

OLDER HOUSING UNITS IN 2001

Housing units in America have been built since colonial times and some of those units are still standing, thanks to the efforts of conservationists and preservation programs of all levels of government. Such units are testimony to just how long housing units can last if properly maintained and spared from destruction by natural disasters. Older housing units are important for several reasons. First, they provide housing to a significant proportion of American families. Second, their age may create challenges in terms of housing quality and safety. Third, they may be an important source of affordable housing, especially as the median price of newly constructed single-family houses rises above the \$200,000 threshold. Fourth, using existing units conserves the scarce resources needed to replace them.

The American Housing Survey collects the age of structures in 10-year intervals (generally) back to 1920; units built before 1920 are grouped together. Exhibit 1 shows the 2001 distribution of nearly 120 million housing units by year built. The 9.8 million housing units built before 1920 account for 8.2 percent of all housing units. At the opposite end, about 19 million units were built since 1990, accounting for 16.1 percent of the housing stock. If we compare these newer housing units to the older housing units, we can see how housing has changed over the last century and describe the type of housing provided by the older housing units.

Exhibit 1. Age Distribution of Housing Units

Year Built	Housing Units (thousands)	Percent of Total Units
1990 to 2001	19,205	16.1
1980 to 1989	16,542	13.9
1970 to 1979	23,529	19.8
1960 to 1969	15,894	13.3
1950 to 1959	13,779	11.6
1940 to 1949	8,284	7.0
1930 to 1939	6,593	5.5
1920 to 1929	5,465	4.6
1919 or earlier	9,827	8.2

A study by Barbara T. Williams, *These Old Houses: 2001*, which was recently released by the Census Bureau and the U.S. Department of Housing and Urban Development, focuses on comparisons of older and newer houses¹. In her study, Williams defined older units as those built before 1920 and newer units as those built between 1990 and 2001. This article provides information from her study and notes some of the more interesting findings.

Location of Housing Units

The location of older housing units contrasted with the location of newer housing units reflects the development of the country and the movements of families to the West and South. Exhibit 2 shows that older units are more likely to be located in the Northeast (43.4 percent) and Midwest (34.2 percent) than in the South (14.2 percent) or West (8.3 percent). Newer units, on the other hand, are more likely to be located in the South (46.8 percent) and West (23.1 percent) than in the Northeast (9.1) or Midwest (20.9 percent).

The contrast between older and newer housing units shows the movement to suburbs. Older housing units are more likely located in central cities of metropolitan areas, while newer housing units are more likely

Exhibit 2. Regional Location

Region	All Housing (%)	Older Units (%)	Newer Units (%)
Northeast	18.8	43.4	9.1
Midwest	23.3	34.2	20.9
South	36.6	14.2	46.8
West	21.4	8.3	23.1

Exhibit 3. Metropolitan Location

Location	All Units (%)	Older Units (%)	Newer Units (%)
Metropolitan area	78.1	69.1	77.9
Central city	29.4	38.4	17.7
Suburb	48.7	30.8	60.2
Outside metro area	21.9	30.9	22.1

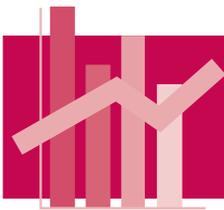


Exhibit 4. Units in Structure

Units in Structure	All Housing Units (%)	Older Units (%)	Newer Units (%)
Single-family, detached	61.6	63.0	57.9
Single-family, attached	7.1	7.0	8.7
2 to 4	7.9	17.2	3.6
5 to 9	4.8	5.3	3.3
10 to 19	4.5	2.7	4.9
20 to 49	3.3	3.3	3.0
50 or more	3.4	1.6	2.1
Manufactured	7.5	—	16.6
Total	100.0	100.0	100.0

to be in suburban parts of metropolitan areas. Older units, however, are more evenly distributed, with 38.4 percent in central cities, 30.8 percent in suburbs, and 30.9 percent outside metropolitan areas. Newer units are almost three times as likely to be located in suburbs (60.2 percent) than in central cities (17.7 percent) or outside metropolitan areas (22.1 percent). (See Exhibit 3.)

Characteristics of Housing Units

While no older manufactured (mobile) housing units exist², they are a significant part of the inventory of newer housing units, accounting for one out of every six of the newer units as indicated in Exhibit 4. On the other hand, units in buildings with two to four units account for a much higher proportion of older units (17.2 percent) than newer units (3.6 percent)³. The high number of manufactured homes is the reason that single-family units are much more prevalent among newer

Exhibit 5. Size of Housing Units

Size by Type of Room	Older Units			Newer Units		
	Total (%)	Owner-occupied (%)	Renter-occupied (%)	Total (%)	Owner-occupied (%)	Renter-occupied (%)
Rooms						
1	1.4	—	3.4	0.1	0.0	0.3
2	1.5	0.1	3.7	0.3	0.1	1.2
3	9.6	1.6	21.8	4.7	0.7	20.3
4	15.0	8.1	25.4	13.4	7.4	37.3
5	19.0	17.7	21.1	24.7	24.2	26.7
6	22.2	27.5	14.1	21.3	24.2	9.7
7	15.0	20.9	6.1	14.1	17.0	2.6
8	7.9	11.8	1.9	10.4	12.8	1.1
9	4.0	6.1	0.8	5.7	7.0	0.4
10 or more	4.4	6.2	1.5	5.4	6.6	0.4
6 or more	53.4	72.5	24.5	56.8	67.6	14.1
Bedrooms						
None	2.0	0.1	4.9	0.1	0.0	0.4
1	13.9	3.5	29.6	6.2	1.1	26.5
2	26.6	21.3	34.6	20.5	14.1	46.1
3	36.1	45.2	22.2	47.9	54.4	22.0
4 or more	21.4	30.0	8.6	25.3	30.4	5.0
Bathrooms						
None	2.0	0.9	3.8	0.2	0.1	0.3
1	59.5	44.9	81.7	14.0	6.3	44.2
1-1/2	16.9	24.4	5.6	7.2	6.6	9.4
2 or more	21.5	29.8	9.0	78.7	87.0	46.0

Exhibit 6. Foundation Type for Single-Family Units

Foundation Type	Older Units			Newer Units		
	Total (%)	Owner-occupied (%)	Renter-occupied (%)	Total (%)	Owner-occupied (%)	Renter-occupied (%)
With basement under all of building	48.4	48.3	48.7	29.9	31.5	13.1
With basement under part of building	29.2	30.6	23.7	6.4	6.7	2.8
With crawl space	18.5	18.3	19.5	18.6	18.9	15.5
On concrete slab	2.9	2.1	6.2	44.2	42.2	66.6
Other	1.0	0.7	1.9	0.8	0.7	2.1

Exhibit 7. Kitchen and Plumbing Facilities

Facility	Older Units			Newer Units		
	Total (%)	Owner-occupied (%)	Renter-occupied (%)	Total (%)	Owner-occupied (%)	Renter-occupied (%)
Kitchen						
Lacking complete kitchen facilities	3.6	0.9	7.7	0.9	0.4	2.8
With complete kitchen (sink, refrigerator, and oven or burners)	96.4	99.1	92.3	99.1	99.6	97.2
Plumbing						
With all plumbing facilities	97.9	98.8	96.4	99.7	99.8	99.1
Lacking some or all plumbing facilities	2.1	1.2	3.6	0.3	0.2	0.9

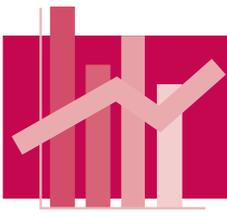
units—83.2 percent of newer units are single-family, detached; single-family, attached; or manufactured homes. Only 70 percent of older units are single-family (attached or detached) homes. The original study contained a deeper review of structure types and location. For older units, there were structure type-location concentrations (more than one million units) of single-family, detached units outside metropolitan areas in the Midwest; multifamily units in central cities of the Northeast; and single-family, detached units in the Northeast suburbs. For newer units, the only concen-

tration (more than 10 percent of newer units) was single-family, detached units in the South.

Newer units tend to have more rooms than older units, with 56.8 percent of newer units having six or more rooms, compared to 53.4 percent for older units. This difference, however, is the result of the shift in composition of the stock toward owned units and away from rentals. The proportion of owner-occupied units with six or more rooms actually decreases from 72.5 percent for older homes to 56.8 percent for newer homes. The

Exhibit 8. Heating Equipment

Main Heating Equipment	Older Units			Newer Units		
	Total (%)	Owner-occupied (%)	Renter-occupied (%)	Total (%)	Owner-occupied (%)	Renter-occupied (%)
Warm-air furnace	51.1	59.0	39.2	69.4	71.6	60.6
Steam or hot water system	32.1	26.2	41.1	4.0	3.8	4.7
Electric heat pump	1.1	1.3	0.9	20.1	20.0	20.7
Built-in electric units	2.9	2.0	4.4	2.5	1.3	7.4
Floor, wall, or other built-in, hot-air units without ducts	4.3	3.9	4.9	2.0	1.4	4.3
Room heaters with flue	3.2	2.3	4.5	0.5	0.4	0.8
Other heating methods	5.1	5.2	4.9	1.4	1.4	1.4



proportion for renter-occupied units also decreases in the same categories, from 24.5 percent to 14.1 percent. This paradoxical result can be explained by the fact that so many newer units are owner-occupied that the overall percentages of larger units increased, despite the reduction in both categories. In addition, manufactured housing units are included with owner-occupied newer units. Since manufactured homes have fewer rooms than single-family, detached units, their inclusion brings down the size of owner-occupied newer units. Similarly, the number of bedrooms shows an overall increase from older to newer homes, while the numbers of rooms remains the same or declines for

owner and renter subgroups. As shown in Exhibit 5, the proportion of older units with four or more bedrooms was 21.4 percent and 25.3 percent for newer units. For the owner subgroup, the proportions were 30.0 percent and 30.4 percent for older and newer units, respectively. About 9 percent of older renter units had four or more bedrooms, while 5 percent of the newer units had four or more bedrooms. Finally, unlike the number of bedrooms and rooms, the number of bathrooms shows an unambiguous increase. Older units were considerably less likely (21.5 percent) to have two or more bathrooms than newer units (78.7 percent). This proportion held true for renters and owners.

Exhibit 9. Housing Quality

Condition	Older Units			Newer Units		
	Total (%)	Owner-occupied (%)	Renter-occupied (%)	Total (%)	Owner-occupied (%)	Renter-occupied (%)
External Building Conditions						
Sagging roof	4.7	4.8	4.5	1.1	0.9	1.6
Missing roofing material	6.6	6.4	7.0	2.0	1.9	2.7
Hole in roof	3.6	2.9	4.6	0.9	0.7	1.3
Missing bricks, siding, other outside wall material	6.5	6.2	7.0	1.2	1.0	2.0
Sloping outside walls	4.0	3.9	4.1	1.0	0.8	1.6
Boarded up windows	2.7	1.9	3.8	0.4	0.4	0.2
Broken windows	8.1	6.2	10.9	1.5	1.5	1.3
Bars on windows	6.4	3.7	10.5	1.1	0.8	2.2
Foundation crumbling or has open crack or hole	7.1	7.5	6.4	0.9	0.9	1.1
None of the above	66.4	72.0	58.0	90.9	91.5	88.9
Not reported	1.8	2.1	1.4	2.0	2.3	0.8
Flush Toilet Breakdowns						
None working some time in last 3 months	3.0	2.1	4.4	1.6	1.1	3.9
Heating Problems						
Uncomfortably cold for 24 hours or more last winter	11.6	8.6	17.0	5.5	5.4	5.8
Equipment breakdowns	4.0	2.5	6.9	1.6	1.5	2.2
Electric Fuses and Circuit Breakers						
With fuses or breakers blown in last 3 months	14.3	14.4	14.2	8.6	9.1	6.8
Selected Deficiencies						
Signs of rats in last 3 months	1.4	0.8	2.2	0.5	0.6	0.1
Signs of mice in last 3 months	13.1	11.5	15.5	4.3	4.4	3.8
Holes in floors	2.8	2.0	4.0	0.4	0.4	0.6
Open cracks or holes (interior)	10.2	7.9	13.5	3.0	2.9	3.6
Broken plaster or peeling paint (interior)	6.2	5.1	7.8	0.7	0.5	1.5
Rooms without electric outlets	2.1	1.6	2.9	1.0	0.9	1.4
Overall Opinion of Structure						
1 (worst) to 3	2.0	0.9	3.8	0.7	0.6	0.8
4 to 7	34.0	27.3	44.0	15.3	12.8	25.2
8 to 10 (best)	60.4	67.8	49.2	80.2	82.4	71.7

Exhibit 6 shows that newer houses are much more likely to have been built on a concrete slab than older houses, most likely because a high proportion of newer homes are built in the South where such methods are standard. The proportion of older, single-unit housing units with basements (under all or part of the building) was 77.6 percent, while only 36.3 percent of newer homes were built with such foundations. In contrast, 44.2 percent of newer housing units were built on concrete slabs, while only 2.9 percent of older units were built on concrete slabs.

Older units are more likely to lack complete kitchen facilities and to lack some plumbing facilities. Exhibit 7 shows that older units are lacking complete kitchen facilities (3.6 percent) four times as often as newer units (0.9 percent). Such deficiencies are most pronounced for rental units and especially for older rental units (7.7 percent). Newer rental units lack complete kitchen facilities 2.8 percent of the time. Similarly, older units lack complete plumbing facilities (2.1 percent) more often than newer units (0.3 percent), and again rental units have the higher deficiency rates with older units having the highest rate (3.6 percent).

Heating equipment in newer units is more likely to be electric heat pumps and warm-air furnaces and less likely to be steam or hot water systems. Exhibit 8 shows that warm-air furnaces were reported for 51.1 percent of older units and for 69.4 percent of newer units. Steam or hot

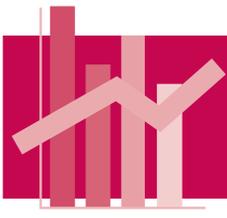
water systems were reported for 32.1 percent of older units but only 4.0 percent of newer units. All other heating systems, mostly less desirable methods, were reported more often for older units than for newer units.

Housing Quality

Respondents to the American Housing Survey are asked numerous questions about the quality of their housing units and the surrounding areas. Exhibit 9 presents survey results for a small subset of these questions. In general, older housing units do not fare as well as newer units on these and other quality measures, as might be expected. Problems with the external conditions of the building were reported by occupants of older units three to four times more often than by residents of newer units. Sagging roofs were reported by 4.7 percent of occupants of older units and by 1.1 percent of newer home residents. Missing roof material was reported for 6.6 percent of older units but for only 2.0 percent of newer units. Holes in roofs were reported by 3.6 percent of the occupants of older units but by only 0.9 percent of occupants of newer units. Other problems with the building reported by 3 to 8 percent of older units and only 0.4 to 1.5 percent of newer units included “missing bricks, siding, and other outside wall material,” “sloping outside walls,” “boarded-

Exhibit 10. Household Characteristics

Characteristic	Older Units			Newer Units		
	Total (%)	Owner-occupied (%)	Renter-occupied (%)	Total (%)	Owner-occupied (%)	Renter-occupied (%)
Number of People in Household						
1	30.6	24.4	40.1	19.0	14.4	37.0
2	30.4	34.0	24.9	32.9	33.7	29.5
3	15.9	16.8	14.4	18.2	18.7	16.0
4	13.2	14.8	10.8	18.6	20.7	10.4
5	5.5	5.6	5.4	7.8	8.6	5.0
6 or more	4.4	4.4	4.3	3.5	3.9	2.1
4 or more	23.1	24.9	20.5	30.0	33.1	17.5
Householders 75 or more years of age	12.3	16.7	5.7	4.9	4.2	7.5
Median age of householder	47	52	39	43	44	35
Median household income (\$)	33,940	42,784	25,588	54,784	62,588	31,425
Median monthly housing costs (\$) (excludes households that do not pay cash rent)	584	576	592	895	963	737
Median monthly housing costs as percent of current income (excludes two previous lines)	23	19	30	21	20	29
Median housing value—owned units (\$)			98,793		154,233	



up windows," "broken windows," "bars on windows," and "foundation crumbling or has open crack or hole." Overall, respondents for older homes reported one or more problems in 33.6 percent of the cases, while only 9.1 percent of occupants of newer housing reported any of these external building deficiencies. Flush toilet breakdowns, in which all toilets were not working at some time in the last 3 months, were reported by 3 percent of older units but by only 1.6 percent of newer units. Heating problems were more prevalent for residents of older housing units. Nearly 12 percent experienced being uncomfortably cold for 24 hours or more during the last winter compared to 5.5 percent of the newer home residents. Actual breakdown of heating equipment was reported by 4.0 percent of older units but by only 1.6 percent of newer units⁴. The likelihood that fuses were blown or circuit breakers were tripped was nearly twice as high for older units (14.3 percent) as for newer units (8.6 percent).

Residents of older units reported interior problems three to nine times more often than residents of newer units. In particular, mice were reported in 13.1 percent of older units but in only 4.3 percent of newer units; open cracks or holes were reported in 10.2 percent of older units but in only 3.0 percent of newer units; and broken plaster or peeling paint were reported in 6.2 percent of older units but in only 0.7 percent of newer units. Finally, residents of older units rated their units lower than residents of newer units. The last panel shows the results of the residents' ratings of their units on a 1 (worst) to 10 (best) scale. While residents of both older and newer residents most often gave high scores (8 or higher), older unit residents gave such high ratings 60.4 percent of the time and newer unit residents gave such ratings 80.2 percent of the time.

Household Characteristics

Households occupying older housing units are smaller and older, have less income, and have lower housing costs than households occupying newer housing units. Owners of older units estimate that the value of their housing unit is considerably lower than the value for owners of newer units. Exhibit 10 presents data on a few household characteristics. Households occupying older housing units report four or more people in the household 23.1 percent of the time, while those in newer units report such high person counts 30 percent of the time. Older households more likely occupy older housing units. The proportion of householders who are 75 or more years of age is 12.3 percent for older units but only 4.9 percent for newer units. The median

householder age is 4 years older—47 years of age for older units compared to 43 years for newer units.

Householders with newer housing units have higher incomes. The median income for households in newer units is \$54,784 compared to \$33,940 for households in older units. Median monthly housing costs for older housing units (\$584) are considerably below those paid for newer housing units (\$895). The lower incomes and the lower housing costs of households in older units result in an only slightly higher housing costs burden for occupants of older units. Residents of older housing units spend slightly more of their income (median of 23 percent) than those in newer units (median of 21 percent). Finally, the value of older units is considerably below the value of newer units. The median of owners' estimates of the values of their units was \$98,793 for older units and \$154,233 for newer units.

Accessing Additional Information on Older Homes

This article only touches on the wealth of information presented in the original study by Barbara T. Williams — much more information can be found on the Inter-net. The original report and supplemental tables can be downloaded as a PDF file at www.census.gov/prod/2004pubs/h121-04-1.pdf. The supplemental tables contain information on many more physical characteristics of housing units, types and costs of fuels used, equipment and amenities included, housing quality problems, neighborhood characteristics and problems, and demographic and economic characteristics of occupant families.

Notes

¹ *These Old Houses: 2001* is part of the Current Housing Reports series and was issued in February 2004. It can be downloaded as a PDF file at www.census.gov/prod/2004pubs/h121-04-1.pdf.

² As Williams notes, manufactured homes with bathrooms were first produced in the 1940s. Earlier models that date to the 1920s were intended as vacation homes.

³ Note that the current number of units in the structure is not the same as when units were built more than 80 years ago. It is possible that current multifamily units were originally single-family units that were subsequently subdivided or were originally less spacious units in buildings with more units that were combined into larger units in building with two to four units.

⁴ Note that newer homes are more prevalent in the warmer clients so that portions of these differences may be reflective of the lower demands placed on heating systems.