

## Part B: Collection of Information Employing Statistical Methods

### 1. Description of Universe and Sample Selection

The Department of Housing and Urban Development (HUD) has requested that the Census Bureau produce estimates of selected characteristics of existing rental housing properties in the United States.

These estimates will be based on data collected from a representative sample of rental housing structures in the United States in 2015. These rental structures will be used to construct rental housing properties.

The sample universe consists of rental structures from two sources; the 2013 American Housing Survey (AHS) Sample and the January 2014 Master Address File Extract Files (MAFXs) in the same geographic areas. The AHS provides a frame of single unit rental structures while the MAFXs provide the frame of multi-unit structures.

For the single unit frame, all existing single unit structures were identified from the 2013 AHS sample using housing characteristics such as structure type and tenure. Next, the public housing units were removed using an administrative list provided by HUD. The in-scope structures include attached and detached single family homes, manufactured homes, and condominiums. For the multi-unit frame, the public housing units were removed using an administrative list provided by HUD and the remaining structures were created by combining unit level addresses into a single basic street address based on either geographic coordinates or house number and street name. Next, the out-of-scope structures such as manufactured homes and group quarters were removed. Finally, the two types of structures (single and multi) are combined into a single frame.

A sample of these structures will be selected in several steps. First, the rental structures will be assigned to one of five strata based on the number of units in the structure. These strata are: 1 unit, 2-4 units, 5-24 units, 25-49 units, and 50 or more units. The structures within each stratum will be sorted by geographic variables, including state, urban/rural status, and county. A representative sample of these ordered structures will then be selected within each stratum. The within-stratum sampling rates will be determined to result in an expected coefficient of variation of 6% at the national level. The sample sizes for each strata are as follows:

Strata	Universe Size	Initial Sample Size	Oversample Size	Total Sample Size
1 unit	6,497	1,761	755	2,516
2-4 units	3,452,236	491	187	678
5-24 units	907,544	1,048	420	1,468
25-49 units	82,840	2,432	1,119	3,551
50+ units	83,440	754	346	1,100
Total	4,532,557	6,486	2,827	9,313

The oversample rates varied by strata and are based on the percentage of non-respondents and ineligible structures from the 2012 iteration of this survey. These rates are below:

<b>Strata</b>	<b>Oversample Rates</b>
1 unit	30%
2-4 units	37%
5-24 units	38%
25-49 units	42%
50+ units	37%

This oversample is needed for two reasons; a high non-response rate and a large number of ineligible structures. The owners and or property managers of the structure will be contacted and asked about specific financing and property-related characteristics.

## **2. Procedures for Collection of Information and Estimation Procedures**

Prior to RHFS data collection, an Owner-Seeker operation to collect the contact information for the rental property owner will be conducted.

The RHFS data collection will begin with an advance letter to the rental property owner which invites their participation in the survey using a web-based instrument.

Respondents that do not complete their survey after approximately six weeks will continue into the telephone follow-up operation. The National Processing Center (NPC) clerical staff will call to either remind the respondents to complete their survey online or attempt to conduct the interview over the phone.

Respondents that do not complete their survey after approximately three months will continue into the field follow-up operation. Field representatives (FRs) will either call or visit the respondents in an attempt to conduct the interview.

Based on the available contact information, the NPC clerical staff and the FRs may be contacting either property owners or managers. In some instances, the owner will refer staff to the manager (or the manager will refer the staff to the owner) due to one party not having sufficient knowledge to answer certain questions.

During the interview, respondents may provide contact information for an additional respondent (i.e., property manager, owner, or accountant). This person will be contacted if the data already provided do not qualify as a sufficient partial interview. In addition, an effort will be to determine if different questionnaires are being referred to the same owner (which can occur if one individual owns multiple properties). In these situations, questionnaires will be consolidated and administered during a single follow-up attempt.

The survey estimates will be based on weighted data. The weights for producing these estimates will be calculated using a three step procedure. First, the base weight (BW),

which is the inverse of the probability of selecting a structure, will be calculated and assigned to each sample structure in the stratum. Next, a post-sampling adjustment factor (PSF), the adjustment needed to account for the structure having a different number of units than expected, will be calculated and assigned to each sample case.

Next, a nonresponse adjustment factor (NRF), which is the ratio of the sample properties divided by the interviewed sample properties, will be calculated and assigned to the interviewed sample properties. Separate NRFs will be computed for each stratum. The weight for each interviewed structure will be the product of these factors as expressed by the following formula:

$$\text{Weight} = \text{BW} * \text{PSF} * \text{NRF}$$

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

We will maintain high levels of data accuracy and response rates through NPC clerical and FR instruction, professional training, and close monitoring of the data. NPC clerks and FRs will be educated on proper interviewing techniques as well as methods for dealing with reluctant respondents.

In addition, respondents who still refuse to participate during the field follow-up operation may receive a Refusal Letter. These letters will be generated at the Regional Office level and sent in order to educate individuals about the importance of our survey and the Census Bureau's commitment to confidentiality.

In addition, Unable to Contact Letters will be sent to respondents whom the FRs are having trouble reaching. This letter will inform respondents that a Census Bureau representative has been attempting to locate them and will ask them to call a Census Regional Office for further instruction.

### 4. **Testing Procedures**

Three rounds of cognitive testing will be performed on the questionnaire. Current owners and managers of rental properties will be selected as participants. The participants will be chosen so as to ensure representatives from each strata, i.e., 1 unit, 2-4 unit, 5-24 unit, 25-49 unit and 50 or more unit structures, are all included.

The first round of cognitive testing is intended to identify issues with the new questions that assist respondents in correctly identifying their property.

The second and third rounds of cognitive testing will test the survey content and the usability of the electronic data collection instrument. The second round will cover the entire survey and identify issues related to content and usability. The third round will evaluate the revisions intended to remedy the issues identified during the first and second rounds of cognitive testing.

### 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.

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Attachments