

# **Supporting Statement for Drunk Driver Segmentation Research Plan**

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**December 23, 2015**

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## A. Justification

The National Highway Traffic Safety Administration (NHTSA), under the U.S. Department of Transportation (USDOT), was established to reduce the number of deaths, injuries, and economic losses resulting from motor vehicle crashes on the Nation's highways. As part of its statutory mandate, NHTSA is authorized to conduct research as a foundation for the development of traffic safety programs.

NHTSA proposes to conduct a national segmentation study of drunk drivers of vehicles and drunk riders of motorcycles. A vital step in doing the study is first to collect relevant data about the characteristics of drivers and riders.

For this data collection, NHTSA is seeking approval from the Office of Management and Budget (OMB) to conduct a national Web-based panel survey. The survey will be administered to 2,200 at-risk drivers/riders in the age group of 21-54 (the age group determined by USDOT's Fatality Analysis Reporting System (FARS) to constitute the greatest number of alcohol-related driving/riding fatalities).

After collection of the data, segmentation analysis will be done to classify drivers and riders according to segments based on common demographics, drinking behaviors, attitudes about drinking and driving, lifestyle characteristics and media use habits. Such segmentation profiles provide NHTSA's Office of Communications and Consumer Information (OCCI) staff a pragmatic and cost-effective means to better target and reach intended audiences with communications messages and techniques that are relevant and meaningful to people within the target market. Target market segmentation profiles (such as the type desired by NHTSA) have been proven useful and effective by companies and non-profit organizations throughout the United States for marketing, communications, sales, product/service development, and customer service.

### **A1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

#### *a. Circumstances making the collection necessary*

NHTSA was established to reduce the number of deaths, injuries, and economic losses resulting from motor vehicle crashes on the Nation's highways. As part of this statutory mandate, NHTSA is authorized to conduct research as a foundation for the development of traffic safety programs.

A significant cause of highway fatalities, injuries and economic losses is drunk driving. Alcohol-impaired driving fatalities totaled 10,076 in 2013. These crashes accounted for 31% of all motor-vehicle-crash fatalities. On average, in 2013, there was an alcohol-impaired driving fatality every 52 minutes. Among motorcycle riders, in particular, 27% of riders in fatal crashes were legally drunk – a rate exceeding that of passenger car drivers (23%) and the highest among all vehicle types measured. Aside

from the fatalities, alcohol-impaired driving crashes carried an economic cost of an estimated \$44 billion in 2010 (the most recent year for which cost data are available).<sup>1</sup>

Even when crashes are not involved, the number of incidences of drunk driving is noteworthy. Nearly 1.17 million drivers were arrested in 2013 for driving under the influence of alcohol or narcotics (according to the FBI's Uniform Crime Report). This was an arrest rate of 1 for every 181 licensed drivers.<sup>2</sup>

NHTSA-led efforts over many years have aimed to urge drivers to not operate a vehicle when "buzzed" or drunk. Such efforts have included high-visibility enforcement (during periods in which both enforcement and communications via paid, earned, and social media are coordinated), on-going social norming communications programs, technical assistance for State Partners' Governor's Highway Safety Offices, collaboration with advocacy groups and the alcohol industry to promote "drive responsibly" messages, and other means to remind drivers of the importance of not driving drunk. In general over a 10-year span, there has been some success (in 2003, 13,096 died in alcohol-impaired-driving crashes, compared to 10,076 in 2013), attributable to a number of factors including NHTSA-led efforts. However, the problem is still significant and fatalities persist, so NHTSA continues to strive to find ways to decrease these numbers.

Further, NHTSA's communications messages about drunk driving must "compete" for audience attention in the public domain among hundreds of other major marketers, including those in the alcoholic beverage industry that strategically target particular messages to particular groups of the public marketplace. It is in the consumer marketing context and environment that NHTSA must strive to urge and convince members of the driving/riding public to not operate vehicles when impaired by alcohol. As such, the type of segmentation analysis proposed here would be especially useful to NHTSA within that competitive context, just as similar analyses have benefitted other companies/organizations.

More closely understanding and segmenting drunk drivers and riders will inform more cost-effective communications programs. Insights about drunk drivers'/riders' media consumption and lifestyle characteristics, alcohol consumption behaviors, and attitudes towards drunk driving will provide useful, pragmatic information for NHTSA's continuing efforts to address the drunk driving/riding issue that has been responsible for so many deaths.

#### *b. Statute authorizing the collection of information*

Title 23, United States Code, Chapter 4, Section 403 (attached as Appendix A) gives the Secretary authorization to use funds appropriated to carry out this section 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 (A) 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; communications; and with respect to (B) human behavioral factors and their effect on highway and traffic

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<sup>1</sup> National Center for Statistics and Analysis. (2015, July). Overview: 2013 data. (Traffic Safety Facts. Report No. DOT HS 812 169). Washington, DC: National Highway Traffic Safety Administration.

<sup>2</sup> [www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/table-29](http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/table-29)

safety, including impaired driving. [See 23 U.S.C. 403(b)(1)(A)(i), 23 U.S.C. 403(b)(1)(A)(ii), 23 U.S.C. 403(b)(1)(A)(iii), 23 U.S.C. 403(b)(1)(B)(ii)].

**A2. 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.**

The data collected in the survey and subsequent segmentation profiles will be used to assist NHTSA in its ongoing responsibilities to improve communications programs and campaigns to decrease the incidence of drunk driving/riding, thereby decreasing the number of vehicle and/or motorcycle crash fatalities in which alcohol-impaired drivers/riders are a factor. The results will also be made available to State Partners for their information and communications program campaign efforts. By knowing the segments of the population of drunk drivers/riders – and by typifying each segment according to demographic characteristics, lifestyle traits, drinking behaviors, media consumption characteristics, and attitudes about drinking-and-driving/riding and enforcement – NHTSA will be better informed and equipped to develop more cost-effective communications strategies, messages, and materials that will help convince potential drinker-drivers/riders to not operate vehicles/motorcycles when impaired. More specifically, the insights about at-risk drivers/riders will help inform NHTSA about the most effective words, images, media, message tonalities, and other communications tactics to use that will be the most meaningful, relevant and impactful for people in a given segment.

**A3. 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, e.g. permitting the electronic submission of responses, and the basis for the decisions for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

The data will be collected electronically via the Internet. NHTSA proposes this method of collection for these reasons:

- Cost considerations: The targeted groups are such a small part of the general population that it would not be practical from a cost and efficiency standpoint to attempt to locate them through mass mailings or phone calls as would be necessary using other data collection modes.
- Pragmatic considerations: Due to numerous questions that involve scaled responses (such as Likert-type scale ratings and semantic differential scales), Web-based data collection is more practical for participants' responses. Risk of respondent fatigue and disengagement for such forms of data collection would be higher if data were collected via phone or in-person interviews.

Additionally, the survey will be programmed to allow respondents to choose to partially complete and save their answers so they may return and resume the survey at another time (within a limited

timeframe of approximately seven days). This will also help lower risk of respondent fatigue and disengagement.

- Burden-reduction considerations: Due to numerous questions that involve scaled responses (as noted in the point above), Web-based data collection is projected to consume less burden time compared to telephone or in-person interviews. Further, because the sample participants have previously opted-in to receiving Web-based surveys, they will already be attuned and relatively skilled with responding to surveys via Web-based means.
- Respondent “anonymity” considerations: Several questions will query somewhat sensitive information concerning respondents’ drinking behaviors, attitudes about drinking and driving, and attitudes about law enforcement. NHTSA believes respondents are more likely to answer these questions truthfully via a more “anonymous” and less personal Web-based medium, versus direct interaction/conversation with another person.

**A4. 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.**

A duplicate government segmentation study has not been done previously. However, in 2007, a drunk-driving segmentation study was done by the Governor’s Highway Safety Association (GHSA). That segmentation study is now eight years old. Over that time span, media consumption and lifestyle characteristics of drivers have changed significantly as a result of new technologies (e.g., mobile devices), new forms of media (e.g., rapid adoption/use of social media, decreased influence of more conventional media), and an improved economy leading to more opportunities for discretionary spending and social activities that may include alcohol consumption. Another significant shift is the continuing emergence of the “Millennial” generation (persons generally ages 14-34 currently) moving into the legal-drinking-age cohort. Furthermore, the GHSA 2007 study did not attempt to analyze the motorcycle rider group of citizens.

**A5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.**

The collection of information involves individuals and will not impact small businesses or other small entities.

**A6. 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 burden.**

If the study is not implemented, NHTSA will be limited to using outdated target market and segmentation data reported by GHSA. In this circumstance, NHTSA would risk using resources and money for anti-drunk driving communications campaigns and programs that might be largely irrelevant, ineffective and ignored among drunk drivers/riders. Further, the previous GHSA data did not address motorcycle riders. In fatal crashes in 2013, 27% of motorcycle riders had BACs of .08 g/dL or higher, as compared with 23% of drivers of passenger cars and 21% for light-truck drivers.<sup>3</sup> Therefore NHTSA's efforts to stem alcohol-impaired driving/riding fatalities would be hampered by lack of more up-to-date data and knowledge about effective messaging.

There are no legal or technical obstacles to reducing burden.

**A7. Explain any special circumstances that would cause an information collection to be conducted in a manner that is not consistent with the guidelines in 5 CFR 1320.6.**

No special circumstances require the collection to be conducted in a manner inconsistent with the guidelines in 5 CFR 1320.6.

**A8. Provide a copy of the FEDERAL REGISTER document soliciting comments on extending the collection of information, a summary of all public comments responding to the notice, and a description of the agency's actions in response to the comments. Describe efforts to consult with persons outside the agency to obtain their views.**

FEDERAL REGISTER NOTICE: The 60-day notice was published on May 9, 2014, Volume number\_\_\_\_, FR-US DOT Docket No. NHTSA-2014-0050.

No comments were received in response to the Notice.

CONSULTS WITH PERSONS OUTSIDE THE AGENCY: For all aspects of development of the research plan, NHTSA's project staff has worked closely with its marketing communications and advertising contractor (The Tombras Group) and with The Tombras Group's subcontractor (W5, Inc.), a marketing research company with extensive experience in designing and conducting segmentation studies.

**A9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

Online research panel members are provided (by the consolidator of the panel) points redeemable for cash and/or general merchandise as a thank you for participating in studies. The amount of points provided per study varies depending on the survey length and complexity and incidence expectations for completion. Participants who respond to the full survey will be awarded an incentive by the panel provider valued at

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<sup>3</sup> National Center for Statistics and Analysis. (2015, July) Overview: 2013 data. (Traffic Safety Facts. Report No. DOT HS 812 169). Washington, DC: National Highway Traffic Safety Administration.

\$5. Contingent on the panel provider's incentive award program, this could be in cash or points (redeemable for merchandise) that are valued at \$5. No respondent will receive an incentive greater than the \$5 amount.

**A10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation or agency policy.**

In the survey's introduction, respondents will be informed that participation is voluntary, and their answers will be kept private and will be used only for statistical purposes. These surveys will not collect identifying information such as names, addresses, telephone numbers, or social security numbers. Upon completion of the survey, it will not be possible for anyone to identify a respondent based on his or her responses to the survey questions.

The following text will appear in an introductory window, prior to an invitee seeing the first question of the survey:

Thank you for agreeing to participate in this online study. The survey will take an average of 25 minutes to complete.

This study is being conducted on behalf of the National Highway Traffic Safety Administration (NHTSA). This collection of information is voluntary and will be used for communications campaigns and programs to help reduce the number of fatal alcohol crashes on roads and highways. We will not collect any personal information that would allow anyone to identify you. A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2127-XXXX.

Public reporting for this collection of information is estimated to be an average of 25 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are voluntary. If you have comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, send them to: Information Collection Clearance Officer, National Highway Traffic Safety Administration, 1200 New Jersey Ave, S.E., Washington, DC, 20590.

**A11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

Some of the subject matter of this survey would be considered sensitive, particularly attitudes and experiences related to drinking, driving and riding. Yet collection of this information is critically

important to the insights sought by the survey. Measures will be in place to allow respondents to decline to answer any question. Agreement to answer questions will be strictly voluntary.

No questions will be asked pertaining to sexual behavior, sexual orientation, religious beliefs and other sensitive matters unrelated to drinking and driving/riding.

**A12. Provide estimates of the hour burden of the collection of information.**

A total of 2,200 drivers/riders will complete the full survey, with an average completion time of 25 minutes. To obtain 2,200 completions, the NHTSA Contractor will send requests for survey participation to 220,000 randomly selected panel members. NHTSA plans to administer this study one time.

Data collection will involve three phases of engagement, each with differing numbers of individuals and time needed to complete:

1. Receipt and review of the survey invitation, among 220,000\* recipients; average time: 1 minute.
2. Response to the battery of screening questions, among 22,000\* recipients who open the survey; average time: 4 minutes
3. Response to the complete survey (once qualified as eligible or of interest, via the screening questions), among 2,200 respondents; average time: 20 minutes

*\* Explanation and rationale for these numbers of recipients/respondents are noted in the sub-section “Expected Response Rates” under B1. in Part B of the Supporting Statement*

Based on these estimates, the total estimated burden is 5,868 hours total, per the table below:

**TABLE:**

**ESTIMATED BURDEN HOURS**

	<b>Time</b>	<b>N</b>	<b>Total Hours</b>
Recipients	1/60 <sup>th</sup> hour	220,000	3,667
Screening	1/15 <sup>th</sup> hour	22,000	1,467
Full Survey	1/3 <sup>rd</sup> hour	2,200	734
<b>Total Burden Hours</b>			<b>5,868</b>

The maximum total input cost, if all respondents were interviewed on the job, is estimated as follows:

$$\text{\$17.09 per hour*} \quad \times \quad 5,868 \text{ interviewing hours} \quad = \quad \text{\$100,284.12}$$

\* From Bureau of Labor and Statistics' median hourly wage (all occupations) in the May 2014 National Occupational Employment and Wage Estimates, Last Modified March 2015 ([www.bls.gov/oes/current/oes\\_nat.htm](http://www.bls.gov/oes/current/oes_nat.htm))

The survey will not involve an actual monetary cost to the respondents.

**A13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information.**

There are no record keeping or reporting costs to respondents. Respondents who are members of an online panel of U.S. consumers will be contacted and asked to participate in the study. Each respondent participates only once in the data collection. Thus there is no preparation of data required or expected of respondents. Respondents do not incur: (a) capital and startup costs, or (b) operation, maintenance, and purchase costs as a result of participating in the survey.

**A14. Provide estimates of annualized costs to the Federal government.**

Total estimated cost to the government for planning and designing the study, conducting the data collection, completing the segmentation analysis and reporting the findings is \$182,000.

**A15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I.**

This is a new information collection request, resulting in a program change of adding 5,868 burden hours to NHTSA's overall total.

**A16. For collections of information whose results will be published, outline plans for tabulation and publication.**

The prevailing goal of the study is to identify and describe drunk driver/rider segments of the US population. To do so, descriptive analyses, factor analysis, and k-means cluster modeling will be applied to the 2,200 participants' responses.

For the basis of the descriptive data analysis, data tabulation sets will be developed based on a tab plan customized to the final screener and questionnaire. Tabulations will each feature up to twenty-one (21) banner points. This number of banner points, along with their detailed statistical values, is expected to allow for descriptive comparative analyses of responses from sub-groupings of the sample based on behavioral, attitudinal, and demographic similarities/differences. The individual tabulations will include stubs for all closed-ended data points in the survey, means for Likert and Semantic Differential scale ratings frequency and percentage responses.

Factor analysis will be conducted utilizing SPSS (IBM Statistics) software to examine correlations within

sets of variables (across forty-five (45) potential segment defining variables total) reflecting respondents' self-reported drinking attitudes and behaviors, drinking and driving attitudes and behaviors, social behaviors, and personalities. The identification of correlated variables will aid in selection of variables that are relatively strong in explaining ways in which respondents may cluster. Variables with higher factor loadings from correlated combinations will be considered in cluster modeling.

The cluster modeling will also be conducted utilizing SPSS (IBM Statistics) software using k-means clustering. Cluster analyses will be conducted using variables selected after factor analysis and also informed by descriptive analysis of response to related survey questions. These analyses will vary in the number and selection of variables that will define emerging clusters. It is expected that approximately nine to fifteen (9-15) variables from the set of forty-five (45) potential segment defining variables will be successful in identifying viable cluster models for interpretation. Several cluster modeling outcomes will be examined with four to six (4-6) clusters per model. A cluster model and segmentation approach will be selected and the related clusters will be represented in an additional set of data tabulations for comparative descriptive analysis of responses to survey questions beyond the final defining metrics.

The final written PowerPoint-formatted report will contain detailed findings about each segment in narrative form. A comparative analysis across segments will be conducted to look for key differences that NHTSA may leverage in strategy moving forward. As appropriate, descriptive statistics for specific points of data and findings will be referenced. In the event the detailed data might be useful in the future, addenda will include data tables of all findings representing all questions in the survey.

Findings will be disseminated to NHTSA through a PowerPoint presentation deck reporting the results of the study, insights, and actionable recommendations. Included will be appropriate charts and graphs to illustrate findings and conclusions.

Internal briefings will be offered to NHTSA staff who will be responsible for strategic communications for NHTSA's messages regarding drunk driving/riding. NHTSA will subsequently determine what findings and data will be appropriate to share with State Partners.

The results of this study are to be used for internal planning purposes by NHTSA and shared with State Partners, Stakeholders, and placed on the NHTSA Website [TrafficSafetyMarketing.gov](http://TrafficSafetyMarketing.gov).

#### *Project timeline*

Upon OMB approval:

Survey programming and quality assurance	5 business days
Survey fielding	10 – 15 business days
Data processing/tabulation	5 business days
Analysis (including factor and clustering)	15 business days
Report preparation and delivery	5 business days

**A17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

We do not seek approval to not display the expiration date for OMB approval for this research plan.

**A18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.**

No exceptions to the certification are required for this research plan.