

**SUPPORTING STATEMENT**  
**U.S. Department of Commerce**  
**U.S. Census Bureau**  
**The American Community Survey**  
**OMB Control No. 0607-0810**

**B. Collections of Information Employing Statistical Methods**

**1. Sample Selection and Universe**

We will select the sample for the American Community Survey (ACS) and the Puerto Rico Community Survey (PRCS) in three parts: 1) a sample of household (HUs) addresses in the 50 states, the District of Columbia, and in Puerto Rico, 2) a sample of GQs and people in GQs in the 50 states, the District of Columbia, and in Puerto Rico and 3) a reinterview sample selected from households and GQs completing Computer-Assisted Personal Interviewing (CAPI) interviews.

**Household Sample**

**First-Phase Sample of Household Addresses**

For the 2005 ACS main sample, the frame of addresses from the MAF was divided into five sub-frames in the first phase, each containing 20 percent of the full frame. Addresses in each of the sampling rate categories were also divided equally among these sub-frames. This was accomplished by sorting the addresses in each county by new versus previously existing address, sampling rate category, and geographical order in the address frame. Consecutive addresses were then assigned in a specified order to each of the five 20 percent sub-frames. One of these sub-frames was designated the first-phase sample for 2005 and the remaining sub-frames were designated for the years 2006-2009. Starting with 2010, the sub-frames were re-used in the same order used during 2005-2009.

Since the first-phase sample was selected in 2005, when selecting the main samples starting with the 2006 ACS, only the addresses new to the MAF since the previous year's supplemental sample MAF are used in the first-phase sample. Similarly, for all supplemental samples, only addresses added to the MAF since that year's main sample MAF are used in the first phase. These new addresses are sorted by sampling rate category and geographical order in the address frame, and assigned in a specified order to the five existing sub-frames. The sub-frame allocated to the sample year is its first-phase sample, and addresses to be included in the ACS will be selected from it in the second-phase sample.

## Household Address Sampling Rates

Each year the specific set of sampling rates used in the second-phase sample must be determined for each of the non-fixed sampling rate categories. There were five sampling rates used from 2005-2010, four of these were determined each year and one was fixed at 10 percent. Beginning with the 2011 sample selection, 16 sampling rates were used. Three of the 2011 rates were fixed at 15 percent, 10 percent, and seven percent, respectively. The determination of the rates requires two steps. The first step is the calculation of initial overall sampling rates, which are defined as the sampling rates across both phases of sampling that produce approximately equal reliability across the categories for an estimate of a given characteristic and maintain the fixed ACS address sample. From 2005-2010 the U.S. sample size was approximately three million addresses per year and about 36,000 in Puerto Rico. Beginning in June of 2011, the monthly U.S. sample size was increased to an annual level corresponding to 3.54 million addresses per year. The ACS sub-samples addresses for the final stage of data collection. Because of this sub-sampling, the second step of defining the sampling rate refines these initial overall sampling rates.

**Initial Household Overall Sample Rates.** As the number of addresses in the United States and Puerto Rico increases over time, the initial overall rates for all but the smallest governmental unit categories (2005-2010: Measure of Size  $\leq 200$ ; 2011: Measure of Size  $\leq 200$ ,  $200 < \text{Measure of Size} \leq 400$ ,  $400 < \text{Measure of Size} \leq 800$ ) will be reduced annually to maintain the address sample (currently 3.54 million in the United States and about 36,000 in Puerto Rico), but their relative initial overall rates will remain constant. The initial overall sampling rate for the smallest governmental units will remain at 15 percent in future years.

**Final Household Overall Sampling Rates.** As part of maintaining the reliability of estimates across areas with differing proportions of the initial sample subject to CAPI sub-sampling, these initial overall rates are reduced for blocks in selected tracts in the United States. This reduction is based on the predicted level of completed interviews prior to CAPI sub-sampling for each tract.

The predicted rate of completed interviews prior to CAPI sub-sampling =  $(\text{annual number of interviews completed by the mail and CATI modes, by the end of their CATI month, for addresses mailed questionnaires}) / (\text{annual estimated number of occupied HUs mailed questionnaires})$ .

Since these rates were not available for all tracts in the country prior to 2005, projections were used for 2005-2007. For tracts that were included in the 2000-2003 ACS, these projections were based on production data from those years. In the remaining tracts these rates were projections based on a model that used information from Census 2000. Prior to the 2008 sample selection,

new predicted rates of completed interviews prior to CAPI sub-sampling for each tract were generated using ACS data for all tracts from February 2005-December 2006. These were used beginning with the 2008 sample selection.

In the 2005 ACS, the initial overall sampling rate for each block in the United States in one of the last two sampling rate categories (Measure of Size < 1200) was multiplied by 0.92 to obtain its final overall sampling rate if its tract had a level of completed interviews prior to CAPI sub-sampling of at least 60 percent and at least 75 percent of its addresses were defined to be mailable. Beginning in 2011, all blocks with a Measure of Size  $\leq 400$  (and not in the fixed rate categories) in tracts with a level of completed interviews prior to CAPI sub-sampling of at least 60 percent and at least 75 percent of its addresses defined to be mailable had the sampling rate multiplied by 0.92 to obtain its final overall sampling rate. In the remaining blocks in the United States the final overall sampling rates are the same as the initial overall sampling rates. Therefore, there were seven final overall sampling rates in the United States in 2005-2010 and 16 rates beginning in 2011. The reduction does not occur in Puerto Rico, so all blocks in Puerto Rico have the same initial and final overall sampling rates.

**Second-Phase Sample of Household Addresses.** The second-phase sample selects a subset of the addresses from the first-phase sample to be included in the ACS during the sample year. In the main sample, addresses selected for a county in the first phase are sorted by sampling rate category, new versus previously existing address, and first-phase order of selection. In the supplemental sample they are sorted by sampling rate category and first-phase order of selection. A systematic sample of addresses is selected for both the main and supplemental samples, where each address has a second-phase sampling rate equal to its final overall sampling rate divided by 20 percent, the first-phase sampling rate for all addresses.

Each address selected in the second-phase sample is assigned to a month. The set of all addresses assigned to a specific month is referred to as the month's sample. For the main sample, most of the addresses are sorted by their second-phase order of selection and assigned in a specified order to the 12 months of the year, starting with a randomly determined month. However, addresses that have been selected for one of several Census Bureau household surveys in the same year or in specified months (which vary by survey) of the two surrounding years are treated differently. Each of these addresses is assigned a month based on its interview month(s) for the other survey in such a way as to avoid individuals being asked to complete interviews for both the ACS and one of these surveys within a few months of each other.

Every month since January, 2005 until May, 2011, approximately 250,000 household addresses were in sample each month across every part of the United States. Beginning in June of 2011 this increased to roughly 295,000 per month in the U.S. The average Puerto Rico sample size remains at approximately 3,000. In the mail-out/mail-back areas, sample households for which a questionnaire is not returned in the mail and for which a telephone number is available are defined as the telephone nonresponse follow up universe. Interviewers in the Census Bureau's telephone centers, using Computer Assisted Telephone Interviewing (CATI), attempt to contact and interview these mail nonresponse cases.

In general, mailable sample addresses from which we have not received a response two months after the mailing of the survey questionnaires, and directly after the completion of the CATI operation, are subsampled at a rate of 1-in-2, 2-in-5, or 1-in-3 depending on tract and initial sampling stratum. Unmailable sample addresses are subsampled at a 2-in-3 rate. The selected addresses are assigned to Field Representatives who visit the addresses, verify the existence of a valid household address or declare the address nonexistent, determine their occupancy status, and conduct interviews using CAPI. Through 2009, the sample has yielded approximately 135,000 self-response interviews or 54 percent of the household addresses in sample each month. The CATI and CAPI follow-up has yielded an estimated final weighted response rate of approximately 97 percent since 2005.

In conjunction with the overall sample increase beginning with the June 2011 mailout, several improvements were made to our CAPI data collection. Beginning with the field work (CAPI) for the June 2011 panel, occurring in August of 2011, the following areas will have all of their unmailable and non-responding addresses sent to CAPI: American Indian lands with a proportion of American Indian population estimated to be 10 percent or more; Alaska Native Village Statistical Areas; and, Hawaiian Homelands. We expect the increase in the CAPI workload due to this change to be roughly 25,000 cases per year. Also, as we did for the January 2011 panel, all addresses in remote Alaska in September 2011 will be sent directly to the CAPI data collection mode.

The universe of addresses for the 2008 and 2009 sampling frames was derived from an updated version of the Master Address File (MAF) originally developed for Census 2000. The 2010 and 2011 universe of addresses was derived from the MAF updated with the results of address canvassing for the 2010 Decennial Census.

### **Group Quarters Sample**

Prior to 2011, the base for creating the Group Quarters (GQ) universe of addresses was the Census 2000 Special Place/Group Quarters file combined with the MAF inventory of GQ facilities. This file was modified to include GQs closed on Census day 2000 and updates from various sources such as HQ research and time of interview information. A sample of GQ residents will be selected and interviewed. Beginning in 2011, the GQ sampling frame included updates from the 2010 Census.

After determining that the GQ facility is in scope for GQ data collection, the FR asks for a list or register of names and/or bed locations for everyone that is living or staying at the sample GQ facility on the day of the visit. This register is used to generate the sample of residents to be interviewed. If a register is not available, the FR will create one using the GQ listing sheet. The listing sheet contains preprinted GQ contact and facility address information.

The FR uses the sampling component of the GQFQ instrument to verify the register provided to them by the GQ contact person. The instrument will proceed automatically to the beginning of the sampling component after the FR has entered all the required facility information and the GQ contact person verifies that there are people living or staying there at the time of the GQ visit. If there are no residents living or staying at the GQ facility at the time of the visit, the FR will complete the GQ-level interview to update the GQ information and the GQ type code will be determined. No person-level data collection follows.

The person-level sample of GQ residents is generated from the GQFQ instrument through a systematic sample selection. The FR matches the line numbers generated by the instrument for the person sample to the register of current residents. A grid up to 15 lines long appears on the GQFQ laptop screen with a place for name and sample person location description, the line number corresponding to the register, a telephone number, a telephone extension, and a GQ control number (assigned by the GQFQ sampling program). To complete the sampling process, the FR enters information that specifically identifies the location of each sample person into the GQFQ.

Each year, approximately 200,000 GQ residents will be selected for interviewing from about 20,000 GQ facilities. We will select a systematic sample of GQs and make assignments across the 36 months for the 2008-2010 ACS GQ and PRCS GQ. A separate sampling selection procedure will be implemented each year.

GQ facilities include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, workers' dormitories, and facilities for people experiencing homelessness. Each GQ facility is classified according to its GQ type. As noted previously, GQ

facilities were not included in the 2005 ACS but were included in 2006 and subsequent years.

There is no supplemental GQ sample; therefore, all GQ samples are selected during the main sampling phase. The sample is selected by state, not county, as is done with the HU sample. Some locations that were classified in Census 2000 as specific GQ types are not included in ACS data collection operations. These are domestic violence shelters, soup kitchens, regularly scheduled mobile food vans, targeted non-sheltered outdoor locations, crews of commercial maritime vessels, natural disaster shelters, and dangerous encampments. There are several reasons for their exclusion, depending on GQ type, including concerns about privacy and the operational feasibility of repeated interviewing for a continuing survey rather than once a decade for a census. Nevertheless, ACS estimates of the total population are controlled to be consistent with the intercensal population estimates. The exclusion of these GQ types may result in a small bias in some ACS estimates.

Two strata are created to sample the GQ facilities. The first stratum includes both small GQ facilities (having 15 or fewer people according to Census 2010 or updated information) and GQ facilities listed as closed on Census Day. The second stratum includes large GQ facilities (having more than 15 people according to Census 2010 or updated information). A GQ measure of size (GQMOS) is computed for use in sampling the large GQ facilities. GQMOS is the population of the GQ facilities divided by 10.

Different sampling procedures are used for these two strata. The small GQ stratum is sampled like the HU address sample and data are collected for all people in the selected GQ facilities. Like a HU, a small GQ facility is eligible to be in sample only once in five years. Groups of 10 people are selected for interview from GQ facilities in the large GQ stratum and the number of groups selected for a large GQ facility is a function of its GQMOS. Unlike HUs, large GQ facilities are eligible for sampling each year. From 2006 and 2007 all GQs were sampled at a rate of 2.5 percent. Beginning in 2008, the GQ sampling rates were determined at the state level and now range from 2.5 percent to approximately 7 percent.

**Small Group Quarters Stratum Sampling.** For the small GQ stratum, a two-phase sample of GQ facilities is selected in a method similar to that used for the HU address sample.

**First-Phase Sample.** The first-phase sampling procedure for 2006 assigned all of the GQ facilities in this stratum to one of five 20 percent sub-frames. The GQ facilities within each state are sorted by small versus closed on Census Day, new versus previously existing, GQ type, and geographical order in the frame. Consecutive GQ facilities are assigned to the five sub-frames in a specified order. One of these sub-frames was designated as the 2006 first-phase sample and the others were designated for the years 2007-2010. The

GQ facilities on the 2006 sub-frame were not eligible for sampling again until 2011, as the once-in-five-years restriction of HU addresses also applies to the small GQ stratum.

Beginning with the 2007 sample, all small GQ facilities that are new since the previous year's sampling (there will be no new GQ facilities that were closed on Census Day) will be sorted by GQ type and geographical order in the frame, and assigned to the five existing 20 percent sub-frames in a specified order for the first-phase sample. In 2007, the 2006 sub-frame will be defined as the 2011 sub-frame. The 2007 sub-frame becomes the 2007 first-phase sample.

**Second-Phase Sample.** The second-phase sample is a systematic sample of the GQ facilities from the first-phase sample sorted by new versus previously existing address and first-phase order of selection. Each state is assigned an overall GQ sampling rate ranging from 2.5 percent for the larger states to roughly 7 percent for the smallest state. Prior to 2008, all GQs in each state were sampled at 2.5 percent. Regardless of their actual size, all of small GQ facilities within a state have the same probability of selection. Every person in the GQ facilities selected in this second-phase sample is eligible to be interviewed. If the actual number of people in the GQ facility exceeds 15, even though it was included in the small GQ stratum, a field sub-sampling operation is performed to reduce the total number of sample people in the GQ facility to 10.

### **Large Group Quarters Stratum Sampling**

The ultimate sampling units for large GQ facilities are groups of 10 people within a GQ facility. The number of groups of 10 people that can be sampled from a large GQ facility is equal to its GQMOS. For example, if a GQ facility had 550 people in Census 2000, then its GQMOS is 55 and there are 55 groups of 10 people that are eligible for selection in the sample. A two-step sampling procedure is used to select the people to be included in the large GQ sample. The first step selects the GQ facilities and the number of groups in sample for each GQ facility. The second step selects the people within each GQ facility to be included in its sample groups.

**First-Step Sample (example).** If a state has a GQ sampling rate of 2.5 percent, then for the first step, all the large GQ facilities in a state are sorted by GQ type and geographical order in the frame, and a systematic sample of 1-in-40 groups is selected. GQ facilities with fewer than 40 groups, therefore, may or may not have one of its groups selected for the sample; GQ facilities with between 40 and 80 groups will have at least one group selected; GQ facilities with between 80 and 120 groups will have at least two groups selected; and the like.

**Second-Step Sample.** The second step of sampling takes place within each GQ facility which has at least one group selected in the first step. When a field representative visits a GQ facility to conduct interviews, an automated listing instrument is used to select the 10 people to be included in each group being interviewed. It computes sampling parameters based on the observed population at the time of interviewing in order to achieve a group size of 10. If the observed population is 15 or fewer, then the group size will be at most 10.

### **Group Quarters Sample Month Assignment**

The selected small GQ facilities and groups of 10 people for large GQ facilities are assigned to months in a manner similar to that used for HUs. All the GQ samples from a state are combined and sorted by small versus large stratum and second-phase or second-step order of selection. Consecutive samples are assigned to the 12 months in a pre-determined order, starting with a randomly determined month, except for state and federal correctional facilities.

Due to an interagency agreement, the same month is assigned to all sample groups of 10 people within a given state correctional facility. Additionally, the sample groups of 10 in all federal correctional facilities are assigned to September and data collection may take up to 4.5 months, an exception to the six weeks allowed for all other GQ types. For the sample groups of 10 in non-federal or state correctional facilities -- local jails, college dormitories, halfway houses, military disciplinary barracks, and other correctional institutions -- the individual GQ facilities are assigned to random months throughout the year. GQs selected in remote Alaska are assigned to one of two 4.5 month data collection periods from January through April or September through mid-January.

### **Remote Alaska Sample (Household and Group Quarters)**

Remote Alaska is a set of rural areas in Alaska that are difficult to access during the summer months due to muddy and impassable roadways and which do not have regular postal service. Recognizing the data collection related difficulties for field operations during some months, data collection operations in remote Alaska differ from what has been described for the rest of the country. In both the main and supplemental samples, the month assigned for each Remote Alaska HU address is based on certain types of geographical entities in which it can be contained. All addresses located in each specific geography of these types are assigned to the same month, either January or September. The assignment of each specific geographical entity to either January or September is done in such a way as to balance workloads between these months and to keep groups of cases together geographically. The addresses for each month are sorted by county and geographical order in the frame, and between 2005 and 2010 a sample of 2-in-3 of them was sent directly to CAPI in



the appropriate month. Beginning in January of 2011, all Remote Alaska housing unit addresses in sample were sent directly to CAPI. The GQ sample in remote Alaska is assigned to January or September in the same manner as are sample HU addresses. Up to four months is allowed to complete the HU interviews and GQ data collection for each assigned month in remote Alaska.

### **Sample Non-response Bias**

Non-response results in a smaller final sample size and leads to less reliable estimates. It also has the potential to introduce additional errors that can seriously distort the survey results. This error, referred to as non-response bias, occurs when a large number of sampled people fail to respond and have relevant characteristics that differ from the respondents. When unit non-response is low there is less concern with the potential effects of non-response bias. Fortunately, the weighted ACS non-response rate is very small at less than 4 percent.

## **2. Procedures for Collecting Information**

### **ACS Households**

The Census Bureau will mail survey materials to about 295,000 HU addresses each month. The mailing operations will be conducted through the U.S. Postal Service. The current plan is to use first-class postage rates for all pieces. Unmailable household addresses will be sampled and included in the CAPI data collection mode.

For addresses that were mailed survey materials but did not respond by mail or by Internet, we will attempt to find phone numbers by matching addresses to commercial phone number lists. We will attempt CATI interviews for all mail non-respondent household addresses for which we obtain phone numbers. After the CATI operation is complete, we will select a sub-sample of all households that still have not responded and assign them to the CAPI data collection mode. This sub-sample includes household addresses that were not mailable, without telephone numbers, and CATI non-interviews.

For households and the household population, we will calculate weights for producing estimates using a multiple-stage procedure. The base weight is the inverse of the probability of selection of a unit. We will calculate nonresponse adjustment factors for respondents by combining sample over all months of mailing. The base weight for each responding unit is multiplied by its nonresponse adjustment factor to obtain a first stage weight.

We next calculate a HU factor equal to the ratio of the household control total to the estimate of total HUs. We calculate an estimate of the total HUs for a county by summing the first stage weights for all HUs belonging to that county. This initial HU weight is the first stage weight multiplied by the HU factor.

Next, we will calculate a set of person factors. A factor for a specified combination of demographic characteristics (cell) is the ratio of the population control total to an estimate of the population total. We calculate an estimate of the population total for a cell within a county by summing the initial HU weights for all listed people belonging to that cell. The final person weight is the initial HU weight multiplied by the person factor.

For occupied HUs, the final HU weight is equal to the person weight of the householder. For vacant HUs, the final HU weight is simply equal to the initial HU weight.

### **ACS Group Quarters**

For the group quarters population, the weighting procedure is very similar to the HU weighting procedure. The base weight is the inverse of the probability of selection of a group quarters person. We will calculate nonresponse adjustment factors for respondents by combining sample over all months of mailing. The base weight for each responding person is multiplied by its nonresponse adjustment factor to obtain a first stage GQ person weight.

Next, we will calculate a set of GQ person factors. A factor for a specified group quarters type group (cell) is the ratio of the population control total to an estimate of the population total. We calculate an estimate of the population total for a cell within a county by summing the first stage GQ person weight for all listed people belonging to that cell. The final GQ person weight is the first stage GQ person weight multiplied by the person factor.

## **3. Methods to Maximize Response**

We will maintain high levels of data accuracy and response rates through interviewer instruction, training, and close monitoring of the data.

During the development of the household self-administered paper and Internet questionnaire and the interviewer/self-administered GQ questionnaire, we have made efforts to clarify item wording and placement, to improve the format of the overall questionnaire, and to be sensitive to questionnaire content effects.

Historically the ACS has employed a tri-modal data collection strategy for households data collection—mail, telephone and personal visit. In 2011 the Census Bureau conducted two tests to assess the feasibility of providing an Internet response option to households that receive survey materials by mail. These tests evaluated various methods for providing an Internet response option. Based on the results of these tests, the ACS will add an Internet response option in 2013.

For households eligible to receive survey materials by mail, the first contact will be a pre-notice letter alerting residents that they will receive instructions in the mail in a few days on how to complete the ACS survey, and encouraging them to do so promptly. The letter then explains the purpose of the ACS and how the data are used. Enclosed with the letter, a brochure provides basic information about the survey in English, Spanish, Russian, Chinese, and Korean, and provides a phone number to call for assistance in each language.

The second mailing includes a letter and instruction card explaining how to complete the survey online, as well as a Frequently Asked Questions (FAQ) brochure. The instruction card provides the information on how to respond in English and Spanish. The letter explains that if the respondent is unable to complete the survey online, a paper questionnaire will be sent later. The Internet version of the questionnaire is available in English and Spanish and includes questions about the HU and the people living in the HU. The Internet questionnaire has space to collect detailed information for twenty people in the household. The third mailing is a postcard that reminds respondents to complete the survey online, thanks them if they have already done so, and informs them that a paper form will be sent later if we do not receive their response.

A fourth mailing is sent only to those sample addresses that have not completed the online questionnaire within two weeks. The content includes a cover letter, a paper copy of the questionnaire, an instruction guide for completing the paper form, an instruction card for completing the survey online, an FAQ brochure, and a return envelope. The cover letter with this questionnaire package reminds the household of the importance of the ACS, and asks them to respond soon either by completing the survey online or by returning a completed paper questionnaire. The fifth mailing is a postcard that reminds respondents that “now is the time to complete the survey,” informs them that an interviewer may contact them if they do not complete the survey, and reminds them of the importance of the ACS.

A sixth mailing is sent to respondents who have not completed the survey within five weeks and are not eligible for telephone follow-up because we do not have a telephone number for the household. This postcard also reminds these respondents to return their questionnaires and thanks them if they have already done so.

For sample housing units in Puerto Rico, a different mail strategy is employed. Based on the results of testing in 2011 and concerns with the resulting response and data quality, we will be delaying the introduction of an Internet response option until a later date while we assess better alternatives. Therefore, in 2013 for Puerto Rico we will continue to use the previously used mail strategy with no references to an Internet response option. Specifically, the second mailing will include a cover letter, a brochure, a copy of the paper questionnaire, an instruction booklet, and a return envelope, but no instruction card for completing the survey online. Also, no second

reminder postcard (the fifth mailing described above for stateside HUs) will be sent to Puerto Rico HUs.

In addition to the ACS data collection from households, the data are also collected from a sample of group quarters (GQ) facilities and residents. The Field Representatives (FRs) use the CAPI Group Quarters Facility questionnaire (GQFQ) in English or Spanish when making initial telephone contact to schedule an appointment to conduct a personal visit at the sample GQ and also to generate the sub-sample of persons for ACS interviews. An introductory letter is mailed to the sample GQ approximately two weeks prior to the period when an FR may begin making contact with the GQ. The Spanish GQFQ instrument will be used for ACS data collection at Puerto Rico GQs.

The ACS HU non-response follow up consists of computer-assisted telephone interviewing (CATI), CATI Failed Edit Follow-up (FEFU) interview, computer-assisted personal interviewing (CAPI), and FR telephone or personal visit follow-up for GQs are conducted to ensure a final high weighted response rate.

Non-response follow up operations for household ACS data collection include: CATI to conduct telephone interviews for all households that do not respond by mail and for which we are able to obtain telephone numbers and CAPI to conduct personal interviews for a sample of addresses for which we have not obtained a mail or CATI interview. Both CATI and CAPI instruments are available to interviewers in English and Spanish.

Previously, we have conducted a CATI Failed Edit Follow-up (FEFU) if we have a telephone number and either: 1) respondents omit answering a set of critical questions that are deemed essential for the questionnaire to be considered complete, or 2) the household has more than five people so that we can obtain information for the additional members of the household. Starting in October 2012, we will be scaling back the FEFU operation to focus on households with coverage problems (such as mail respondents with more than 5 people, mail respondents with more people listed on the cover than in the basic demographic section, or questionnaires returned for vacant units). We will also use the FEFU operation in 2013 to collect missing data from some survey respondents that did not finish their response to the Internet survey, but rather broke off before completion; to confirm the status of Internet responses classified as businesses or vacant units; and to possibly collect the minimum amount of information needed to further process the questionnaire. If funding can be obtained in the future, we would resume FEFU for mail returns missing responses to a critical amount of questions. The FEFU instrument is available to interviewers in both English and Spanish..

Bi-lingual ACS paper questionnaires are used to conduct personal interviews with sampled GQ residents. The GQ resident data collection packages include an introductory letter, a bilingual Confidentiality Notice, a paper questionnaire, and a

copy of the ACS GQ FAQ brochure. For Puerto Rico sample GQ residents, we will use PR data collection packages to collect the GQ data. We will also conduct a separate operation to collect ACS GQ data from sampled GQs in remote Alaska.

Non-response follow up takes place for the ACS GQ operation during each six-week sample month data collection period. FRs may call or conduct a second personal visit to the GQ sample resident to obtain missing or incomplete information for the ACS GQ form until the closeout of each sample panel.

#### **4. Testing Procedures**

The content of the American Community Survey (ACS) questionnaire is similar to the Census 2000 long-form questionnaire and reflects questions tested from 2004 - 2010. Two new question topics will be added in 2013 based on results of the 2010 Content Test.

The initial stages of the 2010 Content Test consisted of content determination, cognitive laboratory pretesting, and expert review for the purpose of developing alternate versions of question content for field testing. Through the Office of Management and Budget (OMB) Interagency Committee for the ACS, subject matter experts and key data users from other federal agencies collaborated in identifying revised and new questions for inclusion in the content test. These groups provided a written justification to the OMB and American Community Survey Office at the Census Bureau explaining the need for the new questions or changes on a survey with the magnitude of size and geographic precision as the ACS. The suggested revised and new questions affected both the housing and detailed person sections of the ACS questionnaire. The OMB approved several topics for testing, including a new series of questions on computer ownership and Internet access and two new questions of parental place of birth. OMB also approved various proposed changes to the following existing questions: veterans status and period of service; wages, interest/dividends income; public assistance income; and food stamps. Subcommittees were formed which included staff from the agency requesting the change, the Census Bureau and other interested agencies, and these subcommittees developed the first draft of questions to feed into cognitive testing.

We used cognitive interviewing to assist in identifying a final set of questions for the field test. Multiple versions of each question topic were cognitively tested with the goal of choosing the best question(s) for field testing. The Census Bureau conducted testing in the three modes used in the ACS data collection (paper, telephone interview, and personal interview) in English and Spanish. Cognitive interviews consisted of one-on-one interviews using the proposed questions in the context of the ACS survey. Survey methodologists also conducted respondent debriefings during the interview to gain respondent insight into the understanding of the proposed questions. Cognitive testing results were shared with the subcommittees that drafted

the questions, and those subcommittees made recommendations on which question version they believe should be included in the field test.

Next, an expert review panel composed of government survey methodology experts reviewed the cognitive testing results and subcommittee recommendations. They added some changes to the final question versions proposed to move forward from the cognitive testing into the field test. The proposed changes for each question topic were approved by the corresponding OMB interagency subcommittee responsible for initiating the research prior to getting final approval from the OMB of the proposed questions for field testing.

The field test portion of the ACS Content Test used the data collection methodology that was used in the production ACS in 2010 (i.e., mail questionnaire, CATI follow-up, and CAPI follow-up) with an added reinterview conducted via a CATI instrument known as the Content Follow-Up (CFU). To meet the test objective of the 2010 ACS Content Test, analysts evaluated changes to question wording, response categories, instructions, and examples relative to a control version of the question or another version for new questions. Additional data were collected on respondent and interviewer behavior during the field test via Computer Audio Recorded Interviewing (CARI) technologies for a subset of respondents during the CATI and CAPI follow-up modes of data collection.

For reports that provide a full description of the overall 2010 ACS Content Test and topic-specific research objectives, methodology, and empirical results, see attachment Rpt2 or the Census Bureau website at:  
[http://www.census.gov/acs/www/library/by\\_series/content\\_test\\_evaluation\\_reports/](http://www.census.gov/acs/www/library/by_series/content_test_evaluation_reports/)

In 2011 the Census Bureau conducted two tests to assess the feasibility of providing an Internet response option to households that receive survey materials by mail (see Part A, Section 1 for details about the testing and results; also see attachment Rpt1 or the Census Bureau website at:  
[http://www.census.gov/acs/www/library/by\\_series/internet\\_data\\_collection/](http://www.census.gov/acs/www/library/by_series/internet_data_collection/)). These tests evaluated various methods for providing an Internet response option. Our plans for the 2013 American Community Survey reflect content, cost saving, and data collection methods testing conducted at the Census Bureau from 2004 - 2011.

Since 2000, we tested the ACS in various parts of the country in preparation for conducting the survey in households nationwide in 2005. We completed testing of the ACS in group quarters (GQs) facilities in 2005 in preparation for conducting the survey in GQs nationwide in 2006.

We have also completed extensive testing of the CATI, CAPI, and Internet instruments to ensure that the interviews flow smoothly and the questions are asked appropriately across all modes of survey data collection.

The ACS Methods Panel provides opportunities for annual testing of content and/or survey methods to achieve efficiencies and improve data quality. The ACS Methods Panel is submitted under a separate OMB clearance package (OMB Control Number 0607-0936.)

## 5. **Contacts for Statistical Aspects and Data Collection**

The Census Bureau will collect and process these data. Within the Census Bureau, the following individuals should be consulted for further information on their area of expertise.

### Statistical Aspects

Mr. Alfredo Navarro	Assistant Division Chief, ACS Statistical Design Decennial Statistical Studies Division Phone: (301) 763-3600
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### Overall Data Collection

Mr. James B. Treat	Chief, American Community Survey Office Phone: (301) 763-3609
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## **Attachments**

### **Collection Materials**

- A ACS-12(L)S(11-2010), ACS pre-notice letter; and ACS-40 (2005)(11-2010), ACS pre-notice envelope, ACS-9 Multilingual Brochure [Draft]
- B American Community Survey Household (HU) Initial Questionnaire Package: ACS-46(2005) (11-2006), ACS stateside outgoing envelope; ACS-13(L)SM (5-2010), ACS introductory letter; ACS-0001(2011)KFI (5-17-10), ACS HU questionnaire, stateside, English; ACS-30(2011) (7-2010), HU instruction guide booklet; ACS-10SM (6-09), ACS frequently asked question brochure; and ACS-5385-0047(2011)(09-2010), ACS business reply mail envelope
- C ACS-0020S (8-2009), ACS HU reminder/thank you postcard
- D Replacement HU Questionnaire Package Letters: ACS-14(L)SM (5-2010), ACS follow-up letter, U.S. English; ACS-14(L)(SP) (10-2010), ACS introductory letter, stateside, Spanish; and ACS-14(L)PR (10-2010), PRCS follow-up letter, English/ PR Spanish
- E ACS-23 (2011), additional mailing postcard, stateside, English

- F American Community Survey HU Questionnaire Mail Package (Spanish): ACS-46(2009)SP (8-2009), ACS stateside Spanish outgoing envelope; ACS-13(L)SP (10-2010), introductory letter; ACS-0001(2011)SP (08-05-10), ACS stateside Spanish questionnaire; ACS-30(2011)SP(9-2010), ACS instruction guide booklet, stateside Spanish; ACS-10SMSP(7-09), frequently asked questions brochure, stateside Spanish; ACS-47(2011)(09-2010), business reply mail envelope
- G ACS-1 (2010) Korean, ACS questionnaire language assistance guide (Korean) [Draft]
- H ACS-1(2010) Chinese, ACS questionnaire language assistance guide (Simplified Chinese) [Draft]
- I Puerto Rico Community Survey HU Questionnaire Mail Package (Spanish/English): ACS-46(2005)PR (11-2006), PRCS outgoing envelope; ACS-12(L)PR (10-2010), PRCS pre-notice letter (Spanish and English); ACS-13(L)PR (10-2010), PRCS introductory letters (Spanish and English); ACS-13(L)SM (5-2010), ACS introductory letter; ACS-13(L)SP(10-2010), ACS introductory letter, stateside, Spanish; ACS-0001(2010)PR(SP) (07-28-10), PRCS HU questionnaire, Puerto Rico, Spanish; ACS-0001(2010)PR(04-29-10), PRCS HU questionnaire, Puerto Rico, English; ACS-30(2011)PRSP (9-2010), PRCS instruction guide booklet; ACS-30(2011)SP(9-2010), ACS instruction guide booklet, stateside, Spanish; ACS-10SMPR(05-10), PRCS frequently asked questions brochure; ACS-5385-0047(2011) (09-2010), ACS business reply mail envelope; ACS-20PR (10-2010), PRCS reminder/thank you postcard; and Stateside and PR Spanish Questionnaire Differences.
- J Questions for HU CATI Failed Edit Follow Up
- K Questions for CATI/CAPI/TQA That Differ From the ACS-1; Questions for Vacant Units (2009 ACS CATI/CAPI/TQA)
- L Questions for Quality Control – Household Reinterview
- M American Community Survey HU Detailed Language Brochures and Reluctant CATI/CAPI Respondent Letters in Language: ADDC/07-ACSQA SPA 10(1) (Spanish); ADDC/07-ACSQA RUS 10(1)(Russian); ADDC/07-ACSQA CHI 10(1)(Chinese); ADDC/07-ACSQA VIE 10(1)(Vietnamese); ADDC/07-ACSQA KOR 10(1)(Korean); ADDC/07-ACSQA AR 10(1) (Arabic); ADDC/07-ACSQA FRE 10(1) (French); ADDC/07-ACSQA HAI 10(1) (Haitian-Creole); ADDC/07-ACSQA POL 10(1) (Polish); ADDC/07-ACSQA POR 10(1) (Portuguese); CATI and CAPI versions of reluctant respondent letters in Spanish, Russian, Simplified Chinese, Vietnamese, and Korean
- N ACS-1GQ(2011) Group Quarters Facility Questionnaire (U.S) and ACS-1GQ(PR) (2011) Group Quarters Facility Questionnaire (PR) (English/Spanish)



- O ACS-18(L)(GQ)(2011), GQ introductory letter; ACS-50(GQ)\_Oct\_2009 frequently asked questions brochure; ACS-18(L)(GQ)(PR)(2011), PR GQ introductory letter – Spanish/ English
- P American Community Survey – Group Quarters Questionnaire Package: ACS-17(L)(GQ), resident introductory letter; ACS-17(L)(GQ)SP, resident introductory letter, stateside spanish; ACS-21(GQ) confidentiality notice; ACS-1(GQ), ACS GQ questionnaire, English/stateside Spanish; ACS-30(GQ) instruction guide, English/stateside Spanish; ACS-50(GQ)\_Oct\_2009, ACS GQ frequently asked questions brochure; and ACS-46(GQ)(2005)(11-2006), ACS stateside outgoing envelope
- Q Puerto Rico Community Survey – Group Quarters Questionnaire Package: ACS-17(L)(GQ)(PR)(2011), PRCS resident introductory letter (English); ACS-17(L)(GQ)(S)(2011), PRCS resident introductory letter (Spanish); ACS-21(GQ), ACS GQ confidentiality notice (English/Spanish); ACS-21(GQ)(PR), PRCS GQ confidentiality notice (English/Spanish); ACS-1(GQ)(PR), PRCS GQ Questionnaire (English/Spanish); ACS-30(GQ)(PR) PRCS instruction guide (English/Spanish); ACS-51(GQ)PR\_10-09, PRCS frequently asked questions brochure (English/Spanish); and ACS-46(GQ)(PR) (11-2006), PRCS outgoing envelope (Spanish)
- R Questions for Quality Control - Group Quarters Facility Reinterview
- S American Community Survey – Group Quarters Questionnaire Package: ACS-17(L)(GQ), resident introductory letter; ACS-17(L)(GQ)SP, resident introductory letter, stateside Spanish; ACS-21(GQ) confidentiality notice; ACS-1(GQ)(2013), ACS GQ questionnaire, English/stateside Spanish; ACS-30(GQ) instruction guide, English/stateside Spanish; ACS-50(GQ), ACS GQ frequently asked questions brochure; ACS-51(GQ) RA, GQ remote Alaska frequently asked questions brochure; ACS-261GQR , GQ resident thank you letter and 5385-46(2011) (English/Spanish), ACS business reply mail envelope
- T Puerto Rico Community Survey – Group Quarters Questionnaire Package: ACS-17(L)(GQ)(PR), PRCS resident introductory letter (English); ACS-17(L)(GQ)(PR)(S), PRCS resident introductory letter (Spanish); ACS-21(GQ), ACS GQ confidentiality notice (English/Spanish); ACS-26(L)(GQ)(PR), PRCS thank you resident (English/Spanish); ACS-1(GQ)(PR)(2013), PRCS GQ Questionnaire (English/Spanish); ACS-30(GQ)(PR) PRCS instruction guide (English/Spanish); ACS-51(GQ)PR\_10-09, PRCS frequently asked questions brochure (English/Spanish); 5385-46(2011), ACS business reply mail envelope
- U Questions for Quality Control - Group Quarters Facility Reinterview
- V Responses to the Pre-submission *Federal Register* Notice

### Contingency Plan Collection Materials

- CP1 ACS-0012(L)S(2012)(6-2011), ACS pre-notice letter; and ACS-0040 (2012)(6-2011), ACS pre-notice envelope, ACS-9(2011) (4-2011)Multilingual Brochure
- CP2 American Community Survey Household (HU) Initial Questionnaire Package: ACS-46(2012) (5-2011), ACS stateside outgoing envelope; ACS-13(L)SM(2012) (6-2011), ACS introductory letter; ACS-0001(2013)D1, ACS HU questionnaire, stateside, English; ACS-30(2013)D3, HU instruction guide booklet; ACS-10SM (2013)(2\_2012), ACS frequently asked question brochure; and ACS-5385-0047(09-2010), ACS business reply mail envelope
- CP3 American Community Survey HU Questionnaire Mail Package (Spanish): ACS-46(2012)SP (6-2011), ACS stateside Spanish outgoing envelope; ACS-0013(L)SP(2012) (6-2011), introductory letter; ACS-1(2013)(SP)D2, ACS stateside Spanish questionnaire; ACS-30(SP)(2013)D5, ACS instruction guide booklet, stateside Spanish; ACS-10SM(2012)(SP), frequently asked questions brochure, stateside Spanish; and ACS-5385-0047(09-2010), ACS business reply mail envelope
- CP4 ACS-0020S (8-2009), ACS Reminder Card
- CP5 Replacement HU Questionnaire Package: : ACS-46(2012) (5-2011), ACS stateside outgoing envelope; ACS-10SM (2013)(2\_2012), ACS frequently asked question brochure; ACS-0001(2013)D1, ACS HU questionnaire, stateside, English; ACS-0014(L)SM (2012)(6-2011), ACS follow-up letter, U.S. English;ACS-30(2013)D3, HU instruction guide booklet; and ACS-5385-0047(09-2010), ACS business reply mail envelope
- CP6 ACS-0023 (2012)(5-2011), additional mailing postcard, stateside, English, ACS-0023 (2012)SP(2-2012), additional mailing postcard, stateside, Spanish

### Reports

- Rpt1 ACS Internet Test – Results from First test in April 2011; April 2011 Internet Test – Attitudes and Behavior Study Follow-up; Design of ACS Internet Instrument
- Rpt2 2011ACS Content Test Evaluation Report – Property Income, 2011ACS Content Test Evaluation Report – Computer and Internet, 2011ACS Content Test Evaluation Report - Food Stamps/SNAP; 2011ACS Content Test Evaluation Report – Parental Place of Birth; 2011ACS Content Test Evaluation Report – Period of Military Service; 2011ACS Content Test Evaluation Report – Public Assistance, 2011ACS Content Test Evaluation Report – Veterans Status; 2011ACS Content Test Evaluation Report - Wages

Rpt3 Information Sheets - Housing Questions; Population Questions

Rpt4 Parental Place of Birth Legal Justifications