

**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 DESIGN<sup>1</sup>**

**1Housing Units**

The ACS employs a two-phase, two-stage sample design. The first-phase sample consists of two separate address samples: Period 1 and Period 2. These samples are chosen at different points in time. Both samples are selected in two stages of sampling, a first-stage and a second-stage. Subsequent to second-stage sampling, the majority of sample addresses are randomly assigned to one of the 12 months of the sample year (the exception is for addresses in remote Alaska, which are assigned to either January or September). The second-phase of sampling occurs when the Computer-Assisted Personal Interview (CAPI) sample is selected.

The Period 1 sample is selected during September and October of the year prior to the sample year (e.g. the 2018 Period 1 sample was selected in September and October of 2017). Approximately half of a year's sample is selected at this time. Sample addresses that are not in remote Alaska are randomly assigned to one of the first six months of the sample year; sample addresses in remote Alaska are assigned to January to address access issues.

Period 2 sampling occurs in January and February of the sample year (e.g. the 2018 Period 2 sample was selected during January and February of 2018). This sample accounts for the remaining half of the overall first-phase sample. Period 2 sample addresses that are not in remote Alaska are randomly assigned to one of the last six months of the sample year; Period 2 sample addresses in remote Alaska are assigned to September.<sup>2</sup>

A subsample of nonresponding addresses and of any addresses deemed unmailable is selected for the CAPI data collection mode.<sup>3</sup>

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<sup>1</sup> The procedures for the Puerto Rico Community Survey (PRCS) are the same as the ACS.

<sup>2</sup> Remote Alaska assignments are made so that the sample addresses are approximately evenly distributed between the two data collection periods.

<sup>3</sup> Beginning in August 2011, all nonmailable and nonresponding addresses in the following areas are now sent to CAPI: all Hawaiian Homelands, all Alaska Native Village statistical areas, American Indian areas with an estimated proportion of American Indian population  $\geq 10\%$ .

The following steps are used to select the first-phase and second-phase samples in both periods.

### **First-Phase Housing Unit Sample Selection**

#### *1First-Stage Sampling for Housing Units*

First stage sampling defines the universe for the second stage of sampling through three steps. First, all addresses that were in a first-phase sample within the past four years are excluded from eligibility. This ensures that no address is in sample more than once in any five-year period. The second step is to select a 20 percent systematic sample of “new” units, i.e., those units that have never appeared on a previous Master Address File extract. Each new address is systematically assigned either to the current year or to one of four back-samples. This procedure maintains five equal partitions (samples) of the universe. The third step is to randomly assign all eligible addresses to a period.<sup>4</sup>

#### *1Assignment of Blocks to a Second-Stage Sampling Stratum for Housing Units*

Second-stage sampling uses 16 sampling strata in the United States.<sup>5</sup> The stratum-level rates used in second-stage sampling account for the first-stage selection probabilities. These rates are applied at a block level to addresses in the United States by calculating a measure of size for each of the following geographic entities:

- Counties.
- Places.
- School Districts (elementary, secondary, and unified).
- American Indian Areas.
- Tribal Subdivisions.
- Alaska Native Village Statistical Areas.
- Hawaiian Homelands.
- Minor Civil Divisions – in Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.<sup>6</sup>
- Census Designated Places – in Hawaii only.

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<sup>4</sup> Most of the period assignments are made during Period 1 sampling. The only assignments in Period 2 sampling are made for addresses that were not part of the process in Period 1, e.g., new addresses.

<sup>5</sup> Beginning with the 2011 sample the ACS implemented a change to the stratification, increasing the number of sampling strata and changing how the sampling rates are defined. Prior to 2011 there were seven strata; there are now 16 sampling strata. Table 1 gives a summary of these strata and the rates.

<sup>6</sup> These are the states where MCDs are active, functioning governmental units.

The measure of size for all areas except American Indian areas, Tribal Subdivisions, Alaska Native Village statistical areas, and Hawaiian Homelands is an estimate of the number of occupied housing units (HUs) in the area. This is calculated by multiplying the number of ACS addresses by an estimated occupancy rate at the block level. A measure of size for each census tract is also calculated in the same manner.

For American Indian areas, tribal subdivisions areas, and Alaska Native Village statistical areas, the measure of size is the estimated number of occupied HUs multiplied by the proportion of people reporting American Indian or Alaska Native (alone or in combination) in the 2010 Census.

For Hawaiian Homelands, the measure of size is the estimated number of occupied HUs multiplied by the proportion of people reporting Native Hawaiian (alone or in combination) in the 2010 Census.

Each block is then assigned the smallest positive, nonzero measure of size from the set of all entities of which it is a part. The 2018 second-stage sampling strata and the overall first-phase sampling rates are shown in Table 1. Table 2 includes the rates used in Puerto Rico.

### **1Calculation of the Second-Stage Sampling Rates for Housing Units**

The overall first-phase sampling rates are calculated using the distribution of ACS valid addresses by second-stage sampling stratum in such a way as to yield an overall target sample size for the year of 3,540,000 (1,770,000 for each period) in the United States. The first-phase rates are adjusted for the first-stage sample to yield the second-stage selection probabilities.

**Table 1. First-phase Sampling Rate Categories for the United States**

| Sampling Stratum | Type of Area  | Rate Definitions                    | 2018 Sampling Rates |          |
|------------------|---|-------------------------------------|---------------------|----------|
|                  |   |                                     | Period 1            | Period 2 |
| 1                | $0 < \text{MOS}^1 < 200$  | 15.00%                              | 15.00 %             | 15.00 %  |
| 2                | $200 \leq \text{MOS} < 400$   | 10.00%                              | 10.00 %             | 10.00 %  |
| 3                | $400 \leq \text{MOS} < 800$   | 7.00%                               | 7.00 %              | 7.00 %   |
| 4                | $800 \leq \text{MOS} < 1200$  | $2.80 \times \text{BR}$             | 4.30 %              | 4.29 %   |
| 5                | $1200 \leq \text{MOS}$ and $0 < \text{TRACTMOS}^2 < 400$                  | $3.50 \times \text{BR}$             | 5.37 %              | 5.37 %   |
| 6                | $1200 \leq \text{MOS}$ and $0 < \text{TRACTMOS} < 400$<br>HR <sup>3</sup> | $0.92 \times 3.50 \times \text{BR}$ | 4.94 %              | 4.94 %   |
| 7                | $1200 \leq \text{MOS}$ and $400 \leq \text{TRACTMOS} < 1000$              | $2.80 \times \text{BR}$             | 4.30 %              | 4.29 %   |
| 8                | $1200 \leq \text{MOS}$ and $400 \leq \text{TRACTMOS} < 1000$ HR           | $0.92 \times 2.80 \times \text{BR}$ | 3.95 %              | 3.95 %   |
| 9                | $1200 \leq \text{MOS}$ and $1000 \leq \text{TRACTMOS} < 2000$             | $1.70 \times \text{BR}$             | 2.61 %              | 2.61 %   |
| 10               | $1200 \leq \text{MOS}$ and $1000 \leq \text{TRACTMOS} < 2000$ HR          | $0.92 \times 1.70 \times \text{BR}$ | 2.40 %              | 2.40 %   |
| 11               | $1200 \leq \text{MOS}$ and $2000 \leq \text{TRACTMOS} < 4000$             | $\text{BR}^4$                       | 1.54 %              | 1.53 %   |
| 12               | $1200 \leq \text{MOS}$ and $2000 \leq \text{TRACTMOS} < 4000$ HR          | $0.92 \times \text{BR}$             | 1.41 %              | 1.41 %   |
| 13               | $1200 \leq \text{MOS}$ and $4000 \leq \text{TRACTMOS} < 6000$             | $0.60 \times \text{BR}$             | 0.92 %              | 0.92 %   |
| 14               | $1200 \leq \text{MOS}$ and $4000 \leq \text{TRACTMOS} < 6000$ HR          | $0.92 \times 0.60 \times \text{BR}$ | 0.85 %              | 0.85 %   |
| 15               | $1200 \leq \text{MOS}$ and $6000 \leq \text{TRACTMOS}$                    | $0.35 \times \text{BR}$             | 0.54 %              | 0.54 %   |
| 16               | $1200 \leq \text{MOS}$ and $6000 \leq \text{TRACTMOS}$ HR                 | $0.92 \times 0.35 \times \text{BR}$ | 0.49 %              | 0.49 %   |

<sup>1</sup>MOS = measure of size (estimated number occupied housing units) of the smallest governmental entity

<sup>2</sup>TRACTMOS = the measure of size (MOS) at the census tract level

<sup>3</sup>HR = areas where predicted levels of completed mail and CATI interviews are > 60%

<sup>4</sup>BR = base sampling rate

**Table 2. First-phase Sampling Rate Categories for Puerto Rico**

| Sampling Stratum | Type of Area  | Rate Definitions          | 2018 Sampling Rates |          |
|------------------|---|---------------------------|---------------------|----------|
|                  |   |                           | Period 1            | Period 2 |
| 3                | $400 \leq \text{MOS}^1 < 800$                                 | 7.00%                     | 7.00 %              | 7.00 %   |
| 5                | $1200 \leq \text{MOS}$ and $0 < \text{TRACTMOS}^2 < 400$      | $3.50 \times \text{BR}^3$ | 5.11 %              | 5.11 %   |
| 7                | $1200 \leq \text{MOS}$ and $400 \leq \text{TRACTMOS} < 1000$  | $2.80 \times \text{BR}$   | 4.09 %              | 4.09 %   |
| 9                | $1200 \leq \text{MOS}$ and $1000 \leq \text{TRACTMOS} < 2000$ | $1.70 \times \text{BR}$   | 2.48 %              | 2.48 %   |
| 11               | $1200 \leq \text{MOS}$ and $2000 \leq \text{TRACTMOS} < 4000$ | $\text{BR}^4$             | 1.46 %              | 1.46 %   |
| 13               | $1200 \leq \text{MOS}$ and $4000 \leq \text{TRACTMOS} < 6000$ | $0.60 \times \text{BR}$   | 0.88 %              | 0.88 %   |

<sup>1</sup>MOS = measure of size (estimated number occupied housing units) of the smallest governmental entity

<sup>2</sup>TRACTMOS = the measure of size (MOS) at the census tract level

<sup>4</sup>BR = base sampling rate

### 1Second-Stage Sample Selection for Housing Units

After each block is assigned to a second-stage sampling stratum in each period, a systematic sample of addresses is selected from the second-stage universe (first-stage sample) within each county and county equivalent.

### 1Sample Month Assignment for Housing Units

After the second stage of sampling, sample addresses selected during Period 1 sampling that are not in remote Alaska are allocated to one of the first six months of the sample year. Sample addresses selected during Period 2 sampling that are not in remote Alaska are assigned to a month between July through December, inclusive. Sample addresses in remote Alaska are assigned to January or September in Period 1 and Period 2 sampling, respectively.

### Second-Phase Housing Unit Sample Selection – CAPI Subsampling

The addresses from which CAPI subsamples are selected can be divided into two groups. One group includes addresses that are not eligible for any other data collection operation; these consist of unmailable addresses and those in remote Alaska areas. The second group includes addresses that are eligible for the other data collection operations but for which no response was obtained prior to CAPI subsampling – these consist of mailable addresses not in a remote Alaska area.

All sample addresses in remote Alaska are sent to the CAPI data collection operation. Most unmailable addresses are selected for CAPI at a rate of 2-in-3; the exception is when they are in a Hawaiian Homeland area (HH), Alaska Native Village statistical area (ANVSA), or certain American Indian areas (AI), where all are selected for CAPI.

With one exception, mailable addresses from which a response was not obtained by the time of the CAPI operation are sampled at rates of 1-in-2, 2-in-5, and 1-in-3; these rates are set at the tract level. The exception is for addresses in HH, ANVSA, and AI areas, where all are selected for CAPI. Table 3 shows the CAPI subsampling rates that are associated with each group of addresses.

All non-responding addresses in Puerto Rico are subsampled for CAPI at a 1-in-2 rate.

**Table 3. Second-Phase (CAPI) Subsampling Rates for the United States**

| Address and Tract Characteristics   | CAPI Subsampling Rate |
|---|-----------------------|
| Addresses in Remote Alaska *  | Take all (100.0%)     |
| Addresses in Hawaiian Homelands, Alaska Native Village statistical areas and a subset of American Indian areas *  | Take all (100.0%)     |
| Unmailable addresses that are not in the previous two categories  | 66.7%                 |
| Mailable addresses in tracts with predicted levels of completed mail and CATI interviews prior to CAPI subsampling between 0% and 35%, inclusive                  | 50.0%                 |
| Mailable addresses in tracts with predicted levels of completed mail and CATI interviews prior to CAPI subsampling greater than 35% and less than or equal to 50% | 40.0%                 |
| Mailable addresses in all other tracts  | 33.3%                 |

\*The full CAPI follow-up procedure for these two categories began in 2011.

### **1Group Quarters**

The 2019 group quarters (GQ) sampling frame was divided into two strata: a small GQ stratum and a large GQ stratum. Small GQs have expected populations of 15 or fewer residents, while large GQs have expected populations of more than 15 residents.

Samples were selected in two phases within each stratum. In general, GQs were selected in the first phase and then persons/residents were selected in the second phase. Both phases differ between the two strata. Each sampled GQ was randomly assigned to one or more months in 2019; it was in these months that their person samples were selected.

## Small GQ Stratum

### *First Phase of Sample Selection for Small GQs*

There were two stages of selecting small GQs for sample.

#### 1. First stage

The small GQ universe is divided into five groups that are approximately equal in size. All new small GQs are systematically assigned to one of these five groups on a yearly basis, with about the same probability (20 percent) of being assigned to any given group. Each group represents a second-stage sampling frame, from which GQs are selected once every five years. The 2019 second-stage sampling frame was used in 2014 as well, and is currently to be used in 2024, 2029, etc.

#### 2. Second stage

GQs were systematically selected from the 2019 second-stage sampling frame. Each GQ had the same second-stage probability of being selected within a given state, where the probabilities varied between states. Table 4 below shows these probabilities.

Note that the GQ sampling rate for Puerto Rico was 2.5 percent.

**Table 4. 2019 Group Quarter State Targeted Sampling Rates for the U.S.**

| State                | Targeted Rate | State         | Targeted Rate | State          | Targeted Rate |
|----------------------|---------------|---------------|---------------|----------------|---------------|
| Alabama              | 2.34%         | Kentucky      | 2.36%         | North Dakota   | 4.56%         |
| Alaska               | 3.18%         | Louisiana     | 2.89%         | Ohio           | 2.54%         |
| Arizona              | 2.41%         | Maine         | 3.40%         | Oklahoma       | 2.24%         |
| Arkansas             | 2.19%         | Maryland      | 2.42%         | Oregon         | 2.59%         |
| California           | 2.71%         | Massachusetts | 2.30%         | Pennsylvania   | 2.70%         |
| Colorado             | 2.45%         | Michigan      | 2.86%         | Rhode Island   | 2.27%         |
| Connecticut          | 2.55%         | Minnesota     | 2.56%         | South Carolina | 2.11%         |
| Delaware             | 5.00%         | Mississippi   | 2.67%         | South Dakota   | 4.26%         |
| District of Columbia | 2.94%         | Missouri      | 2.33%         | Tennessee      | 2.45%         |
| Florida              | 2.43%         | Montana       | 4.34%         | Texas          | 2.27%         |
| Georgia              | 2.66%         | Nebraska      | 2.52%         | Utah           | 1.92%         |
| Hawaii               | 3.34%         | Nevada        | 3.65%         | Vermont        | 4.84%         |
| Idaho                | 4.09%         | New           | 2.97%         | Virginia       | 2.69%         |

| State    | Targeted Rate | State          | Targeted Rate | State         | Targeted Rate |
|----------|---------------|----------------|---------------|---------------|---------------|
|          |               | Hampshire      |               |               |               |
| Illinois | 2.54%         | New Jersey     | 2.73%         | Washington    | 2.42%         |
| Indiana  | 2.39%         | New Mexico     | 2.92%         | West Virginia | 2.23%         |
| Iowa     | 2.38%         | New York       | 2.26%         | Wisconsin     | 2.57%         |
| Kansas   | 2.57%         | North Carolina | 2.39%         | Wyoming       | 6.56%         |

### *Second Phase of Sample Selection for Small GQs*

Individuals were selected for sample from each GQ that was selected for sample in the first phase of sample selection. If 15 or fewer people were residing at a GQ at the time a field representative visited the GQ, then all of them were selected for sample. Otherwise, if more than 15 people were residing at the GQ, then the field representative selected a systematic sample of ten people from the GQ's roster.

### *Targeted Sampling Rate (Probability of Selection) for Small GQs*

The targeted state-level sampling rates are the probabilities of selecting any given person in a GQ; it is around these probabilities that the sample design is based. These probabilities reflect both phases of sample selection, and they varied by state. The probabilities for 2019 are shown in Table 3.

The sample was designed so that the second-phase sampling rate would be 100 percent for small GQs (i.e., select the entire expected population of 15 or fewer people for sample in every small sampled GQ). This means the probability of selecting any person in a small GQ was designed to equal the probability of selecting the small GQ itself.

## **Large GQ Stratum**

### *First phase of Sample Selection for Large GQs*

All large GQs were eligible for being sampled in 2019, as has been the case every year since the inception of the sampling of GQs in 2006. This means there was only a single stage of sampling in this phase. This stage consists of systematically assigning "hits" to GQs independently in each state, where each hit represents ten people to be sampled.

In general, a GQ has either  $Z$  or  $Z+1$  hits assigned to it. The value for  $Z$  is dependent on both the GQ's expected population size and its within-state target sampling rate, shown in Table 3. When this rate is multiplied by a GQ's expected population, the result is a GQ's expected person sample size. If a GQ's expected person sample size is less than ten, then  $Z = 0$ ; if it is at least ten but less than 20, then  $Z = 1$ ; if it is at



least 20 but less than 30, then  $Z = 2$ ; and so on. See 2.C. below for a detailed example.

If a GQ has an expected person sample size that is less than ten, then this method effectively gives the GQ a probability of selection that is proportional to its size; this probability is the expected person sample size divided by ten. If a GQ has an expected person sample size of ten or more, then it is in sample with certainty and is assigned one or more hits.

#### *Second Phase of Sample Selection for Large GQs*

Individuals are selected within each GQ to which one or more hits are assigned in the first phase of selection. There are ten people selected at a GQ for every hit assigned to the GQ. The individuals are systematically sampled from a roster of people residing at the GQ at the time of a field representative's visit. The exception is if there are far fewer persons residing in a GQ than expected – in these situations, the number of people to sample at the GQ is reduced to reflect the GQ's actual population. In cases where fewer than ten people reside in a GQ at the time of a visit, the field representative will select all of them for sample.

#### *Targeted Sampling Rate (Probability of Selection) for Large GQs*

As for small GQs, the targeted state-level sampling rates are the probabilities of selecting any given person in a GQ. The probabilities are shown in Table 3. Note that these rates are the same as for everyone in small GQs.

As an example, suppose a GQ in Indiana has an expected population of 250. The target sampling rate in Indiana is 2.29 percent, meaning any given person in a GQ in Indiana has about a 1-in-43 $\frac{2}{3}$  chance of being selected. This rate, combined with the GQ's expected population of 250, means that the expected number of individuals selected for sample in this GQ is 5.725 (2.29 percent  $\times$  250). Since this is less than ten, this GQ has either 0 or 1 hits assigned to it ( $Z = 0$ ). The probability of it being assigned a hit is the GQ's expected person sample size of 5.725 divided by 10, or 57.25 percent.

As a second example, suppose a GQ in Idaho has an expected population of 1,000. The target sampling rate in Idaho is 4.30 percent, meaning any given person in a GQ in Idaho has about a 1-in-23.26 chance of being selected. This rate, combined with the GQ's expected population of 1,000, means that the expected number of individuals selected for sample in the GQ is 43 (4.30 percent  $\times$  1,000); this GQ is assigned either four or five hits ( $Z = 4$ ).

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

All sample GQs are assigned to one or more months (interview months); these are the months in which field representatives will visit a GQ to select a person sample and conduct interviews. All small GQs, all large GQs that are assigned only one hit, all remote Alaska GQs, all sampled military facilities, and all sampled correctional facilities (regardless of how many hits a military or correctional facility is assigned) are assigned to a single interview month. Remote Alaska GQs are assigned to either January or September; federal prisons are assigned to September; all of the others are randomly assigned one interview month. Military ships are restricted to March – December to allow time for the Census Bureau to let the point of contact for these ships know what month the sampled ships are in.

All large GQs that are assigned multiple hits, but are not in any of the categories above, have each hit randomly assigned to a different interview month. If a GQ has more than 12 hits assigned to it, then multiple hits are assigned to one or more interview months for the GQ. For example, if a GQ has 15 hits assigned to it, then there are three interview months in which two hits are assigned and nine interview months in which one hit is assigned. There are two restrictions to this process. One restriction is applied to college dormitories, whose hits are randomly assigned to nonsummer months only, i.e., January through April and September through December. The other restriction is applied to military ships, whose hits are randomly assigned only to the last ten months of the year (i.e., March through December).

### **Bureau of Prison Group Quarters**

Prior to 2018, all GQs were sampled at the same time for a given year. Starting in 2016, for the Bureau of Prison (BOP) GQs (federal prisons) the Census Bureau began selecting the BOP sample separately from other GQs. They are sampled using the same procedure shown above, and are all assigned to the September interview month as before. The Census Bureau uses the most up-to-date information through two files delivered from the Bureau of Prisons—a facilities file listing each federal prison including address and contact information, and a list of all federal inmates. The Census Bureau samples inmates directly from the file, and the questionnaires for inmates in federal prisons are preprinted with the names of inmates in sample.

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

### **ACS Households**

The Census Bureau mails survey materials to about 286,000 HU addresses each month. The mailing operations are conducted through the U.S. Postal Service and use first-class postage rates for all pieces. For addresses that were mailed survey

materials but did not respond by mail, internet, or by calling our telephone questionnaire assistance line, the Census Bureau selects a subsample of all households and assign them to the CAPI (nonresponse follow-up) data collection mode. Unmailable household addresses are sampled and included in the CAPI data collection mode.

In 2017, the HU sample yielded approximately 135,000 self-response interviews. The HU CAPI follow-up yielded an estimated response rate of approximately 87 percent in 2017. The 2017 final weighted response rate for ACS was 94 percent.

### **ACS Group Quarters**

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 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 subsample of persons for ACS interviews. An introductory letter is mailed to the sample GQ approximately two weeks prior to the period when a field representative may begin making contact with the GQ. The Spanish GQFQ instrument is used for ACS data collection at Puerto Rico GQs. A subset of the ACS HU questions is used for the interviews with sample residents in GQs. Resident-level personal interviews with sampled GQ residents are conducted using CAPI, but bilingual paper questionnaires can also be used for self-response. The GQ CAPI and paper questionnaires contain questions for one person. Field representatives may call or conduct additional personal visits to the GQ and/or sample residents to obtain missing or incomplete ACS GQ forms until the closeout of each sample panel.

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

The ACS maintains 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, the Census Bureau 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 had employed a trimodal data collection strategy for household 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. Based on the results of these

tests, the Census Bureau implemented an internet response option for the ACS for the start of the 2013 data collection.

In October 2017, to ensure the ACS program was executed in the most efficient and cost-effective manner, the Census Bureau discontinued conducting nonresponse follow-up operations through computer-assisted telephone interviewing (CATI). Several ACS operations continue to make use of the telephone mode: Telephone Questionnaire Assistance (TQA), Failed Edit Followup (FEFU), and centralized reinterview operations.

For households eligible to receive survey materials by mail, the first contact (Attachment A) includes a letter and instruction card explaining how to complete the survey online. Also included are a Frequently Asked Questions (FAQ) brochure and a brochure that provides basic information about the survey in English, Spanish, Russian, Chinese, Vietnamese, and Korean, and provides a phone number to call for assistance in each language. 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 (Attachment B) has space to collect detailed information for 20 people in the household.

The second mailing is a letter (Attachment C) 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 at a later date if the Census Bureau does not receive their response. This letter includes clear instructions to log in, including an explicit reference to the user identification number. A pressure-seal mailer is used for this letter.

In a third mailing (Attachment D), the American Community Survey Household Questionnaire Package is sent only to those sample addresses that have not completed the online questionnaire within two weeks. The content includes a follow-up letter, a paper questionnaire, 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 fourth mailing (Attachment E) is a postcard that reminds respondents that “now is the time to complete the survey,” informs them that a field representative may

contact them if they do not complete the survey, and reminds them of the importance of the ACS.

A fifth mailing (Attachment F) is sent to respondents who have not completed the survey within five weeks. This mailing reminds these respondents to return their questionnaires and thanks them if they have already done so. This letter includes clear instructions to log in, including an explicit reference to the user identification number. A pressure-seal mailer is used for this mailing.

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 internet response rates from that testing, the ACS deferred the introduction of an internet response option in order to further assess the best implementation approach. Therefore, the Census Bureau continues to use the previously used mail strategy with no references to an internet response option (Attachment H).

Follow-up operations on nonresponding units are conducted to ensure a final high weighted response rate. These operations are conducted through CAPI for a sample of addresses for which the Census Bureau has not obtained a mail or internet response. The HU CAPI instrument is available to in English and Spanish. Beginning in June 2016, the Census Bureau implemented a burden reduction initiative for the HU CAPI operation to prevent excessive attempts to complete ACS interviews. For that initiative, the Census Bureau assigns a burden score to each contact a household receives, and the score accumulates through each mailing and CAPI visit. When the score reaches a predetermined threshold, the case is removed from the CAPI operation and closed out. While this initiative has had a slight, negative impact on CAPI response rates, it has been a successful effort to address concerns from internal and external stakeholders about the amount of respondent burden associated with the ACS.

The ACS conducts the FEFU operation to focus on households with coverage problems (such as mail respondents with more than five people, mail respondents with more people listed on the cover than in the basic demographic section, or questionnaires returned for vacant units). The Census Bureau will also use the FEFU operation 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 possibly to collect the minimum amount of information needed to further process the questionnaire. If funding allows, the Census Bureau would resume FEFU for mail and internet returns for missing responses to critical questions. The FEFU instrument (Attachment J) is available in both English and Spanish.

Bilingual ACS paper questionnaires are used to conduct personal interviews with sampled GQ residents. The GQ resident data collection packages (Attachment P) 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, the Census Bureau will use PR data collection packages (Attachment Q) to collect the GQ data. The Census Bureau will also conduct a separate operation to collect ACS GQ data from sampled GQs in remote Alaska.

#### **4. Changes to the ACS for 2020**

The American Community Survey (ACS) is one of the Department of Commerce's most valuable data products, used extensively by businesses, nongovernmental organizations (NGOs), local governments, and many federal agencies. In conducting this survey, the Census Bureau's top priority is respecting the time and privacy of the people providing information while preserving its value to the public.

As mentioned in the ACS 2019 OMB Clearance Package, in 2020, the ACS will adopt the final version of the race and Hispanic origin questions that will be implemented for the 2020 Census. These changes will make the ACS consistent with 2020 Census data on this topic.

The ACS will also change the instruction for reporting babies' ages to match the 2020 Census. Ongoing research suggests the instructions for reporting infants creates challenges for some respondents. Cognitive testing demonstrated the wording for the age instruction is unclear and confusing to some respondents; the revised instruction is expected to help respondents understand how to respond to the question for infants under age 1. Details about all of the questions planned for the 2020 Census and the American Community Survey are available at: [https://www.census.gov/2020questions\\_](https://www.census.gov/2020questions_)

The ACS self-response rates in 2010, a decennial census year, were higher than usual in the first few months of the year, but were lower than usual in the spring and summer months, when the 2010 Census was underway. The increased self-response rates early in the year were attributed to decennial census communications while the decreased rates later in the year were attributed to respondent confusion, as respondents had already filled out their decennial census form and did not understand that the ACS was a separate data collection. Prior research suggests that during a decennial census year, ACS mail materials such as envelopes and letters should be revised to distinguish the ACS from the census. For the 2020 ACS data collection year, the Census Bureau plans to modify the mail package contents, field representative flyers, scripts for the Interactive Voice Recognition system, and frequently asked questions to better communicate to respondents that the ACS is a

separate data collection from the 2020 Census and that respondents selected for the ACS should complete both the ACS and the 2020 Census. These materials can be found in Attachments N, P, Q, and T.

To encourage self-response in the ACS, the Census Bureau sends up to five mailings to an address selected to be in the sample. The first mailing, sent to all mailable addresses in the sample, includes an invitation to participate in the ACS online and states that a paper questionnaire will be sent in a few weeks to those unable to respond online. Subsequent mailings serve as a reminder to respond to the survey, with a paper questionnaire included in the third mailing for those households that prefer to respond by mailing back the questionnaire. Respondents who begin filling out the survey online will have an option to provide an email address, which would be used to send an email reminder to households that did not complete the online form. The reminder asks them to log back in to finish responding to the survey.<sup>7</sup>

Some addresses are deemed unmailable because the address is incomplete or directs mail only to a post office box. The Census Bureau currently collects data for these housing units using CAPI. The Census Bureau plans to make the ACS online survey available to all housing units in the 50 states and the District of Columbia, including those with unmailable addresses. Residents in housing units with unmailable addresses will still be contacted by Census Bureau field representatives, but they will now be given the option to complete the survey online or by personal interview. Because of conflicting priorities, the Census Bureau needs to reassess when implementation of this change is feasible. This change in implementation is different than what was published in the 60-day Federal Register Notice on October 16, 2018.

As a result of the 2018 Mail Materials Test, the Census Bureau plans to implement new mail materials designed to better emphasize the benefits of survey participation. Included in the changes are the use of updated logos on the envelopes and letters to identify the mail more clearly as coming from the Census Bureau and the addition of “Open Immediately” on some of the envelopes. Additionally, bold lettering and boxes (callout boxes) are used to highlight elements of the materials to capture the attention of busy respondents who may not read the entire letter. The mandatory nature of the survey is highlighted by using bold text and isolating sentences about mandatory in the materials. Some materials, such as the Frequently Asked Questions (FAQ) brochure are excluded from the mailings to simplify the materials and focus the attention of the respondent to what they need to do. Content from the FAQ brochure is included on the back of the letters. Please see Attachment A and Attachments C – F.

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<sup>7</sup>See the 2017 American Community Survey (ACS) Internet Test research paper at: [https://www.census.gov/library/working-papers/2016/acs/2016\\_Zelenak\\_01.html](https://www.census.gov/library/working-papers/2016/acs/2016_Zelenak_01.html)

## 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. Steven Hefter | Chief, ACS Sample Design Branch<br>Decennial Statistical Studies Division<br>Phone: (301) 763-4082 |
|-------------------|--|

### Overall Data Collection

|                 |   |
|-----------------|---|
| Ms. Donna Daily | Assistant Division Chief for Data Collection<br>American Community Survey Office<br>Phone: (301) 763-5258 |
|-----------------|---|



## Attachments

### Collection Materials

- A American Community Survey Household (HU) First Mailing:
- ACS-13(L)(2020)(02-11-2019), ACS Introductory Letter
  - ACS-34IM(2020)(11-27-2018), Internet Response Instruction Card
  - ACS-9(2020)(2-5-2019), Multilingual Brochure
  - ACS-46IM(2020)(12-11-2018), ACS Stateside Outgoing Envelope
- B American Community Survey Internet Screen Capture Guide:
- ACS-400C(January 2019), ACS Internet Data Collection Instrument Screen Capture Guide
- C American Community Survey Household (HU) Second Mailing:
- ACS-20L(2020)(02-11-2019) ACS HU Reminder Letter (Pressure-seal mailer)
- D American Community Survey HU Third Mailing:
- ACS-14L(2020)(02-11-2019), ACS Follow-Up Letter
  - ACS-1(2020)(02-11-2019), ACS Stateside Questionnaire
  - 6385-47(2020)(12-12-2018), Business Reply Envelope
  - ACS-46(2020)(12-18-2018), ACS Outgoing Envelope Stateside Replacement Mailing
- E American Community Survey HU Fourth Mailing:
- ACS-29(2020)(2-11-2019), ACS Reminder Postcard
- F American Community Survey HU Fifth Mailing:
- ACS-23(L)(2020)(2-11-2019), ACS Additional Mailing Letter (Pressure-seal mailer)
- G American Community Survey HU Spanish Mailing Package:
- ACS-13L(SP)(2020)(2-12-2019), ACS Spanish Introductory Letter
  - ACS-1(SP)(2019)(02-08-2018), ACS Stateside Questionnaire in Spanish
  - ACS -14L(SP)(2020)(2-12-2019), ACS Spanish Follow-Up Letter
  - 6385-47(2020)(12-12-2018), Business Reply Envelope
  - ACS-29(SP)(2020) (2-5-2019), ACS Spanish Reminder Postcard
  - ACS-23(SP)(2020) (2-5-2019), ACS Bilingual Additional Mailing Postcard
  - ACS-46(SP)(2020) (12-17-2018), Stateside Spanish Outgoing Envelope

H Puerto Rico Community Survey HU Mailing Forms:

- ACS-12(L)PR(2020)(2-6-2019), PRCS Bilingual Prenotice Letter
- ACS-40PR(2020)(1-29-2019), Prenotice Envelope
- ACS-13(L)PR(2020)(2-6-2019), PRCS Bilingual Introductory Letter
- ACS-10SMPR(2020)(02-31-2019), PRCS Bilingual Frequently Asked Questions Brochure
- ACS-1PR(SP)(2019)(02-07-18), PRCS Spanish Questionnaire in Spanish
- 6385-47(2020)(12-12-2018), Business Reply Envelope
- ACS-20PR(2020)(2-12-2019), PRCS Bilingual Reminder Postcard
- ACS-14(L)PR(2020)(2-6-2019), PRCS Bilingual Follow-Up Letter
- ACS-23PR(2020) (2-5-2019), PRCS Bilingual Additional Mailing Postcard
- ACS-46PR(2020) (12-31-2018), PRCS Outgoing Envelope

I Puerto Rico Community Survey HU Mailing Forms in English:

- ACS-13(L)PR(2020)(2-6-2019), PRCS Bilingual Introductory Letter
- ACS-10SMPR(2020)(02-31-2019), PRCS Bilingual Frequently Asked Questions Brochure
- ACS-1(2020)PR(1-31-2019), PRCS Questionnaire in English
- 6385-47(2020)(12-12-2018), Business Reply Envelope
- ACS-14(L)PR(2020)(2-6-2019), PRCS Bilingual Follow-Up Letter
- ACS-46PR(2020) (12-31-2018), PRCS Outgoing Envelope

J American Community Survey Failed Edit Follow-up Questions

K American Community Survey Vacant Unit Questions

L American Community Survey Housing Unit Reinterview Questions

M American Community Survey CAPI Tools

- ACS-16(L) (1-2020) Introductory Letter in Multiple Languages
- ACS-26(L) (1-2020) ACS Thank You Letters in Multiple Languages
- ACS-50(HU) (1-2020), Informational Brochure in Multiple Languages
- ACS-51(HU) (1-2020), Q&A Brochure in Multiple Languages
- ACS-613R(L)(January 2018) Refusal Letters in Multiple Languages
- ACS-Measuring America Flyer (1-2020)

- N American Community Survey Group Quarters Facilities Data Collection Package
- ACS-18(L)(C)(GQ)(RO name)(2020)(12-2018) ACS GQ Student Housing Introductory Letter
  - ACS-18(L)(H)(RO name)(2020)(12-2018) ACS GQ Health Care Introductory Letter
  - ACS-18(L)(GQ)(RO name)(2020)(12-2018), ACS GQ Facility Manager Introductory Letter
  - ACS-18(L)(GQ)(PR)(2020)(12-2018) PRCS GQ Introductory Letter (English)
  - ACS-18(L)(GQ)(PR)(S)(2020)(12-2018) PRCS GQ Introductory Letter (Spanish)
  - ACS-51(GQ)(F)(December 2018) ACS GQ Facility FAQ
  - ACS-26(L)(GQ)(F)(2020)(12-2018), ACS Facility Thank You Letter (English/Spanish)
  - ACS-26(L)(GQ)(PR)(F)(2020)(12-2018), PRCS Facility Thank You Letter (English/Spanish)
- O American Community Survey Group Quarters Facility Questionnaire and Listing Sheets
- GQFQ Facilities Questionnaire
  - ACS-290(GQ)(7-16-2014) ACS GQ Listing Sheet
  - ACS-290(GQ)(PR)(SP)(8-15-2017) PRCS GQ Listing Sheet
  - ACS-290B(GQ)(8-1-2011) ACS GQ Control List
  - ACS-290B(GQ)(PR)(SP)(8-14-2017) PRCS GQ Control List (Spanish)
- P American Community Survey Group Quarters Resident Data Collection Package
- ACS-17(L)(GQ)(2020)(12-2018), ACS Resident Introductory Letter (English)
  - ACS-17(L)(GQ)(S)(2020)(12-2018), ACS Resident Introductory Letter (Spanish)
  - ACS-21(GQ) (12-2018), ACS GQ Confidentiality Notice (English/Spanish)
  - ACS-1(GQ)(2019) (2-14-2018), ACS GQ Questionnaire (English/Spanish)
  - ACS-30(GQ)(2020)(8-2018), ACS GQ Instruction Guide (English/Spanish)
  - ACS-26(L)(GQ)(R)(2020)(12-2018), ACS GQ Resident Thank You Letter (English/Spanish)
  - ACS-50(GQ)(September 2018) ACS Brochure
  - ACS-51(GQ)RA(December 2018) ACS GQ Remote Alaska FAQ
  - 6385-46(GQ) (8-2017) ACS Business Reply Mail Envelope
- Q Puerto Rico Community Survey – Group Quarters Resident Questionnaire Package:
- ACS-17(L)(GQ)(PR)(2020)(12-2018), PRCS Resident Introductory Letter (English/Spanish)
  - ACS-21(GQ)(PR)(12-2018), PRCS GQ Confidentiality Notice (English/Spanish)
  - ACS-1(GQ)(PR)(2019) (2-14-2018), PRCS GQ Questionnaire (English/Spanish)
  - ACS-30(GQ)(PR)(2020)(8-2018) PRCS GQ Instruction Guide (English/Spanish)
  - ACS-26(L)(GQ)(PR)(R)(2020)(12-2018), PRCS Resident Thank You Letter (English/Spanish)
  - ACS-51(GQ)PR (December 2018) PRCS GQ Puerto Rico FAQ
  - 6385-46(GQ)(PR)(8-17-2017) PRCS GQ Business Reply Mail Envelope

- R American Community Survey Group Quarters Reinterview Questions
- S Comments on the Federal Register Notice received by the Census Bureau
- T Modified Materials to distinguish between ACS and the 2020 Census