Information Collection Request Supporting Statement: Part A
National Survey of Drowsy Driving Knowledge, Attitudes and Behaviors

Abstract:[1] The National Highway Traffic Safety Administration (NHTSA) of the U.S. Department of Transportation is seeking approval to collect information from a random sample of adults (18 years or older) who have driven a motor vehicle in the past month for a one-time voluntary survey to report their knowledge, attitudes, and behaviors associated with drowsy driving. This collection has two parts. The first part is a pilot test for which NHTSA will contact 1,000 households for an expected number of 163 voluntary responses. The second part is the full survey for which NHTSA will contact 81,490 households to achieve a total target of at least 15,000 complete voluntary responses, consisting of 7,000 completed instruments from a nationally representative sample and 2,000 completed instruments from each of four samples representative of States that recently have had drowsy driving law or program activities (Arkansas, Iowa, Massachusetts, and New Jersey). The total estimated burden associated with this collection is 16,323 hours – up to 10,949 hours associated with survey invitations and reminders and up to 5,374 hours associated with completing the survey. NHTSA will summarize the results of the collection using aggregate statistics in a final report to be distributed to NHTSA program and regional offices, State Highway Safety Offices, and other traffic safety stakeholders. This collection will inform the development of countermeasures, particularly in the areas of communications and outreach, for reducing fatalities, injuries and crashes associated with drowsy driving.

A.1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

a. Circumstances making the collection necessary

NHTSA was established by the Highway Safety Act of 1970 (Pub. L. No. 91-605, § 202(a), 84 Stat. 1713, 1739-40). Its Congressional mandate is to reduce the number of deaths, injuries, and economic losses resulting from motor vehicle crashes on our nation's highways. To accomplish this mission, NHTSA conducts research on driver behavior and traffic safety to develop efficient and effective means of bringing about safety improvements. This information collection supports NHTSA's strategic goal of safety by supporting efforts to reduce drowsy driving and its consequences.

NHTSA's Fatality Analysis Reporting System (FARS) database reports that 2% of traffic fatalities were drowsy driving related in 2018.[2] Reported fatalities (and drowsy-

[1] The Abstract must include the following information: (1) whether responding to the collection is mandatory, voluntary, or required to obtain or retain a benefit; (2) a description of the entities who must respond; (3) whether the collection is reporting (indicate if a survey), recordkeeping, and/or disclosure; (4) the frequency of the collection (e.g., bi-annual, annual, monthly, weekly, as needed); (5) a description of the information that would be reported, maintained in records, or disclosed; (6) a description of who would receive the information; (7) the purpose of the collection; and (8) if a revision, a description of the revision and the change in burden.

[2] National Center for Statistics and Analysis. (October 2019). *2018 Fatal Motor Vehicle Crashes: Overview,* pg. 8 (Traffic Safety Facts, Research Note, Report No. DOT HS 812 826). Washington, DC:

driving crashes overall) have remained largely consistent in recent years. Based on 2014 through 2018 FARS data, there was an annual average of 820 traffic fatalities (in an average of 728 fatal crashes) related to drowsy-driving. However, the involvement of drowsy driving in crashes is likely underreported due to difficulty in defining and reporting drowsy driving incidents. [3]

In fact, precise counts of crashes caused by drowsy driving are not possible. Law enforcement can look for certain clues that drowsiness was likely to have contributed to driver error, but the clues are not always identifiable or conclusive. In lieu of consistent and conclusive evidence, researchers have used various methods to estimate the overall number of crashes or crash fatalities caused by driver drowsiness. These methods range from counts of crash reports where police indicate drowsiness as a contributing factor to statistical estimates based on crash reports and surveys of self-report crashes or driving experience. Other researchers have inferred the number of drowsy driving crashes by looking for correlations with related factors such as the number of passengers in the vehicle, crash time and day of week, driver sex, and crash type. One such study from the AAA Foundation for Traffic Safety analyzed data from NHTSA's National Automotive Sampling System (NASS) Crashworthiness Data System (CDS).[4] Using a multiple imputation methodology, the study estimated 21% of fatal crashes involved drowsy driving. If this estimate is accurate, it suggests that more than 7,000 people die in drowsy driving related motor vehicle crashes across the United States each year.

b. Legal basis for collecting data

Title 23, United States Code, Chapter 4, Section 403 gives the Secretary authorization to use funds appropriated to conduct research and development activities, including demonstration projects and the collection and analysis of highway and motor vehicle safety data and related information needed to carry out this section, with respect to all aspects of highway and traffic safety systems and conditions relating to vehicle, highway, driver, passenger, motorcyclist, bicyclist, and pedestrian characteristics; accident causation and investigations; and human behavioral factors and their effect on highway and traffic safety.

A.2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

This is a new collection. It will provide critical information needed by NHTSA to develop, implement, and maintain effective countermeasures that meet the Agency's

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National Highway Traffic Safety Administration (available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812826).

[3] National Center for Statistics and Analysis. (October 2017). *Drowsy Driving 2015*, pg. 2 (Traffic Safety Facts, Crash•Stats, A Brief Statistical Summary, Report No. DOT HS 812 446). Washington, DC: National Highway Traffic Safety Administration (available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812446).

[4] Tefft, Brian C. (2014) *Prevalence of Motor Vehicle Crashes Involving Drowsy Drivers, United States, 2009–2013*. Washington, DC: AAA Foundation for Traffic Safety.

mandate to improve traffic safety. While NHTSA has made research contributions throughout the years, including the frequently cited report from the 1998 National Center on Sleep Disorders Research/NHTSA Expert Panel on Driver Fatigue and Sleepiness,[5] and ongoing work on in-vehicle drowsy driving detection, many research gaps still exist. Closing these gaps would provide substantial progress toward understanding the impact of drowsy driving as well as offering potential solutions to the problems it causes. In addition, many societal changes have occurred since NHTSA last fielded a similar survey in 2002.[6] The goal of the study is to conduct a nationally representative survey of a randomly selected sample of adult drivers on their attitudes, behavior, and awareness of drowsy driving.

There are three primary objectives for this project. The first is to use constructs from Ajzen's Theory of Planned Behavior to provide analysis as to effective countermeasures.[7,8] Second, NHTSA plans to assess the relationships between falling asleep/nodding off while driving and lifestyle, health factors, and demographics. Finally, the study will identify the knowledge, attitudes, and behaviors that predict drowsy driving. Demographic data will help identify group differences. Ultimately, the results of the survey will provide a better understanding of the reasons for drowsy driving, which will allow NHTSA and other stakeholders to develop effective countermeasures to discourage drowsy driving.

The information will assist NHTSA in (a) planning drowsy driving prevention program activities; (b) supporting groups involved in improving public safety; and (c) identifying countermeasure strategies that are most acceptable and effective in reducing drowsy driving. In addition to using the collected information for its own program development and technical assistance activities, NHTSA will disseminate the information to:

- state and local highway safety authorities, who may use it to develop, improve, and target their own programs and activities;
- interested safety organizations so that this information can be used to develop, improve and target their own programs and activities, especially for public information and education campaigns; and
- academics concerned with traffic safety issues through a peer-reviewed journal article, so that it can be used as a baseline for future studies.

[5] National Highway Traffic Safety Administration and National Heart, Lung, and Blood Institute. (April 1998). *Drowsy Driving and Automobile Crashes* (Report No. DOT HS 808 707). Washington, DC: National Highway Traffic Safety Administration (available at https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/808707.pdf).
[6] Royal, D. (2003). *Volume 1: Findings, National Survey of Distracted and Drowsy Driving Attitudes and Behaviors: 2002* (Report No. DOT HS 809 566). Washington DC: National Highway Traffic Safety Administration (NHTSA). https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/hs809566v1.pdf
[7] Fishbein, M. & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Addison-Wesley.
[8] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50(2),* 179–211. doi:10.1016/0749-5978(91)90020-T.

A.3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology. Also describe any consideration of using information technology to reduce burden.

The proposed methodology for this research is a web-based survey with a paper-based version as a back-up. A toll-free telephone number and email address will be available for respondents who have difficulty or are unable to complete the survey online because of technical or language issues. The survey is designed to facilitate the interview process for the respondent and reduce burden by:

- basing the visual layout of the questions on principles of heuristics that people follow in interpreting visual cues;
- making the survey easily navigable from page to page;
- incorporating logic into the survey functionality, preventing users from having to view questions not applicable to them based on previous survey responses;
- incorporating user assistance tools, such as capability to contact a help desk via email or a toll-free phone number;
- retaining user responses so that respondents can leave the system and then re-enter (at the point of departure) without losing the responses previously entered;
- building in consistency and other edit checks; and
- programming the survey so that it is 508 compliant[9] by ensuring the survey is compatible with applicable forms of assistive technology, such as screen readers.

Also included in this process of online survey development, the instrument will be tested in different web browsers, including on mobile devices such as phones and tablets. This development will be completed internally by NHTSA's contractor.

A.4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in item 2 above.

Unfortunately, while there are several studies of self-reported drowsy driving behavior, there is limited research about the public's knowledge and attitudes that lead to drowsy driving. NHTSA last fielded a similar survey in 2002, and much has changed since then (see Appendices for Royal, 2003 report).[10] In addition, the following gaps in the literature have been identified by others, and available information cannot be used or modified to address these gaps:

- Most studies on drowsy driving have used samples comprised of young or middle-age drivers; more research is needed on a broader age range to understand

[9] Section 508 of the Rehabilitation Act (29 USC 794d), as amended by the Workforce Investment Act of 1998 (Pub. L. No. 105-220).

[10] Royal, D. (2003). *Volume 1: Findings, National Survey of Distracted and Drowsy Driving Attitudes and Behaviors: 2002* (Report No. DOT HS 809 566). Washington DC: National Highway Traffic Safety Administration (NHTSA). https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/hs809566v1.pdf

the co-presence of possible causes of drowsy driving, such as medical conditions, that become more prevalent with age and the medications used to treat them.[11]

- Knowledge about drivers' motivations for driving drowsy as well as their use of countermeasures is needed.[12]
- Sleepiness can be exacerbated by alcohol and drugs; thus, more investigation into the interactive effects of alcohol and drug use, and sleep disorders, is warranted.[13]
- Study samples are often quite small, making it difficult to discern effects.[14,15] In addition, samples are often convenience samples of volunteers, making it difficult to generalize results to the larger population.[16]
- More studies are needed to evaluate the effectiveness of countermeasures and determine how best to target countermeasures so they are reaching appropriate audiences.[17]

Understanding the public's attitudes and knowledge is an important step in building predictive models of behavior that will allow NHTSA to design and deploy effective countermeasures that can reduce drowsy driving across the United States.

[11] Zanier, N., Eby, D. W., Arnedt, T., Molnar, L. J., Shelgikar, A., St. Louis, R., Antonucci, T., Jackson, J. S., Nelson, J., Ryan, L., & Smith, J. (2010). *Drowsy Driving among Older Adults: A Literature Review* (Report No. M-CASTL 2010-04). Ann Arbor, MI: Michigan Center for Advancing Safe Transportation throughout the Lifespan.

[12] Watling, C., Armstrong, K., & Radun, I. (2015). Examining signs of driver sleepiness, usage of sleepiness countermeasures and the associations with sleepy driving behaviors and individual factors. *Accident Analysis and Prevention, 85,* 22-29.

[13] Zhang, G., Yau, K. K. W., Zhang, X., & Li, Y. (2016). Traffic accidents involving fatigue driving and their extent of casualties. *Accident Analysis and Prevention, 87,* 34-42.

[14] Akerstedt, T., Ingre, M., Kecklund, G., Anund A., Sandberg, D., Wahde, M., Philip, P., & Kronberg, P. (2010). Reaction of sleepiness indicators to partial sleep deprivation: Time of day, and time on task in a driving simulator – the DROWSI Project. *Journal of Sleep Research, 19(2),* 298-309.

[15] Akerstedt, T., Hallvig, D., Anund, A., Fors, C., Schwarz, J., & Kecklund, G. (2013). Having to stop driving at night because of dangerous sleepiness – awareness, physiology, and behavior. *Journal of Sleep Research, 22(4),* 380-388.

[16] Volna, J., & Sonka, K. (2006). Medical factors of falling asleep behind the wheel. *Prague Medical Report, 107(3),* 290-296.

[17] Sahayadhas, A., Sundaraj, K., & Murugappan, M. (2012). Detecting driver drowsiness based on sensors: A review. *Sensors, 12,* 16937-16953.

A.5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

There will be no impact on small businesses or other small entities. The collection of information involves randomly selected individuals contacted at their residences.

A.6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing the burden.

The information collection is necessary for NHTSA and other safety stakeholders to develop effective programs that prevent and reduce drowsy driving. If the current survey is not conducted, NHTSA will not have access to up-to-date data with which to help guide programmatic decisions and develop countermeasures to help State and local governments reduce drowsy driving. There are no known technical or legal obstacles to reducing the burden.

A.7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- **a. requiring respondents to report information to the agency more often than quarterly;**
- **b. requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- **c. requiring respondents to submit more than an original and two copies of any document;**
- **d. requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;**
- **e. in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- **f. requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- **g. that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes· sharing of data with other agencies for compatible confidential use; or**
- **h. requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

No special circumstances require this collection to be conducted in a manner inconsistent with these guidelines.

A.8. If applicable, provide a copy and identify the date and page number of publication in the FEDERAL REGISTER of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the collection of information prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to the comments. Describe efforts to consult with persons outside the agency to obtain their views.

The Federal Register notice notifying the public of NHTSA's intent to conduct this information collection, and providing a 60-day comment period, was published on July 14, 2020 (Vol. 85, No. 135, pp. 42486-42488). NHTSA received two comments in response to the 60-day Federal Register Notice. General Motors (GM) provided comments supportive of the proposed information collection. The American Alliance for Healthy Sleep (AAHS) also provided comments supportive of the proposed collection but expressed concerns about the collection methods.

The AAHS raised two areas of concern. The first is that the AAHS "suggests that participants be contacted, and the survey completed, by electronic means instead, if possible." While we agree with the AAHS that electronic methods generally improve efficiency and cost-effectiveness, we chose to use an address-based sampling frame to select and contact respondents to increase representativeness of the national and State samples. Address-based samples are generally more representative of the population than e-mail or other electronic-based samples because they allow people who do not have a way to be contacted electronically to be selected for the survey. Also, given a main purpose of the survey is to produce national and State estimates of knowledge, attitudes, and behaviors, the use of address-based sampling more readily allows for the calculation of sample weights to reflect the population since the United States Postal Service maintains a computerized list of all U.S. residential addresses from which the contractor will draw the sample. Regarding the responses, the proposed methodology is a web-based survey with a paper-based version as a back-up. The initial invitation letter and the two reminder postcards direct the respondent to the web version of the survey. The second and third invitation letters direct the respondent to the web but also provide a paper survey and Business Reply Envelope as a back-up for those without internet access. Like the sampling process, we do not want to exclude respondents who may not have easy access to the internet. The second area of concern was allowing the survey to be completed anonymously and to recognize that respondents "may under-report or may not be willing to disclose certain behaviors." We agree, and the survey is anonymous in that we do not collect the names of the respondents. In addition, the invitation letters and survey instruments inform the respondents that their responses are anonymous.

The Federal Register notice notifying the public of NHTSA's intent to submit this information collection to the Office of Management and Budget, and providing a 30-day

comment period, was published on November 10, 2020 (Vol. 85, No. 218, pp. 71717-71719).

A.9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

Because of the general decline in people's willingness to take surveys in all modes, researchers are challenged with finding ways to increase response rates.[18] A lower response rate increases the risk of non-response error, which occurs when sampled units who respond differ from those who do not respond in a way that impacts the survey's estimates.[19] Consequently, a low response rate can lead to biased research findings despite selecting a well-representative sample. Offering a non-contingent incentive is one method that researchers have used to improve survey response rates. The evidence for incentives increasing response rates has been well established.[20] Dirmaier et al. (2007)[21] and Ryu et al. (2006)[22] found that pre-paid monetary incentives were associated with higher rates of response to mail surveys. Millar and Dillman (2011)[23] found that mailing a pre-paid cash incentive induced response to a web survey, and Messer and Dillman (2011)[24] saw similar findings with both mail and web responses to a mixed mode survey in which some participants were contacted in both modes and others were contacted by mail only.

Thus, this survey will include a $2 non-contingent incentive. Based on research of social exchange theory, non-contingent incentives have been shown to increase response rates by engendering good will.[25] The norm of reciprocity anticipates that some people will feel more obligated to complete the survey—that is, to reciprocate the extra effort on the part of the researcher—than they otherwise would, leading to a higher response rate.[26]

[18] Dykema, J., Jaques, K., Cyffka, K., Assad, N., Hammers, R. G., Elver,K., et al. (2015). Effects of Sequential Prepaid Incentives and Envelope Messaging in Mail Surveys. *Public Opinion Quarterly, 79(4),* 906–931. https ://doi.org/10.1093/poq/nfv041.

[19] Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (4th ed.). Hoboken, NJ: Wiley.

[20] Singer, E., & Ye, C. (2013). The Use and Effects of Incentives in Surveys. *The ANNALS of the American Academy of Political and Social Science, 645(1),* 112–141. https ://doi.org/10.1177/00027 16212458082.

[21] Dirmaier, J., Harfst, T., Koch, U., & Schulz, H. (2007). Incentives increased return rates but did not influence partial nonresponse or treatment outcome in a randomized trial. *Journal of Clinical Epidemiology, 60(12),* 1263–1270. https ://doi.org/10.1016/j.jclinepi.2007.04.006.

[22] Ryu, E., Couper, M. P., & Marans, R. W. (2006). Survey incentives: Cash vs. In-Kind; Face-to-Face vs. Mail; Response Rate vs. Nonresponse Error. *International Journal of Public Opinion Research, 18(1),* 89–106. Retrieved from https ://doi.org/10.1093/ijpor /edh08 9.

[23] Millar, M. M., & Dillman, D. A. (2011). Improving Response to Web and Mixed-Mode Surveys. *Public Opinion Quarterly, 75(2),* 249–269. Retrieved from https ://doi.org/10.1093/poq/nfr003.

[24] Messer, B. L., & Dillman, D. A. (2011). Surveying the General Public over the Internet Using Address-Based Sampling and Mail Contact Procedures. *Public Opinion Quarterly, 75(3),* 429–457. Retrieved from https ://doi.org/10.1093/poq/nfr021.

[25] Lavrakas, P J. (2008). *Encyclopedia of Survey Research Methods.* SAGE Publications, Inc. DOI**:** https://dx.doi.org/10.4135/9781412963947.n331.

[26] Groves, R. M., Cialdini, R. B., & Couper, M. P. (1992). Understanding the Decision to Participate in a

The non-contingent incentive will be a $2 bill included in the first invitation letter to take the survey. This letter will be on NHTSA letterhead and describe the purpose of the study in a clear and relatable way.

A.10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy. If the collection requires a Systems of Records Notice (SORN) or Privacy Impact Assessment (PIA), those should be cited and described here.

Surveys are assigned to households selected via an address-based sample. Respondents within households are randomly chosen using the last birthday/next birthday method. In the mailed invitations, households are notified that their responses are voluntary, anonymous, and will only be reported in the aggregate. Surveys are self-administered and accessible at any time for a designated period. Participants can complete a survey only once using the study code provided in the forms.

Access to the online survey would be controlled using a unique ID-protected access. Online surveys will be self-administered and only accessible for a designated period. If the participant chooses to complete the mailed paper survey, again, the survey will be self-administered. Mailed paper surveys will be tagged with a unique ID code, known only to the researchers. The survey mailing will include a Business Reply Envelope (BRE), so that the participant can send back the survey without incurring mailing costs. The postal addresses of sample households will be kept separate from the data collected

and would be stored in restricted folders on secure FedRAMP[27] compliant servers that are only accessible to study staff who need to access such information.

All data collected from respondents will be reported in the aggregate, and identifying information will not be used in any reports resulting from this data collection effort. Rigorous de-identification procedures will be used during summary and feedback stages to prevent respondents from being identified through reconstructive means.

This proposed collection is covered under the Privacy Impact Assessment "NHTSA Office of Behavioral Safety Research (OBSR) Research Studies," which is available at https://www.transportation.gov/individuals/privacy/nhtsa-office-behavioral-safety-research-obsr-research-studies. NHTSA's Office of Behavioral Safety Research (OBSR) conducts research studies on behaviors and attitudes in highway safety, focusing on drivers, passengers, pedestrians, and motorcyclists, and uses those studies to develop and refine countermeasures to deter unsafe behaviors and promote safe alternatives. To carry out these research studies, such as the one associated with this proposed collection, OBSR contracts with universities and other research partners. This Privacy Impact Assessment was conducted because OBSR's contractors collect, process, and maintain Personally Identifiable Information on members of the public on behalf of NHTSA as part of these studies.

A.11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior or attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

Participants will be asked to answer several questions about their own thoughts, attitudes, perceptions, and behaviors to adequately measure the psychological and psychosocial constructs of interest. Some of these questions may be considered sensitive in nature. For example, the survey includes questions that ask about risk-taking behavior, health, perceptions that do not align with social norms, peer influence, and views towards government involvement. It is necessary to ask the specific questions included in the survey because they contribute to constructs used in the Theory of Planned Behavior. If questions were changed or removed, the constructs may not be able to achieve statistical robustness. However, participation in the survey will be completely voluntary. Participants may choose not to participate in any portion of the survey. If participants are uncomfortable with answering any of the survey questions, they can move on to the next question with which they feel comfortable.

A.12. Provide estimates of the hour burden of the collection of information on the respondents.

This collection has two phases – pilot and full collections. For the pilot, the contractor will send invitation letters to 1,000 households. The households will be randomly selected from an address-based frame via the U.S. Postal Service's Delivery Sequence

File (DSF). The DSF provides coverage of nearly all U.S. households.[28,29] To be eligible to participate, the respondent must be 18 years or older and have driven a motor vehicle

in the past month. Based on the 2016 iteration of the Motor Vehicle Occupant Safety

Survey, we estimate that 96% of households will have an eligible respondent.[30]

The pilot survey has a three-stage outreach. As stated above, the contractor will send the invitation mailing to complete the web-based survey to 1,000 households, of which 960 likely have an eligible respondent. The second mailing is a reminder postcard, while the final pilot mailing is a paper copy of the survey with a BRE. Based on corporate experience, the contractor estimates a 17% response rate for the pilot, which would result in an estimated 163 surveys.

The targeted number of completed instruments for the full survey is 7,000 for a nationally-representative component and 2,000 for each of four State components for a total target of at least 15,000 completions. The contractor estimates, based on corporate experience, that approximately 6% of people will start the survey but then breakoff. Given an assumed completion rate of 94%, NHTSA needs as many as 15,959 individuals (7,447 nationally and 2,128 in each of the four States) to respond to the invitation to achieve the target. The full survey has a five-stage outreach. Like the pilot, each sampled household will receive an invitation to complete the web-based version of the survey. The second mailing is a reminder postcard, while the third mailing is an invitation letter and paper copy of the survey with a BRE. The fourth mailing is another reminder postcard, and the fifth and final mailing is another invitation letter and paper copy of the survey along with a BRE. Overall, based on 34 years of corporate experience and the number and methods of outreach, the contractor estimates a response rate of 20.4% from eligible households. Given the expected response rate, NHTSA needs to send invitations to 78,229 households with an eligible respondent. Further, given the estimated household eligibility rate of 96%, NHTSA will need to send invitation letters to as many as 81,490 households (38,026 nationally and 10,866 in each of four States). While not every household will receive every reminder and subsequent invitation since some will respond right away, NHTSA does not have reliable estimates of the expected number of reminders and subsequent invitations. As such, the burden calculation assumes that all households receive all invitations and reminders.

The total burden hours for the respondents are derived by estimating the number of minutes each respondent would spend on each form and multiplying by the number of respondents (i.e., Form 1547 invitation letter 1 for the pilot phase: 1,000 Respondents × 2 minutes ÷ 60 = 33.3 hours). As detailed in Table 1, the total respondent burden hours for this pilot and data collection would be 16,323 hours -- up to 10,949 hours associated with survey invitations and reminders (33.3 + 16.7 + 33.3 + (2,716.3 × 3) + (1,358.2 × 2) = 10,948.6 or 10,949 hours) and up to 5,374 hours associated with completing the survey (54.3 + 5,319.7 = 5,374 hours).

Table 1. Survey Burden by Form

Form Number	Form Name	Respondents	Minutes per Respondent	Total Burden in Hours
Form 1547	**Invitation Letter 1**	**1,000 (pilot) 81,490 (full)**	**2**	**2,750**
Form 1548	**Reminder Postcard 1**	**1,000 (pilot) 81,490 (full)**	**1**	**1,375**
Form 1549	**Invitation Letter 2**	**1,000 (pilot) 81,490 (full)**	**2**	**2,750**
Form 1550	**Reminder Postcard 2**	**81,490 (full)**	**1**	**1,358**
Form 1551	**Invitation Letter 3**	**81,490 (full)**	**2**	**2,716**
Form 1552	**Survey**	**163 (pilot) 15,959 (full)**	**20**	**5,374**
Total				**16,323**

To calculate the opportunity cost to respondents associated with each form, NHTSA used the national average hourly earnings of all employees on private nonfarm payrolls which

the Bureau of Labor Statistics lists at $28.43.[31] NHTSA estimated the opportunity cost for each form (i.e., Form 1547 invitation letter 1 for the pilot phase opportunity cost = (2 minutes ÷ 60 × $28.43 = $0.95) × 1,000 Forms 1547 = $950) and arrived at a total opportunity cost of $464,054. Table 2 includes the estimated opportunity costs associated with each form along with the associated burden hours.

Table 2. Burden Hours and Costs by Form

Form	Description	Respondents	Est. Minutes per Respondent	Est. Opportunity Cost per Form	Total Opportunity Cost per Form per phase	Total Opportunity Cost per Form	Total Burden Hours per Form per phase	Total Burden Hours per Form
Form 1547	Invitation Letter 1 -Pilot Survey	1,000	2	$ 0.95	$ 950.00	$ 78,365.50	33.3	2,749.6
	Invitation Letter 1 -Full Survey	81,490	2	$ 0.95	$ 77,415.50		2,716.3	
Form 1548	Reminder Postcard 1 – Pilot Survey	1,000	1	$ 0.47	$ 470.00	$ 38,770.30	16.7	1,374.9
	Reminder Postcard 1 - Full Survey	81,490	1	$ 0.47	$ 38,300.30		1,358.2	
Form 1549	Invitation Letter 2 -Pilot Survey	1,000	2	$ 0.95	$ 950.00	$ 78,365.50	33.3	2,749.6
	Invitation Letter 2 -Full Survey	81,490	2	$ 0.95	$ 77,415.50		2,716.3	
Form 1550	Reminder Postcard 2 - Full Survey	81,490	1	$ 0.47	$ 38,300.30	$ 38,300.30	1,358.2	1,358.2

Survey. *Public Opinion Quarterly, 56(4),* 475–495. DOI: 10.1086/269338.

[27] "The Federal Risk and Authorization Management Program (FedRAMP) is a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services." *See* https://www.fedramp.gov/about/

[28] Montaquila, J. M., Hsu, V., Brick, J. M., English, N., & O'Muircheartaigh, C. (2009). A Comparative Evaluation of Traditional Listing vs. Address-Based Sampling Frames: Matching with Field Investigation of Discrepancies. *Proceedings of the Survey Research Methods Section of the Joint Statistical Meetings*, 4855–4862.

[29] Mansour, F. (2010). Enhancing the Computerized Delivery Sequence File for Survey Sampling Applications. Paper presented at the 65th Annual Meeting of the American Association for Public Opinion Research; Chicago, IL, USA.

[30] Spado, D., Schaad, A., & Block, A. (December 2019). *2016 Motor Vehicle Occupant Safety Survey; Volume 2: Seat belt report* (Report No. DOT HS 812 727). National Highway Traffic Safety Administration. *See* https://rosap.ntl.bts.gov/view/dot/43609

[31] January 2020. *See* https://www.bls.gov/news.release/empsit.t19.htm.

Form 1551	Invitation Letter 3 -Full Survey	81,490	2	$ 0.95	$ 77,415.50	$ 77,415.50	2,716.3	2,716.3
Form 1552	Pilot Survey	163	20	$ 9.48	$ 1,545.24	$ 152,836.56	54.3	5,374.0
	Full Survey	15,959	20	$ 9.48	$ 51,291.32		5,319.7	
Totals						**$ 464,053.66 or $ 464,054**		**16,322.6 or 16,323**

A.13. Provide an estimate of the total annual cost to the respondents or record keepers resulting from the collection of information.

Participation in this collection is voluntary, and there are no costs to respondents beyond the time spent completing the survey.

A.14. Provide estimates of the annualized cost to the Federal Government.

As described in the contract with M. David and Company, the estimated total cost to the Federal government for this collection is $1,490,336 (including the $2 incentive fee). The annualized cost over the 60 months of the project is $298,067 per year. The estimated cost in terms of government time is approximately 120 hours for the Contracting Officer's Representative (COR) and 20 hours for the supervisor for a total estimated cost of $7,565 in wages. Using the annual salary of $102,663 for a GS-13, Step 1, in Washington, DC, the estimated cost of wages for the COR is $5,923 (120 X $49.36) Using the annual salary of $170,800 for a GS-15, Step 6, in Washington, DC, the estimated cost of wages for the supervisor is $1,642 (20 X $82.12).

A.15. Explain the reasons for any program changes or adjustments reported on the burden worksheet. If this is a new collection, the program change will be entire burden cost and number of burden hours reported in response to questions 12 and 13. If this is a renewal or reinstatement, the change is the difference between the new burden estimates and the burden estimates from the last OMB approval.

This is a new information collection. As such, it requires a program change to add the estimated 16,323 hours for the new information collection to existing burden.

A.16. For collection of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions as applicable.

A final electronic file containing all data collected in the study will be developed. The full sample weights will be developed for analysis. A data dictionary including variable names, labels, and value labels/ranges will be designed to accompany the final file. The analysis plan for the data includes the following types of analysis using the weighted data:

- Descriptive analysis using proportions, means, confidence intervals, by subpopulation when necessary;
- Analysis to uncover subsets of the population that have differences in drowsy driving knowledge, attitudes, and behavior;
- Linear regression analysis to study the relationship between drowsy driving and demographic, regional, psychological, health, social situational factors, as well as motives for drowsy driving; and

- Multi-process or multi-equation logistic modeling, and/or structural equation modeling/ latent trait analysis to extend the demographic and regional models predicting drowsy driving to discern if psychological, health, and social-situational variables account for demographic and regional differences.

NHTSA will develop a final report that presents the aggregate statistics and results from the data collection effort, which will be disseminated on the agency website. We expect data collection to take place in 2021, and we expect the report will be published in 2023. Individual data will not be identified in the report.

A.17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The expiration date for OMB approval will be displayed.

A.18. Explain each exception to the certification statement identified in "Certification for Paperwork Reduction Act Submissions." The required certifications can be found at 5 CFR 1320.9.

No exceptions to the certification are made.