# Department of Transportation Office of the Chief Information Officer

#### SUPPORTING STATEMENT

# HOUSEHOLD GOODS CONSUMER INFORMATION PROGRAM ASSESSMENT STUDY

#### Part B. Collections of Information Employing Statistical Methods

#### 1. <u>Sampling methodology</u>.

The potential respondent universe for the Household Goods Consumer Information Program Survey is the non-institutionalized population of households in the United States that have moved in the past year. The U.S. Census Bureau estimates there were16 million household moves in 2006.<sup>1</sup> The sampling frame of potential respondents will be obtained from a commercial database with comprehensive records on households who have moved over the past 12 months. A market survey panel will not be used for this study. The New Movers Database<sup>SM</sup> by Experian Information Solutions,<sup>2</sup> which is updated on a monthly basis, is compiled from multiple sources including recorded deed information on new home sales, telephone service providers and other utility sources. To ensure data accuracy, an additional validation process is completed on files from telephone providers to verify that new connects are actual HHG shippers. A random sample of households will be generated from this database; each record includes name, contact information, and other pertinent data (such as whether the HHG shippers owns or rents the new residence) for interstate HHG shipper who have moved within a recent 12month period. Because the commercial database maintains 12 months of data at any given time, the exact dates of the period will be determined at the time the data is acquired (when OMB clearance has been obtained and data collection process can be initiated). We will contact each selected living unit and survey an adult member of the living unit. There are a total of 19 million records of living units or households in the new HHG shippers database; however, the number of recent interstate HHG shippers will be a smaller subset of the database (approximately 19 percent of the total records).<sup>3</sup> The table below provides the number of households in the universe that have recently used an interstate HHG shipper (carrier or freight forwarder) of household goods within the last year and the number of those households that FMCSA will sample.

Population	Universe	Sample
Interstate HHG shippers within one-year	2.89 million households <sup>4</sup>	15,000
period		

<sup>&</sup>lt;sup>1</sup> Based on U.S. Census Bureau Current Population Survey (CPS) mobility statistics.

<sup>&</sup>lt;sup>2</sup> Other commercial data providers include Acxiom, InfoUSA and USA DataCorp

<sup>&</sup>lt;sup>3</sup> Ibid

<sup>&</sup>lt;sup>4</sup> Estimated households who have moved interstate is calculated by taking 7.44 million individuals based on Census 2005 CPS mobility statistics and dividing that figure by the most recent Census estimate of 2.57 persons per household.

In order to yield a target of 1,500 completed interviews, an initial sample of 15,000 records will be drawn from the sampling frame to account for ineligibles, terminates, refusals and potential out-of-scope records.

### 2. Procedures for the collection of information.

The objective of the survey is to gauge awareness in the population of interstate HHG shippers of the "Household Goods" consumer information that FMCSA distributes. We do not anticipate any unusual problems requiring specialized sampling procedures. As mentioned in the section above, a sample of 15,000 records will be drawn from a commercial data frame on household goods HHG shippers. The records will be coded and programmed into a computer assisted telephone interviewing (CATI) system to guide the interviewers through the questionnaire in a consistent manner. The software will randomize the sample; manage callbacks; and serve as a tool for the data collection, analysis, and reporting. When a household is reached, the interviewer will screen the participant for eligibility by asking to speak to someone who has recently moved in the household.<sup>5</sup> If the designated respondent is not available to conduct the interview at that time, interviewers will try to set up a convenient time(s) to call-back. Otherwise, the interviewer will conduct the interview, using the preprogrammed questions in the CATI system. Since this is a new data collection and is focused on a targeted segment of the U.S. population, it will be difficult to anticipate an accurate response level at this time. Furthermore, there are no data currently available that can estimate how many interstate movers have considered hiring a moving company. However, based on industry estimates provided by the American Moving and Storage Association, the percentage of annual household good moves by professional movers make up about 27% of interstate moves. Using this as a proxy, we can estimate that at least 27% of our sample will be eligible, though we anticipate it will be higher since those who have considered movers will be eligible for the survey as well. Based on previous experiences of other household surveys conducted by the U.S. DOT, such as the National Highway Traffic Safety Administration's (NHTSA) Motor Vehicle Occupant Safety Survey and the Bureau of Transportation Statistics' (BTS) Omnibus Household Survey, an estimated 40 -50 percent response rate is expected.

To calculate the expected standard error, FMCSA assumes that 10 percent of the respondents will answer positively (i.e., will be aware of the HHG campaign). Given that outcome, the projected number of 1,500 respondents will produce an expected sampling error of the estimate of  $\pm$  1.5 percentage points at the 95-percent confidence level.

As part of the analysis on the survey results, FMCSA will examine the differential effects in subpopulations according to the State where the move originated, age, and education of the respondent, among other variables. A chi-square test will be used to determine whether the level of awareness differs among respondents from States where FMCSA distributed its materials more extensively (Florida, Texas, New York and California) during the period from September

<sup>&</sup>lt;sup>5</sup> To ensure we maximize the response rate, we will not conduct an additional procedure to select a respondent within the household such as the commonly used "most recent/next birthday" method because we are employing other measures that should offset any bias that may be introduced by the interviewer. The interviews will be conducted by different interviewers and at different times of the day to minimize potential bias. Furthermore, according to paper presented by John M. Kenney at the American Association for Public Opinion Research 1993 Annual Meeting, response rates were lower and field costs were higher for the last birthday method and about 20 - 25 percent of the households picked the wrong person with this method.

2006 to April 2007, as compared with those in the States, which did not receive such treatment (remainder of the 50 states). The chi-square test is a non-parametric test used to evaluate the strength of relationships in cross-tabulated results.

# 3. <u>Methods to maximize response rates</u>.

The following survey procedures will help to increase the response rates for the survey:

- There will be a concentrated pool of interviewers dedicated to the survey who will be selected based on their specific qualifications and experience with similar research interviews. Training sessions will be conducted for the selected interviewers.
- Survey system software will be used to guide the interviewer through the questions to ensure consistency and maximize the response rate.
- Multiple call-back attempts will be made to each household and will be varied at different times or days or the week to ensure respondents can be reached.<sup>6</sup>
- Prior to the launch of the survey, FMCSA can promote awareness of the survey by utilizing the agency's website, as well as use other outreach methods to improve the response rate.

During the telephone interview, respondents will also be informed that the survey is being conducted for research purposes to determine the effectiveness of public service messages promoting successful household goods moves, that individual answers will be not be shared beyond the study team; they will only be reported at an aggregate, not an individual, level.

Non-response occurs when members of the sample cannot or will not participate in the survey. FMCSA plans to conduct an analysis to determine non-response bias. FMCSA will compare the demographic characteristics of respondents to the general population of HHG shippers to determine whether there are any systematic differences (bias) in the sample from the overall universe. We will pick at least two demographic characteristics that are available through the New Mover's database. These characteristics may include age, income, gender, dwelling type, tenure (renter/homeowner), and marital status depending on the availability and quality of the data. In addition, the analysis will determine whether there are any differences in the geographical distribution of respondents versus non-respondents.

FMCSA may also compare those who responded early in the survey process with late respondents, who required more effort or persuasion in providing their responses. These late respondents can serve as proxy for non-respondents in the comparative analyses for the study.

Because the agency expects a low frequency of "positive" responses regarding awareness of the public service campaigns, the study uses a relatively large sample size to detect what is expected will be a low-frequency effect.

4. Test of procedures or methods.

<sup>&</sup>lt;sup>6</sup> To maximize response rate while balancing cost-effectiveness of the survey, it is anticipated that six call-back attempts will be made for each household. Furthermore, a larger sample size is drawn to ensure 1500 completed interviews.

FMCSA conducted reviews of the overall questionnaire during development and made necessary adjustments after initial pre-testing. FMCSA will also conduct additional testing on the survey instrument prior to interviewing including review of the programmed version of the questionnaire. Any external pre-testing will be limited to less than 10 respondents.

# 5. Household Goods Awareness Survey Contact Information.

Mr. Brian Ronk U.S. Department of Transportation Federal Motor Carrier Safety Administration 1200 New Jersey Avenue, SE Washington DC, 20590 202-366-1072 brian.ronk@dot.gov