Supporting Statement for
Paperwork Reduction Act Submissions

OMB Control Number: 1660 – NW80

Title: Post Hurricane Sandy Survivor Research

Form Number(s): FEMA Form 008-0-9; 008-0-10; 008-0-11

General Instructions

A Supporting Statement, including the text of the notice to the public required by 5 CFR 1320.5(a)(i)(iv) and its actual or estimated date of publication in the Federal Register, must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified in Section A below. If an item is not applicable, provide a brief explanation. When Item 17 or the OMB Form 83-I is checked "Yes", Section B of the Supporting Statement must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

Specific Instructions

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 universe for this study will consist of all adults (18 years of age or older) residing in counties receiving individual and public assistance from FEMA as a result of Hurricane Sandy. Respondents who report that they are currently living in those areas will be

considered eligible for this study. Given the overall incidence of the targeted population of the study and the relatively low incidence of specific sub-groups of interest –Asian Americans, Hispanics and African Americans, potential respondents will be selected from a recontact list of individuals from the ongoing Gallup RDD (Random Digit Dial) surveys (called the "Gallup daily track surveys").

For the daily track surveys (Well-being track and the Political and Economy track), Gallup interviews 1,000 adults nationally each day by telephone using both landline and cell phone samples. Survey respondents are asked a series of questions associated with well-being across a range of income and health status conditions in the Well-being track. In the Political and Economy track, the questions are on current political and economic issues. For each track, Gallup completes about 500 surveys daily. This happens seven days a week and excludes only major holidays. The survey methods for the daily track study uses a dual-frame RDD sampling methodology that includes landlines as well as wireless phones to reach those in wireless-only households, and a random selection method for choosing respondents within a sampled household. The landline part of the telephone sample is chosen from the universe of all area codes and telephone exchange combinations for landline phone numbers by using a list-assisted telephone sampling method (Casady and Lepkowski (1993)). The cell phone sample is selected from the telephone exchanges dedicated to cell phone numbers. Each sampled number is called up to three times to complete an interview. The survey asks respondents demographic questions including questions on race and ethnicity, income, zip code and age. The response to the zip code question is used to identify households in the designated counties. The respondents are also approached for permission to call them back at a later date, if necessary. This set of prescreened eligible households (Recontact List) with permission to call back will constitute the initial sample. Sufficient numbers of prescreened cases (respondents saying that they live in zip codes within the affected areas on the Gallup daily track survey) will be available to complete surveys for each group.

The average AAPOR response rate for the Gallup daily track surveys is about 12 percent. Of those who complete the daily track surveys, the percentage of respondents who agree to be recontacted at a later date is around 78 percent. The response rate for any follow-up survey based on the Recontact sample will obviously depend on several factors including the type of survey and the target population. For the proposed In-Depth Case Study on communities, we anticipate achieving a response rate in the range of 50 to 60 percent. As mentioned before, the Recontact list is proposed to be used as the sampling frame for the In-Depth Case Study on communities. Compared to starting with an RDD sample and screen for the targeted population (residing in specific counties or belonging to certain minority groups like Asians, Hispanics or African Americans), use of this prescreened sampling frame will be an effective strategy in terms of cost and time.

In order to examine the potential of Non-response bias associated with the data collected through the daily tracks, Gallup recently conducted a non-response bias study using 10,000 randomly selected numbers from the available pool of cases identified as non-respondents for the daily track surveys. The mode of data collection for this non-response follow-up study was telephone covering both landline and cell numbers identified as a non-interview record from the main study. The sampling plan involved recontacting up to 10,000 non-interviews drawn randomly from a population of all eligible non-interviews over a defined period of data collection. Gallup gathered data for the non-response bias study between April 1st, 2012 and Dec 31st, 2012. To take into account any seasonality that might exist in the ability to reach people at home or numbers to be disconnected or reassigned, fieldwork was spread out through the entire 8 month period. Hard refusals as well as numbers identified as ineligible for the main study such as non-residential and disconnects were excluded for the follow up study. Each of the selected number for the follow up non-response study received up to 15 additional calls spread across different time of day and different days of the week so as to optimize the chances of contacting and completing an interview. Out of 10,000 numbers that were dialed as part of the follow up non-response study, 1213 of them resulted in a complete interview.

The non-response follow-up study yielded very similar distribution of completes by gender. However there were slightly larger differences observed by age, education and by employment status. Additional call attempts to increase response rates appeared to be productive even after 10 calls have been made to a given number. The exclusion of these respondents may introduce a certain bias to substantive questions although the magnitude of the bias varies depending on the type of question and the subject matter. Given the magnitude of differences observed on most substantive measures, overall estimates including non-respondents from the follow up study and those from the main study are expected to exhibit very little difference in comparison to estimates using just the respondents from the main study. Moreover, appropriate sample weighting based on relevant demographic variables (like age, gender, education) can also be used effectively to address some of the non-response bias issues relating to these variables. The overall findings did not seem to indicate the existence of any significant differences between the respondents and the non-respondents to the daily track surveys and hence did not suggest the possibility of any significant non-response bias. For the purpose of examining the potential of non-response bias for the In-Depth Case Study on communities, a separate non-response analysis of Sandy data will be conducted.

For this In-Depth Case Study on communities, about 3000 interviews will be completed. The 3000 interviews for the In-depth case study will include an oversample of size 500 for each of the minority groups -African Americans, Hispanics, and Asians living in the designated counties. The remaining 1,500 interviews will be completed with the general U.S. adult population. The Recontact sample to be subsampled from the Gallup daily track surveys will include both landline and cell phones. For respondents reached on a

landline phone, one respondent will be chosen at random from all eligible adults within a sampled household. For respondents reached on a cell phone, the person answering the call will be selected as the respondent if he or she is otherwise found eligible. The oversample for each of the minority groups will be a representative sample from the corresponding national population. Estimates for any minority group will be based on the sample obtained by combining the corresponding oversample (of approximate size 500) and the completed interviews from the same minority group obtained from the remaining sample of size 1,500 with the general U.S. adult population. The sample size for each of the minority groups is therefore expected to be more than 500. For estimation of any unknown population proportion for specific minority group, the sampling error is not likely to exceed 5 percent under the assumption of a design effect of about 1.25 and assuming that the unknown population proportion is around 50 percent. Given that the sample size will be larger than 500 and that the unknown population proportion in many cases may not be around 50 percent or the design effect may in fact be lower, the expected sampling error associated with estimates for the minority population is likely to be even smaller than 5 percent. The anticipated sample size for minority groups will be adequate for comparison between two groups (for example, to detect a pre-specified difference say 0.10 between two proportions) at 5% level of significance with 80% power. Hence, the accuracy and reliability of the information collected in this study for subgroups like the minority groups will be adequate for its intended uses.

This study has not been conducted previously and so there is no past response rate to refer to. However, FEMA has been able to get high response rates on national preparedness surveys conducted previously. Also, given that the sample will be selected from a list of households where respondents have agreed to be recontacted, the hit and response rates for this final phase are expected to be higher. The goal will be to maximize the response rate by taking necessary steps as outlined in section B3 on "Methods to maximize response rates."

The population parameters are those individuals living in the counties receiving individual and public assistance from FEMA. The sample-based estimate (p) of the parameter representing an unknown population proportion (P) can be expressed as:

$$p = \frac{\sum_{i=1}^{n} W_i Y_i}{\sum_{i=1}^{n} W_i},$$

where $Y_i = 1$ if the ith sampled respondent belongs to the category of interest (living in a designated county) and 0 otherwise; W_i is the sample weight attached to the ith respondent and "n" is the number of completed surveys.

For this study, these parameters (proportions or means) will be estimated at the overall population level for sampled counties. The corresponding estimates at subgroup level (specific racial group, specific geographic parameters) may be computed and the precision associated with those estimates will depend on the resulting sample size (number of completed surveys) for these subgroups. As described above, groups of minorities living in the designated counties will be oversampled.

The telephone sample for the Gallup daily tracks, as mentioned before, includes both landline and cell phone numbers. The sample is purchased from Survey Sampling Inc. (SSI) from their latest available updated sampling frames. The landline sample is selected using a list-assisted telephone sampling procedure (Casady and Lepkowski (1993)) from the universe of all area code exchange combinations for landlines maintained by SSI. The cell phone sample is selected from the telephone exchanges of the Telcordia frame that are dedicated to cell phone numbers.

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

-Statistical methodology for stratification and sample selection:

-Estimation procedure:

-Degree of accuracy needed for the purpose described in the justification:

-Unusual problems requiring specialized sampling procedures: (e.g., special hard to reach populations, bias toward landline verses cell phone respondents, populations that need to be reached via other methods such as those who do not use telephones for religious reasons, large non-English speaking populations expected to be surveyed but only English questionnaires available, exclusion of elderly using computer response only, etc.)

(Note: For surveys with particularly low response rates and a substantial suspicion of non-response bias, it may be necessary to collect an additional sub-sample of completed surveys from non-respondents in order to confirm if non-response bias is present in the sample and make adjustments if appropriate.)

The In-Depth Case Study on communities may require targeting populations in specified counties based on their reported zip codes. The Recontact list to be used as the sampling frame for this study will contain relevant location information (zip codes) for the respondents to be screened based on where they live. As a result, it will be possible to subsample adequate number of eligible adults from selected zip codes. Both landline

and cell phone numbers will be included in the sample. The Recontact list will also include Spanish speaking respondents. The only segment that will not be covered will be the population in non-telephone households. However, the post-stratification weighting of sample will be based on data including the non-telephone households and hence the non-coverage of non-telephone households is not expected to introduce any significant bias in the survey based estimates.

For surveys with lower response rates, one way to examine the potential of non-response bias is to conduct a follow-up non-response bias study by collecting data from a subsample of non-respondents to the main survey. Typically, very little information is known about the non-respondents to a RDD telephone survey. For this study based on the sample from the Recontact list, a significant amount of information will be available about the non-respondents to the follow-up survey (who are respondents from the original Gallup daily track surveys). In particular, all relevant demographic information will be known for each entity on the Recontact list (or the sampling frame). It will, therefore, be possible to carry out a non-response bias analysis based on that information without undertaking additional data collection in the form of a separate non-response follow-up study. For further details on the proposed non-response bias analysis plan, please refer to section B3 of Part B.

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

The recontact sample will consist of U.S. adults who are currently living in households in counties receiving individual and public assistance from FEMA as a result of Hurricane Sandy. The sample will be geographically stratified into counties and sampling will be done independently within each county (region). The breakdown of the counties is given below.

New York:
- Sullivan
- Ulster
- Orange
- Putnam
- Rockland
- Westchester
- Bronx
- Queens
- Nassau
- Kings
- Richmond
- Suffolk

New Jersey:

- Sussex
- Passaic
- Warren
- Morris
- Essex
- Hudson
- Union
- Hunterdon
- Somerset
- Mercer
- Middlesex
- Monmouth
- Ocean
- Burlington
- Camden
- Gloucester
- Salem
- Cumberland
- Atlantic
- Cape May
- Bergen

Connecticut:
- Fairfield
- Litchfield
- New Haven
- Middlesex
- New London
- Windham
- Tolland

Rhode Island:
- Kent
- Washington
- Newport
- Bristol

The sample allocation across the counties will be based on proportional allocation i.e. the sample size allocated to any particular county will be roughly in proportion to the size of that county in terms of the estimated number of adults. Using proportional sample allocation, the targeted number of surveys to be completed in each county is expected to be close to those proportions. It may be noted that the actual number of completed surveys for each county (and by landline and cell phone strata within each

county) will depend on observed response rates and so they may not exactly match the corresponding targets. However, the goal will be to meet those targets to the extent possible by constant monitoring of the response rates and by optimally releasing the sample in a sequential manner throughout the data collection period.

Within each county, the sample will consist of both landline and cell phones. For within-household sampling, Gallup will use the "most recent birthday" method to randomly select one eligible person from all eligible adults in each sampled household. Following the "most recent birthday" method, the interviewer asks to speak with the eligible person in the household who most recently had a birthday. This is much less intrusive than the purely random selection method or grid selection that requires enumeration of all household members to make a respondent selection. For respondents reached on cell phones, there will not be any additional stage of sampling (as there is with the within-household sampling for landline sample). The person answering the call will be selected for the survey if he/she is found otherwise eligible.

For both landline and cell phones, the geographic location of the respondent will be determined based on respondent's self-reported response to a question on location (like "what is your zip-code?"). For the cell phone sample, data will be collected from all respondents regardless of whether they also have access to a landline. A respondent reached on a cell phone will be asked a series of questions to gather information on his/her use of telephone (cell only, landline only, or dual-user cell mostly and other dual users).

As mentioned above, the cell phone numbers for the Gallup daily track surveys are sampled from the telephone exchanges dedicated to cell phones while the landline numbers will be sampled from all 100-banks (with at least one listed residential number) of the remaining telephone exchanges. It may be noted that due to continuous porting of numbers from landline to cell and cell to landline, some numbers from landline exchanges may turn out to be cell phones and conversely, some numbers sampled from the cell phone exchanges may actually be landline numbers. However, such numbers will be relatively rare and the vast majority of landline and cell phone numbers will be from the corresponding frames. The survey will also find out from the respondents if the number called is actually a landline or a cell phone number. The physical location of respondents will therefore be based on their self-reported location information (for example, based on their self-reported zip-code information) and will not be determined based on their telephone exchange.

Estimation procedure—Sample data will be weighted to generate unbiased estimates. As stated previously, the sample for the In-Depth case study on communities will be

drawn from the Recontact List consisting of respondents who complete the Gallup daily tracks and are willing to be recontacted. The initial weight assigned to each sampled case will be equal to their weight derived from the Gallup daily track surveys. Thereafter, adjustments for (i) sub-sampling from the Recontact list (ii) non-response in the In-Depth case study on communities survey and (iii) post-stratification to the target population will be carried out to derive the final weights. Once the sampling weights are generated, weighted estimates can be produced for different unknown population parameters (means, proportions etc.) for the target population and also for population subgroups.

The weighting for the Gallup daily track surveys are done following the procedure described in Kennedy, Courtney (2007): Evaluating the Effects of Screening for Telephone Service in Dual Frame RDD Surveys, *Public Opinion Quarterly*, Special Issue 2007, Volume 71 / Number 5: 750-771. In studies dealing with both landline and cell phone samples, one approach is to screen for "cell only" respondents by asking respondents reached on the cell phones whether or not they also have access to a landline and then interviewing all eligible persons from the landline sample whereas interviewing only "cell only" persons from the cell phone sample. The samples from such designs are stratified, with each frame constituting its own stratum. For the Gallup daily tracks, however, a dual-frame design is used where dual users (those with access to both landline and cell phones) can be interviewed in either sample. This results in two estimates for the dual users based on the two samples (landline and cell). The two estimates for the dual users are then combined and added to the estimates based on landline-only and cell-only population to generate the estimate for the whole population.

Composite pre-weight— Following Kennedy, Courtney (2007), the composite pre-weight will be generated within each weighting class. The weight assigned to the ith respondent in the hth weighting class (h=1, 2, 3, 4) will be calculated as follows:

$$W_{(landline,hi)} = (N_{hl}/n_{hl})(1/RR_{hl})(n_{cwa}/n_{ll})(\lambda^{IDual}) \quad \textit{for landline sample cases} \quad (1)$$

$$W_{(Cell,hi)} = (N_{hc}/n_{hc})(1/RR_{hc})(1-\lambda)^{IDual} \quad \textit{for cellular sample cases} \quad (2)$$

where

N_{hl}: size of the landline RDD frame in weighting class h
n_{hl}: sample size from landline frame in weighting class h
RR_{hl}: response rate in weighting class h associated with landline frame
n_{cwa}: number of adults in the sampled household

I^{Dual}: indicator variable with value 1 if the respondent is a dual user and value 0 otherwise

N_{hc}: size of the Cell RDD frame in weighting class h

n_{hc}: sample size from Cell frame in weighting class h

RR_{hc}: response rate in weighting class h associated with Cell frame

'λ' is the "mixing parameter" with a value between 0 and 1. If roughly the same number of dual users is interviewed from both samples (landline and cell) within each state, then 0.5 will serve as a reasonable approximation to the optimal value for λ. This adjustment of the weights for the dual users based on the value of the mixing parameter 'λ' will be carried out within each state. For this study, the plan is to use a value of 'λ' equal to the ratio of the number of dual users interviewed from the landline frame and the total number dual users interviewed from both frames within each state.

It may be noted that equation (2) above for cellular sample cases doesn't include weighting adjustments for number of adults. For cellular sample cases, as mentioned before, there is no within-household random selection. The random selection can be made from all persons sharing a cell phone but the percentage of those sharing a cell phone is rather small and it will also require additional questionnaire time to try to capture such information. The person answering the call is selected as the respondent if he or she is otherwise found eligible and hence no adjustment based on "number of eligible adults in the household" is necessary. The information on the number of residential telephone lines reaching a household or the number of cell phones owned by a respondent could also be asked to make adjustments based on the number of landline telephone lines or cell phones. However, the percentage of respondents owning more than one cell phone is expected to be too low to have any significant impact on sampling weights. The adjustment based on the number of residential telephone lines is also not expected to have any significant effect on weights. For landline sample cases, the value for number of eligible adults (n_{cwa}) may have to be truncated to avoid extreme weights. The cutoff value for truncation is determined after examining the distribution of the variable (number of adults) in the sample. It is anticipated that this value may be capped at 2 or 3.

Response rate: The response rates (RR_{hl} and RR_{hc} mentioned above in equations (1) and (2)), are measured using the AAPOR (3) definition of response rate within each weighting class and will be calculated as follows:

RR   = (number of completed interviews) / (estimated number of eligibles)

= (number of completed interviews) / (known eligibles + presumed eligibles)

It is straightforward to find the number of completed interviews and the number of known eligibles. The estimation of the number of "presumed eligibles" is done in the following way: In terms of eligibility, all sample records (irrespective of whether any contact/interview was obtained) may be divided into three groups: i) known eligibles (i.e., cases where the respondents, based on their responses to screening questions, were found eligible for the survey), ii) known ineligibles (i.e., cases where the respondents, based on their responses to screening questions, were found ineligible for the survey), and iii) eligibility unknown (i.e., cases where all screening questions could not be asked, as there was never any human contact or cases where respondents answered the screening questions with a "Don't Know" or "Refused" response and hence the eligibility is unknown).

Based on cases where the eligibility status is known (known eligible or known ineligible), the eligibility rate (ER) is computed as:

ER = (known eligibles) / (known eligibles + known ineligibles)

Thus, the ER is the proportion of eligibles found in the group of respondents for whom the eligibility could be established.

At the next step, the number of presumed eligibles is calculated as:

Presumed eligibles = ER × number of respondents in the eligibility unknown group

The basic assumption is that the eligibility rate among cases where eligibility could not be established is the same as the eligibility rate among cases where eligibility status was known. The response rate formula presented above is based on standard guidelines on definitions and calculations of Response Rates provided by AAPOR (American Association for Public Opinion Research).

Post-stratification weight—Once the two samples are combined using the composite weight (equations (1) and (2) above), a post-stratification weighting step is carried out, following Kennedy (2007), to simultaneously rake the combined sample to (i) known characteristics of the target population (adults living in the designated counties, age,

gender, and race/ethnicity) and (ii) an estimated parameter for relative telephone usage (landline-only, cell only, cell mostly, other dual users). The target numbers for post-stratification weighting will be obtained from the latest available county data available.

The target numbers for the relative telephone usage parameter is based on the latest estimates from NHIS (National Health Interview Survey). For the purpose of identifying the "cell mostly" respondents among the group of dual users, the following question is used in the Gallup daily track survey.

DC

QID:103424   Of all the telephone calls your household receives **(read 1-3)**?

       1   All or almost all calls are received on cell phones

       2   Some are received on cell phones and some on regular phones, OR

       3   Very few or none are received on cell phones

       4   (DK)

       5   (Refused)

Respondents choosing response category 1 (all or almost all calls are received on cell phones) will be identified as "cell mostly" respondents.

After post-stratification weighting, the distribution of the final weights are examined and trimming of extreme weights, if any, are carried out if necessary to minimize the effect of large weights on variance of estimates. The weight so derived from the daily track survey will be assigned to each case on the Recontact list as their initial weight. For this study (In-Depth case study on communities), these weights, as mentioned before, will undergo non-response and post-stratification adjustments.

Degree of accuracy needed for the purpose described in the justification—

The margin of error (MOE) for estimating the unknown population proportion 'P' at the 95% confidence level can be derived based on the following formula:

$$\textit{MOE = 1.96 *}\sqrt{P*(1-P)/n} \textit{ where "n" is the sample size (i.e. the number of completed surveys).}$$

For this proposed In-Depth case study on communities, some design effect is expected but the precision for survey-based estimates for most subgroups of interest are likely to have reasonable precision. For example, let us consider the estimation of an unknown population proportion (P). The sampling error associated with any estimate for a subgroup based on a sample size of 1,000 with a design effect of 1.25 will still be below

±3.5 points under the most conservative assumption about the unknown value of P to be around 50 percent. As mentioned before, the sample size for each of minority groups (African American, Hispanic or Asian) is expected to be at least 500. For these subgroups with a minimum sample size of 500, the margin of error with a design effect of 1.25 will be less than ± 5% points. A minimum sample size of 500 (with a design effect of 1.25) i.e. an effective sample size of 400 will also be adequate for comparison between two groups (for example, to detect a pre-specified difference say 0.10 between two proportions) at 5% level of significance with 80% power. Hence, the accuracy and reliability of the information collected in this study will be adequate for its intended uses. The sampling error of estimates for this survey will be computed using special software (like SUDAAN) that calculates standard errors of estimates by taking into account the complexity in the sample design and the resulting set of unequal sample weights.

1. **Unusual problems requiring specialized sampling procedures**—Unusual problems requiring specialized sampling procedures are not anticipated at this time. If response rates fall below the expected levels, additional sample will be released to generate the targeted number of surveys. However, all necessary steps to maximize response rates will be taken throughout the data collection period and hence such situations are not anticipated.

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.

Note: Describe all possible actions you plan to take to maximize response including incentives, call-backs, follow up, survey length kept to a minimum to increase participation, letters urging the importance of their contribution to this data collection, etc.

Survey based estimates for this study will be weighted to minimize any potential bias that may be associated with unit level non-response. For the Gallup daily track survey recontact sample, a significant amount of information will be available for both for respondents and non-respondents. As a result, it will be possible to examine the non-response pattern within various demographic subgroups and, on that basis, construct suitable non-response weighting adjustment cells using variables that are available for both groups. In addition, the respondents to survey may be split into two groups: (i)

early or 'easy to reach' and (ii) late or 'difficult to reach' respondents. The total number of calls required to complete an interview will be used to identify these groups. This comparison will be based on selected key questions from the main survey and on the assumption that the latter group may in some ways resemble the population of non-respondents. The goal of the analysis plan will be to assess the nature non-response pattern in the main survey.

The exact definition of these two groups ("easy to reach" and "early to reach") will be finalized after examining the distribution of the 'number of calls' needed to complete an interview for this study. Comparison of estimates (proportions or means of selected key variables like proportion of satisfied customers, for example) between these two groups will be carried out by testing the hypothesis of equality of proportions (or means). The analysis can be done using survey weights. This process will help identify estimates that may be subject to non-response bias.

The first step will be to select the key variables (or survey questions) for the comparison of "Early" and "Late" respondents described above. For each of these selected variables, the mean of the two groups ('early' and 'late' respondents) will be compared based on a t- test using software SUDAAN. Let the mean (or equivalently the proportion of 1^s for a 0-1 variable) of 'early' and 'late' respondents for a specific variable (Y) based on survey data be denoted by p_1 and p_2 respectively. Then, p_1 can be written as

$p_1 = \sum W_i y_i / \sum W_i$, where y_i is 1 if the value of variable Y for the ith respondent is 1 and '0' otherwise; W_i is the weight assigned to the ith respondent and the summation in both numerator and denominator is over all 'early' respondents in the sample. p_2 can be similarly defined. The t-statistic for testing the equality of means for those two groups (H_o: $P_1 = P_2$ vs. H_1: $P_1 \neq P_2$ where P_1 and P_2 are the corresponding population means) will be computed as:

$t = (p_1 - p_2)/SE (p_1 - p_2)$, where SE $(p_1 - p_2)$ is the standard error or the estimated square-root of the variance of $(p_1 - p_2)$. In order to obtain the value of t-statistic (and the

corresponding significance level or p-value), appropriate software (like SUDAAN) will be used.

Methods to maximize response rates—In order to maximize response rates, Gallup will use a comprehensive plan that focuses on (1) a call design that will ensure call attempts are made at different times of the day and different days of the week to maximize contact rates, (2) conducting an extensive interviewer briefing prior to the field period that educates interviewers about the content of the survey as well as how to handle reluctance and refusals, (3) having strong supervision that will ensure that high-quality data are collected throughout the field period, (4) using troubleshooting teams to attack specific data collection problems that may occur during the field period, and (5) customizing refusal aversion and conversion techniques. Gallup will use a 5 + 5 call design, i.e., a maximum of five calls will be made on the phone number to reach the specific person we are attempting to contact and up to another five calls will be made to complete the interview with that selected person.

Issues of Non-Response—Survey based estimates for this study will be weighted to minimize any potential bias, including any bias that may be associated with unit level nonresponse. For any subgroup of interest, the sampling error will depend on the sample size. All estimates will be weighted to reduce bias and it will be possible to calculate the sampling error associated with any subgroup estimate in order to ensure that the accuracy and reliability is adequate for intended uses of any such estimate. Based on experience from conducting similar surveys previously and given that the mode of data collection for the proposed survey is telephone, the extent of missing data at the item level is expected to be minimal. We, therefore, do not anticipate using any imputation procedure to handle item-level missing data.

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.

Note: Pilot tests cannot be conducted on 10 or more persons without prior approval.

The CATI surveys will be tested with a total of 40 respondents across two waves of cognitive testing prior to fielding.

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 Individual and Community Preparedness Division by a contractor:

Gallup Inc.
901 F St. NW
Washington, DC 20004

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

Name	Agency/Company/Organization	Number Telephone
Dr. Manas Chattopadhyay	Gallup	202.715.3179
Susan Conner	Gallup	202.715.3124
Camille Lloyd	Gallup	202.715.3188

Reference

Robert J. Casady and James, M. Lepkowski (1993). Stratified Telephone Survey Designs. *Survey Methodology*, 19, 103-113.

Kennedy, Courtney (2007): Evaluating the Effects of Screening for Telephone Service in Dual Frame RDD Surveys, *Public Opinion Quarterly*, Special Issue 2007, Volume 71/Number 5: 750-771.