

# Highway Statistics 1993

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16. Abstract  This is an annual report containing analyzed statistical data on motor fuel; motor vehicles; driver licensing; highway-user taxation; State highway finance; highway mileage; Federal aid for highways; highway finance data for municipalities, counties, townships, and other units of local government; and international data.. This report has been published since 1945.					
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# SI\* (MODERN METRIC) CONVERSION FACTORS

## APPROXIMATE CONVERSIONS TO SI UNITS

## APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol	Symbol	When You Know	Multiply By	To Find	Symbol
<b>LENGTH</b>					<b>LENGTH</b>				
in	inches	25.4	millimeters	mm	mm	millimeters	0.039	inches	in
ft	feet	0.305	meters	m	m	meters	3.28	feet	ft
yd	yards	0.914	meters	m	m	meters	1.09	yards	yd
mi	miles	1.61	kilometers	km	km	kilometers	0.621	miles	mi
<b>AREA</b>					<b>AREA</b>				
in <sup>2</sup>	square inches	645.2	square millimeters	mm <sup>2</sup>	mm <sup>2</sup>	square millimeters	0.0016	square inches	in <sup>2</sup>
ft <sup>2</sup>	square feet	0.093	square meters	m <sup>2</sup>	m <sup>2</sup>	square meters	10.764	square feet	ft <sup>2</sup>
yd <sup>2</sup>	square yards	0.836	square meters	m <sup>2</sup>	m <sup>2</sup>	square meters	1.195	square yards	yd <sup>2</sup>
ac	acres	0.405	hectares	ha	ha	hectares	2.47	acres	ac
mi <sup>2</sup>	square miles	2.60	square kilometers	km <sup>2</sup>	km <sup>2</sup>	square kilometers	0.386	square miles	mi <sup>2</sup>
<b>VOLUME</b>					<b>VOLUME</b>				
fl oz	fluid ounces	29.57	milliliters	mL	mL	milliliters	0.034	fluid ounces	fl oz
gal	gallons	3.785	liters	L	L	liters	0.264	gallons	gal
ft <sup>3</sup>	cubic feet	0.028	cubic meters	m <sup>3</sup>	m <sup>3</sup>	cubic meters	35.71	cubic feet	ft <sup>3</sup>
yd <sup>3</sup>	cubic yards	0.765	cubic meters	m <sup>3</sup>	m <sup>3</sup>	cubic meters	1.307	cubic yards	yd <sup>3</sup>
NOTE: Volumes greater than 1000 l shall be shown in m <sup>3</sup> .									
<b>MASS</b>					<b>MASS</b>				
oz	ounces	28.35	grams	g	g	grams	0.035	ounces	oz
lb	pounds	0.454	kilograms	kg	kg	kilograms	2.202	pounds	lb
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")	Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
<b>TEMPERATURE (exact)</b>					<b>TEMPERATURE (exact)</b>				
°F	Fahrenheit temperature	5(F-32)/9 or (F-32)/1.8	Celsius temperature	°C	°C	Celsius temperature	1.8C + 32	Fahrenheit temperature	°F
<b>ILLUMINATION</b>					<b>ILLUMINATION</b>				
fc	foot-candles	10.76	lux	lx	lx	lux	0.0929	foot-candles	fc
fl	foot-Lamberts	3.426	candela/m <sup>2</sup>	cd/m <sup>2</sup>	cd/m <sup>2</sup>	candela/m <sup>2</sup>	0.2919	foot-Lamberts	fl
<b>FORCE and PRESSURE or STRESS</b>					<b>FORCE and PRESSURE or STRESS</b>				
lbf	poundforce	4.45	newtons	N	N	newtons	0.225	poundforce	lbf
lbf/in <sup>2</sup>	poundforce per square inch	6.89	kilopascals	kPa	kPa	kilopascals	0.145	poundforce per square inch	lbf/in <sup>2</sup>

\* SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.

# INTRODUCTION

This publication brings together annual series of selected statistical tabulations relating to highway transportation in three major areas: (1) highway use--the ownership and operation of motor vehicles; (2) highway finance--the receipts and expenditures for highways by public agencies; and (3) the highway plant--the extent, characteristics, and performance of the public highways, roads, and streets in the Nation.

The arrangement of contents follows this general order, with the first three sections devoted to motor-fuel use and taxation, vehicle ownership, and driver licensing. The fourth section deals with financing of highways by all government agencies; the fifth section provides data on highway mileage and performance; the sixth section gives statistics for the U.S. Territories and the Commonwealth of Puerto Rico; and the seventh section shows selected international data.

Statistics in this publication have been analyzed and reported using procedures that provide comparability of values among States. Therefore, some values reported here may differ from values reported by other agencies for similar items.

The cooperation of Federal, State, and local agencies in providing the basic data from which these statistical series are derived is acknowledged and greatly appreciated.

While the Office of Highway Information Management is responsible for the preparation of this publication, a number of the statistical summaries are prepared by other units within the Federal Highway Administration (FHWA) as indicated by notes on the tables involved.

Responsibility for administering the highway network of the United States, providing funds for its continued improvement and maintenance, and regulating its use is a complex affair involving Federal and State agencies, together with nearly 39,000 county, township, and municipal governments and, to a limited degree, the private sector. These agencies work in concert in many ways in the management of the Nation's highway plant.

## FEDERAL AGENCIES

The FHWA is the principal highway agency of the Federal Government. Under the Federal-aid highway program, the initiative for selecting routes eligible for improvement with Federal-aid funds rests with the States. These routes continue to remain under the jurisdiction of the State or local governments which are responsible for administering and maintaining them as part of the State or local highway systems.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) required reclassification of roads and streets. The final system must be approved by Congress by September 30, 1995. The affected tables in this report will reflect when possible the data on the National Highway System.

The FHWA also administers the Federal Lands Highways Program. This program is funded from the Federal Highway Trust Fund and consists of three separate programs: Park Roads and Parkways, Indian Reservation Roads, and Public Lands Highways.

The Department of Defense and the Bureau of Land Management in the Department of the Interior provide funds for the construction of roads leading to military installations, timber areas, etc., but these funds are usually transferred to the FHWA to manage the construction program.

Some Federal agencies also provide funds for road and bridge work which is incidental to their major functions. For example, the Corps of Engineers in the Department of the Army and the Bureau of Reclamation in the Department of the Interior expend funds for highway and bridge construction and reconstruction on projects involving water resources and navigable rivers. Other Federal agencies, such as the Forest Service and the Bureau of Land Management, provide funds through a policy of sharing with States and counties some of the income derived from timber sales and oil and mineral royalties on Federal lands, a portion of which is placed in road funds.

Additional Federal funds are provided from the General Treasury to States, counties, and cities through the programs of other Federal agencies such as Urban Development Block Grants for various purposes including highways. The different Federal assistance programs for highways are summarized in table F-106, which is in the FHWA publication, *Highway Taxes and Fees, How They Are Collected and Distributed*.

The Treasury Department's Internal Revenue Service collects the Federal road-user taxes and deposits the revenues in the Federal Highway Trust Fund. Amounts dedicated by Congress for mass transportation are credited to a separate mass transit account.

## STATE AGENCIES

In the Federal Highway Administration's analyses, special State commissions and authorities, both toll and nontoll, as well as State highway and transportation departments, are classified as State highway agencies. Other executive

branches of State governments also have been included when, and to the extent, they are responsible for the collection and distribution of road-user taxes or perform highway and related functions. Examples of these executive agencies are treasury and revenue departments, motor-vehicle departments, public-safety departments (highway police and law enforcement activities), and conservation departments when they are responsible for roads within State parks, forests, or reservations. The District of Columbia is treated as a State.

## LOCAL GOVERNMENTS

Local governments include: counties, townships, and municipalities. Included with local governments are subordinate agencies, road districts, commissions, and authorities, both toll and nontoll.

All States have organized county governments except Connecticut and Rhode Island. Counties, however, have limited or no responsibility for roads in the New England States, or in Delaware, North Carolina, Virginia (with some exceptions), and West Virginia. In Alabama and Maryland, the State has assumed responsibility for roads in certain counties. Counties are called parishes in Louisiana, boroughs in Alaska, municipios in Puerto Rico, and townships are known as towns in New England, New York, and Wisconsin.

A municipality is a political subdivision where a municipal corporation has been established to provide general local government for a specific population concentration in a specified area. Some counties have boundaries coextensive with cities. Generally, these counties retain their identities only for certain administrative purposes. Because some counties are entirely urban in nature or have merged with municipalities, they are classified as municipalities. A county may also be classified as a municipality when its area consists predominantly of incorporated cities, towns, and villages.

Although generally considered to be rural governments, many townships, particularly in the Northeast, serve heavily populated areas and perform the functions of a municipal government.

## URBAN AREAS

The term "urban" is used in the summary tables to denote the Federal-aid legislation definition of an area. Such areas include, at a minimum, a census place with an urban

population of 5,000 to 49,999 or a designated urbanized area with a population of 50,000 or more (or portions thereof within State boundaries). The Federal-aid boundaries are fixed by responsible State and local officials, subject to the approval of the Secretary of Transportation. These Federal-aid urban areas may extend beyond incorporated (with some exceptions) and census boundaries, and thus are not necessarily coextensive with municipal boundaries.

## INDIVIDUAL UNIT STATISTICS

In general, the statistical series present summary data primarily on a State-by-State basis. However, in the highway finance section, special tabulations are included for individual toll authorities. The roadway extent section includes two tables detailing information for urbanized areas. While a number of States compile selected motor vehicle and mileage statistics on a county basis, this is not universal and tabulations of these data are, therefore, not included in this publication. Inquiries for information on a county-by-county basis should be directed to the respective State highway agencies.

## DUPLICATIONS

Users of these data must be careful to avoid "double counting" of the statistical data that could result from the effect of intergovernmental relationships. This is particularly so with reference to tables in the finance and mileage sections, because of the overlapping of Federal-aid activities with the State and local highway activities, and the effects of grant-in-aid programs. Examples are Federal-aid payments, which are in turn reported as State receipts and included in State expenditures; and Federal-aid highway system mileage, which are parts of the State and/or local highway systems, and are also included in those systems. Summary tables that give national statistics have been included at the beginning of the finance and mileage sections, and eliminate "double counting" or duplication. These are then followed by table series that reflect the transactions of each level of government, but which are not necessarily cumulative to national totals.

## CONVERSION TO METRIC

In accordance with Public Law 100-418 requiring Federal agencies to use the metric system, we will be publishing *1994 Highway Statistics in metric*. The English version will also be available. The table in the front of this book (back of the Technical Report Documentation page) may be useful in preparing your spreadsheets for this conversion.