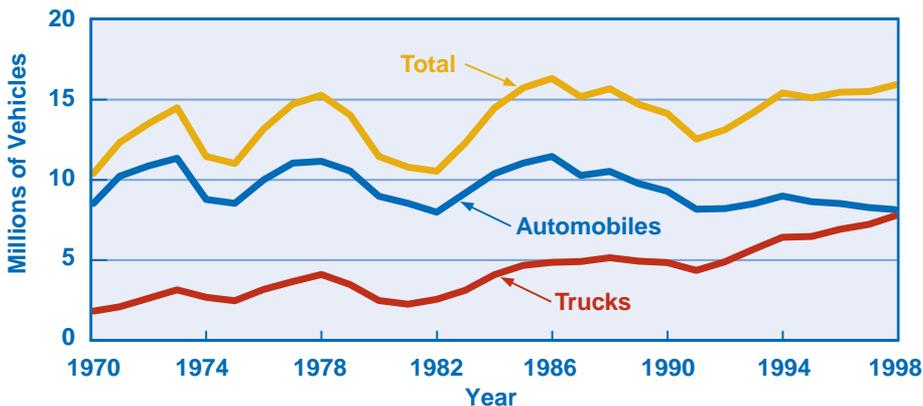
Repairs	0.9¢
Depreciation	13.7¢
Fuel Tax	1.8¢
Fuel Cost (No Taxes)	4.0¢
Financing	6.7¢
Maintenance	5.3¢
State Fees	1.3¢
Insurance	10.6¢



SOURCE: Federal Highway Administration estimates based on the 1998 editions of *The Complete Car Cost Guide* and *The Complete Small Truck Guide* from Intellichoice, Inc. and sales figures from *Automotive News*.

The Federal Highway Administration estimates that combined Federal and State motor-fuel taxes currently account for only 4% of the cost per mile of owning and operating an automobile. This share is about the same as in 1994, but lower than the 5.1% Federal and State motor-fuel tax share in 1991.

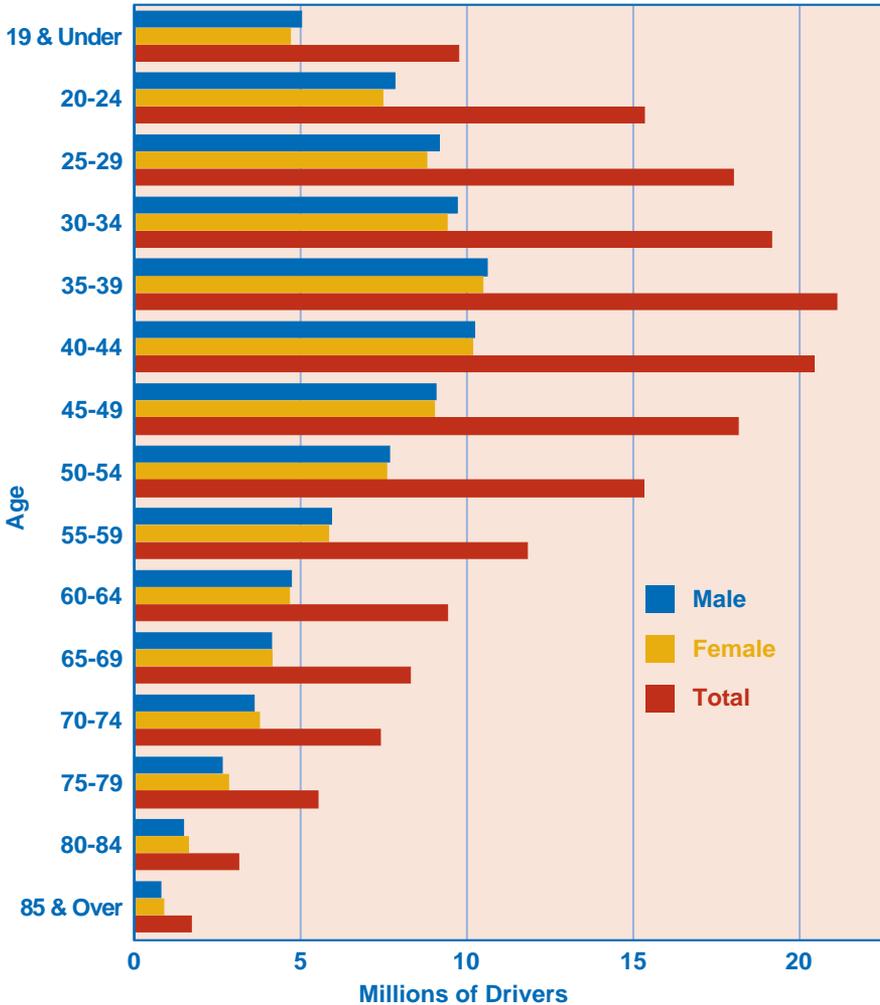
**Motor Vehicle Retail Sales**



SOURCE: Ward's Communications, *Ward's Motor Vehicle Facts and Figures 1999*.

After a slight drop in 1991, total motor-vehicle retail sales are steadily increasing, with 15,965,000 units sold in 1998. The all-time high was set in 1986 at 16,322,000 units. We are still seeing a decline in retail sales of automobiles at 51% of total sales in 1998, compared to 73% in 1978. Popularity of the light trucks as personal vehicles continues to increase—retail sales of trucks for 1998 amount to 7,826,000 units sold.

### Licensed Drivers by Age and Sex

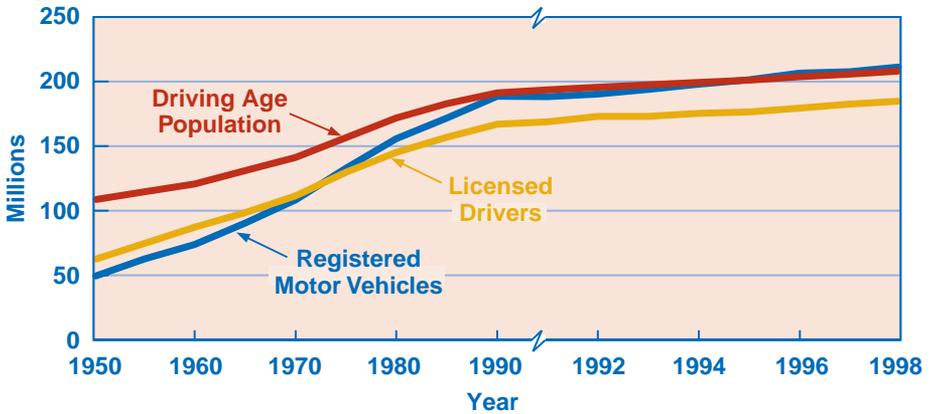


There were 184,980,177 licensed drivers in the United States in 1998. That is an increase of 31.34% since 1978 and a 13.59% increase over 1988. As the average age of licensed drivers shifts upward, we see that the 35-39 and 40-44 year old age groups contain the largest share of drivers.

The number of age 70 and over drivers holding a valid license has continued to increase. In 1978 drivers 70 years and over was about 8 million, and rose to almost 18 million in 1998. This is a 121% increase in older drivers since 1978.

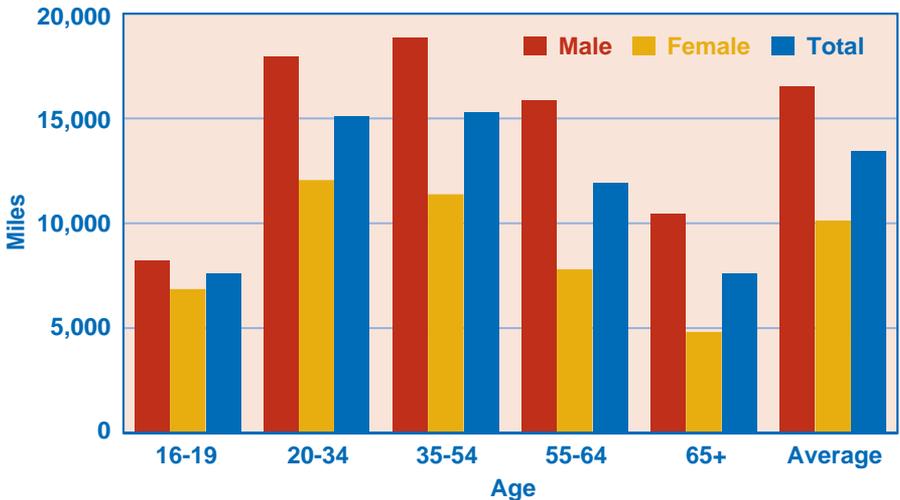
Female drivers increased by about 41% from 1978 to 1998, whereas the number of male drivers only increased by 23%.

### 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.

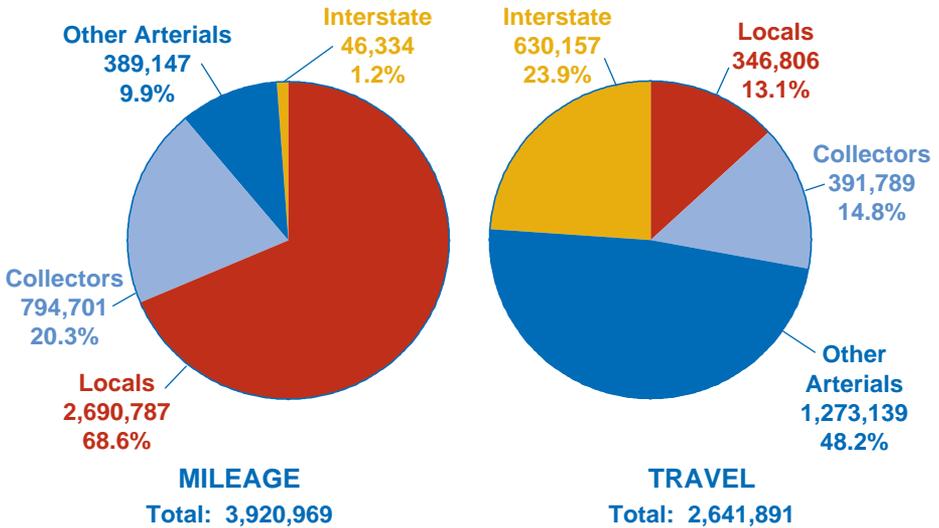
### Average Annual Miles per Driver by Age Group



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.

## 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 Mileage	%	Urban Mileage	%	Total 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	77.2
Federal	118,369	3.9	1,485	0.2	119,854	3.1
<b>Total</b>	<b>3,072,272</b>	<b>100.0</b>	<b>848,707</b>	<b>100.0</b>	<b>3,920,979</b>	<b>100.0</b>

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	% Change 1988-1998	Urban	% Change 1988-1998	Total	% Change 1988-1998	% of Total Mileage
Interstate	32,910	-1.4	13,424	17.3	46,334	3.4	1.2
Other Freeways/ Expressways	—	—	9,213	20.9	9,213	20.9	0.2
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
<b>Total</b>	<b>3,072,271</b>	<b>-2.0</b>	<b>848,698</b>	<b>14.0</b>	<b>3,920,969</b>	<b>1.0</b>	<b>100.0</b>

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	% Change 1988-1998	Urban	% Change 1988-1998	Total	% Change 1988-1998	% of Total Travel
Interstate	252,317	39.2	377,840	46.1	630,157	43.2	23.9
Other Freeways/ Expressways	—	—	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
<b>Total</b>	<b>1,037,524</b>	<b>26.9</b>	<b>1,604,367</b>	<b>32.8</b>	<b>2,641,891</b>	<b>30.4</b>	<b>100.0</b>

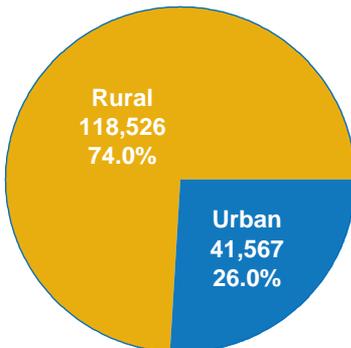
Since 1988, total miles has increased only 1.0%, while travel has increased 30.4%. The urban travel increase of 32.8% has outpaced the rural 26.9% increase due to the Nation's continued growth in urbanization and expanded urban boundaries. The rural Other Principal Arterial system has had the greatest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

## National Highway System

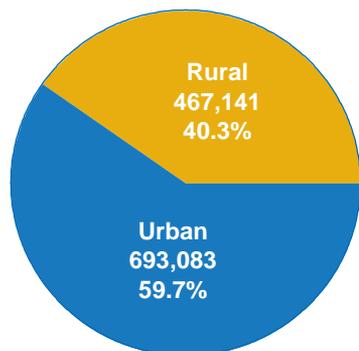
NHS Mileage			
	Rural	Urban	Total
Interstate	32,910	13,424	46,334
Other NHS	85,616	28,143	113,759
<b>Total NHS</b>	<b>118,526</b>	<b>41,567</b>	<b>160,093</b>
NHS Percent of Total Mileage			
	Rural	Urban	Total
Interstate	0.8	0.3	1.2
Other NHS	2.2	0.7	2.9
<b>Total NHS</b>	<b>3.0</b>	<b>1.1</b>	<b>4.1</b>
NHS Travel (millions)			
	Rural	Urban	Total
Interstate	252,317	377,840	630,157
Other NHS	214,824	315,243	530,067
<b>Total NHS</b>	<b>467,141</b>	<b>693,083</b>	<b>1,160,224</b>
NHS Percent of Total Travel			
	Rural	Urban	Total
Interstate	9.6	14.3	23.9
Other NHS	8.1	11.9	20.1
<b>Total NHS</b>	<b>17.7</b>	<b>26.2</b>	<b>43.9</b>

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.

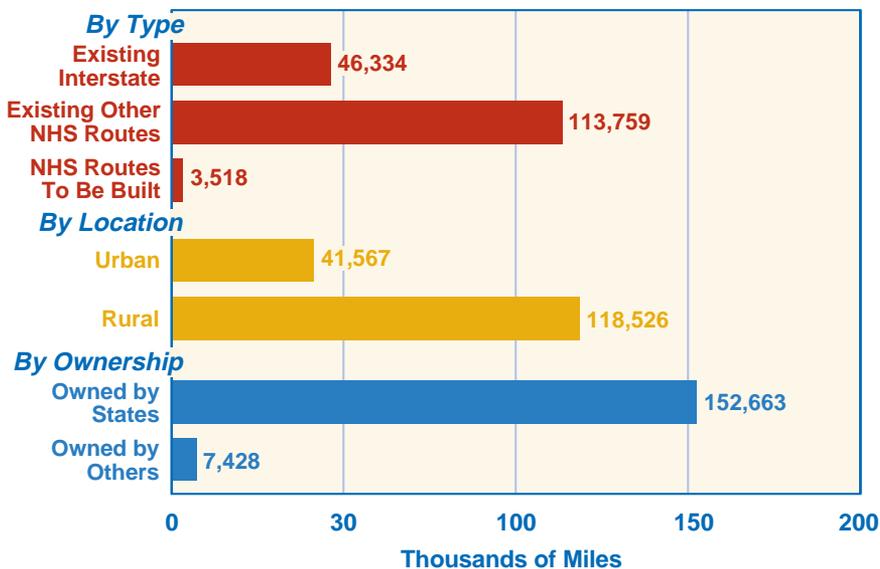


**NHS MILEAGE**



**NHS TRAVEL**

## National Highway System



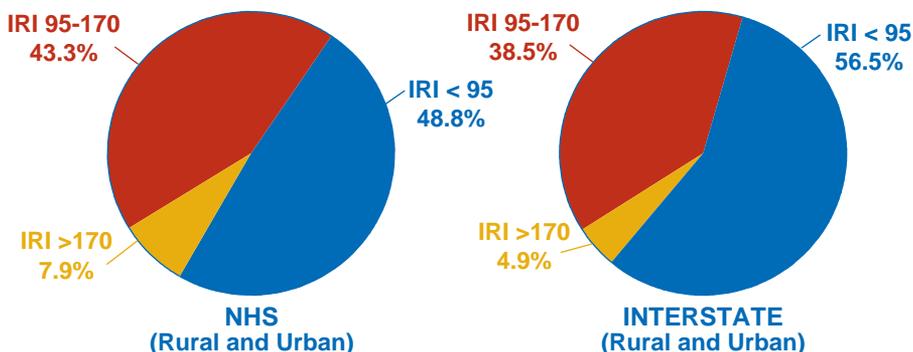
Of the 160,093 NHS miles, 29% are made up of the Interstate System (IS). The NHS encompasses all of the Strategic Highway Network (STRAHNET), a system of national defense roadways that includes the IS and approximately 10,000 miles of non-IS mileage. The NHS also includes 2,255 miles of designated intermodal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

## Intermodal Facility Connections

Facility Type	Number of Facilities	Associated Mileage
Airport	231	471
Intercity Bus	99	56
Ferry	59	290
Truck/Pipeline	61	127
Multipurpose	42	35
Port	253	487
Truck/Rail	203	360
Amtrak	71	72
Public Transit	395	354
<b>TOTALS</b>	<b>1,414</b>	<b>2,255</b>

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 instrument-based rating system that has been used as an indicator of pavement performance as measured by rideability. Pavements with IRI<170 can be considered to have an acceptable ride quality, while those with an IRI<95 can be considered to have a good or very good ride quality.

## Bridge Conditions (as of June 1998)

Conditions	NHS <sup>1</sup>		Other FA Highways <sup>2</sup>		Non-FA Highways <sup>3</sup>		Total Highways	
	No.	%	No.	%	No.	%	No.	%
Structurally Deficient	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
<b>Total Bridges in Inventory</b>	<b>128,997</b>	<b>100.0</b>	<b>171,012</b>	<b>100.0</b>	<b>282,960</b>	<b>100.0</b>	<b>582,969</b>	<b>100.0</b>

<sup>1</sup>Includes all Interstate and other principal arterials.

<sup>2</sup>Includes all other highways except minor collectors and local roads and streets.

<sup>3</sup>Includes rural minor collectors and local roads and streets.

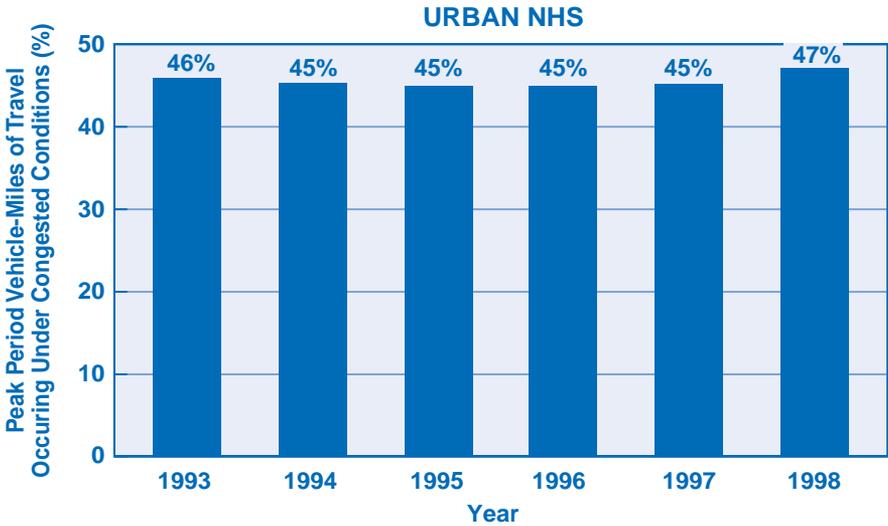
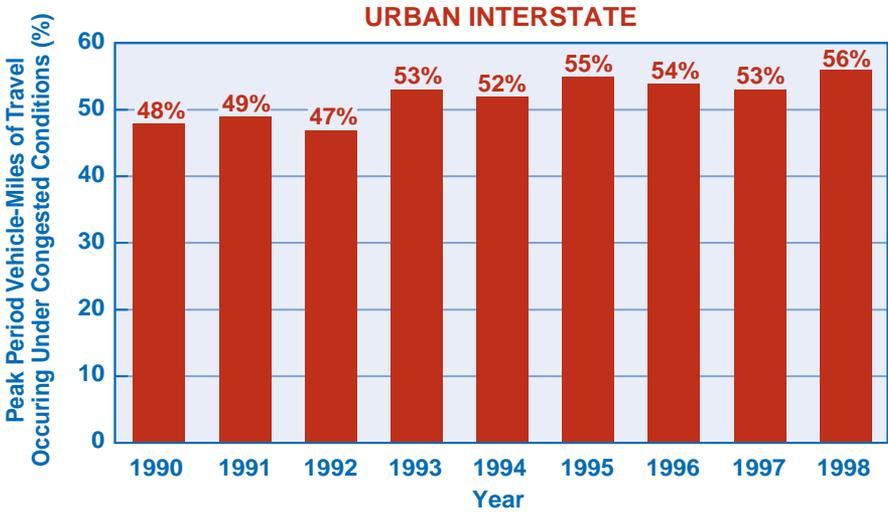
**SOURCE:** Federal Highway Administration, Office of Engineering, National Bridge Inventory Data.

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.

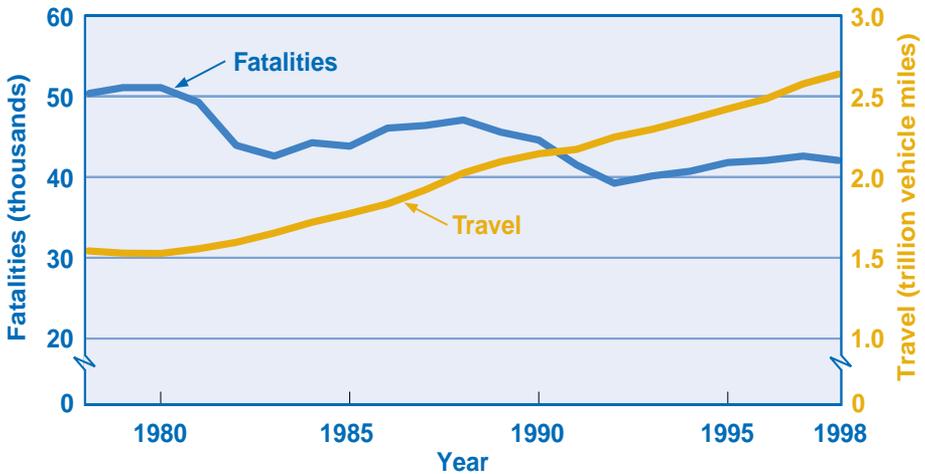
A functionally obsolete bridge is one that cannot safely service the volume or type of traffic using it. These bridges are not unsafe for all vehicles, but have older design features that prevent them from accommodating current traffic volumes and modern vehicle sizes and weights.

*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.

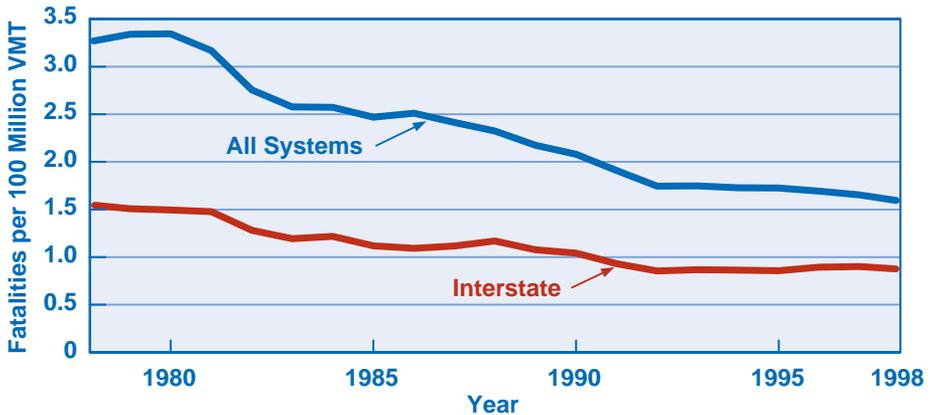
## Motor-Vehicle Fatalities and Travel



SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

Fatalities decreased from 1978 to a low of 39,230 in 1992. However, they have since risen to 42,029 in 1998. Of the 1998 fatalities, 13.1% occurred on the Interstate System.

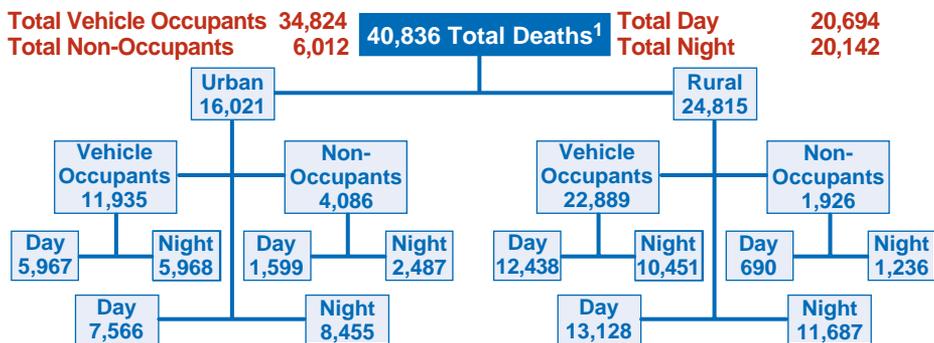
## Fatality Rates



SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

The fatality rate — fatalities per 100 million vehicle-miles of travel (VMT) — on all highway systems continues to decline. In 1998, the fatality rate reached 1.59, a 51% decrease from 1978. The decrease in the fatality rate occurred despite a 71% increase in highway travel and a 43% increase in motor vehicle registrations during the 1978 to 1998 time period. The fatality rate (0.87) on the Interstate System is a little more than one-half the rate on all highway systems.

## Principal Classes of Motor-Vehicle Deaths

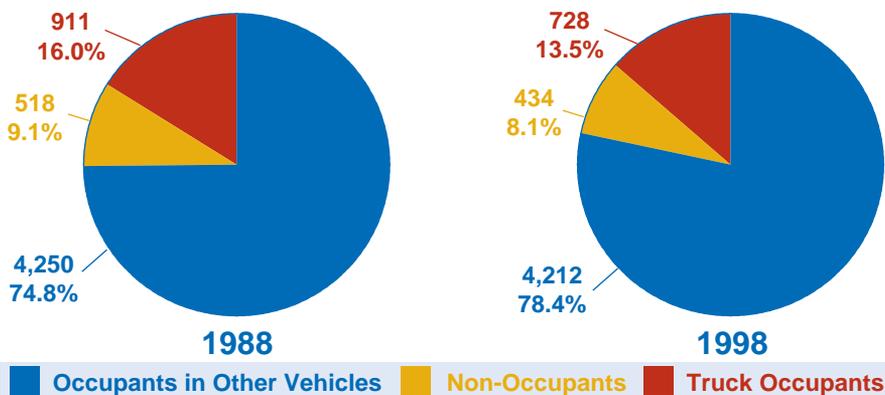


<sup>1</sup>In addition to the above deaths reported, there were 635 deaths where time of day or location was not reported. Grand total of all deaths including not-reported was 41,471.

SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

In 1998, 61% of motor-vehicle deaths occurred in places classified as rural. In urban areas, nearly 25% of the victims were non-occupants; in rural areas, the victims were mostly occupants of motor vehicles. Forty-nine percent of deaths occurred at night.

## Fatalities Involving Medium/Heavy Trucks<sup>1</sup>



<sup>1</sup>Medium Heavy Truck—Single unit truck with gross vehicle weight greater than 10,000 lb., tractor-trailer combination, truck with cargo trailer(s), or truck-tractor pulling no trailer.

SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

There were 5,374 fatalities in crashes involving medium and heavy trucks in 1998. Occupants in other vehicles accounted for 78.4% of the fatalities involving medium and heavy trucks.

There were 305 less fatalities in crashes involving medium and heavy trucks from 1988 to 1998. Occupants in other vehicles shows a decrease of 38 fatalities involving medium and heavy trucks while the non-occupant fatalities increased by 84 over the same two years.

# The National Highway System

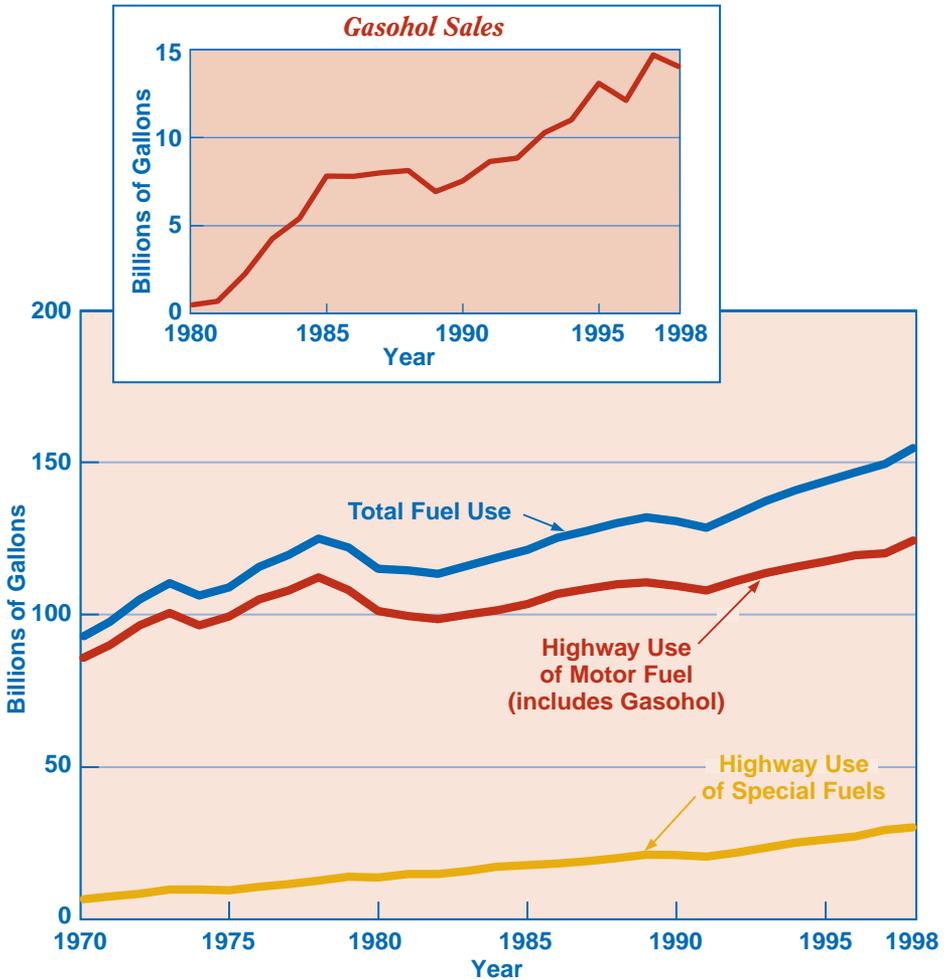


— Eisenhower Interstate System  
— Other NHS Route

NOTE: Detailed information on the National Highway System, including intermodal connectors, can be found on the FHWA internet site at [www.fhwa.dot.gov/hep10/nhs](http://www.fhwa.dot.gov/hep10/nhs).



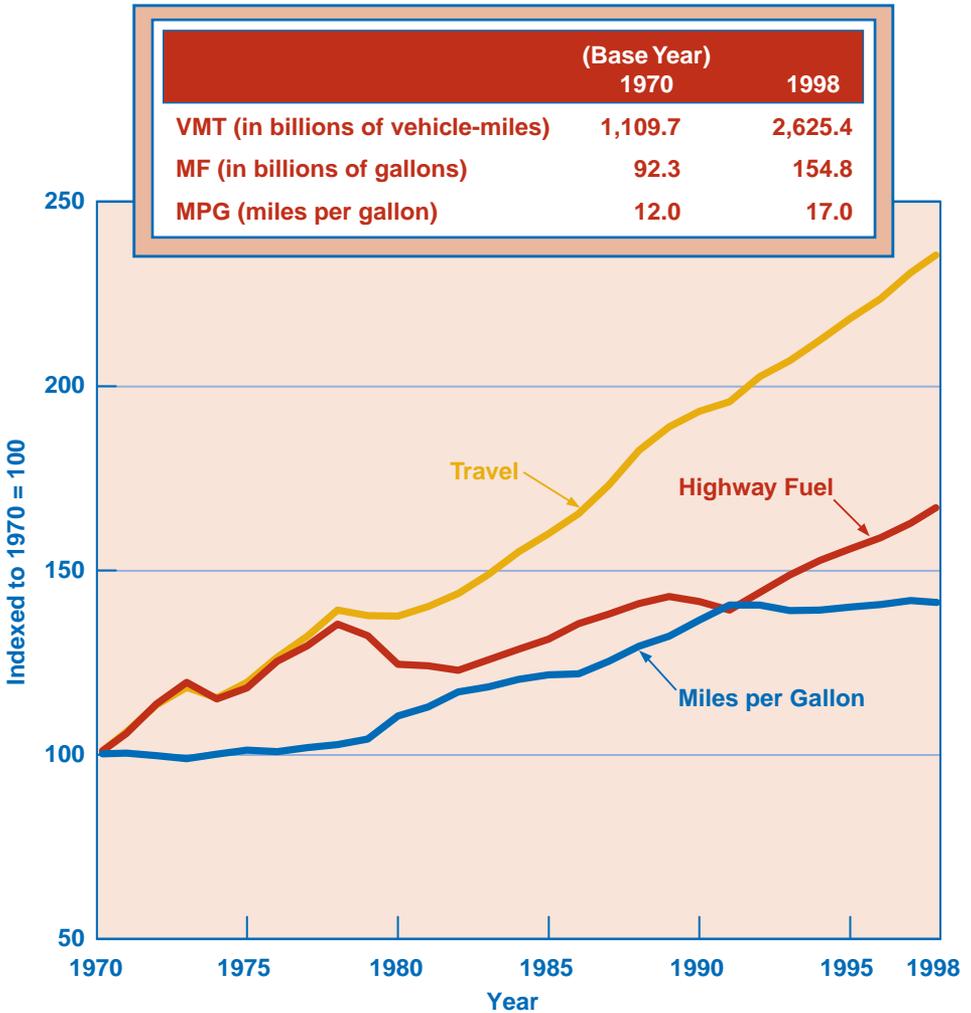
## Highway Fuel Use



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.

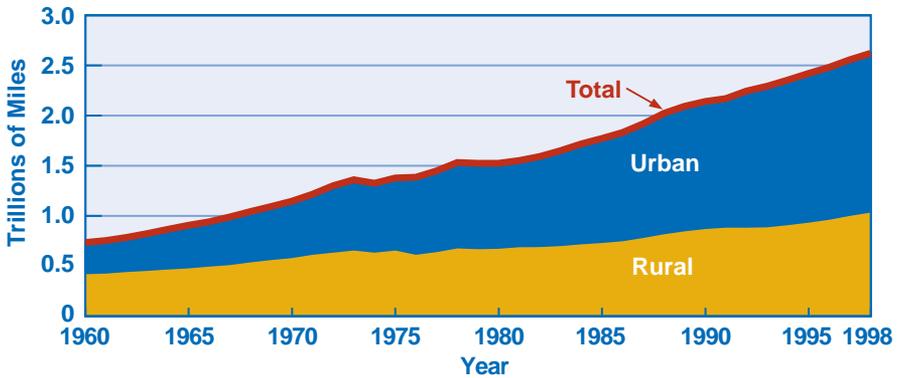
During this period, the highway use of gasoline increased 45.7% from 85.6 to 124.7 billion gallons. As population and the number of automobiles increased, the highway use of gasoline increased overall through the 1980's and into the 1990's despite improved automotive fuel economy.

*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.

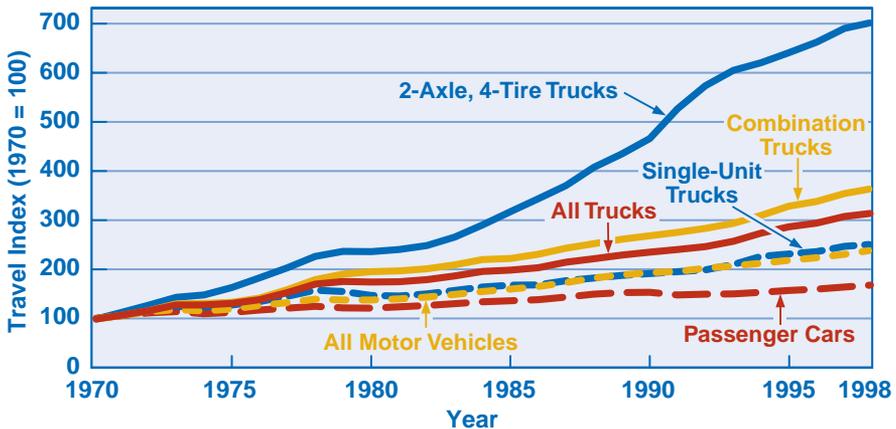
## Annual Vehicle-Miles of Travel



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.

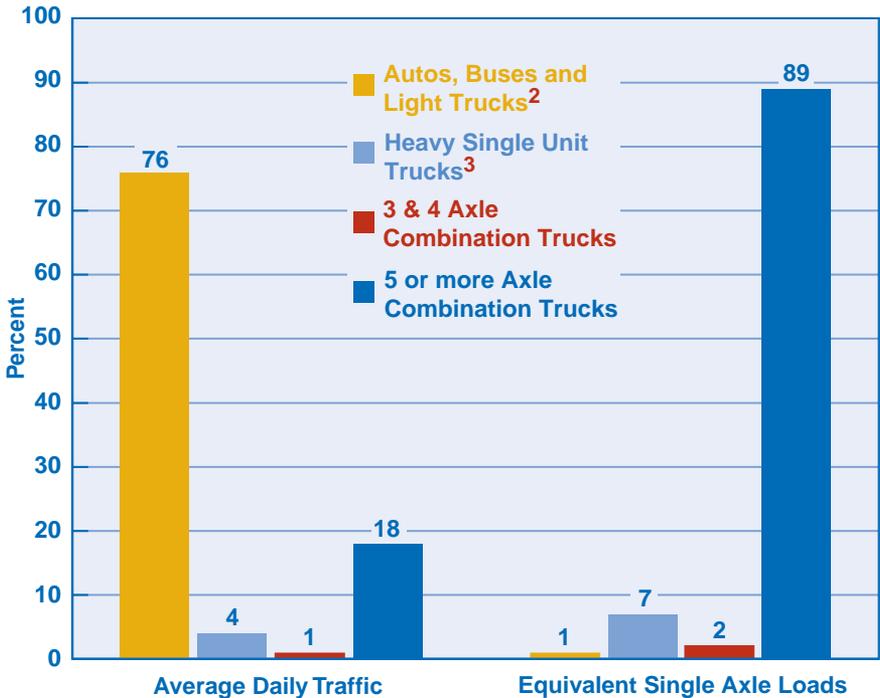
Annual travel on roads and streets in urban areas accounted for 1.6 trillion vehicle-miles in 1998 or 60% of total travel compared to 44% in 1960. Compared to the urban travel growth of 45% in the 1980's, rural travel grew 27%. Much of the urban travel growth can be attributed to expanding urban boundaries.

## 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<sup>1</sup> on the Rural Interstate System as a Percent of Total)



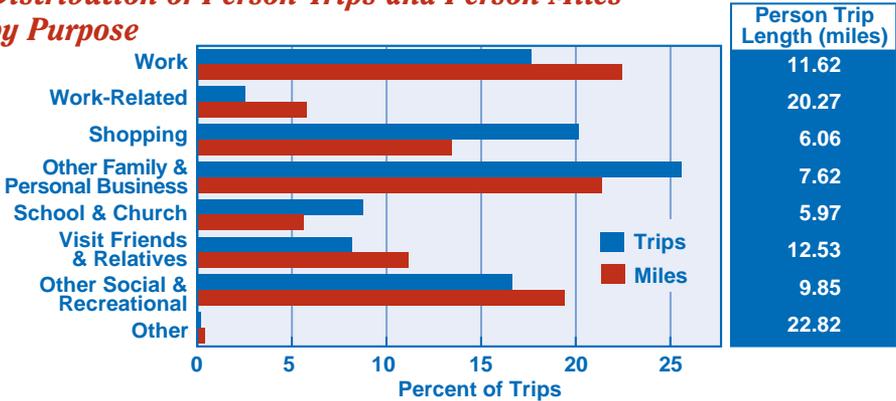
<sup>1</sup>Equivalent axle loads provide a means of measuring vehicle wear on pavements by relating them to an 80 kilonewton (18,000 pound) single axle load.

<sup>2</sup>All 2-axle, 4-tire trucks. Includes pickup trucks, vans, and other vehicles (such as campers, motor homes, etc.).

<sup>3</sup>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%.

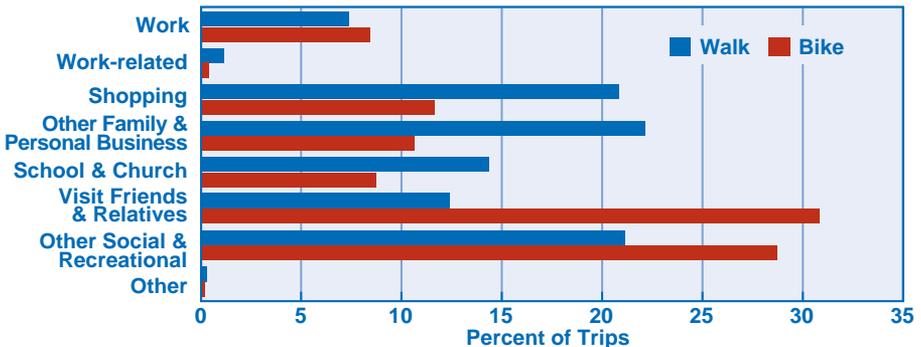
## Distribution of Person Trips and Person Miles by Purpose



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

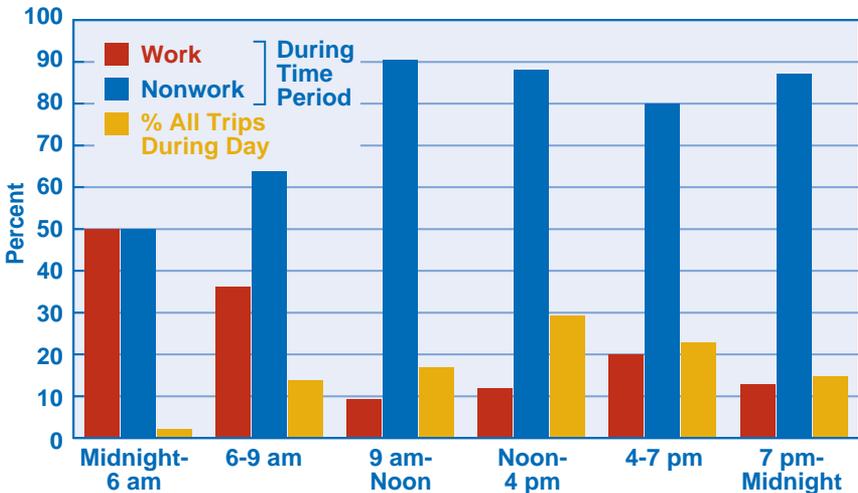
Worktrip Length By Mode Average Length In Miles			
	Male	Female	All
POV	13.49	9.58	11.84
Public Transit	14.10	11.47	12.88
Walk	0.81	0.66	0.74
All Modes	13.28	9.35	11.60

Worktrip Time By Mode Average Time in Minutes			
	Male	Female	All
POV	22.09	17.40	20.10
Public Transit	43.41	40.38	41.95
Walk	10.86	10.87	10.86
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 single-occupant 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.

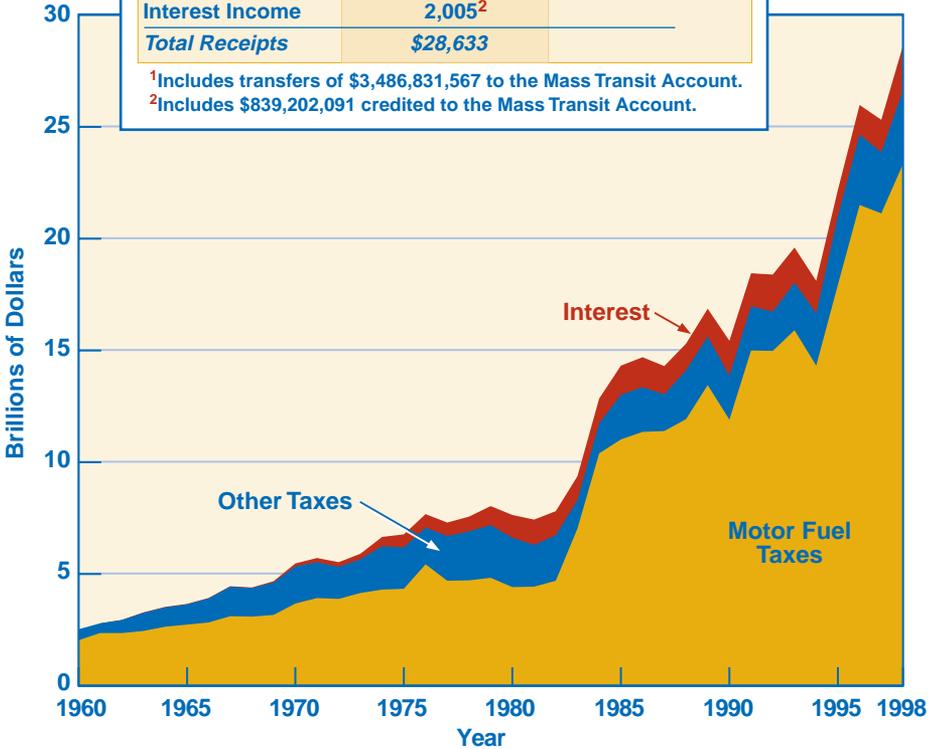
There is a general perception that most trips during the traditional “rush hour” are for work. Data from the 1995 NPTS show that the share of trips for work does not support this perception. Only 36% of all trips starting between 6 AM and 9 AM are for work, and this share drops to 20% in the 4 PM-7 PM 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.

*Federal Highway Trust Fund Receipts*

Source	Receipts (\$1,000,000)	Percent of Total
Motor Fuel	\$23,325 <sup>1</sup>	87.6
Gasoline	(16,635)	(62.5)
Gasohol	(1,063)	(4.0)
Diesel and Other	(5,627)	(21.1)
Trucks and Trailers	2,041	7.7
Heavy Vehicle Use	863	3.2
Tires	399	1.5
Total Tax Receipts	26,628	100.0
Interest Income	2,005 <sup>2</sup>	
<b>Total Receipts</b>	<b>\$28,633</b>	

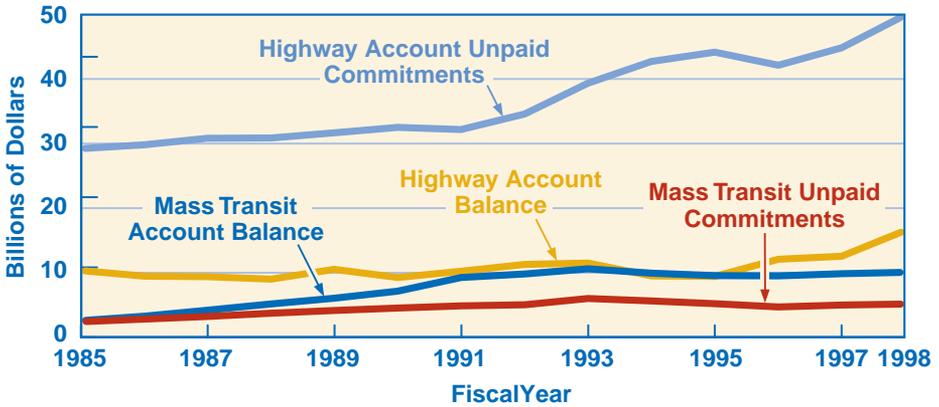
<sup>1</sup>Includes transfers of \$3,486,831,567 to the Mass Transit Account.  
<sup>2</sup>Includes \$839,202,091 credited to the Mass Transit Account.



Most receipts from the Federal taxation of motor fuel, along with a number of other highway-related taxes, are deposited in the Federal Highway Trust Fund. The Trust Fund is made up of two accounts—highway and mass transit—and is dedicated for the funding of Federal surface transportation programs. In this way, taxes on highway users are used to fund highway facilities. The Trust Fund has provided a stable funding source for highway programs since it was established in 1956.

Motor-fuel tax receipts accounted for \$23.325 billion in Fiscal Year 1998 or 87.6% of all Trust Fund tax receipts. Other taxes accounted for \$3.303 billion. The balance in the Trust Fund earned interest income of \$2.005 billion.

**Federal Highway Trust Fund Balance and Commitments**

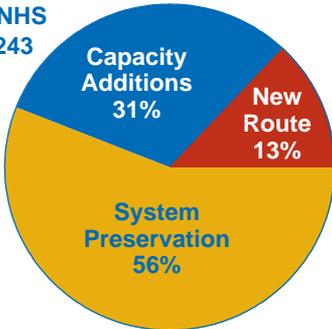


NOTE: The Highway Trust Fund was established July 1, 1956; the Mass Transit Account was established April 1, 1983.

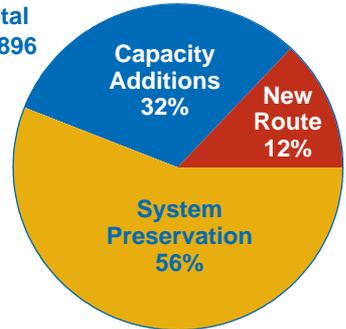
The balance in the Highway Trust Fund has grown from \$12.885 billion at the end of FY 1985 to \$26.585 billion at the end of FY 1998. At the end of FY 1998, the Highway Account held a balance of \$16.535 billion and had unpaid commitments of \$49.832 billion. Funds for highway projects are committed when the project is initiated and are paid out as the project progresses. Because construction projects are long term in nature, the highway-user tax revenues can be committed to projects in advance of actual tax collection.

**Obligation of Federal Funds for Roadway Projects by Improvement Types on the National Highway System (NHS) and Total (On and Off the NHS) (All Projects – in Thousands)**

1998 on NHS  
\$6,168,243



1998 Total  
\$12,426,896

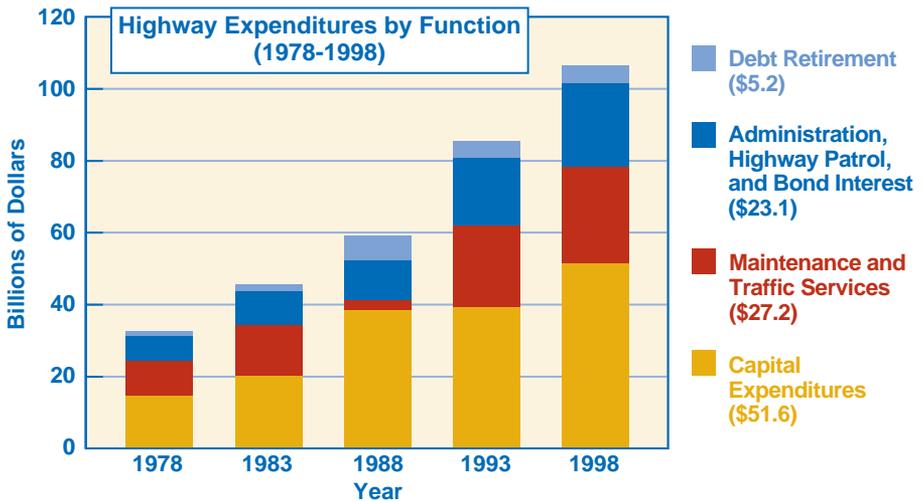
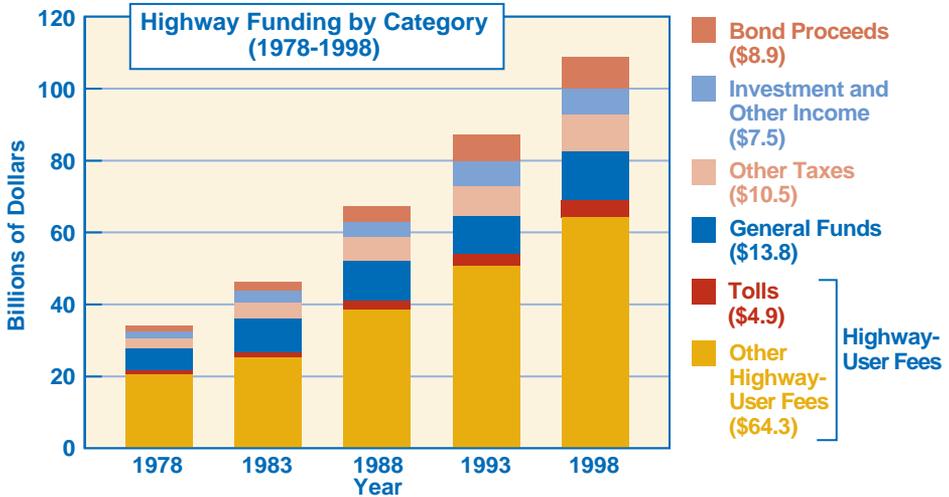


NOTE: Capacity addition improvements include Relocation, some Reconstruction, Major Widening, and Reconstruction-added capacity. System preservation improvements include some Reconstruction, Minor Widening, Restoration and Rehabilitation, Resurfacing, and Reconstruction-no added capacity. Excludes certain improvement types such as Safety/Traffic/Traffic System Management, Environmentally-related Projects, Special Bridge Programs and other projects.

SOURCE: Fiscal Management Information System.

Obligations for roadway projects in FY 1998 were \$6.2 billion for projects on the NHS and \$12.4 billion for projects both on and off the NHS. The majority of the obligations both NHS and Total were for projects involving System Preservation.

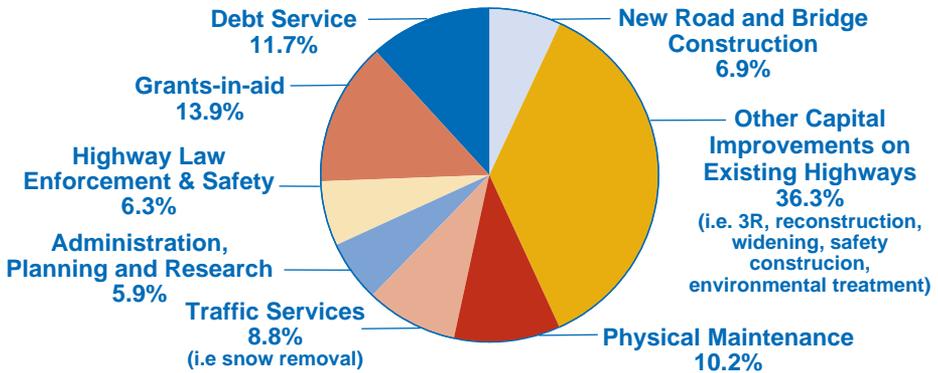
## Highway Funding by Category & Highway Expenditures by Function



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.

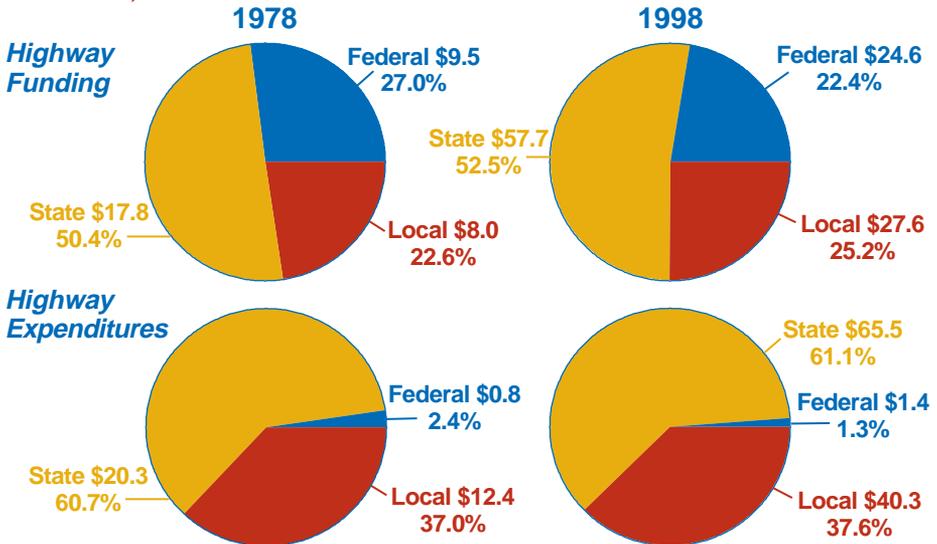
Capital expenditures currently account for 48.2% of highway expenditures compared to 44.6% in 1978; maintenance accounts for 25.4% compared to 29.3% in 1978. Expenditures for administration, highway patrol, and bond interest account for a slightly increased share of total expenditures — 21.6% in 1998 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%).

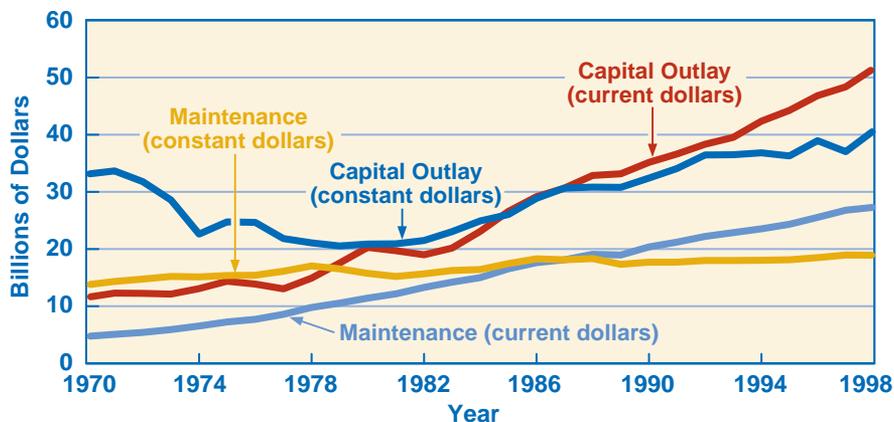
## Highway Funding and Expenditures by Governmental Unit (billions of dollars)



**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.

## Highway Capital Expenditures and Maintenance Expenditures by All Units of Government



NOTE: Capital expenditures include construction, engineering, and right-of-way.

Highway capital expenditures increased 346.1% from 1970 to 1998. Adjusted for inflation, 1998 capital expenditures (expressed in constant 1987 dollars) were only 22.6% above the 1970 level. Expenditures for highway maintenance in 1998 increased 477.1% compared to 1970. After accounting for inflation, 1998 maintenance expenditures were 37.4% above the 1970 level.

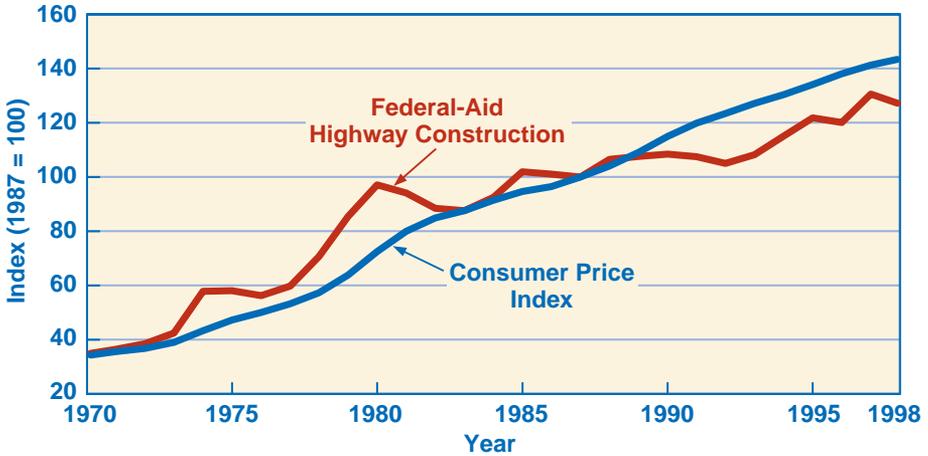
## Federal Highway-User Fees<sup>1</sup>

User Fee Type	Rate on October 1, 1997
<b>Motor Fuels</b>	
Gasoline	18.4¢ per gallon
Gasohol (10% blend)	13.0¢ per gallon
Diesel Fuel	24.4¢ per gallon
Liquefied Petroleum Gases	13.6¢ per gallon
<b>Tires</b>	0-40 pounds, no tax over 40 - 70 pounds, 15¢ per pound in excess of 40 over 70 - 90 pounds, \$4.50 plus 30¢ per pound in excess of 70 over 90 pounds, \$10.50 plus 50¢ per pound in excess of 90
<b>Truck and Trailer Sales</b>	12 % of retailer's sales price for trucks over 33,000 pounds gross vehicle weight (GVW) and trailers over 26,000 pounds GVW
<b>Heavy Vehicle Use</b>	Annual Tax: Trucks 55,000 - 75,000 pounds GVW, \$100 plus \$22 for each 1,000 pounds (or fraction thereof) in excess of 55,000 pounds Trucks over 75,000 pounds GVW, \$550

<sup>1</sup> See tables FE-101A, FE-101B, and FE-21B in *Highway Statistics 1998* for a more complete description of Federal highway-user fees.

NOTE: This table reflects rates included in Taxpayer Relief Act of 1997.

*Highway Construction Price Trends and the Consumer Price Index*



*Apportionment of Federal Funds Administered by the Federal Highway Administration for FY 1997, 1998, and 1999<sup>1</sup> (in millions of dollars)*

Selected Programs	1997 <sup>2</sup>	1998 <sup>3</sup>	1999 <sup>3</sup>
Interstate Maintenance	2,761	3,294	3,759
Reimbursement for non-Federally aided Interstate Segments	1,896	-	-
National Highway System	3,345	3,989	4,607
Surface Transportation Program	3,875	4,654	5,377
Congestion Mitigation and Air Quality Improvement	975	1,163	1,311
Appalachian Development Highway System	-	-	443
Recreation Trails	-	30	39
Bridge Replacement and Rehabilitation	2,536	2,845	3,211
P.L. 104-59 Restoration Funds <sup>4</sup>	155	-	-
Metropolitan Planning	157	162	187
Donor State Bonus	493	-	-
90% of Payment Adjustments	1,682	-	-
Apportionment Adjustment	931	-	-
Minimum Allocation	603	-	-
Minimum Guarantee	-	5,386	6,387
<b>Total<sup>5</sup></b>	<b>\$19,409</b>	<b>\$21,523</b>	<b>\$25,321</b>

<sup>1</sup> Fiscal year starts October 1 and ends September 30.

<sup>2</sup> Apportioned pursuant to the Intermodal Surface Transportation Efficiency Act of 1991 and the National Highway System Designation Act of 1995. Does not include funds from the Mass Transit Account of the Highway Trust Fund or the National Recreational Trails Trust Fund.

<sup>3</sup> Apportioned pursuant to the Transportation Equity Act for the 21st Century (as amended by the TEA 21Restoration Act) of 1998.

<sup>4</sup> Section 203 of the National Highway System (NHS) Designation Act of 1995 rescinded some unobligated balances remaining from the authorizations under previous highway authorization acts. It also made reductions in authorized amounts for several programs. These funds were apportioned to the States based on percentages specified in section 202 of the NHS Designation Act.

<sup>5</sup> Does not include funds from the following programs: emergency relief, highway-related safety, Federal lands highway programs, mandated projects, national magnetic levitation development, high-speed ground transportation development, and intelligent vehicle-highway system, among others. These funds are allocated from the Highway Trust Fund.

## *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, Table DL-1C)	Driving-Age Population (thousands) (HS'98, Table DL-1C)	Highway Motor Fuel Use (thousands of gallons) (HS'98, Table MF-21)	Total Lane Miles (HS'98, Table HM-48)	Total Road and Street Mileage (HS'98, Table HM-20)	Annual Vehicle-Miles of Travel (millions) (HS'98, Table VM-2)	Total Highway Fatalities (HS'98, Table FI-10)	Fatalities (per 100 million VMT)	State Motor Fuel Taxes and Other Related Receipts (HS'98, Table MF-1)	Total Highway Capital Outlay (thousands) (HS'98, Table SF-2)	Total Disbursements for Highways (thousands) (HS'98, Table SF-2)	Payments into the Federal HTF (thousands) (HS'98, Table FE-221)	Apportionments from the Federal HTF (thousands) (HS'98, Table FE-221)
Alabama	4,352	3,397	3,089,276	195,118	94,227	55,205	1,071	1.94	555,347	535,282	1,053,279	593,144	474,373
Alaska	614	443	345,790	25,697	12,680	4,514	71	1.57	23,403	224,607	403,786	50,546	293,518
Arizona	4,669	3,541	2,803,347	116,235	53,968	45,486	980	2.15	511,544	649,427	1,430,492	506,320	366,554
Arkansas	2,539	1,963	1,926,982	192,946	95,110	28,346	625	2.20	347,929	491,817	815,014	402,494	306,798
California	33,772	24,663	16,102,917	373,834	165,948	286,442	3,494	1.22	2,780,012	2,669,580	6,574,436	2,872,266	2,254,699
Colorado	3,971	3,051	2,251,687	176,606	85,270	39,283	628	1.60	480,714	609,823	1,165,583	343,503	300,736
Connecticut	5,821	2,566	1,596,697	43,975	20,726	29,322	329	1.12	523,974	502,141	1,426,791	296,289	347,058
Delaware	739	584	436,340	12,442	5,733	8,204	115	1.40	101,519	248,520	646,824	79,315	101,561
Dist. of Columbia	523	430	183,111	3,450	1,421	3,307	54	1.63	30,639	115,387	259,399	34,725	96,724
Florida	14,916	11,755	8,129,947	249,888	115,415	137,495	2,824	2.05	1,476,947	2,448,044	4,024,261	1,474,794	1,055,949
Georgia	7,642	5,845	5,696,748	238,608	113,554	97,030	1,569	1.62	421,171	1,111,114	1,613,446	1,089,701	805,729
Hawaii	2,005	927	410,499	9,108	4,218	7,987	120	1.50	66,917	194,746	326,450	72,645	117,807
Idaho	1,229	922	807,227	94,455	46,108	13,433	265	1.97	195,510	209,119	414,274	169,787	215,407
Illinois	12,056	9,208	5,808,157	288,272	137,963	101,273	1,393	1.38	1,170,197	1,472,402	3,305,665	912,383	776,165
Indiana	5,545	4,561	4,086,149	192,799	93,344	68,865	978	1.42	716,788	785,504	1,652,221	726,233	541,973
Iowa	2,862	2,232	1,981,613	231,111	112,810	28,912	449	1.55	393,217	505,566	1,177,155	320,786	280,336
Kansas	2,629	2,016	1,672,230	272,482	133,825	27,095	493	1.82	315,606	637,165	1,305,627	328,458	268,182
Kentucky	5,294	3,068	2,780,196	152,594	73,635	46,577	858	1.84	453,667	777,719	1,480,678	551,260	398,330
Louisiana	4,332	3,326	2,605,566	127,576	60,747	40,326	922	2.29	530,527	643,033	1,400,318	490,244	367,164
Maine	1,241	989	772,091	46,279	22,638	13,540	192	1.42	152,897	187,691	484,760	155,240	130,535
Maryland	5,059	3,985	2,707,712	66,359	30,188	48,343	606	1.25	633,246	588,224	1,491,869	503,179	353,299
Massachusetts	6,147	4,843	2,961,857	74,400	35,254	51,829	406	0.78	605,312	1,853,968	3,351,131	536,141	426,958
Michigan	9,740	7,562	5,682,608	255,066	121,482	93,916	1,367	1.46	1,004,936	965,723	2,745,030	1,005,790	722,839
Minnesota	4,759	3,617	2,883,041	269,129	131,188	49,628	650	1.31	543,893	561,994	1,377,045	352,575	362,521
Mississippi	2,574	2,088	2,015,172	151,830	73,295	34,210	948	2.77	363,268	564,335	843,443	383,999	284,156
Missouri	5,439	4,199	3,900,483	251,701	122,847	64,534	1,169	1.81	645,898	791,672	1,438,351	759,721	539,709
Montana	880	686	642,080	142,628	69,890	9,589	237	2.47	167,669	211,567	377,599	133,014	248,352
Nebraska	1,637	1,272	1,172,943	188,062	92,743	17,558	315	1.79	270,128	271,469	589,126	214,298	177,861
Nevada	1,856	1,327	1,139,956	74,076	35,413	17,295	361	2.09	292,127	218,907	445,538	193,230	179,686
New Hampshire	1,538	920	730,812	31,146	15,124	11,573	128	1.11	126,759	168,936	370,913	138,770	118,644
New Jersey	8,115	6,333	4,544,212	77,654	35,920	64,510	743	1.15	492,810	775,648	2,512,675	822,744	592,754
New Mexico	1,755	1,291	1,297,042	124,783	59,914	22,193	424	1.91	244,098	269,662	570,433	238,405	233,235
New York	18,176	14,147	6,415,679	238,509	112,525	123,376	1,498	1.21	1,462,799	2,551,865	6,050,952	1,171,703	1,195,520
North Carolina	7,546	5,832	4,801,571	206,318	98,608	85,283	1,596	1.87	1,030,093	1,355,164	2,351,786	865,261	657,909
North Dakota	638	497	484,727	175,335	86,603	7,333	92	1.25	94,822	189,898	305,979	96,882	183,059
Ohio	11,207	8,702	6,343,642	244,659	116,221	104,924	1,422	1.36	1,421,259	1,464,561	3,326,527	1,071,233	795,089
Oklahoma	3,307	2,575	2,329,665	232,038	112,524	42,032	755	1.80	394,756	459,817	943,633	472,832	351,232
Oregon	3,268	2,555	1,917,930	140,597	68,478	33,374	538	1.61	383,221	450,821	1,050,919	360,794	297,727
Pennsylvania	12,052	9,475	6,136,083	248,481	119,281	99,908	1,481	1.48	1,663,007	1,546,071	3,902,210	1,133,518	1,166,826
Rhode Island	1,862	776	441,406	12,887	6,048	7,983	74	0.93	128,983	180,173	339,227	77,739	135,626
South Carolina	3,836	2,989	2,696,310	135,938	64,895	42,821	1,002	2.34	406,115	465,434	765,785	511,540	365,515
South Dakota	747	563	565,395	168,983	83,412	8,097	165	2.04	108,570	203,678	305,266	94,170	176,954
Tennessee	5,431	4,254	3,628,402	181,492	86,601	62,562	1,216	1.94	696,329	772,521	1,420,018	708,091	533,445
Texas	19,934	14,760	12,215,649	629,092	296,581	206,023	3,577	1.74	2,517,785	2,368,058	4,295,119	2,335,122	1,644,394
Utah	2,100	1,483	1,249,729	86,407	41,341	21,270	350	1.65	295,486	820,138	1,129,169	247,854	192,429
Vermont	591	467	389,528	29,296	14,251	6,596	104	1.58	84,442	99,873	221,864	77,821	112,317
Virginia	6,791	5,332	4,317,971	151,270	69,860	70,686	935	1.32	746,902	1,244,313	2,619,010	801,023	618,151
Washington	5,687	4,388	3,003,216	165,801	80,229	51,927	660	1.27	702,612	692,370	1,805,365	545,247	442,849
West Virginia	1,811	1,461	1,095,078	73,736	35,829	18,666	354	1.90	297,039	499,433	892,702	219,203	264,793
Wisconsin	5,107	4,039	3,103,713	230,647	111,951	56,655	714	1.26	727,042	709,128	1,397,701	514,292	464,455
Wyoming	481	369	583,378	59,041	28,456	8,031	154	1.92	60,526	200,559	321,452	135,325	172,423
U.S. Total	276,822	208,277	154,883,560	8,160,836	3,906,292	2,625,367	41,471	1.58	29,860,457	38,534,667	80,518,296	28,191,649	23,510,325

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

## Population, Drivers, Vehicles, Fuel and Travel by State

State	Total Registered Vehicles (HS'98, Table MV-1)	Total Licensed Drivers (HS'98, Table DL-22)	Licensed Drivers per 1,000 Driving-Age Population	Motor Vehicles per 1,000 Population	Motor Vehicles per Licensed Driver	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
Alabama	3,858,928	3,434,117	1,011	887	1.12	1.13	801	17.87	14,306	12,685	16,075
Alaska	545,865	456,891	1,031	889	1.19	1.12	633	13.05	8,269	7,352	9,880
Arizona	2,944,016	3,198,276	903	631	0.92	1.59	952	16.23	15,450	9,742	14,222
Arkansas	1,754,215	1,918,451	977	691	0.91	1.45	1098	14.71	16,159	11,164	14,775
California	25,600,250	20,498,902	831	758	1.25	1.32	629	17.79	11,189	8,482	13,974
Colorado	3,466,094	2,946,476	966	873	1.18	1.15	650	17.45	11,334	9,892	13,332
Connecticut	2,700,633	2,349,286	915	464	1.15	2.16	591	18.36	10,857	5,037	12,481
Delaware	616,492	545,872	934	834	1.13	1.20	708	18.80	13,308	11,101	15,029
Dist. of Columbia	228,716	349,835	814	437	0.65	2.29	801	18.06	14,459	6,323	9,453
Florida	11,276,389	12,026,947	1,023	756	0.94	1.32	721	16.91	12,193	9,218	11,432
Georgia	6,893,319	5,315,739	909	902	1.30	1.11	826	17.03	14,076	12,697	18,253
Hawaii	703,836	746,329	805	351	0.94	2.85	583	19.46	11,348	3,984	10,702
Idaho	1,118,893	862,674	935	910	1.30	1.10	721	16.64	12,006	10,930	15,571
Illinois	9,306,710	7,700,880	836	772	1.21	1.30	624	17.44	10,882	8,400	13,151
Indiana	5,371,653	3,976,241	872	969	1.35	1.03	761	16.85	12,820	12,419	17,319
Iowa	3,053,135	1,950,374	874	1,067	1.57	0.94	649	14.59	9,470	10,102	14,824
Kansas	2,121,410	1,851,449	918	807	1.15	1.24	788	16.20	12,772	10,306	14,634
Kentucky	2,844,612	2,640,335	861	537	1.08	1.86	977	16.75	16,374	8,798	17,641
Louisiana	3,430,717	2,736,305	823	792	1.25	1.26	759	15.48	11,754	9,309	14,737
Maine	929,605	912,506	923	749	1.02	1.33	831	17.54	14,565	10,911	14,838
Maryland	3,750,275	3,177,783	797	741	1.18	1.35	722	17.85	12,891	9,556	15,213
Massachusetts	5,159,168	4,394,355	907	839	1.17	1.19	574	17.50	10,046	8,432	11,794
Michigan	8,128,150	6,802,704	900	835	1.19	1.20	699	16.53	11,554	9,642	13,806
Minnesota	4,177,841	2,868,002	793	878	1.46	1.14	690	17.21	11,879	10,428	17,304
Mississippi	2,255,744	1,758,293	842	876	1.28	1.14	893	16.98	15,166	13,291	19,456
Missouri	4,377,520	3,798,096	905	805	1.15	1.24	891	16.55	14,742	11,865	16,991
Montana	988,277	646,512	942	1,123	1.53	0.89	650	14.93	9,703	10,897	14,832
Nebraska	1,525,998	1,185,794	932	932	1.29	1.07	769	14.97	11,506	10,726	14,807
Nevada	1,220,277	1,245,905	939	657	0.98	1.52	934	15.17	14,173	9,318	13,881
New Hampshire	1,038,465	907,479	986	675	1.14	1.48	704	15.84	11,144	7,525	12,753
New Jersey	5,780,336	5,563,492	878	712	1.04	1.40	786	14.20	11,160	7,949	11,595
New Mexico	1,594,792	1,203,869	932	909	1.32	1.10	813	17.11	13,916	12,646	18,435
New York	10,422,033	10,554,098	746	573	0.99	1.74	616	19.23	11,838	6,788	11,690
North Carolina	5,861,830	5,534,284	949	777	1.06	1.29	819	17.76	14,549	11,302	15,410
North Dakota	672,158	454,933	915	1,054	1.48	0.95	721	15.13	10,910	11,494	16,119
Ohio	10,039,488	7,941,479	913	896	1.26	1.12	632	16.54	10,451	9,362	13,212
Oklahoma	2,919,186	2,305,361	895	883	1.27	1.13	798	18.04	14,399	12,710	18,232
Oregon	2,980,064	2,417,002	946	912	1.23	1.10	644	17.40	11,199	10,212	13,808
Pennsylvania	8,978,814	8,404,689	887	745	1.07	1.34	683	16.28	11,127	8,290	11,887
Rhode Island	715,017	681,832	878	384	1.05	2.60	617	18.09	11,165	4,287	11,708
South Carolina	2,893,061	2,679,131	896	754	1.08	1.33	932	15.88	14,801	11,163	15,983
South Dakota	768,507	535,339	951	1,029	1.44	0.97	736	14.32	10,536	10,839	15,125
Tennessee	4,469,065	4,072,836	957	823	1.10	1.22	812	17.24	13,999	11,519	15,361
Texas	13,324,167	13,322,911	903	668	1.00	1.50	917	16.87	15,462	10,335	15,464
Utah	1,532,253	1,393,242	939	730	1.10	1.37	816	17.02	13,882	10,129	15,267
Vermont	496,153	497,172	1,064	840	1.00	1.19	785	16.93	13,294	11,161	13,267
Virginia	5,818,294	4,787,150	898	857	1.22	1.17	742	16.37	12,149	10,409	14,766
Washington	4,823,987	4,078,895	930	848	1.18	1.18	623	17.29	10,764	9,131	12,731
West Virginia	1,377,835	1,280,539	877	761	1.08	1.31	795	17.05	13,547	10,307	14,577
Wisconsin	4,203,319	3,709,957	919	823	1.13	1.21	738	18.25	13,479	11,094	15,271
Wyoming	558,991	359,158	972	1,162	1.56	0.86	1044	13.77	14,367	16,696	22,361
<b>U.S. Total</b>	<b>211,616,553</b>	<b>184,980,177</b>	<b>888</b>	<b>764</b>	<b>1.14</b>	<b>1.31</b>	<b>732</b>	<b>16.95</b>	<b>12,406</b>	<b>9,484</b>	<b>14,193</b>

HS'98 = Highway Statistics, 1998.

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	Total Freeway/ Expressway Mileage	Total Freeway Miles per Urbanized Population	Total Daily Highway Vehicle-Miles (thousands)	Total Daily Freeway Vehicle-Miles (thousands)	Daily Vehicle-Miles per Capita	Average AADT* Total	% of Travel Served by Freeways	Average AADT on Freeways
	State	State(s)												
New York-Northeastern NJ	NY	NJ	16,407	3,962	4,141	37,581	1,142	69.6	257,041	96,808	15.7	6,840	37.7	84,794
Los Angeles	CA		12,600	2,231	5,648	26,716	643	51.0	273,161	121,554	21.7	10,225	44.5	189,167
Chicago-Northwestern IN <sup>1</sup>	IL	IN	8,070	2,730	2,956	23,697	477	59.1	159,107	48,426	19.7	6,714	30.4	101,451
Philadelphia <sup>1</sup>	PA	NJ	4,546	1,350	3,367	13,389	352	77.4	76,464	23,555	16.8	5,711	30.8	66,918
San Francisco-Oakland	CA		4,017	1,203	3,339	9,323	338	84.1	85,039	45,146	21.2	9,121	53.1	133,608
Detroit	MI		3,852	1,304	2,954	12,945	282	73.2	88,802	30,867	23.1	6,860	34.8	109,507
Dallas-Fort Worth	TX		3,722	1,712	2,174	17,866	583	156.6	108,542	46,737	29.2	6,075	43.1	80,216
Washington	DC	MD, VA	3,442	999	3,445	10,212	309	89.8	81,642	33,931	23.7	7,995	41.6	109,932
Boston	MA		2,904	1,138	2,552	10,125	215	74.0	59,540	22,254	20.5	5,880	37.4	103,409
Atlanta	GA		2,806	1,757	1,597	13,005	306	109.1	100,461	40,597	35.8	7,725	40.4	132,528
San Diego	CA		2,683	733	3,660	5,926	239	89.1	57,625	29,877	21.5	9,724	51.8	124,995
Phoenix	AZ		2,482	1,054	2,355	9,556	139	56.0	53,396	15,894	21.5	5,588	29.8	114,345
Houston	TX		2,396	1,537	1,559	15,498	400	166.9	91,925	39,567	38.4	5,931	43.0	98,995
Minneapolis-St. Paul	MN		2,322	1,192	1,948	10,706	311	133.9	56,256	25,503	24.2	5,255	45.3	81,932
Baltimore	MD		2,107	712	2,959	6,532	278	131.9	44,136	21,288	20.9	6,757	48.2	76,623
Miami-Hialeah	FL		2,066	545	3,791	5,607	120	58.1	38,389	12,546	18.6	6,847	32.7	104,204
St. Louis	MO	IL	2,000	1,123	1,781	8,039	320	160.0	58,416	24,961	29.2	7,267	42.7	78,003
Seattle	WA		1,980	844	2,346	6,938	240	121.2	50,578	23,318	25.5	7,290	46.1	97,173
Tampa-St Pete-Clearwater	FL		1,863	1,294	1,440	7,406	125	67.1	40,180	8,149	21.6	5,425	20.3	65,409
Denver	CO		1,828	720	2,539	6,842	206	112.7	41,043	16,170	22.5	5,999	39.4	78,630
Pittsburgh	PA		1,768	1,112	1,590	8,386	284	160.6	35,836	10,911	20.3	4,273	30.4	38,419
Cleveland	OH		1,748	838	2,086	5,571	227	129.9	38,846	17,121	22.2	6,973	44.1	75,423
San Jose	CA		1,653	365	4,529	4,111	175	105.9	36,749	17,652	22.2	8,939	48.0	100,869
Portland-Vancouver	OR	WA	1,471	468	3,143	5,535	137	93.1	31,090	12,021	21.1	5,617	38.7	87,717
Norfolk-VA Beach-Newport News	VA		1,453	952	1,526	5,479	161	110.8	32,765	10,757	22.5	5,980	32.8	66,814
Fort Lauderdale-Hollywood-Pompano Beach	FL		1,441	489	2,947	4,206	109	75.6	32,579	11,228	22.6	7,746	34.5	103,440
Riverside-San Bernardino	CA		1,396	514	2,716	4,727	139	99.6	31,487	15,579	22.6	6,661	49.5	111,905
Kansas City	MO	KS	1,375	1,034	1,330	7,541	374	272.0	40,145	18,222	29.2	5,324	45.4	48,713
Sacramento	CA		1,353	383	3,533	4,205	105	77.6	27,734	11,142	20.5	6,595	40.2	106,434
San Juan	PR		1,322	274	4,825	2,792	64	48.4	16,634	5,730	12.6	5,958	34.4	89,415
Las Vegas	NV		1,283	270	4,752	2,946	77	60.0	21,323	5,880	16.6	7,238	27.6	76,364
Milwaukee	WI		1,243	512	2,428	5,023	114	91.7	31,621	8,859	25.4	6,295	28.0	77,880
San Antonio	TX		1,229	485	2,534	5,155	211	171.7	31,281	14,513	25.5	6,068	46.4	68,854
Cincinnati	OH	KY	1,203	630	1,910	5,325	174	144.6	32,645	15,197	27.1	6,131	46.6	87,339
Orlando <sup>1</sup>	FL		1,075	667	1,612	3,577	148	137.7	29,106	8,666	27.1	8,137	29.8	58,750
Buffalo-Niagara Falls	NY		1,072	564	1,901	3,968	139	129.7	20,269	5,796	18.9	5,108	28.6	41,792
New Orleans	LA		1,065	269	3,959	3,286	75	70.4	15,367	5,745	14.4	4,677	37.4	76,311
Oklahoma City	OK		1,030	711	1,449	4,639	147	142.7	25,151	8,731	24.4	5,422	34.7	59,593
West Palm Beach-Boca Raton-Delray Beach	FL		939	556	1,689	2,592	87	92.7	20,287	7,474	21.6	7,827	36.8	85,886
Memphis	TN	AR, MS	933	409	2,281	3,253	89	95.4	22,120	6,370	23.7	6,800	28.8	71,761
Indianapolis	IN		915	422	2,168	4,191	130	142.1	28,209	10,967	30.8	6,731	38.9	84,172
Columbus	OH		912	476	1,916	3,408	149	163.4	24,929	11,678	27.3	7,315	46.8	78,376
Providence-Pawtucket	RI	MA	900	515	1,748	4,357	117	130.0	19,368	7,904	21.5	4,445	40.8	67,568
Salt Lake City	UT		888	353	2,516	3,194	79	89.0	19,576	6,171	22.0	6,129	31.5	78,114
Jacksonville	FL		839	727	1,154	3,666	145	172.8	23,347	9,026	27.8	6,369	38.7	62,127
Louisville	KY	IN	799	384	2,081	3,628	137	171.5	23,457	9,897	29.4	6,466	42.2	72,066
Tulsa	OK		760	394	1,929	2,743	112	147.4	16,964	5,846	22.3	6,184	34.5	52,064

\*Annual average daily traffic.

<sup>1</sup>Some urbanized area data are inconsistently reported; for example, the Pennsylvania portion of Wilmington, Delaware is reported with Philadelphia; Kissimmee, Florida is reported with Orlando; and the Illinois portions of Aurora, Danville, Elgin, Crystal Lake, Joliet and 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 published 1990 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.