

# FHWA Statistical Programs

A Customer's Guide to  
Using Highway Statistics



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

## **THE FHWA STATISTICAL PROGRAM**

For more than a century, an essential element of the Federal Highway Administration (FHWA) mission has been collecting data useful to the President and Congress in developing and managing the Nation's transportation program. The FHWA originated in 1893 with the establishment of the Office of Road Inquiry (ORI). In 1904, the ORI inventoried all the roads in the United States outside the cities. Through questionnaires mailed to county officials, the investigation went far beyond merely tabulating road mileage. This inventory also gathered information about taxation and sources of revenue, road laws and total expenditures in every county of every State.

Since that first national inventory, the types of data used to manage our highway programs have been refined to reflect the changing needs and expectations of our transportation system. During the same time, the process for collecting and analyzing the data has become systematized to ensure regular updating of information. The publication of FHWA's A Guide to Reporting Highway Statistics was a significant milestone in unifying the data-reporting process. The Guide consolidated 16 reporting forms and provided instructions for reporting highway-related data on motor-fuel consumption, motor-vehicle registrations, driver licensing, and sources and funding of State and local government highway programs. The Guide promotes a unified reporting concept with an understanding of the interrelationships among various reporting areas.

This pamphlet provides an overview of the process for assembling statistical information from the files of State agencies on motor-vehicle registration and fees, motor-fuel use and taxation, driver licensing, highway taxation and finance, and other related subjects. This pamphlet also describes the reporting of these data to the FHWA in response to the Guide and some of the important uses of that data.

This pamphlet is a companion to the 1994 FHWA brochure The Highway Performance Monitoring System, which describes the FHWA system for measuring and monitoring the condition, performance, use, and operating characteristics of the Nation's highways.

The success of FHWA's statistical program is a direct result of the long partnership between FHWA and the State Departments of Transportation (DOTs). FHWA relies on the State DOTs to coordinate the data collection from a multitude of agencies and local jurisdictions.

## **WHAT PURPOSE DOES THE FHWA STATISTICAL PROGRAM SERVE?**

FHWA's statistical programs provide data essential for:

- Preparing the Secretary of Transportation's report to Congress on the status of the Nation's Surface Transportation System including highway performance, conditions, and needs.
- Apportioning Federal-aid highway funds among the States for ISTEA minimum allocation, donor State bonus, and 90 percent-of-payment adjustment programs.
- Developing and evaluating the impact of Federal surface transportation legislation.
- Providing data that supports policy and planning decisions in State and local governments.

- Assisting the private sector, academic research, national organizations, and others in meeting their transportation information requirements.

FHWA statistical programs and data support a policy and planning framework needed by a wide range of decision-makers and other customers. In general, these data are the primary source of information used to evaluate and improve the annual investment of approximately \$20 billion of Federal highway funds. The most current data are summarized and published annually in FHWA's Highway Statistics, which has become a standard reference and has provided a continuous compilation of data since 1945.

### Program Products

Documents produced directly from or supported by the FHWA statistical program include:

- The Status of the Nation's Surface Transportation System. Conditions and Performance, Biennial Report to the Congress
- Highway Statistics
- Our Nation's Highways
- Selected Highway Statistics and Charts
- Monthly Motor Fuel Reported by States
- Highway Taxes and Fees
- Driver License Administration Requirements and Fees

### The Statistical Process

Information provided to FHWA comes from a number of sources, including various administrative agencies in the 50 States; more than 30,000 county, township, and municipal governments; the FHWA; other Federal agencies; and the five U.S. territories. This information is the result of a cooperative effort between FHWA and the States. Nearly all the non Federal data provided to FHWA come through State DOTs from existing databases or business records of many State and local government agencies, including metropolitan planning organizations. The State DOTs are permitted to use a portion of their Federal Aid monies to support this data collection and reporting effort.

In most cases, the data are assembled from existing records of the various State offices and agencies such as tax departments, motor vehicle departments, public service commissions, State treasuries, or State DOTs. Much of the information reported to FHWA consists of year-end summaries drawn from the records of these agencies. Because State laws differ, the system is designed to provide a high degree of flexibility. The system is also evaluated regularly to ensure that the reporting burden is kept to a minimum, while addressing transportation program management needs.

Data quality and consistency depend on the programs, actions, and data base maintenance of numerous data collectors, manipulators, and suppliers at the State, local, and metropolitan-area levels. In general, specific data items that are used by the collecting agency are likely to be of better quality than data items that are collected solely for FHWA. Data quality and consistency also depend on the nature of the individual data items and how difficult they are to define and collect.

Highway statistics other than those gathered through the Highway Performance Monitoring System are collected in accordance with A Guide to Reporting Highway Statistics. Reporting procedures contained in the Guide are not rigid standards; rather, they represent a reporting reference system that FHWA recommends the States use in collecting and reporting State and local highway data to FHWA.

The State-reported data are analyzed by FHWA for consistency and adherence to reporting guidelines. In a number of cases, data are adjusted to improve consistency and uniformity among the States. As time permits, the analysis and adjustment process is accomplished via working relationships with the States supplying the data.

## **APPLICATIONS OF FHWA STATISTICAL DATA**

Officials at the Federal, State, and local levels of government use the data in FHWA's Highway Statistics in the transportation policy and planning decision-making process. In addition, these statistics are also offer used in the private sector, academic research, and by national organizations. A discussion of some of the important uses follows:

### Fuel Consumption Information

The fuel consumption information provided to FHWA is widely considered to be the most complete and accurate information on gasoline use available from any source. These statistics are used extensively by FHWA, the Department of Energy (DOE), and other Federal agencies to monitor the demand for petroleum products and the sector distribution of that demand. Because fuel crises can arise quickly and without warning, and because there is a natural time lag in data reporting, fuel consumption is monitored. Both DOE and FHWA depend on this source for data in times of fuel emergencies. Fuel use is of interest not only in terms of gallons consumed, but also in terms of revenues generated by taxes on fuel. Taxes on motor fuel at both the Federal and State levels are a primary source of highway funds. In 1994, Federal and State highway-use taxes funded 58 percent of the highway program. Motor-fuel taxes account for more than half of that figure. Fuel consumption is also used to indicate trends in the amount of travel.

### Vehicle Registration and Driver Licensing Data

Motor-vehicle registration and driver-license data are used by FHWA in a wide variety of planning activities, including the Highway Cost Allocation Study. Registration and licensing data also help FHWA understand the numbers and types of vehicles that our highway system and programs must serve. Interest in allocating road-user taxes to various vehicle types has increased the importance of registration data, particularly truck registrations. In addition, FHWA and the National Highway Traffic Safety Administration (NHTSA) use vehicle-registration and driver-license data as part of overall safety analysis, including the evaluation of State-by-State highway programs. These evaluations help identify problems to which program emphasis should be given. The data are also important in evaluating the many Federal and State programs aimed at reducing drunk and drugged driving. Careful coordination with NHTSA ensures that the data needs of both agencies are met without duplication of data collection effort.

### Highway Finance Data

Highway financial data are used to prepare the Secretary of Transportation report to Congress on

the status of the Nation's Surface Transportation System including highway performance, condition, and needs. This report is required by law 23 U.S.C. 307(e). Data on State highway income, State highway expenditures, highway capital outlay and maintenance expenditures, and local highway finance are used in developing the finance portion of this report. The report also includes a detailed analysis of highway revenue and disbursement trends by jurisdiction, an examination of the effects of inflation on the highway dollar, trends in road-user versus non-user revenue by jurisdiction and a graphic depiction of inter governmental transfers of highway revenue. This information is used extensively to project State and local investment in future highway development.

On the expenditure side, trends in obligation by improvement type, functional system, and jurisdiction are included in the report. The information is distilled into a summary of financial trends and is used throughout the report in discussions of specific highway programs and systems. The biennial report to Congress, often termed the "needs report", has become a standard for documenting highway needs. Tolls are a significant part of highway revenues in some states and, as such, are important to highway program administration. Toll facility data also help FHWA administer the toll provisions of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which permits greater latitude in Federal funding of toll facilities. These provisions also allow States to match Federal-aid highway funds with documented toll expenditures for construction on non-federally funded roads, bridges, and tunnels.

#### Apportionment of Federal Highway Funds

A further use of the data reported to FHWA is allocating Federal Highway Trust Fund revenues to the States. In an effort to ensure that each State receives back in highway funding a reasonable portion of Trust Fund receipts contributed by its highway users, Congress created several funding mechanisms known as "equity adjustments." These include the 90-percent minimum allocation, the donor state bonus, and the 90-percent-of-payments adjustment.

To determine each State's eligibility for these equity adjustments, FHWA must determine the amount of Trust Fund receipts received from highway users in each State. This cannot be determined from Federal tax records. The Highway Trust Fund receives part of the proceeds of Federal excise taxes imposed on highway motor fuels and all the proceeds from taxes on truck and trailer chassis, truck tires, and heavy-vehicle use. Most of the excise taxes credited to the Trust Fund are not collected by the Federal Government directly from the consumer. They are, instead, paid to the Internal Revenue Service by the producer or importer of the taxable product. Exceptions are the tax on trucks and trailers, which is paid by the retailer, and the heavy-vehicle use tax, which is paid by the vehicle owner. In fact, because the home offices of major producers of motor fuels are concentrated in New York, Pennsylvania, and Texas, more than half of the revenue from the Federal gasoline tax is received from just those three States.

In place of actual tax information, motor fuel data, originating in State records, are used to identify the sources of Trust Fund receipts. The Federal-aid highway funds distributed in fiscal year 1995, based on the attribution of Trust Fund receipts, exceeded \$1.9 billion, or slightly more than 10 percent of total funds apportioned by FHWA. It is clear that complete and accurate motor-fuel statistics "the underlying attribution factor" are critical to the fair and equitable distribution of Federal aid.

In addition to their use in distribution of enacted authorizations to the States, data reported in Highway Statistics also may be used to evaluate formula factors in proposed legislation or in the development of legislative alternatives. For example, the Surface Transportation Assistance Act of 1991 (an earlier Administration's ISTEA-type proposal) would have used motor-fuel and public-road miles, both reported in Highway Statistics, as distribution factors for National Highway System apportionments to the States.

### Mass Transit Information

Financial information on mass transportation has taken on new importance as a result of the increasing use by the States of a common fund for both highway and mass transit projects, the establishment of the Mass Transit Account within the Federal Highway Trust Fund, and the designation of 2 cents per gallon of the Federal motor fuel tax for mass transit. In addition, under the ISTEA, funding of transit improvements with Federal-aid highway funds was made considerably easier and thus, more likely under the flexibility provisions of the Surface Transportation Program. Credible transit data are essential to the rational management of these new legislative provisions. FHWA and the Federal Transit Administration (FTA) use financial information to determine the extent to which States are financing mass transportation activities. FHWA collects State-level data for FTA, and WA shares information supplied by transit operations with FHWA.

These transit and highway financial data are essential in preparing the joint "needs report," described above.

### Additional Statistics and Applications

The U.S. Department of Commerce, Bureau of Economic Analysis, continues to use motor fuel consumption, motor fuel tax receipts, vehicle registrations, vehicle miles of travel, and related revenue data in estimating the gross domestic product.

Data developed by FHWA are also used by State DOTs, State legislatures, universities, and private companies. The summaries developed from these data are used extensively by State and local governments because they are the only source of State-specific data on highway matters.

The statistical data are made available to FHWA's various customers through various media. These include hard copy reports developed on a monthly or annual basis, and computer files for use on personal and mainframe computers. Currently FHWA is making these data available through the Internet's World Wide Web.

## **THE STATISTICAL PROGRAM IN THE FUTURE**

Monitoring of program performance depends on the provision of data on what funding is available to the transportation program and how have the resulting program investments supported the current and expected travel and system. The growing emphasis on performance evaluation of public programs will require regular enhancement of the analysis software used to assess the relationship between investment and performance. Future research will address efficient methods to collect data on alternative and non-fossil fuel use to assess their impact on Highway Trust Fund receipts. Additional work is necessary to more accurately track fund disposition in order to relate project expenditures with actual changes in system performance.

This pamphlet describes the need for and critical uses of FHWA's statistical information on fuels, finances registrations, and licensing. The continued effectiveness of the statistical program depends on the continuing support of FHWA's various program partners. Without this support, the ability of the Nation's elected officials and transportation program managers to address current and emerging issues will be diminished. Responsible decision-making demands access to current and consistent highway statistical data.

For more information, contact:

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