Department of Commerce
U.S. Census Bureau
OMB Information Collection Request
Vehicle Inventory and Use Survey
OMB Control Number 0607-0892

This revision is being submitted to correct the legal citations related to the collection authority for the Vehicle Inventory and Use Survey (VIUS). We initially received clearance to add the corrected citation using the emergency clearance process, which was approved separately. The emergency clearance was necessary because we needed to implement the change immediately during data collection for the survey. This revision is to now add Title 13 U.S.C., Section 221 to the collection authority under the original clearance and to allow a full review at OMB.

The supporting Statement that follows is the original submitted for the VIUS. No other changes have been made to this supporting statement as part of this revision.

Part B – Collections of Information Employing Statistical Methods

1. Universe and Respondent Selection
The 2021 VIUS is a simple random sample without replacement of private and commercial trucks registered in the 50 states and the District of Columbia during a specified time period. Government owned trucks, buses, ambulances, fire trucks, motor homes, and farm tractors are not in scope for VIUS. Passenger cars are also out of scope.

The truck universe is expected to contain about 190 million trucks of which approximately 150,000 will be selected. The sample is purchased from a commercial vendor, I.H.S. Polk. Using instructions provided by the Census Bureau, Polk will pull the VIUS sample from two separate databases (referred to as the commercial database and personal database).

2. Procedures for Collecting Information
The sample design for the 2021 VIUS is similar to the design for the 2002 VIUS. A stratified random sample will be selected in each of the 50 states and the District of Columbia. The truck stratification is based on body type and gross vehicle weight (GVW) for private trucks and for commercial trucks as follows:

1. Commercial database pickups
2. Commercial database vans, minivans, SUVs
3. Commercial database straight trucks with GVW ≤ 26,000 lbs.
4. Commercial database straight trucks with GVW > 26,000 lbs.
5. Commercial database semi-trucks
6. Personal database pickups
7. Personal database vans, minivans, SUVs
8. Personal database straight trucks with GVW ≤ 26,000 lbs.
9. Personal database straight trucks with GVW > 26,000 lbs.
10. Personal database semi-trucks

I.H.S. will de-duplicate VINs, exclude out of scope vehicles, and exclude trucks with missing addresses to create the sample frame used for VIUS. The final sample will be a set of trucks that have been selected from the sample frame for each of the above strata using simple random sampling without replacement.

The VIUS publishes three types of estimates for many truck characteristics: number of trucks, truck miles, and average miles per truck. Characteristics include major use, truck size, annual miles categories, range of operation, truck weight, and model year. We calculate the 2021 VIUS sample sizes to ensure that any estimate of number of trucks which accounts for 10 percent of a particular truck type in the population will have a predefined accuracy. Our measure of accuracy is the coefficient of variation (CV), defined as the ratio of the standard error of the estimate to the estimate. The CV levels we use to calculate the sample sizes vary according to the types and levels of estimates we will publish as shown in the following table.

Truck Stratum	Geographic Level	Desired CV (%) on 10-Percent Estimate
(1, 6) Pickups	State	12%
(2, 7) Vans, Minivans, Sport Utility Vehicles	State	
(3, 8) Straight trucks with GVW ≤ 26,000 lbs	State	10%
(4, 9) Straight trucks with GVW > 26,000 lbs	State	8%
(5, 10) Semi-trucks	State	

The total approximate sample size for the 2021 VIUS is 150,000 trucks. Since we have estimated the sample sizes using historical truck counts, the actual allocation of each estimated sample size is not final until the 2021 truck counts become available from I.H.S. Polk.

The VIUS data products present, at most, the three separate estimates (number of trucks, truck miles, and the average miles per truck) for many different truck characteristics. The estimates of the number of trucks and truck miles will be computed by summing the weighted data (reported or imputed in some cases) from the appropriate respondents. The weight used for a particular truck is the reciprocal of its probability of selection multiplied by a nonresponse and post-stratification adjustment factor. The estimate of the average miles per truck is a combined ratio estimate and will be computed by dividing the estimate of truck miles by the estimate of the number of trucks.

The joint effect of sampling variability and nonsampling errors determines the accuracy of the survey results. Sampling variability is the uncertainty in the results because only part of the truck population has been measured. It does not exist if the entire population is measured. Mathematical statistics provide techniques to estimate the sampling variability of any estimate by using data collected for the sample.

Nonsampling error exists because of errors in the survey process. It can result from many sources: (1) inability to get information from all cases in the sample, (2) response errors, (3) definitional difficulties, (4) misinterpretation of questions, (5) mistakes in recording or coding data obtained, and (6) other errors of collection, response coverage, and estimation of missing data. Nonsampling error will exist whether the results are from a sample or from the entire population. Although we obtain no direct measurement of the biases due to nonsampling errors, we will take precautionary steps in phases of the

collection, processing, and tabulation of the data to reduce their influence. To reduce further nonsampling errors, we will review all questionnaires for completeness and consistency. We will verify and correct extreme and unusual data (falling outside predetermined levels) if necessary.

3. Methods to Maximize Response
This data collection will maximize response through the following means:
    (1) mailing materials that emphasize the mandatory and confidential nature of the Census Bureau, as provided by Title 13, U.S.C. (Attachments F, G, H)
    (2) designing questionnaires and instructions that simplify reporting and minimize respondent burden (Attachments I, J, K)
    (3) providing toll-free assistance for any respondent that has questions about completing the questionnaire
    (4) implementing systematic mail follow-up for non-response
    (5) working directly with owners of large fleets of trucks to complete their survey questionnaires and allowing these owners to complete one questionnaire to represent more than one truck with similar characteristics.

4. Test of Procedures or Methods
This information collection will use procedures and data collection strategies that are based on a considerable body of experience with economic censuses and surveys. In preparation for the 2021 VIUS, we have also conducted cognitive testing and expert interviews, as well as a pilot study of the tested questions.

Cognitive Testing and Expert Reviews
The 2021 VIUS survey questions have been successfully tested through cognitive interviews. The questionnaire items used for the pilot were based on the 2002 VIUS instrument with the addition of some new and revised content. Between September 2019 and May 2020, the U.S. Census Bureau's Data Collection and Methodology Research Branch conducted 41 cognitive interviews over two rounds of testing. Overall, testing revealed some questions could be improved with the addition of help text for respondents and several questions could be simplified by breaking them into multiple questions.

In addition, Census Bureau staff asked experts in the trucking industry, including the American Trucking Association, the Owner-Operator Independent Drivers Association, and the National Truck Equipment Association, to review the questionnaire content to identify outdated or irrelevant questions and responses as well as to help translate some of the industry jargon into plain language.

2020 VIUS Pilot
Following cognitive testing and expert review, a short pilot study was conducted to test the survey instrument. The VIUS pilot study was fielded from February 11 to March 19, 2021. Electronic instrument was the only data collection method used for the pilot.

Approximately a week after data collection for the pilot started, we began conducting debriefing interviews. The respondent debriefing interviews were aimed at understanding how a respondent recently reported to a survey. The Economic Statistical Methods Division's Data Collection Methodology and Research Branch conducted ten debriefing interviews with pilot respondents. All interviews were

conducted over the telephone or via Skype for Business. These interviews were not recorded. The interviews followed a semi-structured interview protocol. The protocol was based on findings from the cognitive interviews completed in 2020 regarding the VIUS content. For the purposes of this research, the debriefing questions focused on the respondents' experiences in answering the survey and their evaluation of the content and survey instruments.

5. Contacts for Statistical Aspects and Data Collection

Statistical methodology is developed under the direction of Carol Caldwell, Chief of the Economic Statistical Methods Division, Census Bureau, Washington, DC 20233 (work 301-763-3390). The VIUS sample design work is conducted under the direction of William Davie Jr., Methodology Director for the Business, Register, Economic Census, and Related Surveys area, Census Bureau, Washington, DC 20233 (work 301-763-7182).

Data collection is managed by Michelle Karlsson, Operational Director for the Collection Instruments and Preparation area, Economic Management Division, Census Bureau, Washington, DC 20233 (work 301-763-6769).

The survey director for VIUS is Jennifer Whitaker, Assistant Chief for Commodity Flow and Health Surveys Economic Reimbursable Surveys Division, Census Bureau, Washington, DC 20233 (work 301-763-2823). Data review and analysis for VIUS is managed by Kelly Holder, Branch Chief, Vehicle Inventory and Use Survey Branch, Economic Reimbursable Surveys Division, Census Bureau, Washington, DC 20233 (work 301-763-3462).

Attachments to the Supporting Statements

A. Title 13, United States Code

B. VIUS Data Item Justification

C. Stakeholders Contacted for Review of the Proposed Questionnaires

D. Changes Made to the Questionnaires in Response to the Recommendations Received

E. Recommendations Which Could Not Be Implemented to the Questionnaires

F. Proposed Advance Letter

G. Proposed Initial Letter for Data Collection

H. Proposed Follow-up Letters for Non-Response

I. TC-9501 Questionnaire for Small Trucks (Pickups, Vans, and Sport Utility Vehicles)

J. TC-9502 Questionnaire for Large Trucks (All Other Trucks)

K. Centurion instrument log-in page screenshots