AMERICAN HOUSING SURVEY

Dependent Interviewing: 2015 and Beyond

LAST UPDATED: JULY 2019

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
U.S. CENSUS BUREAU
U.S. DEPARTMENT OF COMMERCE

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

PD&R

Contents

1. Overview 1
2. Determining Eligibility for Dependent Interviewing 2
   2.1. Determining Question Eligibility 2
   2.2. Determining Response Eligibility 3
3. Types of Dependent Interviewing 3
   3.1. Do Not Re-ask 4
   3.2. Verification of Prior Year Response 5
   3.3. Bounding for Home Improvement Projects 6
4. Dependent Interviewing Legend 6
5. Reference 14

List of Exhibits

Exhibit 3.2. Verification Codes and Descriptions 6
Exhibit 4.1. Topic: Occupancy and Tenure 7
Exhibit 4.2. Topic: Structural 8
Exhibit 4.3. Topic: Equipment and Appliances 9
Exhibit 4.4. Topic: Housing Problems 10
Exhibit 4.5. Topic: Demographics 11
Exhibit 4.6. Topic: Housing Costs 12
Exhibit 4.7. Topic: Home Improvement 13
Exhibit 4.8. Topic: Neighborhood Features 14

1. Overview

The purpose of this document is to explain how the Department of Housing and Urban Development (HUD) and the U.S. Census Bureau (Census Bureau) implemented dependent interviewing in the American Housing Survey for 2015 and later years.

Dependent interviewing is the practice of using a respondent's answer to a question from a *prior* survey to fill in the response to the same question in the *current* survey, thereby improving accuracy and reducing respondent burden in the current survey. The American Housing Survey (AHS) is a longitudinal survey where the same housing units are visited every two or four years. The AHS is administered using a Computer Assisted Personal Interview (CAPI). These two characteristics of the AHS mean there are numerous opportunities to use dependent interviewing.

For 2015, the U.S. Department of Housing and Urban Development (HUD) and the U.S. Census Bureau drew an entirely new sample for the AHS. The 2015 AHS longitudinal sample is composed of an integrated national longitudinal sample and 20 independent metropolitan area longitudinal oversamples. The national longitudinal sample is described as integrated because it incorporates a few different types of samples. The integrated national longitudinal sample includes:

- A representative sample of the nation.
- Representative oversamples of each of the top 15 group of metropolitan areas[1].
- A representative oversample of HUD-assisted housing units.

The entire integrated national longitudinal sample will be surveyed every two years, meaning it is a two-year survey cycle.

In 2015, HUD and the Census Bureau identified a "Next 20" group of metropolitan areas to be surveyed in 2015 and later years. These Next 20 group are described as independent so as not to be confused with the Top 15 metropolitan areas that are part of the integrated national longitudinal sample. The Next 20 group is a set of metropolitan areas ranging from the 16th to 51st largest by population, and it includes: [2]

- The first ten of the Next 20 group were surveyed in 2015 and 2019. They are scheduled to be surveyed every four years thereafter 2023, etc.).
- The second ten of the Next 20 group of metropolitan area longitudinal oversamples were surveyed in 2017 and are scheduled to be surveyed every four years thereafter (2021, 2025, etc.).

Throughout the rest of this document, the phrase "independent metropolitan area longitudinal samples" is shortened to "metropolitan area samples."

---

[1] The Top 15 group of metropolitan area longitudinal oversamples use the 2013 Office of Management and Budget's core based statistical area definitions as of February 2013

[2] For more information about how the Next 20 group of metropolitan areas was selected, see *Metropolitan Area Selection Strategy: 2015 and Beyond* on the Census Bureau's AHS website ("2015 Redesign" portion of the "Operations and Administration" page).

Since 2015 was the first year with the new sample, dependent interviewing was not implemented in the 2015 CAPI instrument. HUD and the Census Bureau began implementing dependent interviewing for select questions in 2017 and additional select questions in 2019. In subsequent survey years, HUD and the U.S. Census Bureau will continue to use dependent interviewing and may make additional questions eligible.

The dependency timeframe, or look back, is every two years for the integrated national longitudinal sample and every four years for the Next 20 group of independent metropolitan area longitudinal oversamples.

The remainder of this guide explains how HUD and the Census Bureau implement dependent interviewing. Section 2 explains how HUD and the Census Bureau chose which questions are eligible for dependent interviewing and the prior year responses that are eligible as a source of information for dependent interviewing. Section 3 describes the techniques used to implement dependent interviewing. Section 4 lists the dependent interviewing technique used for questions whose answers appear in the AHS Public Use File (PUF).

2. Determining Eligibility for Dependent Interviewing

To implement dependent interviewing for an AHS question, AHS managers at HUD and the Census Bureau must make two key eligibility decisions. The first decision is whether a survey question is eligible for dependent interviewing. The second decision, which is referred to as response eligibility, requires a determination of the conditions under which a response from a prior year survey is considered eligible as a source of information for dependent interviewing in the current survey.

2.1. Determining Question Eligibility

Determining which questions are eligible for dependent interviewing is both an art and a science. AHS managers at HUD and the Census Bureau make these determinations based on their experience, their intuition, and, when available, data from prior surveys. Specifically, HUD and the Census Bureau evaluate questions using three criteria. First, HUD and the Census Bureau evaluate the questions or variables based on how frequently we expect the characteristics to change. These questions have responses that generally do not change, change predictably, or change infrequently. For example, responses to questions such as the presence of a basement or the type of foundation for a manufactured/mobile home are unlikely to change.

Second, HUD and the Census Bureau analyze the potential bias that dependent interviewing might introduce. By incorporating dependent interviewing, there is a potential decrease in variability or artificial leveling of responses that may occur. In fact, the effects of dependent interviewing were studied using the 1985–2013 sample by comparing the 2013 data with data collected using the new sample in 2015 (Brassell and Gustafson, 2018). In the research, notable differences were found even when the analysts accounted for changes in sample design between the two survey years.

For example, in 2013, the AHS introduced a dependent interviewing question for respondents who reported at least one separate dining room. Comparing the 2011 and 2013 data, analysts found that the number of respondents who switched the number of separate dining rooms in the home from one or more to zero was markedly smaller than in previous years. In addition to reducing the variability of responses, the research also suggested a reduction in nonresponses over time. For these variables, the Census Bureau retained the dependent interviewing questions used in the 2013 questionnaire. The research so

far primarily focuses on dependent interviewing for the types of rooms in the home; however, the analysts plan to expand and revisit this research as the data from each survey cycle become available.

The third criteria to evaluate questions for dependent interviewing potential is to evaluate the complexity and risks of adding dependent interviewing to the instrument. HUD and the Census Bureau evaluate the costs and benefits of adding a new question to an already complex questionnaire. For example, though possible, it would be technically complicated to add dependency to a “mark all that apply” question or questions used in a series of skips in the instrument.

2.2. Determining Response Eligibility

The AHS CAPI questionnaire is administered to occupied housing units. Census Bureau Field Representatives (FRs) also collect information for vacant housing units and for households who are occupying the sampled housing unit but live someplace else, referred to as usual residence elsewhere *URE* households. All three housing types appear in the AHS PUF.

For the AHS, HUD and the Census Bureau have adopted a global eligibility rule that applies to all AHS questions selected for dependent interviewing. That rule is that only *valid* responses collected from *occupied* housing units are eligible to be used in dependent interviewing. Responses collected from vacant or *URE* interviews are not eligible to be used in dependent interviewing. Question responses that are imputed due to a missing response from an otherwise completed interview are also not eligible to be used in dependent interviewing.

In addition to the global response eligibility rule that applies uniformly to all AHS questions, there is a second response eligibility decision that must be made for each individual question. The response eligibility decision is whether to require that prior year responses come from the *same* household (or person).

To understand the nature of why this decision must be made, it is useful to recall a few characteristics of the AHS. First, the AHS is a longitudinal survey administered to the same housing units every two or four years. This means that a household interviewed in (for instance) the 2017 AHS may be a different household than the one interviewed for the 2015 AHS. Second, the AHS questionnaire includes questions about the housing unit, the householder, the household, actions taken by the household, and persons within the household.

For the AHS, HUD and the Census Bureau adopted a flexible approach. For some questions, only a prior year survey response from the same household was eligible as a source of information for dependent interviewing in the current survey. For other questions, a prior year survey response from *any* household was eligible. For a handful of questions specific to persons within the household, only a prior year survey response about the person was eligible as a source of information for dependent interviewing in the current survey.

3. Types of Dependent Interviewing

Once HUD and the Census Bureau determined that a question was eligible for dependent interviewing and determined the response eligibility (that is, any household, same household, same person), the final decision to make was the technical approach for implementing dependent interview, hereinafter referred to as “techniques.” There are three basic techniques to implement dependent interviewing in the AHS and two of the techniques have multiple types depending on the nature of the survey question.

3.1. Do Not Re-ask

Do Not Re-ask (DNR) dependent interviewing technique is when a question is skipped in the current AHS if a valid answer was obtained in the prior year AHS. DNR is applied only when the answer to a question has been deemed as highly unlikely to change between surveys. Examples of this include the purchase price of the housing unit or a person's country of birth.

There are seven types of DNR techniques. For the purposes of clarity within the exhibits in Section 4, each type is given a unique code. Exhibit 3.1 provides the code and description of the type of DNR dependent interviewing technique.

Exhibit 3.1. Code and Description of Type of DNR Dependent Interviewing Technique

Code	Description
DNR-a	Do not re-ask under any circumstance.
DNR-s	Do not re-ask if the person reported being a citizen in the prior survey year.
DNR-y	Do not re-ask if the prior year response was "yes."
DNR-v	Do not re-ask if the current interview is a vacant or URE interview and prior year value of *RENTSUB*[a] was "Other government subsidy."
DNR-vs	Do not re-ask if the current interview is a vacant or URE interview and SUBRNT2 is "yes," and the prior year value of *RENTSUB* was "Public housing."[b]
DNR-vp	Do not re-ask if the current interview is a vacant or URE interview and there is a prior year value for RENTSUB.
DNR-p	Do not re-ask if the current interview is a regular occupied interview and prior year value of *RENTSUB* was "Public housing."

[a] A full description of *RENTSUB* and any other variables listed here without additional documentation can be found in the AHS Codebook at https://www.census.gov/programs-surveys/ahs/tech-documentation/codebooks/ahs-codebook-tool.html.

[b] The question *SUBRNT2* asks, "Does the Federal, State, or local government pay some of the cost of your unit?"

3.2. Verification of Prior Year Response

For some questions, it is possible that a respondent could provide a different answer than in the prior year survey, but either do so infrequently or in a predictable way. For instance, a person's age. For these questions, the respondent is asked to verify that the answer to the question was the same as it was in the previous survey. There are four types of verifications, each with a unique code. Exhibit 3.2 provides the code and description of the type of verification. The codes appear in Section 4 of this help guide.

Exhibit 3.2. Verification Codes and Descriptions

Code	Description
V-a	Verify prior year response for all response categories.
V-s	Verify prior year response, except in instances where the prior year response was “other.”
V-t	Verify prior year response, but only if tenure changed from “renter-occupied” to “owner occupied.”
V-y	Verify prior year response, but only in instances where the prior year response was "yes."

3.3. Bounding for Home Improvement Projects

Homeowners in the AHS are asked questions about home improvement projects they have undertaken in the past two years. Although the questions are designed to capture *new* home improvement projects, sometimes respondents report a project that matches a project they reported in the prior year AHS. This is known as telescoping: the tendency of respondents to remember events as occurring more recently than the actual date of occurrence.

To ensure only new home improvement projects are captured, a type of dependent interviewing called “bounding” is used. Simply put, for any home improvement project that matches a prior project, the respondent is asked whether the project is the same or different from one reported in the previous survey. If the project is the same as the one reported in the previous survey, no further questions are asked about it. The project’s data are then edited out of the responses in processing.

The code B indicates when a variable is bounded and appears in Section 4.

4. Dependent Interviewing Legend

The exhibits below show the type of dependent interviewing associated with each PUF variable. The exhibits are organized by topic and sub-topic, and these topics and sub-topics are the same as the ones used in the AHS Codebook.

Exhibit 4.1. Topic: Occupancy and Tenure

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Tenure				
COMPLEX	Flag indicating this building is part of an apartment complex	Any HH	V-a	V-a
CONDO	Flag indicating unit is a condominium	Any HH	V-y	V-y
COOP	Flag indicating unit is a cooperative	Any HH	V-y	V-y
HOA	Flag indicating unit is part of a homeowner's association	Any HH	DNR-y	DNR-y
OWNLOT	Flag indicating owner of regularly occupied unit owns the lot	Any HH	DNR-y	DNR-y
	Flag indicating owner of *URE* or vacant unit owns the lot	Any HH	NA	NA

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

Exhibit 4.2. Topic: Structural

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Exterior Features				
ENTRYSYS	Entry system required to access building	Any HH	V-y	V-y
GARAGE	Flag indicating unit has a garage or carport	Any HH	V-y	V-y
MHANCHOR	Method used to anchor mobile home	Any HH	V-y	V-y
MHWIDE	Type of manufactured or mobile home	Any HH	V-a	V-a
NOSTEP	Flag indicating unit's entrance is accessible without climbing up or down any stairs	Any HH	V-y	V-y
PORCH	Flag indicating unit has porch or deck or balcony or patio	Any HH	V-y	V-y
GUTREHB	Flag indicating unit has undergone a gut rehabilitation in the last 10 years	Any HH	DNR-y	NA
Subtopic: Interior Features[a]				
BATHROOMS	Number of bathrooms in unit	Same HH	NA	V-a
	Number of half bathrooms in unit	Same HH	NA	V-a
	Do units reporting 0 full bathrooms and 1+ half bathroom(s) have a working bathroom sink	Any HH	V-y	V-y
	Do units reporting 0 full bathrooms and 1+ half bathroom(s) have a working toilet	Any HH	V-y	V-y
	Do units reporting 0 full bathrooms and 1+ half bathroom(s) have a working shower or bathtub	Any HH	V-y	V-y
BEDROOMS	Number of bedrooms in unit	Same HH	NA	V-a
DENS	Number of dens or libraries in unit	Same HH	NA	V-a
DINING	Number of dining rooms in unit	Same HH	NA	V-a
FAMROOMS	Number of family rooms, great rooms, or TV rooms	Same HH	NA	V-a
FOUNDTYPE[b]	Type of foundation–single family	Any HH	V-s	V-s
	Type of foundation–mobile home	Any HH	V-s	V-s
KITCHENS	Number of kitchens in unit	Same HH	NA	V-a
LAUNDY	Number of laundry or utility rooms in unit	Same HH	NA	V-a
LIVING	Number of living rooms in unit	Same HH	NA	V-a
OTHFN	Number of other finished rooms in unit	Same HH	NA	V-a
UFINROOMS	Number of other unfinished rooms in unit	Same HH	NA	V-a
RECROOMS	Number of recreation rooms in unit	Same HH	NA	V-a

[a] All interior features variables listed as V-a dependency are verified in the same question. The interviewer lists the counts of each room type reported in the prior survey and verifies with the respondent whether they are the same. If the respondent indicates no, each room count question is re-asked independently as it would be for a new sample.

[b] For 2017 and 2019, housing units that respondents reported as an "other" foundation type in the prior survey year carried forward the prior response and were not re-asked or verified.

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

Exhibit 4.3. Topic: Equipment and Appliances

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Heating				
FIREPLACE	Fireplace reported as main heating equipment in *HEATTYPE* questions	Any HH	V-s	V-s
	Unit has useable fireplace—fireplace not reported as main heating equipment	Any HH	V-y	V-y
	Considers fireplace heating equipment—fireplace not reported as main heating equipment	Any HH	V-y	V-y
HEATFUEL	Fuel used most for heating unit	Any HH	NA	V-s
HEATTYPE	Main heating equipment	Any HH	V-s	V-s
Subtopic: Cooling				
ACPRIMARY	Do units with heat pumps also use them to provide air conditioning	Any HH	NA	NA
	Do units that do not use heat pumps to provide air conditioning have some form of central air conditioning	Any HH	V-y	V-y
	What fuel does the central AC use	Any HH	V-s	V-s
	Does unit have room air conditioners	Any HH	NA	NA
	How many room air conditioners	Any HH	NA	NA
Subtopic: Water and Sewer				
HOTWATER	Does unit have both cold and hot water	Any HH	V-y	V-y
	Fuel used most to heat water	Any HH	V-s	V-s
SEWTYPE	Is unit connected to public sewer	Any HH	DNR-y	DNR-y
	Type of non-public system	Any HH	NA	NA
	Type of septic or cesspool system	Any HH	V-s	V-s
SEWUSERS	Number of units connected to septic tank or cesspool	Any HH	V-a	V-a
WATSOURCE	Source of water for unit	Any HH	V-s	V-s
Subtopic: Appliances				
COOKFUEL	Fuel used most for cooking	Any HH	V-s	V-s
COOKTYPE	Has working cooking stove or range/oven	Any HH	V-y	V-y
	Has built-in cooking burners if no stove/range/oven	Any HH	V-y	V-y
	Has microwave if none of the previous cooking equipment	Any HH	V-y	V-y
DISHWASH[a]	Unit has working dishwasher	Any HH	V-y	V-y
DRYER	Unit has working clothes dryer	Any HH	V-y	V-y
	Fuel used for dryer	Any HH	V-s	V-s
FRIDGE	Unit has a working refrigerator	Any HH	V-y	V-y
KITCHSINK	Unit has kitchen sink	Any HH	DNR-y	DNR-y
WASHER	Unit has a working washing machine	Any HH	V-y	V-y

[a] The verification question for DISHWASH, DRYER, and WASHER are asked in the same question. At the beginning of the appliance section, the interviewer lists all appliances that were reported during the last interview and asks the respondent whether that is still correct. Appliances that were not reported in the prior interview are asked the normal questions, as are those who say no to this confirmation screen.

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

Exhibit 4.4. Topic: Housing Problems

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Electrical Problems				
PLUGS	Flag indicating every room has working electrical plug	Any HH	V-y	V-y

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

Exhibit 4.5. Topic: Demographics

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Same Per Demographics				
MLPA, MLPB, MLPCD, MLPE, MLPFG, MLPH, MLPI, MLPJ, MLPK	Flags indicating period of military service	Same Per	DNR-a	DNR-a
AGE	Age of person	Same Per	V-a	V-a
CITSHP	U.S. citizenship of person	Same Per	DNR-s	DNR-s
FIRPARENT	Line number of parent number one	Same Per	DNR-a	DNR-a
GRAD	Educational level of person	Same Per	V-a	V-a
INUSYR	Year person came to the United States	Same Per	DNR-a	DNR-a
MAR	Marital status of person	Same Per	V-a	V-a
MIL	Military status of person	Same Per	DNR-y	DNR-y
MOVE	Year person moved in	Same Per	DNR-a	DNR-a
MOVM	Month person moved in	Same Per	DNR-a	DNR-a
NATVTY	Country of birth of person	Same Per	DNR-a	DNR-a
RACE	Race of person	Same Per	DNR-a	DNR-a
RACEAS	Race of person (Asian group)	Same Per	DNR-a	DNR-a
RACEPI	Race of person (Native Hawaiian or Pacific Islander group)	Same Per	DNR-a	DNR-a
REL	Relationship of person to reference person	Same Per	V-a	V-a
SECPARENT	Line number of parent number two	Same Per	DNR-a	DNR-a
SEX	Sex of person	Same Per	DNR-a	DNR-a
SPAN	Spanish origin of person	Same Per	DNR-a	DNR-a
SPOUSE	Line number of spouse of person	Same Per	DNR-a	DNR-a

[a] Though person-level DNR-a questions are never directly re-asked, the interviewer is shown a roster verification screen where they are given the opportunity to change prior year responses if they are not accurate.

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

Exhibit 4.6. Topic: Housing Costs

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Renter Subsidy				
RENTCNTRL	Flag indicating rent is limited by rent control or stabilization—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating rent is limited by rent control or stabilization—URE or vacant rental unit	Any HH	DNR-vs	DNR-vs
RENTSUB	Flag indicating that re-certification is part of rental agreement—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating rent reduced because someone in the household works for the owner—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating rent reduced because someone in the household is related to the owner—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating rent is lower because of rental subsidy—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating rent is lower because of rental subsidy—renter occupied	Any HH	DNR-v	DNR-v
	Flag indicating HH has housing voucher—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating HH has portable housing voucher—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating public housing—renter occupied	Any HH	DNR-p	DNR-p
	Flag indicating public housing—URE or vacant rental unit	Any HH	DNR-vp	DNR-vp
Subtopic: Owner's Purchase, Value, and Debt				
HOWBUY	How owner obtained unit	Same HH	DNR-a	DNR-a
LEADINSP	Lead pipes inspected before purchase	Same HH	DNR-a	DNR-a
YEARBUY	Year unit bought/obtained/received	Same HH	DNR-a	DNR-a

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

Exhibit 4.7. Topic: Home Improvement

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: Job Specific[a]				
JOBTYPE	Type of alteration/repair	Same HH	B	B

[a] No dependency is applied to the home improvement module for the 20 independent metropolitan areas oversamples.

Exhibit 4.8. Topic: Neighborhood Features

PUF Variable	Description	Response Eligibility Requirement	2017 Technique	2019 Technique
Subtopic: General				
AGERES	Flag indicating community is age-restricted	Any HH	DNR-y	V-y
GATED	Flag indicating housing is gated or surrounded by walls or fences to prevent access by persons other than residents	Any HH	NA	V-y
Subtopic: Nearby Features				
NEARBARCL	Building with bars on windows within one half-block	Any HH	NA	V-y
NEARBUSIN	Business/institutions within one half-block	Any HH	NA	V-y
NEARFACT	Factories/other industry within one half-block	Any HH	NA	V-y
NEARWATER	Bodies of water within one half-block	Any HH	NA	DNR-a
WATFRONT	Unit considered waterfront property	Any HH	NA	DNR-a

Notes: Variables that are created from multiple questions with different dependency statuses are divided by question. If a variable is divided this way, questions that do not use dependency will have NA in the 2017 and 2019 Technique columns. The exhibits also note the type of response eligible for dependent interviewing, whether *any* household (Any HH), the *same* household (Same HH), or the same *person* (Same Per).

5. Reference

Brassell, Evan, and Kathleen Gustafson. 2018. "Impact of Dependent Interviewing on Consistency of Answers in the American Housing Survey." Hillcrest Heights, MD: U.S. Census Bureau. https://www.census.gov/content/dam/Census/programs-surveys/ahs/working-papers/Impact%20of%20Dependent%20Interviewing%20on%20Consistency%20of%20Answers%20in%20the%20AHS.pdf.

U.S. Department of Housing and Urban Development

Office of Policy Development and Research

Washington, DC 20410-6000

July 2019