SUPPORTING STATEMENT

Drivers' Awareness of and Response to Significant Weather Events and the Correlation of Weather to Road Impacts

OMB CONTROL NO. 0648-0624

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

Random digit dialing (home phones and cell phones) will be utilized to gather 1,200 responses from licensed drivers, following three winter storm events. The survey domain is South Davis County, Salt Lake County, and Summit County, in Utah.

PEGUS Research, the survey firm, was asked to draw a simple random sample from all exchanges in the target area, and to conduct the interview in English. PEGUS Research will provide 75% RDD sample (nonautomated dialing system) and 25% cell phone sample (purchased cell phone numbers, participants drawn randomly from the list of numbers).

There are several criteria for inclusion which will affect the population to which the data can be generalized. The respondent (1) must be 18 years of age, (2) must not be driving at the time of the interview (targeted for callback), (3) must have a current driver's license for driving in Utah, (4) reside in one of the target counties (south Davis, Salt Lake, or Summit), and (5) travel regularly in the Salt Lake Valley (the area of interest to UDOT and NOAA). To increase validity of responses, respondents who cannot remember if they did or did not travel in the Valley on the day of the storm will be excluded.

The expected response rate, defined as the percentage of calls answered which result in completion of the survey, will be between 20% and 25%. This is consistent with RDD surveys of a similar length, conducted within the target area by PEGUS Research, during the past few years. A large enough sample to result in 400 responses per storm will be purchased, taking into account an expected 25 numbers dialed to result in each live contact, and at least four live contacts made to result in one completed survey.

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

More than 90% of Utah residents speak English. It is understood that there will be an underestimation of responses from Spanish speaking drivers (drivers' license exams are offered

only in English and Spanish). Using larger samples and fewer storms for greater precision with our estimates was considered, but it was decided that a sample size of 400 for each survey would be adequate for both point estimates and hypothesis testing (range within +/-5%), and that obtaining information about 3 different storm events will offset the reduced precision.

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

It is understood that the quality of the sample is greatly influenced by the response rate. The selected survey firm provides professional training, with an emphasis on interpersonal communication, one factor in promoting a higher response rate. The interviewers will be asked to call at different times during a 3-day period following the storm, so as to increase chances of reaching the targeted respondents. There will be 5 call-backs, prior to excluding a telephone number. One difficulty of this process is the short period of time in which to reach eligible respondents. It was decided to contact people within 3 days, and no longer, to increase the accuracy of their recollections, even though this limit has the potential to reduce the number of surveys completed.

The relatively low response rate and lack of information about nonrespondents will not allow us to make any claims that the responses will be representative of adult drivers in the three counties targeted. We will compare the demographic information in the responses to known county demographics; however, that will address only one aspect of nonresponse bias. However, we believe that the information gathered will still be of use in our planning.

In any presentations or publications, we will stress that we cannot claim that the sample of those who completed the survey is representative of the target population.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

The survey was designed in a collaborative effort between NWS, UDOT, NWN, and the University of Utah's Department of Psychology. The final survey was developed using a series of revisions based on interviews with colleagues. PEGUS Research, the survey firm, conducts in-house tests of the computerized version, so it is not anticipated that these participants will be contacted prior to the actual administration of the survey.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

The individuals listed below are the consultants for the statistical aspects of the design. As indicated, Dawn Straatsma, PEGUS Research, will coordinate data collection, and Carol Werner, University of Utah, will lead the analysis. The descriptive responses (weighted to represent the population) will be provided by PEGUS Research. The actual analyses will be supervised by

Carol Werner, who will be examining relationships among variables, rather than a simple item by item description.

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