B. Collections of Information Employing Statistical Methods.

When Item 17 on the Form OMB 83-I is checked "Yes", the following documentation should be included in the Supporting Statement to the extent it applies to the methods proposed:

1. Describe (including 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 government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection has been conducted previously, include the actual response rate achieved during the last collection.

The potential respondent pool includes the entire non-institutionalized U.S. adult population residing in telephone-equipped dwellings. This population does not include adults in penal, mental, or other institutions; adults living in other group quarters, such as dormitories, barracks, or boarding houses; adults living in a dwelling without a telephone; and/or adults who do not speak English or Spanish well enough to be interviewed.

The Genesys-ID system, which contains information on area-code exchange combinations with working numbers and U.S. Census demographic information in geographic regions defined by zip codes, will be used to construct a sampling of U.S. households. There will be a target of completed interviews 3,500 households nationwide.

In addition, there will be 6 regional city targets (that correspond to DHS Urban Area Security Initiative jurisdictions in the top tier of the Regional Catastrophic Preparedness Grant Program) as shown below. These locations may change as DHS identifies priority UASI jurisdictions.

We estimate the 6 target city regional samples below as follows at $^{\pm}$4.4% and at 95% confidence:

$$n = \left(\frac{z}{E}\right)^2 p(1-p)$$

n = 496.0744

Therefore, we are requesting a rounded 500 for each of the 6 regional city targets, totaling 3,000 bi-annually as below.

Simple Random Sample of Target Cities:

Geographic Regional	Interviews

Target Cities	
Houston	500
New York City	500
Chicago	500
San Francisco	500
Los Angeles	500
Washington, DC	500
Bi-annual Total	**3,000**

We estimate the stratified random national sample by FEMA's 10 regions as follows at $\pm$ 2% and at 95% confidence:

Stratified Random National Sample by FEMA Regions:

FEMA Regions	Interviews
Region I	350
Region II	350
Region III	350
Region IV	350
Region V	350
Region VI	350
Region VII	350
Region VII	350
Region IX	350
Region X	350
Bi-annual Total	**3,500**

In addition to the bi-annual regional total above, there will be a stratified random national sample 350 from 10 regions. i.e., 3,500 collected every two years as well totaling 6,500 bi-annual respondents. Therefore, 9,750 respondents will be in the three year period and there is average of 3,250 respondents per year. This will result in a total of 6,500 interviews in each survey cycle, which is 2 years in duration. These phone interviews will be placed using Random Digit Dialing technology, which guarantees equal probability of selection to all households containing at least one working residential telephone number. Respondents are selected without replacement also so that the same person can not be called for a regional sample and a national sample as well. The same form is given to both the regional respondents as well as the national.

Additionally, the calls will be made during weekday, weeknight, and weekends to ensure better representation. Under the direction of a Senior Analyst, results will be weighed according to known parameters, such as age, gender, and race. This allows the researcher to be confident that the sample frame is a scientifically valid representation of the U.S. population. The national response rate for the last cycle of this survey was 80%; we expect future surveys to achieve a similar response rate.

Stratified Random Sample:

The survey employs a random sample selection based on a 95 percent confidence level and a margin of error of ± 2 percentage points.

A description of the strata for each site that has elected to use a stratified sample is shown below.

The simplest form of stratified sampling has been implemented where an SRS is taken from each stratum. The variance estimate for each stratum is calculated by using standard statistical formulas as shown below.

The estimated variance for $\hat{p}_i$, an estimate of a population proportion in stratum i where stratum $i = 1, 2, \ldots,$ n, is given by[1]

$$\hat{V}(\hat{p}_i) = \frac{N_i - n_i}{N_i} \times \frac{\hat{p}_i(1 - \hat{p}_i)}{n_i - 1}$$

(1)

The estimated variance for the estimated population proportion of a stratified sample, $\hat{p}_{str}$, can be calculated by[2]

$$\hat{V}(\hat{p}_{str}) = \frac{1}{N^2} \sum_{i=1}^{n} N_i^2 \hat{V}(\hat{p}_i)$$

(2)

The estimated variance for the estimated population proportion of an SRS, $\hat{p}_{SRS}$, can be calculated by[3]

$$\hat{V}(\hat{p}_{SRS}) = \left(1 - \frac{n}{N}\right) \times \frac{\hat{p}(1 - \hat{p})}{n - 1}$$

(3)

The design effect, *deff,* for a stratified sample over an SRS can be shown by[4]

$$deff(plan, statistic) = \frac{V(\text{estimate from a sampling plan})}{V(\text{estimate from an SRS with same number of observation units})}$$

(4)

For each regional stratified sample, the table provides the following information:

[1] Scheaffer, Richard L., Mendenhall William, and Ott Lyman (1979). Elementary Survey Sampling 2nd Edition. Boston, MA: Duxbury Press, p. 78.
[2] ibid.
[3] Lohr, Sharon L. (1999) Sampling Design and Analysis. Brooks/Cole Publishing Company, p. 35.
[4] Lohr, Sharon L. (1999) Sampling Design and Analysis. Brooks/Cole Publishing Company, p. 239.

- Name of each stratum

- Universe for each stratum

- Sample size for each stratum

- Estimated variance, standard error, and margin of error for each stratum

- Estimated variance for each stratified sample

- Estimated variance for an SRS with the same number of observations as the stratified sample

- Estimated design effect for each stratified sample

The variances in the table below were calculated with the statistical formulas shown above. In the surveys the proportion, *p*, will be different for each question on the questionnaire. Therefore, in the calculations in table we used conservative estimates, $\hat{p}_i$ = 0.5 and $\hat{p}$ =0.5. The standard error, SE, is calculated as the square root of the variance and the margin of error, ME, is calculated as the standard error multiplied by 1.96.

If a region were to elect to use a complex survey design other than a stratified sample, standard statistical formulas for that precise sampling design would be used to calculate the sampling size, variance, standard error, and margin of error.

Total Sample or Name of Strata (FEMA Region)	Universe: Population over 18	Sample Size	$\hat{V}(\hat{p}_i)$	$SE(\hat{p}_i)$	$ME(\hat{p}_i)$	$\hat{V}(\hat{p}_{str})$	$SE(\hat{p}_{str})$
Region I	11010235	350	0.0007163	0.0267644	5%		
Region II	24387479	350	0.0007163	0.0267644	5%		
Region III	22182424	350	0.0007163	0.0267644	5%		
Region IV	44267423	350	0.0007163	0.0267644	5%		
Region V	38734429	350	0.0007163	0.0267644	5%		
Region VI	26385339	350	0.0007163	0.0267644	5%		
Region VII	10053325	350	0.0007163	0.0267644	5%		
Region VIII	7577034	350	0.0007163	0.0267644	5%		
Region IX	34414017	350	0.0007163	0.0267644	5%		
Region X	9236500	350	0.0007163	0.0267644	5%		
Total Sample	**228248205**	**3,500**				**9.33935E-05**	**0.009664**

2. Describe the procedures for the collection of information including:

- **Statistical methodology for stratification and sample selection,**

  The Genesys-ID system, which contains information on area-code exchange combinations with working numbers and U.S. Census demographic information in geographic regions defined by zip codes, will be used to construct a nationwide stratified random national sampling of 350 respondents from the 10 FEMA regions of U.S. households for a total of 3,500 interviews. The same techniques will be used to construct individual samples for each of the 6 selected regions. The regions are clearly defined by zip codes and can be identified through Genesys. These phone interviews will be placed using Random Digit Dialing technology, which guarantees equal probability of selection to all households containing at least one working residential telephone number. Results will be weighted to known parameters, such as age, gender, and race. This allows the researcher to be confident that the sample frame is a scientifically valid representation of the population. It should be noted that the target city regional interviews will not be analyzed with the nationwide interviews, so this is not considered a stratification.

- **Estimation procedure,**

  The population parameters are the entire non-institutionalized U.S. adult population residing in telephone-equipped dwellings. This population does not include adults in penal, mental, or other institutions; adults living in other group quarters, such as dormitories, barracks, or boarding houses; adults living in a dwelling without a telephone; and/or adults who do not speak English or Spanish well enough to be interviewed.

- **Degree of accuracy needed for the purpose described in the justification,**

  The bi-annual nationwide survey of 3,500 people will provide overall results at $\pm$2%, at 95% confidence.

  The bi-annual regional surveys of 500 people will each provide overall results at $\pm$4.4%, at 95% confidence.

- **Unusual problems requiring specialized sampling procedures, and**

  Under the direction of a Senior Analyst, results will be weighed according to known parameters, such as age, gender, and race.

- **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

There will not be less frequent than annual data collection cycles. This survey is scheduled to be conducted every other year. During each survey cycle, new respondents are contacted, so a respondent is only be burdened for one collection.

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

Methods to Maximize Response Rates**:**
-Surveys will be conducted during weekday, weeknight, and weekend hours to maximize response while minimizing response bias.

-During the telephone contact period, up to 10 attempts to call a number will be made.

-The length of the survey is approximately twenty minutes and respondents will be able to break during the survey if they are not able to complete it in one sitting.

-Respondents will also be provided with a toll-free number that they can call to complete the survey at their convenience.

-Interviews will also be conducted by bilingual interviewers who can conduct the survey in Spanish or English depending on the respondent's preference.

Control for Non-Response Bias: The national response rate for the last cycle of this survey was 80%; we expect future surveys to achieve a similar response rate. It is expected that these measures will help to maintain sufficiently high response rates suitable to analysis, but in the event of response rates falling below 80%, a non-response analysis will be performed on the group(s) in question. These analyses will be conducted by using the "SPSS Analysis of Missing Data" module of the general SPSS software package and the findings of the analysis will be addressed accordingly.

If there is substantial suspicion of a non-response bias in the survey results, a sub-sample of the nonrespondents will be collected and analyzed. If a nonresponse bias is found in the analysis, we would use weights to adjust the data for nonresponse. From the analysis of the respondents and nonrepondents, we would determine the probability of responding to the survey for each person, which we will call Ai for person i. We would then calculate the probability that person i is measured in the survey, P (unit i selected in the sample and responds) = AiBi, where Bi is the probability that person i will be selected in the sample.

The final weight for each person i will be: $\dfrac{1}{\hat{A}_i B_i}$.[5]

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[5] Lohr, Sharon L. (1999) Sampling Design and Analysis. Brooks/Cole Publishing Company, p. 265-266.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

The CATI survey is tested with fewer than 10 respondents, prior to fielding, to ensure correct skip patterns and procedures.

5. Provide the name and telephone number of individuals consulted on 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 information collection is conducted for the Community Preparedness Division Office of Citizen Corps by a contractor:

ICF Macro
11420 Rockville Pike
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301-770-5800

The representatives of the contractor who consulted on statistical aspects of design and will be responsible for conducting the planned data collection are:

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