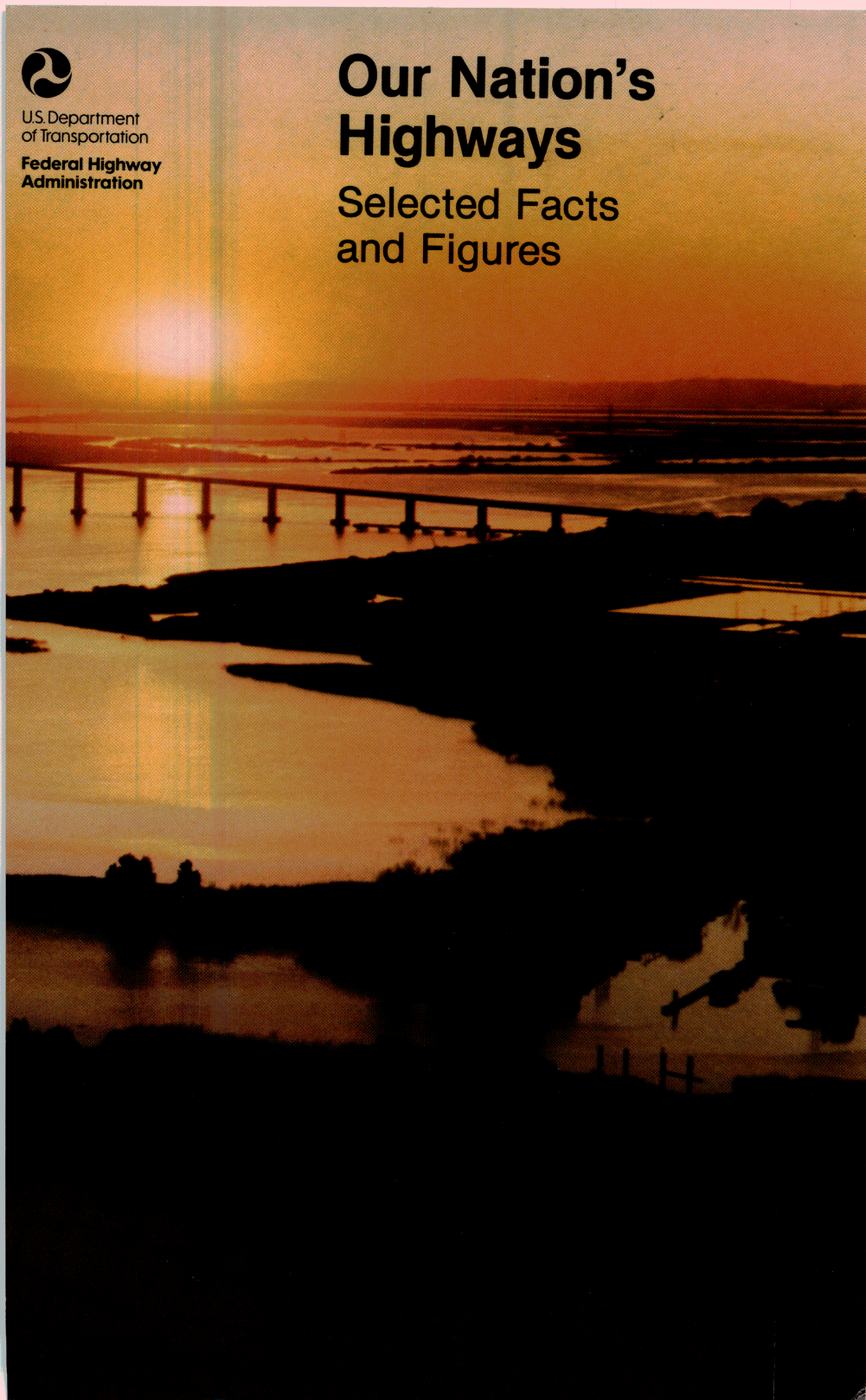




U.S. Department  
of Transportation  
**Federal Highway  
Administration**

# Our Nation's Highways

## Selected Facts and Figures



Unless otherwise stated, all data in this publication are for calendar year 1981. Preliminary 1982 data are shown in some charts and graphs. Except where noted, the Federal Highway Administration is the source of the data, provided by the states.

The information in the pamphlet is intended to be an overview of our Nation's highways of general interest to the average citizen. For more detailed data on many of the subjects covered, refer to the publication "Highway Statistics" published annually by the Highway Statistics Division, Office of Highway Planning, Federal Highway Administration.

**Cover Photo**

The new Antioch Bridge in California's Delta region of the Bay Area (State Route 160).

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## IN 1981...

## Contents

The United States had 3.9 million miles of roadway, of which 3.2 million miles were rural roads. There were 42,268 miles on the Interstate System.

The Highway System 2

38 percent of the Interstate System mileage had new or nearly new pavements and 10 percent had deteriorated pavements.

Condition and Performance 6

There were 158.5 million motor vehicles; 123.5 million automobiles, and 35 million buses and trucks.

The Vehicle Fleet 8

There were 147 million licensed drivers, or 84 percent of the population 16 years of age and over.

114.5 billion gallons of fuel were consumed on the highways—this is 97 percent of total motor-fuel use—722 gallons per vehicle.

Travel by motor vehicles reached 1.5 trillion vehicle-miles, an increase of 1.9 percent over the previous year. Automobiles are responsible for 72 percent of the travel.

Travel 15

Although \$41.1 billion was spent for highways, this amounted to less than 2.7 cents per vehicle-mile traveled.

Financing Our Highways 17

## 2 The Highway System

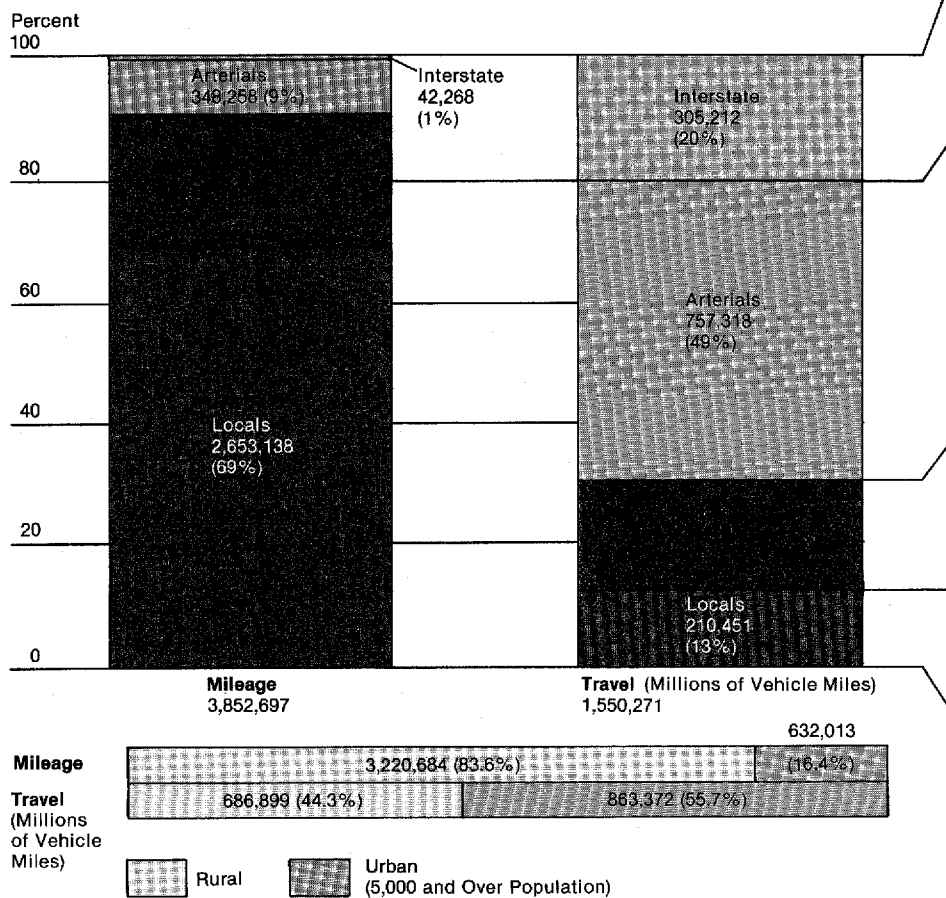
### Total Road Mileage and Travel by Functional Classification

Roads and streets are grouped into functional classes according to the type of service they provide. The arterial system (including the Interstate System) and collector system comprise about 31 percent

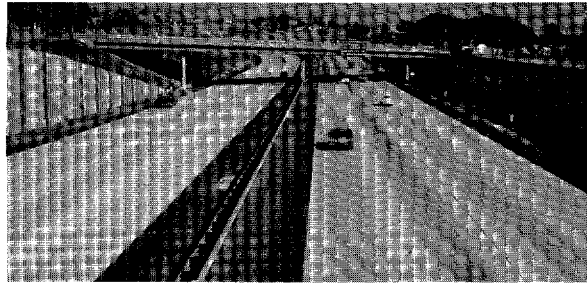
of the Nation's total roads and streets but carry 87 percent of total travel.

The Interstate System comprises only 1 percent of the Nation's total miles of roadway,

but it carries about 20 percent of the travel in our country. Conversely, local roads comprise 69 percent of the Nation's total roads and streets but only carry 13 percent of total travel.



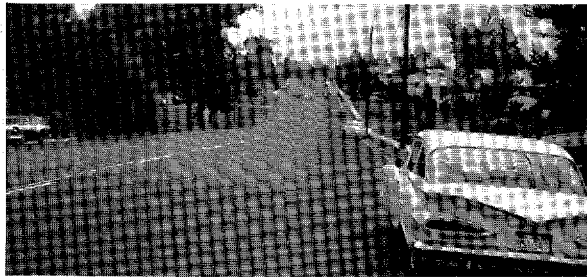
Freeway



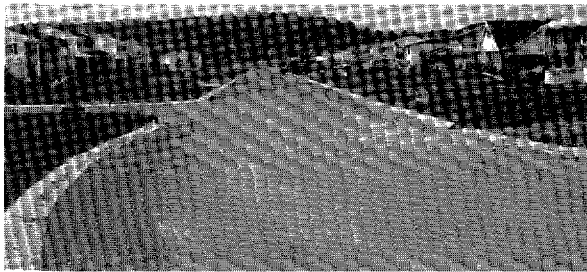
Urban Arterial



Collector

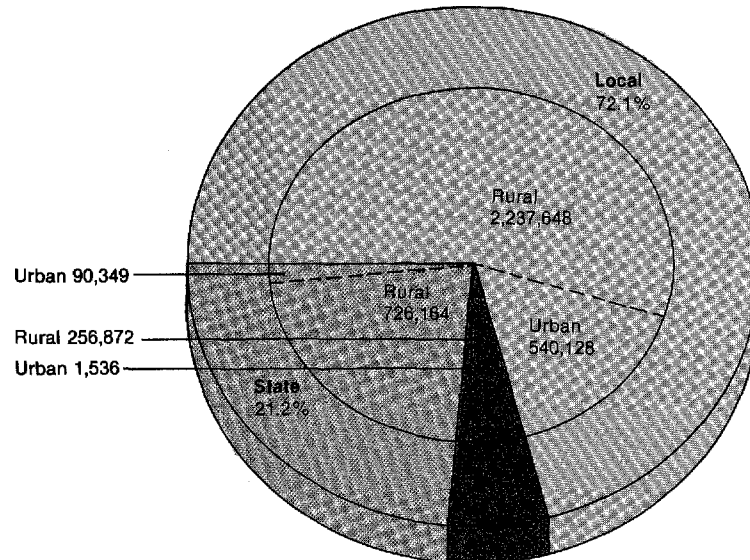


Residential Street



### Jurisdictional Control of U.S. Roads and Streets

The vast majority (93 percent) of all the roads and streets in the United States are under the jurisdiction of State and local governments.



### Federal-Aid Systems Mileage and Travel

The Federal-aid systems are segments of State and local mileage eligible for

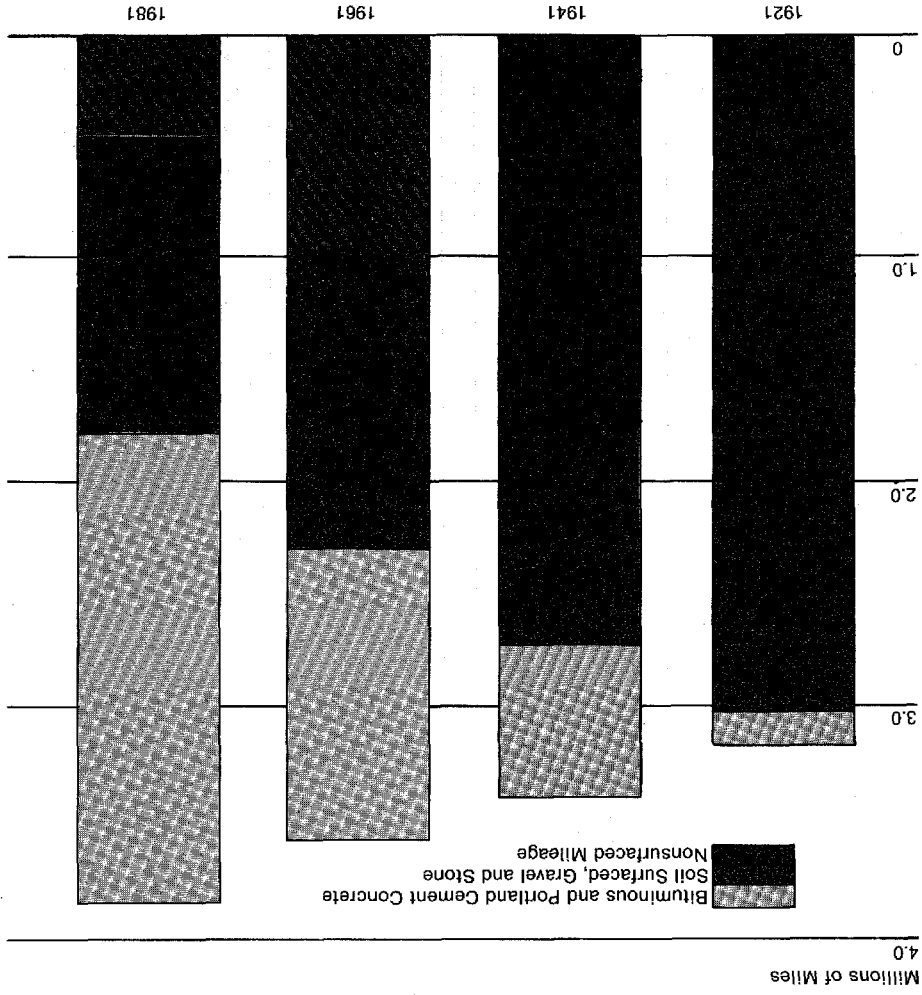
funding through the Federal aid highway program. The Federal-aid systems include

21.5 percent of total road and street mileage but carry nearly 80 percent of total travel.

	Mileage (Thousands)				Vehicle-Miles of Travel (Billions)			
	Rural	Urban	Total	Percent	Rural	Urban	Total	Percent
<b>Federal-Aid Systems:</b>								
Interstate (Arterials)	33	9	42	1.1	138	167	305	19.7
Primary (Arterials)	227	29	256	6.6	264	193	457	29.5
Urban (Arterials & Collectors)	-	130	130	3.4	-	327	327	21.1
Secondary (Collectors)	401	-	401	10.4	143	-	143	9.2
<b>Total</b>	<b>661</b>	<b>168</b>	<b>829</b>	<b>21.5</b>	<b>545</b>	<b>687</b>	<b>1,232</b>	<b>79.5</b>
<b>Non-Federal-Aid Systems</b>	<b>2,560</b>	<b>464</b>	<b>3,024</b>	<b>78.5</b>	<b>142</b>	<b>176</b>	<b>318</b>	<b>20.5</b>
<b>Total</b>	<b>3,221</b>	<b>632</b>	<b>3,853</b>	<b>100.0</b>	<b>687</b>	<b>863</b>	<b>1,550</b>	<b>100.0</b>

**Total Road and Street Mileage by Surface Type**

About half of all roadway mileage is not surfaced or is surfaced with soil or gravel; the remainder is paved with various asphaltic materials and Portland cement concrete. While cement concrete surfaced total road and street mileage has increased only 21.5 percent since 1921, bituminous and Portland cement concrete surfaced mileage has increased 1,192 percent.



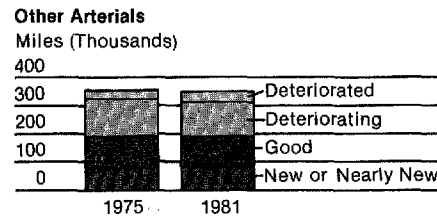
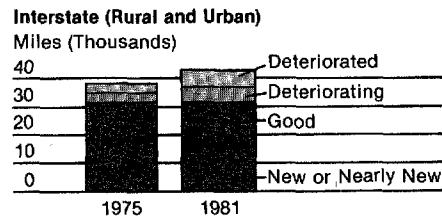
### Pavement Conditions of Interstate and Arterial Highways<sup>1</sup>

The physical condition of the Nation's highways is of growing concern. Since 1975, the portion of miles on the interstate System with pavements in new or nearly new condition has decreased by nearly 10 percent, while the portion of miles in good condition has

increased by about 5 percent. Mileage with pavements in a deteriorated or deteriorating condition has increased about 4.5 percent.

For other arterials, pavement conditions remained fairly stable during the 1975-81

period, however, the portion of miles with pavements in new or nearly new condition increased by about 4 percent. Of the 800,000-mile collector system, the portion with pavements in new or nearly new condition also increased about 4 percent.



<sup>1</sup>More complete information on highway condition and performance may be obtained from the U.S. Department of Transportation report "Status of the Nation's Highways: Condition and Performance".

### Bridge Condition

More than 40 percent of the Nation's estimated 573,650 bridges are structurally deficient or functionally obsolete. Twenty-six percent of the 259,950 bridges on the Federal-

Aid Systems are structurally deficient or functionally obsolete.

A *structurally deficient* bridge is closed or restricted to light vehicles only because

of deteriorated structural components.

A *functionally obsolete* bridge is one that cannot safely service the volume or type of traffic using it.

	Federal-Aid Systems		Off Federal-Aid Systems	
	Number	Percent	Number	Percent
Structurally deficient	27,354	10.5	99,301	33.4
Functionally obsolete	40,342	15.5	81,530	27.4
All other bridges	192,254	74.0	116,735	39.2
Total Bridges in Inventory	259,950	100.0	297,566	100.0

Source: Third Annual Report of the Secretary of Transportation to the Congress—"Highway Bridge Replacement and Rehabilitation Program, July 1982".

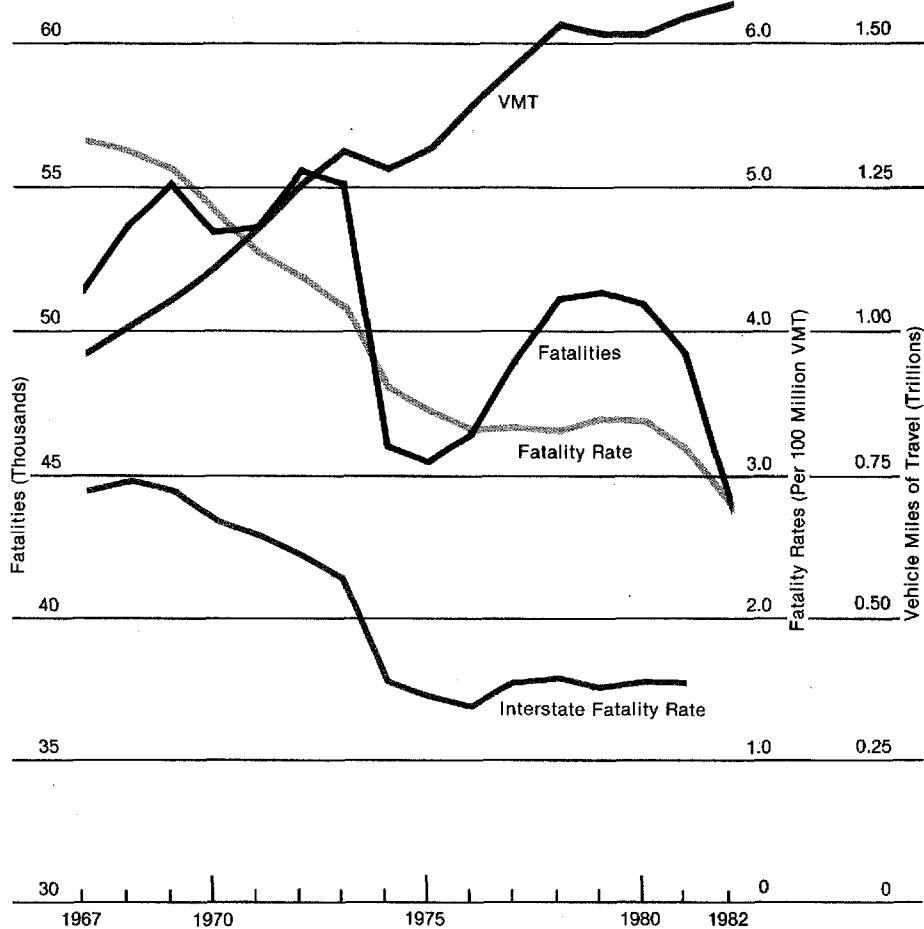


### Motor Vehicle Accident Fatalities and Travel

Highway fatalities have shown a rather dramatic drop in recent years.

The fatality rate for the Interstate System is only about half the average for all roads. In the 10 years, 1971-1981,

vehicle-miles of travel on this system increased 31 percent, while highway fatalities decreased 8.4 percent.



There were 2.8 highway fatalities per 100 million vehicle-miles of travel in 1982, approximately one-half of the 1966 rate.

### Motor Vehicle Registrations

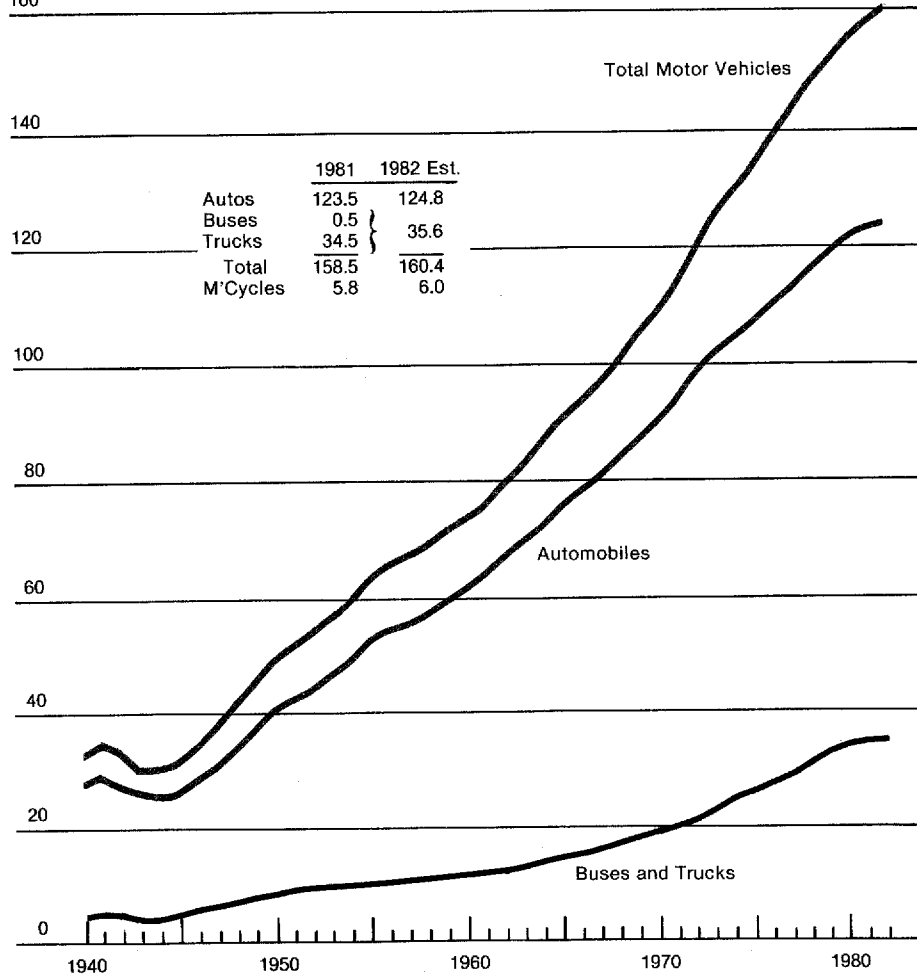
The number of registered motor vehicles in the United States has increased steadily from 30 million

in 1944 to 158 million in 1981.

Automobiles accounted for 77 percent or 98 of

the 128 million vehicle increase in the 37 years since 1944.

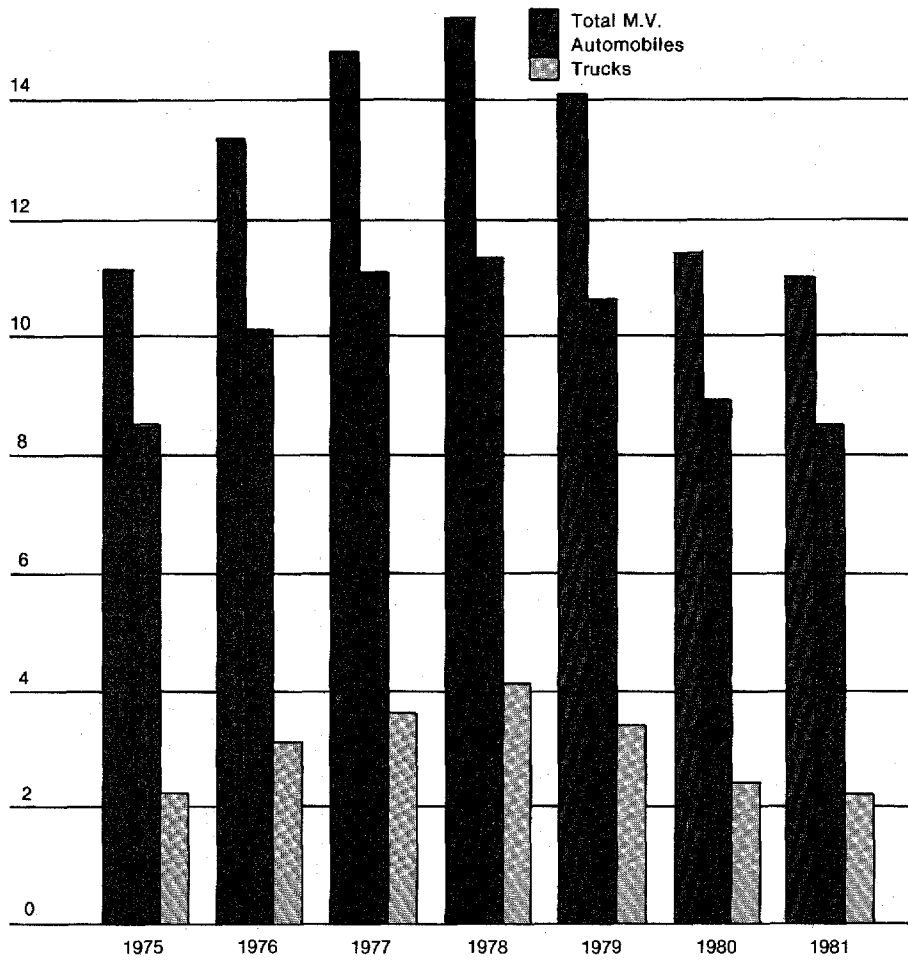
Millions of Motor Vehicles



### Motor Vehicle Retail Sales

Retail sales of automobiles declined 4.9 percent in 1981 from the previous year; however automobile registrations increased 1.5 percent.

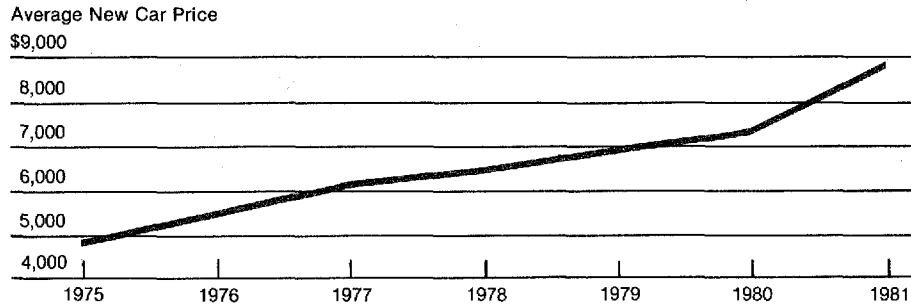
Millions  
16



Source: Motor Vehicle Manufacturers Association of the U.S., Inc. "Facts & Figures '79 and '82"

## Average New-Car Selling Price






The average price of a new car was \$4,750 in 1975. The \$8,850 average price in 1981 was an increase of 20.6 percent over the 1980 price of \$7,340. The average age of a passenger car has reached 6.9 years, the highest in 30 years.



## Cost of Ownership and Operation

### Suburban-Based Operation

Estimated 12-Year, 120,000-Mile Life)

Size		Total Cost <sup>1</sup> (Cents per mile)	Purchase Price
	<b>Large</b> With Standard Equipment, Weight More Than 3,500 Lbs. Empty	26.6	\$9,232
	<b>Intermediate</b> Weight Less Than 3,500 Lbs. Empty	23.8	\$7,449
	<b>Compact</b> Weight Less Than 3,000 Lbs. Empty	21.4	\$7,111
	<b>Subcompact</b> Weight Less Than 2,500 Lbs. Empty	18.9	\$5,625
	<b>Passenger Van</b> Weight Less Than 5,000 Lbs. Empty	33.2	\$12,877

<sup>1</sup>Includes original cost, maintenance, accessories, parts and tires, gas and oil, parking and tolls, insurance, and taxes.

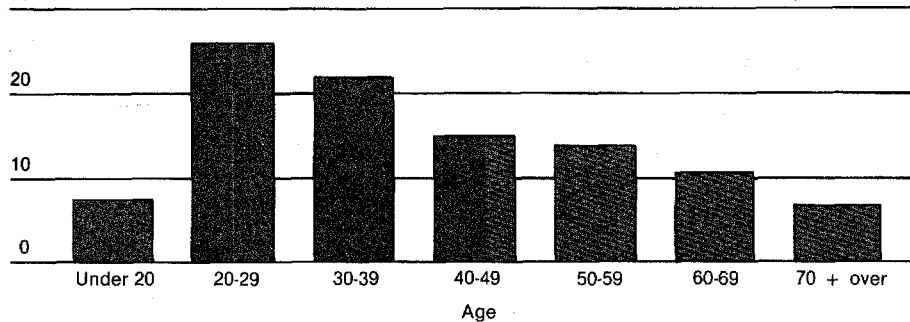
## Licensed Drivers, by Age

Of the 147 million licensed drivers in 1981, 21 percent were under 25 years of age and over 16 percent were age 60 and above.

The average driving age is shifting upward as younger drivers must meet the requirements for driver education, financial responsibility,

etc., and the older drivers continue to drive, or at least keep their licenses valid.

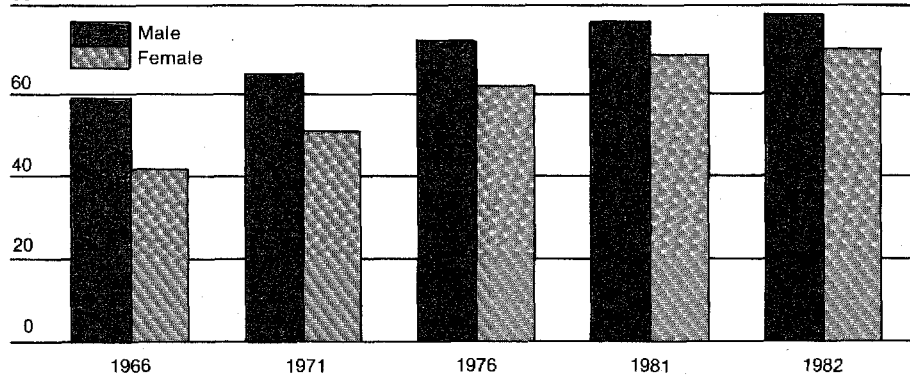
Percent of Total Drivers  
30



## Licensed Drivers, by Sex

Forty-seven percent of the 147 million licensed drivers are women. The number of female drivers has increased 67 percent since 1966, more than double the 31 percent increase of male drivers.

Millions of Drivers  
80

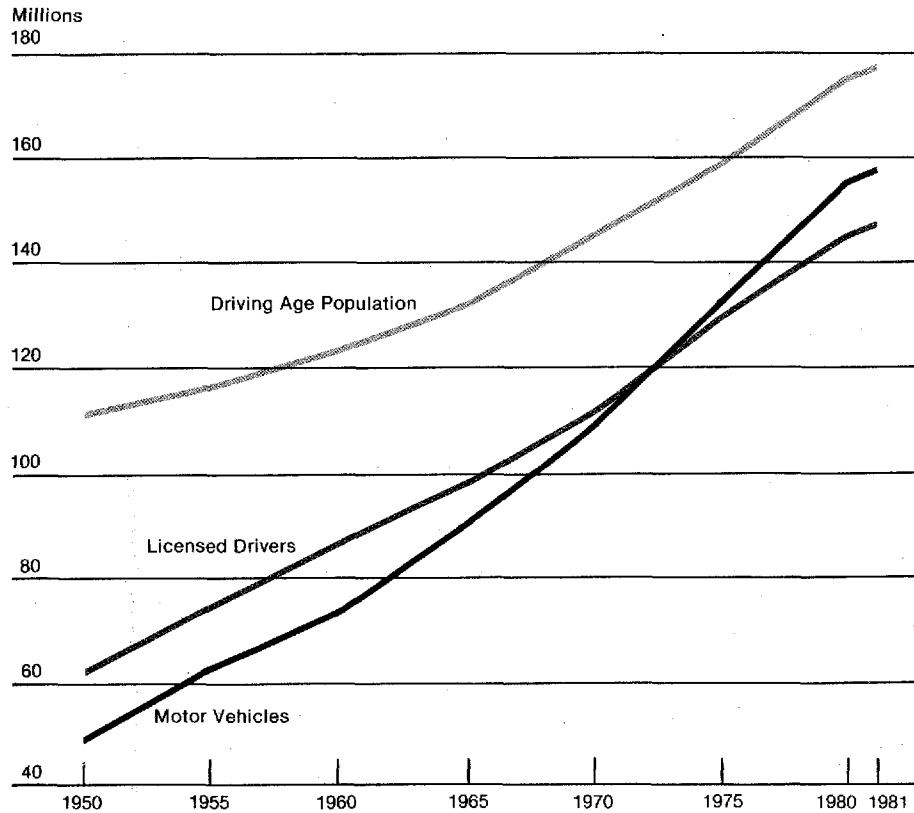


## Licensed Drivers, Population, and Motor Vehicles

In 1950, 41 percent of the resident population was licensed to drive a motor vehicle, and by 1981, 64 in every 100 people were licensed drivers.

There was 1.26 licensed drivers for every registered motor vehicle in 1950. By 1972, the ratio was about one to one, and in 1981, there were

more motor vehicles than drivers, or 100 vehicles for every 93 drivers.



The National Driver Register, established by Congress in 1960, is a central index of drivers whose license

to drive has been denied or withdrawn. The index contains 7 million records. Nearly 84,000 State inquiries

are processed daily, resulting in about 1,000 identifications each day.

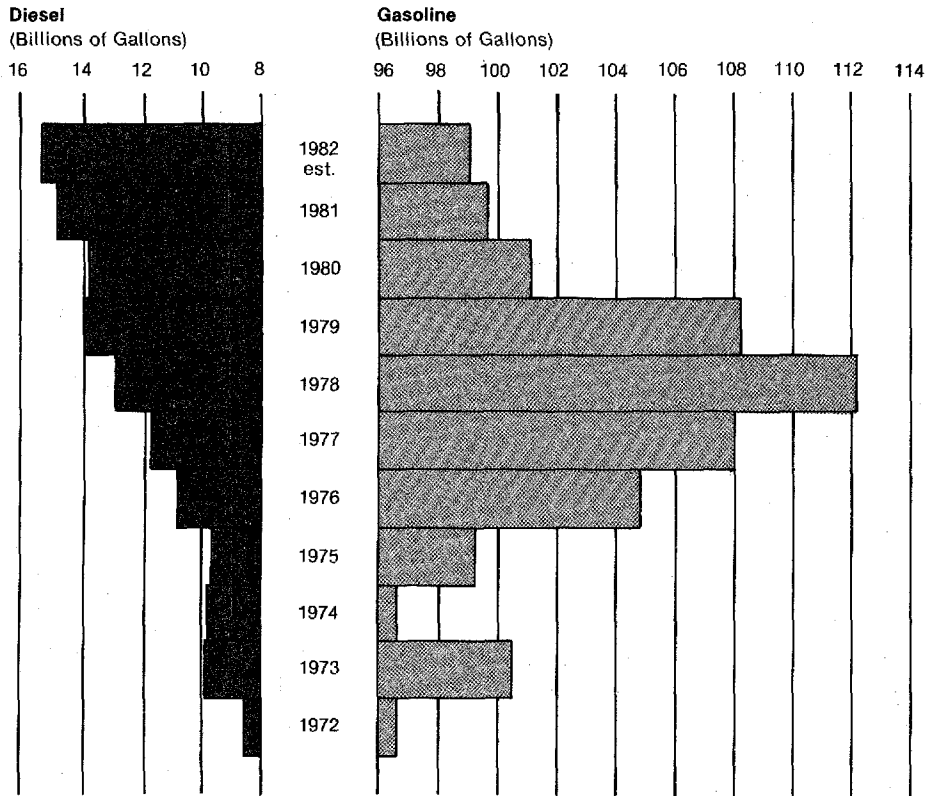
## Total Highway Fuel Consumption

After a long period of annual increases, highway fuel consumption dropped in 1974 to 106 billion gallons, but gradually worked up to 125 billion gallons in 1978

before tapering off again to 114.5 billion gallons in 1981.

Diesel fuel accounted for 9 percent of total highway fuel consumed in 1974 and nearly 13

percent in 1981. Since 1978, diesel fuel consumption has increased by 15.6 percent while gasoline consumption has fallen by 11.2 percent.



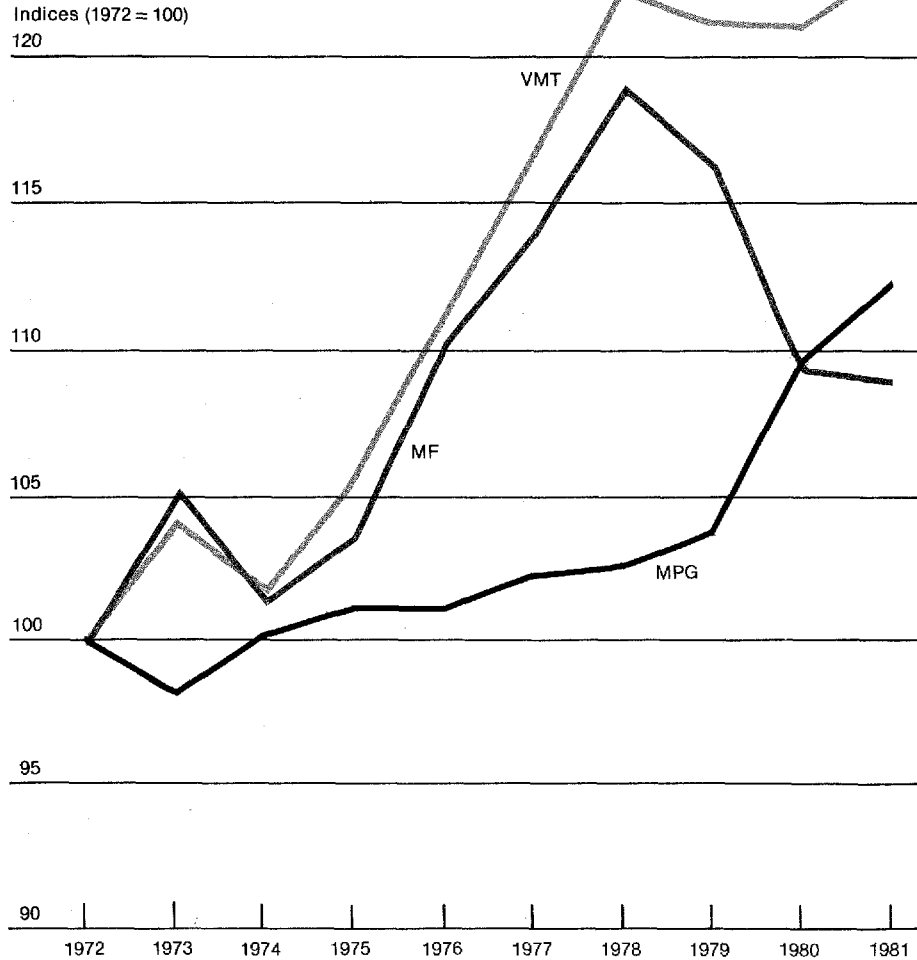
For automobiles only, average annual fuel consumption has decreased from 763 gallons at 13.10 miles-per-gallon in 1973 to 581 gallons at 15.54 miles-per-gallon in 1981.

### Vehicle-Miles of Travel, Highway Fuel Consumption, and Miles-Per-Gallon of Fuel for All Vehicles

Vehicle-miles of travel (VMT) and highway fuel consumption increased 20.6 and 17.6 percent, respectively, during the period 1974-1978.

However, since 1978, VMT has increased 0.4 percent while motor fuel consumption (MF) has decreased 8.5 percent. Miles-per-

gallon (MPG) increased 9.5 percent or 1.17 miles-per-gallon since 1978.



Source: U.S. Department of Energy, Energy Information Administration, "Motor Fuel Use," Table 1.1, 1982.



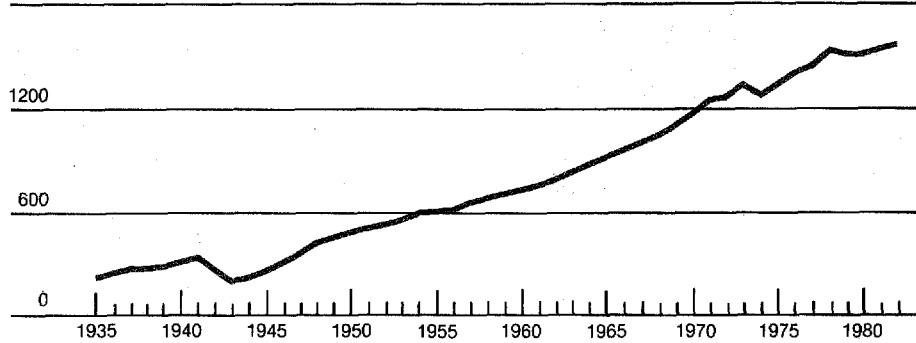
### Vehicle-Miles of Travel

Travel reached an all-time high of 1.57 trillion vehicle miles in 1982, an increase of 1.4

percent over the previous year. This equates to 9,000 round

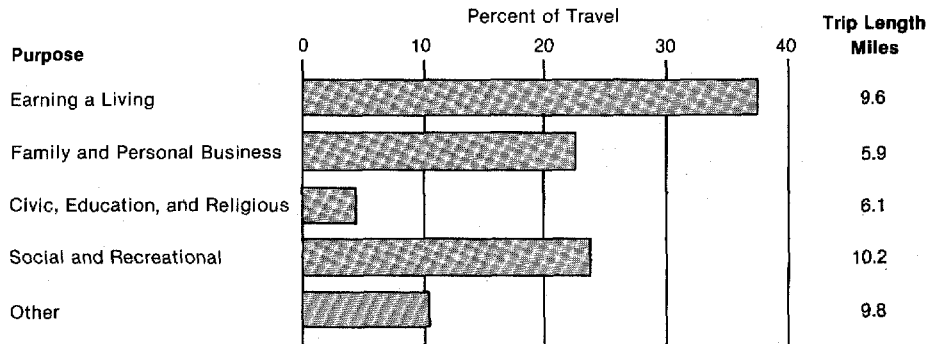
trips to the moon daily, or an average of 9,436 miles per vehicle annually.

Billion Vehicle Miles  
1800  
1200  
600  
0



### Percent of Motor-Vehicle Travel, by Purpose and Average Trip Length

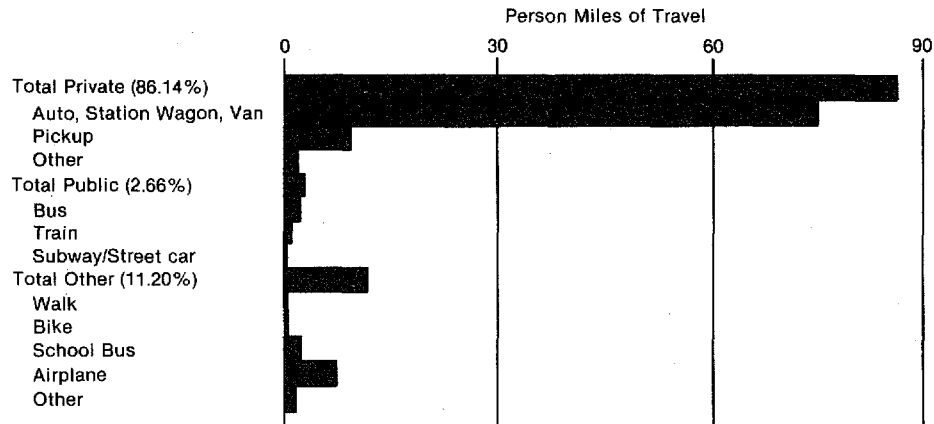
In 1977, work-related travel accounts for 38 percent of all motor-vehicle travel, the next largest segment being 24 percent for social and recreational purposes.



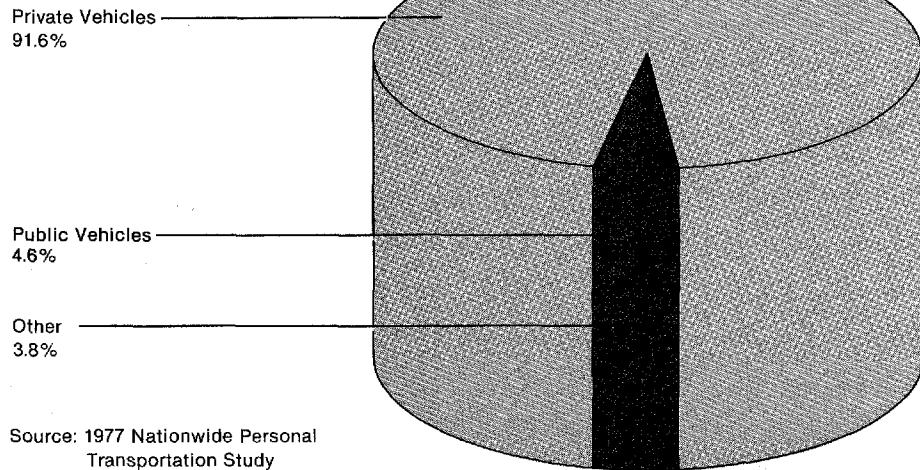
Source: 1977 Nationwide Personal Transportation Study

### Personal Travel by Mode of Transportation

In 1977, privately owned vehicles were used for 86 percent of all personal travel, and 92 percent of the travel to work. Seventy-seven percent of personal travel to work was by automobiles and vans.



### Travel to Work (Percent)



Source: 1977 Nationwide Personal Transportation Study

### Total Highway Receipts and Expenditures

Nearly \$41 billion of highway income was collected in 1981 from bonds, highway-user and property taxes, general fund appropriations, and tolls, over half coming from highway-user taxes.

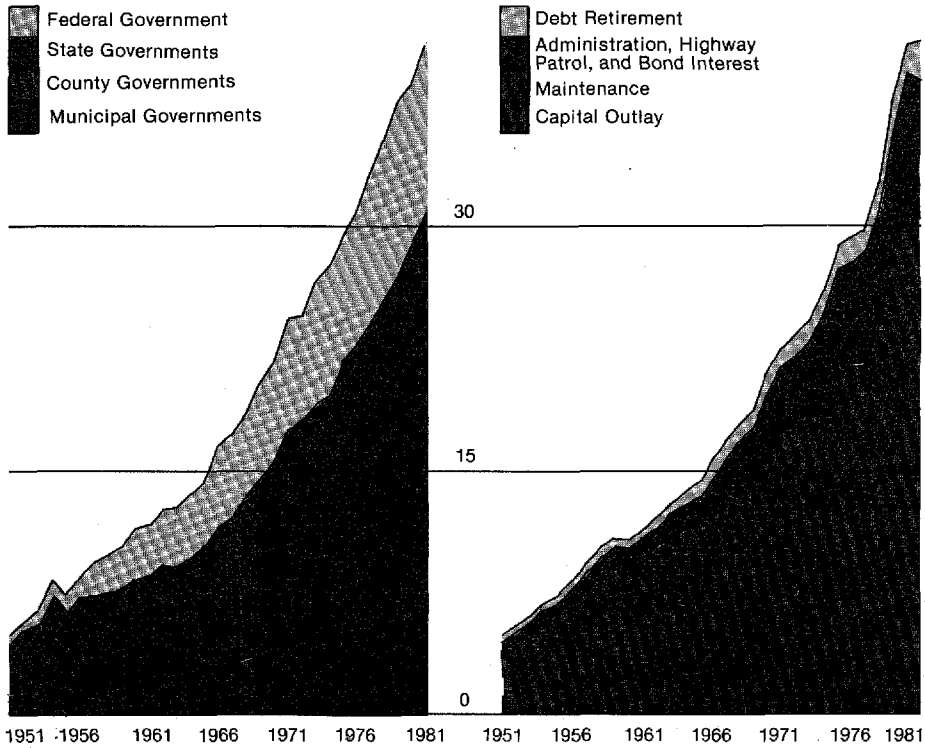
These receipts were expended by Federal, State, and local governments, 62 percent by State agencies.

In 1981, 46 percent of the total disbursements was for capital outlay (construction, engineering, and right-of-way) and 28 percent for maintenance of highways.

Total Receipts for Highways, by Governmental Units

Total Disbursements for Highways, by Function

Billions of Dollars  
45



**Federal Highway Trust Fund Receipts** (Billions of Dollars)

Highway Trust Fund receipts increased \$388 million in fiscal year 1982, to \$7,822 million.

the largest contributor, increased 5.9 percent over 1981.

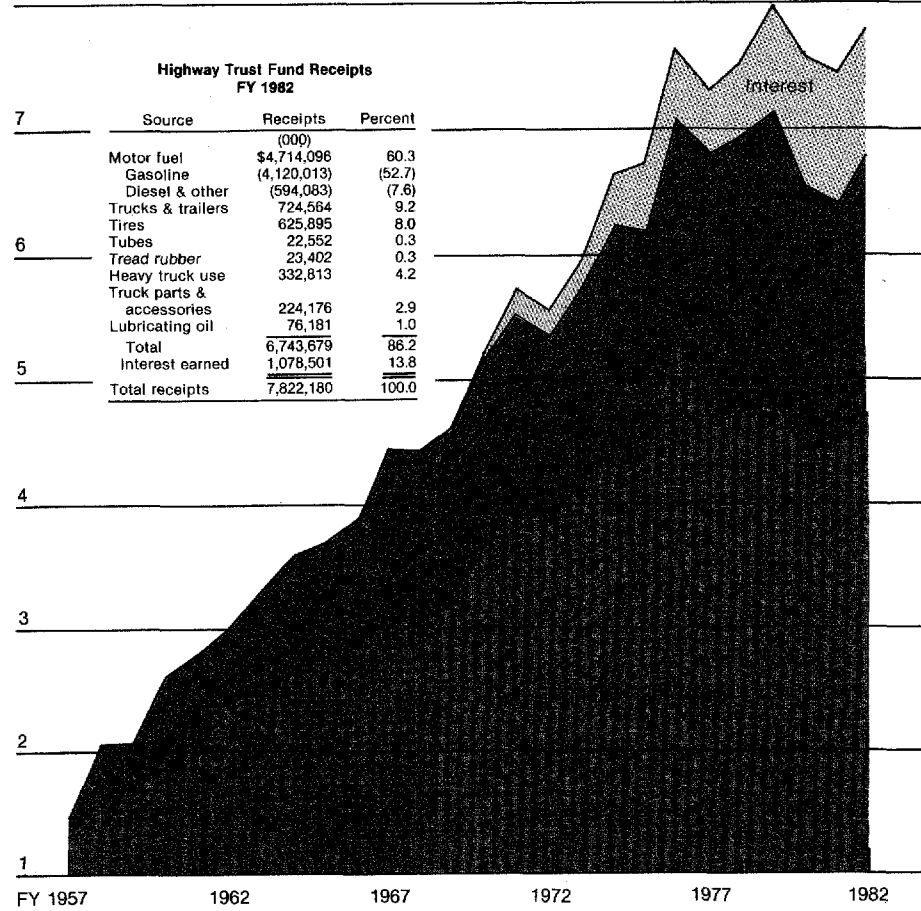
1982 by \$213 million, leaving a balance of \$9,046 million in the Fund.

Motor-fuel tax receipts,

Total disbursements exceeded receipts in

Billions

8

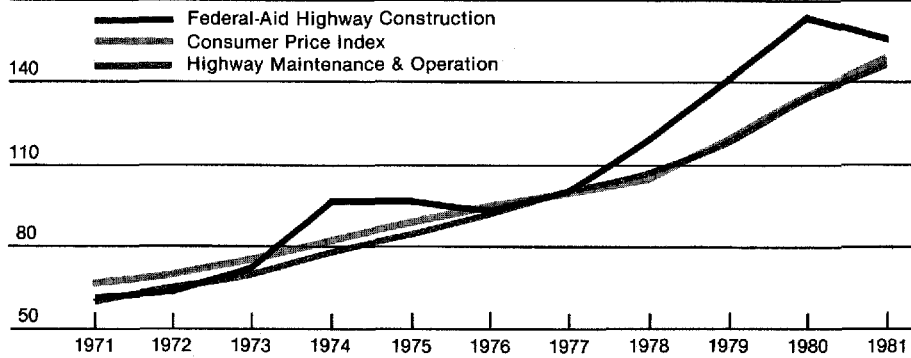


Transition quarter included with 1976 FY.

### Highway Price Trends and Consumer Price Index

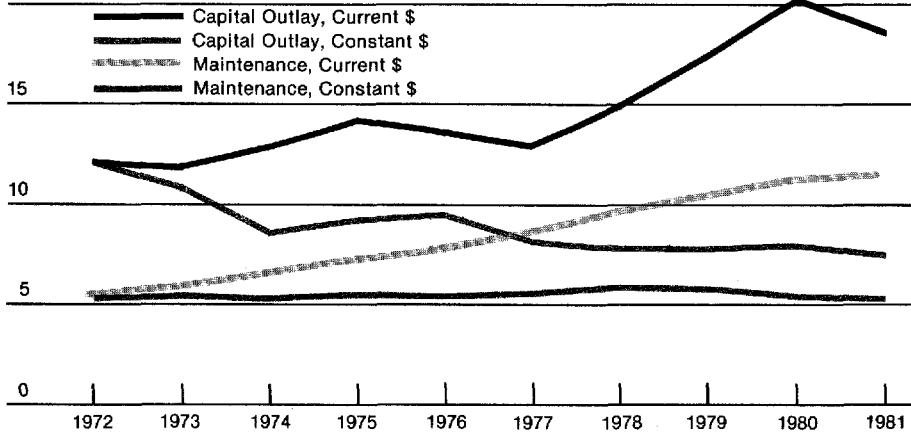
Highway construction costs increased by 63 percent from 1977 to 1980 but decreased 6.3 percent in 1981. Maintenance costs have increased 34.6 percent during this period.

Indices (1977 = 100)  
170  
140  
110  
80  
50



### Highway Capital Outlay and Maintenance Expenditures by All Units of Government<sup>1</sup>

Billions of Dollars  
20  
15  
10  
5  
0



<sup>1</sup>Capital Outlay includes construction, engineering, and right-of-way.

### Surface Transportation Assistance Act of 1982 - Highway User Fees

User Fee Type	Previous Rate	New Rate	Effective Date of Changes
Gasoline	4¢/gallon	9¢/gallon	April 1, 1983
Diesel	4¢/gallon	9¢/gallon	April 1, 1983
Gasohol	0	4¢/gallon	April 1, 1983
Tires	9.75¢/lb., all tires	Tires under 40 lbs., 0 40-70 lbs., 15¢/lb. in excess of 40 70-90 lbs., \$4.50 + 30¢/lb. in excess of 70 Over 90 lbs., \$10.50 + 50¢/lb. in excess of 90.	January 1, 1984
Tread Rubber	5¢/lb.	0	January 1, 1984
Inner Tubes	10¢/lb.	0	January 1, 1984
Lubricating Oil	6¢/gallon	0	January 6, 1983
Truck Parts	8% at wholesale for all trucks	0	January 6, 1983
Truck Sales	10% at wholesale for trucks over 10,000 lbs. gvw	12% at retail for trucks over 33,000 lbs. gvw and trailers over 26,000 lbs. gvw	April 1, 1983 <sup>1</sup>
Heavy Vehicle Use Fee <sup>2</sup>	\$3/1,000 lbs. gvw for trucks over 26,000 lbs. gvw	Trucks under 33,000 lbs. gvw, 0 33,000-55,000 lbs. gvw, \$50 + \$25/1,000 lbs. in excess of 33,000 55,000-80,000 lbs. gvw, \$600 + \$40/1,000 lbs. <sup>4</sup> in excess of 55,000 Over 80,000 lbs. gvw, \$1,600 <sup>5</sup>	July 1, 1984 July 1, 1988 <sup>3</sup>

<sup>1</sup>Exemption for trucks below 33,000 lbs. gvw and trailers below 26,000 lbs. gvw effective January 6, 1983.

<sup>2</sup>Vehicles traveling less than 5,000 miles per year on highways are exempt from this tax.

<sup>3</sup>The tax on trucks under 33,000 lbs. will be removed effective July 1, 1984. New rates will be phased in beginning July 1, 1984 with top rate of \$1,900 effective July 1, 1988.

<sup>4</sup>This rate rises in 4 steps—\$40, \$44, \$48, and \$52.

<sup>5</sup>This rate also rises in steps—\$1,600, \$1,700, \$1,800, and \$1,900.

**Highway Authorizations—FY<sup>1</sup> 1983 Through FY 1986  
Compared With FY 1982**

Selected Programs	1982	1983	1984	1985	1986
Interstate <sup>2</sup>	3,200	4,000	4,000	4,000	4,000
Interstate 4R <sup>2, 3</sup>	800	1,950	1,950	2,400	2,800
Interstate Transfers <sup>4</sup>	—	775	700	700	725
Primary	1,500	1,850	2,100	2,300	2,450
Secondary	400	650	650	650	650
Urban	800	800	800	800	800
Bridge Replacement and Rehabilitation <sup>5</sup>	900	1,600	1,650	1,750	2,050
Rail-Highway Crossings <sup>5</sup>	190	190	190	190	190
Hazard Elimination <sup>5</sup>	200	200	200	200	200
Total	7,990	12,015	12,240	12,990	13,865

<sup>1</sup>Fiscal year starts October 1 and ends Sept. 30 for each year shown.

<sup>2</sup>Interstate and Interstate 4R funds are made available one year in advance of the year for which they are authorized.

<sup>3</sup>Resurfacing, rehabilitation, restoration and reconstruction.

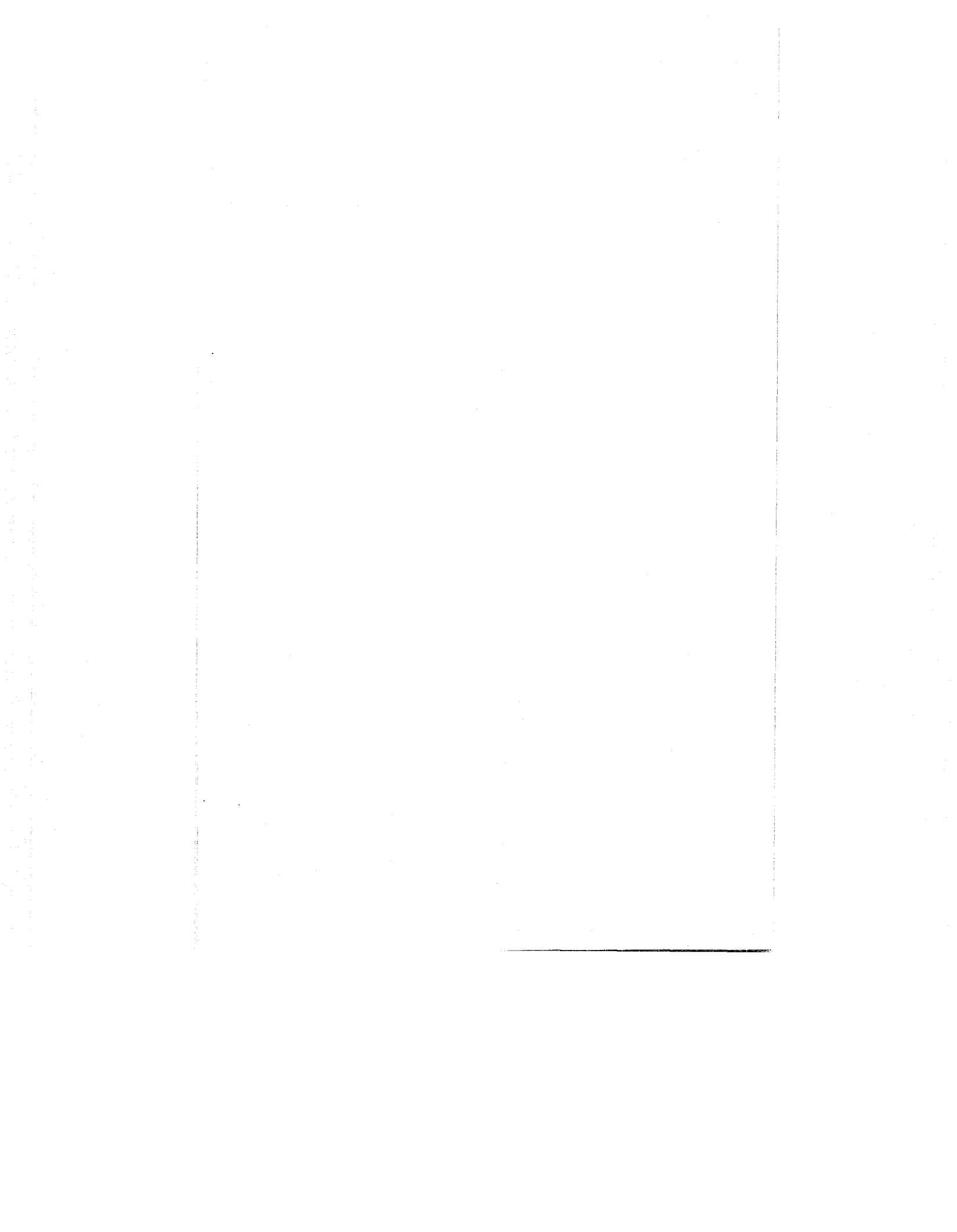
<sup>4</sup>From Highway Trust Fund for highway projects.

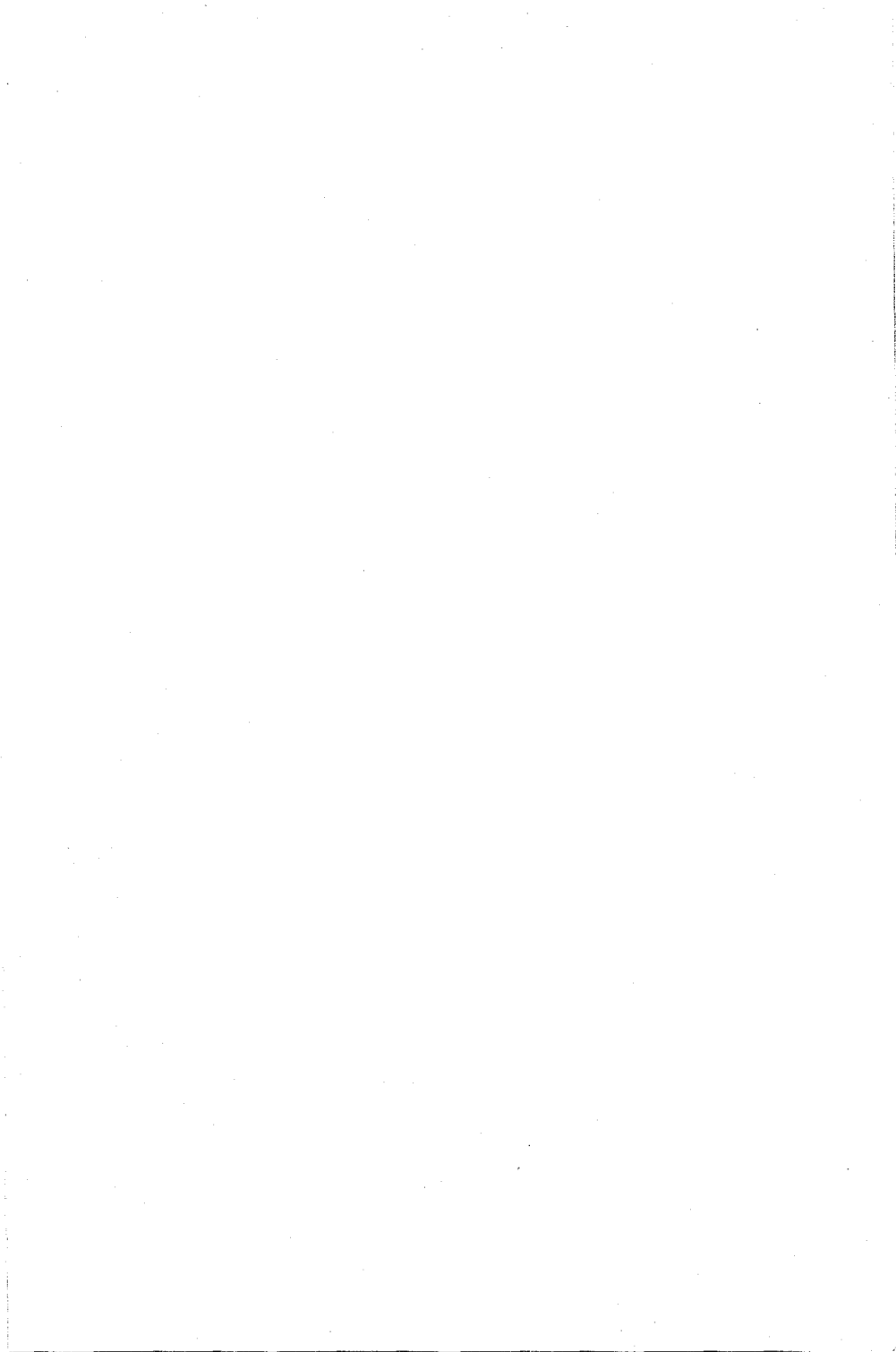
<sup>5</sup>Title II programs.

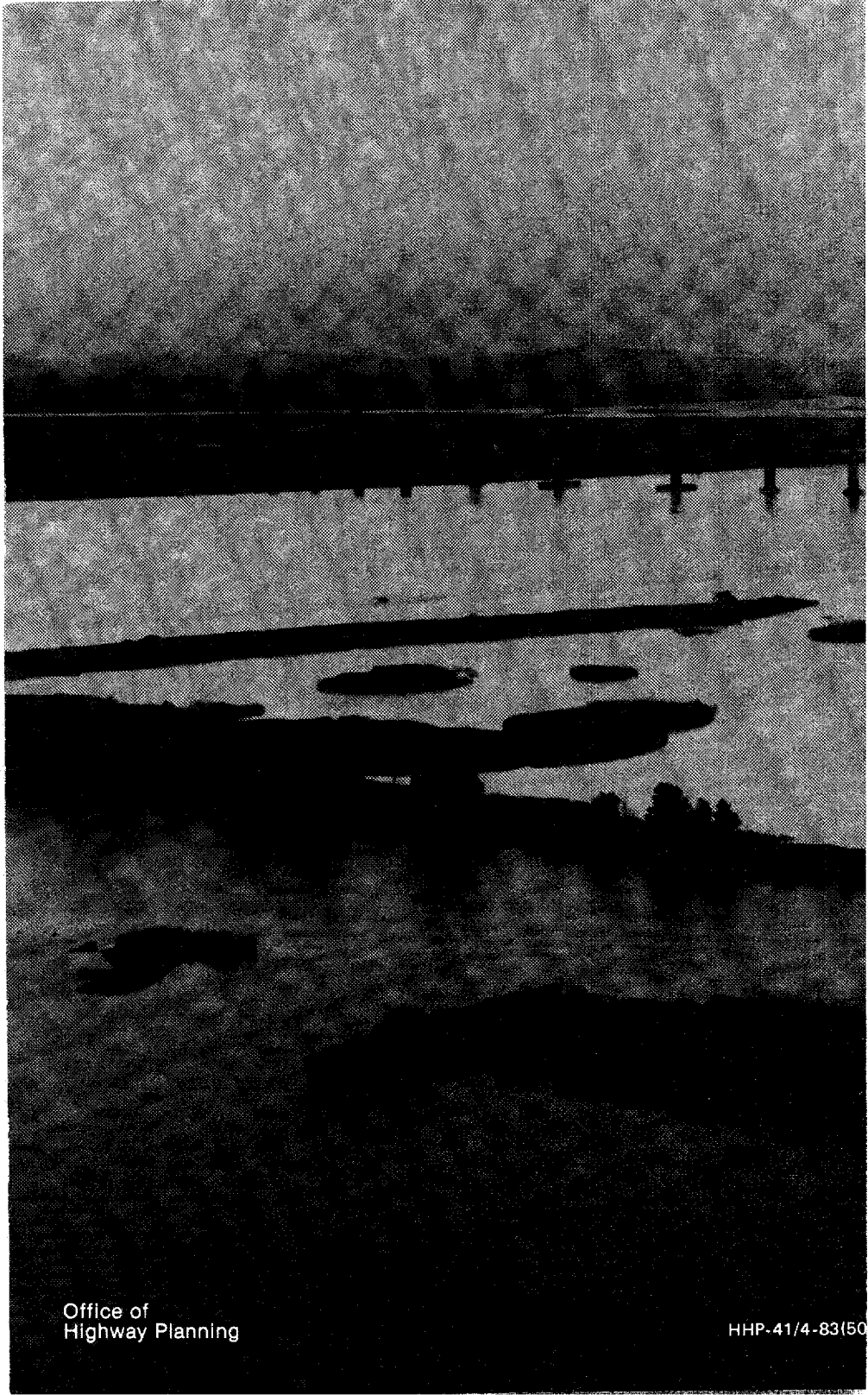
State	Resident Population (Thousands)	Total Registered Motor Vehicles (Thousands)	Total Highway Fuel Consumption (Millions of Gallons)	Total Licensed Drivers (Thousands)	Total Vehicle Miles (Millions)	Total Disburse- ments for Highways (Millions of dollars)	Total Existing Road and Street Mileage (Thousands)	Total Highway Fatalities
Alabama	3,917	3,011	2,092	2,316	27,852	814	87	937
Alaska	412	288	187	228	2,911	292	9	100
Arizona	2,794	2,102	1,513	2,020	18,570	692	78	916
Arkansas	2,296	1,661	1,344	1,532	16,770	466	77	535
California	24,195	16,791	11,805	16,046	159,900	3,349	177	5,170
Colorado	2,965	2,479	1,599	2,104	22,337	649	76	755
Connecticut	3,134	2,107	1,374	2,197	19,366	511	19	515
Delaware	598	405	325	429	4,458	191	5	111
District of Columbia	631	272	183	343	3,308	83	1	50
Florida	10,183	7,974	5,240	7,641	76,145	1,753	97	3,044
Georgia	5,574	3,853	3,277	3,518	44,843	1,168	104	1,418
Hawaii	981	581	315	535	5,855	194	4	150
Idaho	959	857	495	643	6,977	234	87	293
Illinois	11,462	7,597	4,992	6,863	65,836	2,229	134	1,818
Indiana	5,468	3,891	3,123	3,495	38,882	994	92	1,130
Iowa	2,899	2,357	1,609	2,122	19,113	925	113	612
Kansas	2,383	2,023	1,416	1,680	17,470	659	132	578
Kentucky	3,662	2,593	1,964	2,147	25,195	1,825	68	812
Louisiana	4,308	2,822	2,365	2,406	24,960	1,198	57	1,206
Maine	1,133	729	543	753	7,587	232	22	219
Maryland	4,263	2,852	2,072	2,723	28,617	1,114	27	781
Massachusetts	5,773	3,758	2,383	3,593	35,948	207	34	746
Michigan	9,204	6,166	4,200	6,450	62,090	1,695	117	1,564
Minnesota	4,094	3,152	2,093	2,383	28,678	1,301	131	753
Mississippi	2,531	1,576	1,395	1,699	16,952	488	71	744
Missouri	4,941	3,334	2,781	3,281	35,178	781	118	1,041



Montana	799	736	533	484	7,002	273	72	338
Nebraska	1,577	1,211	882	1,088	11,504	523	92	378
Nevada	845	697	556	642	6,515	155	43	294
New Hampshire	935	761	418	665	6,570	140	14	148
New Jersey	7,404	4,697	3,415	5,155	51,328	1,155	34	1,162
New Mexico	1,328	1,048	865	914	11,470	325	54	544
New York	17,602	8,120	5,616	3,249	79,130	3,565	110	2,487
North Carolina	5,953	4,546	3,165	3,831	42,059	854	93	1,491
North Dakota	668	641	438	425	5,352	279	86	166
Ohio	10,781	7,737	5,322	6,337	71,728	1,821	111	1,780
Oklahoma	3,100	2,614	2,081	1,953	28,780	519	110	989
Oregon	2,650	2,085	1,458	1,984	19,516	666	121	645
Pennsylvania	11,871	7,010	5,048	7,252	71,508	2,374	117	2,019
Rhode Island	953	596	380	593	5,575	98	6	102
South Carolina	3,167	1,970	1,730	1,949	23,054	336	63	846
South Dakota	686	612	413	476	6,029	236	73	177
Tennessee	4,612	3,533	2,700	2,838	34,729	818	84	1,100
Texas	14,766	11,123	9,195	9,674	120,084	2,854	268	4,623
Utah	1,518	1,033	766	889	10,732	274	44	364
Vermont	516	345	263	349	3,835	149	14	114
Virginia	5,430	3,844	2,857	3,570	38,432	961	65	1,011
Washington	4,217	3,330	2,020	2,733	30,268	1,125	83	855
West Virginia	1,952	1,352	910	1,488	10,440	601	34	410
Wisconsin	4,741	3,098	2,284	3,027	33,611	1,219	108	912
Wyoming	492	487	459	363	5,222	254	37	264
<b>TOTAL</b>	<b>229,307</b>	<b>158,457</b>	<b>114,453</b>	<b>147,075</b>	<b>1,550,271</b>	<b>45,618</b>	<b>3,853</b>	<b>49,217</b>







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