

**Forced to Move: An Analysis of Hurricane Katrina Movers**  
**2009 American Housing Survey: New Orleans**  
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This paper reports the results of research and analysis undertaken by U.S. Census Bureau staff. It has undergone more limited review than official publications and was released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau. I thank Tamara Cole and Mousumi Sarkar for substantive and editorial comments.

## Introduction

On August 28, 2005, a day before Hurricane Katrina swept through Louisiana, the mayor of New Orleans issued a mandatory evacuation for the residents of Orleans parish. Those who chose to evacuate did so with no idea of the kind of devastation the city would soon experience. Hurricane Katrina tore through the city of New Orleans on August 29<sup>th</sup>, leaving a wake of destroyed homes and more than 400,000 displaced residents. With the levees breached and the city in a state of turmoil, these displaced residents went where there was lodging, having no knowledge of when they would be able to return home. Unlike previous evacuations, the residents were not able to return home once the storm had passed. With the city flooded, an entire population was displaced and scattered nationwide for an uncertain amount of time. This unprecedented displacement of nearly an entire city was unlike anything experienced in the nation's history. Recent American Housing Survey (AHS) data indicate that five years after the storm, some of those who remain in New Orleans are still in temporary lodgings, though most have settled into permanent homes.

The 2009 AHS contained specific questions aimed to capture information from the Katrina-displaced residents living in the New Orleans metro area, which is comprised of seven parishes: Jefferson, Orleans, Plaquemines, St. Bernard, St. John the Baptist, St. Tammany, and St. Charles. Some of these questions focused on gathering information regarding the householder's displacement activity immediately following the storm. This paper examines the displacement data collected from New Orleans householders between July and November of 2009, characteristics of residents living in the metro area, the type of dwelling into which they were forced to move in the immediate aftermath of Hurricane Katrina, and how many times they moved. It should be noted that the data do not include information on those evacuees who did not return. Additionally, this paper will focus only on occupied housing units.

## New Orleans Residents

According to the 2009 AHS data, there were 436,000 occupied housing units in the New Orleans metro area, a decrease from 2004 (Table 1 below compares selected resident characteristics from 2004 to 2009). The median age of the householder in 2009 was 50 years old and the median household income was \$40,000. Sixty-five percent of the householders were White; another 31 percent were Black; and 8 percent of householders reported being of Hispanic origin. Only 27 percent of householders reported having their own children under eighteen years old. Compared to the 2004 AHS, there was an increase in the proportion of Hispanics and a decrease in the proportion of Blacks in the New Orleans metropolitan area (see Table 1).

Table 1 also shows the distribution for owners versus renters. Compared to 2004, there was an increase in the percentage of both White and Hispanic renters in the metro area. Conversely, there was a decrease in the percentage of Black renters in the New Orleans area. Once the revitalization in New Orleans began, many migrant workers moved into the area to help with the reconstruction efforts. These workers tend to be Hispanic migrant workers<sup>1</sup>, which may account for the increased number of Hispanic-occupied rental units between 2004 and 2009.

Additionally, there were changes among renter-occupied households with children. Between 2004 and 2009, the percent of renter-occupied households with children less than six years old increased (from 21% in 2004 to 27% in 2009), while the percent of renter-occupied households with children between the ages of six and seventeen years old decreased (from 56% to 48%).

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<sup>1</sup> Fussell, Elizabeth, Constructing New Orleans, Constructing Race: A Population History of New Orleans. [The Journal of American History](http://www.historycooperative.org/journals/jah/94.3/fussell.html) 94.3 (2007): 20 pars. 24 Jul. 2010 <<http://www.historycooperative.org/cgi-bin/justtop.cgi?act=justtop&url=http://www.historycooperative.org/journals/jah/94.3/fussell.html>>.

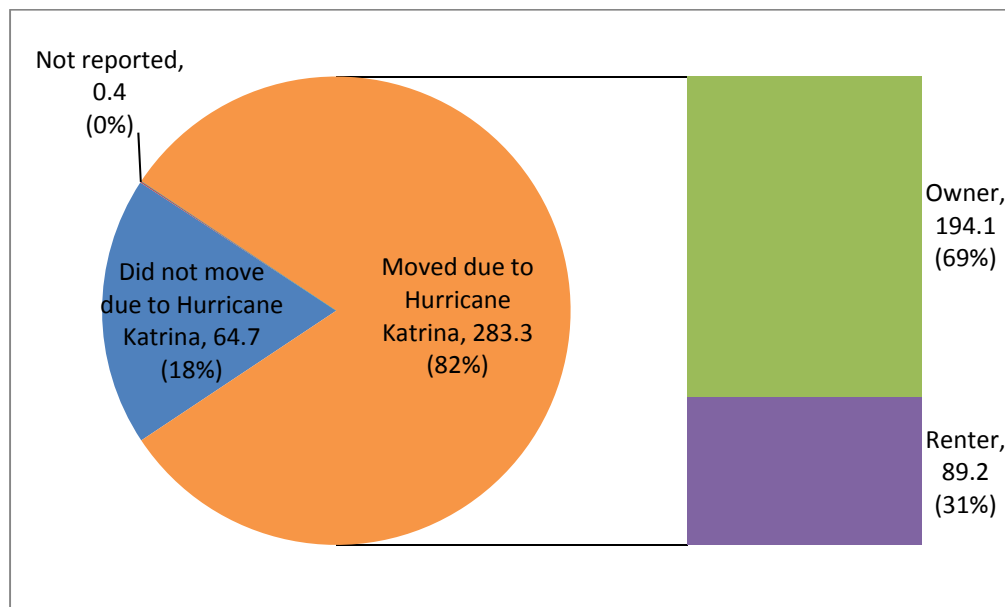
**Table 1: Selected Characteristics of the Households and Householders: 2004 and 2009 American Housing Survey (Numbers in thousands.)**

Household/Householder Characteristics	2004			2009		
	Total Occupied Units	Tenure		Total Occupied Units	Tenure	
		Owner	Renter		Owner	Renter
<b>Total (in thousands)</b>	<b>498.2</b>	<b>323.3</b>	<b>174.9</b>	<b>436.0</b>	<b>290.4</b>	<b>145.7</b>
<b>Race and Origin</b>						
White Alone.....	63%	71%	47%	65%	71%	53%
Black Alone.....	35%	26%	51%	31%	25%	44%
All other races alone or in combination.....	3%	3%	2%	4%	4%	3%
Hispanic or Latino (of any race).....	6%	6%	6%	8%	7%	11%
<b>Age of Householder</b>						
Under 25 years.....	5%	2%	11%	5%	1%	11%
25 to 29.....	7%	4%	13%	7%	4%	15%
30 to 34.....	8%	6%	12%	8%	5%	12%
35 to 44.....	21%	20%	24%	17%	14%	22%
45 to 54.....	22%	24%	18%	23%	26%	17%
55 to 64.....	17%	20%	11%	20%	24%	12%
65 years and older.....	20%	25%	11%	21%	26%	11%
<b>Median.....</b>	<b>49</b>	<b>53</b>	<b>41</b>	<b>50</b>	<b>54</b>	<b>40</b>
<b>Marital Status</b>						
Married.....	46%	57%	24%	45%	56%	24%
Widowed.....	12%	14%	8%	11%	13%	8%
Separated.....	17%	15%	22%	18%	17%	19%
Divorced.....	4%	2%	7%	3%	2%	6%
Never Married.....	21%	11%	39%	23%	13%	43%
<b>Household with Children</b>						
No own children under 18.....	70%	71%	69%	73%	74%	71%
With own children under 18 years.....	30%	29%	31%	27%	26%	29%
Under 6 years only.....	18%	16%	21%	20%	15%	27%
6 to 17 years only.....	62%	66%	56%	62%	69%	48%
Both age groups.....	20%	18%	23%	19%	16%	24%
<b>Household Income</b>						
Less than \$5,000.....	8%	6%	13%	11%	8%	16%
\$5,000 to \$29,999.....	37%	29%	51%	29%	24%	40%
\$30,000 to \$79,999.....	38%	42%	32%	37%	38%	36%
\$80,000 and over.....	17%	24%	5%	23%	31%	8%
<b>Median.....</b>	<b>33,036</b>	<b>41,508</b>	<b>22,841</b>	<b>40,000</b>	<b>50,000</b>	<b>25,354</b>

### Moved as a result of Hurricane Katrina

Of the 436,000 total occupied units in 2009, 348,400 householders reported living in the New Orleans area during Hurricane Katrina. Following the AHS definition of a “move,” which is given as a householder who has vacated his or her home for a period longer than two weeks, 82 percent of the householders who were living in the New Orleans metro area at the time of Hurricane Katrina moved away from their homes (see figure 1). The vast majority of movers evacuated to a location outside the metro area. While a large number of those evacuees did not return for at least two weeks, there were some respondents who either did not evacuate or who returned within two weeks after the storm passed through city, and these respondents are not considered “movers” for the purposes of this survey. As seen in Table 2, renter, Black, and Hispanic households were more likely to move from the New Orleans MSA for longer than two weeks.

**Figure 1: Tenure of Householder who moved for more than two weeks as a result of Hurricane Katrina: 2009 American Housing Survey (Numbers in thousands.)**



**Table 2: Selected Characteristics of Households and Householders by whether Moved for More Than Two Weeks: 2009 American Housing Survey (Numbers in thousands.)**

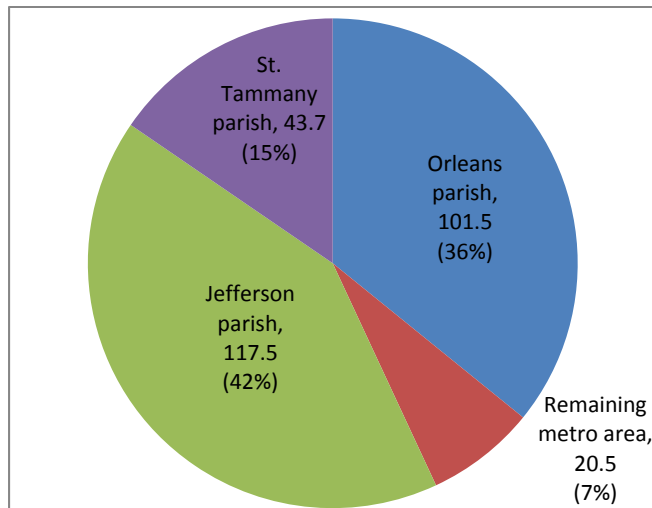
<b>Householder Characteristics</b>	<b>Moved for more than 2 weeks</b>	<b>Did not move for more than 2 weeks<sup>1</sup></b>	<b>Not Reported</b>
<b>Total</b>	<b>283.3</b>	<b>64.7</b>	<b>0.4</b>
<b>Sex</b>			
Male.....	48%	52%	18%
Female.....	52%	48%	82%
<b>Tenure</b>			
Owner occupied.....	69%	81%	100%
Renter occupied.....	31%	19%	0%
<b>Race and Origin</b>			
White Alone.....	61%	79%	47%
Non-Hispanic.....	88%	94%	100%
Black Alone.....	35%	19%	53%
Non-Hispanic.....	99%	98%	100%
All other races alone or in combination.....	4%	2%	0%
Hispanic or Latino (of any race).....	8%	5%	0%
<b>Age of Householder</b>			
Under 25 years.....	4%	3%	0%
25 to 29.....	6%	5%	0%
30 to 34.....	6%	7%	0%
35 to 44.....	17%	12%	55%
45 to 54.....	23%	27%	45%
55 to 64.....	22%	22%	0%
65 years and older.....	22%	25%	0%
<b>Marital Status</b>			
Married.....	46%	49%	22%
Widowed.....	12%	14%	0%
Separated.....	19%	16%	56%
Divorced.....	3%	3%	0%
Never Married.....	21%	18%	22%
<b>Household with Children</b>			
No own children under 18.....	71%	80%	0%
With own children under 18 years.....	29%	20%	100%

<sup>1</sup> Includes households that did not move and households that moved and returned within two weeks.

Householder Characteristics	Moved for more than 2 weeks	Did not move for more than 2 weeks <sup>1</sup>	Not Reported
Under 6 years only.....	17%	20%	0%
6 to 17 years only.....	66%	58%	100%
Both age groups.....	18%	22%	0%
<b>Household Income</b>			
Less than \$5,000.....	11%	12%	62%
\$5,000 to \$29,999.....	32%	27%	0%
\$30,000 to \$79,999.....	36%	35%	38%
\$80,000 and over.....	22%	25%	0%

The housing units in New Orleans are concentrated in two parishes, Jefferson and Orleans. It is, therefore, no surprise that the highest number of movers came from these two parishes (as depicted in Figure 2). Forty-two percent of all the respondents that reported moving as a result of Hurricane Katrina were found in Jefferson parish. An additional thirty-six percent of respondents were found in Orleans parish.

Figure 2: Hurricane Katrina Movers by Subarea: 2009 American Housing Survey (Numbers in thousands.)



Looking at each parish in figure 2, although Jefferson parish had the largest share of those displaced in the metro area (42%), only 85 percent of residents were actually displaced. Orleans parish had a smaller share of the total displaced residents from the metro area (36%); however, almost all the residents were evacuated (96%). In St. Tammany parish, which suffered the least amount of damage from Hurricane Katrina, 65 percent of householders reported moving for more than two weeks.

Still In Transition

As of 2009, approximately 31,500 households (7% of all households in the New Orleans metro area) do not consider themselves permanently settled. These householders were found primarily in renter-

occupied units and were likely to be Black. The households that were reported as still in transition had a median income of \$25,000 and nearly a quarter of the householders reported that they stayed in five or more residence types. Below are selected characteristics of those who considered themselves in transition and those who considered themselves permanently settled.

**Table 3: Selected Characteristics of Households and Householders by Transition Status: 2009 American Housing Survey (Numbers in thousands.)**

<b>Household/Householder Characteristics</b>	<b>In Transition</b>	<b>Not in Transition</b>	<b>Not Reported</b>
<b>Total</b>	<b>31.5</b>	<b>251.4</b>	<b>153.1</b>
<b>Sex</b>			
Male.....	44%	48%	54%
Female.....	56%	52%	46%
<b>Tenure</b>			
Owner occupied.....	28%	74%	63%
Renter occupied.....	72%	26%	39%
<b>Race and Origin</b>			
White Alone.....	31%	60%	55%
Non-Hispanic.....	90%	88%	89%
Black.....	47%	30%	18%
Non-Hispanic.....	98%	60%	26%
All other races alone or in combination.....	22%	10%	28%
Hispanic or Latino (of any race).....	5%	8%	9%
<b>Age of Householder</b>			
Under 25 years.....	22%	10%	30%
25 to 29.....	9%	5%	7%
30 to 34.....	8%	5%	7%
35 to 44.....	15%	16%	12%
45 to 54.....	21%	21%	17%
55 to 64.....	14%	21%	13%
65 years and older.....	10%	22%	14%
<b>Median.....</b>	<b>46</b>	<b>52</b>	<b>46</b>
<b>Marital Status</b>			
Married.....	30%	48%	44%
Widowed.....	9%	12%	10%
Separated.....	19%	19%	16%
Divorced.....	5%	3%	4%
Never Married.....	37%	19%	27%



Household/Householder Characteristics	In Transition	Not in Transition	Not Reported
<b>Household with Children</b>			
No own children under 18.....	67%	71%	77%
With own children under 18 years.....	33%	29%	23%
Under 6 years only.....	14%	17%	27%
6 to 17 years only.....	53%	67%	52%
Both age groups.....	32%	16%	21%
<b>Household Income</b>			
Less than \$5,000.....	18%	10%	35%
\$5,000 to \$29,999.....	40%	30%	23%
\$30,000 to \$79,999.....	34%	36%	26%
\$80,000 and over.....	8%	23%	16%
<b>Median.....</b>	<b>\$25,000</b>	<b>\$39,000</b>	<b>\$35,600</b>

### Displacement Residence Types

Although it was forecast that Hurricane Katrina would cause major devastation of the New Orleans metro area, very few people could have imagined the extent of the flooding that followed the storm and the duration of the devastation to the city. Those who evacuated the city due to Hurricane Katrina probably did not anticipate the length of time they would be away from home or the number of times they would have to move from one location to another.

The majority of those who were forced to move because of Hurricane Katrina moved into a shared residence. Of those who shared a residence, an overwhelming majority, at some point during their displacement, shared a residence with people they knew.

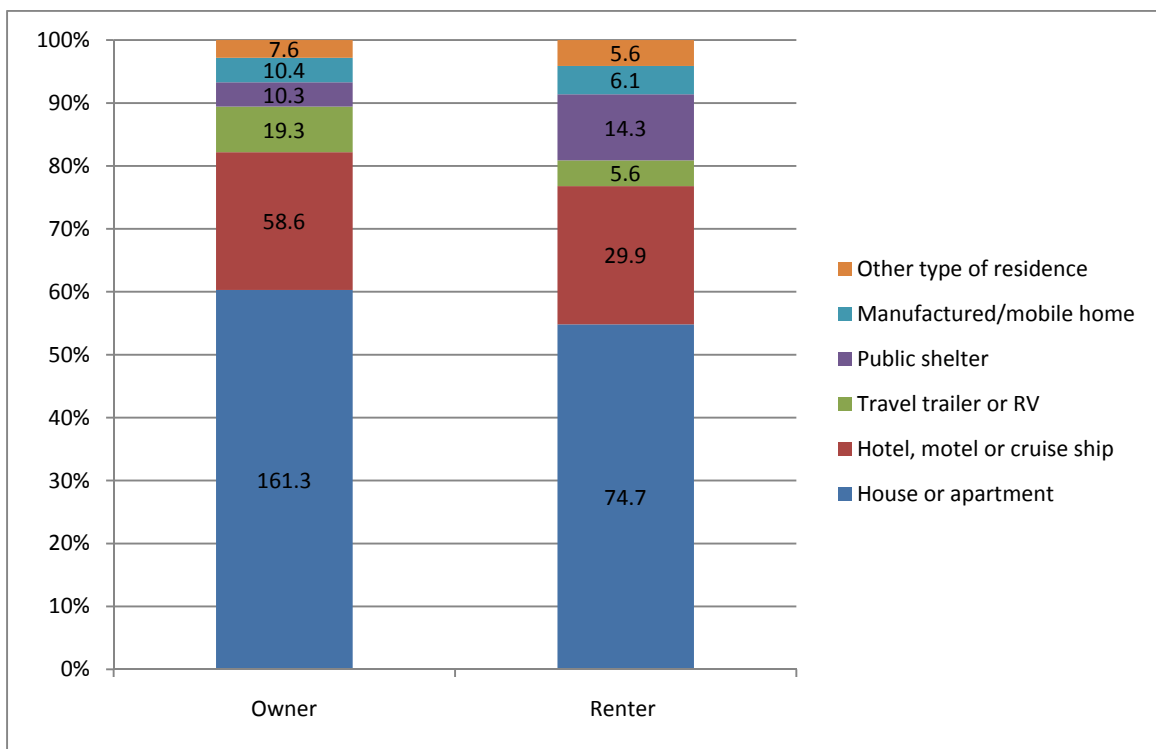
Of the 283,300 householders who moved because of Hurricane Katrina, 217,500 householders (77%) reported that they lived in a shared residence. Of those who lived in a shared residence, 208,700 householders (74% of householders who moved) reported living with an acquaintance and 20,200 householders (7% of householders who moved) were required to live with people they did not know.

The question posed to the householders who had returned to the metro area by the AHS was “Did the householder stay in any of the following?”. A list of residence types was provided from which the respondent could check all the residence types in which he or she stayed. This wording did not capture whether a householder stayed in multiple public shelters or hotel rooms, but instead captured the number of different types of displacement residences in which they stayed for longer than two weeks. For example, if a householder stayed in a public shelter for two weeks, moved to and stayed in a hotel room for two weeks, and then moved to and stayed in a different public shelter for two weeks, the AHS recorded that the householder moved to two residences types. For this reason, the number of moves cannot be calculated with the data collected from the AHS. Instead a count of residence types is a more accurate calculation.

Of the 403,600 displacement residence types reported by householders, 235,900 (59%) of the residence types were reported as “House or apartment.” The second most common displacement residence type reported was “Hotel, motel, or cruise ship” (22%).

Respondents could check as many residence types as were applicable. The choices given to them were: House or apartment; Hotel, motel, or cruise ship; Travel trailer or RV; Public Shelter; Manufactured/mobile home; Tent or car; and Other type of residence. For Figures 2 and 3, the category “Tent or car” was collapsed into “Other type of residence” due to the small number of respondents who reported “Tent or car” as a residence type. The graph below shows the frequency of each residence type out of the overall number of moves that were reported by the residents. As depicted in figure 2, approximately 10 percent of the displacement residence types among renter-occupied units were “Public shelter,” whereas only 4 percent of owner-occupied units reported staying in a public shelter. The higher median number of moves reported, compared to owner-occupied units, suggests that renters sought more temporary housing in public shelters. Owners, on the other hand, more frequently reported living in travel trailers or RVs (7%) compared to renters (4%).

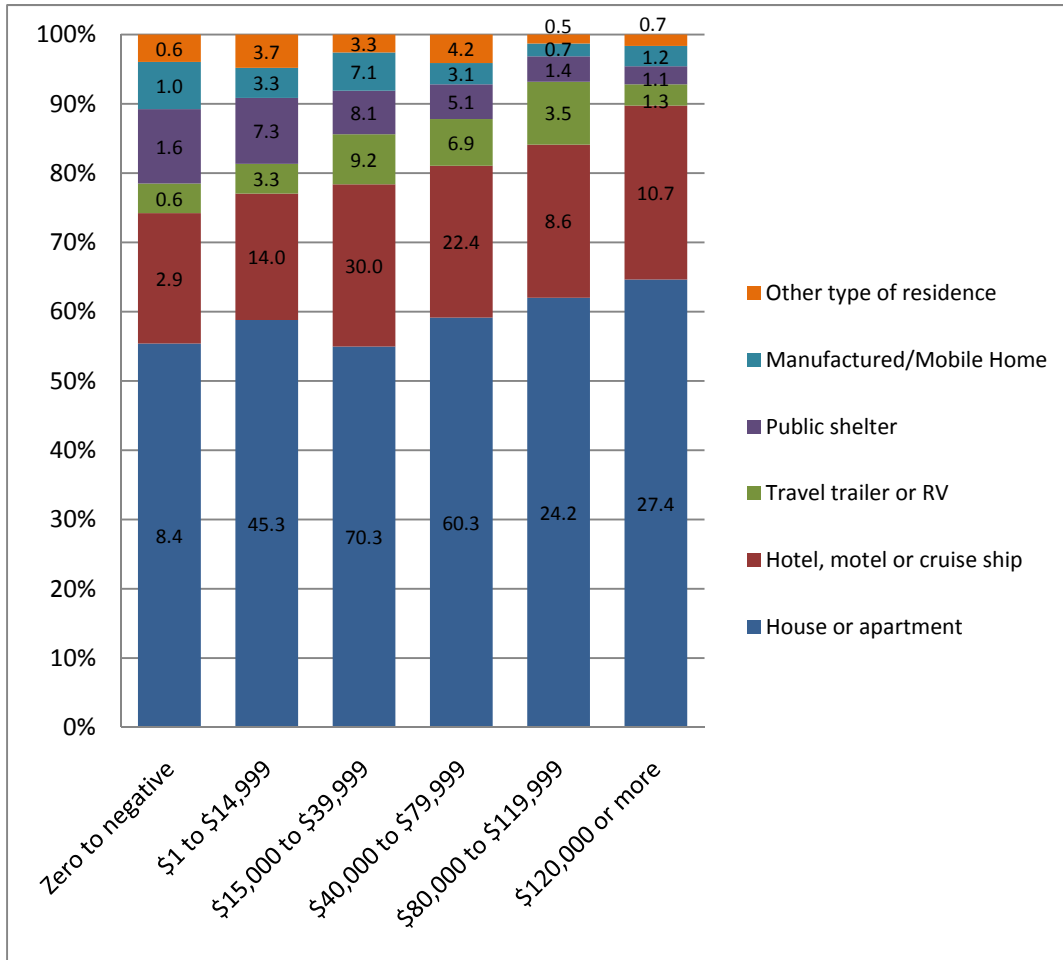
Figure 2: Displacement Residence Type by Tenure Status: 2009 American Housing Survey (Numbers in thousands.)



As shown in Figure 3, the predominant displacement residence type was the same across income levels. The majority of people, regardless of income, reported staying in a house or apartment during their displacement. Households that reported making \$120,000 or more were more likely to report staying in a house or apartment compared to those making less than \$80,000. Additionally, those making below \$15,000 were more likely to report staying in a public shelter when compared to those making \$40,000 and over. The data suggest that both tenure status and income were important factors determining the

type of displacement residence used by the displaced residents who have returned to the New Orleans metro area.

Figure 3: Displacement Residence Type by Income: 2009 American Housing Survey (Numbers in thousands.)

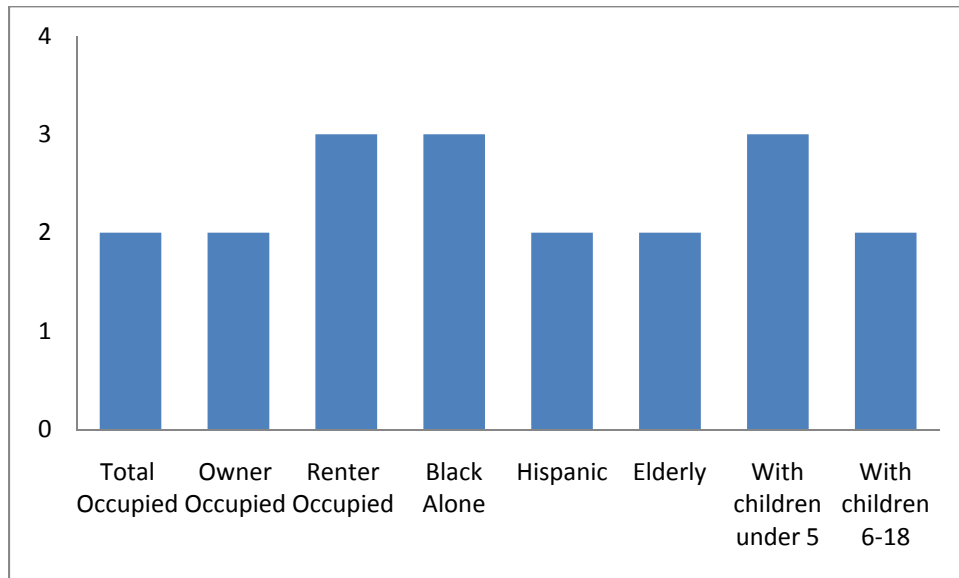


Number of Residence Types

With Hurricane Katrina looming in the Gulf of Mexico, many people sought temporary shelter assuming this would be like the many storms that had previously passed through New Orleans. People went to public shelters or went to stay with friends and family in another city, not knowing they would not be able to return to their homes for many weeks. As a result of this prolonged evacuation, many people moved multiple times and stayed in different residence types.

Figure 4 shows the median number of residence types, broken down by selected characteristics, experienced by movers who returned to the metro area.

Figure 4: Median Number of Residence Types by Selected Characteristic: 2009 American Housing Survey (Numbers in thousands.)



As shown in Figure 4, the overall median number of residence types was two. Renters, Blacks, and households with children are subgroups that reported staying in a greater number of residence types than the overall median.

### Conclusion

In August of 2005, Hurricane Katrina brought chaos and disruption to the residents of New Orleans. Immediately following the storm, the majority of people moved away from their homes for longer than the two weeks immediately following the storm. Among returning households, respondents reported moving a median of two times. Owners were more likely to stay in a house or apartment when compared to renters. Renters, conversely, were more likely to find refuge in public shelters when compared to owners. A small portion of residents still did not consider themselves to be permanently settled as of late 2009. For the most part, these respondents were living in rental units and had a median household income of \$25,000. Conversely, those who consider themselves permanently settled owned their homes and had a higher median household income of \$39,000.

As of late 2009, the characteristics of those living in New Orleans differed in many respects from 2004 levels. While the characteristics of owner-occupied units have remained similar, the characteristics of renters in New Orleans have seen a change since 2004. While there has not been an increase in renter-occupied units (35% of occupied units were renter occupied in 2004 and 33% in 2009), it is the makeup of this subgroup that has experienced the most change after Hurricane Katrina. There has been an increase in both White renters (53%) and Hispanic renters (44%), while the percent of Black renters has decreased (44%).