

Supporting Statement Highway Performance Monitoring System (HPMS)

INTRODUCTION: This is to request the Office of Management and Budget's (OMB) renewed three-year approved clearance for the Highway Performance Monitoring System (HPMS) information collection, OMB No. 2125-0028. This information collection is due to expire on June 30, 2012.

A. Justification

1. Circumstances that make the collection of information necessary.

The reports and procedures outlined in the attached "HPMS Field Manual for the Continuing Analytical and Statistical Data Base" (Attachment) are authorized under 23 U.S.C. 315 (Attachment), which places the responsibility on the Secretary of Transportation for management decisions which affect transportation. In addition, 23 CFR 1.5 (Attachment) and 49 CFR 1.48 (Attachment) provide the Federal Highway Administrator with authority to request such information deemed necessary to administer the Federal-aid highway program. Estimates of future highway needs of the Nation are mandated by Congress on a biennial basis (23 U.S.C 502(g)--Attachment). Data are used for assessing highway system performance under FHWA's strategic planning and performance reporting process in accordance with requirements of the Government Performance and Results Act (GPRA, Sections 3 and 4) [Attachment] and for apportioning Federal-aid highway funds under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Public Law 109-59, enacted August 10, 2005. Also, the Office of Management and Budget (OMB) Circular A-16 along with Executive Order 12906 established the USDOT as the lead agency for the transportation theme of the National Spatial Data Infrastructure (NSDI) which covers all public roads. Finally, 23 CFR 420.105(b) requires States to provide data that support FHWA's responsibilities to the Congress and the public (Attachment).

The HPMS is not only a data collection and reporting system, but an analytical system that consists of a series of interrelated simulation models designed to serve the needs of the policy decision-making process of the agency. The HPMS data base, in concert with the inventory of the Nation's structures, consists of the continuing source of data used to prepare the legislatively mandated biennial report to Congress, *Status of the Nation's Surface Transportation System: Condition and Performance*. In addition, the HPMS serves as the single continuing data source used to carry out a host of special studies and operational functions including:

- Various State management systems.
- Vehicle size and weight studies.
- Federal-aid program apportionments and allocations.
- Environmental Protection Agency's (EPA's) Section 187, VMT Forecasting and Tracking

Guidance (attachment not available) and Transportation Conformity Rule (40 CFR Parts 51 and 93-Attachment) for urbanized areas that are National Ambient Air Quality Standards (NAAQS) non-attainment areas.

-- FHWA publications including *Highway Statistics* and *Our Nation's Highways*.

Length, lane-mile, and travel data are also used for the apportionment and allocation of Federal-aid funds [23 U.S.C. 104(b)-Attachment]. Numerous special travel data reports are prepared in response to requests from within the FHWA and National Highway Traffic Safety Administration (NHTSA). Offices from within the Department of Transportation, EPA, Department of Defense, Congress, State governors and legislators, and numerous organizations and individuals in the private sector, as well as the general public, also request these data. The data collected in accordance with the *HPMS Field Manual* are unique in that they directly tie together roadway physical, operational, use (travel), pavement, condition, and performance data that can be analyzed and summarized at the sub-State¹, statewide, regional, and national levels. The HPMS is also unique in that it makes effective use of statistically based sampling. These data are not obtainable from any other known source.

This information collection supports the DOT Strategic Goals of Mobility and Safety. The HPMS data is used as a basis for developing improvements to the overall highway system. The resulting improvements facilitate the mobility of the highway users while enhancing the economic growth and trade opportunities on the part of providers of goods and services and consumers.

2. How, by whom, and for what purpose is the information used.

The HPMS data is used by FHWA to assess the performance of the Nation's highway transportation system as well as identify future highway system needs. HPMS data are extensively used by various agencies of the Federal, State, and local governments, institutions of higher learning, industry, consultants, professional organizations, and the public for a host of purposes. Data are used for assessing highway system performance under FHWA's strategic planning and performance reporting process developed in accordance with requirements of the GPRA and for apportioning Federal-aid highway funds under SAFETEA-LU. The HPMS data collected are essential to FHWA and Congress in evaluating effectiveness of the Federal-aid highway program providing miles, lane-miles, and travel components of apportionment formulae. The information is used by FHWA to develop and implement legislation and by State and Federal transportation officials to adequately plan, design, and administer effective, safe, and efficient transportation systems.

The vehicle-miles of travel data, which represent annual travel on the Nation's highways, serve as the basis for FHWA estimation of annual travel (use) by truck type and for highway allocation among the various vehicle classes. Estimates of travel by vehicle type and vehicular weight are the basis for the estimation of pavement loadings (equivalent axle loadings) and are the fundamental input to pavement design, pavement management and administration of

¹ ? HPMS is also designed to estimate travel for EPA-designated NAAQS non-attainment and maintenance areas.

vehicular weight enforcement laws.

HPMS full extent data are essential to comprehensive evaluations of the National Highway System (NHS) and are needed for the entire Principal Arterial System (PAS) to enable tracking of the system to determine whether it is providing service to all areas warranting NHS service. This is a necessity because of changing demographics, industrialization, market places, and other strategic activities.

The sample data collected via the HPMS are essential to the HPMS Highway Economic Requirement System (HERS), which are extensively used for the development of the legislatively mandated biennial report to Congress, *Status of the Nation's Surface Transportation System: Condition and Performance*. In general, the models are used to:

- Estimate backlog and future accruing highway system deficiencies (needs).
- Estimate the cost of overcoming deficiencies.
- Test alternative investment levels and strategies.
- Establish highway investment/performance relationships.
- Calculate related impacts.

Analytical tools of this nature, which rely upon the HPMS data base as input, are essential to sound prudent policymaking practices and are paramount to efficient and effective program evaluation and development activities. In addition, HPMS sample data serve as the basic input to the Highway Economic Requirement System-State version (HERS-ST) model, which selects and prioritizes simulated highway improvements (needs) on the basis of benefit-cost relationships for use by individual States.

Information received from the current collection have been used for:

- (1) Measuring performance/FHWA and DOT programs
- (2) FHWA apportionment purposes.
- (3) *Status of the Nation's Surface Transportation System: Condition and Performance*; used for appropriations.
- (4) *Highway Statistics* (5,000+ recipients): used for planning, programming, budgeting, etc.
- (5) Internet data base.
- (6) State/private sector/academic/general public analysis purposes.
- (7) *Our Nation's Highways, Selected Facts and Figures*.
- (8) Cost Allocation Study.
- (9) Truck size and weight study

3. Extent of automated information collection.

All information for the HPMS is submitted electronically via the Internet to the FHWA by the State highway agencies. Reliance on electronic reporting of data was adopted in order to extend the power of dwindling staff resources at both the State and Federal levels. With the large data file requirements of the HPMS, electronic submission has become unavoidable. The HPMS

enhancements also include the use of additional, up-to-date information technology including the ability to append HPMS data with Geographical Information System (GIS) Linear Reference System (LRS) information to operate in the GIS environment.

All data summarization, processing, modeling, etc., are fully automated via state-of-the-art personal computers and file servers. An HPMS specific software package has been developed and is occasionally modified and updated for use by State highway agencies, MPO, FHWA field offices, and Headquarters to accommodate the data requested in the *HPMS Field Manual*.

The HPMS is a dynamic system that undergoes periodic reassessment to assure that each data element collected continues to be needed and that the data collected is sensitive to emerging agency needs, goals and issues. This is sometimes a result of legislative action such as passage of a new highway authorization bill, for example. A significant reassessment activity for the HPMS has been recently completed and resulting changes are described in detail under item 15 below.

4. Describe efforts to identify duplication.

The identification and elimination of duplication are two critical goals in managing the HPMS. Continued HPMS coordination throughout the transportation community has ensured that duplication does not exist. Over time, several HPMS Working Groups have been used to address various HPMS data issues, including avoidance of duplication, urban congestion, HPMS redevelopment, pavement data needs, etc. The Working Groups included representatives of State highway agencies, MPOs, AASHTO, the National Association of Regional Councils (NARC), FHWA field offices, and other Federal agencies and professional organizations. Current activities are directed at improving data partnerships between States, MPOs, and other local governments to implement a “collect it once, use it often” philosophy.

5. Efforts to minimize the impact on small businesses.

There is no impact on small businesses since the HPMS data is collected only from State and local governments.

6. Impact of less frequent collection of information.

It is essential that the HPMS data continue to be collected on an annual basis rather than less frequently. The annual collection of HPMS data is required to facilitate the FHWA’s continuous addressing of issues regarding the preservation of the Nation’s highway transportation infrastructure, air quality, and EPA’s requirements for NAAQS non-attainment areas to annually measure travel via HPMS. Less frequent data collection would fail to keep FHWA and EPA abreast of the continuing changes taking place on the Nation’s streets and highways on a timely basis. The results of current Federal-aid highway program projects and actions, including activities designed to improve air quality, cannot be properly evaluated based on data that is collected less frequently. The determination of the consequence of future alternative changes in policies or programs would be made with out-of-date information.

Further, legal mandates for annual System length, lane-mile and travel data for the apportionment of Federal-Aid Highway Program funds, Clean Air Act requirements for travel tracking and conformity; fund transferability issues, etc., necessitate the continuation of annual HPMS data collection.

Highway conditions, travel, urban congestion, pavement deterioration, air quality, and many other highway use and performance indicators and statistics are constantly changing. Consequently, it is imperative that we continually monitor change to determine the effectiveness of Federal-aid highway programs. Urban highway congestion is an important national issue and its alleviation is of critical concern because of the economic costs of delay and the additional harmful emissions that are produced.

7. Special circumstances.

There are no special circumstances related to this information collection.

8. Compliance with 5 CFR 1320.8

The FHWA published a 60-day Federal Register Notice on October 11, 2011 (Volume 76, No: 196, page 62893) (Attachment). One response to the Notice was received (Docket # FHWA – 2011-0111) as follows:

“The Virginia Department of Transportation ("VDOT") hereby submits its solicited Reply Comments regarding the Notice of Request for Renewal of Two Previously Approved Information Collection (FHWA Docket No. FHWA-2011-0111).

VDOT is pleased to have an opportunity to comment on FHWA data collection requirements. Comments are provided as described within the applicable notice.

1. Is the proposed collection necessary for the FHWA's performance?

Highway Statistics.

Data in FHWA's Highway Statistics guidance do appear necessary for FHWA's performance, and ensure necessary consistency and conformity of data across states.

Further, statistics on Virginia highways that appear in Highway Statistics are used by VDOT staff for analysis, as well as for a variety research and analysis purposes by individuals internal and external to VDOT.

HPMS.

VDOT understands FHWA's performance monitoring of the US highway system depends upon the availability of HPMS data. This information is also useful to VDOT; many of the data items required for HPMS are items VDOT would otherwise collect for its own use. HPMS data provide VDOT with a basic characterization of the roadway network, traffic, and related information necessary to support decision-making and investment prioritization. In addition, VDOT relies upon the availability of HPMS data to respond to internal and

external data requests from sources including other state agencies and legislative offices, academic institutions, public and private organizations, the media, and the general public.

2. Are the estimated man-hour burdens accurate?

FHWA estimates that on average each state spends a total of 825 hours for the annual collection and processing of Highway Statistics data. As these data are primarily collected and processed by the Commonwealth of Virginia Department of Motor Vehicles, it is difficult for VDOT to verify the accuracy of this estimated average. However, with this qualification, the FHWA estimate appears reasonable.

HPMS.

FHWA estimates that on average each state spends a total of 1,800 hours for the annual collection and processing of HPMS data. The estimated burden appears reasonable for a typical year, if it is assumed to include the time required to quantify sample section data items not used for purposes other than HPMS reporting, in addition to the time required to prepare and review the HPMS submittal. However, significant additional resources have been required recently for the transition to FHWA's newly-revised specification for HPMS data. Once this transition is complete, VDOT expects the annual reporting burden to return to a value comparable to that estimated by FHWA. Note that determination of the burden attributable to HPMS requirements is somewhat speculative, as it requires an assumption regarding which data would otherwise be collected by VDOT for its own use.

3. How can the FHWA enhance the usefulness, clarity, and quality of the collected information?

VDOT has no enhancements to recommend at this time.

4. Are there ways to reduce the man-hour burden for the collection of data, including use of electronic technology, without reducing the quality of the collected information?

Highway Statistics.

VDOT has no recommendations at this time.

HPMS.

VDOT recommends reviewing the procedures for assessing HPMS sample adequacy in light of recent changes to HPMS data specifications. It is recommended that potential sample sections that are too short to be considered as sample sections be excluded in the calculation of the required number of samples.

VDOT values and appreciates FHWA's Highway Statistics and HPMS data collection efforts. VDOT offers this response in an effort to assist FHWA in improving the quality, consistency and utility of these data. We welcome further opportunities to work with FHWA to continue to strengthen data collection and data quality and to understand the costs and benefits associated with these efforts.”

In response, FHWA notes and acknowledges the general affirmative nature of the above comments and that while a particular State may have a burden-hour estimate above ours, there are States which have a lesser burden-hour estimate due to the relative size and organizational

structure, when compared. It should be noted that different data collection and reporting processes can be in place with more/less staff dedicated to their respective HPMS programs. A revision of the burden hour estimate is considered (per below) as the States have had to adjust their processes to implement a recently reassessed HPMS program.

9. Payment or gifts to respondents.

There will be no payments or gifts to the State and local government respondents.

10. Assurance of confidentiality.

The information to be collected is not confidential in nature; there is no need for an assurance of confidentiality.

11. Justification for collection of sensitive information.

The information to be collected is not sensitive in nature.

12. Estimate of burden hours for information requested.

Respondent	No. of Respondents	Frequency of Responses	Annual Hour Burden	Total Annual Hour Burden
State Transportation Agencies, Wash., DC & Puerto Rico (Includes MPOs)	52	Annually	2,000	104,000
TOTAL	52		2,000	104,000

The estimated total annual burden hours on the 52 responding agencies for the collection of HPMS data is 104,000 hours. This respondent burden is based on the average annual activities necessary for the 50 States, Washington, DC, and Puerto Rico to comply with the HPMS data requirements. The total annual salary cost to the 52 responding agencies is \$3,438,240, based on an average of \$33.06 per hour, as indicated in Table 463 of the *2012 Statistical Abstract of the United States* (Attached).

13. Estimate of total annual costs to respondents.

Other than the salary costs indicated in item 12 there are no additional cost burdens to the responding agencies since the HPMS data are obtained from the normal business records maintained by the State and local governments that are a basic part of their day-to-day business activities.

14. Estimate of annualized cost to the Federal Government.

The estimated annual cost to the Federal Government for this HPMS information collection is \$669,664 which is calculated as follows:

(7) FHWA Headquarters staff x 2,000 hours each @ \$33.06 per hour	= \$ 462,840
(60) FHWA field office staff x 48 hours each @ \$33.06 per hour	= \$ <u>95,213</u>
	\$ 558,053 (subtotal)
plus overhead @ 20%	= \$ <u>111,611</u>
	\$ 669,664 (total)

Note: The printing costs for the various reports and publications associated with the HPMS are covered in the existing OMB clearance for the *Guide for Reporting Highway Statistics*, OMB control number 2125-0032.

15. Explanation of program changes or adjustments.

Burden hour estimates for the data respondents increased (10,400 hours) due to the HPMS program activities pertaining to implementation of the recently completed reassessment effort. The reassessed HPMS incorporates a new geospatial data base model, adds and deletes some data items required for reporting, changes several data item coding structures and thus will require some near term additional effort and resources in implementing it for some or most States. Additional geospatial network files will be required so as to cover all public roadways in dual-carriageway format. Several of the additional data items or program requirement changes were made in response to HPMS customer initiatives such as improved timeliness of reporting, enhanced pavement reporting and modeling based on additional HPMS data items, and improved ability to estimate vehicle-miles of travel (VMT) data in EPA-designated non-attainment/maintenance areas by pollutant type, for example. It should be noted that part of the incentive to change the data model to a geospatial one was to enhance the utility and connectivity of HPMS data with several other internal and external data systems, making the data much more usable and available for various enhanced analyses.

It is anticipated that the overall HPMS reporting burden and cost for the respondents will decrease over time due to streamlined data reporting changes that should benefit the respondents.

16. Publication of results of data collection.

The results of the data collected are published in the reports to Congress, and are also published in the *Highway Statistics*; and are posted on the Internet. The data to be submitted on June 15 of each year is assembled and/or collected by the States and MPOs to reflect data as of December 31 of the previous year. The data received is processed by FHWA from the time the data are submitted with final data tables, charts, and graphs being readied for publication and release by the end of the calendar year. The publication is generally received from the printer

and distributed/posted on the Internet by December 1. This is an annual activity.

17. Approval for not displaying the expiration date for OMB approval.

No such approval is being requested for this information collection.

18. Exceptions to the certification statement.

No exceptions to the certification statement are being requested.

ATTACHMENTS

- . *Highway Performance Monitoring System (HPMS) Field Manual*
 - 23 U.S.C. 315
 - 23 CFR 1.5
 - 49 CFR 1.48
 - 23 U.S.C. 502(g)
 - Government Performance and Results Act (GPRA), Sections 3 and 4
 - 23 CFR 420.105(b)
 - 40 CFR Parts 51 and 93
 - 23 U.S.C. 104(b)
 - Federal Register Notice dated October 11, 2011
 - OMB Circular A-16, August 19, 2002