

WORST CASE HOUSING NEEDS

2017 REPORT TO CONGRESS



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WORST CASE HOUSING NEEDS

2017 REPORT TO CONGRESS

Prepared for
U.S. Department of Housing and Urban Development
Office of Policy Development and Research

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PREFACE

The U.S. Department of Housing and Urban Development (HUD) is pleased to transmit to the U.S. Congress this 2017 report on Worst Case Housing Needs. This report—the 16th in a longstanding series—provides national data and analysis of the critical problems facing low-income renting families. The report draws on data from the American Housing Survey (AHS), which is funded by HUD and conducted by the U.S. Census Bureau. The AHS has been conducted every 2 years since 1973 and debuted a major redesign in 2015 that included a new national and metropolitan area longitudinal sample. The AHS is a key source of national data on housing markets, conditions, and dynamics.

Despite continued signs of a strengthening national economy, the report finds that severe housing problems are on the rise. In 2015, 8.30 million households had worst case needs, up from 7.72 million in 2013 and approaching the record high of 8.48 million in 2011. These households are defined as very low-income renters who do not receive government housing assistance and who paid more than one-half of their income for rent, lived in severely inadequate conditions, or both. High rents in proportion to renter incomes remain dominant among households with worst case needs, leaving these renters with substantial, unmet need for affordable housing.

The modest reduction in worst case needs observed in 2013 was not sustained and worst case needs continued their upward trend. Specifically, severe housing problems have grown 41 percent since the beginning of the Great Recession in 2007 and 66 percent since 2001. Worst case needs continue to affect all subgroups, whether defined by race and ethnicity, household structure, or location within metropolitan areas or regions.

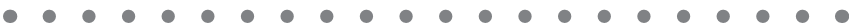
Contributing most to the increase in worst case needs between 2013 and 2015 was a notable shift from homeownership to renting. The magnitude of this sustained postrecession trend, along with other demographic factors, increased the number of very low-income renters and thereby played a major role in growing worst case needs between 2013 and 2015. Modest gains in household incomes were met with rising rents, shrinking the supply of affordable rental housing stock in an increasingly competitive market. Even with the supply of more expensive units growing, higher-income renters occupy a growing share—43 percent—of the most affordable units. Only 62 affordable units are available per 100 very low-income renters, and only 38 units are available per 100 extremely low-income renters.

This report also uses new AHS enhancements to explore the variation in worst case needs and the distribution of housing assistance across a greater variety of market geographies. These data show that, although 43.2 percent of very low-income renters had worst case needs nationally, local markets reflect a substantial degree of variation beyond the longstanding trends observed across regions and types of metropolitan locations.

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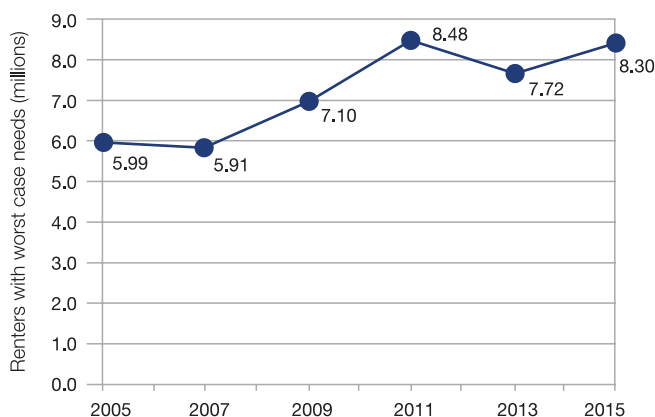
EXECUTIVE SUMMARY

WORST CASE HOUSING NEEDS 2017 REPORT TO CONGRESS

During the 2013-to-2015 period, worst case needs for housing assistance persisted at high levels across demographic groups, household types, and regions. Worst case needs are defined as renters with very low incomes—no more than 50 percent of the Area Median Income (AMI)—who do not receive government housing assistance and who pay more than one-half of their income for rent, live in severely inadequate conditions, or both. *Worst Case Housing Needs: 2017 Report to Congress* examines the causes of and trends in worst case needs, using the most recent data from the American Housing Survey (AHS).¹

Substantial unmet needs for affordable rental housing remain even as incomes are improving. The unmet need for decent, safe, and affordable rental housing continues to outpace the ability of federal, state, and local governments to supply housing assistance and facilitate affordable housing production.

Exhibit ES-1. Growth in Worst Case Housing Needs, 2005–2015



Source: HUD-PD&R tabulations of American Housing Survey data

¹ This Executive Summary and report are based on the U.S. Census Bureau's March 2017 release of the 2015 AHS. Estimates may differ slightly from those of the *Preview of 2015 Worst Case Housing Needs* published in January 2017 using preliminary AHS data.

Worst Case Needs Have Increased

The number of renter households with worst case needs increased to 8.3 million in 2015, up from 7.7 million in 2013 and slightly less than the record high of 8.5 million in 2011 (see exhibit ES-1). The number of worst case needs in 2015 was 8 percent higher than in 2013, offsetting much of the 9-percent decrease observed during the 2011-to-2013 period and marking a 10-year growth rate of 39 percent.

The likelihood that a very low-income renter household had worst case needs increased from 42 percent in 2013 to 43 percent in 2015, approaching the record rate of 44 percent observed in 2011. The increase in worst case needs between 2013 and 2015 reflects both a larger population of susceptible very low-income renters and a higher prevalence of severe housing problems among that population. The data suggest that the nation’s ongoing economic recovery is continuing to have some beneficial effects on the incomes of very low-income renters, but growing competition for a limited supply of affordable units, a rising population of renter households and a declining population of homeowners, a widening rental assistance gap, and rising rents continue to drive severe housing problems among this vulnerable population.

Worst Case Needs Increased Across All Demographic Groups and Household Types

The absolute number of households with worst case needs increased across all racial and ethnic groups. The prevalence of worst case needs during 2015 was 47 percent for Hispanic renters, 45 percent for non-Hispanic White renters, 37 percent for non-Hispanic Black renters, and 41 percent for others. The share of very low-income renters experiencing worst case needs increased between 2013 and 2015 for non-Hispanic White, non-Hispanic Black, and Hispanic renters but not for others.

Worst case needs also increased among all types of households. In 2015, 2.9 million families with children, 1.9 million elderly households without children, 2.8 million “other nonfamily” households (mostly single individuals), and 0.8 million “other family” households experienced worst case needs.

The proportion of very low-income renters with worst case needs also increased among all household types in 2015, ranging somewhat narrowly from a high of 47 percent for other nonfamily and other family households to 42 percent for families with children and 40 percent for elderly households without children.

About one in six renter households with worst case needs—17 percent—included a nonelderly person with

disabilities. These 1.4 million households remain 6 percent above the 2011 estimate.

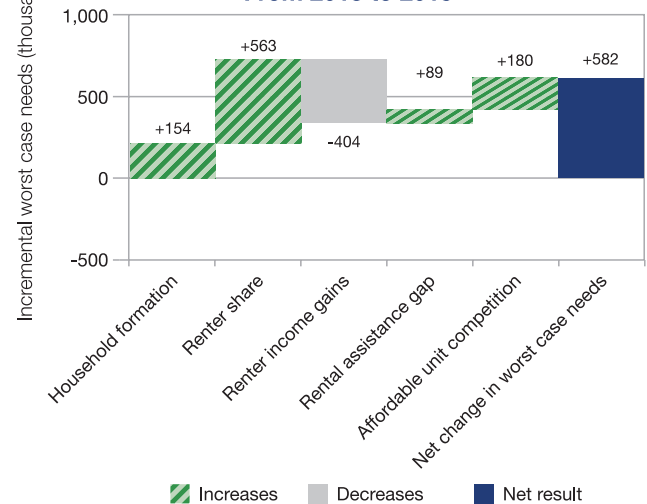
Worst Case Needs Result From a Shortage of Affordable Rental Housing

Most cases of worst case needs are caused by severe rent burdens—paying more than one-half of income for rent. Inadequate housing caused only 2 percent of worst case needs.

An increase by 700,000 in the number of very low-income renters who lack housing assistance—the group at risk of experiencing worst case needs—explains about 402,000 of the 582,000 new cases of worst case needs between 2013 and 2015. Four demographic factors, shown in the first four columns of exhibit ES-2, affected the size of this at-risk group. Contributing most to the increase in worst case needs was a notable shift from homeownership to renting, which surpassed even the marked tenure shift trends observed during the recessionary period. Also contributing to the increase in worst case needs were a modest level of household formation and a widening gap in rental assistance relative to need. A fourth factor, renter income increases, raised some renters out of the very low-income population, partially offsetting other demographic factors that increased worst case needs in 2015.

Although these demographic factors created a substantial net increase in demand for affordable rental units by a growing population of unassisted very low-income renters, inadequate market responses to the increased demand account for an

Exhibit ES-2. Tenure Shifts From Homeownership to Renting More Than Offset Tenant Income Effects From 2013 to 2015



Source: HUD-PD&R analysis of American Housing Survey data

additional 180,000 cases of worst case needs, as shown in the fifth column of exhibit ES-2. This market-driven increase in worst case needs resulted from increased competition for a shrinking supply of affordable rental units.

If the supply of rental units were unchanged, greater demand would increase competition for affordable units, drive up rents, and increase prevalence of worst case needs. Although the total supply of rental units—including conversions of owner-occupied properties to rentals—increased by nearly 4.7 million, or more than 10 percent, between 2013 and 2015, renter households expanded by 3.6 million, or 9 percent. As a result, new renters absorbed much of the net increase of rental units, keeping overall rental vacancy rates under 10 percent. Among units affordable to renters with extremely low incomes (0 to 30 percent of AMI), the rental market was much tighter, with a vacancy rate of less than 4 percent.

For a growing population of very low-income renters, the expanding supply of rental units in 2015 failed to translate into increased availability of affordable housing (see exhibit ES-3). Unlike more expensive units, the stock of rental housing affordable to very low-income renters shrank between 2013 and 2015, and vacancy rates remained highest among the most expensive units. For renters with extremely low incomes, the ratio of affordable and available units decreased by 1 from 2013 levels to 38 units per 100 renters. For very low-income renters, the availability ratio decreased by 3, to 62 units per 100 renters.

This uneven pattern in supply growth was mimicked in renter income changes, with incomes growing more sharply

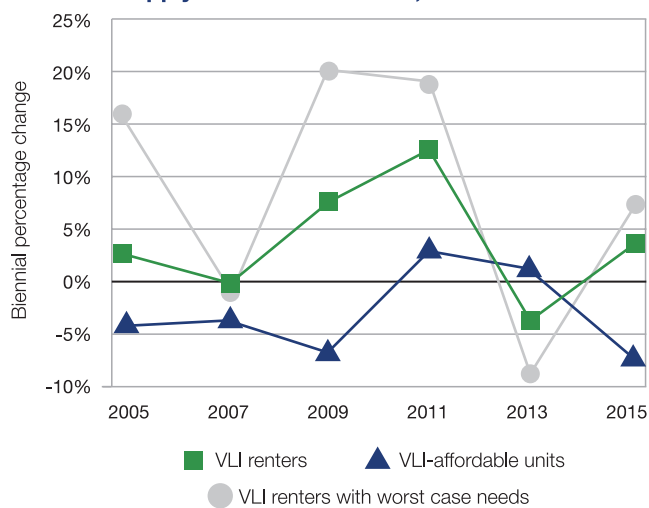
for renters overall than for poorer renters. Further, median monthly housing costs for renters increased by nearly 9 percent, a notable jump from costs that had remained relatively flat between 2011 and 2013. For the poorest renters, growing housing costs outpaced income gains, failing to relax typical housing cost burdens for those most vulnerable to worst case needs.

Conclusion

Worst case housing needs are a national problem. Such severe housing problems have expanded dramatically during the past decade and were exacerbated by the economic recession and associated collapse of the housing market, which reduced homeownership through foreclosures and tight lending and increased demand for renting. The slight improvements observed since 2011 offer cause for hope, but the failure to sustain the more promising trends observed in 2013 is sobering. Recognizing that AHS sampling and design changes in 2015 increase opportunities for spurious conclusions, the latest resumption of worsening housing problems among the nation’s very low-income renters is attributable primarily to demographic and economic factors—especially a notable shift from homeownership to renting—that grew the number of households susceptible to worst case needs. Uneven housing market responses that increased the proportion of unassisted very low-income renters with severe rent burdens played a secondary yet substantial role.

Even with rental assistance, 6 of 10 extremely low-income renters and 4 of 10 very low-income renters do not have access to affordable and available housing units. Among very low-income renters in 2015, only 25 percent of households had rental assistance and an additional 43 percent had worst case needs for assisted or other affordable housing. In other words, only a small share of very low-income renters—32 percent—avoided severe housing problems in the unassisted private rental market in 2015. A broad strategy at the federal, state, and local levels is needed to continue to rebuild the economy, strengthen and realign markets, and provide assistance to those families most in need.

Exhibit ES-3. Biennial Changes in Worst Case Needs Tied to Size of Very Low-Income Renter Population and Supply of Affordable Units, 2005–2015



Source: HUD-PD&R tabulations of American Housing Survey data



Section

1

Extent and Nature of Worst Case Needs

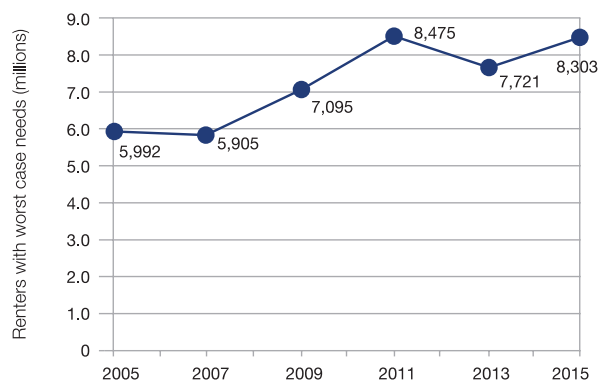
The U.S. Department of Housing and Urban Development (HUD) is the largest federal provider of affordable rental housing. In response to a request by Congress in 1991, HUD's Office of Policy Development and Research (PD&R) periodically reports on the severity of worst case needs for affordable rental housing, as collected in the biennial American Housing Survey (AHS). This report is the 16th in the series of core reports.²

Extent of Worst Case Needs in 2015

HUD examined the 2015 AHS data to understand the evolving dimensions of a persistently expanding shortage of decent and affordable rental housing for lower-income households. The basic facts presented and examined in the following pages are—

- In 2015, 8.30 million renters³ had worst case needs (see exhibit 1-1). These renters have very low incomes,⁴ lack housing assistance, and have either severe rent burdens or severely inadequate housing (or both).

Exhibit 1-1. Growth in Worst Case Housing Needs, 2005–2015



Source: HUD-PD&R tabulations of American Housing Survey data

² PD&R supplements the core reports on worst case needs with periodic topical reports. For a list of previous titles, see appendix D.

³ That is, renter households.

⁴ *Very low income* and *extremely low income* refer throughout this report to the income levels of renters. Very low incomes are those incomes of no more than 50 percent of the Area Median Income (AMI), and extremely low incomes are those incomes of no more than 30 percent of AMI—typically below the poverty line. HUD programs use AMI based on local family incomes with adjustments for household size, more precisely known as HUD-adjusted area median family income, or HAMFI (see appendix E). Nationwide, median AMI was \$66,700 in 2015. Median very low-income and extremely low-income levels were \$28,400 and \$17,050 per year, respectively. All these income levels are for a family of four. Thresholds defining extremely low-income and very low-income families can be much less than these national thresholds if they have fewer than four members or live in areas with lower median family incomes.

- Between 2013 and 2015, the number of worst case needs increased by 7.5 percent following an 8.9-percent decrease observed during the 2011-to-2013 period. With this latest resumption of worsening housing problems, the number of worst case needs has increased by 40.6 percent since 2007, when the recession began, and by 65.6 percent since 2001.
- Consistent with long-term trends, the primary problem for worst case needs renters in 2015 was *severe rent burden*—insufficient tenant incomes relative to rents. Among all renter households, a 9.3-percent increase in median incomes between 2013 and 2015 was consumed, in part, by an 8.5-percent increase in median housing costs for renters. Severely inadequate housing accounted for only 1.8 percent of worst case needs.
- The most recent increase in worst case needs⁵ differed somewhat in cause and effect from the recession-driven increases observed from 2007 through 2011. During that period, the combination of mortgage foreclosures, widespread unemployment, and shrinking renter incomes resulted in historic increases in the number of very low-income renters with worst case needs: 2.57 million households or 43.5 percent. In contrast, post-recession gains in renter incomes played a mitigating role in the more modest 7.5-percent increase in worst case needs observed during the 2013-to-2015 period.
- In 2015, the United States had 19.24 million very low-income renters, a 4.0-percent increase from 2013 levels that reversed the 4.0-percent reduction seen in the 2011-to-2013 period. In 2015, 43.2 percent of very low-income renters and 51.6 percent of extremely low-income renters had worst case needs.
- Worst case needs also increased slightly as a proportion of U.S. households during the most recent 2-year period, from 6.7 percent in 2013 to 7.0 percent in 2015.

WHICH HOUSEHOLDS CAN HAVE WORST CASE NEEDS?

By definition, households that can have worst case needs are households that—

- Are renters.
- Have *very low incomes*; that is, incomes of no more than 50 percent of the Area Median Income (as adjusted for family size).
- Do not receive housing assistance.

PRIORITY PROBLEMS TRIGGER WORST CASE NEEDS

Two types of priority problems determine whether households have worst case needs.

1. *Severe rent burden* means a renter household is paying more than one-half of its income for gross rent (rent and utilities).
2. *Severely inadequate housing* refers to units having one or more serious physical problems related to heating, plumbing, and electrical systems or maintenance. (Problems are listed in appendix E.)

- Housing assistance prevents millions of renters from experiencing worst case needs, but the shortfall of housing assistance relative to need grew more severe between 2013 and 2015. In absolute terms, the number of assisted renters increased slightly, by 0.5 percent, but increasingly fell behind the growing need among very low-income renters. The share of very low-income renters receiving housing assistance fell by 0.8 points between 2013 and 2015.
- An important dimension of the affordable housing gap is that affordable units are not necessarily available to the renters who need them most; higher income renters occupy substantial shares of units that would be affordable to the lowest-income renters.

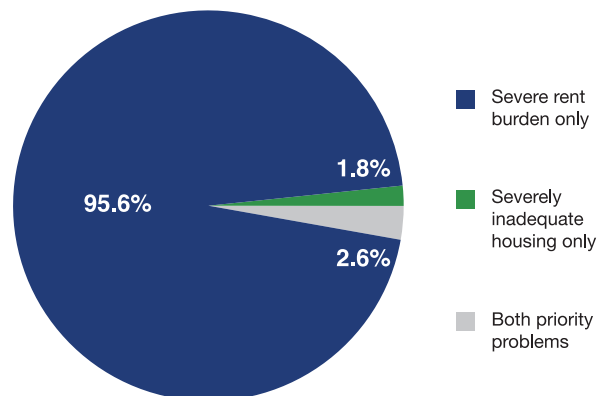
With these key facts in mind, section 1 explores the current extent and the demographic characteristics of worst case needs—which households have such needs and what are their situations.

⁵ The Joint Center for Housing Studies of Harvard University reported that the American Community Survey (ACS) recorded a smaller decline in severely cost-burdened renters than the AHS between 2011 and 2013 and observed that the broader definition of occupancy used by the ACS generally records about 2 million more renter households, of which some are homeowners residing in seasonal rental units. See <http://housingperspectives.blogspot.com/2016/06/are-renter-worst-case-housing-needs.html>.

WHAT IS A TYPICAL WORST CASE NEEDS HOUSEHOLD?

The typical renter with worst case housing needs⁶ is a family with two children, most often a minority family headed by either a single female or a married couple. The family resides in adequate or good-quality housing in a central city of a southern metropolitan area. Earnings are the family's primary source of income, yet their low wages place them below the poverty line and in the extremely low-income category. Their rent plus utilities consume most, if not all, of their extremely low reported income, costing more than \$1,000 per month on average. They meet other needs with food stamps from the Supplemental Nutrition Assistance Program, Medicaid, gifts from friends and relatives, and Earned Income Tax Credits.

Exhibit 1-2. Severe Rent Burdens Drove Worst Case Needs in 2015



N = 8,303 million renters with worst case needs.
Source: HUD-PD&R tabulations of American Housing Survey data

Inadequate Housing and Inadequate Income

Of the two types of priority problems that make up worst case needs, severe rent burden is, by far, the more frequent problem. As exhibit 1-2 illustrates, 98.2 percent of all worst case needs renters, or 8.15 million households, had severe rent burdens in 2015. Paying one-half of a limited total income for rent leaves very little income for other essentials, such as food, medical care, transportation expenses, education, and childcare.

Severely inadequate housing alone made up only 1.8 percent of worst case needs in 2015. A total of 4.4 percent of worst case renters (364,000) had severely inadequate housing, either alone or in combination with severe rent burdens.

That severely inadequate housing causes such a small fraction of worst case needs is the result of a decades-long trend of improvements to the nation's housing stock. More stringent building codes prevent the construction of units without complete plumbing or heating systems, and obsolete units are demolished each year.⁷ In addition, a portion of severe physical inadequacies reported in the AHS likely results from or reflects maintenance or upgrade activity occurring in occupied units. Among all renters, 2.7 percent of those with very low incomes had severely inadequate housing in 2015, but so did 1.3 percent of renters with higher incomes.⁸ Nevertheless, the housing stock is continually aging, and severely inadequate units continue to pose threats to the life and health of thousands of renters.

PROGRESS IN REDUCING HOMELESSNESS

Homeless individuals and families clearly have the greatest need for affordable or assisted housing. Homeless people, however, are not included in official estimates of worst case needs because the American Housing Survey (AHS) covers only housing units and the households that live in them, and persons experiencing homelessness, by definition, do not live in a housing unit and are not surveyed by the AHS.⁹

In the most recent *Annual Homeless Assessment Report to Congress*, HUD estimated that 550,000 sheltered and unsheltered homeless people were in the United States during a given night in January 2016. Most of these, 68 percent, were staying in residential programs for homeless people, and the remaining 32 percent were staying in unsheltered locations (HUD-CPD, 2016).

Homelessness declined 3 percent between 2015 and 2016 and has declined 15 percent since 2007. Chronic homelessness among individuals declined 35 percent between 2007 and 2016.

⁶ See table A-7 for household characteristics of worst case needs renters. Table A-14 describes average income and housing cost characteristics.

⁷ Changes in the overall housing stock are primarily driven by new construction and losses due to demolition and natural disasters (Econometrica, 2016).

⁸ Homeowners reported severely inadequate housing at even lower rates than renters—2.0 percent of very low-income homeowners and 0.7 percent of homeowners with higher incomes had severely inadequate housing. See table A-1B.

⁹ The AHS samples both occupied and vacant residential housing units but excludes places like group quarters or motels where homeless persons may be sheltered (HUD-Census, 2017a: 3–5).

Prevalence of Worst Case Needs by Income

Because most cases of worst case needs are triggered by severe rent burdens, the adequacy of household incomes relative to rents of available units is crucial. Among the 19.24 million very low-income renters in 2015, 43.2 percent had worst case needs (exhibit 1-3). The very low-income category includes extremely low-income renters, who had an even greater prevalence of worst case needs, 51.6 percent. Extremely low-income households constituted the majority (58.7 percent) of very low-income renters and represented an even larger share (70.1 percent) of households with worst case needs.

Exhibit 1-3. Extremely Low-Income Renters Were Most Vulnerable to Worst Case Needs in 2015

	0–30% AMI	>30–50% AMI	Total
Number (thousands)	11,290	7,945	19,235
Number that are worst case needs renters (thousands)	5,821	2,482	8,303
Percent that are worst case needs renters	51.6	31.2	43.2

AMI = Area Median Income (HUD-adjusted)
 Source: HUD-PD&R tabulations of American Housing Survey data

Increase in Worst Case Needs

Although worst case needs declined by 754,000 during the 2011-to-2013 period, they then increased by 582,000 (7.5 percent) by 2015, offsetting much of the previous improvement. The increase in the most recent period contributes to the long-term trend of increasing worst case needs, including growth of 38.6 percent, or 2.31 million households, during the 10-year span of 2005 to 2015 (exhibit 1-4).

Exhibit 1-4. Growth in Worst Case Needs Among All U.S. Households

	2005	2007	2009	2011	2013	2015
All households (millions)	108.90	110.72	111.86	115.08	116.03	118.29
Renters with worst case needs (millions)	5.99	5.91	7.10	8.48	7.72	8.30
Worst case needs as percent of all households	5.50	5.33	6.34	7.36	6.65	7.02

Source: HUD-PD&R tabulations of American Housing Survey data

Worst case needs also increased slightly as a proportion of U.S. households during the most recent 2-year period, from 6.7 percent in 2013 to 7.0 percent in 2015.

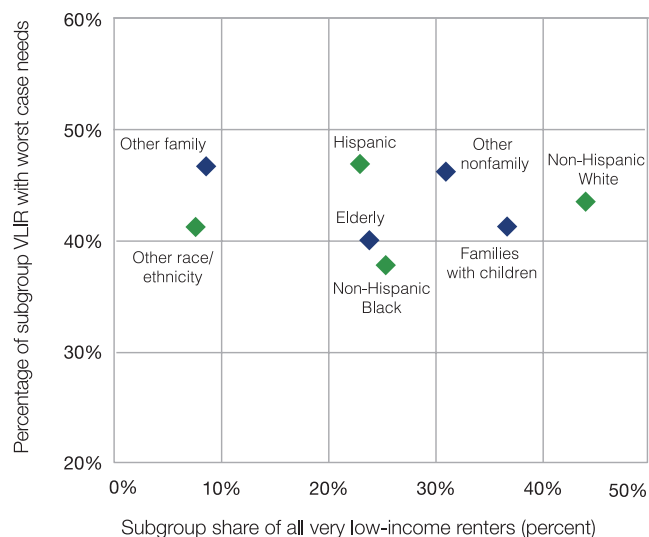
Because the problem of worst case needs is primarily one of a scarcity of units with affordable rents relative to the number of renters with very low incomes, the balance of section 1 examines the demographics of the renters who have these problems. Section 2 explores the dimensions of the inadequate supply of affordable rental units, and section 3 summarizes and integrates supply and demand issues to shed light on the root causes and shifting dimensions of this national problem.

Demographics of Worst Case Needs

Worst case needs are an economic reality for many of the nation’s very low-income renters. The severe housing problems that trigger worst case needs are widespread for such households, yet notable variations exist among subgroups of the population.

Exhibit 1-5 shows population subgroups defined either on the basis of race and ethnicity (green markers) or on the basis of household structure (blue markers). The position of the markers reflects each subgroup’s share of very low-income renters and the proportion of such renters experiencing worst case needs. As a share of very low-income renters, the subgroups span a range of 36.2 percentage points, but the prevalence of worst case needs varied by only 10.0 points across all subgroups.

Exhibit 1-5. Very Low-Income Renters from All Household Types and Racial and Ethnic Groups Experienced Worst Case Needs in 2015



Source: HUD-PD&R tabulations of American Housing Survey data

The larger and more-afflicted subgroups appear in the right side of the exhibit and therefore account for the greatest numbers of worst case households. Although Hispanic households, like elderly and non-Hispanic Black households, represented roughly one-fourth of very low-income renters in 2015, Hispanics were more likely to experience worst case needs. Subgroups on the left side represent relatively few very low-income renters but, in the case of families without children, were overrepresented among those with worst case needs. The variations in prevalence among subgroups, although limited, may reflect different access to affordable or assisted units resulting from differences in geographic distribution and markets, household preferences, disabilities, or possibly housing discrimination.

Worst Case Needs by Race and Ethnicity

Worst case needs were found across all types of communities, racial groups, and ethnic lines. Both similarities and differences emerged when examining the three largest racial and ethnic groups—non-Hispanic White, non-Hispanic Black, and Hispanic.

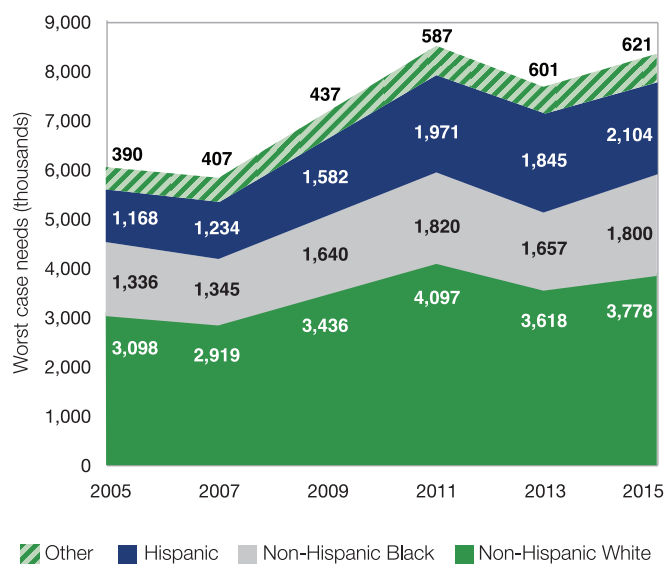
During 2015, non-Hispanic White renters experienced the greatest share of worst case needs (45.5 percent) followed by Hispanic renters (25.3 percent), non-Hispanic Black renters (21.7 percent), and renters of other races and ethnicities (7.5 percent). Together, the three largest race and ethnicity groups accounted for 92.5 percent of worst case needs in 2015, and minority households accounted for 54.5 percent of worst case needs.

The share of worst case needs approximates the relative share of very low-income renters in each group, but not all groups are proportionally represented among those renters with worst case needs. During 2015, worst case needs affected 44.6 percent of non-Hispanic White renters with very low incomes, somewhat less than the proportion of Hispanic renters (47.4 percent). Prevalence was lower for non-Hispanic Black renters (37.4 percent), and other very low-income renters fell between, with 41.2 percent having worst case needs.

Exhibit 1-6 shows that all racial and ethnic groups experienced increases in worst case needs between 2013 and 2015. The 582,000 additional cases of worst case needs in 2015 reflected 259,000 additional Hispanic households, 160,000 additional non-Hispanic White households, 143,000 additional non-Hispanic Black households, and 20,000 additional households among other very low-income renters.

In addition to absolute increases in numbers, the shares of very low-income renters with worst case needs in the largest racial and ethnic groups increased between 2013 and 2015, by 0.6 points for non-Hispanic White renters, 1.9 points for non-Hispanic Black renters, and 3.3 points for Hispanic renters. Prevalence rates decreased marginally by 0.9 points for very low-income renters of other races and ethnicities (despite the small absolute increase in number).

Exhibit 1-6. Growth in Worst Case Needs Among All Racial and Ethnic Groups, 2005–2015



Source: HUD-PD&R tabulations of American Housing Survey data

Exhibit 1-6 also illustrates how population change affects the long-term growth of worst case needs. Between 2005 and 2015, worst case needs increased 38.6 percent overall but increased only 21.9 percent for the largest subgroup of very low-income renters, non-Hispanic White households. Worst case needs expanded much more rapidly during these 10 years among minority subgroups—80.1 percent among Hispanic households, 34.7 percent among non-Hispanic Black households, and 59.2 percent among renters of other races and ethnicities. Disproportionate increases in incidence of worst case needs among minority groups, however, are explained more by greater expansion of very low-income renter populations than by greater increases in the percentage of very low-income minority renters with worst case needs. Between 2013 and 2015, the population of very low-income minority renters grew more rapidly than the 3.1 percent growth observed among their non-Hispanic White counterparts, with increases of 3.2, 6.1, and 5.5 percent observed among non-Hispanic Black, Hispanic, and other minority renters, respectively.

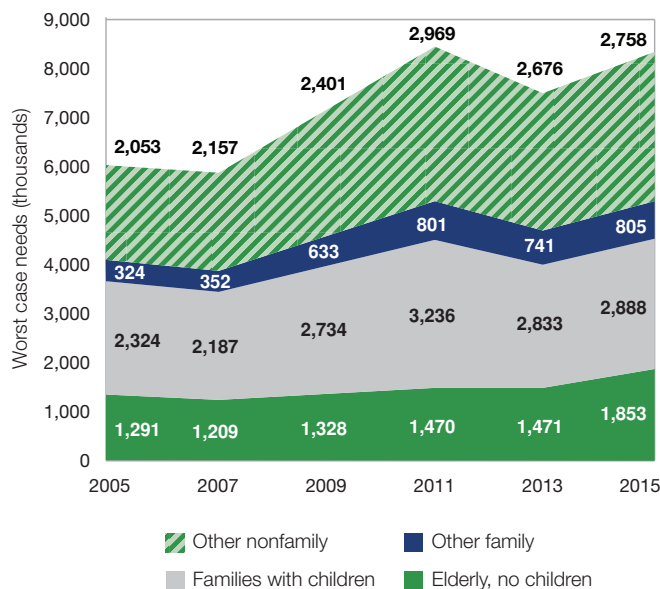
Worst Case Needs by Household Type

The composition of different households reflects variations in their stage of life, income and resources, and housing needs. Exhibit 1-7 shows that families with children constituted the largest share of households experiencing worst case needs in 2015—34.8 percent—followed by other nonfamily households

SECTION 1. EXTENT AND NATURE OF WORST CASE NEEDS

(single adults and roommates)¹⁰ with 33.2 percent, elderly households without children (hereafter, elderly households) with 22.3 percent, and other family households with 9.7 percent.

Exhibit 1-7. Growth in Worst Case Needs Among All Household Types, 2005–2015



Source: HUD-PD&R tabulations of American Housing Survey data

Families With Children. The number of families with children having worst case needs increased by 55,000 during the 2013-to-2015 period to 2.89 million—partially offsetting the 400,000 decrease observed in the previous 2 years. Worst case needs increased despite a reduction of 61,000 in the number of very low-income renters with children. The increase is explained primarily by an increase in the share of very low-income renters with children experiencing worst case needs by 1.2 points, to 41.5 percent, as the percentage reporting housing assistance decreased by 1.4 points, or 115,000 households, to 24.8 percent.

Without housing assistance, substantially more cases of worst case needs would occur. Among very low-income renters with children, 1.73 million reported having rental assistance in 2015 and, by definition, could not have worst case needs. Only one in four very low-income renters with children received housing assistance, which helps account for the fact that the greatest share of worst case needs occurred in such families.¹¹

Elderly Households. During 2015, 1.85 million elderly¹² renters had worst case needs, an increase of 382,000 since 2013. The proportion of elderly very low-income renters with worst case needs was 39.8 percent in 2015, less than the rate for families with children but representing a 2.6-point increase since 2013. Poor elderly households that rely on fixed incomes rather than wages may be less likely to benefit from economic recovery trends that raised incomes for others in recent years.

Other Family Households. After considering families with children and elderly households, other households can be divided into those that include multiple members of a given family and those that do not. Other family households include those such as married couples who are childless, one or more parents with adult children at home, adult siblings sharing an apartment, and householders boarding an elderly parent.¹³

Other family households constitute the smallest category in exhibit 1-7, contributing 805,000 worst case households in 2015. The rate of worst case needs among very low-income renters in this group was 46.6 percent, exceeding the prevalence for families with children and elderly households. The high rate of worst case needs among this group is also growing rapidly, increasing by 3.5 points between 2013 and 2015, more than for any other household type. Complex dynamics within this small diverse group are likely driving this growth. Families might find themselves in this category as a result of economic distress. Such might be the case among adult relatives who “double up” due to economic hardship when they would otherwise choose to live independently. Nonelderly families without children may also be less likely to be prioritized among households competing for scarce housing assistance resources.¹⁴

¹⁰ See appendix E for more on the composition of household types.

¹¹ Estimates of the number of rental households that reported receiving rental housing assistance are presented for various subgroups in the tables of appendix A. AHS estimates of assisted very low-income renters in this report rely on self-reported data. HUD continues to assess the use of administrative data matching procedures, which may better identify HUD-assisted households and exclude households assisted through state or local programs. The aggregate numbers of households served by HUD’s primary rental assistance programs based on administrative records are outlined in appendix C.

¹² HUD defines *elderly households* as those having a household head or spouse who is at least age 62 and including no children younger than age 18.

¹³ Table A-6A reveals that 45.3 percent of other family households with very low incomes included a married couple, 56.4 percent had a female householder, and the mean household size was 2.48 persons.

¹⁴ Within HUD’s largest rental assistance program, the Housing Choice Voucher program (HCVP), the majority (69 percent) of households served are either families with children or elderly. In addition to the fact that only one-fourth of eligible households receive assistance, the scarcity of HCVP resources is further evidenced by long waiting lists. On average, eligible households waited 2.5 years before receiving a voucher in 2016. Public housing authorities have the discretion to establish local preferences for choosing which families to assist based on local housing needs and priorities within this constrained resource environment. See appendix C for additional information on HUD’s rental assistance programs.

Other Nonfamily Households. About 5.90 million very low-income renters in 2015 were other nonfamily households, making this category the second largest after families with children. Unlike families with children, however, other nonfamily households increased in number from 2013 to 2015.

Worst case needs affected 2.76 million other nonfamily households in 2015, 82,000 more than in 2013. Worst case needs affect 46.8 percent of very low-income renters of this type, a 0.7-point increase since 2013 and still the highest rate among the four household categories. Most renters in this group are single individuals, and the rest are unrelated people sharing a housing unit.¹⁵

Trends by Household Type. Exhibit 1-7 also displays how the changing distribution of household types relates to the growth of worst case needs. Between 2005 and 2015, the number of worst case needs increased 38.6 percent. During this period, worst case needs increased among all household types. Worst case needs expanded at a slower-than-average pace of 24.3 percent among families with children and 34.3 percent among other nonfamily households. Worst case needs grew more rapidly among elderly households, 43.5 percent, and among other family households, 148.5 percent, although this rapidly growing subgroup remains the smallest.

Households Including People With Disabilities. Having worst case needs can be especially difficult for renter households that include people with disabilities. Disabilities can reduce employment options and create difficulties in finding suitable housing at reasonable cost.

Beginning with the 2009 AHS, respondents were asked directly whether household members have any of six types of disabilities, including four basic functional limitations—visual, hearing, cognitive, and ambulatory—and two types of difficulties with activities of daily living—self-care and independent living. Ambulatory limitations (walking or climbing stairs) are the most frequently occurring type of disability, affecting 49.2 percent of very low-income renter households that include a nonelderly person with a disability. Cognitive limitations (serious difficulties concentrating, remembering, or making decisions) are next in prevalence, affecting 46.3 percent of these households.¹⁶ People with disabilities are found among all four household types discussed previously. As exhibit 1-8 shows, 3.53 million very low-income renter households, or 18.4 percent, include nonelderly individuals¹⁷ reporting at least one of the six measures of disability. Of the 8.30 million renters with worst case needs in 2015, 1.39 million, or 16.7 percent, included one or more nonelderly people with disabilities. Worst case needs among such households increased by 28.0 percent from 1.09 million in 2013.

DISABILITY AND ACCESSIBILITY IN THE AMERICAN HOUSING SURVEY

Since 2009, the American Housing Survey (AHS) has collected information about the following types of disabilities—

- Deafness or serious difficulty hearing.
- Blindness or difficulty seeing, even when wearing glasses.
- Serious difficulty concentrating, remembering, or making decisions because of a physical, mental, or emotional condition.
- Serious difficulty walking or climbing stairs.
- Serious difficulty dressing or bathing.
- Difficulty doing errands alone because of a physical, mental, or emotional condition.

The 2015 AHS also included questions related to the wheelchair accessibility of housing units and home modifications made to accommodate individuals with physical disabilities. As in 2011, future AHS surveys may periodically include topical modules of questions related to housing accessibility features.

For further information, see demographics and accessibility sections of the *AHS Codebook Interactive Tool* (HUD-Census, 2017b).

The share of worst case needs among very low-income renter households having nonelderly people with disabilities was 39.4 percent in 2015, up from 38.7 percent in 2013. Prevalence ranged from 37.7 percent for other nonfamily households to 41.5 percent for families with children. The largest household categories, however, accounted for most cases of worst case needs affecting people with disabilities—of those affected, 38.7 percent are families with children and 44.2 percent are other nonfamily households.

Summary

Worst case needs for affordable rental housing remain a serious national problem, having improved only slightly since reaching peak levels in 2011. Of the 19.24 million very low-income renters susceptible to severe rent burdens and severely inadequate housing in 2015, 8.30 million (43.2 percent) faced one or both problems without housing assistance. Between 2013 and 2015,

¹⁵ Among very low-income nonfamily renter households, 81.1 percent were one-person households in 2015. See table A-6A. The AHS does not include college students living in institutional housing, but it may include students sharing off-campus housing and other households in which individuals double up to share housing expenses.

¹⁶ The data about types of limitations are summarized in table A-15. Also see HUD-PD&R (2008).

¹⁷ The analysis is limited to nonelderly people with disabilities, because many elderly people suffer from impairments and activity limitations as a consequence of aging. Note, however, that nonelderly people with disabilities may be found in elderly households, as exhibit 1-8 demonstrates. Households headed by an elderly person with disabilities are not excluded if they also have a nonelderly person with disabilities.

Exhibit 1-8. Worst Case Needs Were Common Among Nonelderly People With Disabilities Across All Household Types in 2015

	Families With Children	Elderly Households Without Children	Other Family Households	Other Nonfamily Households	Total
Very low-income renter households (thousands)	6,962	4,652	1,726	5,895	19,235
Worst case needs (thousands)	2,888	1,853	805	2,758	8,303
Percent with worst case needs	41.5	39.8	46.6	46.8	43.2
Percent having nonelderly people with disabilities	18.6	3.3	26.2	27.6	18.4
Very low-income renter households having nonelderly people with disabilities (thousands)	1,295	155	453	1,627	3,530
Worst case needs (thousands)	538	61	177	614	1,390
Percent with worst case needs	41.5	39.4	39.1	37.7	39.4

Source: HUD-PD&R tabulations of American Housing Survey data

the number of worst case needs increased by 7.5 percent, following an 8.9-percent decrease observed during the 2011-to-2013 period. With this latest resumption of worsening housing problems, the number of worst case needs has increased by 40.6 percent since 2007, when the recession began, and by 65.6 percent (3.29 million households) since 2001. The percentage of U.S. households with worst case needs was 7.0 percent in 2015 compared with 5.5 percent in 2005.

Severely inadequate housing continues to be a relatively minor cause of worst case needs. In 2015, severely inadequate housing alone triggered a mere 1.8 percent of worst case needs, whereas 98.2 percent of worst case needs households had severe rent burdens, including 2.6 percent that had both types of housing problems. Reflecting the importance of severe rent burdens as a cause of worst case needs, more than two out of three households with worst case needs (70.1 percent) had extremely low incomes during 2015.

Very low-income renters among all racial or ethnic groups and all household compositions examined experienced growth in worst case needs. Since 2005, worst case needs have expanded much more rapidly among minority very low-income renters compared to their non-Hispanic White counterparts. Ten-year growth rates of 80.1 percent among Hispanic renters, 34.7 percent among non-Hispanic Black renters, and 59.2 percent among renters of other races and ethnicities outpaced 21.9 percent growth among the largest group of very low-income renters, non-Hispanic White households.

Among very low-income renters, worst case needs affected 41.5 percent of families with children, 39.8 percent of elderly households, 46.6 percent of other family households, and 46.8

percent of other nonfamily households. Families with children account for the greatest share of worst case needs—34.8 percent—followed by other nonfamily households (typically one-person households) with 33.2 percent.

Worst case needs affected 39.4 percent of very low-income renters reporting nonelderly people with disabilities in 2015, slightly less than the 43.2 percent prevalence among very low-income renters overall. Households having nonelderly people with disabilities accounted for 16.7 percent of worst case needs.

Section 2 examines how the broad problem of worst case needs is caused by shortages of affordable housing and is mitigated by assisted housing in national and regional markets.

2

Section

Shortage of Affordable Housing

The supply of rental units that are affordable to very low-income renters, especially those with extremely low incomes, is inadequate. Nationwide, only 66 affordable units exist for every 100 extremely low-income renters. The presence of higher-income renters in units that are affordable to extremely low-income renters worsens this shortage. Only 38 affordable units are available for occupancy for every 100 extremely low-income renters. A final blow is that a significant portion of the affordable and available stock is physically inadequate and may pose threats to occupants. Only one-half of affordable units, or 33 units, are both physically adequate and available for occupancy for every 100 extremely low-income renters. The geography of worst case needs and housing assistance sets a foundation for understanding competition for affordable rental housing and the shortages that result.

Geography of Worst Case Needs

Housing markets are local markets. To a greater extent than wealthier renters, very low-income and extremely low-income renters find their choice of housing units limited to communities and neighborhoods where poverty is more common.

As a relatively small national survey, the American Housing Survey does not support biennial estimates of worst case needs for most individual metropolitan areas.¹⁸ It does, however, support select estimates of worst case needs for certain large metropolitan areas included in the survey sample.¹⁹ It also supports a national examination of four types of metropolitan locations—central cities, urban and rural suburbs of central cities, and nonmetropolitan areas²⁰—and of four geographic regions—the Northeast, Midwest, South, and West. This analysis by regional and metropolitan status adds considerable depth to the national picture of worst case needs.

¹⁸ HUD and the Census Bureau have traditionally conducted periodic AHS metropolitan surveys to supplement the national AHS. In 2015, the AHS was redesigned with a new national and metropolitan area longitudinal sample to account for changes in geography and attrition of housing units over time. In 2015, as in 2013, a supplemental sample of housing units in select metropolitan areas were combined with the national sample to produce metropolitan level estimates. Stand-alone surveys were also conducted in some additional metropolitan areas.

¹⁹ The redesigned AHS includes a longitudinal sample of the 15 largest metropolitan areas every 2 years and an additional 10 metropolitan areas surveyed on a rotating basis every 4 years. Select estimates for the metropolitan areas sampled in 2015 are presented in exhibit 2-3 and table A-11B. For more information on the 2015 AHS redesign, see appendix E.

²⁰ Both central cities and suburbs are located within metropolitan areas. A central city consists of the largest city within a metropolitan area. Suburbs are located within metropolitan counties but outside central cities. For the purposes of this report, suburban areas are further distinguished as urban or rural based on their population density. Nonmetropolitan areas fall outside of metropolitan counties and tend to be more rural in nature.

Worst Case Needs and Housing Assistance by Region and Metropolitan Location

A key aspect of the definition of *worst case needs* is that it can be understood as an indicator of need for affordable housing. Because rental housing with deep public subsidies falls into the affordable range, the definition of worst case needs excludes renters with housing assistance. Examining the spatial distribution of housing assistance²¹ and of worst case needs together provides information about the extent to which assistance is mitigating severe housing problems.

Exhibit 2-1 shows the distribution of the nation's 19.24 million very low-income renters across the four census regions and three metropolitan categories. On a regional basis, most very low-income renters (6.70 million) lived in the South, 4.50 million lived in the West, 4.05 million lived in the Midwest, and 3.98 million lived in the Northeast in 2015.

Central cities were home to most (9.51 million) very low-income renters, followed by suburbs (7.23 million)²² and nonmetropolitan areas (2.49 million).²³

Like very low-income renters, worst case needs were common in every region and metropolitan category across the nation. As a national average, 43.2 percent of very low-income renters had worst case needs. The prevalence of worst case needs among very low-income renters was greater than the national average in the South and West and in central cities and urban suburbs. On the other hand, the Midwest, Northeast, rural suburbs, and nonmetropolitan areas had smaller than average shares of very low-income renters with worst case needs.

Exhibit 2-1 also demonstrates the important role housing assistance plays in reducing worst case needs. Nationwide, 4.79 million very low-income renters (24.9 percent) reported receiving housing assistance compared with the 43.2 percent having worst case needs. Thus, 1.7 very low-income renters

Exhibit 2-1. Very Low-Income Renters Experienced Worst Case Needs Across Every Region and Metropolitan Location in 2015

Region	Metropolitan Location				Total
	Central Cities	Suburbs, Urban	Suburbs, Rural	Nonmetropolitan Areas	
Northeast (thousands)	2,169	1,385	217	212	3,983
Percent with worst case needs	39.7	43.0	33.7	29.7	40.0
Percent with housing assistance	34.3	28.6	24.7	36.6	31.9
Midwest (thousands)	1,806	1,182	283	782	4,053
Percent with worst case needs	37.3	42.1	39.5	29.2	37.3
Percent with housing assistance	28.6	21.0	20.5	33.5	26.8
South (thousands)	3,048	1,840	672	1,136	6,696
Percent with worst case needs	45.9	52.6	30.8	31.1	43.7
Percent with housing assistance	23.0	17.1	21.4	29.9	22.4
West (thousands)	2,490	1,369	287	358	4,503
Percent with worst case needs	50.9	55.4	40.0	36.4	50.4
Percent with housing assistance	21.2	18.2	16.9	31.4	20.8
Total (thousands)	9,513	5,775	1,459	2,488	19,235
Percent with worst case needs	44.2	48.8	34.8	31.1	43.2
Percent with housing assistance	26.2	20.9	20.8	31.8	24.9

Source: HUD-PD&R tabulations of American Housing Survey data.

²¹ AHS questions about receipt of rental assistance are designed to focus on federal housing assistance programs. These data result in an estimate of 4.79 million self-reported very low-income households with housing assistance, which is comparable with HUD's program total. Other potential sources of housing assistance include the U.S. Department of Agriculture's Rural Housing Service or other state or local programs. Also affecting this comparison, a small fraction of HUD-assisted renters may have incomes above the very low-income threshold, because they were admitted to programs under local policy preferences or their incomes increased after program admission. See the discussion of HUD's rental assistance programs in appendix C and housing assistance status in appendix E.

²² Among suburban very low-income renters, most (79.8 percent) were concentrated in densely populated urban suburbs.

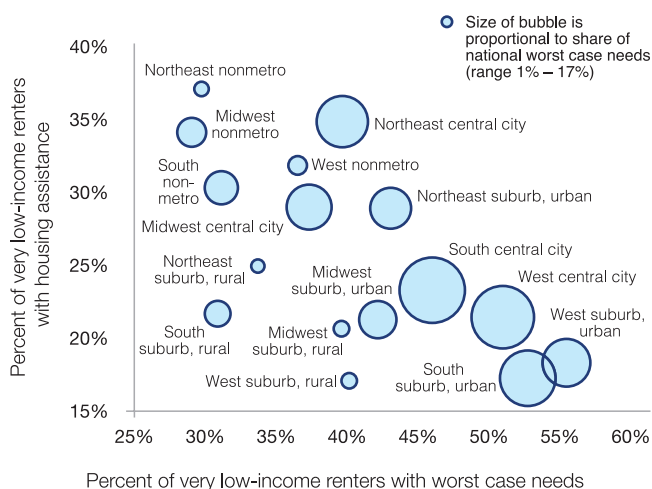
²³ Changes in annual estimates of very low-income renters in nonmetropolitan areas should be viewed with caution, because HUD assigns average income limits to less populated areas to accommodate AHS data suppression. See the discussion of income cutoffs in association with AHS geography in appendix E.

had worst case needs for every 1 that was assisted, somewhat worse than the 1.6 ratio seen in 2013. In other words, among very low-income renters, about 25 percent of households had rental assistance, an additional 43 percent had worst case needs for assisted or other affordable housing, and the remaining 32 percent avoided severe housing problems in the unassisted private rental market in 2015.

Housing assistance is relatively less common in the suburbs, where less than 21 percent of very low-income renters were assisted, and especially in the newer suburbs of the South and the West. The prevalence of housing assistance for very low-income renters also varied on a regional basis, ranging from 20.8 percent in the West to 31.9 percent in the Northeast. The region with the lowest rate of housing assistance among very low-income renters, the West, has experienced a long-term trend of the highest regional rate of worst case needs. Areas that developed during an earlier period continue to draw benefits from an established but aging stock of public housing.

Exhibit 2-2 charts the same data to illustrate the vital role of housing assistance in preventing households from falling into worst case needs. Worst case needs affected a smaller share of very low-income renters in nonmetropolitan areas, where housing assistance was relatively more available.

Exhibit 2-2. Worst Case Needs Was Inversely Related to Prevalence of Housing Assistance in 2015



Source: HUD-PD&R tabulations of American Housing Survey data

Worst case needs were more prevalent in the West and the South, especially in urban suburbs, where housing assistance was scarcer—although high rents in the West also shaped this picture.²⁴ Several areas having greater relative scarcity of housing assistance and an abundance of worst case needs account for substantial fractions of the national problem, as shown by the size of the bubbles in the lower right quadrant of exhibit 2-2. The relative size and trajectory of the bubbles representing worst case needs in central cities and urban suburbs also suggests that the largest shares of severe housing affordability problems were concentrated in densely populated urban areas. Compared with their urban counterparts, the small populations of very low-income renters living in rural suburbs differed from the general pattern by combining lower rates of housing assistance with lower rates of worst case needs in every region except the South.

Not shown in this exhibit are changes in rates of very low-income renters with worst case needs between 2013 and 2015, with increases of 3.6 and 2.6 percentage points observed in the West and South, compared with decreases of less than 1 point in the other regions (summarized in table A-10). In the same period, prevalence of worst case needs increased in urban suburbs and central cities by 4.4 and 1.7 percentage points, respectively, with decreases of 2.2 and 4.0 percentage points observed in rural suburbs and nonmetropolitan areas (summarized in table A-11A).

Variation in Worst Case Needs Across Local Markets

An examination of the distribution of very low-income renters and prevalence of worst case needs across the largest metropolitan areas offers additional insight into the variation of severe housing problems in central cities and suburbs. With densely populated urban cores connected to surrounding counties through strong commuting ties, metropolitan areas reflect groupings of central cities and suburbs with a high degree of social and economic integration. The redesigned AHS supports an examination of the variation in worst case needs across some of the largest metropolitan housing markets. Exhibit 2-3 shows the number of very low-income renters and the share experiencing worst case needs in the nation's 15 largest metropolitan areas in 2015.

Although 43.2 percent of very low-income renters had worst case needs nationally, local markets reflect a substantial degree of variation beyond the macro-level trends observed across regions and types of metropolitan locations. Worst case needs affected substantial shares of very low-income renters in each of the nation's largest metropolitan areas. Reflecting particularly severe local conditions, more than one-half of the very low-income renters residing in and around Miami, Riverside, Phoenix, and Los Angeles experienced worst case needs in 2015.

²⁴ High rents introduce the question of whether enough rental units are available at Fair Market Rents (FMRs) to make housing vouchers an adequate policy response to affordable housing shortfalls. Appendix B, exhibit B-3, addresses the extent of the supply of below-FMR housing on a regional basis. Also see regional supply discussions to follow in this section.

Exhibit 2-3. Prevalence of Worst Case Needs Among Very Low-Income Renters Varied Across Metropolitan Markets in 2015

Metropolitan Area	0-50% AMI	Metropolitan Area	0-50% AMI
New York-Newark-Jersey City, NY-NJ-PA		Atlanta-Sandy Springs-Roswell, GA	
Number (thousands)	1,834	Number (thousands)	259
Number with worst case needs (thousands)	815	Number with worst case needs (thousands)	127
Percent with worst case needs	44.4	Percent with worst case needs	49.0
Los Angeles-Long Beach-Anaheim, CA		Boston-Cambridge-Newton, MA-NH	
Number (thousands)	1,041	Number (thousands)	300
Number with worst case needs (thousands)	567	Number with worst case needs (thousands)	93
Percent with worst case needs	54.5	Percent with worst case needs	31.0
Chicago-Naperville-Elgin, IL-IN-WI		San Francisco-Oakland-Hayward, CA	
Number (thousands)	567	Number (thousands)	287
Number with worst case needs (thousands)	242	Number with worst case needs (thousands)	142
Percent with worst case needs	42.7	Percent with worst case needs	49.5
Dallas-Fort Worth-Arlington, TX		Detroit-Warren-Dearborn, MI	
Number (thousands)	365	Number (thousands)	251
Number with worst case needs (thousands)	177	Number with worst case needs (thousands)	115
Percent with worst case needs	48.5	Percent with worst case needs	45.8
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD		Riverside-San Bernardino-Ontario, CA	
Number (thousands)	342	Number (thousands)	215
Number with worst case needs (thousands)	145	Number with worst case needs (thousands)	123
Percent with worst case needs	42.4	Percent with worst case needs	57.2
Houston-The Woodlands-Sugar Land, TX		Phoenix-Mesa-Scottsdale, AZ	
Number (thousands)	347	Number (thousands)	227
Number with worst case needs (thousands)	159	Number with worst case needs (thousands)	124
Percent with worst case needs	45.8	Percent with worst case needs	54.6
Washington-Arlington-Alexandria, DC-VA-MD-WV		Seattle-Tacoma-Bellevue, WA	
Number (thousands)	343	Number (thousands)	199
Number with worst case needs (thousands)	141	Number with worst case needs (thousands)	83
Percent with worst case needs	41.1	Percent with worst case needs	41.7
Miami-Fort Lauderdale-West Palm Beach, FL		National	
Number (thousands)	373	Number (thousands)	19,235
Number with worst case needs (thousands)	227	Number with worst case needs (thousands)	8,303
Percent with worst case needs	60.9	Percent with worst case needs	43.2

AMI = Area Median Income.

Note: Estimates for the 15 largest metropolitan areas (by population ranking) are presented. The redesigned AHS samples these 15 metropolitan areas every 2 years. Estimates for 10 additional metropolitan areas surveyed in 2015 are presented in table A-11B.

Source: HUD-PD&R tabulations of American Housing Survey data

Factors Limiting Access to Affordable Rental Housing

Even with one-fourth of very low-income renters receiving housing assistance, the private market's supply of affordable rental housing is inadequate. Nationally, less than a third of very low-income renters were able to avoid severe housing problems in the unassisted private rental market in 2015. An examination of the mismatches between the number of rental units needed by renters of various income categories and the number of affordable units provided by the market to those renters lends considerable insight into private rental market dynamics and the persistence of worst case needs.

How the Market Allocates Affordable Housing on a National Basis

The competition for good quality, affordable housing remains vigorous. Competition affects whether the neediest households can live in the most affordable units, the vacancy rate at different rent levels, and how quickly new units are occupied. Exhibit 2-4 shows the distribution of rental units and their occupancy by the affordability of their rents relative to the Area Median Income (AMI). For this analysis, a unit is considered affordable for a renter if the gross rent (rent plus utilities) does not exceed 30 percent of the maximum income of their income

category. Any given renter may live in a unit renting for less than, the same as, or more than that threshold, however.²⁵ The extent of competition for the most affordable housing, portrayed in exhibit 2-4, is striking. Higher-income renters occupy 3.08 million, or 43.3 percent, of the units affordable to extremely low-income renters. Similarly, higher-income renters occupy 36.7 percent of units affordable at incomes of 30 to 50 percent of AMI and 33.9 percent of units affordable at incomes of 50 to 80 percent of AMI, which is the largest category of units. Rental units that are more affordable are both more rare and more likely to be occupied by higher income renters.

Variations in vacancy rates across the affordability categories further demonstrate the competition for affordable units. The most affordable units are least likely to be vacant (exhibit 2-5). Among the least costly units—those with rents affordable at incomes of 0 to 30 percent of AMI—only 3.8 percent were vacant in 2015. The vacancy rate jumped to 10.4 percent among units affordable at incomes of 30 to 50 percent of AMI and 50 to 80 percent of AMI, and the rate jumped to 11.5 percent among the highest-rent units. Since 2013, vacancy rates relaxed among units affordable at incomes from 30 to 80 percent of AMI but tightened for renters with the lowest incomes. Overall rental vacancy rates consistently observed under 10 percent in recent years—9.8 percent in 2011, 8.4 percent in 2013, and 9.7 percent in 2015—reflect steady absorption of unoccupied rental housing stock.²⁶

Exhibit 2-4. Higher-Income Renters Occupied Many Affordable Units in 2015

Occupancy Status	Rental Units by Income Needed To Make the Rent Affordable (thousands)				Total
	0–30% of AMI	>30–50% of AMI	>50–80% of AMI	>80% of AMI	
Higher income occupants	3,080	3,547	6,540	NA	13,167
Same-income or lower income occupants	3,766	5,111	10,751	11,140	30,768
Vacant	273	1,005	2,017	1,445	4,740
Total	7,117	9,662	19,308	12,584	48,670

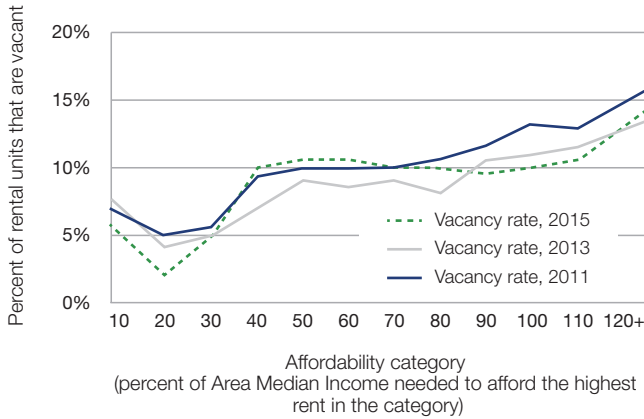
AMI = Area Median Income. NA = not applicable.

Source: HUD-PD&R tabulations of American Housing Survey data

²⁵ Note that renters whose incomes place them at the bottom of an income range would not be able to afford rents at the top of their range. More detailed presentations of these data appear in appendixes A and B, where table A-12 and exhibit B-2 show unit affordability and occupancy status using 10-point income breaks.

²⁶ Comparable estimates of the rental vacancy rate based on the Current Population Survey are slightly lower and reflect a steady decline in rental vacancy rates in recent years—9.5 percent in 2011, 8.3 percent in 2013, and 7.1 percent in 2015. See U.S. Housing Market Conditions charting data http://www.huduser.gov/portal/ushmc/hi_RentVac.html.

Exhibit 2-5. Vacancies Were Lowest Among Most Affordable Rental Units, 2011 to 2015



Source: HUD-PD&R tabulations of American Housing Survey data

The gradient in national vacancy rates seen in exhibit 2-5 also became flatter for most units during both the 2011-to-2013 and the 2013-to-2015 periods. Nevertheless, the market for units affordable at extremely low income levels remained very tight. Greater vacancy rates continue to be found at the highest rent levels (which include numerous vacation homes). Compared with the market for the most affordable units, the availability of vacant units at higher rent levels shows that in many markets, rental assistance in the form of vouchers could reduce worst case needs to the extent landlords are willing to participate. In addition, the somewhat higher vacancy rate for the units affordable at only 10 percent of AMI is often ascribed to units that have physical or locational challenges and may soon be removed from the housing stock.

The shifts in vacancy from 2013 to 2015 reflect in part the expansion of the overall rental stock by approximately 4.7 million units, or over 10 percent, including an increase in vacancies by over 1 million units, or nearly 30 percent. The rental stock affordable to very low-income renters, however, decreased by over 1 million units, or approximately 7 percent with a negligible increase in affordable vacant units over the same period.²⁷ Despite increases in vacant units while the overall rental stock was growing, strong rental demand nationwide kept vacancy rates fairly constrained for renters with median or lower incomes.

Although vacancy rates provide a valuable indication of the balance between supply and demand, they do not directly compare the number of affordable units with the number of

²⁷ See tables A-12 and A-13.

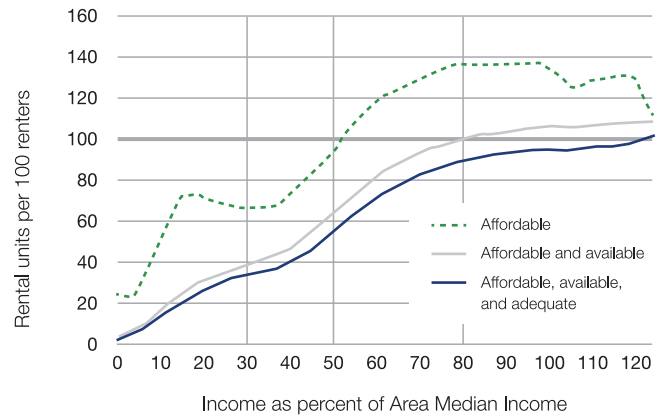
²⁸ Measures of affordability, availability, and adequacy compare the entire housing stock with the entire renter population, and they do not reflect small-scale geographic detail or the complexities of local housing markets.

renters. The remainder of section 2 makes such comparisons, employing three increasingly stringent concepts to assess whether the rental housing stock is sufficient for the need.

Affordability, Availability, and Adequacy of the National Rental Stock

The scarcity of affordable units is greatest for the poorest renters, but, because of the rapid increase in renter households and greater competition, that scarcity is reaching higher up the income scale. Exhibit 2-6 displays the rental housing stock in 2015. These aggregate data portray how well the overall stock could meet the need for affordable housing if location did not matter.²⁸

Exhibit 2-6. The Supply of Affordable, Available, and Adequate Rental Housing Stock Was Insufficient in 2015



Source: HUD-PD&R tabulations of American Housing Survey data

Focusing first on all affordable units, regardless of whether higher-income households occupied them or whether they were adequate, the cumulative number of affordable units is shown to equal the cumulative number of renters only for incomes exceeding 52 percent of AMI. Beyond this point, more than 100 affordable units existed per 100 renters—enough, with perfect allocation, to provide affordable housing to every renter with a greater income. This threshold matched the 2013 estimate and remains greater than the 2007 level of 45 percent of AMI, meaning that the scarcity of affordable units continues to reach higher up the income scale than it did in 2007, prior to the financial crisis.

The ratio of affordable units per renter peaked at income levels of 98 percent of AMI. On a cumulative basis, a substantial

surplus of units were affordable at higher levels of household income. As income increased, renters were increasingly likely to spend less than 30 percent of their incomes on housing.²⁹

The situation was completely different at the low end of the income scale. Enough affordable units existed to house 66 percent of extremely low-income renters in 2015 if those units somehow could have been perfectly allocated. This shortage was substantial and critical, with little improvement from the ratio of 65 percent observed in 2013.

MEASURING WHETHER AFFORDABLE HOUSING STOCK IS SUFFICIENT FOR NEED

- *Affordability* measures the extent to which enough rental housing units of different costs can provide each renter household with a unit it can afford (based on the 30-percent-of-income standard). Affordability, which is the broadest measure of the relative supply of the housing stock, addresses whether sufficient housing units would exist if allocated solely on the basis of cost. The affordable stock includes both vacant and occupied units.
- *Availability* measures the extent to which affordable rental housing units are available to renters within a particular income range. Availability is a more restrictive concept, because units that meet the definition must be available and affordable. Some renters choose to spend less than 30 percent of their incomes on rent, occupying housing that is affordable to renters of lower incomes. These units thus are not available to lower-income renters. A unit is available at a given level of income if (1) it is affordable at that level and (2) it is occupied by a renter either at that income level or at a lower level or is vacant.
- *Adequacy* extends the concept of availability by considering whether sufficient rental units are physically adequate (based on unit characteristics described in appendix E), affordable, and available. Adequacy thus is the most restrictive of the three measures.

The second line in exhibit 2-6 includes the criterion of availability in addition to affordability, meaning that it considers whether higher-income renters currently occupy affordable units.³⁰ Availability poses an important additional constraint on renters seeking affordable units; only 38 percent of extremely low-income renters could actually find an affordable and available unit, even if location were not a factor.

The paucity of affordable and available units is worsened by the occupancy of a considerable proportion of the most affordable housing stock by renters who could afford to spend more (as shown previously in exhibit 2-4). The affordable stock was nominally sufficient to house every renter with an income greater than 52 percent of AMI, yet the affordable and available stock did not match the number of renters until household incomes reached about 80 percent of AMI.

The third line in exhibit 2-6 adds a third criterion—that units should be physically adequate—which further reduced the supply of the rental housing stock. For renters even with low incomes (up to 80 percent of AMI), only 89 adequate units were available for every 100 renters. The physically adequate stock did not fully match the need until it included units affordable only to renters with incomes exceeding 124 percent of AMI, consistent with 2013 levels and a substantial shift from the 110 percent of AMI observed in 2011.

Rental Stock by Income

We have seen that relatively few rental units are affordable, and—because of occupancy by higher income renters and limited vacancies—even fewer are available to renters with the lowest incomes. Exhibit 2-7 summarizes the three housing stock measures for the standard income groups used in this report.

A severe mismatch existed between the number of extremely low-income renters and the number of affordable units available to them. For every 100 extremely low-income renters, only 66 affordable units existed, and only 38 of those units were affordable and available. If physically adequate units are required, then only 33 units were available for every 100 extremely low-income renters.³¹ These figures suggest that 12 percent of affordable and available units for extremely low-income renters had severe deficiencies. Renters with very low incomes found 93 affordable units, 62 affordable and available units, and only 54 affordable, available, and physically adequate units per 100 renters. About 13 percent of the affordable and available units for this larger group had severe physical problems.

²⁹ Table A-1A shows that only 12.7 percent of renters with incomes greater than 80 percent of AMI had either moderate or severe rent burdens compared with 68.3 percent of renters with lower incomes.

³⁰ The availability measure also removes units from consideration if they have artificially low rents, because they are occupied as a benefit of employment (for example, units provided for caretakers) or because relatives or friends of the occupants own the units. In 2015, 2.14 million renter households (4.9 percent) occupied units while paying no rent. The AHS does not provide estimates of the number of households paying a positive but less-than-market rent because of employment or other reasons.

³¹ Previous research based on the Residential Finance Survey indicated that 12 percent of units with gross rents of \$400 or less produced negative net operating income, suggesting they were headed for demolition or conversion to nonresidential use (JCHS, 2006). More recent research based on the Housing Vacancy Survey suggests more than 10 percent of vacant units held off the market are in need of repair, abandoned, condemned, or to be demolished (JCHS, 2016).

Exhibit 2-7. Rental Housing Stock Was Scarcest for Extremely Low-Income Renters in 2015

Income Category	Rental Units per 100 Renters		
	Affordable	Affordable and Available	Affordable, Available, and Adequate
Extremely low-income renters (0–30% AMI)	66.0	37.7	33.0
Very low-income renters (0–50% AMI)	92.9	62.0	53.7
Low-income renters (0–80% AMI)	135.4	99.9	88.7

AMI = Area Median Income.

Source: HUD-PD&R tabulations of American Housing Survey data

Renters with low incomes find that the affordable and available rental stock was nearly sufficient to house them all, although 11 percent of such units had severe physical problems.

Overall, the supply of affordable housing improved slightly from its record low point in 2011, although fewer units were both affordable and available. Exhibit 2-8 illustrates that the supply of affordable housing stock for extremely low-

Exhibit 2-8. Fewer Affordable Units Were Available in 2015

Income Category	Rental Units per 100 Renters				
	2011	2013	2015	Change	
				2011 to 2013	2013 to 2015
Extremely low-income renters (0–30% AMI)					
Affordable	58.2	65.3	66.0	7.1	0.7
Affordable and available	35.8	39.0	37.9	3.2	– 1.1
Very low-income renters (0–50% AMI)					
Affordable	92.4	97.2	92.9	4.8	– 4.3
Affordable and available	64.6	65.2	62.0	0.6	– 3.2

AMI = Area Median Income. Source: HUD-PD&R tabulations of American Housing Survey data

income renters increased by 1 unit per 100 renters from 2013 to 2015, following a 7-unit gain during the previous 2 years. The ratio of affordable and available units, however, decreased by 1 unit from 2013 levels to 38 units per 100 extremely low-income renters.

For very low-income renters, the overall supply of affordable units decreased by more than 4 units per 100 renters, offsetting a nearly 5-unit gain in the previous 2 years. The more focused affordable and available unit ratio lost 3 units per 100 renters. Netting out the 1-point loss in units available at 0 to 30 percent of AMI from the 3-point loss for very low-income renters suggests that the stock at 30 to 50 percent of AMI became more constrained during the 2013-to-2015 period.

Geography of Supply

The preceding discussion shows that worst case needs are dispersed across the nation, yet they can be concentrated in certain geographic areas, and it shows that spatial variation in worst case needs is affected in part by the availability of housing assistance.

Affordable rental housing includes both units that receive public rent assistance and units that for-profit and nonprofit housing providers offer at modest rents. The examination of affordable housing supply on a national basis reveals, first, that the supply of rental units that are affordable to very low-income and poorer households remains substantially inadequate; second, that this shortage is worsened by the natural preference of higher-income renters for more affordable units; and third, that the shortage is further worsened by the physical inadequacy of some of the stock.

The following discussion sharpens that picture by showing how shortages vary by geography.

Rental Stock by Region

Rental markets are constrained for extremely low-income renters across the four census regions despite substantial variation in the availability of affordable rental units.³² Exhibit 2-9 illustrates that the Midwest showed the best availability, with 77 units per 100 very low-income renters. The West was worst off, with fewer than 44 units per 100 very low-income renters, compared with 63 units for the Northeast and 64 for the South. For extremely low-income renters, the availability of affordable units was far from adequate in any region. Even low-income renters with incomes up to 80 percent of AMI found, in the West and the Northeast, that not enough affordable units were available.

³² For renters who could afford rents no greater than the FMR, appendix B, exhibit B-3, reveals that although enough affordable units existed in each region, the number of available units in each region was sufficient to house only 76 to 85 percent of those renters. For renters who attempt to find a unit with a housing choice voucher, the housing quality standards of that program imply that their success will depend on the prevalence of “adequate” units in their area—not merely affordable and available units. Across regions, there were enough physically adequate, affordable, and available units to house only 70 to 77 percent of renters who could not afford rents higher than FMR.

Exhibit 2-9. Rental Housing Stock Was Insufficient for Extremely Low-Income Renters Across All Regions in 2015

Income Category	Housing Units per 100 Renters		
	Affordable	Affordable and Available	Affordable, Available, and Adequate
Northeast			
Extremely low-income renters (0–30% AMI)	71.7	42.8	36.0
Very low-income renters (0–50% AMI)	92.2	63.2	54.1
Low-income renters (0–80% AMI)	126.2	95.0	81.8
Midwest			
Extremely low-income renters (0–30% AMI)	66.2	39.9	35.2
Very low-income renters (0–50% AMI)	118.8	77.3	67.6
Low-income renters (0–80% AMI)	145.6	109.5	98.3
South			
Extremely low-income renters (0–30% AMI)	70.8	38.7	34.3
Very low-income renters (0–50% AMI)	95.4	64.1	55.1
Low-income renters (0–80% AMI)	142.2	104.4	92.6
West			
Extremely low-income renters (0–30% AMI)	53.9	29.9	26.6
Very low-income renters (0–50% AMI)	64.0	43.7	38.2
Low-income renters (0–80% AMI)	119.9	87.6	78.7

AMI = Area Median Income.

Source: HUD-PD&R tabulations of American Housing Survey data

On a regional basis, adding the adequacy test restricted the estimated supply for very low-income renters less in the West, eliminating 6 units, than in the other regions, which lost 9 to 10 units per 100 very low-income renters.

Nevertheless, the primary point in exhibit 2-9 is that extremely low-income renters continued to face severely constrained markets across all four regions. The Northeast, Midwest, and South had affordable units available only for two in five extremely low-income renters, and the West only for one in three.

Similar analysis of affordable housing supply on the basis of metropolitan status displayed minimal variation in 2015. Measures of affordability, availability, and adequacy for each income group were generally within a few points of the national summary values presented in exhibit 2-7, regardless of whether calculated for central cities, urban suburbs, rural suburbs, or nonmetropolitan areas.

Summary

Worst case needs are commonplace in every region and metropolitan category across the United States. Nationwide, 43.2 percent of very low-income renters had worst case needs in 2015. Prevalence increased by 3.6 percentage points from 2013 levels in the West and by 2.6 percentage points in the South, which both had greater-than-average rates of worst case needs in 2015. Central cities and urban suburbs also had greater-than-average prevalence rates and were home to the vast majority (84.6 percent) of worst case needs households.

Housing assistance, including that provided by HUD, is an important preventer of worst case needs among very low-income renters. Nationwide, 24.9 percent of very low-income renters, or 4.79 million households, reported receiving housing assistance. For every very low-income renter who was assisted, however, another 1.7 renters had worst case needs for such assistance.

Steady absorption of unoccupied rental housing stock has reduced overall vacancy rates to consistently less than 10 percent since 2011. With 93 rental units affordable for every 100 very low-income renters, not all such households could find an affordable unit in 2015, even if allocations were perfect among households across the nation (that is, if the lowest-rent units were allocated to the lowest-income households first). Many fewer affordable units were actually available to renters with the lowest incomes, because vacancy rates were lowest for the lowest-rent units and many affordable units were rented to higher income families. In 2015, the vacancy rate for units affordable at extremely low incomes was only 3.8 percent compared with 11.5 percent for units affordable at more than 80 percent of AMI. The expansion of rental stock to meet surging rental demand between 2013 and 2015 mostly benefited higher-income households, with less stock affordable to very low-income renters.

Because of competition for affordable units, when a simple ratio of affordable units per 100 very low-income renters is made more stringent by adding availability as a constraint, the ratio decreases from 93 affordable units to only 62 affordable and available units per 100 very low-income renters, and it decreases from 66 to 38 per 100 extremely low-income renters. Higher income families occupied 43.3 percent of units affordable to extremely low-income renters.

In addition, a substantial proportion of available units are not in standard physical condition. The number of affordable, available, and adequate units in 2015 was only 54 per 100 very low-income renters and only 33 per 100 extremely low-income renters.

Given the scarcity of affordable, available, and adequate units for the poorest renters, the efficacy of housing assistance in preventing worst case needs, and the surplus of units available at higher rent levels, housing vouchers continue to offer an important policy option for addressing the growing problem of worst case needs using the existing housing stock.

Section

3

Understanding the Trend in Worst Case Needs

Section 2 demonstrated that worst case needs are prevalent across the nation as a result of the limited availability of adequate, affordable rental units relative to the number of very low-income renters who need them. Section 3 elaborates how the changes in the number of units, the number of renters, and the rents they paid during the 2013-to-2015 period underlie this result.

Post-recession improvements in worst case needs observed between 2011 and 2013 were not sustained during the 2013-to-2015 period. The 754,000 decline in worst case needs between 2011 and 2013 was partially reversed in the latest 2013-to-2015 period, increasing by 582,000 households. Across both periods, however, about 70 percent of the change in worst case needs was attributed to demographic changes among unassisted very low-income renters and 30 percent to changes in market conditions.

Consistent with the previous 2-year period, formation of new households and changes in tenure from homeownership to renting continued to escalate worst case needs between 2013 and 2015. Rising incomes also continued to benefit renters, although increases in tenant incomes among very low-income renters were too weak to fully offset other factors between 2013 and 2015. Departing, however, from trends observed in the previous 2-year period, inadequate increases in rental assistance and the widening of the gap between demand for affordable rental housing and the supply of affordable units drove worst case needs upward between 2013 and 2015.

Changes in Affordable Housing Demand

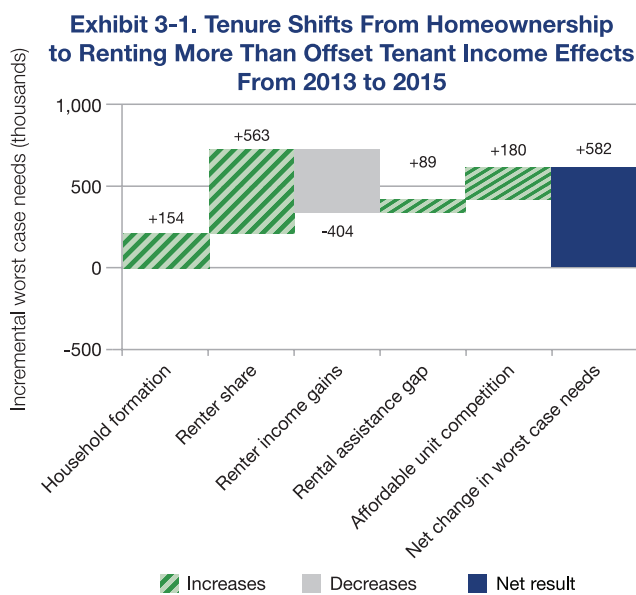
The previous sections of this report have shown that the increase in the number of households with worst case needs reflects both changes in the population vulnerable to worst case needs—unassisted very low-income renters—and changes in the share of those renters experiencing the severe problems that trigger worst case needs. The population of vulnerable renters is affected primarily by demographic factors (including their incomes and, to a small extent, HUD's categorization of their incomes). This population, in turn, substantially determines the demand for affordable housing. The rate of worst case needs among these vulnerable renters, by contrast, reflects the economic response of the housing market to these demographic changes.

The following analysis sorts out these factors. First, we distinguish between the effects of population change and the effects of the prevalence of worst case needs to estimate their relative importance. Then we identify how much various demographic factors affected the population change.³³

The population of unassisted very low-income renters increased 5.1 percent between 2013 and 2015, from 13.74 million to 14.44 million. During the same period, the rate of worst case needs in this population increased from 56.2 to 57.5 percent.

From these facts, we can attribute a net increase of 402,000 cases of worst case needs (about 70 percent of the total increase) to demographic changes and a further increase of about 180,000 cases (about 30 percent of the increase) to changes in the prevalence of severe problems. The demographic effect and the prevalence effect together explain the 582,000 additional cases of worst case needs observed in the AHS in 2015 compared with the number of cases observed in 2013.³⁴

The 402,000 increase in worst case needs resulting from demographic shifts can be further broken down into four components, illustrated by the first four columns of exhibit 3-1.



Source: HUD-PD&R analysis of American Housing Survey data

1. Household formation. The nation added 2.23 million new households between 2013 and 2015, to which we attribute a proportional increase of 154,000 cases of worst case needs. The household formation growth rate was 1.9 percent during this 2-year period, equivalent to the average biennial increase of 1.9 percent since 2005 as measured by the AHS.

2. Renter share of households. Shifts in tenure from homeownership to renting account for 563,000 new cases of worst case needs. The homeownership rate declined from 65.3 percent in 2013 to 62.9 percent in 2015,³⁵ as the nation added 3.66 million renter households, a notable increase of 9.1 percent. By comparison, renter households increased 3.6 percent from 2011 to 2013, and the average biennial growth rate in renter households since 2005 has been 4.6 percent.

3. Renter income changes. Changes in income that raised renter households out of the very low-income category account for a 404,000-case reduction of worst case needs. In 2015, 734,000 additional renters had very low incomes, a 4.0-percent increase. Because the tenure shift discussed previously was more than sufficient to explain this increase, the attributed impact of renter income changes on the number of worst case needs is negative.³⁶ This increase in very low-income renters offset the 4.0-percent decrease during the 2011-to-2013 period but still compared favorably with the 12.5-percent increase during the 2009-to-2011 period and was consistent with average biennial increases of 3.6 percent observed since 2005.³⁷

4. Rental assistance gap. We attribute 89,000 cases of the total increase in worst case needs to the widening gap in rental assistance. The number of unassisted very low-income renters increased by 699,000 households during the 2013-to-2015 period because the number of very low-income renters reporting housing assistance increased only slightly (35,000 cases) while the number of very low-income renters overall increased by 734,000. The resulting 5.1-percent increase in the number of unassisted very low-income renters partially reversed the 6.4-percent decrease seen during the preceding 2-year period but was moderate compared with the 14.3-percent increase during the 2009-to-2011 period. This increase in the rental assistance gap was comparable with biennial increases in unassisted very low-income renters since 2005 averaging 4.2 percent.

³³ Any analysis of survey data faces limitations from both sampling error and nonsampling error. Such errors are compounded when multiple survey years are compared. Additionally, the 2015 AHS was administered to a completely different sample of households than previous AHS iterations. This analysis takes the AHS estimates at face value, but the reader should recognize that multiple sources of potential error exist.

³⁴ The demographic effect equals the new prevalence rate times the numerical increase (or decrease) in renters, and the prevalence effect is the increase (or decrease) in the prevalence rate times the baseline number of renters.

³⁵ AHS estimates. Annual homeownership estimates based on the Current Population Survey/Housing Vacancy Survey were 65.1 percent for 2013 and 63.7 percent for 2015.

³⁶ As a percentage of renter households, very low-income renters decreased from 45.9 percent in 2013 to 43.8 percent in 2015.

³⁷ Methodological factors are summarized in the sidebar, "Changes in Income Limits and Worst Case Needs."

Lingering effects of 2013 sequestration budget cuts may also help explain why the closing gap in rental assistance observed in the 2011-to-2013 period was reversed in the 2013-to-2015 period. For example, the number of households served by HUD's largest rental assistance program, the Housing Choice Voucher program, declined temporarily between 2013 and 2014 following sequestration. The number of households served by the program did not fully restore to pre-sequestration levels until 2016.³⁸

This analysis shows that demographic factors that caused net increases in the population of unassisted very low-income renters account for much of the increase in worst case needs between 2013 and 2015. Such factors drove large decreases in the previous 2 years as measured by the AHS. The increase in tenure shifts from homeownership to renting was the most important demographic factor during the most recent period, more than offsetting tenant income effects.

After accounting for these four demographic factors, about 30 percent of the increase in worst case needs remains to be attributed to the fifth column of exhibit 3-1. Affordable unit competition represents the extent to which the market responded to the increased demand. Because the supply of affordable and available units did not increase enough to meet the increased demand, the prevalence of worst case needs increased.

Affordable Housing Supply and Demand

Exhibit 2-8 shows that the availability of affordable rental units became more constrained during the 2013-to-2015 period. Such affordability metrics are affected by multiple demographic and market factors. Some additional data, including key numbers underlying the changes in available unit ratios, will shed light on the issue.

Exhibit 3-2. Changes in Affordable Rental Housing Availability Driven by Growing Population of Renters and Rising Costs, 2013–2015

	Extremely Low-Income (0–30% AMI)	Very Low-Income (0–50% AMI)	Low-Income (0–80% AMI)	Total ^a
Cumulative affordable and available rental units (thousands)				
2013	4,354	12,088	26,617	43,992
2015	4,278	11,854	27,716	48,670
Percent change	-1.7	-1.9	+4.1	+10.6
Cumulative households (thousands)				
2013	11,163	18,538	26,333	40,294
2015	11,290	19,235	27,931	43,930
Percent change	+1.1	+3.8	+6.1	+9.0
Income limit (median, current dollars)				
2013	16,800	28,000	44,618	—
2015	17,050	28,400	45,450	—
Percent change	+1.5	+1.4	+1.9	—
Median household income (all renters, current dollars)				
2013	—	—	—	30,000
2015	—	—	—	32,796
Percent change	—	—	—	+9.3
Median monthly housing cost (all renters, current dollars)				
2013	—	—	—	850
2015	—	—	—	922
Percent change	—	—	—	+8.5

AMI = Area Median Income.

^a Total represents all units or renters, not the sum of the cumulative income categories.

Source: HUD-PD&R tabulations of American Housing Survey data

³⁸ According to calendar year-end HUD administrative records from 2012 to 2016.

Exhibit 3-2 examines the factors responsible for the change in the availability of affordable units. The total number of rental units increased by about 4.68 million (10.6 percent) between 2013 and 2015, building on a modest increase of 920,000 (2.1 percent) during the previous 2 years. The 3.64 million new renter households absorbed much of the net increase of rental units.

Between 2013 and 2015, both of the primary market forces of supply and demand contributed to increased worst case needs among the most vulnerable, extremely low-income subset—the supply of affordable and available units for these renters decreased modestly by 1.7 percent or 76,000 units, while an additional 127,000 households, a 1.1-percent increase, put upward pressure on demand for affordable units.

The loss of affordable and available stock was about the same in percentage terms for the broader very low-income category, but demand increased more steeply. Netting out the extremely low-income estimates from the very low-income estimates reveals that households with incomes of 30 to 50 percent of Area Median Income increased while available units decreased. The increase in extremely low-income renters was supplemented by a further increase of 570,000 renters with incomes 30 to 50 percent of AMI, and the loss of 76,000 extremely low-income units was coupled with a loss of 158,000 units available and affordable at 30 to 50 percent of AMI. As renters occupying affordable units shifted to higher income categories, their units were no longer considered available for the income category they exited. The data of exhibit 3-2 suggest that such transitions may have reduced availability for both extremely low-income renters and for renters at 30 to 50 percent of AMI but not for renters of higher incomes.

CHANGES IN INCOME LIMITS AND WORST CASE NEEDS

A minimal portion of the increase in renters with extremely low and very low incomes between 2013 and 2015, and of those with worst case needs, is explained by a shift in income limits. HUD calculates income limits on the basis of Area Median Incomes, including both owners and renters, and then uses the income limits to define the boundaries of the extremely low-income, very low-income, and low-income categories.

Exhibit 3-2 shows that, across the nation, the income limits for the median renter household increased slightly between 2013 and 2015. That is, the greatest income qualifying as extremely low income increased by \$250, and the greatest income qualifying as very low income increased by \$400. As a result, each category captured more households during 2015.

The median renter’s income increased 9.3 percent between 2013 and 2015. To the extent that these are the same households in both years, this increase represents a substantial gain in income compared with incomes during the recessionary period.³⁹ The median renter’s income placed her in the very low-income category in 2011 and the low-income category in 2013 and 2015. At the same time, the median monthly housing costs for renters⁴⁰ also increased by 8.5 percent, a notable jump from the nearly flat 0.6-percent increase during the previous 2 years. Putting these two factors together, to the extent that renters enjoyed income gains during the 2013-to-2015 period, increasing housing costs consumed a good share of additional income. This tandem increase in rents and incomes stands in contrast to the trend between 2011 and 2013, when income gains outpaced housing costs by substantial margins and worst case housing needs decreased. Further helping to explain the most recent increase in worst case needs, for extremely low-income renters, growth in rental costs outpaced income gains from 2013 to 2015. Although average incomes grew by 4.7 percent among this group, average gross rental costs increased more rapidly, by 6.9 percent, failing to relax typical housing cost burdens for the most vulnerable renters and yielding a greater number of worst case housing needs.⁴¹

Growing incomes of renter households accompanied a substantial increase in the number of renter households, but, unfortunately, income increases were insufficient to prevent growth in the number classified as having very low incomes. Even as the overall supply of rental units expanded, rents increased and the shortage of affordable and available units for extremely low-income renters and very low-income renters became more severe. These factors provide the primary framework for understanding the increase in worst case housing needs between 2013 and 2015.

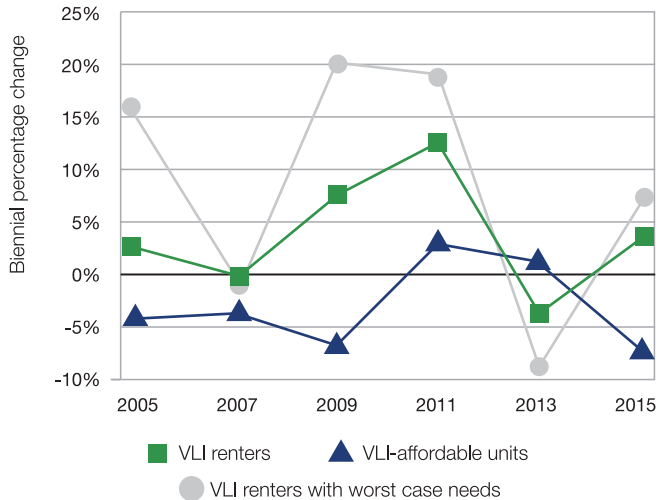
Exhibit 3-3 examines the biennial percentage change of two supply and demand factors, the number of very low-income renters and the number of units they can afford, in the context of changes in worst case needs observed over the past 10 years.

³⁹ Another potential cause of an increase in the median renter’s income could be the addition of new, higher-income renters. HUD has not assessed the extent to which each factor contributed to the result.

⁴⁰ Includes rent, utilities, property insurance, land rent, and association fees but excludes any separate security deposit or parking fees.

⁴¹ Average monthly incomes and gross rents across income groups are set forth in table A-14.

Exhibit 3-3. Biennial Changes in Worst Case Needs Tied to Size of Very Low-Income Renter Population and Supply of Affordable Units, 2005–2015



Source: HUD-PD&R tabulations of American Housing Survey data

With few exceptions, the number of households experiencing worst case needs has increased steadily, with the sharpest increases observed during and immediately following the recessionary period. In most instances, increases in worst case needs were accompanied by increasing numbers of very low-income renters, indicating increasing demand for affordable rental units. Correspondingly, in most instances, increases in worst case needs were also accompanied by declines in the national supply of units affordable to very low-income renters.

In 2013, which witnessed the sharpest decline in worst case needs in the past decade, that trend reversed. The number of very low-income renters decreased, easing demand, and the number of units affordable to very low-income renters increased, growing the national supply of affordable housing. In 2015, however, supply of affordable units declined as demand for those units rose, yielding an increase in very low-income renters with worst case housing needs.

Concluding Summary

An analysis of demographic and market factors indicates that, of the total increase of worst case needs by 582,000 during the 2013-to-2015 period, about 70 percent is attributable to demographic changes that grew the population of unassisted very low-income renters, and 30 percent is attributable to market responses that increased the prevalence of worst case needs among such households.

Four demographic factors affected the number of unassisted, very low-income renters who were susceptible to worst

case needs from 2013 to 2015. On net, demographic factors increased worst case needs after driving modest reductions in the previous 2 years. National household formation tended to increase worst case needs by 154,000 cases, and a marked increase in the renter share of households contributed 563,000 more. The growing gap in rental assistance relative to the need accounted for another 89,000 cases. These increasing factors, accounting for 806,000 new cases, were partially offset by renter income increases that raised renters out of the very low-income population and reduced worst case needs by 404,000 cases.

The increase in the number of unassisted, very low-income renters represents a quantitative increase in the number of affordable units demanded. Even if the supply were unchanged, we would expect increased competition for affordable units, increasing rents, and increasing prevalence of worst case needs. Therefore, after demographic factors on net grew worst case needs by 402,000, it is reasonable that market-driven increases in prevalence would account for a further increase of 180,000 cases.

The market response is somewhat less tidy than the previous sentence suggests. The total supply of rental units increased somewhat more (by approximately 4.7 million units, or more than 10 percent) than the total renter population (3.64 million renters, or 9.0 percent). However, with vacancy rates highest among the most expensive units, the number of rental units affordable and available to very low-income renters decreased by 234,000 units (1.9 percent), while the very low-income renter population increased by 734,000 households (4.0 percent). This uneven pattern in supply growth was mimicked in renter income changes, with median income growing more sharply for renters overall (9.3 percent) than the median income threshold for very low-income renters (1.4 percent). Further, the 8.5 percent increase in median monthly housing costs for renters was a notable departure from nearly flat costs during the previous 2 years.

Worst case housing needs are a national problem. They expanded dramatically during the past decade and were exacerbated by the economic recession and associated collapse of the housing market, which reduced homeownership through foreclosures and increased demand for renting. The slight improvements observed since 2011 offer cause for hope, but the failure to sustain the more promising trends observed in 2013 is sobering. Even with public rental assistance, it remains the case that 6 of 10 extremely low-income renters and 4 of 10 very low-income renters do not have access to affordable and available housing units. In 2015, 1.7 very low-income households experienced worst case needs for every very low-income household with rental assistance. A broad strategy at the federal, state, and local levels is needed to continue to rebuild the economy, strengthen the market, and provide assistance to those families most in need.



Appendix

A

Detailed Data on Housing Problems and Supply of Affordable Housing

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Table A-1A. Housing Conditions of Renter Households by Relative Income, 2013 and 2015

2015	Household Income as Percentage of HUD-Adjusted Area Median Family Income					
	0–30%	>30–50%	>50–80%	>80–120%	>120%	All Incomes
Total households (thousands)	11,290	7,945	8,696	7,051	8,948	43,930
Unassisted with severe problems	5,821	2,482	880	258	210	9,651
Unassisted with nonsevere problems only	779	3,344	3,755	1,684	893	10,455
Unassisted with no problems	988	1,027	3,623	4,908	7,720	18,265
Assisted	3,702	1,092	438	202	125	5,559
Any with severe problems	7,500	2,634	896	263	215	11,509
Rent burden >50% of income	7,385	2,525	748	207	124	10,988
Severely inadequate housing	352	157	161	60	97	828
Any with nonsevere problems only	1,776	3,848	3,919	1,712	899	12,153
Rent burden >30–50% of income	1,511	3,611	3,296	1,276	424	10,118
Moderately inadequate housing	357	452	506	336	376	2,027
Crowded housing	122	358	361	157	122	1,120
Any with no problems	2,014	1,463	3,881	5,077	7,834	20,269
2013						
Total households (thousands)	11,104	7,397	7,815	6,683	7,274	40,273
Unassisted with severe problems	5,607	2,114	674	279	201	8,874
Unassisted with nonsevere problems only	779	3,185	3,182	1,370	717	9,233
Unassisted with no problems	1,046	1,011	3,502	4,841	6,236	16,636
Assisted	3,672	1,087	457	194	120	5,530
Any with severe problems	7,116	2,237	720	287	205	10,566
Rent burden >50% of income	6,937	2,072	502	161	72	9,744
Severely inadequate housing	445	217	225	131	138	1,155
Any with nonsevere problems only	1,809	3,638	3,327	1,406	726	10,906
Rent burden >30–50% of income	1,515	3,403	2,843	952	310	9,022
Moderately inadequate housing	373	371	416	339	342	1,840
Crowded housing	173	345	296	159	92	1,066
Any with no problems	2,179	1,522	3,768	4,990	6,343	18,801

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-1B. Housing Conditions of Owner Households by Relative Income, 2013 and 2015

2015	Household Income as Percentage of HUD-Adjusted Area Median Family Income					All Incomes
	0–30%	>30–50%	>50–80%	>80–120%	>120%	
Total households (thousands)	6,893	6,861	10,948	13,638	36,019	74,360
Unassisted with severe problems	4,341	1,727	1,110	556	616	8,349
Unassisted with nonsevere problems only	1,206	2,387	2,947	2,323	2,354	11,217
Unassisted with no problems	1,347	2,748	6,891	10,759	33,049	54,794
Any with severe problems	4,341	1,727	1,110	556	616	8,349
Cost burden >50% of income	4,263	1,639	1,000	475	433	7,811
Severely inadequate housing	165	109	123	89	187	673
Any with nonsevere problems only	1,206	2,387	2,947	2,323	2,354	11,217
Cost burden >30–50% of income	1,056	2,167	2,541	1,821	1,549	9,135
Moderately inadequate housing	170	236	367	411	696	1,881
Crowded housing	53	144	178	158	150	683
Any with no problems	1,347	2,748	6,891	10,759	33,049	54,794
2013						
Total households (thousands)	7,354	8,062	11,809	14,162	34,371	75,759
Unassisted with severe problems	4,402	2,282	1,609	797	589	9,679
Unassisted with nonsevere problems only	1,301	2,496	3,470	2,919	2,734	12,920
Unassisted with no problems	1,651	3,284	6,731	10,446	31,049	53,160
Any with severe problems	4,402	2,282	1,609	797	589	9,679
Cost burden >50% of income	4,341	2,198	1,486	671	370	9,066
Severely inadequate housing	175	124	137	131	219	787
Any with nonsevere problems only	1,301	2,496	3,470	2,919	2,734	12,920
Cost burden >30–50% of income	1,175	2,260	3,105	2,649	2,252	11,441
Moderately inadequate housing	153	217	252	193	358	1,173
Crowded housing	71	145	217	135	148	715
Any with no problems	1,651	3,284	6,731	10,446	31,049	53,160

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-2A. Housing Conditions of Renters and Owners, 2001–2015—Number of Households

	2001	2003	2005	2007	2009	2011	2013	2015
Total households (thousands)	105,435	105,868	108,901	110,719	111,861	115,076	116,032	118,290
Unassisted with severe problems	13,494	13,398	16,142	16,944	19,259	20,717	18,553	18,000
Unassisted with nonsevere problems only	19,217	19,790	20,849	22,752	23,225	24,079	22,153	21,672
Unassisted with no problems	66,445	66,468	65,362	65,862	64,506	64,983	69,796	73,059
Assisted	6,279	6,211	6,547	5,161	4,871	5,298	5,530	5,559
Cost burden >50% of income	13,330	13,188	16,433	17,140	19,458	20,781	18,810	18,799
Cost burden >30–50% of income	16,923	17,856	19,403	21,153	21,818	22,369	20,884	19,252
Severely inadequate housing	2,108	1,971	2,023	1,805	1,866	2,126	1,942	1,500
Moderately inadequate housing	4,504	4,311	4,177	3,954	3,884	3,133	3,946	3,907
Crowded housing	2,631	2,559	2,621	2,529	2,509	1,923	2,509	1,803
Renter households (thousands)	33,727	33,614	33,951	35,054	35,396	38,867	40,273	43,930
Unassisted with severe problems	5,758	5,887	6,860	6,993	8,085	9,548	8,874	9,651
Unassisted with nonsevere problems only	7,283	7,557	7,303	8,445	8,229	9,194	9,233	10,455
Unassisted with no problems	14,407	13,958	13,240	14,455	14,211	14,828	16,636	18,265
Assisted	6,279	6,211	6,547	5,161	4,871	5,298	5,530	5,559
Rent burden >50% of income	6,412	6,477	7,891	7,793	9,000	10,391	9,744	10,988
Rent burden >30–50% of income	6,916	7,468	7,502	8,340	8,240	9,124	9,292	10,118
Severely inadequate housing	1,168	1,038	1,100	1,073	998	1,204	1,155	828
Moderately inadequate housing	2,508	2,525	2,542	2,400	2,264	1,830	2,508	2,027
Crowded housing	1,658	1,615	1,635	1,511	1,499	1,072	1,652	1,120
Owner households (thousands)	71,708	72,254	74,950	75,665	76,465	76,209	75,759	74,360
Unassisted with severe problems	7,736	7,511	9,282	9,951	11,174	11,169	9,679	8,349
Unassisted with nonsevere problems only	11,934	12,233	13,546	14,307	14,996	14,885	12,920	11,217
Unassisted with no problems	52,038	52,510	52,122	51,407	50,295	50,155	53,160	54,794
Cost burden >50% of income	6,918	6,711	8,542	9,347	10,458	10,390	9,066	7,811
Cost burden >30–50% of income	10,007	10,388	11,901	12,813	13,578	13,245	11,592	9,135
Severely inadequate housing	940	933	923	732	868	922	787	673
Moderately inadequate housing	1,996	1,786	1,635	1,554	1,620	1,303	1,438	1,881
Crowded housing	973	944	986	1,018	1,010	851	857	683

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-2B. Housing Conditions of Renters and Owners, 2001-2015—Percentage of Households

	2001	2003	2005	2007	2009	2011	2013	2015
Total households	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Unassisted with severe problems	12.8	12.7	14.8	15.3	17.2	18.0	16.0	15.2
Unassisted with nonsevere problems only	18.2	18.7	19.1	20.5	20.8	20.9	19.1	18.3
Unassisted with no problems	63.0	62.8	60.0	59.5	57.7	56.5	60.2	61.8
Assisted	6.0	5.9	6.0	4.7	4.4	4.6	4.8	4.7
Cost burden >50% of income	12.6	12.5	15.1	15.5	17.4	18.1	16.2	15.9
Cost burden >30–50% of income	16.1	16.9	17.8	19.1	19.5	19.4	18.0	16.3
Severely inadequate housing	2.0	1.9	1.9	1.6	1.7	1.8	1.7	1.3
Moderately inadequate housing	4.3	4.1	3.8	3.6	3.5	2.7	3.4	3.3
Crowded housing	2.5	2.4	2.4	2.3	2.2	1.7	2.2	1.5
Renter households	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Unassisted with severe problems	17.1	17.5	20.2	19.9	22.8	24.6	22.0	22.0
Unassisted with nonsevere problems only	21.6	22.5	21.5	24.1	23.2	23.7	22.9	23.8
Unassisted with no problems	42.7	41.5	39.0	41.2	40.1	38.2	41.3	41.6
Assisted	18.6	18.5	19.3	14.7	13.8	13.6	13.7	12.7
Rent burden >50% of income	19.0	19.3	23.2	22.2	25.4	26.7	24.2	25.0
Rent burden >30–50% of income	20.5	22.2	22.1	23.8	23.3	23.5	23.1	23.0
Severely inadequate housing	3.5	3.1	3.2	3.1	2.8	3.1	2.9	1.9
Moderately inadequate housing	7.4	7.5	7.5	6.8	6.4	4.7	6.2	4.6
Crowded housing	4.9	4.8	4.8	4.3	4.2	2.8	4.1	2.6
Owner households	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Unassisted with severe problems	10.8	10.4	12.4	13.2	14.6	14.7	12.8	11.2
Unassisted with nonsevere problems only	16.6	16.9	18.1	18.9	19.6	19.5	17.1	15.1
Unassisted with no problems	72.6	72.7	69.5	67.9	65.8	65.8	70.2	73.7
Cost burden >50% of income	9.6	9.3	11.4	12.4	13.7	13.6	12.0	10.5
Cost burden >30–50% of income	14.0	14.4	15.9	16.9	17.8	17.4	15.3	12.3
Severely inadequate housing	1.3	1.3	1.2	1.0	1.1	1.2	1.0	0.9
Moderately inadequate housing	2.8	2.5	2.2	2.1	2.1	1.7	1.9	2.5
Crowded housing	1.4	1.3	1.3	1.3	1.3	1.1	1.1	0.9

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-3. Housing Conditions of Unassisted Renter Households by Relative Income, 2013 and 2015

2015	Household Income as Percentage of HUD-Adjusted Area Median Family Income					
	0–30%	>30–50%	>50–80%	>80–120%	>120%	All Incomes
Total unassisted households (thousands)	7,588	6,853	8,258	6,849	8,823	38,371
Any with severe problems	5,821	2,482	880	258	210	9,651
Rent burden >50% of income	5,756	2,395	740	202	124	9,216
[Rent above FMR]	1,919	1,437	672	202	124	4,354
Severely inadequate housing	234	130	153	59	92	669
Any with nonsevere problems only	779	3,344	3,755	1,684	893	10,455
Rent burden >30–50% of income	615	3,150	3,170	1,258	422	8,616
Moderately inadequate housing	216	376	471	329	372	1,764
Crowded housing	75	325	344	154	121	1,020
Any with no problems	988	1,027	3,623	4,908	7,720	18,265
2013						
Total unassisted households (thousands)	7,432	6,310	7,357	6,490	7,155	34,743
Any with severe problems	5,607	2,114	674	279	201	8,874
Rent burden >50% of income	5,530	1,967	473	157	72	8,200
[Rent above FMR]	1,548	1,168	419	157	72	3,366
Severely inadequate housing	301	195	208	126	133	963
Any with nonsevere problems only	779	3,185	3,182	1,370	717	9,233
Rent burden >30–50% of income	613	3,007	2,735	928	304	7,587
Moderately inadequate housing	226	302	382	329	339	1,578
Crowded housing	102	320	276	157	91	946
Any with no problems	1,046	1,011	3,502	4,841	6,236	16,636

FMR = Fair Market Rent
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-4. Incidence of Housing Problems Among Renters by Relative Income, 2013 and 2015

	Number		Percentage	
	2013	2015	2013	2015
Renter households (thousands)	40,273	43,930	100.0	100.0
Unassisted with severe problems	8,874	9,651	22.0	22.0
Unassisted with nonsevere problems only	9,233	10,455	22.9	23.8
Unassisted with no problems	16,636	18,265	41.3	41.6
Assisted	5,530	5,559	13.7	12.7
Any with severe problems	10,566	11,509	26.2	26.2
Rent burden >50% of income	9,744	10,988	24.2	25.0
Severely inadequate housing	1,155	828	2.9	1.9
[Rent burden only]	8,743	9,772	21.7	22.2
Any with nonsevere problems only	10,906	12,153	27.1	27.7
Rent burden >30–50% of income	9,022	10,118	22.4	23.0
Moderately inadequate housing	1,840	2,027	4.6	4.6
Crowded housing	1,066	1,120	2.6	2.5
[Rent burden only]	8,088	9,098	20.1	20.7
Any with no problems	18,801	20,269	46.7	46.1
Income 0–30% HAMFI (thousands)	11,104	11,290	100.0	100.0
Unassisted with severe problems	5,607	5,821	50.5	51.6
Unassisted with nonsevere problems only	779	779	7.0	6.9
Unassisted with no problems	1,046	988	9.4	8.8
Assisted	3,672	3,702	33.1	32.8
Any with severe problems	7,116	7,500	64.1	66.4
Rent burden >50% of income	6,937	7,385	62.5	65.4
Severely inadequate housing	445	352	4.0	3.1
[Rent burden only]	6,168	6,500	55.5	57.6
Any with nonsevere problems only	1,809	1,776	16.3	15.7
Rent burden >30–50% of income	1,515	1,511	13.6	13.4
Moderately inadequate housing	373	357	3.4	3.2
Crowded housing	173	122	1.6	1.1
[Rent burden only]	1,278	1,312	11.5	11.6
Any with no problems	2,179	2,014	19.6	17.8

(continued)

Table A-4. Incidence of Housing Problems Among Renters by Relative Income, 2013 and 2015 (continued)

	Number		Percentage	
	2013	2015	2013	2015
Income >30-50% HAMFI (thousands)	7,397	7,945	100.0	100.0
Unassisted with severe problems	2,114	2,482	28.6	31.2
Unassisted with nonsevere problems only	3,185	3,344	43.1	42.1
Unassisted with no problems	1,011	1,027	13.7	12.9
Assisted	1,087	1,092	14.7	13.7
Any with severe problems	2,237	2,634	30.2	33.2
Rent burden >50% of income	2,072	2,525	28.0	31.8
Severely inadequate housing	217	157	2.9	2.0
[Rent burden only]	1,893	2,274	25.6	28.6
Any with nonsevere problems only	3,638	3,848	49.2	48.4
Rent burden >30-50% of income	3,403	3,611	46.0	45.4
Moderately inadequate housing	371	452	5.0	5.7
Crowded housing	345	358	4.7	4.5
[Rent burden only]	2,960	3,073	40.0	38.7
Any with no problems	1,522	1,463	20.6	18.4
Income >50-80% HAMFI (thousands)	7,815	8,696	100.0	100.0
Unassisted with severe problems	674	880	8.6	10.1
Unassisted with nonsevere problems only	3,182	3,755	40.7	43.2
Unassisted with no problems	3,502	3,623	44.8	41.7
Assisted	457	438	5.8	5.0
Any with severe problems	720	896	9.2	10.3
Rent burden >50% of income	502	748	6.4	8.6
Severely inadequate housing	225	161	2.9	1.9
[Rent burden only]	471	696	6.0	8.0
Any with nonsevere problems only	3,327	3,919	42.6	45.1
Rent burden >30-50% of income	2,843	3,296	36.4	37.9
Moderately inadequate housing	416	506	5.3	5.8
Crowded housing	296	361	3.8	4.2
[Rent burden only]	2,630	3,076	33.7	35.4
Any with no problems	3,768	3,881	48.2	44.6

(continued)

Table A-4. Incidence of Housing Problems Among Renters by Relative Income, 2013 and 2015 (continued)

	Number		Percentage	
	2013	2015	2013	2015
Income >80-120% HAMFI (thousands)	6,683	7,051	100.0	100.0
Unassisted with severe problems	279	258	4.2	3.7
Unassisted with nonsevere problems only	1,370	1,684	20.5	23.9
Unassisted with no problems	4,841	4,908	72.4	69.6
Assisted	194	202	2.9	2.9
Any with severe problems	287	263	4.3	3.7
Rent burden >50% of income	161	207	2.4	2.9
Severely inadequate housing	131	60	2.0	0.9
[Rent burden only]	145	191	2.2	2.7
Any with nonsevere problems only	1,406	1,712	21.0	24.3
Rent burden >30–50% of income	952	1,276	14.2	18.1
Moderately inadequate housing	339	336	5.1	4.8
Crowded housing	159	157	2.4	2.2
[Rent burden only]	922	1,226	13.8	17.4
Any with no problems	4,990	5,077	74.7	72.0
Income >120% HAMFI (thousands)	7,274	8,948	100.0	100.0
Unassisted with severe problems	201	210	2.8	2.4
Unassisted with nonsevere problems only	717	893	9.9	10.0
Unassisted with no problems	6,236	7,720	85.7	86.3
Assisted	120	125	1.6	1.4
Any with severe problems	205	215	2.8	2.4
Rent burden >50% of income	72	124	1.0	1.4
Severely inadequate housing	138	97	1.9	1.1
[Rent burden only]	65	110	0.9	1.2
Any with nonsevere problems only	726	899	10.0	10.0
Rent burden >30–50% of income	310	424	4.3	4.7
Moderately inadequate housing	342	376	4.7	4.2
Crowded housing	92	122	1.3	1.4
[Rent burden only]	299	410	4.1	4.6
Any with no problems	6,343	7,834	87.2	87.5

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-5A. Incidence of Housing Problems Among Very Low-Income Renters by Household Type, 2013 and 2015

Household type	Number		Percentage	
	2013	2015	2013	2015
All household types (thousands)	18,500	19,235	100.0	100.0
Elderly without children (thousands)	3,955	4,652	100.0	100.0
Unassisted with severe problems	1,471	1,853	37.2	39.8
Unassisted with nonsevere problems only	567	722	14.3	15.5
Unassisted with no problems	510	519	12.9	11.2
Assisted	1,408	1,559	35.6	33.5
Any with severe problems	1,915	2,373	48.4	51.0
Rent burden >50% of income	1,847	2,335	46.7	50.2
Severely inadequate housing	119	86	3.0	1.8
[Rent burden only]	1,696	2,070	42.9	44.5
Any with nonsevere problems only	1,004	1,242	25.4	26.7
Rent burden >30–50% of income	942	1,149	23.8	24.7
Moderately inadequate housing	118	161	3.0	3.5
Crowded housing	1	(s)	0.0	(s)
[Rent burden only]	885	1,075	22.4	23.1
Any with no problems	1,036	1,038	26.2	22.3
Families with children (thousands)	7,023	6,962	100.0	100.0
Unassisted with severe problems	2,833	2,888	40.3	41.5
Unassisted with nonsevere problems only	1,797	1,796	25.6	25.8
Unassisted with no problems	552	552	7.9	7.9
Assisted	1,841	1,726	26.2	24.8
Any with severe problems	3,478	3,614	49.5	51.9
Rent burden >50% of income	3,349	3,534	47.7	50.8
Severely inadequate housing	263	207	3.7	3.0
[Rent burden only]	2,977	3,076	42.4	44.2
Any with nonsevere problems only	2,394	2,340	34.1	33.6
Rent burden >30–50% of income	2,089	2,088	29.7	30.0
Moderately inadequate housing	290	333	4.1	4.8
Crowded housing	513	446	7.3	6.4
[Rent burden only]	1,642	1,607	23.4	23.1
Any with no problems	1,151	1,008	16.4	14.5

(continued)

Table A-5A. Incidence of Housing Problems Among Very Low-Income Renters by Household Type, 2013 and 2015 (continued)

Household type	Number		Percentage	
	2013	2015	2013	2015
Other family households (thousands)	1,720	1,726	100.0	100.0
Unassisted with severe problems	741	805	43.1	46.6
Unassisted with nonsevere problems only	442	429	25.7	24.9
Unassisted with no problems	194	203	11.3	11.8
Assisted	343	289	19.9	16.7
Any with severe problems	840	922	48.8	53.4
Rent burden >50% of income	808	899	47.0	52.1
Severely inadequate housing	56	57	3.3	3.3
[Rent burden only]	736	801	42.8	46.4
Any with nonsevere problems only	560	527	32.6	30.5
Rent burden >30–50% of income	526	488	30.6	28.3
Moderately inadequate housing	61	79	3.5	4.6
Crowded housing	4	26	0.2	1.5
[Rent burden only]	495	427	28.8	24.7
Any with no problems	320	277	18.6	16.1
Other nonfamily households (thousands)	5,802	5,895	100.0	100.0
Unassisted with severe problems	2,676	2,758	46.1	46.8
Unassisted with nonsevere problems only	1,158	1,176	20.0	19.9
Unassisted with no problems	801	740	13.8	12.6
Assisted	1,167	1,221	20.1	20.7
Any with severe problems	3,119	3,225	53.8	54.7
Rent burden >50% of income	3,005	3,142	51.8	53.3
Severely inadequate housing	223	159	3.8	2.7
[Rent burden only]	2,652	2,827	45.7	48.0
Any with nonsevere problems only	1,489	1,514	25.7	25.7
Rent burden >30–50% of income	1,361	1,397	23.5	23.7
Moderately inadequate housing	274	236	4.7	4.0
Crowded housing	1	(s)	0.0	(s)
[Rent burden only]	1,215	1,277	20.9	21.7
Any with no problems	1,193	1,155	20.6	19.6

(s) = Unweighted counts of 5 or fewer suppressed.

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-5B. Incidence of Housing Problems Among Very Low-Income Renter Households Containing Persons With Disabilities* by Household Type, 2013 and 2015

Household type	Number		Percentage	
	2013	2015	2013	2015
All household types (thousands)	2,804	3,529	100.0	100.0
Elderly without children (thousands)	110	155	100.0	100.0
Unassisted with severe problems	41	61	37.3	39.7
Unassisted with nonsevere problems only	26	44	23.6	28.2
Unassisted with no problems	14	18	12.7	11.6
Assisted	29	32	26.4	20.6
Any with severe problems	45	75	40.9	48.2
Rent burden >50% of income	44	71	40.0	46.1
Severely inadequate housing	5	(s)	4.5	(s)
[Rent burden only]	37	65	33.6	42.4
Any with nonsevere problems only	39	52	35.5	33.5
Rent burden >30–50% of income	38	50	34.5	32.5
Moderately inadequate housing	6	3	5.5	2.2
Crowded housing	0	0	0.0	0.0
[Rent burden only]	33	48	30.0	31.3
Any with no problems	26	28	23.6	18.3
Families with children (thousands)	1,018	1,295	100.0	100.0
Unassisted with severe problems	397	538	39.0	41.5
Unassisted with nonsevere problems only	192	264	18.9	20.4
Unassisted with no problems	79	68	7.8	5.2
Assisted	350	425	34.4	32.8
Any with severe problems	523	722	51.4	55.7
Rent burden >50% of income	514	682	50.5	52.7
Severely inadequate housing	35	82	3.4	6.3
[Rent burden only]	417	541	41.0	41.8
Any with nonsevere problems only	323	403	31.7	31.1
Rent burden >30–50% of income	278	358	27.3	27.6
Moderately inadequate housing	50	74	4.9	5.7
Crowded housing	65	70	6.4	5.4
[Rent burden only]	224	268	22.0	20.7
Any with no problems	172	170	16.9	13.1

(continued)

Table A-5B. Incidence of Housing Problems Among Very Low-Income Renter Households Containing Persons With Disabilities* by Household Type, 2013 and 2015 (continued)

Household type	Number		Percentage	
	2013	2015	2013	2015
Other family households (thousands)	420	453	100.0	100.0
Unassisted with severe problems	196	177	46.7	39.1
Unassisted with nonsevere problems only	75	81	17.9	17.9
Unassisted with no problems	34	70	8.1	15.5
Assisted	114	124	27.1	27.4
Any with severe problems	232	227	55.2	50.1
Rent burden >50% of income	224	211	53.3	46.7
Severely inadequate housing	17	36	4.0	8.0
[Rent burden only]	194	175	46.2	38.5
Any with nonsevere problems only	110	126	26.2	27.8
Rent burden >30–50% of income	103	116	24.5	25.6
Moderately inadequate housing	22	22	5.2	4.9
Crowded housing	0	(s)	0.0	(s)
[Rent burden only]	88	101	21.0	22.3
Any with no problems	78	100	18.6	22.0
Other nonfamily households (thousands)	1,257	1,627	100.0	100.0
Unassisted with severe problems	452	614	36.0	37.8
Unassisted with nonsevere problems only	216	234	17.2	14.4
Unassisted with no problems	95	106	7.6	6.5
Assisted	494	673	39.3	41.4
Any with severe problems	639	863	50.8	53.1
Rent burden >50% of income	603	841	48.0	51.7
Severely inadequate housing	60	54	4.8	3.3
[Rent burden only]	518	739	41.2	45.4
Any with nonsevere problems only	354	436	28.2	26.8
Rent burden >30–50% of income	320	408	25.5	25.1
Moderately inadequate housing	51	61	4.1	3.8
Crowded housing	0	(s)	0.0	(s)
[Rent burden only]	302	374	24.0	23.0
Any with no problems	264	327	21.0	20.1

* Elderly persons with disabilities were excluded.

(s) = Unweighted counts of 5 or fewer suppressed.

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-6A. Housing Problems and Characteristics of Very Low-Income Renters by Household Type, 2015

	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
Renter households (thousands)	19,235	4,652	6,962	1,726	5,895
Number of children	14,244	0	14,244	0	0
Number of persons	44,257	6,101	26,619	4,289	7,248
Children/household	0.74	0.00	2.05	0.00	0.00
Persons/household	2.30	1.31	3.82	2.48	1.23
Unassisted with severe problems	8,303	1,853	2,888	805	2,758
Unassisted with nonsevere problems only	4,123	722	1,796	429	1,176
Unassisted with no problems	2,015	519	552	203	740
Assisted	4,794	1,559	1,726	289	1,221
Any with severe problems	10,134	2,373	3,614	922	3,225
Rent burden >50% of income	9,910	2,335	3,534	899	3,142
Severely inadequate housing	509	86	207	57	159
[Rent burden only]	8,774	2,070	3,076	801	2,827
Any with nonsevere problems only	5,624	1,242	2,340	527	1,514
Rent burden >30–50% of income	5,121	1,149	2,088	488	1,397
Moderately inadequate housing	809	161	333	79	236
Crowded housing	480	(s)	446	26	(s)
[Rent burden only]	4,385	1,075	1,607	427	1,277
Any with no problems	3,478	1,038	1,008	277	1,155

(continued)

Table A-6A. Housing Problems and Characteristics of Very Low-Income Renters by Household Type, 2015 (continued)

	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
Other characteristics					
One person in household	8,283	3,501	(s)	0	4,780
Two spouse household	3,688	648	2,258	782	0
Female householder	12,053	3,077	4,953	973	3,049
Minority householder	10,762	1,892	4,807	1,099	2,963
Welfare/SSI income	3,720	925	1,499	330	967
Social security income	4,814	3,529	496	254	535
Income below 50% poverty	4,671	875	1,973	309	1,514
Income below poverty	10,947	2,265	4,557	868	3,257
Income below 150% of poverty	16,074	3,619	6,392	1,353	4,709
High school graduate	14,251	3,229	4,959	1,300	4,763
Two+ years post high school	3,803	891	1,066	341	1,504
Earnings at minimum wage:					
At least half time	8,758	453	4,485	1,057	2,763
At least full time	6,313	282	3,415	767	1,849
Earnings main source of income	9,698	452	4,875	1,120	3,251
Housing rated poor	1,301	205	594	107	396
Housing rated good+	13,929	3,803	4,740	1,264	4,122
Neighborhood rated poor	1,446	216	662	132	436
Neighborhood rated good+	13,860	3,683	4,772	1,264	4,141
In central cities	9,513	2,082	3,380	877	3,174
Suburbs, urban	5,775	1,526	2,159	522	1,568
Suburbs, rural	1,459	388	553	149	369
Nonmetro	2,488	656	871	178	783
Northeast	3,983	1,216	1,370	381	1,016
Midwest	4,053	953	1,367	258	1,474
South	6,696	1,419	2,458	631	2,188
West	4,503	1,064	1,767	456	1,217

SSI = Supplemental Security Income. (s) = Unweighted counts of 5 or fewer suppressed.
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-6B. Housing Problems and Characteristics of Extremely Low-Income Renters by Household Type, 2015

	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
Renter households (thousands)	11,290	2,909	3,948	850	3,583
Number of children	8,171	0	8,171	0	0
Number of persons	24,701	3,627	14,766	2,032	4,275
Children/household	0.72	0.00	2.07	0.00	0.00
Persons/household	2.19	1.25	3.74	2.39	1.19
Unassisted with severe problems	5,821	1,294	2,125	499	1,903
Unassisted with nonsevere problems only	779	196	278	76	229
Unassisted with no problems	988	252	231	68	436
Assisted	3,702	1,166	1,313	207	1,015
Any with severe problems	7,500	1,762	2,792	602	2,343
Rent burden >50% of income	7,385	1,743	2,753	596	2,293
Severely inadequate housing	352	55	153	36	109
[Rent burden only]	6,500	1,540	2,365	527	2,068
Any with nonsevere problems only	1,776	557	606	136	477
Rent burden >30–50% of income	1,511	504	509	107	391
Moderately inadequate housing	357	82	120	39	116
Crowded housing	122	(s)	113	(s)	0
[Rent burden only]	1,312	469	386	96	361
Any with no problems	2,014	590	550	112	763

(continued)

Table A-6B. Housing Problems and Characteristics of Extremely Low-Income Renters by Household Type, 2015 (continued)

Other characteristics	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
One person in household	5,346	2,314	(s)	0	3,029
Two spouse household	1,774	337	1,066	371	0
Female householder	7,357	1,982	2,978	499	1,898
Minority householder	6,587	1,327	2,822	561	1,877
Welfare/SSI income	2,865	742	1,094	206	823
Social security income	2,851	2,083	272	107	390
Income below 50% poverty	4,671	875	1,973	309	1,514
Income below poverty	9,816	2,193	3,724	749	3,151
Income below 150% of poverty	11,197	2,854	3,941	839	3,562
High school graduate	8,002	1,917	2,756	609	2,719
Two+ years post high school	2,058	535	549	158	816
Earnings at minimum wage:					
At least half time	3,132	113	1,771	341	907
At least full time	1,242	32	873	146	191
Earnings main source of income	4,305	162	2,255	450	1,437
Housing rated poor	859	145	401	59	254
Housing rated good+	8,034	2,330	2,587	624	2,494
Neighborhood rated poor	941	145	450	76	270
Neighborhood rated good+	7,909	2,251	2,560	627	2,470
In central cities	5,747	1,386	1,931	457	1,972
Suburbs, urban	3,361	980	1,198	238	944
Suburbs, rural	783	202	296	72	213
Nonmetro	1,399	341	521	82	454
Northeast	2,494	809	829	195	661
Midwest	2,380	579	783	135	883
South	3,884	889	1,397	294	1,304
West	2,532	631	939	227	735

SSI = Supplemental Security Income. (s) = Unweighted counts of 5 or fewer suppressed.
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-7. Housing Problems and Characteristics of Very Low-Income Worst Case Renters by Household Type, 2015

	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
Renter households (thousands)	8,303	1,853	2,888	805	2,758
Number of children	5,933	0	5,933	0	0
Number of persons	19,274	2,532	11,212	1,974	3,556
Children/household	0.71	0	2.05	0	0
Persons/household	2.32	1.37	3.88	2.45	1.29
Unassisted with severe problems	8,303	1,853	2,888	805	2,758
Unassisted with nonsevere problems only	—	—	—	—	—
Unassisted with no problems	—	—	—	—	—
Assisted	—	—	—	—	—
Any with severe problems	8,303	1,853	2,888	805	2,758
Rent burden >50% of income	8,150	1,828	2,842	790	2,690
Severely inadequate housing	364	59	132	40	133
[Rent burden only]	7,212	1,607	2,479	715	2,411
Any with nonsevere problems only	—	—	—	—	—
Rent burden >30–50% of income	—	—	—	—	—
Moderately inadequate housing	—	—	—	—	—
Crowded housing	—	—	—	—	—
[Rent burden only]	—	—	—	—	—
Any with no problems	—	—	—	—	—

(continued)

Table A-7. Housing Problems and Characteristics of Very Low-Income Worst Case Renters by Household Type, 2015 (continued)

Other characteristics	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
One person in household	3,474	1,333	0	0	2,141
Two spouse household	1,728	293	1,067	368	0
Female householder	4,988	1,186	1,952	458	1,392
Minority householder	4,526	702	1,997	523	1,304
Welfare/SSI income	1,380	292	589	121	378
Social security income	1,886	1,407	215	106	158
Income below 50% poverty	2,418	482	995	182	759
Income below poverty	5,495	1,014	2,272	495	1,714
Income below 150% of poverty	7,342	1,506	2,787	692	2,357
High school graduate	6,345	1,403	2,067	589	2,286
Two+ years post high school	1,962	425	512	178	847
Earnings at minimum wage:					
At least half time	3,723	190	1,711	479	1,342
At least full time	2,294	106	1,150	306	733
Earnings main source of income	4,528	213	2,009	547	1,759
Housing rated poor	555	84	250	55	166
Housing rated good+	5,960	1,494	1,959	583	1,925
Neighborhood rated poor	549	66	237	57	188
Neighborhood rated good+	5,993	1,472	1,983	581	1,957
In central cities	4,202	836	1,360	427	1,579
Suburbs, urban	2,820	681	1,044	276	818
Suburbs, rural	507	140	177	41	149
Nonmetro	774	196	307	61	211
Northeast	1,593	445	549	125	474
Midwest	1,512	372	457	103	580
South	2,928	543	1,038	321	1,026
West	2,270	493	844	256	677

SSI = Supplemental Security Income.
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-8. Housing Problems and Characteristics of Extremely Low-Income Worst Case Renters by Household Type, 2015

	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
Renter households (thousands)	5,821	1,294	2,125	499	1,903
Number of children	4,433	0	4,433	0	0
Number of persons	13,606	1,695	8,285	1,213	2,414
Children/household	0.76	0	2.09	0	0
Persons/household	2.34	1.31	3.90	2.43	1.27
Unassisted with severe problems	5,821	1,294	2,125	499	1,903
Unassisted with nonsevere problems only	—	—	—	—	—
Unassisted with no problems	—	—	—	—	—
Assisted	—	—	—	—	—
Any with severe problems	5,821	1,294	2,125	499	1,903
Rent burden >50% of income	5,756	1,287	2,107	495	1,867
Severely inadequate housing	234	28	96	24	86
[Rent burden only]	5,053	1,123	1,807	448	1,675
Any with nonsevere problems only	—	—	—	—	—
Rent burden >30–50% of income	—	—	—	—	—
Moderately inadequate housing	—	—	—	—	—
Crowded housing	—	—	—	—	—
[Rent burden only]	—	—	—	—	—
Any with no problems	—	—	—	—	—

(continued)

Table A-8. Housing Problems and Characteristics of Extremely Low-Income Worst Case Renters by Household Type, 2015 (continued)

Other characteristics	Total	Elderly, No Children	Families with Children	Other Families	Other Nonfamily Households
One person in household	2,478	976	0	0	1,501
Two spouse household	1,170	180	750	240	0
Female householder	3,507	852	1,455	269	931
Minority householder	3,238	527	1,495	318	899
Welfare/SSI income	1,162	246	500	87	328
Social security income	1,272	938	150	47	136
Income below 50% poverty	2,418	482	995	182	759
Income below poverty	5,121	994	2,012	445	1,670
Income below 150% of poverty	5,767	1,266	2,121	490	1,891
High school graduate	4,288	938	1,469	356	1,524
Two+ years post high school	1,264	287	329	107	541
Earnings at minimum wage:					
At least half time	2,026	78	1,072	232	644
At least full time	788	13	552	95	129
Earnings main source of income	2,912	111	1,396	320	1,085
Housing rated poor	420	68	191	30	131
Housing rated good+	4,101	1,020	1,423	363	1,295
Neighborhood rated poor	423	56	197	35	135
Neighborhood rated good+	4,126	1,013	1,423	369	1,320
In central cities	2,940	595	978	277	1,091
Suburbs, urban	1,899	469	745	149	536
Suburbs, rural	376	95	140	30	110
Nonmetro	606	136	262	43	165
Northeast	1,159	322	417	83	337
Midwest	1,178	276	384	80	438
South	2,039	391	758	195	696
West	1,445	305	566	142	432

SSI = Supplemental Security Income.
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-9. Incidence of Housing Problems Among Very Low-Income Renters by Race and Ethnicity, 2013 and 2015—Number and Percentage

	Number		Percentage	
	2013	2015	2013	2015
Non-Hispanic White (thousands)	8,220	8,473	100.0	100.0
Unassisted with severe problems	3,618	3,778	44.0	44.6
Unassisted with nonsevere problems only	1,770	1,836	21.5	21.7
Unassisted with no problems	1,117	1,072	13.6	12.7
Assisted	1,716	1,787	20.9	21.1
Any with severe problems	4,169	4,379	50.7	51.7
Rent burden >50% of income	4,037	4,302	49.1	50.8
Severely inadequate housing	262	176	3.2	2.1
[Rent burden only]	3,672	3,856	44.7	45.5
Any with nonsevere problems only	2,323	2,417	28.3	28.5
Rent burden >30–50% of income	2,125	2,210	25.9	26.1
Moderately inadequate housing	336	346	4.1	4.1
Crowded housing	83	132	1.0	1.6
[Rent burden only]	1,917	1,950	23.3	23.0
Any with no problems	1,728	1,678	21.0	19.8
Non-Hispanic Black (thousands)	4,666	4,813	100.0	100.0
Unassisted with severe problems	1,657	1,800	35.5	37.4
Unassisted with nonsevere problems only	835	906	17.9	18.8
Unassisted with no problems	377	414	8.1	8.6
Assisted	1,797	1,693	38.5	35.2
Any with severe problems	2,336	2,495	50.1	51.8
Rent burden >50% of income	2,239	2,421	48.0	50.3
Severely inadequate housing	182	151	3.9	3.1
[Rent burden only]	1,936	2,130	41.5	44.2
Any with nonsevere problems only	1,342	1,389	28.8	28.9
Rent burden >30–50% of income	1,225	1,261	26.3	26.2
Moderately inadequate housing	192	246	4.1	5.1
Crowded housing	81	65	1.7	1.3
[Rent burden only]	1,078	1,090	23.1	22.6
Any with no problems	988	929	21.2	19.3

**Table A-9. Incidence of Housing Problems Among Very Low-Income Renters by Race and Ethnicity, 2013 and 2015—
Number and Percentage (continued)**

	Number		Percentage	
	2013	2015	2013	2015
Hispanic (thousands)	4,186	4,441	100.00	100.0
Unassisted with severe problems	1,845	2,104	44.1	47.4
Unassisted with nonsevere problems only	1,092	1,100	26.1	24.8
Unassisted with no problems	391	361	9.3	8.1
Assisted	857	875	20.5	19.7
Any with severe problems	2,129	2,482	50.9	55.9
Rent burden >50% of income	2,038	2,429	48.7	54.7
Severely inadequate housing	168	140	4.0	3.2
[Rent burden only]	1,843	2,119	44.0	47.7
Any with nonsevere problems only	1,397	1,384	33.4	31.2
Rent burden >30–50% of income	1,217	1,263	29.1	28.4
Moderately inadequate housing	173	153	4.1	3.4
Crowded housing	315	248	7.5	5.6
[Rent burden only]	939	1,009	22.4	22.7
Any with no problems	660	575	15.8	12.9

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-10. Incidence of Housing Problems Among Very Low-Income Renters by Region, 2013 and 2015—Number and Percentage

	Number		Percentage	
	2013	2015	2013	2015
Northeast (thousands)	3,804	3,983	100.0	100.0
Unassisted with severe problems	1,542	1,593	40.5	40.0
Unassisted with nonsevere problems only	641	725	16.9	18.2
Unassisted with no problems	380	393	10.0	9.9
Assisted	1,241	1,271	32.6	31.9
Any with severe problems	1,992	2,092	52.4	52.5
Rent burden >50% of income	1,903	2,015	50.0	50.6
Severely inadequate housing	223	189	5.9	4.8
[Rent burden only]	1,661	1,690	43.7	42.4
Any with nonsevere problems only	1,032	1,143	27.1	28.7
Rent burden >30–50% of income	930	1,035	24.4	26.0
Moderately inadequate housing	148	185	3.9	4.6
Crowded housing	81	70	2.1	1.8
[Rent burden only]	814	898	21.4	22.5
Any with no problems	780	748	20.5	18.8
Midwest (thousands)	3,692	4,053	100.0	100.0
Unassisted with severe problems	1,389	1,512	37.6	37.3
Unassisted with nonsevere problems only	872	1,003	23.6	24.7
Unassisted with no problems	424	453	11.5	11.2
Assisted	1,007	1,085	27.3	26.8
Any with severe problems	1,690	1,901	45.8	46.9
Rent burden >50% of income	1,628	1,854	44.1	45.8
Severely inadequate housing	111	89	3.0	2.2
[Rent burden only]	1,452	1,667	39.3	41.1
Any with nonsevere problems only	1,181	1,335	32.0	32.9
Rent burden >30–50% of income	1,073	1,233	29.1	30.4
Moderately inadequate housing	167	167	4.5	4.1
Crowded housing	56	71	1.5	1.7
[Rent burden only]	963	1,116	26.1	27.5
Any with no problems	822	817	22.3	20.2

(continued)

**Table A-10. Incidence of Housing Problems Among Very Low-Income Renters by Region, 2013 and 2015—
Number and Percentage (continued)**

	Number		Percentage	
	2013	2015	2013	2015
South (thousands)	6,350	6,696	100.00	100.0
Unassisted with severe problems	2,612	2,928	41.1	43.7
Unassisted with nonsevere problems only	1,459	1,456	23.0	21.7
Unassisted with no problems	788	812	12.4	12.1
Assisted	1,491	1,501	23.5	22.4
Any with severe problems	3,164	3,494	49.8	52.2
Rent burden >50% of income	3,065	3,444	48.3	51.4
Severely inadequate housing	176	114	2.8	1.7
[Rent burden only]	2,745	3,093	43.2	46.2
Any with nonsevere problems only	1,895	1,867	29.8	27.9
Rent burden >30–50% of income	1,682	1,682	26.5	25.1
Moderately inadequate housing	309	316	4.9	4.7
Crowded housing	143	142	2.3	2.1
[Rent burden only]	1,463	1,421	23.0	21.2
Any with no problems	1,291	1,335	20.3	19.9
West (thousands)	4,654	4,503	100.0	100.0
Unassisted with severe problems	2,178	2,270	46.8	50.4
Unassisted with nonsevere problems only	991	939	21.3	20.9
Unassisted with no problems	466	357	10.0	7.9
Assisted	1,019	937	21.9	20.8
Any with severe problems	2,507	2,647	53.9	58.8
Rent burden >50% of income	2,414	2,596	51.9	57.7
Severely inadequate housing	151	117	3.2	2.6
[Rent burden only]	2,203	2,324	47.3	51.6
Any with nonsevere problems only	1,339	1,279	28.8	28.4
Rent burden >30–50% of income	1,233	1,172	26.5	26.0
Moderately inadequate housing	120	142	2.6	3.1
Crowded housing	240	198	5.2	4.4
[Rent burden only]	997	950	21.4	21.1
Any with no problems	807	578	17.3	12.8

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-11A. Incidence of Housing Problems Among Very Low-Income Renters by Metropolitan Location, 2013 and 2015—Number and Percentage

	Number		Percentage	
	2013	2015	2013	2015
Central cities (thousands)	9,131	9,513	100.0	100.0
Unassisted with severe problems	3,878	4,202	42.5	44.2
Unassisted with nonsevere problems only	1,944	1,951	21.3	20.5
Unassisted with no problems	824	872	9.0	9.2
Assisted	2,486	2,489	27.2	26.2
Any with severe problems	4,800	5,202	52.6	54.7
Rent burden >50% of income	4,596	5,080	50.3	53.4
Severely inadequate housing	397	296	4.3	3.1
[Rent burden only]	4,066	4,435	44.5	46.6
Any with nonsevere problems only	2,677	2,739	29.3	28.8
Rent burden >30–50% of income	2,398	2,496	26.3	26.2
Moderately inadequate housing	389	419	4.3	4.4
Crowded housing	240	240	2.6	2.5
[Rent burden only]	2,075	2,116	22.7	22.2
Any with no problems	1,654	1,572	18.1	16.5
Suburbs, urban (thousands)	5,556	5,775	100.0	100.0
Unassisted with severe problems	2,466	2,820	44.4	48.8
Unassisted with nonsevere problems only	1,218	1,157	21.9	20.0
Unassisted with no problems	611	589	11.0	10.2
Assisted	1,261	1,209	22.7	20.9
Any with severe problems	2,891	3,294	52.0	57.0
Rent burden >50% of income	2,799	3,236	50.4	56.0
Severely inadequate housing	153	131	2.7	2.3
[Rent burden only]	2,579	2,913	46.4	50.4
Any with nonsevere problems only	1,641	1,536	29.5	26.6
Rent burden >30–50% of income	1,546	1,426	27.8	24.7
Moderately inadequate housing	145	179	2.6	3.1
Crowded housing	203	155	3.6	2.7
[Rent burden only]	1,314	1,213	23.7	21.0
Any with no problems	1,024	945	18.4	16.4

(continued)

Table A-11A. Incidence of Housing Problems Among Very Low-Income Renters by Metropolitan Location, 2013 and 2015—Number and Percentage (continued)

	Number		Percentage	
	2013	2015	2013	2015
Suburbs, rural (thousands)	1,410	1,459	100.0	100.0
Unassisted with severe problems	522	507	37.0	34.8
Unassisted with nonsevere problems only	312	409	22.1	28.0
Unassisted with no problems	290	239	20.6	16.4
Assisted	286	304	20.3	20.8
Any with severe problems	597	602	42.4	41.3
Rent burden >50% of income	577	584	41.0	40.0
Severely inadequate housing	53	33	3.8	2.3
[Rent burden only]	505	491	35.8	33.7
Any with nonsevere problems only	407	505	28.9	34.6
Rent burden >30–50% of income	364	464	25.8	31.8
Moderately inadequate housing	62	57	4.4	3.9
Crowded housing	27	37	1.9	2.5
[Rent burden only]	318	411	22.6	28.2
Any with no problems	405	352	28.7	24.1
Non-metropolitan (thousands)	2,385	2,488	100.00	100.00
Unassisted with severe problems	838	774	35.1	31.1
Unassisted with nonsevere problems only	489	607	20.5	24.4
Unassisted with no problems	338	315	14.2	12.7
Assisted	719	792	30.2	31.8
Any with severe problems	1,047	1,036	43.9	41.7
Rent burden >50% of income	1,019	1,009	42.7	40.6
Severely inadequate housing	63	48	2.6	1.9
[Rent burden only]	885	936	37.1	37.6
Any with nonsevere problems only	719	843	30.2	33.9
Rent burden >30–50% of income	610	736	25.6	29.6
Moderately inadequate housing	150	154	6.3	6.2
Crowded housing	44	49	1.8	2.0
[Rent burden only]	531	646	22.3	26.0
Any with no problems	618	609	25.9	24.5

(continued)

Table A-11A. Incidence of Housing Problems Among Very Low-Income Renters by Metropolitan Location, 2013 and 2015—Number and Percentage (continued)

	Number		Percentage	
	2013	2015	2013	2015
U.S. Total (thousands)	18,482	19,235	100.0	100.0
Unassisted with severe problems	7,704	8,303	41.7	43.2
Unassisted with nonsevere problems only	3,963	4,123	21.4	21.4
Unassisted with no problems	2,063	2,015	11.2	10.5
Assisted	4,752	4,794	25.7	24.9
Any with severe problems	9,335	10,134	50.5	52.7
Rent burden >50% of income	8,991	9,910	48.6	51.5
Severely inadequate housing	666	509	3.6	2.6
[Rent burden only]	8,035	8,774	43.5	45.6
Any with nonsevere problems only	5,444	5,624	29.5	29.2
Rent burden >30–50% of income	4,918	5,122	26.6	26.6
Moderately inadequate housing	746	809	4.0	4.2
Crowded housing	514	480	2.8	2.5
[Rent burden only]	4,238	4,385	22.9	22.8
Any with no problems	3,701	3,477	20.0	18.1

Note: Metropolitan location tabulations for 2013 are provided for comparison to 2015 tabulations only and are not comparable to previous reports, which defined metropolitan locations across three categories: central cities, suburbs, and non-metropolitan areas.

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-11B. Housing Conditions of Renter Households by Relative Income, Sampled Metropolitan Areas, 2015

	Household Income as Percentage of HUD-Adjusted Area Median Family Income	
	2015	All Incomes
Atlanta-Sandy Springs-Roswell, GA		
Total households (thousands)	259	729
Unassisted with severe problems	127	
Unassisted with nonsevere problems only	52	
Unassisted with no problems	30	
Assisted	51	
Boston-Cambridge-Newton, MA-NH		
Total households (thousands)	300	708
Unassisted with severe problems	93	
Unassisted with nonsevere problems only	41	
Unassisted with no problems	20	
Assisted	146	
Chicago-Naperville-Elgin, IL-IN-WI		
Total households (thousands)	567	1,289
Unassisted with severe problems	242	
Unassisted with nonsevere problems only	112	
Unassisted with no problems	57	
Assisted	157	
Dallas-Fort Worth-Arlington, TX		
Total households (thousands)	365	1,019
Unassisted with severe problems	177	
Unassisted with nonsevere problems only	112	
Unassisted with no problems	22	
Assisted	54	
Detroit-Warren-Dearborn, MI		
Total households (thousands)	251	524
Unassisted with severe problems	115	
Unassisted with nonsevere problems only	54	
Unassisted with no problems	27	
Assisted	57	

(continued)

Table A-11B. Housing Conditions of Renter Households by Relative Income, Sampled Metropolitan Areas, 2015 (continued)

	Household Income as Percentage of HUD-Adjusted Area Median Family Income	
	2015	All Incomes
Houston-The Woodlands-Sugar Land, TX		
Total households (thousands)	347	892
Unassisted with severe problems	159	
Unassisted with nonsevere problems only	101	
Unassisted with no problems	37	
Assisted	50	
Los Angeles-Long Beach-Anaheim, CA		
Total households (thousands)	1,041	2,328
Unassisted with severe problems	567	
Unassisted with nonsevere problems only	220	
Unassisted with no problems	90	
Assisted	164	
Miami-Fort Lauderdale-West Palm Beach, FL		
Total households (thousands)	373	860
Unassisted with severe problems	227	
Unassisted with nonsevere problems only	43	
Unassisted with no problems	29	
Assisted	73	
New York-Newark-Jersey City, NY-NJ-PA		
Total households (thousands)	1,834	3,705
Unassisted with severe problems	815	
Unassisted with nonsevere problems only	281	
Unassisted with no problems	174	
Assisted	563	
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD		
Total households (thousands)	342	722
Unassisted with severe problems	145	
Unassisted with nonsevere problems only	74	
Unassisted with no problems	39	
Assisted	85	

(continued)

Table A-11B. Housing Conditions of Renter Households by Relative Income, Sampled Metropolitan Areas, 2015 (continued)

	Household Income as Percentage of HUD-Adjusted Area Median Family Income	
	2015	All Incomes
Phoenix-Mesa-Scottsdale, AZ		
Total households (thousands)	227	622
Unassisted with severe problems	124	
Unassisted with nonsevere problems only	63	
Unassisted with no problems	15	
Assisted	26	
Riverside-San Bernardino-Ontario, CA		
Total households (thousands)	215	536
Unassisted with severe problems	123	
Unassisted with nonsevere problems only	33	
Unassisted with no problems	28	
Assisted	30	
San Francisco-Oakland-Hayward, CA		
Total households (thousands)	287	791
Unassisted with severe problems	142	
Unassisted with nonsevere problems only	40	
Unassisted with no problems	22	
Assisted	84	
Seattle-Tacoma-Bellevue, WA		
Total households (thousands)	199	604
Unassisted with severe problems	83	
Unassisted with nonsevere problems only	46	
Unassisted with no problems	17	
Assisted	54	
Washington-Arlington-Alexandria, DC-VA-MD-WV		
Total households (thousands)	343	809
Unassisted with severe problems	141	
Unassisted with nonsevere problems only	95	
Unassisted with no problems	33	
Assisted	74	

(continued)

Table A-11B. Housing Conditions of Renter Households by Relative Income, Sampled Metropolitan Areas, 2015 (continued)

	Household Income as Percentage of HUD-Adjusted Area Median Family Income	
	2015	All Incomes
Cincinnati, OH-KY-IN		
Total households (thousands)	127	281
Unassisted with severe problems	47	
Unassisted with nonsevere problems only	28	
Unassisted with no problems	16	
Assisted	36	
Cleveland-Elyria, OH		
Total households (thousands)	159	301
Unassisted with severe problems	62	
Unassisted with nonsevere problems only	43	
Unassisted with no problems	12	
Assisted	42	
Denver-Aurora-Lakewood, CO		
Total households (thousands)	140	395
Unassisted with severe problems	60	
Unassisted with nonsevere problems only	33	
Unassisted with no problems	16	
Assisted	31	
Kansas City, MO-KS		
Total households (thousands)	121	293
Unassisted with severe problems	41	
Unassisted with nonsevere problems only	34	
Unassisted with no problems	14	
Assisted	32	
Memphis, TN-MS-AR		
Total households (thousands)	90	201
Unassisted with severe problems	44	
Unassisted with nonsevere problems only	18	
Unassisted with no problems	12	
Assisted	16	

(continued)

Table A-11B. Housing Conditions of Renter Households by Relative Income, Sampled Metropolitan Areas, 2015 (continued)

	Household Income as Percentage of HUD-Adjusted Area Median Family Income	
	2015	All Incomes
Milwaukee-Waukesha-West Allis, WI		
Total households (thousands)	115	248
Unassisted with severe problems	50	
Unassisted with nonsevere problems only	33	
Unassisted with no problems	9	
Assisted	24	
New Orleans-Metairie, LA		
Total households (thousands)	76	191
Unassisted with severe problems	31	
Unassisted with nonsevere problems only	10	
Unassisted with no problems	9	
Assisted	28	
Pittsburgh, PA		
Total households (thousands)	141	313
Unassisted with severe problems	43	
Unassisted with nonsevere problems only	33	
Unassisted with no problems	21	
Assisted	44	
Portland-Vancouver-Hillsboro, OR-WA		
Total households (thousands)	125	349
Unassisted with severe problems	56	
Unassisted with nonsevere problems only	29	
Unassisted with no problems	8	
Assisted	32	
Raleigh, NC		
Total households (thousands)	63	166
Unassisted with severe problems	25	
Unassisted with nonsevere problems only	19	
Unassisted with no problems	9	
Assisted	11	

Note: Each of the 15 largest metropolitan areas, listed first alphabetically, are part of the AHS longitudinal panel surveyed every 2 years. The remaining 10 metropolitan areas represent a subset of the 16th to 50th largest metropolitan areas surveyed on a rotating basis every 4 years.
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-12. Households Occupying Rental Units by Affordability of Rent and Income of Occupants, 2013 and 2015

Relative Income of Households	Occupied and Vacant Rental Units (thousands) by Unit Affordability Category (percent of HAMFI needed to afford the highest rent in the category)												
	2015	10*	20	30	40	50	60	70	80	90	100	110	120+
Extremely low-income (<30% HAMFI)	818	1,607	1,341	1,132	1,757	1,533	1,040	649	436	246	197	534	11,290
Very low-income (30–50%)	272	437	387	757	1,465	1,612	1,137	634	415	270	164	398	7,945
Low-income (50–80%)	226	371	259	556	1,310	1,726	1,405	1,015	663	348	240	579	8,696
Middle-income or higher (>80%)	278	511	339	431	1,250	1,981	2,405	2,154	1,821	1,234	928	2,667	15,999
Vacant units for rent	89	56	128	319	686	815	692	510	363	230	180	672	4,740
Total units vacant and occupied	1,682	2,982	2,453	3,194	6,468	7,667	6,679	4,962	3,699	2,328	1,708	4,849	48,670
2013													
Extremely low-income (<30% HAMFI)	868	1,672	1,367	1,423	1,911	1,718	850	513	252	136	73	321	11,104
Very low-income (30–50%)	219	362	553	895	1,497	1,655	971	557	222	110	77	280	7,397
Low-income (50–80%)	219	259	322	673	1,345	1,853	1,241	886	328	172	135	382	7,815
Middle-income or higher (>80%)	303	368	345	691	1,445	2,174	1,969	2,014	1,282	942	576	1,848	13,958
Total occupied units	1,609	2,660	2,587	3,681	6,198	7,400	5,031	3,970	2,084	1,360	862	2,831	40,273
Vacant units for rent	120	118	133	283	616	668	484	350	235	160	110	429	3,707

HAMFI = HUD-adjusted area median family income.
 * The 10 percent of HAMFI category includes units occupied with no cash rent.
 Source: HUD-PD&R tabulations of the American Housing Survey

Table A-13. Renters and Rental Units Affordable and Available to Them by Relative Income, 2001–2015

	2001	2003	2005	2007	2009	2011	2013	2015
Renter households (thousands)	34,042	33,614	33,951	35,054	35,396	38,867	40,294	43,930
Extremely low-income (<30% HAMFI)	8,739	9,077	9,729	9,243	9,961	11,774	11,163	11,290
Very low-income (30–50%)	6,315	6,581	6,342	6,697	7,157	7,492	7,375	7,945
Low-income (50–80%)	7,251	7,460	7,488	7,650	7,168	7,750	7,795	8,696
Middle-income or higher (>80%)	11,737	10,496	10,392	11,464	11,110	11,850	13,961	15,999
Affordable units	37,197	37,577	37,924	39,330	39,744	43,075	43,992	48,670
Extremely low-income (<30% HAMFI)	6,870	7,098	6,747	7,280	6,265	6,854	7,294	7,117
Very low-income (30–50%)	12,366	12,863	12,368	11,071	10,938	10,947	10,727	9,643
Low-income (50–80%)	13,634	13,518	14,044	15,063	16,228	17,995	17,904	19,326
Middle-income or higher (>80%)	4,328	4,099	4,765	5,916	6,313	7,279	8,067	12,584
Affordable and available units	37,197	37,577	37,924	39,330	39,744	43,075	43,992	48,670
Extremely low-income (<30% HAMFI)	3,803	3,996	3,982	4,224	3,665	4,220	4,354	4,278
Very low-income (30–50%)	8,132	8,744	8,549	7,786	8,045	8,225	7,734	7,576
Low-income (50–80%)	11,665	12,396	12,865	13,196	14,004	15,361	14,529	15,862
Middle-income or higher (>80%)	13,597	12,441	12,528	14,123	14,029	15,270	17,375	20,955

HAMFI = HUD-adjusted area median family income.

Note: Income categories in this table do not overlap and therefore differ from the standard definitions.

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-14. Average Income and Average Gross Rent of Renter Households by Relative Income, 2013 and 2015

2015	Household Income as Percentage of HUD-Adjusted Area Median Family Income					All Incomes
	0–30%	>30–50%	>50–80%	>80–120%	>120%	
Total households (thousands)	11,290	7,945	8,696	7,051	8,948	43,930
Unassisted with severe problems	5,821	2,482	880	258	210	9,651
Unassisted with nonsevere problems only	779	3,344	3,755	1,684	893	10,455
Unassisted with no problems	988	1,027	3,623	4,908	7,720	18,265
Assisted	3,702	1,092	438	202	125	5,559
Average monthly income	\$760	\$1,988	\$3,148	\$4,545	\$9,731	\$3,890
Unassisted with severe problems	\$806	\$1,895	\$3,024	\$3,901	\$7,211	\$1,510
Unassisted with nonsevere problems only	\$1,072	\$2,081	\$3,173	\$4,477	\$8,637	\$3,344
Unassisted with no problems	\$470	\$2,004	\$3,173	\$4,617	\$9,934	\$6,207
Assisted	\$699	\$1,896	\$2,974	\$4,197	\$9,279	\$1,433
Average gross rent	\$763	\$961	\$1,014	\$1,172	\$1,479	\$1,060
Unassisted with severe problems	\$1,038	\$1,537	\$2,190	\$3,344	\$3,841	\$1,394
Unassisted with nonsevere problems only	\$578	\$801	\$1,091	\$1,514	\$1,938	\$1,100
Unassisted with no problems	\$388	\$364	\$682	\$953	\$1,370	\$1,012
Assisted	\$470	\$708	\$731	\$885	\$968	\$564
2013	0–30%	>30–50%	>50–80%	>80–120%	>120%	All Incomes
Total households (thousands)	11,104	7,397	7,815	6,683	7,274	40,273
Unassisted with severe problems	5,607	2,114	674	279	201	8,874
Unassisted with nonsevere problems only	779	3,185	3,182	1,370	717	9,233
Unassisted with no problems	1,046	1,011	3,502	4,841	6,236	16,636
Assisted	3,672	1,087	457	194	120	5,530
Average monthly income	\$726	\$1,961	\$3,081	\$4,415	\$9,232	\$3,559
Unassisted with severe problems	\$794	\$1,869	\$2,937	\$3,977	\$8,138	\$1,479
Unassisted with nonsevere problems only	\$1,039	\$2,057	\$3,086	\$4,346	\$9,170	\$3,218
Unassisted with no problems	\$331	\$1,983	\$3,122	\$4,492	\$9,277	\$5,583
Assisted	\$670	\$1,839	\$2,940	\$3,628	\$9,109	\$1,374
Average gross rent	\$714	\$816	\$870	\$1,006	\$1,293	\$917
Unassisted with severe problems	\$863	\$1,125	\$1,507	\$2,297	\$2,390	\$1,056
Unassisted with nonsevere problems only	\$563	\$723	\$931	\$1,243	\$1,898	\$954
Unassisted with no problems	\$590	\$500	\$695	\$863	\$1,192	\$925
Assisted	\$542	\$708	\$732	\$887	\$931	\$611

Source: HUD-PD&R tabulations of the American Housing Survey

Table A-15. Housing Conditions of Households Having Nonelderly People With Disabilities by Disability Type, 2013 and 2015

2015	Any Limitation	Functional Limitations				ADL/IADL Limitations ^a	
		Hearing	Visual	Cognitive	Ambulatory	Self-Care	Independent Living
Households (thousands)	12,588	3,060	2,647	5,119	5,626	1,836	3,614
Renter households	5,740	1,077	1,339	2,602	2,746	888	1,755
Owner households	6,849	1,983	1,308	2,517	2,880	948	1,859
Renters (thousands)	5,740	1,077	1,339	2,602	2,746	888	1,755
Unassisted with severe problems	1,507	302	393	745	729	292	476
Unassisted with nonsevere problems only	1,297	246	311	557	578	152	362
Unassisted with no problems	1,567	350	316	603	667	198	387
Assisted	1,369	179	319	698	773	246	529
Very low-income renters (thousands)	1,581	294	416	732	778	227	463
Unassisted with severe problems	387	79	117	189	200	75	123
Unassisted with nonsevere problems only	716	124	182	331	351	94	197
Unassisted with no problems	235	60	54	91	117	21	66
Assisted	243	31	63	122	110	37	78
Any with severe problems	423	88	129	197	217	79	134
Rent burden >50% of income	382	83	117	171	192	69	117
Severely inadequate housing	49	12	13	33	25	S	23
[Rent burden only]	352	73	108	152	179	66	103
Any with nonsevere problems only	808	131	191	386	396	113	233
Rent burden >30–50% of income	742	116	170	343	362	103	217
Moderately inadequate housing	128	21	38	76	57	13	43
Crowded housing	56	9	8	27	27	8	21
[Rent burden only]	630	101	145	290	315	93	173
Any with no problems	351	75	95	149	164	35	96

(continued)

Table A-15. Housing Conditions of Households Having Nonelderly People With Disabilities by Disability Type, 2013 and 2015 (continued)

2013	Any Limitation	Functional Limitations				ADL/IADL Limitations ^a	
		Hearing	Visual	Cognitive	Ambulatory	Self-Care	Independent Living
Households (thousands)	9,315	2,010	1,699	3,667	5,018	1,524	2,884
Renter households	4,265	767	805	1,788	2,366	675	1,290
Owner households	5,050	1,243	895	1,879	2,653	849	1,594
Renters (thousands)	4,265	767	805	1,788	2,366	675	1,290
Unassisted with severe problems	1,156	190	215	500	686	229	417
Unassisted with nonsevere problems only	910	170	184	367	463	135	267
Unassisted with no problems	1,120	228	211	393	565	127	220
Assisted	1,080	179	194	529	652	184	387
Very low-income renters (thousands)	2,804	481	524	1,281	1,623	474	955
Unassisted with severe problems	1,085	179	199	481	648	221	389
Unassisted with nonsevere problems only	509	79	108	209	257	80	147
Unassisted with no problems	223	59	34	103	118	12	53
Assisted	987	164	184	488	601	161	365
Any with severe problems	1,439	236	277	642	864	286	520
Rent burden >50% of income	1,384	230	260	617	825	274	500
Severely inadequate housing	117	18	32	62	77	24	50
[Rent burden only, adequate housing]	1,166	188	202	512	699	235	406
Any with nonsevere problems only	825	131	158	388	449	130	258
Rent burden >30–50% of income	740	115	130	344	405	118	230
Moderately inadequate housing	129	34	30	73	85	23	43
Crowded housing	65	7	14	24	16	17	24
[Rent burden only]	647	92	114	302	352	98	199
Any with no problems	540	113	89	251	310	58	178

^a ADL = Activities of Daily Living. IADL = Instrumental Activities of Daily Living.
Source: HUD-PD&R tabulations of the American Housing Survey

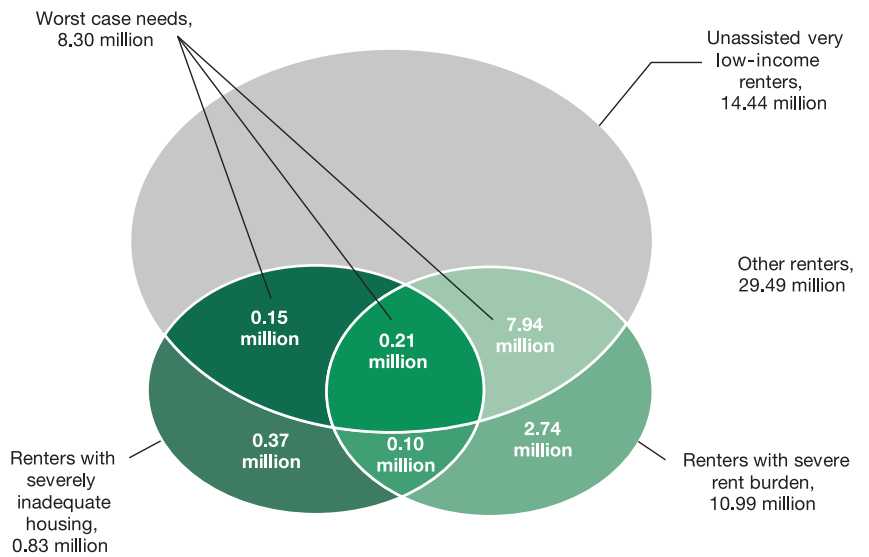


Appendix

B

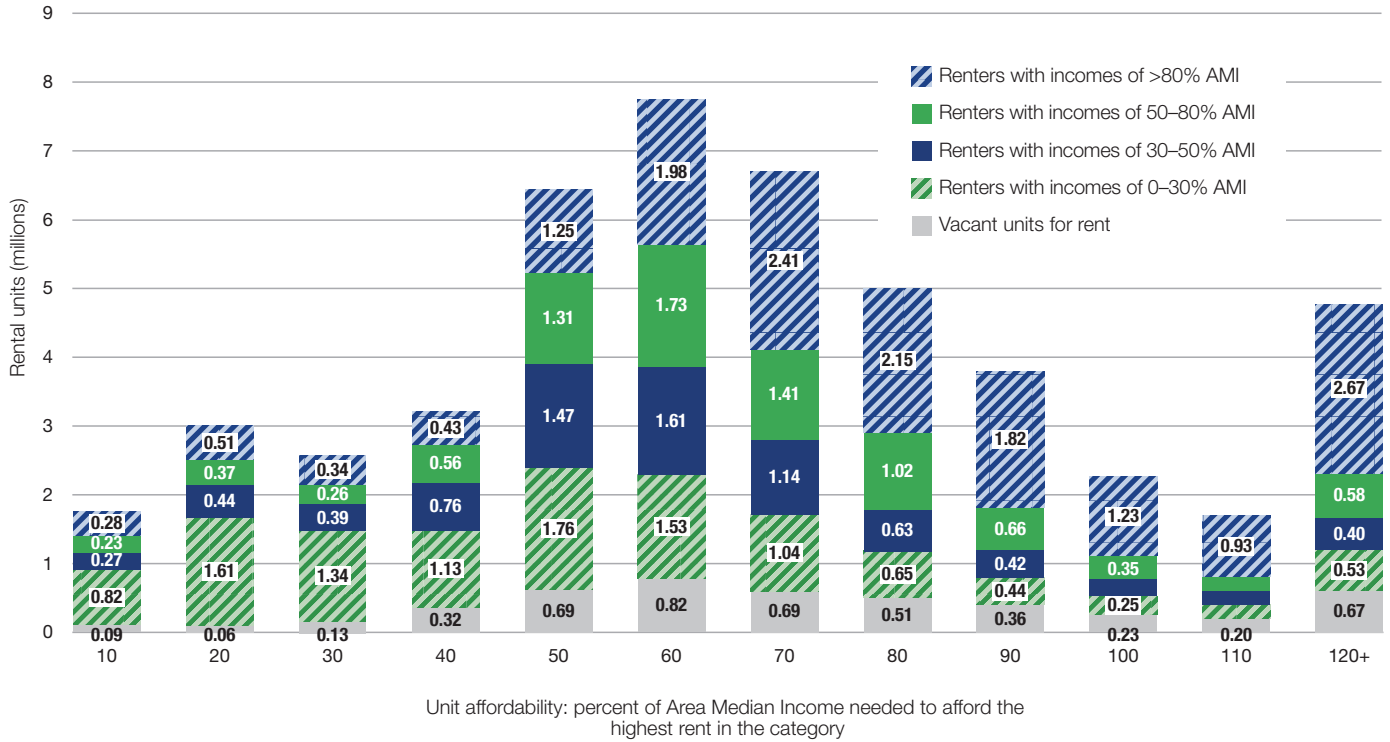
Supplemental Exhibits

Exhibit B-1. Bird's Eye View of Worst Case Housing Needs in 2015



Note: Not to scale.
Source: HUD-PD&R tabulations of American Housing Survey data

Exhibit B-2. Affordable Rental Units Occupied By Higher Income Renters, 2015



Source: HUD-PD&R tabulations of American Housing Survey data

Exhibit B-3. Rental Stock of Below-FMR Units by Region and Metropolitan Location, 2015

	Households (thousands)	Housing Units (thousands)			Housing Units per 100 Households		
		Affordable	Affordable and Available	Affordable, Available, and Adequate	Affordable	Affordable and Available	Affordable, Available, and Adequate
All	26,048	28,381	21,264	19,199	109.0	81.6	73.7
Northeast	5,211	5,499	4,259	3,691	105.5	81.7	70.8
Midwest	4,877	5,631	4,059	3,687	115.5	83.2	75.6
South	9,334	10,440	7,885	7,197	111.9	84.5	77.1
West	6,627	6,810	5,061	4,623	102.8	76.4	69.8
Central cities	12,538	12,960	9,986	8,869	103.4	79.6	70.7
Suburbs, urban	8,296	8,744	6,396	5,890	105.4	77.1	71.0
Suburbs, rural	2,012	2,590	1,893	1,711	128.7	94.1	85.0
Nonmetropolitan areas	3,202	4,087	2,989	2,728	127.6	93.3	85.2

FMR = Fair Market Rent.

Source: HUD-PD&R tabulations of American Housing Survey data

Appendix

C

Federal Housing Assistance and Affordable Housing Programs

HUD provides rental housing assistance through three key programs.¹

- 1. Public housing.** Provides affordable housing to 1.0 million households through units owned and managed by local public housing agencies. Families are required to pay 30 percent of their incomes for rent.
- 2. Project-based assisted housing.** Provides assistance to 1.2 million households living in privately owned rental housing. The assistance is attached to the units, which are reserved for low-income families who are required to pay 30 percent of their incomes for rent.
- 3. Tenant-based rental assistance.** The Housing Choice Voucher program supplements the rent payments of 2.3 million households in the private rental market. The program is administered through state and local housing agencies. Although 30 percent of income is the rent baseline, families often pay more and use these portable subsidies to locate housing of their choice.

Several other federal housing programs produce affordable housing, typically with shallower subsidies. Although these units are often more affordable than market-rate units, without additional rent subsidies (such as vouchers), extremely low-income families would often have to pay much more than 30 percent of their incomes under these programs.

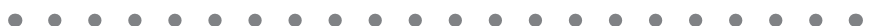
- **Low-Income Housing Tax Credit Program.** Tax credits offered to investors by the U.S. Department of the Treasury subsidize the capital costs of units that have rents affordable to households with incomes not exceeding 60 percent of Area Median Income (AMI).
- **HOME Investment Partnerships Program.** Provides annual formula grants to state and local governments that can be used to assist homeowners, first-time homebuyers, or renters. Qualifying rents must be affordable to households with incomes not exceeding 65 percent of AMI or must be less than the local Fair Market Rent, whichever is less.

¹ The number of households assisted by key programs based on HUD administrative records is available through the *Picture of Subsidized Households* query tool at <http://www.huduser.gov/portal/datasets/assthsg.html>.



- **Housing Opportunities for Persons With AIDS.** Annual formula and competitive grants available to state and local governments and nonprofits for rental assistance targeted to a special-needs population.
- **Older rental subsidy programs.** Programs named for sections of the National Housing Act, primarily the Section 221(d)(3) Below Market Interest Rate Program and the Section 236 mortgage assistance program, were active from the early 1960s through the early 1970s. They were designed to produce housing affordable for families with incomes greater than the public housing income limits.

For further detail on HUD program requirements, see HUD-PD&R (2016).



Appendix

D

Previous Reports to Congress on Worst Case Needs

- *Priority Problems and "Worst Case" Needs in 1989* (June 1991, HUD-1314-PDR).
- *The Location of Worst Case Needs in the Late 1980s* (December 1992, HUD-1387-PDR).
- *Worst Case Needs for Housing Assistance in the United States in 1990 and 1991* (June 1994, HUD-1481-PDR).
- *Rental Housing Assistance at a Crossroads: A Report to Congress on Worst Case Housing Needs* (March 1996).
- *Rental Housing Assistance—The Crisis Continues* (April 1998).
- *Rental Housing Assistance—The Worsening Crisis: A Report to Congress on Worst Case Housing Needs* (March 2000).
- *A Report on Worst Case Housing Needs in 1999: New Opportunity Amid Continuing Challenges, Executive Summary* (January 2001).
- *Trends in Worst Case Needs for Housing, 1978–1999* (December 2003).
- *Affordable Housing Needs: A Report to Congress on the Significant Need for Housing* (December 2005).
- *Affordable Housing Needs 2005: Report to Congress* (May 2007).
- *Housing Needs of Persons With Disabilities: Supplemental Findings to the Affordable Housing Needs 2005 Report* (February 2008).
- *Worst Case Housing Needs 2007: A Report to Congress* (May 2010).
- *Worst Case Housing Needs 2009: Report to Congress* (February 2011).
- *Worst Case Housing Needs 2011: Report to Congress* (August 2013).
- *Worst Case Housing Needs: 2015 Report to Congress* (April 2015).

These publications are available on line at <http://www.huduser.gov>.



Appendix

E

Data and Methodology

A report such as this one requires researchers to use a number of specialized concepts, definitions, and assumptions when analyzing and presenting the data. This appendix documents such elements for those who wish to understand the results more fully or replicate and extend the results in their own research.

Using the American Housing Survey Data

This report uses data from the most recently available American Housing Survey (AHS), conducted in 2015. The AHS, which is the only detailed periodic national housing survey in the United States, is sponsored by HUD and conducted by the Census Bureau. It provides nationally representative data on a wide range of housing subjects, including apartments, single-family homes, mobile homes, vacant homes, family composition, income, housing and neighborhood quality, housing costs, equipment, fuel type, size of housing units, and recent moves. National data are collected every 2 years, from a sample of about 84,400 housing units in 2013 (HUD-Census, 2013) and a new redesigned sample of about 85,400 housing units in 2015 (HUD-Census, 2017a). The survey, which started in 1973, sampled the same housing units between 1985 and 2013, with occasional adjustments and supplements, plus samples of newly constructed units to ensure both continuity and timeliness of the data. To address many challenges in maintaining the AHS longitudinal sample for nearly 30 years, including attrition of housing units, response burden, changes in geography, and disclosure avoidance and mitigation, the 2015 AHS underwent a major redesign. The redesign included selecting a new national and metropolitan area longitudinal sample, changes to weighting methodologies and imputation processes, and a reevaluation of variables. Information from the worst case needs reports has helped inform public policy decisions, including decisions on targeting existing resources, determining the need for additional resources, and choosing the form housing assistance should take.

To accurately estimate worst case needs for federal rental assistance from AHS data, it is essential to determine whether household incomes fall below HUD's official very low-income limits (50 percent of HUD-adjusted area median family income [HAMFI], also termed Area Median Income [AMI]), whether a household already receives housing assistance, and whether an unassisted income-eligible household has one or more of the priority problems that formerly conferred preference in tenant selection for assistance (rent burdens exceeding 50 percent of income, substandard housing, or being involuntarily displaced).

A national data source that is a reasonable alternative to the AHS for measuring housing needs is the American Community Survey (ACS). The ACS has the advantage of a larger sample size that supports estimates for small geographic areas. Disadvantages of the ACS include addressing housing assistance status in a less comprehensive way and providing much less information about housing

unit characteristics. For example, the ACS no longer ascertains whether units contain complete plumbing systems.

Weighting. Because the AHS is based on a sample of housing units rather than a census of all housing units, estimates based on the data must be “weighted up” so that totals for each year match independent estimates of the total housing stock and better represent the full housing stock. The Census Bureau weights up responses to account for undercoverage of households and household nonresponse (about 15 percent). The weights for 2001-through-2009 AHS data used in this report are based on the 2000 Census of Housing, with adjustments for estimated change since then. Since 2011, AHS data have been weighted to 2010 census benchmarks.

Exclusions. Households reporting incomes that are zero or negative are excluded from estimates of worst case needs, although they are included in counts of total households. If such households pay rents greater than the Fair Market Rent and report zero or negative incomes, then their income situation is presumably temporary, and so they are included and higher incomes are imputed to them.

Household and Family Types

In this report, the terms “family” and “household” are not interchangeable, because not all households are families. *Families* refers only to a subset of households that have one or more people in the household related to the *householder* (the first household member age 18 years or older who is listed as an owner or renter of the housing unit) by birth, marriage, or adoption.

Families with children. Households with a child younger than age 18 present are presumed to meet the definition of family through relation by birth or adoption (including grandparents as parents).

Elderly households without children. Households in which the householder or spouse is age 62 or older and in which no children are present. Elderly households may be either family or nonfamily households.

Other family households. Households with a nonelderly householder and no children in which either (1) one or more people are related to the householder by birth, marriage, or adoption; or (2) one or more subfamilies reside there who have members related to each other by birth, marriage, or adoption.

Other nonfamily households. Households with a single nonelderly person living alone or with only nonrelatives. Most of these households comprise single people living alone rather than unrelated people sharing housing.

Households with disabilities. Before 2009, no questions in the AHS were designed to ascertain directly whether individuals suffered from disabilities. Worst case needs reports

for 2007 and earlier identified households containing people with disabilities using various forms of income-based proxies. Households with disabilities (1) were not families with children, (2) were not elderly households, and (3) received some form of income or government assistance that is very likely to indicate that an adult with disabilities is present in the household. Beginning with the 2009 AHS, the survey now asks direct questions about impairments and difficulties with activities of daily living about each household member, including children. This report therefore addresses disability on the basis of people identified with these problems. In this report, elderly people with disabilities do not increase the number of households with disabilities because of the prevalence of disabilities associated with aging.

Housing Assistance Status

In 1997, the AHS questions intended to identify households receiving rental assistance were changed in both content and order from those used previously. After careful review, HUD and the Census Bureau adopted the following procedure to identify assisted units in a way that produces results that are more comparable with pre-1997 data. These questions were further refined in 2007, as a result of additional cognitive research. Therefore, in this report, receipt of rental assistance is based on respondent reports designed to—

- Determine whether the household must recertify to determine the rent it pays.
- Determine whether the rent is less because of a federal, state, or local government housing program.
- Determine whether the household has a housing voucher, and, if so, whether it can be used to move to another location.
- Determine whether the housing authority is the household’s landlord.
- Determine whether the household was assigned to its housing unit or allowed to choose it.

HUD continues to assess an alternative approach of identifying HUD-assisted households using an administrative data match.

Housing Problems

Rent or cost burden. A ratio of housing costs (including utilities) to household income that exceeds 30 percent, which is a conventional standard for housing affordability. To the extent that respondents underreport total income, the AHS estimates may overcount the number of households with a cost burden. A *severe* cost burden exceeds 50 percent of reported income. A *moderate* cost burden exceeds 30 percent but is less than or equal to 50 percent of reported income. Cost burdens qualify as potential worst case needs only if they are severe. Households reporting zero or negative income are defined as having no cost burden.

Inadequate housing. Housing with severe or moderate physical problems, as defined in the AHS since 1984 and modified from time to time to reflect changes in the survey. Severe inadequacies constitute potential worst case needs, but moderate inadequacies do not. The 2007 AHS eliminated the questions about hallways (common stairways and light fixtures) in multiunit structures in the section on selected physical problems, which affects the classification of units having severe or moderate physical problems. Briefly, a unit is defined as having severe physical inadequacies if it has any one of the following four problems.

- 1. Plumbing.** Lacking piped hot water or a flush toilet or lacking both bathtub and shower, all for the exclusive use of the unit.
- 2. Heating.** Having been uncomfortably cold during the past winter for 24 hours or more, or three times for at least 6 hours each, because of broken-down heating equipment.
- 3. Electrical.** Having no electricity or having all three of the following electrical problems: exposed wiring, a room with no working wall outlet, and three or more blown fuses or tripped circuit breakers in the past 90 days.
- 4. Upkeep.** Having any five of the following six maintenance problems: leaks from outdoors, leaks from indoors, holes in the floor, holes or open cracks in the walls or ceilings, more than 1 square foot of peeling paint or plaster, and rats in the past 90 days.

A unit has moderate inadequacies if it has any of the following four problems but none of the severe problems listed previously.

- 1. Plumbing.** Having all toilets break down simultaneously at least three times in the past 3 months for at least 3 hours each time.
- 2. Heating.** Having unvented gas, oil, or kerosene heaters as the main source of heat (because these heaters may produce unsafe fumes and unhealthy levels of moisture).
- 3. Upkeep.** Having any three of the six upkeep problems associated with severe inadequacies.
- 4. Kitchen.** Lacking a sink, range, or refrigerator for the exclusive use of the unit.

Overcrowding. The condition of having more than one person per room in a residence. Overcrowding is counted as a moderate problem rather than a severe problem that constitutes a potential worst case need.

“Priority” problems. Problems qualifying for federal preference in admission to assisted housing programs between 1988 and 1996, including paying more than one-

half of income for rent (severe rent burden), living in severely substandard housing (including being homeless or in a homeless shelter), or being involuntarily displaced. These problems informed the original definition of worst case needs. Because the AHS sample tracks housing units and thus cannot count homeless people, AHS estimates of priority problems are limited to the two severe problems described previously: (1) rent burdens greater than 50 percent of income, or (2) severe physical problems. In accordance with the intention to estimate the number of unassisted very low-income renters with priority problems, the tables in appendix A classify households with a combination of moderate problems and severe problems as having severe problems.

Income Measurement

Income sources. *Income* means gross income reported by AHS respondents for the 12 months preceding the interview. For each person in the household, the AHS questionnaire collects the amounts of several different types of income. Income includes amounts reported for wage and salary income, net self-employment income, Social Security or railroad retirement income, public assistance or welfare payments, and all other money income before deductions for taxes or any other purpose. Imputed income from equity is not included as income in this report. In accordance with HUD rules for determining income eligibility for HUD programs, the earnings of teenagers age 17 and younger are not counted as income for this report.

Household income. Reported income from all sources for all household members age 18 and older.

Income Categories

HAMFI and official income limits. HUD is required by law to set income limits each year that determine the eligibility of applicants for assisted housing programs. In 1974, Congress defined “low income” and “very low income” for HUD rental programs as incomes not exceeding 80 and 50 percent, respectively, of HAMFI. HAMFI is more commonly referred to as AMI, although the latter term may be subject to misinterpretation. Note that income limits are based on Median Family Income (MFI), not on median household income. HUD determines base income limits for a household of four. Income limits are further adjusted by household size: one person, 70 percent of base; two people, 80 percent; three people, 90 percent; five people, 108 percent; six people, 116 percent; and so on. Each household is assigned to an income category using the income limit appropriate to its area and the number of household members.²

Income cutoffs in association with AHS geography.

To categorize households in relation to local income limits as accurately as possible within the limitations of the geography

² For details about how HUD sets income limits, see <http://www.huduser.gov/portal/datasets/il.html>.

given on the AHS public use files, HUD compares household incomes with area income limits. Very low-income and low-income cutoffs for a household of four are defined for each unit of geography identified in the AHS national microdata files. For housing units outside these metropolitan areas, the AHS geography identifies only four regions, metropolitan status, and six climate zones. Average income limits were estimated for each of these 48 locations.

Because developing estimates of official income limits for the geography identified in the AHS microdata was time consuming, before the 2003 AHS release, HUD prepared income limits to use with AHS geography for only 3 years—1978, 1986, and 1995. Income cutoffs for the 2003 AHS release and each subsequent data set have been based on HUD's current income limits for those years, weighted by AHS weights. The Census Bureau included these cutoffs to the AHS public use file through 2013. To protect respondent confidentiality, income limit variables were restricted to the AHS internal use file in 2015. Additional detail about income limits can be found in the housing costs-affordability section of the *AHS Codebook Interactive Tool* (HUD-Census, 2017b).

Categorizing households by income. For this report, when households are categorized using the extremely low-, very low-, and low-income cutoffs, the cutoffs are adjusted for household size using the same adjustment factors that HUD programs use.

In addition, households reporting negative income are attributed incomes of slightly more than AMI if their monthly housing costs exceed the FMR and they lived in adequate and uncrowded housing. The justification for imputing higher incomes is that many households in this situation live in housing with amenities such as dining rooms, balconies, and off-street parking, and thus may be reporting temporary accounting losses.

- **Extremely low income.** Income not in excess of 30 percent of HAMFI, as determined by the extremely low-income cutoff.
- **Very low income.** Income not in excess of 50 percent of HAMFI, as determined by the very low-income cutoff. Very low income thus includes extremely low income, although the term sometimes is used loosely in specific contexts, such as mismatch analysis, to mean incomes of between 30 and 50 percent of HAMFI.
- **Low income.** Reported income not in excess of 80 percent of HAMFI, as determined by the low-income cutoff.

- **Middle income.** For this report, income exceeding 80 percent and less than 120 percent of HAMFI.
- **Upper income.** For this report, income exceeding 120 percent of HAMFI.
- **Poor.** Household income of less than the U.S. national poverty cutoff for that household size. As discussed in appendix A of the Census Bureau's AHS publications, AHS poverty estimates differ from official poverty estimates made from the Current Population Survey. AHS poverty estimates are based on the income of households rather than the income of families or individuals, and AHS income questions are much less detailed and refer to income during the past 12 months rather than during a fixed period. The poverty cutoff for a family of four approximates 33 percent of HAMFI. Comparisons of income limits with poverty thresholds are presented in tables A-6a, A-6b, A-7, and A-8.
- **Earnings at minimum wage.** Households with incomes from salary or wages totaling at least as much as one could earn working full-time (40 hours per week for 50 weeks per year) at the federal minimum wage of \$7.25 per hour are defined as having at least full-time earnings at minimum wage. Thus, the sum of salary and wage income earned by all persons in the household total at least \$14,500 annually. Households with incomes from salary or wages totaling at least one-half that amount (\$7,250 annually) are defined as having at least half-time earnings at minimum wage. Comparisons of household earnings characteristics are presented in appendix tables A-6a, A-6b, A-7, and A-8.

Location

Metropolitan Statistical Area. From 1973 to 1983, the definitions of metropolitan location in AHS data corresponded to the 243 standard Metropolitan Statistical Areas used in the 1970 census. From 1984 to 2013, metropolitan location in the AHS referred to the metropolitan statistical areas defined in 1983, based on the 1980 census. The 2015 AHS redesign that selected a new national and metropolitan area longitudinal sample for the first time since 1985 brought metropolitan area definitions up-to-date with the most current Office of Management and Budget delineations based on the 2010 census, which at the time 2015 AHS sample design took place, was February 2013.⁹

Region. The four census regions are the Northeast, Midwest, South, and West.

⁹ For more detailed information on 2015 AHS metropolitan areas, see <https://obamawhitehouse.archives.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf>.

Mismatch of Supply and Demand for Affordable Rental Housing

Mismatch. The discrepancy between the number of rental units needed by renters of various income categories and the number provided by the market that are affordable at those income levels.

Affordability. Several federal rental programs define *affordable rents* as those requiring not more than 30 percent of an income cutoff defined in relation to HAMFI. Under the Low-Income Housing Tax Credit Program (LIHTC), for example, housing units with rents up to 30 percent of 60 percent of HAMFI qualify as affordable and eligible for the credit.

This report generalizes the approach developed to define LIHTC maximum rents for units of different sizes to define three categories of affordability (extremely low income, very low income, and low income) based on the incomes that are sufficient for the rents—at or less than 30 percent of HAMFI, more than 30 and not more than 50 percent of HAMFI, and more than 50 percent of HAMFI. Gross rents for each unit, including payments for utilities, are compared with 30 percent of HUD's extremely low-income and very low-income cutoffs.

The income limits used to define rent affordability are adjusted for number of bedrooms using the formula codified at 26 U.S.C. 42(g)(2)(C): no bedrooms, 70 percent of base; one bedroom, 75 percent; two bedrooms, 90 percent; three bedrooms, 104 percent; four bedrooms, 116 percent; and plus 12 percent of base for every additional bedroom. This formula assumes that an efficiency unit houses one person, a one-bedroom unit houses 1.5 people, and each additional bedroom houses another 1.5 people. For vacant units, the costs of any utilities that would be paid by an occupant were allocated using a “hot deck” technique based on a matrix of structure type, AHS climate code, and eight categories of gross rent.

Three measures of affordability. HUD uses three measures to analyze the supply of the rental housing stock in relation to the number of renters with household incomes below specified thresholds—affordable units per 100 renters; affordable and available units per 100 renters; and affordable, available, and adequate units per 100 renters.

Categorizing rental units by affordability and households by income. To analyze the mismatch between affordability and income, HUD compares household incomes and housing unit rents with the current income limits (for income and rent categories up to and including 80 percent of HAMFI) and to a ratio of HAMFI (for categories exceeding 80 percent of HAMFI). As in the analysis of household income, households reporting negative income are redefined as having incomes slightly greater than MFI if their monthly housing costs were more than the FMR and they lived in adequate and uncrowded housing. Units with “no cash rent” reported are

categorized solely on the basis of utility costs. Utility costs are allocated to vacant units through hot-deck imputation based on units that are comparable on the basis of cost, number of units, region, and tenure.

Race and Ethnicity

In 2003, the AHS began using revised Census Bureau categories of race and ethnicity that are not directly comparable with the categories used in the AHS from 2001 and earlier. Survey respondents may now select more than one racial group, causing slight but meaningful decreases in the size of previously monolithic categories.



LITERATURE CITED

- Econometrica. 2016. *American Housing Survey Components of Inventory Change: 2011–2013*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research. <https://www.huduser.gov/portal/datasets/cinch/cinch13/cinch11-13.pdf>.
- Joint Center for Housing Studies of Harvard University (JCHS). 2006. *State of the Nation's Housing: 2006*. Cambridge, MA: Joint Center for Housing Studies of Harvard University. <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/son2006.pdf>.
- . 2016. *State of the Nation's Housing: 2016*. Cambridge, MA: Joint Center for Housing Studies of Harvard University. http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs_2016_state_of_the_nations_housing_lowres.pdf.
- U.S. Census Bureau and U.S. Department of Housing and Urban Development (HUD-Census). 2013. *2013 AHS National Sample Design and Weighting*. Washington, DC: U.S. Department of Commerce, U.S. Census Bureau. <https://www.census.gov/programs-surveys/ahs/tech-documentation/def-errors-changes.2013.html>.
- . 2017a. *2015 AHS Integrated National Sample: Sample Design, Weighting, and Error Estimation*. Washington, DC: U.S. Department of Commerce, U.S. Census Bureau. <https://www.census.gov/programs-surveys/ahs/tech-documentation/def-errors-changes.html>.
- . 2017b. *AHS Codebook Interactive Tool*. Washington, DC: U.S. Department of Commerce, U.S. Census Bureau. <https://www.census.gov/data-tools/demo/codebook/ahs/ahsdict.html>.
- U.S. Department of Housing and Urban Development, Office of Community Planning and Development (HUD-CPD). 2016. *The 2016 Annual Homeless Assessment Report (AHAR) to Congress: Part 1, Point-in-Time Estimates of Homelessness*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Community Planning and Development. <https://www.hudexchange.info/resource/5178/2016-ahar-part-1-pit-estimates-of-homelessness>.
- U.S. Department of Housing and Urban Development, Office of Policy Development and Research (HUD-PD&R). 2008. *Housing Needs of Persons With Disabilities: Supplemental Findings to the Affordable Housing Needs 2005 Report*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research. <https://www.huduser.gov/portal/publications/affhsg/affhsgneedsdis.html>.
- . 2016. *Programs of HUD, 2016: Major Mortgage, Grant, Assistance and Regulatory Programs*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research. <https://www.huduser.gov/portal/publications/programs-of-hud.html>.

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