AFFORDABILITY AND AVAILABILITY
OF RENTAL HOUSING IN PENNSYLVANIA

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MARCH 2010

ACKNOWLEDGMENTS

Many people contributed to this report. In particular, the authors wish to thank Alan Mallach for his significant contribution to Chapter 5 and valuable insights on several other sections of the report. Sally Burke played a key role by preparing the Executive Summary and providing essential editing on all chapters and appendices. In addition, the authors would like to thank Dede Myers, Rick Lang, Amy Lempert, Danilo Pelletiere, Joseph Ott, Elizabeth Hersh, and Diane Kinnane for their helpful comments and suggestions.

We also wish to thank the National Low Income Housing Coalition for sharing its cost burden methodology with us and for the database it developed using 2005 and 2006 American Community Survey PUMS files for the state of Pennsylvania.

We are grateful for the excellent data analysis completed by Christine Quinn, Community Affairs Department intern and La Salle University student.

In addition, we would like to thank Christian Lepore and Theresa Halpin for preparing the report for the web. We also thank John Wackes and Dianne Hallowell for producing the maps and Ashlan Taylor for preparing the study for print.

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EXECUTIVE SUMMARY

The Community Affairs Department of the Federal Reserve Bank of Philadelphia undertook this study, *Affordability and Availability of Rental Housing in Pennsylvania*, to assess the housing needs of Pennsylvania's lower-income renter households and to better understand how their needs vary across the state. Our study looks at the incidence of housing problems among this group at both the beginning and the middle of the previous decade. It also considers the extent to which there were shortages in the number of rental units that were both affordable and available to lower-income renters at these two points in time. Our findings strongly suggest that conditions faced by the lowest income renters in Pennsylvania deteriorated from the beginning to the middle of the decade.

We used two primary data sources for our analysis: special tabulations from the 2000 census called comprehensive housing affordability strategy (CHAS) data and similar tabulations from the 2005 and the 2006 American Community Survey (ACS). We discuss renters in three lower-income ranges: extremely low income (ELI, less than or equal to 30 percent of HUD-adjusted area median family income, or HAMFI); very low income (VLI, 30.1 percent to 50 percent of HAMFI); and low income (LI, 50.1 percent to 80 percent of HAMFI).

In addition to the main text, the full report contains a glossary of terms and seven appendices that take a closer look at some of the data and methodologies used.

Background

In Pennsylvania, 11.8 million people live in 4.8 million households. Of the 4.8 million households statewide, 1.4 million, or approximately 29 percent, are renter households. The renter households include 2.9 million people, or 24 percent of the state's total population residing in housing units. (Note: Data in this section are from the 2000 decennial census, unless otherwise noted.)

Pennsylvania's renter households are heavily concentrated in urban areas, reflecting both the larger populations in urban areas and the higher propensity to rent in these areas. Nearly half of Pennsylvania's renter households live in just six counties: Philadelphia, Allegheny, Montgomery, Bucks, Delaware, and Lancaster.

There is a significant disparity in income between owners and renters throughout the country. The data indicate that Pennsylvania follows the nation in this respect. Nationwide, owner households earn nearly twice as much as renter households; in Pennsylvania, the same is true at both the county and the state level.

One of Pennsylvania's key rental housing challenges is the age of its rental housing stock. Pennsylvania has the second oldest renter-occupied

housing stock in the immediate region, following New York. Over two-fifths of rental housing units in Pennsylvania were built before 1950, compared with 24 percent in the nation as a whole. Older rental housing is found throughout the state in both rural and urban areas.

In addition to this aging rental housing stock, Pennsylvania also has a population that is older than the national average and also older than that of its neighboring states. Therefore, it is not surprising that Pennsylvania renters are older than renters in both the nation and all of its neighboring states. Overall, one-fifth of renter households in Pennsylvania have a head of household who is 65 years or older. This fact suggests that any upward pressure on rents might have particularly severe effects on housing affordability in Pennsylvania because many elderly renters are likely to have fixed incomes.

In Pennsylvania, over 60 percent of renter-occupied housing units are in structures with only one to four units. Indeed, nearly half of Pennsylvania's renter-occupied housing units (48 percent) are in one- or two-unit structures, compared with only 39 percent for the nation as a whole.

When compared with the national average and also with that in neighboring states, population growth in Pennsylvania between 1990 and 2006 was quite low (only 4 percent). Yet at the county level, there was great variation in population change during this period. Counties on the northeastern border of the state (most notably Pike and Monroe) experienced the greatest population growth. Other counties throughout the state experienced substantial population declines, including Cambria, Cameron, Philadelphia, Warren, and Allegheny. The population is clearly declining in Pennsylvania's two largest cities, Philadelphia and Pittsburgh (Allegheny County).

Within Pennsylvania, the number of rental housing units grew at approximately the same rate as the population between 1990 and 2005-07. But nearly all of the growth in both rental housing and population actually occurred between 1990 and 2000.

Rental Housing in 2000

CHAS data show that in 2000, nearly two-thirds of renter households in Pennsylvania had incomes below 80 percent of area median income (AMI) and were thus categorized as low income (LI), very low income (VLI), or extremely low income (ELI). Notably, nearly one-quarter of renter households in Pennsylvania were ELI.

Over 70 percent of ELI renter households in Pennsylvania faced some type of housing problem: either a cost burden (paying more than 30 percent of household income on rent and utilities) or a housing unit problem (a lack of complete plumbing or kitchen facilities or overcrowding). Predictably, those with higher household income had fewer housing problems.

In Pennsylvania, 69 percent of the ELI renter households had cost burdens and 53 percent had severe cost burdens (paying more than 50 percent of household income for housing). As has generally been found in national studies, severe cost burdens were substantially less common among VLI and LI renter households.

While severe cost burdens afflicted over half of ELI renters in 2000, housing unit problems were far less common. ELI renter households in Pennsylvania also faced severe shortages of housing units that were both affordable and available for their occupancy, as is also the case nationally. There were only 49 affordable and available housing units per 100 ELI renter households in Pennsylvania in 2000, that is, only one unit for every two renter households.

Although shortages of affordable and available rental housing units were less severe for Pennsylvania than in the nation and in many of its neighboring states, Pennsylvania is larger than many of its neighbors in terms of geographic size, renter population, and number of rental housing units. In absolute numbers, Pennsylvania's shortage of 170,000 units affordable and available to ELI renter households was second in this region only to New York's shortage of 560,000 units.

Rental housing conditions in 2000 at the county level were consistent with state-level trends: ELI renter households were much more likely to have severe housing problems and severe shortages of affordable housing than other households.

ELI renter households were most likely to have severe cost burdens in three different areas of the state. In the Northeast section of the state bordering New Jersey, Monroe County faced the greatest challenge, with 68 percent of ELI renter households having severe cost burdens. Many ELI renter households in neighboring Pike and Wayne counties also had severe cost burdens. The second area was Centre County, home to Pennsylvania State University, and the third area was the Philadelphia suburban counties, particularly Chester, Delaware, and Montgomery.

These three areas also had the greatest shortages of affordable and available housing units per 100 ELI renter households. Nonetheless, in every county in 2000, there were insufficient numbers of affordable and available rental units for ELI renter households. It should be noted, however, that shortages of affordable and available housing units do not always imply that additional units must be built because, in many instances, providing rental assistance could enable renters to rent an affordable unit or to afford their current unit.

In absolute numbers, the seven counties with the greatest shortages of affordable and available housing units for ELI renter households were Allegheny, Bucks, Delaware, Lancaster, Lehigh, Montgomery, and Philadelphia. Sixty percent of the state's overall shortage of rental housing units for ELI households was attributable to these seven counties. Indeed, 42 percent of the state's shortage came from only two counties, Allegheny and Philadelphia, home to Pennsylvania's two largest cities, Pittsburgh and Philadelphia.

In most counties, the shortage of units affordable and available to those in the wider 0-50 percent AMI income range (which includes both ELI and VLI renter households) was absolutely smaller. This difference implies that those counties had more *units* affordable to *renters* with incomes between 30 and 50 percent of AMI than renters in this income range. In only four counties (Bucks, Centre, Chester, and Montgomery) did the shortage of units affordable and available to ELI and VLI renter households slightly exceed the shortage of units affordable and available to ELI renter households, implying that some additional units affordable to households with income below the VLI threshold were also needed in these counties. These data reinforce the conclusion that the most pressing need for additional affordable rental housing in most counties was for units affordable to ELI renter households.

Almost all counties had net surpluses of affordable and available units compared with renters with incomes below 80 percent of AMI. This occurred because the surpluses of units affordable to renters with incomes between 50 and 80 percent of AMI exceeded any shortages of units affordable to incomes below 30 or 50 percent of AMI. Thus, throughout Pennsylvania, ELI renters have by far the greatest need for affordable housing.

Conditions at Mid-Decade

Because CHAS tabulations are not available after 2000, we developed equivalent data from the 2005 and the 2006 American Community Survey. The 2005-06 ACS data show that shortages of affordable rental housing worsened in the first half of the previous decade, particularly for ELI renters. Between 2000 and 2005-06, the state's total shortage of affordable and available housing for ELI renters rose from approximately 170,000 to 220,000. These data indicate that there were only 43 affordable and available units per 100 ELI renter households, down from 49 in 2000. Cost burden pressures were also higher at mid-decade than in 2000. The differences appear most dramatic for ELI renter households.

The increases in both relative and absolute shortages of affordable housing and the higher incidence of cost burdens occurred despite a modest rise in rental vacancy rates between 2000 and 2005-06, which would tend to ease the shortage, all other things being equal. Both changes are likely due in part to more ELI renters competing for a relatively fixed stock of rental housing units.

The interested reader should note that the study also provides an analysis of rental housing conditions mid-decade at two sub-state levels. The first sub-state level, the six relatively large regions used by the Pennsylvania Department of Community and Economic Development (DCED), are particularly relevant to rental housing policy because the Pennsylvania Housing Finance Agency has a regional set-aside for the allocation of low income housing tax credits (LIHTCs) based on DCED regions. LIHTCs have been a major source of affordable rental housing. The second sub-state level, aggregations of public-use micro-data areas (PUMAs), provides as much county-level detail as possible from the ACS micro-data. Because DCED regions are larger than aggregated PUMAs, it is possible to estimate rental housing conditions at the DCED regional level more precisely. Details are available in the full report.

Policy Implications

While this study was not intended to provide recommendations for strategy, it offers a valuable methodology for quantifying rental housing needs from current data. State and local policymakers can use the tools provided in this study to help develop local rental housing strategies. A key finding of this study — that rental housing markets within Pennsylvania differ markedly in the extent of the shortage of units affordable and available to ELI and VLI renters, as well as in vacancy rates and population growth trends — reinforces the importance of choosing strategies that are sensitive to local housing market conditions.

In some parts of Pennsylvania, the use of vouchers, if enough are available, may be sufficient to address most affordable rental housing needs. In other areas of Pennsylvania, different rental housing strategies may be needed, including expanding the affordable rental housing supply. Yet the two largest federal supply-side programs, the LIHTC and HOME programs, do not target funding to ELI renters, the group that consistently faces the most severe affordable housing shortages.

This study concludes by offering questions to help state and local policymakers in the process of framing effective local housing strategies, including:

- To what extent do units determined to be affordable and available actually meet the needs of the local lower-income renters in need of affordable housing?

• What is the quality of the rental housing stock that is affordable and available to lower-income households?

• Are the units that are currently affordable and available to lower-income renters and which meet basic quality standards likely to remain so in the future? This is a two-part issue, involving both preserving those units physically and preserving them as affordable housing.

• When a local housing strategy includes an increase in rental housing supply, is local planning capacity sufficient to take advantage of opportunities and meet challenges?

Conclusion

This study is particularly relevant now, given the current state of the housing industry nationwide. The number of renters has increased in recent years, and this increase has only added to pressures in the affordable rental housing market.

The situation is exacerbated by the mortgage foreclosure crisis, which brings with it the likelihood that an increasing number of homeowners affected by foreclosure will need to find alternative housing arrangements. The mortgage foreclosure crisis also has implications for current renters. Despite legislation enacted in May 2009 that enables renters living in foreclosed buildings to stay in their residences for a certain period, many renter households may seek a new place of residence.

Factors of this nature have led many housing experts to predict that the need for additional affordable rental housing will continue to grow and that rental housing will become an even more important aspect of national housing policy discussions over the next few years. These challenging circumstances make it even more important for policymakers and those involved in the rental housing industry to have current and comprehensive information with which to develop rental housing strategies for their communities. The results of this study suggest that the ACS can provide valuable data for this purpose.

CHAPTER 1

INTRODUCTION

Rental housing is a critical part of the nation's housing supply. Over one-third of occupied housing units throughout the country are occupied by renters, accounting for over 35 million households. In Pennsylvania, nearly 1.4 million housing units are occupied by renters, which is nearly 29 percent of the state's occupied housing stock.[1] Across the Commonwealth (and in the nation as a whole), renter households tend to have incomes that are considerably lower than the owner households in their communities. The average median household income of renters is approximately half that of homeowners.[2] Furthermore, nearly two-thirds of renter households in Pennsylvania are lower income.[3]

This study was initiated to assess the housing needs of Pennsylvania's lower-income renter households and better understand how their needs vary across the state. It looks at the incidence of housing problems among this group at both the beginning and the middle of the previous decade. It also considers the extent to which there were shortages in the number of rental units that were both affordable and available to lower-income renters at these two points in time.

The methodology for measuring rental housing conditions of income-eligible households at the state and local levels has evolved since the early 1990s, when the U.S. Department of Housing and Urban Development (HUD) first funded a special tabulation of 1990 decennial census data to help states and local jurisdictions develop strategies describing their housing needs and housing market conditions.[4] The specific variables provided in the 1990 special census tabulations had already been developed for the nation from American Housing Survey (AHS) data in HUD's "Worst Case Needs" reports.[5]

Until recently, such special comprehensive housing affordability strategy (CHAS) tabulations of 1990 and 2000 census data have been the only comprehensive source of data on housing needs, conditions, and shortages of affordable housing for income-eligible households at the state and local levels. A limitation of CHAS special tabulations

[1] U.S. Census Bureau, "2000-Census – Summary File 3," Table H17.

[2] See Chapter 2, Table 2.

[3] In this report, lower-income households are those with incomes less than 80 percent of area median family income. See Chapter 3 for more details on the classification of households into income groups and the Glossary for two definitions of family. Also, Chapter 3, Table 7 shows the income distribution for renters in Pennsylvania and neighboring states.

[4] The requirement to develop strategies to receive funds for many HUD programs was part of the Cranston-Gonzalez National Affordable Housing Act of 1990 (NAHA).

[5] The AHS also provides biennial data on rental housing needs and conditions, but these data are not available at the state and local levels. See Appendix B for additional information on the AHS and HUD's reports.

has been that they were prepared from decennial census data only for 1990 and 2000.

This study measures housing needs and conditions in 2000 with CHAS data and then develops equivalent data for a mid-decade update from a relatively new data set, the American Community Survey (ACS), which is collected annually. To the best of our knowledge, this is one of the first studies to develop CHAS-like data from the ACS and use them to analyze both housing conditions of lower-income renter households and shortages of affordable housing at the local level.

Not only does this study demonstrate that the ACS can effectively be used to provide a picture of local rental conditions in off-census years, it also illustrates why it is important to be able to do so. Our research findings strongly suggest that the conditions faced by the lowest-income Pennsylvania renters have deteriorated from the beginning to the middle of the previous decade. Yet local policymakers have typically had to rely on CHAS data from the decennial census in developing housing strategies as long as a decade after these data were first collected.[6] Although ACS data also have limitations, these data can more effectively estimate current rental housing conditions, particularly at the regional and state levels.[7]

The study is particularly relevant now, given the current state of the housing industry nationally. The number of renters has increased in recent years, and this increase has only added to the pressures in the affordable rental housing market. In a recent report, the Joint Center for Housing Studies of Harvard University noted that "after averaging just 0.7 percent annual growth from 2003 to 2006, the number of renter households jumped by 2.8 percent or nearly 1 million in 2007. The growing number of renters must now compete for the limited supply of affordable housing, adding to the long-standing pressures in markets across the country."[8]

The situation is exacerbated by the mortgage foreclosure crisis, which brings with it the likelihood that an increasing number of homeowners affected by foreclosure will need to find alternative housing arrangements. The mortgage foreclosure crisis also has implications for current renters. In a recent study, the National Low Income Housing Coalition (NLIHC) estimated that over 20 percent of properties facing foreclosure nationwide were rentals.[9] In May 2009, President Obama signed the Protecting Tenants in Foreclosure Act, which enables renters residing in foreclosed buildings to stay in their residences until the term of the lease expires or for 90 days, as defined by the act.[10] Prior to this legislation, few states had protection laws for renters after a foreclosure occurred.[11] Nonetheless, many renter households may ultimately seek a new

[6] In 1992, the NAHA was amended to require states and local jurisdictions to submit single consolidated plans instead of comprehensive housing affordability strategies to receive funding for HUD programs.

[7] While CHAS data were produced only for 1990 and 2000, ACS data also have limitations, particularly the sample size of small geographic areas. In this study, we combined two years of data to increase the accuracy of results. Even after we combined two years of data, the results of this study are more precise at state and regional levels than for most counties. In December 2008, the Census Bureau released the first three-year ACS sample, and the bureau plans to produce five-year estimates later this year. Such larger samples will enable more precise analysis of how local rental housing conditions and needs change over time.

[8] See Joint Center for Housing Studies (2008), p. 2.

[9] See Pelletiere (2009), pp. 6-7. The NLIHC notes that this estimate is conservative and that renters may constitute as many as 40 percent of families who will lose their homes to foreclosure.

[10] See the NLIHC's website for detailed information about this legislation: http://www.nlihc.org/template/page.cfm?id=227. While the Protecting Tenants in Foreclosure Act provides a uniform level of protection to renters in every state, no federal agency is directly responsible for oversight.

[11] See Pelletiere (2009), p. 10.

place of residence. Because of such factors, many housing experts have predicted that the need for additional affordable rental housing will continue to grow and that rental housing will become an even more important aspect of the nation's overall housing policy discussions in the next few years.[12]

Under these challenging circumstances, it is particularly important that policymakers and practitioners have current and comprehensive information with which to develop rental housing strategies for their communities.

[12] See Gramlich (2007), Chapter 3, for a discussion of subprime mortgages and the importance of rental housing and rental housing policy.

CHAPTER 2

HOUSING CHARACTERISTICS IN PENNSYLVANIA AND NEIGHBORING STATES IN 2000

Overview

Pennsylvania is home to the major cities of Philadelphia (Philadelphia County) and Pittsburgh (in Allegheny County), in the southeast and southwest sections of the state, respectively. In addition, the state has a number of other, smaller key cities that are located within its 16 metropolitan statistical areas (MSAs).[13] These cities include the state capital, Harrisburg, as well as Allentown, Bethlehem, Erie, Lancaster, Reading, and Scranton.

Much of the rest of Pennsylvania is considered rural, particularly the northern and middle sections. In fact, 48 of Pennsylvania's 67 counties can be classified as rural.[14] The rental housing stock in rural areas often differs from the stock in urban areas.

This chapter summarizes key housing and demographic characteristics for Pennsylvania and the nation at the time of the 2000 decennial census and compares Pennsylvania to its neighboring states, including Delaware, Maryland, New Jersey, New York, Ohio, and West Virginia. Appendix A provides county-level detail on housing characteristics within Pennsylvania.

Housing Tenure

According to the 2000 census, Pennsylvania has a population of 12.3 million, most of whom, approximately 11.8 million, are classified as residing in housing units.[15] These 11.8 million people live in 4.8 million households, 28.7 percent of which are renter households. (The renter households include 2.9 million people, or 24.2 percent, of the state's total population residing in housing units.)

As Table 1 shows, Pennsylvania's percentage of renter households is lower than that of the United States and most of Pennsylvania's neighboring states. Yet, because Pennsylvania has the second highest number of housing units in this region, the number of renters is still high (1,370,836 renter households) when compared to that of other states.

Pennsylvania's renter households are heavily

[13] There are 16 MSAs in Pennsylvania. Twelve MSAs are fully contained within Pennsylvania, while portions of four other MSAs are located within the state. See http://www.whitehouse.gov/omb/assets/omb/bulletins/fy2009/09-01.pdf. In addition, Appendix A provides a map that shows all Pennsylvania MSAs and counties.

[14] This study uses the Center for Rural Pennsylvania's classification of urban and rural counties. Refer to Appendix A for a discussion of urban and rural areas within the state and how they are defined.

[15] The difference between the total population and the population in occupied housing units is accounted for by Pennsylvanians residing in group quarters. The Census Bureau identifies two types of group quarters: institutional (correctional facilities, nursing homes, and mental hospitals) and noninstitutional (college dormitories, military barracks, group homes, missions, and shelters). For more information, refer to American Factfinder at http://factfinder.census.gov/home/saff/main.html.

TABLE 1
Occupied Housing Units by State

	Total Occupied Housing Units	Owner-Occupied Units	Renter-Occupied Units	% That Are Renter-Occupied
United States	**105,480,101**	**69,816,513**	**35,663,588**	**33.8%**
New York	7,056,860	3,739,247	3,317,613	47.0%
New Jersey	3,064,645	2,011,298	1,053,347	34.4%
Maryland	1,980,859	1,341,594	639,265	32.3%
Ohio	4,445,773	3,072,514	1,373,259	30.9%
Pennsylvania	**4,777,003**	**3,406,167**	**1,370,836**	**28.7%**
Delaware	298,736	216,046	82,690	27.7%
West Virginia	736,481	553,626	182,855	24.8%

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H17, http://factfinder.census.gov/home/saff/main.html?_lang=en

TABLE 2
Median Household Income in 1999 by Tenure

	Occupied Housing Units	Owner Households	Renter Households	Renter Income as Percentage of Owner Income
United States	**$41,851**	**$51,323**	**$27,362**	**53%**
West Virginia	$29,663	$34,632	$16,794	48%
New York	$43,070	$58,956	$28,851	49%
New Jersey	$54,820	$68,770	$34,103	50%
Maryland	$52,640	$64,860	$32,351	50%
Ohio	$40,846	$50,093	$25,116	50%
Pennsylvania	**$39,987**	**$47,611**	**$24,601**	**52%**
Delaware	$47,012	$54,951	$30,429	55%

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table HCT12, http://factfinder.census.gov/home/saff/main.html?_lang=en

concentrated in urban areas, reflecting both the larger populations in urban areas and the higher propensity to rent in these areas. Over 75 percent of renter households are found within Pennsylvania's 19 urban counties, while only 25 percent are found within the 48 rural counties. Nearly half of Pennsylvania's renter households live in just six counties: Philadelphia, Allegheny, Montgomery, Bucks, Delaware, and Lancaster.

Income of Renters

There is a significant disparity in income between owners and renters throughout the country. Owner households earn nearly twice as much as renter households nationally and in Pennsylvania and its neighboring states, as indicated in Table 2. In 1999, median income for renter households in Pennsylvania was approximately $24,600 and $47,600 for owner households.

A difference in the median income of owner and renter households is also apparent at the county level. Even in the county with the most equal income distribution, the median renter's income is still two-thirds of the median owner's income.

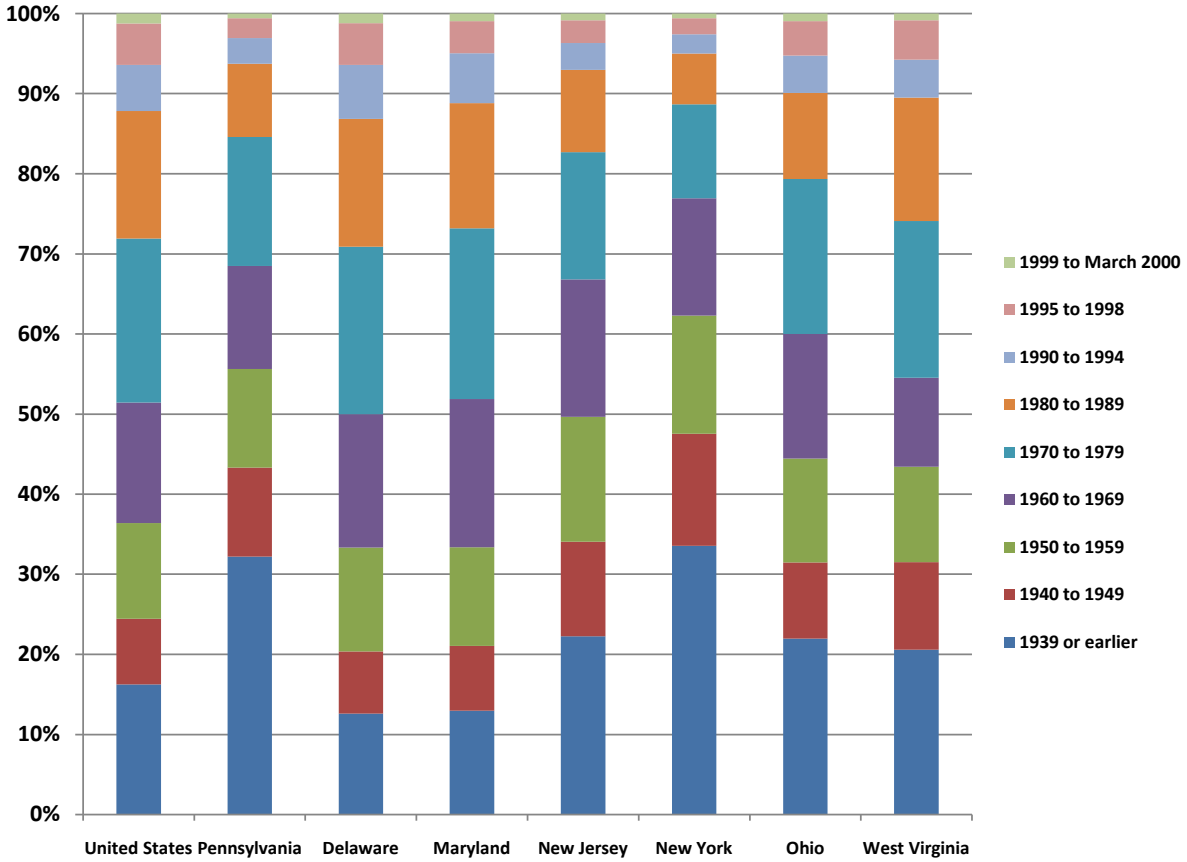
Age of Rental Housing Stock

One of Pennsylvania's key rental housing challenges is the age of its rental housing stock. Pennsylvania has the second oldest renter-occupied housing stock in the immediate region, following only New York (Chart 1). Over two-fifths, or 43 percent, of rental housing units in Pennsylvania were built before 1950, compared with 24 percent in the nation as a whole. Conversely, only 15 percent of rental units in Pennsylvania have been built since 1980.

The median age of renter-occupied housing

CHART 1

Renter-Occupied Units: Year Structure Was Built



Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H36, http://factfinder.census.gov/home/saff/main.html?_lang=en

TABLE 3

Median Year Structure Was Built

	Total Occupied Housing Units	Owner-Occupied Units	Renter-Occupied Units
United States	**1971**	**1971**	**1969**
New York	1954	1956	1952
Pennsylvania	**1957**	**1958**	**1955**
New Jersey	1962	1962	1960
Ohio	1962	1962	1964
West Virginia	1969	1970	1966
Maryland	1971	1972	1969
Delaware	1972	1974	1970

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H37, http://factfinder.census.gov/home/saff/main.html?_lang=en

units is three years older than the median age of owner-occupied units in Pennsylvania (Table 3). Renter-occupied units are generally older than owner-occupied housing units throughout the nation and in most of Pennsylvania's neighboring states as well.

Older rental housing is found throughout the state in both rural and urban areas. In 49 out of the 67 counties in Pennsylvania, the renter-occupied housing stock is older than the owner-occupied housing stock, and in four counties, the renter- and owner-occupied housing stock has the same median age.

Age of Renters

In addition to having an aging rental housing stock, Pennsylvania also has a population that is older than the national average and also older than that of its neighbors. Given this fact, it is not surprising that Pennsylvania renters are older than renters in both the nation and all of its neighboring states (Chart 2). Overall, one-fifth of renter households in Pennsylvania have a head of household who is 65 years or older. This fact suggests that any upward pressure on rents might have particularly severe effects on housing affordability in Pennsylvania because many elderly renters are likely to have fixed incomes.

Having a high percentage of elderly renters is likely related to the fact that Pennsylvania has experienced a large net out-migration of young people. As reported by the Brookings Institution in a 2003 report, "Pennsylvania suffered one of the largest percentage losses in young workers among states in the 1990s."[16] The percent of elderly renters could rise even further if this trend continues.

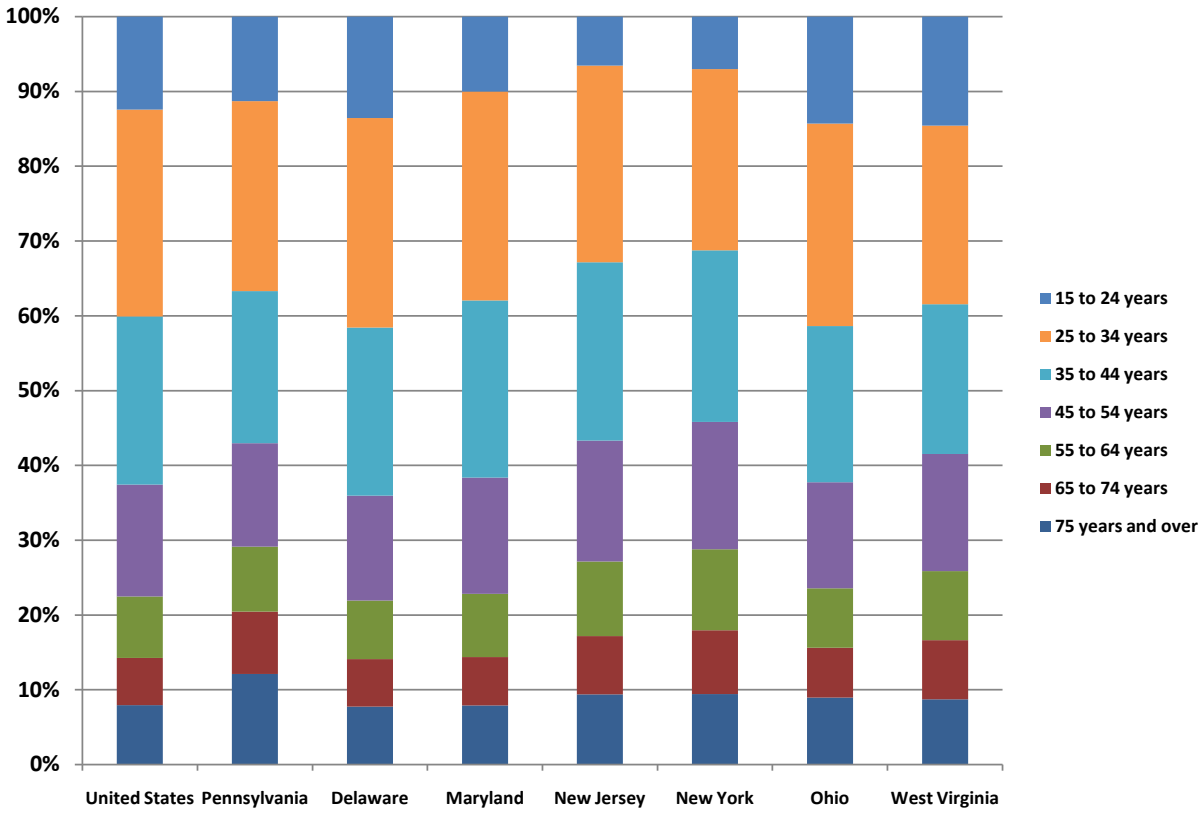
Renter-Occupied Units: Structure Size

In Pennsylvania, over 60 percent of renter-occupied housing units are in structures with only one to four units, which this study calls small rental housing structures. Indeed, nearly half of Pennsylvania's renter-occupied housing units (48 percent) are in one- or two-unit structures,

[16] See Brookings Institution (2003), p. 24.

CHART 2

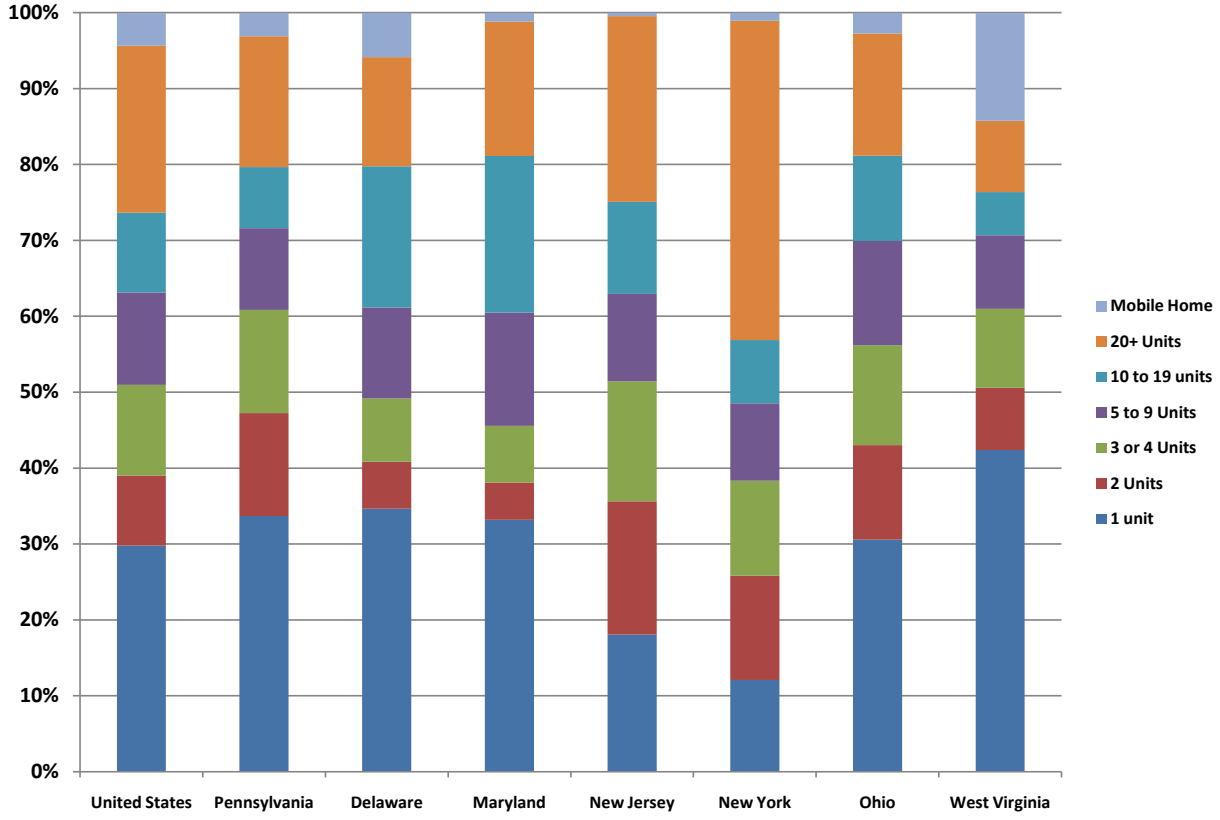
Renter Households by Age



Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H14, http://factfinder.census.gov/home/saff/main.html?_lang=en

CHART 3

Renter-Occupied Units by Structure Size



Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H32, mhttp://factfinder.census.gov/home/saff/main.html?_lang=en

compared to only 39 percent for the nation as a whole.

When compared to structures in neighboring states, the size of Pennsylvania's renter-occupied housing units resembles that of structures in Ohio and West Virginia (although West Virginia has a much greater percentage of renter-occupied housing units that are mobile homes). Pennsylvania is least like New York, in which half of all renter-occupied housing units are in larger structures, specifically 10 or more units (Chart 3). It is important to consider the composition of rental housing structures in Pennsylvania when developing rental housing policy for the state.

While most of Pennsylvania's renter-occupied housing units are in small structures, structure size varies more at the county level. Large urban areas, such as the Philadelphia metropolitan division and Allegheny County (which contains Pittsburgh), tend to have the highest percentage of rental units in large structures (10 units or more), while rural areas have more units in small structures.[17]

Quality Measures

The 2000 decennial census does not provide much data on the quality of rental housing in Pennsylvania.[18] Information is available regarding

[17] See Appendix A, Table A.5. Because of the presence of Pennsylvania State University, Centre County has the highest percentage of structures with 10 or more units. But nearly 45 percent of all structures with 10 or more units statewide are located in the Philadelphia metropolitan division. Philadelphia city has more rental units in large structures (68,500) than any other county in the state, followed by Allegheny County, which has 57,600.

[18] More detailed data on quality are available at the national level and for the Philadelphia and Pittsburgh MSAs from the American

TABLE 4
Quality Measures for Renter Households

	Total Renter-Occupied Households	% Lacking Complete Plumbing	% Lacking Complete Kitchen	% Overcrowded	% Overcrowded and Lacking Complete Plumbing
United States	**35,663,588**	**1.0%**	**1.3%**	**11.0%**	**0.2%**
Delaware	82,690	0.7%	0.9%	6.7%	0.1%
Maryland	639,265	0.7%	0.9%	7.8%	0.1%
New Jersey	1,053,347	1.1%	1.3%	11.0%	0.3%
New York	3,317,613	1.3%	1.4%	13.6%	0.4%
Ohio	1,373,259	0.6%	1.1%	3.3%	0.1%
Pennsylvania	**1,370,836**	**0.8%**	**1.2%**	**4.0%**	**0.1%**
West Virginia	182,855	1.3%	1.1%	2.3%	0.1%

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Tables H20, H22, H48, and H51. http://factfinder.census.gov/home/saff/main.html?_lang=en

the number of renter-occupied housing units that lack complete plumbing and kitchen facilities.[19] The census also provides data on the number of occupants per room from which overcrowding measures can be derived.[20]

In Pennsylvania, only 4.0 percent of units were overcrowded, 1.2 percent lacked complete kitchen facilities, and 0.8 percent lacked complete plumbing facilities.

The quality data for Pennsylvania resemble national averages for all measures except overcrowding. Of the measures shown in Table 4, overcrowding varies most. Renter-occupied households in New York and New Jersey have greater percentages of units that are overcrowded, 13.6 percent and 11.0 percent, respectively. All other neighboring states, including Pennsylvania, have percentages lower than the national average.

While the percentages in Table 4 seem modest for Pennsylvania, they do not prove that Pennsylvania's rental housing stock is in good condition. The decennial census does not include sufficient data to assess the structural conditions or quality of rental housing units. Community development leaders in several areas of the state argue that much of the supply of rental housing in their areas is of poor quality: Although the units may be affordable, they are not in the condition in which renters would want to inhabit them.[21] A more comprehensive analysis is needed at the local level to assess the condition of Pennsylvania's rental housing stock.

Housing Survey. Such data are not available at the state or county level for Pennsylvania.

[19] According to the U.S. Census Bureau, complete plumbing facilities include (1) hot and cold piped water, (2) a flush toilet, and (3) a bathtub or shower. Complete kitchen facilities include (1) a sink with piped water; (2) a range, or cooktop and oven; and (3) a refrigerator. Source: U.S. Census Bureau, "2000 Census – Summary File 3," http://factfinder.census.gov/home/saff/main.html?_lang=en

[20] The Census Bureau does not have an official definition for overcrowding. This study considers overcrowding as households with more than one occupant per room. See Blake et al. (2007) for a detailed discussion of different definitions of overcrowding and a literature review.

[21] The Federal Reserve Bank of Philadelphia's Community Affairs staff members routinely conduct outreach meetings with lenders, government officials, and community development leaders around the Third Federal Reserve District, which includes the eastern two-thirds of Pennsylvania. During these meetings, we have consistently heard that much of Pennsylvania's rental housing stock is of poor quality and in need of repair.

Population and Housing Unit Changes

Population

The 1990 and 2000 decennial census files and 2006 population estimates provided by the U.S. Census Bureau allow us to evaluate population growth for the nation, Pennsylvania, and Pennsylvania's neighboring states.[22]

When compared to the national average and also to neighboring states, population growth in Pennsylvania between 1990 and 2006 was quite low, only 4 percent. Only West Virginia had slower growth, 1 percent (Table 5).

TABLE 5
Population Changes Between 1990 and 2006

	Total Population 2000	Population Change Between 1990-2000	Population Change Between 2000-2006	Population Change Between 1990-2006
United States	**281,421,906**	**13%**	**6%**	**20%**
Delaware	783,600	18%	9%	28%
Maryland	5,296,486	11%	6%	17%
New Jersey	8,414,350	9%	3%	12%
New York	18,976,457	5%	2%	8%
Ohio	11,353,140	5%	1%	6%
Pennsylvania	**12,281,054**	**3%**	**1%**	**4%**
West Virginia	1,808,344	1%	0%	1%

Sources: Three data sets from the U.S. Census Bureau 1) "1990 Census – Summary File 3"; 2) "2000 Census – Summary File 3"; and 3) "2008 Population Estimates" of 2006 data. http://factfinder.census.gov/home/saff/main.html?_lang=en

At the county level, there is great variation in population change between 1990 and 2006. Counties on the northeastern border of the state experienced the greatest population growth. Most notably, Pike County grew by 104 percent and Monroe County grew by 70 percent. Other counties throughout the state experienced population declines, including Cambria (10 percent); Cameron, Philadelphia, and Warren (all 9 percent); and Allegheny (8 percent). The population is clearly declining in Pennsylvania's two largest cities, Philadelphia and Pittsburgh (Allegheny County). See Appendix A for details.

Housing Units

Comparing American Community Survey (ACS) estimates for 2005-07 with decennial census data, total housing units in the United State increased by 23 percent between 1990 and 2005-07, while total housing units in Pennsylvania increased by 10 percent.[23] Increases were lower for rental housing units. In the United States, the rental housing stock grew by 11 percent, while in Pennsylvania, growth was only 4 percent.

Growth in renter-occupied housing units between 1990 and 2005-07 was relatively modest in the region when compared to the nation. Only Delaware's 16 percent rate of growth exceeded the national average of 11 percent. Maryland, New Jersey, Pennsylvania, and West Virginia followed Delaware with changes of 4 percent each.

Within Pennsylvania, the number of rental housing units grew at approximately the same rate

[22] Population estimates are prepared annually after the last published decennial census. Data are re-estimated every year, and data from the most current estimate supersede data from the previous estimates. This study used the 2008 population estimates to obtain the 2006 data. For additional information, see http://factfinder.census.gov.

[23] The U.S. Census Bureau's annual population estimates program also provides data on total housing units, but these data do not distinguish between owner-occupied, renter-occupied, and vacant units. See American Factfinder for additional information: http://factfinder.census.gov/. Because of data limitations with the annual population estimates, this study uses ACS data. ACS three-year estimates are available for geographic areas with populations greater than 20,000. In addition, ACS one-year estimates are available for geographic areas with populations greater than 65,000. This study used the three-year estimates because three-year estimates provide data for more counties in Pennsylvania than the one-year estimates.

TABLE 6

Housing Unit Changes Between 1990 and 2005-2007

	Housing Units in 2000		% Change 1990 to 2000		% Change 2000 to 2005-2007		% Change 1990 to 2005-2007	
	Total Housing Units*	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units
United States	**115,904,641**	**35,663,588**	**13%**	**8%**	**9%**	**2%**	**23%**	**11%**
Delaware	343,072	82,690	18%	12%	11%	3%	32%	16%
Maryland	2,145,283	639,265	13%	5%	7%	0%	21%	4%
New Jersey	3,310,275	1,053,347	8%	7%	5%	-3%	13%	4%
Pennsylvania	**5,249,750**	**1,370,836**	**6%**	**4%**	**4%**	**0%**	**10%**	**4%**
West Virginia	844,623	182,855	8%	2%	4%	2%	12%	4%
Ohio	4,783,051	1,373,259	9%	3%	5%	-2%	15%	1%
New York	7,679,307	3,317,613	6%	5%	3%	-5%	9%	-1%

* Total housing units include owner-occupied, renter-occupied, and vacant units.

Sources: Three data sets from the U.S. Census Bureau 1) "1990 Census – Summary File 3"; 2) "2000 Census – Summary File 3"; and 3) "2005-2007 American Community Survey Three Year Estimates." http://factfinder.census.gov/home/saff/main.html?_lang=en

as the population between 1990 and 2005-07. But nearly all of the growth in both rental housing and population actually occurred between 1990 and 2000.

CHAPTER 3

HOUSING CONDITIONS OF PENNSYLVANIA'S LOWER-INCOME RENTERS IN 2000

Introduction

This chapter focuses on two closely related topics: the housing problems of Pennsylvania's lower-income renters and the availability of rental units affordable to this group in 2000. We examine these topics for the state as a whole and for counties within the state. We also compare conditions in Pennsylvania with those in the nation and in neighboring states.

All of the statistics provided in this chapter are computed from comprehensive housing affordable strategies (CHAS) data, which are special tabulations of 2000 census data funded by HUD that classified renter and owner households and their housing problems by income, and housing units and their characteristics by affordability.[24] We use a methodology similar to that of several national studies described in Appendix B, most notably the 2004 study by the NLIHC, *Losing Ground in the Best of Times: Low Income Renters in the 1990s*.[25] The methodology is described in Appendix C.

The availability of CHAS data for 1990 and 2000 made it possible to examine housing conditions faced by low-income renters in both 1990 and 2000. As context for the 2000 findings presented in this chapter, CHAS data show that housing conditions improved somewhat from 1990 to 2000 in Pennsylvania.[26] The income distribution of lower-income renter households and vacancy rates both remained relatively constant throughout that decade, but cost burden pressures eased, especially for very low-income (VLI) renters. Similarly, shortages of affordable rental housing eased across the state. Yet despite these improvements, the incidence of housing problems among extremely low-income (ELI) renters remained high in 2000, as the statistics presented in this chapter show.

Rental Housing Conditions at the National and State Levels in 2000

Income Distributions of Lower-Income Renter Households

In 2000, nearly two-thirds of renter households in Pennsylvania (64 percent) had incomes below

[24] The Cranston-Gonzalez National Affordable Housing Act of 1990 (NAHA) required states and local jurisdictions to prepare and submit such strategies to HUD, and the CHAS tabulations were developed to assist state and local governments in meeting this mandate. See Appendix B for additional details on CHAS and the NAHA.

[25] See Nelson et al. (2004). In this report, the NLIHC examines changes in housing problems and in the affordability and availability of rental housing at the state level between 1990 and 2000. We use the same methodology in this study. The data in this study are similar to data in the NLIHC's report, although some values vary slightly due to rounding. In addition, the data in this study come from the CHAS files re-issued in November 2004, whereas data in the NLIHC's 2004 report come from the initial CHAS files issued in September 2003. See HUD's website for additional information: http://www.huduser.org/datasets/cp.html.

[26] Appendix F compares conditions in 1990 and 2000 in Pennsylvania.

Defining Income Groups

There are several ways to define income groups in general and low income in particular.[a] This study distinguishes renters in three lower-income ranges:

Renter Household Group	HUD-Adjusted Area Median Family Income (HAMFI) Range [b]
Extremely Low Income (ELI)	Less than or equal to 30% of HAMFI
Very Low Income (VLI)	Between 30.1% and 50.0% of HAMFI
Low Income (LI)	Between 50.1% and 80.0% of HAMFI

The definitions from the table above can be put in context with a couple of simple examples. Data from the 2000 census indicate that in 1999 Pike County had the highest median family income for Pennsylvania counties. The HAMFI thresholds for a four-person household in that county in 1999 were $17,600 for ELI renter households, $29,350 for VLI renter households, and $46,950 for LI renter households. By contrast, in Forest County, which had the lowest median family income in Pennsylvania in 1999, the HAMFI thresholds were $12,500 for ELI renter households, $20,850 for VLI renter households, and $33,350 for LI renter households.[c]

In the remainder of this study, we use the abbreviation AMI to refer to HUD-adjusted area median family income, or HAMFI, unless otherwise noted. In addition, we use the term lower income to include ELI, VLI, and LI renter households.

[a] See Nelson (1994) for a discussion of low income definitions and their origins. By statute, the HUD definitions of low income and very low income for assisted housing programs differ from those used for the community development block grant (CDBG) program, which defines low income as below 50 percent of AMI and moderate income as below 80 percent of AMI. Nelson's article also compares low-income thresholds to poverty thresholds, noting that poverty is close, on average, to ELI. See Appendix D, Table D.1 for very low-income thresholds for each Pennsylvania county.

[b] In classifying households into income groups, HUD adjusts area median family income by household size. Adjustments are also made for locations with unusually high or low income-to-housing-cost relationships. The resulting set of area-specific median incomes for households of different sizes are known as HUD-adjusted area median family incomes (HAMFI). HUD calculates HAMFI annually for each metropolitan area and each nonmetropolitan county across the country. HUD's "Fiscal Year 2008 HUD Income Limits Briefing Materials" describes all the statutory adjustments applied in setting the official income limits.

[c] Forest County shares the lowest HAMFI thresholds with many other counties in the state because of a statutory floor on income thresholds. See Appendix D, Table D.1 for additional information. In addition, income limits are available on the CHAS section of HUD User: http://www.huduser.org/datasets/cp.html.

80 percent AMI and were thus categorized as LI, VLI, or ELI. Notably, nearly one-quarter of renter households in Pennsylvania were ELI (Table 7).

When compared to the national averages, Pennsylvania had slightly higher percentages of ELI, VLI, and LI renter households out of total renter households in 2000. Among nearby states, only West Virginia and New York had higher shares of ELI renter households (28 percent and 26 percent, respectively, compared to Pennsylvania's 24 percent).

Housing Problems

Over 70 percent of ELI renter households in Pennsylvania faced some type of housing problem: either a cost burden or a housing unit problem, including lacking complete plumbing or kitchen facilities or overcrowding.[27] Predictably, those with higher household income had fewer housing problems. In Pennsylvania, 63 percent of VLI renter households and only 28 percent of LI households had housing problems (Table 7). In each income range, Pennsylvania renters had housing problems less frequently than their counterparts throughout the nation. Among nearby states, Pennsylvania most closely resembled Delaware and Ohio, particularly for ELI renter households.

The data show that over three-fourths of ELI renter households with a cost burden actually had a severe cost burden. In Pennsylvania, 69 percent of the ELI renter

[27] Cost burden is defined as paying more than 30 percent of household income on rent and utilities. Severe cost burden is paying more than 50 percent of household income on rent and utilities. See Appendix C for a more detailed discussion of housing problems.

TABLE 7

Income Distribution and Housing Problems in 2000

		% Distribution of Renters by AMI Group			% With Any Problem (Housing Unit Problem or Cost Burden)		
	Total Renter Households	% ELI Households	% VLI Households	% LI Households	% ELI Households	% VLI Households	% LI Households
United States	35,638,908	23%	17%	21%	74%	71%	40%
Pennsylvania	**1,370,366***	**24%**	**18%**	**22%**	**71%**	**63%**	**28%**
Delaware	82,623	21%	17%	23%	71%	69%	32%
Maryland	639,095	23%	17%	21%	73%	68%	32%
New Jersey	1,053,045	23%	16%	18%	74%	76%	45%
New York	3,316,539	26%	15%	17%	77%	76%	49%
Ohio	1,372,841	24%	18%	23%	71%	62%	23%
West Virginia	182,764	28%	19%	19%	65%	57%	24%

* Because of the rounding techniques applied to the different CHAS files, this total varies slightly from the total in other sections of the study. The percentage values in the other columns have not changed.

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

households had cost burdens and 53 percent had severe cost burdens. These results for Pennsylvania are similar to those for the nation and neighboring states (Table 8).

As has generally been found in national studies, severe cost burdens were substantially less common among VLI and LI renter households. In Pennsylvania, only 16 percent of VLI renter households and 3 percent of LI households had severe cost burdens.

Even though ELI renter households in most states in this region had slightly fewer problems than national averages, housing affordability problems were still widespread.[28] Over half of ELI renter households in every state in this area (except West Virginia) had severe cost burdens (Table 8).

While severe cost burdens afflicted over half of ELI renters in 2000, housing unit problems were far less common, particularly in Pennsylvania. ELI, VLI, and LI renter households in Pennsylvania had far fewer housing unit problems than national renters did, on average. Renter households in West Virginia and Ohio also had markedly fewer housing unit problems than renter households in other parts of the country.

As the low incidence of housing unit problems suggests, in each income group most of the renters with a cost burden did not also have a housing unit problem. Indeed, the data in Table 9 are consistent with national experience. In the United States, 83 percent of "worst case" (ELI and VLI) renters identified by HUD had only a severe rent burden in 2005, and that fraction has been rising over the past 20 years.[29]

[28] The exception is ELI renter households in New York and New Jersey, whose incidence of severe cost burdens met or exceeded the national average. New York renter households, in particular, frequently faced severe cost burdens. The results for New York are consistent with the NLIHC's 2004 report, which identified New York, Florida, and several western states, including California, as the states in which ELI renter households had the most severe cost burdens in 2000. See Nelson et al. (2004), p. 6.

[29] See Appendix B for a discussion of cost burden trends identified in HUD's Worst Case Needs series.

TABLE 8

Cost Burden Incidence in 2000

	% with Any Cost Burden (Rent Greater Than 30% of Income)			% with Severe Cost Burden (Rent Greater Than 50% of Income)		
	% ELI Households	% VLI Households	% LI Households	% ELI Households	% VLI Households	% LI Households
United States	70%	64%	29%	56%	20%	4%
Pennsylvania	**69%**	**60%**	**23%**	**53%**	**16%**	**3%**
Delaware	68%	65%	26%	53%	18%	2%
Maryland	70%	61%	24%	54%	13%	2%
New Jersey	71%	69%	34%	56%	21%	4%
New York	73%	69%	36%	60%	26%	5%
Ohio	69%	59%	19%	53%	14%	2%
West Virginia	62%	54%	20%	48%	15%	2%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

TABLE 9

Housing Unit Problems in 2000

	% with at Least One Housing Unit Problem (Lacking Complete Plumbing or Kitchen Facilities or Overcrowding)		
	% ELI Households	% VLI Households	% LI Households
United States	14%	15%	14%
Pennsylvania	**7%**	**6%**	**5%**
Delaware	9%	11%	8%
Maryland	10%	12%	9%
New Jersey	14%	16%	14%
New York	17%	18%	17%
Ohio	6%	5%	5%
West Virginia	5%	5%	4%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

Affordable Rental Housing Shortages

While vacancy rates are the most common measure of housing supply, this study uses two indicators to assess more specifically the degree to which lower-income renters face shortages of affordable housing:[30]

1. The ratio of affordable housing units per 100 renter households with incomes below a specified threshold, in this study 30 percent, 50 percent, or 80 percent of AMI
2. The ratio of housing units that are both affordable and available per 100 renter households with incomes below a specified threshold.

Affordable Housing Units Per 100 Renter Households

Rental housing is assumed to be affordable if a household spends less than 30 percent of its income on gross rent (rent plus utilities). The first ratio, affordable units per 100 renter households, compares the total number of renter households at or below an income threshold to the total number of rental housing units affordable at that threshold. The total number of affordable rental housing units includes both occupied units and vacant units offered for rent. If the number of housing units exceeds the number of households in that income group, the ratio is over 100 and there is a surplus of affordable units. Conversely, if the number of housing units

[30] See Appendix C for details and examples of the methodology for calculating both ratios.

TABLE 10
Affordable Rental Housing Units 2000

	Affordable Units Per 100 Renter Households With Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI
United States	84	130	153
Pennsylvania	**96**	**152**	**157**
Delaware	97	148	167
Maryland	87	148	160
New Jersey	66	107	152
New York	63	99	139
Ohio	96	172	161
West Virginia	124	156	158

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

Note: This study's indicators of shortages cumulate all households by income and all rental units by affordability, below the three income thresholds of 30 percent, 50 percent and 80 percent of AMI. Details are in Appendix C.

is lower than the number of households below that income threshold, the ratio is below 100 and there is a shortage of affordable units.

Such ratios suggest that supplies of affordable housing were nearly adequate in Pennsylvania and in most of Pennsylvania's neighboring states below each of the lower-income thresholds identified (Table 10). Furthermore, most states in this region fared better than the nation. The marked exception is ELI renter households in New York and New Jersey, with ratios of 63 and 66, respectively. These ratios suggest that there were only two affordable units for every three ELI renters, and thus, there were severe shortages of affordable rental housing units.

In all states except New York, the ratios show that there were many more affordable units than renters below the 50 percent and 80 percent of AMI thresholds. In Pennsylvania, there were 152 and 157 affordable units per 100 renter households with incomes at or below 50 percent and 80 percent of AMI, or three units for every two households. Even ELI renter households appeared to have nearly enough affordable rental units somewhere in the state, as there were 96 affordable units for every 100 ELI renter households.

Affordable and Available Housing Units Per 100 Renter Households

Table 10 suggests that many states near Pennsylvania have enough units affordable to LI, VLI, and even ELI renter households. But this indicator is misleading because many affordable units are not available to the lower-income renter households that need them the most. Instead, the units are often occupied by renters in higher-income groups who pay less than 30 percent of their income for housing.[31] For example, if a moderate-income renter rents a unit that is affordable at or below the ELI limit, the unit is unavailable to any ELI renter.

Adding a second ratio provides a more realistic assessment of actual shortages or surpluses of rental housing by counting only affordable units that are *available* to each income group. It includes only housing units affordable at an income threshold that are occupied by renter households with incomes at or below that specified income threshold, and units that are vacant, but intended for rent, and affordable to renter households at the specified threshold.

This more realistic ratio reveals that ELI renter households did face severe affordable rental housing shortages both nationwide and in Pennsylvania, as many fewer affordable units were available to them.[32]

[31] See HUD (2007), Chapter 4.

[32] For a number of reasons these "more realistic" indicators are themselves undoubtedly optimistic. For example, units are classified as affordable for ELI households based on income at the top of the ELI range, but many may not actually be affordable to the many ELI households whose incomes are lower. In addition, some units that are classified as affordable and available may be too small for large ELI families or located far from jobs or in undesirable neighborhoods.

TABLE 11

Affordable and Affordable and Available Housing Units and Shortages in 2000

	Affordable Units Per 100 Renter Households with Household Incomes:			Affordable and Available Units Per 100 Renter Households with Household Incomes:			ELI Renter Households: Total Shortage of Affordable and Available Units[1]
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	
United States	84	130	153	42	74	103	(4,672,590)
Pennsylvania	**96**	**152**	**157**	**49**	**87**	**107**	**(170,320)[2]**
Delaware	97	148	167	49	83	109	(8,750)
Maryland	87	148	160	47	83	105	(76,965)
New Jersey	66	107	152	37	64	98	(154,530)
New York	63	99	139	35	60	94	(563,090)
Ohio	96	172	161	52	96	111	(159,980)
West Virginia	124	156	158	56	93	112	(22,525)

[1] In general, national and state-level data presented in this chapter are similar to the information in the NLIHC's 2004 report. As explained in the note to Table 7, some values vary slightly due to rounding. In this column in particular, the values do not match exactly because the calculation involves the total number of housing units instead of ratios, which will inevitably vary based on rounding.

[2] Because of the rounding techniques applied to the different CHAS files, this total varies slightly from the Pennsylvania total in other sections of the study, including Table 14. The values in the other columns have not changed.

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

Table 11 shows that there were only 49 affordable and available housing units per 100 ELI renter households in Pennsylvania in 2000.

When compared to the national averages, Pennsylvania renter households between 0-50 percent of AMI and 0-80 percent of AMI had better supplies of both affordable housing units and affordable and available housing units. Even though ELI renters in Pennsylvania also fared better than the national average, there was still a substantial shortage of affordable and available units, with only one unit for every two renter households.

These housing "affordability and availability" ratios enable relatively easy comparisons of rental housing needs across states or other geographic areas, but they do not provide a sense of the magnitude of the shortages that states face. The ELI shortages are quantified in the final column of Table 11. Pennsylvania is larger than many of its neighboring states in terms of geographic size, renter population, and number of rental housing units. In absolute numbers, Pennsylvania's shortage of 170,000 units affordable and available to ELI renter households was second only to New York's shortage of 560,000 units.[33]

Rental Housing Conditions at the County Level in 2000[34]

The state-level data clearly show that ELI renter households in Pennsylvania were much more likely to have severe cost burdens than renters in higher-income groups and that shortages of affordable and available housing were by far most pressing for them. For every county within

[33] The results for New York are consistent with the NLIHC's 2004 report, which identified New York as having the second greatest shortage (after California) of units affordable and available to ELI renter households. See Nelson et al. (2004), p. 11.

[34] Appendix F provides data on other sub-state levels for 2000 and indicates how and where conditions improved between 1990 and 2000.

Pennsylvania, the same conclusions hold: ELI renter households are much more likely to have severe housing problems and severe shortages of affordable housing than other households.

Housing Problems

Because housing unit problems were far less common than cost burdens at the county level, this section concentrates on lower-income renters with cost burdens. See Appendix D, Table D.4 for housing unit problems by county.

ELI renter households were most likely to have severe cost burdens in three different areas of the state (Map 1). In the Northeast section of the state bordering New Jersey, Monroe County faced the greatest challenge, with 68 percent of ELI renter households having severe cost burdens. Many ELI renter households in neighboring Pike and Wayne counties also had severe cost burdens. The second area was Centre County, the home to Pennsylvania State University, and the third area was the Philadelphia suburban counties, particularly Chester, Delaware, and Montgomery counties.

The seven counties in which ELI renters were most and least likely to have severe cost burdens appear in Table 12. In all but two counties (Forest and Juniata), at least 50 percent of ELI renter households had a cost burden. Furthermore, in every county, over 30 percent of ELI renter households had a severe cost burden.

Importantly, Table 12 also illustrates how *unlikely* LI renters were to face severe cost burdens. Even in Montgomery County, where 39 percent of LI renters paid more than 30 percent of income for

MAP 1

Severe Cost Burden Incidence for ELI Renter Households by County in 2000

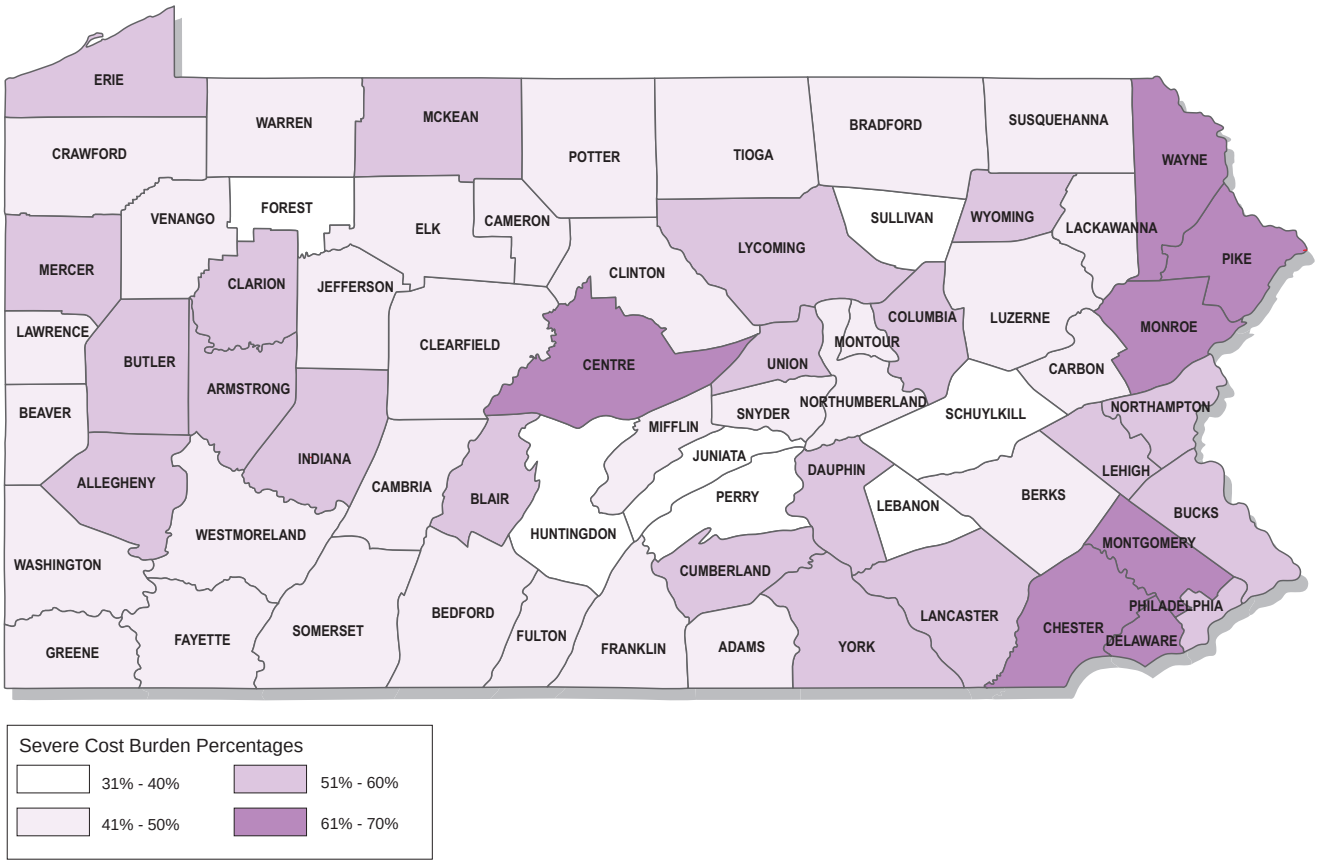


TABLE 12

Cost Burden Incidence in 2000

(Equivalent data are available for all counties in Appendix D)

	% with Any Cost Burden			% with Severe Cost Burden		
	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**69%**	**60%**	**23%**	**53%**	**16%**	**3%**
Counties with the Largest Percentage of ELI Renters Who Had Severe Cost Burdens						
Monroe County	80%	74%	33%	68%	19%	2%
Centre County	79%	72%	30%	67%	28%	4%
Wayne County	72%	63%	20%	63%	21%	1%
Delaware County	74%	75%	29%	63%	25%	4%
Chester County	74%	75%	37%	61%	32%	5%
Montgomery County	72%	74%	39%	61%	29%	6%
Pike County	76%	68%	20%	61%	21%	1%
Counties with the Smallest Percentage of ELI Renters Who Had Severe Cost Burdens						
Lebanon County	63%	45%	14%	40%	8%	1%
Perry County	61%	43%	8%	39%	9%	1%
Sullivan County	59%	49%	6%	39%	14%	0%
Schuylkill County	56%	49%	14%	38%	9%	1%
Huntingdon County	56%	38%	10%	38%	7%	0%
Juniata County	47%	35%	10%	35%	8%	1%
Forest County	49%	34%	9%	31%	15%	0%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

gross rent, only 6 percent had severe cost burdens. VLI renters were also much less likely to have severe cost burdens than ELI renters.

Shortages of Affordable Rental Housing

Shortages of affordable housing were also most pressing for ELI renters. In every county, there were insufficient numbers of affordable and available rental units for ELI renter households.[35] (See Appendix D, Table D.4.)

[35] Note that shortages of affordable and available housing units do not always imply that additional units must be built because, in many instances, providing rental assistance could enable renters to rent an affordable unit or to afford their current unit. Appendix B summarizes key findings of HUD's Worst Case Needs reports and the rental housing strategies that were recommended in these reports.

Map 2 shows that the three areas in Pennsylvania in which ELI renter households most often faced severe cost burdens (the Northeast bordering New Jersey, Centre County, and the Philadelphia suburban counties) were also the areas with the greatest shortages of affordable and available housing units per 100 ELI renter households. The Lancaster area also had a notable shortage: only 38 affordable and available units per 100 ELI renter households.

Table 13 lists the seven counties in which ELI renters faced the largest and smallest housing unit shortages per 100 renter households. The results illustrate that in the counties with the largest shortages of housing both affordable and available

to ELI renters, there were often also fewer units affordable and available at 50 percent of AMI than there were renters with income between 0-50 percent of AMI. However, in five of the seven counties with the largest shortages for ELI renters, the ratios for incomes below 80 percent AMI were 100 or more, indicating a surplus of units relative to renters.

By contrast, in the seven counties with the smallest shortages for ELI renters, there were surpluses of affordable and available units for renters with incomes below 50 percent of AMI, as well as more units than renters with incomes below 80 percent of AMI.

In absolute terms, the shortage of affordable and available housing units for ELI renter households summed to 170,324 units in Pennsylvania in 2000. Of this total, the seven counties with the greatest shortages of affordable and available housing units for ELI renter households were Allegheny, Bucks, Delaware, Lancaster, Lehigh, Montgomery, and Philadelphia. Sixty percent of the state's overall shortage of rental housing units for ELI households was attributable to these seven counties. Indeed, 42 percent of the state's shortage came from only two counties, Allegheny and Philadelphia, home to Pennsylvania's two largest cities, Pittsburgh and Philadelphia (Table 14).

Table 14 also shows that in most counties with the largest absolute shortages of affordable units available to ELI renter households, the shortage of

MAP 2

Affordable and Available Housing Units Per 100 ELI Renter Households by County in 2000

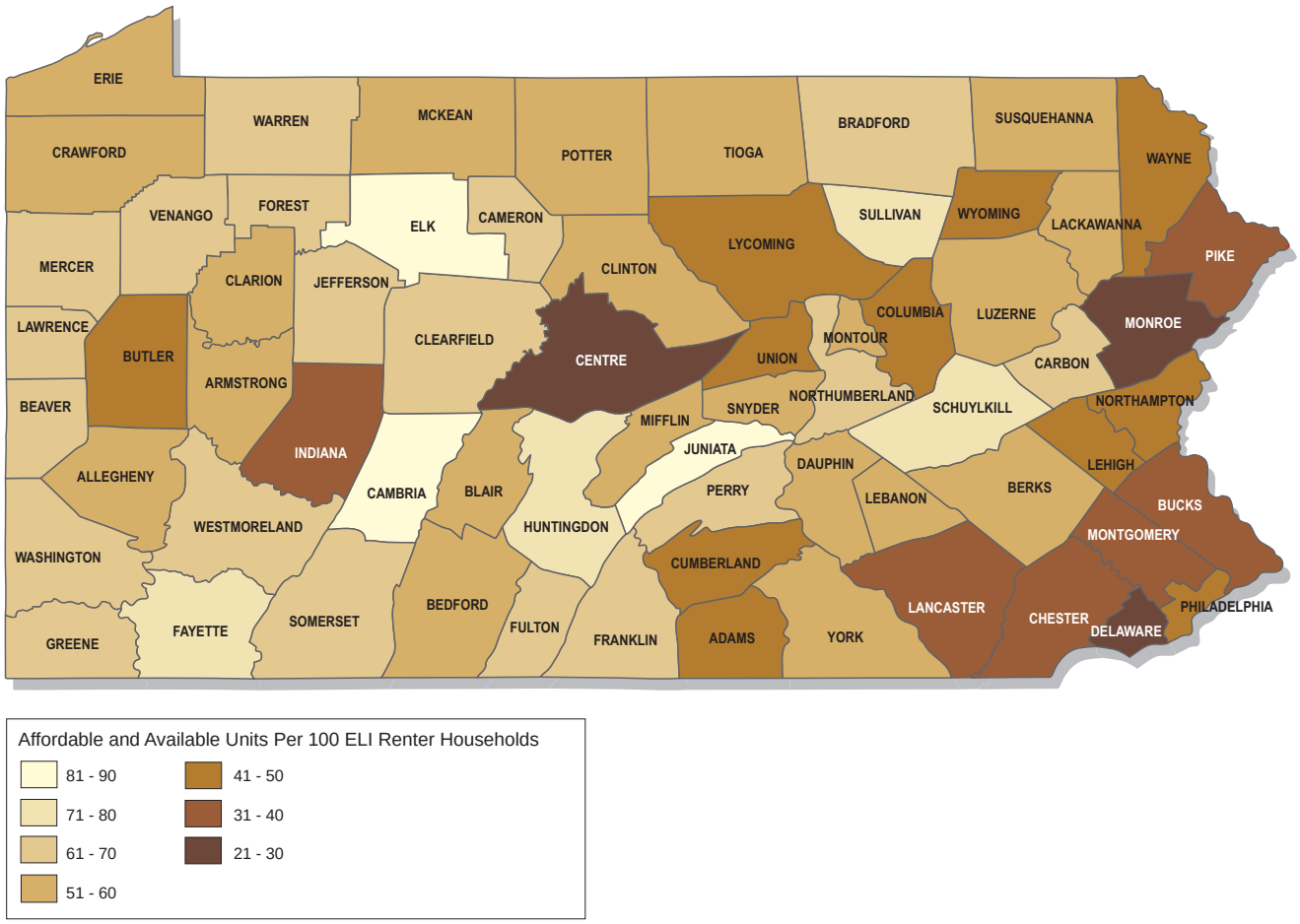


TABLE 13

Affordable and Affordable and Available Housing Units in 2000

(Equivalent data are available for all counties in Appendix D)

	Affordable Units Per 100 Renter Households with Household Incomes:			Affordable and Available Units Per 100 Renter Households with Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**96**	**152**	**157**	**49**	**87**	**107**
Counties with the Largest Shortages of Units Affordable and Available Per 100 ELI Households						
Centre County	54	95	128	24	55	94
Monroe County	76	126	167	29	67	106
Delaware County	56	121	158	30	69	104
Montgomery County	71	123	181	32	62	100
Pike County	86	134	146	33	72	105
Bucks County	75	114	173	37	56	98
Lancaster County	88	179	169	38	82	104
Counties with the Smallest Shortages of Units Affordable and Available Per 100 ELI Households						
Fayette County	138	175	140	72	109	112
Sullivan County	240	248	171	73	112	115
Huntingdon County	195	218	171	73	103	110
Schuylkill County	177	207	168	76	110	115
Cambria County	170	196	158	82	108	113
Elk County	215	236	160	83	116	113
Juniata County	263	267	181	86	108	108

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

units affordable and available to those in the wider 0-50 percent AMI income range (ELI and VLI renter households) was absolutely smaller. This difference implies that those counties had more units affordable to renters with incomes between 30 and 50 percent of AMI than renters in this income range. These data reinforce the conclusion that the most pressing need for additional affordable rental housing in most counties was for units affordable to ELI renter households.

By contrast, in only four counties, including Montgomery and Bucks in Table 14, did the shortage of units affordable and available to those between 0-50 percent AMI (ELI and VLI renter households) slightly exceed the shortage of units affordable and available to ELI renter households. Such data suggest that some additional units affordable to renters with income below the VLI threshold were also needed in these counties, although most of the additional units needed should be affordable to ELI renters.[36]

Finally, almost all counties had net surpluses of affordable and available units compared to renters with incomes below 80 percent of AMI.

[36] In four counties (Bucks, Centre, Chester, and Montgomery), the absolute shortage of units affordable and available for renter households between 0-50 percent AMI exceeds the shortage for ELI renters. See Appendix D, Table D.6 for data for all counties.

TABLE 14

Actual Shortages/Surpluses in Affordable and Available Housing Units in 2000

(Equivalent data are available for all counties in Appendix D)

	Affordable and Available Units with Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(170,324)**	**(76,950)**	**64,300**
Counties with the Largest Shortages of Units Affordable and Available to ELI Renter Households			
Philadelphia County	(49,810)	(19,265)	9,790
Allegheny County	(21,545)	(11,200)	10,330
Delaware County	(9,195)	(6,965)	1,360
Montgomery County	(7,345)	(8,000)	(105)
Lancaster County	(5,275)	(3,095)	1,295
Bucks County	(4,825)	(6,440)	(510)
Lehigh County	(4,750)	(3,655)	1,840
Counties with the Smallest Shortages of Units Affordable and Available to ELI Renter Households			
Montour County	(132)	(10)	101
Elk County	(87)	190	255
Fulton County	(86)	30	83
Juniata County	(42)	50	92
Cameron County	(35)	55	77
Sullivan County	(27)	25	49
Forest County	(25)	6	22

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

CHAPTER 4

A MID-DECADE UPDATE: HOUSING CONDITIONS IN 2005-06

Overview

This chapter presents information on housing problems among Pennsylvania's lower-income renter households and on the extent to which these households faced shortages in affordable and available units at mid-decade. Findings are presented at both the state and sub-state levels.

Because CHAS tabulations are not available for years after 2000, we developed equivalent data from the American Community Survey (ACS). To double the ACS sample size, we used data for both 2005 and 2006. As Appendix E details, all the ACS indicators computed for 2005-06 should be comparable to their 2000 CHAS equivalents except for estimates of the incidence of cost burden. We adopted an approach developed by the NLIHC[37] because we judge that it provides more accurate and complete counts of renters with housing cost burdens in 2005-06 than the procedures used for past CHAS tabulations.[38]

The smaller ACS sample size also constrains the geographic units we can study, because ACS micro-data are not always available at the county level. Therefore, after presenting a summary for the state, the chapter discusses housing conditions for the six relatively large regions used by the Pennsylvania Department of Community and Economic Development (DCED). It then examines conditions for aggregations of public use micro-data areas (PUMAs) that provide as much county-level detail as possible from the ACS micro-data for 2005 and 2006.[39]

Rental Housing Conditions at the State Level in 2005-06

The 2005-06 ACS data show that shortages of affordable rental housing worsened in the first half of the previous decade, particularly for ELI renters (Table 15). By mid-decade, there were 88,000 fewer affordable units than ELI renters. Expressed as a ratio, the number of affordable units per 100 ELI renter households was only 77 in 2005-06 (or roughly three units for every four renters), whereas in 2000, the ratio of 96 meant that the number of units had almost equaled the number of renters.

The absolute shortage of units affordable and available to ELI renters also worsened by mid-decade, reaching 220,000. These data reflect only

[37] See Wardrip and Pelletiere (2008).

[38] See Appendix E for additional information on our use of ACS data in this study, key differences between the CHAS and ACS data sets, and their implications for rental housing comparisons over time, particularly for cost burden.

[39] As detailed in Appendix E, ACS micro-data files identify only PUMAs. In populous urban areas, most notably Philadelphia and Allegheny counties, several PUMAs are located within a single county. In these instances, we aggregated ACS data to the county level for easy comparison to 2000 CHAS data. In other instances, a single PUMA contains several counties with low population.

TABLE 15

Pennsylvania Housing Shortages in 2000 and 2005-06

	Affordable Units			Affordable and Available Units		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Per 100 Renter Households						
2000	96	152	157	49	87	107
2005-06	77	135	150	43	84	110
Actual Shortages/Surpluses						
2000	(13,797)	302,316	503,212	(170,324)	(76,950)	64,300
2005-06	(88,316)	225,998	467,023	(220,369)	(99,912)	92,412

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS Data, U.S. Census Bureau.

TABLE 16

Pennsylvania Cost Burden Incidence in 2000 and 2005-06

	% with Any Cost Burden				% with Severe Cost Burden			
	ELI Households	VLI Households	LI Households	Total Households	ELI Households	VLI Households	LI Households	Total Households
2000	69%	60%	23%	34%	53%	16%	3%	17%
2005-06	84%	67%	29%	44%	69%	21%	3%	24%

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS Data, U.S. Census Bureau.

43 affordable and available units per 100 ELI renter households, down from 49 in 2000.

Within the broader income range of 0-50 percent of AMI, the number of affordable and available units per hundred renters dropped slightly (from 87 to 84) and the absolute deficit rose to almost 100,000. But the surplus of units affordable and available to 0-80 percent of AMI apparently increased more than renters, as the ratio rose to 110.

Cost burden pressures were also higher at mid-decade than in 2000. The differences appear most dramatic for ELI renter households, which experienced increases in cost burden and severe cost burden of 15 and 16 percentage points, respectively (Table 16). As Appendix E details, some of this apparent rise undoubtedly reflects our somewhat different methodology in 2005-06. Because the increases in cost burden are consistent with the increasing shortages of affordable housing, however, we conclude that they are real rather than merely an artifact of our different procedure.[40]

The increases in both relative and absolute shortages of affordable housing and the higher incidence of cost burdens occurred despite a modest rise in rental vacancy rates between 2000 and 2005-06, which would tend to ease the shortage, all other things being equal. As the next sections discuss, both changes are likely due in part to more ELI renters competing for a relatively fixed stock

[40] Using its preferred methodology for both 2001 and 2005, the NLIHC found that the proportion of Pennsylvania renters with severe rent burden rose significantly among ELI renters (from 63 percent to 68 percent) and among VLI renters (from 22 percent to 27 percent). In that study, households were grouped into ELI, VLI, and LI categories by comparing household income to each state's median family income. See Pelletiere and Wardrip (2008), p. 24. Our estimates of income groups are different and closer to HUD's official definitions because each household's income is compared to its county's official HAMFI.

of rental housing units.[41] Statewide, the shares of ELI and VLI renter households increased; the percentage of ELI households rose by 4 percentage points compared to 2000 (Table 17).

Findings at the Regional Level[42]

DCED Regions

To examine housing conditions within Pennsylvania, this chapter first compares 2000 and 2005-06 data in the six regions in Pennsylvania defined by the DCED, which are shown in Map 3.[43] The DCED regions are particularly relevant to rental housing policy because the Pennsylvania Housing Finance Agency (PHFA) has a regional set-aside for the allocation of low income housing tax credits (LIHTCs) based on these DCED regions.[44] LIHTCs have been a major source of affordable rental housing over the last 15 years.

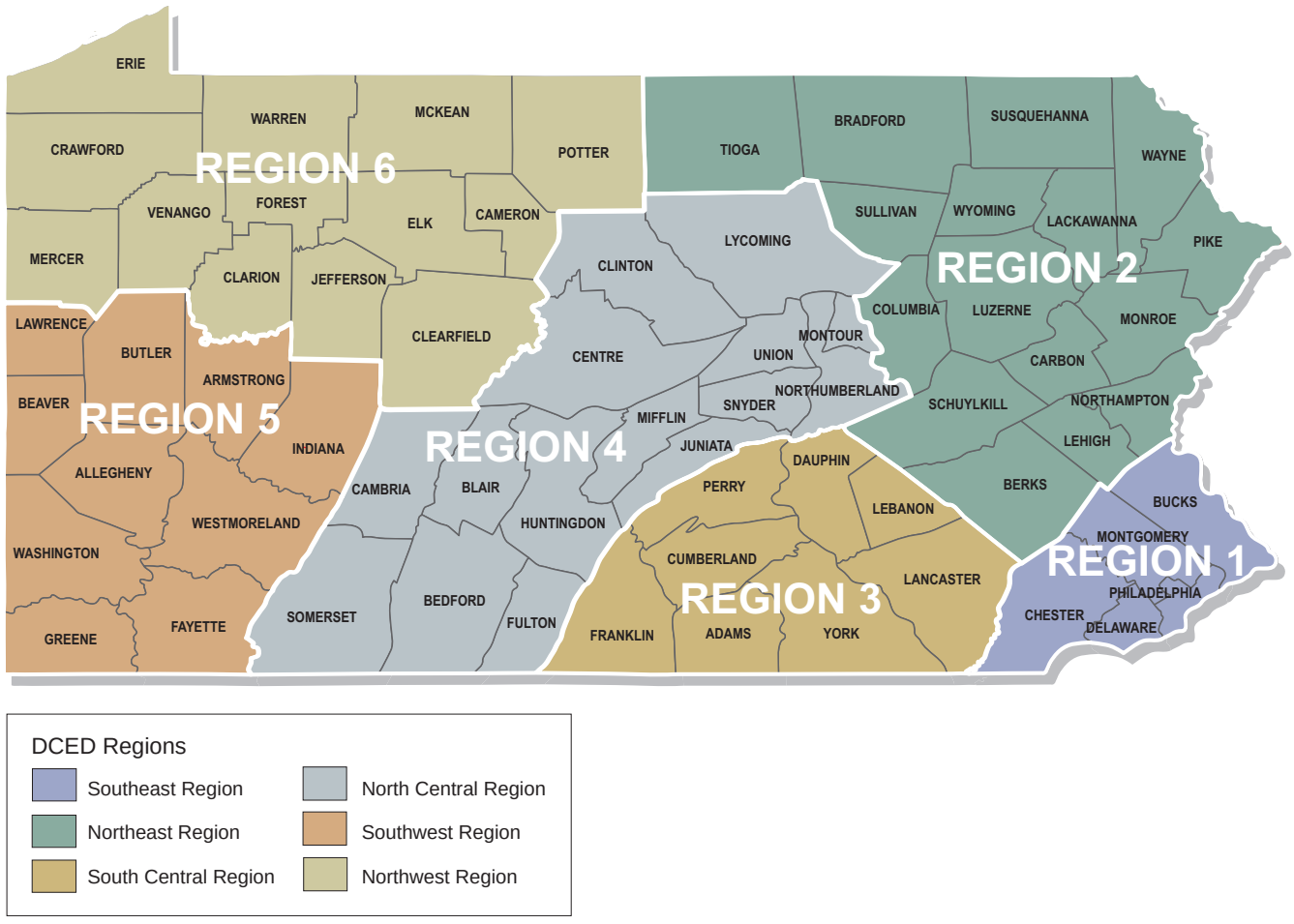
[41] See Table A.8 in Appendix A for changes in rental housing stock and Table G.1 in Appendix G for changes in the income distribution of renter households.

[42] See Appendix G for the detailed tables that support the commentary in this section.

[43] See Appendix F for a discussion of changes between 1990 and 2000 by DCED region.

[44] See "Pennsylvania Housing Finance Agency Amended Allocation Plan for Year 2009," p. 4.

MAP 3
DCED Regions in Pennsylvania*



* Columbia County is part of DCED Region 4 and Lawrence County is part of DCED Region 6. We have included these counties with DCED Regions 2 and 5, respectively. We modified the DCED boundaries so that our DCED regions could be aggregated from the ACS PUMAs. See Appendix E for additional details.

TABLE 17

Income Distribution of Lower-Income Renter Households in 2005-06 and Percentage Changes from 2000

	2005-06			Change from 2000		
	Distribution of Lower-Income Renters (as % of Total Renters) by AMI Group			Distribution of Lower-Income Renters (as % of Total Renters) by AMI Group		
	ELI	VLI	LI	ELI	VLI	LI
Pennsylvania	**28%**	**19%**	**22%**	**4%***	**1%***	**0%**
Region 1: Southeast	32%	16%	20%	4%*	1%	0%
Region 2: Northeast	26%	21%	23%	3%*	2%*	0%
Region 3: South Central	21%	19%	24%	3%*	1%	-1%
Region 4: North Central	26%	21%	23%	2%	1%	1%
Region 5: Southwest	29%	20%	22%	3%*	1%	1%
Region 6: Northwest	28%	19%	21%	5%*	-1%	-2%
Southeast Region: Philadelphia Metropolitan Division						
Suburban Counties	21%	17%	21%	4%*	3%*	-1%
Philadelphia County	43%	16%	19%	5%*	-1%	0%

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS Data, U.S. Census Bureau.

Because DCED regions are larger than the consolidated PUMAs analyzed in the next section, it is possible to estimate rental housing conditions at the DCED regional level more precisely. In turn, differences between 2000 and 2005-06 are more frequently statistically significant at the 90 percent confidence level. All commentary on changes in this chapter focuses on differences that were statistically significant at the 90 percent confidence level, unless otherwise noted.[45]

The data tables for DCED regions in Pennsylvania give additional detail for Region 1, the Philadelphia metropolitan division, because that region has the most renters and the greatest shortage of affordable and available housing units. The central county, Philadelphia, is distinguished from its suburbs: Bucks, Chester, Delaware, and Montgomery counties.

Rental Housing Conditions in 2005-06 by DCED Region

As noted above, statewide, the percentage of ELI renter households in Pennsylvania rose by 4 percentage points between 2000 and 2005-06. This represents an increase of approximately 50,000 ELI renter households, from 334,600 to 384,800. As Table 17 shows, each region experienced similar income shifts. The largest increases in ELI households occurred in Region 6, which includes Erie, and in the city of Philadelphia.

Region 1 had the highest share of ELI renter households (32 percent). Within this region, the city of Philadelphia had a much larger share of ELI renter households than its suburban counties did.[46]

Cost burden. Cost burden pressures worsened in each DCED region between 2000 and 2005-06,

[45] This study uses the term significant to refer to changes that are statistically significant.

[46] The city of Philadelphia and the county of Philadelphia constitute the same area.

particularly for ELI renters. But because part of the increase in cost burden shown by our data reflects procedural differences (as described in Appendix E), we focus on differences among regions in 2005-06.

As Map 4 illustrates, ELI renter households in the Philadelphia area faced the greatest cost burden pressure, with three-fourths having a severe cost burden. The incidence of severe cost burden was least common among ELI renters in the North Central, Southwest, and Northeast regions.

As Table 18 details, within the Philadelphia metropolitan division, ELI renters were more likely to have cost burdens in the suburbs. There, four of five ELI renter households had severe cost burdens. VLI renters were also more likely to have cost burdens in Philadelphia's suburbs than in other areas of the state, and almost a third had severe cost burdens there. In all regions of the state, LI renters very seldom had severe cost burdens.

Shortages of affordable rental housing. At the regional level as in the state, shortages of units affordable and available to ELI renters were greatest in every region. As Map 5 illustrates, Regions 1 and 3 had the greatest shortages of housing both affordable and available to ELI renter households. The shortage of affordable and available housing units per 100 ELI renter households was least pressing in Region 5, the

MAP 4

Severe Cost Burden Incidence for ELI Renter Households by DCED Region in 2005-06

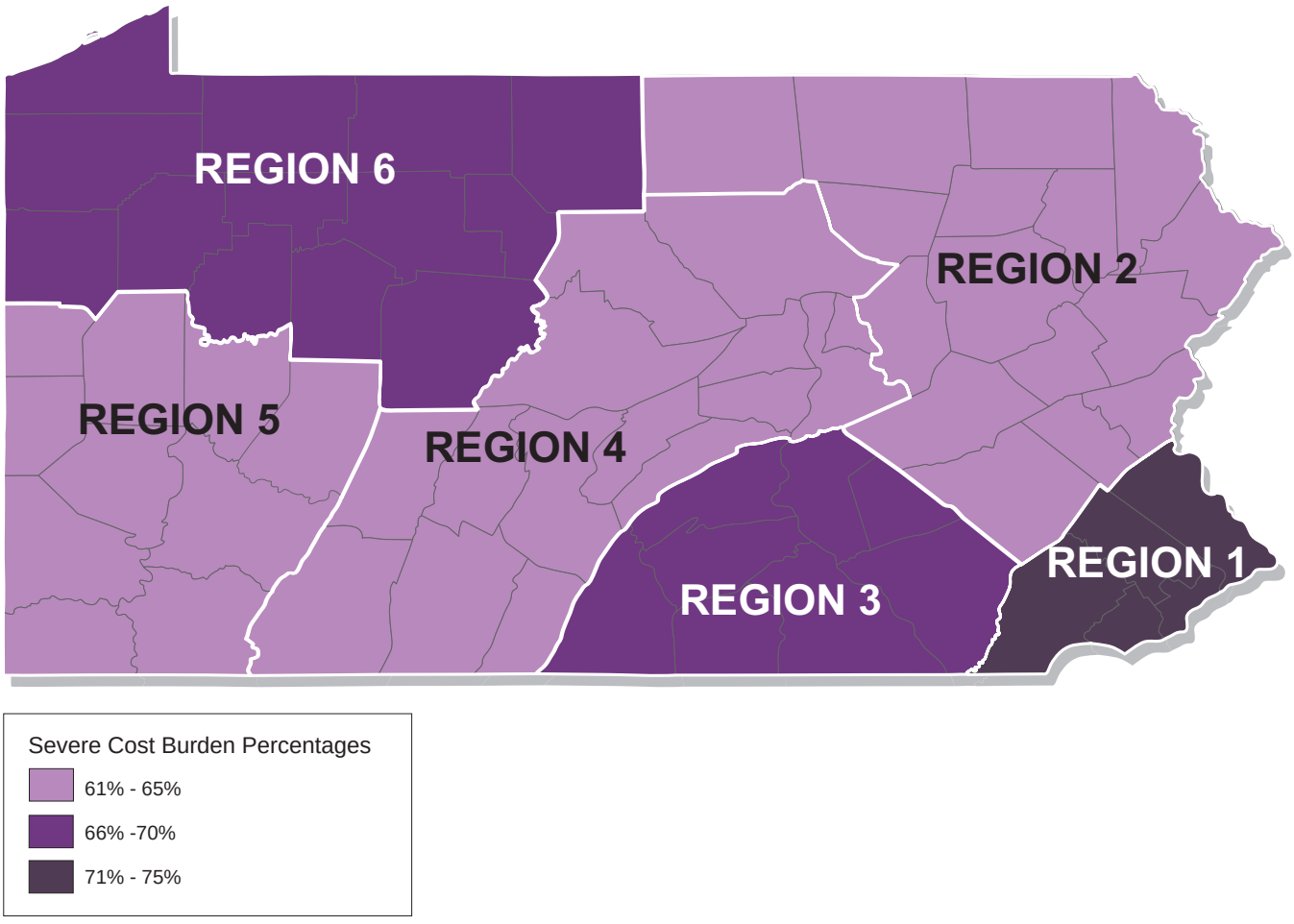


TABLE 18

Cost Burden Incidence in 2005-06

	2005-06					
	% of Renter Households with Any Cost Burden			% of Renter Households with a Severe Cost Burden		
	ELI	VLI	LI	ELI	VLI	LI
Pennsylvania	**84%**	**67%**	**29%**	**69%**	**21%**	**3%**
Region 1: Southeast	87%	74%	37%	75%	24%	4%
Region 2: Northeast	82%	64%	29%	65%	18%	4%
Region 3: South Central	82%	67%	20%	66%	16%	2%
Region 4: North Central	79%	62%	26%	64%	20%	3%
Region 5: Southwest	83%	64%	27%	65%	24%	4%
Region 6: Northwest	82%	61%	24%	67%	18%	2%
Southeast Region: Philadelphia Metropolitan Division						
Suburban Counties	89%	78%	41%	80%	31%	5%
Philadelphia County	86%	69%	33%	73%	18%	3%

Source: Federal Reserve Bank of Philadelphia calculations based on 2005-06 ACS data, U.S. Census Bureau.

MAP 5

Affordable and Available Housing Units Per 100 ELI Renter Households by DCED Region in 2005-06

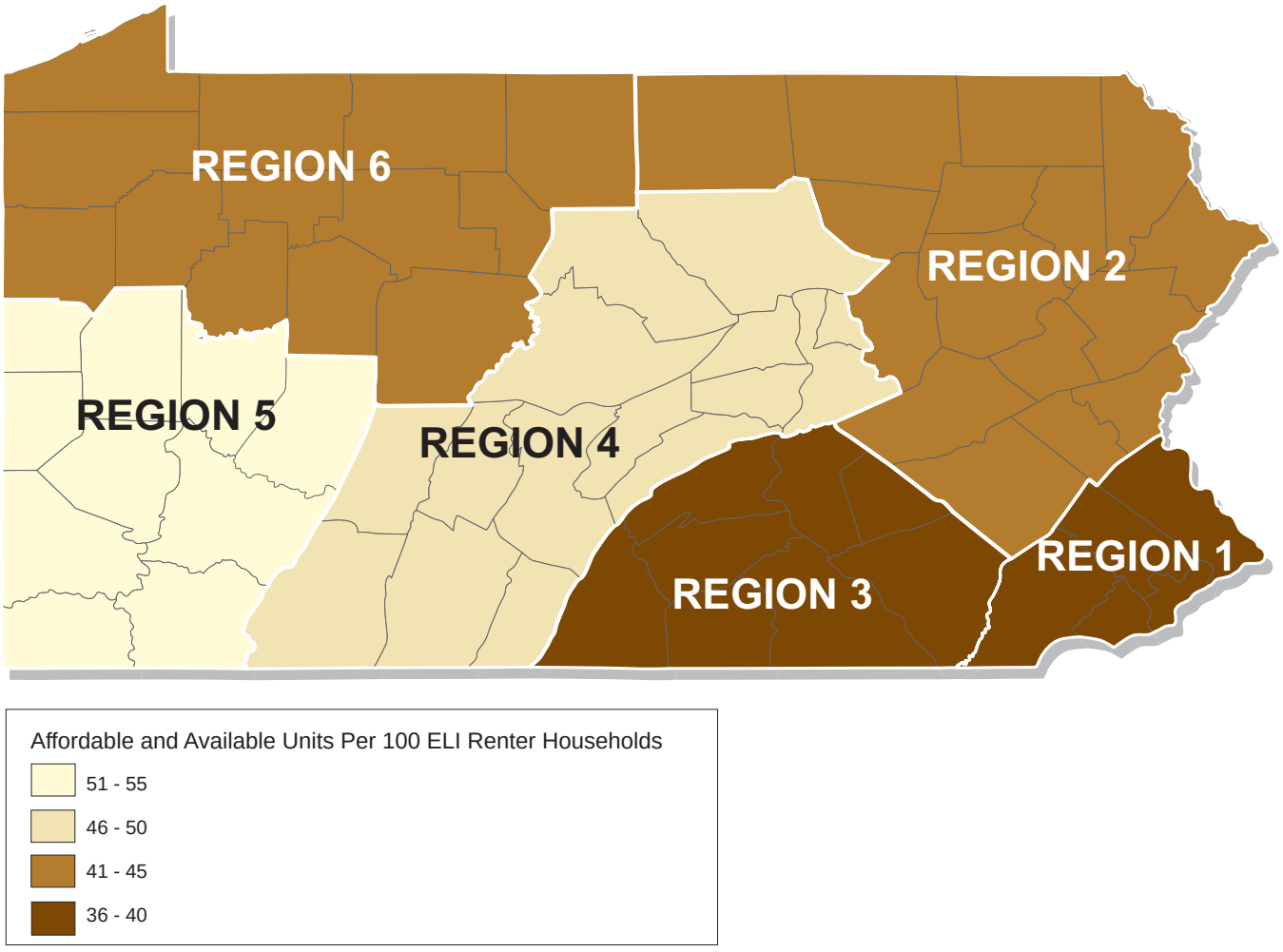


TABLE 19

Affordable and Available Housing Units in 2005-06 and Changes from 2000

	2005-06						Change from 2000					
	Affordable Units per 100 Renter Households with Household Incomes:			Affordable and Available Units per 100 Renter Households with Household Incomes:			Affordable Units per 100 Renter Households with Household Incomes:			Affordable and Available Units per 100 Renter Households with Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**77**	**135**	**150**	**43**	**84**	**110**	**-19***	**-17***	**-8***	**-6***	**-2**	**2**
Region 1: Southeast	56	113	147	38	78	111	-11*	-11*	-4	-4*	0	7*
Region 2: Northeast	86	138	146	43	84	105	-24*	-25*	-17*	-9*	-6	-4
Region 3: South Central	80	161	163	40	84	108	-28*	-28*	-8	-9*	-7	-1
Region 4: North Central	104	149	146	48	86	106	-20*	-19	-8	-6	-4	-1
Region 5: Southwest	91	143	149	51	93	114	-18*	-13*	-8	-5	1	4
Region 6: Northwest	90	154	154	43	90	110	-44*	-24*	-3	-15*	-6	1
Southeast Region: Philadelphia Metropolitan Division												
Suburban Counties	55	102	160	25	60	106	-15*	-20*	-13	-8*	-3	6
Philadelphia County	57	120	138	43	89	114	-10*	-6	2	-2	4	9

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS data, U.S. Census Bureau.

Southwest, but there were still only 51 affordable and available units for every 100 ELI renter households there.

Between 2000 and 2005-06, the number of units affordable to ELI households fell sharply and significantly in each region, and the number of units affordable to renters with incomes between 0-50 percent of AMI also fell significantly[47] (Table 19). Significant drops in units affordable and *available* to ELI renter households also occurred in Regions 6, 3, 2, and 1. (Within Region 1, the drop was larger and significant only in the Philadelphia suburbs.)

Region 1 remained the region with the greatest shortages of affordable and available housing for both ELI renters and renters with income below 50 percent of AMI. Within the region, the Philadelphia suburban counties had much less affordable and available housing than the city itself. The suburbs had only 25 affordable and available units per 100 ELI renters and 60 affordable and available units per 100 renters at 0-50 percent AMI.

Region 6, which experienced the greatest increase in the percentage of ELI renter households between 2000 and 2005-06, also experienced the

[47] The one exception is Region 4, in which the decrease in units affordable to renters with incomes between 0-50 percent of AMI is not significant.

largest reduction in the number of affordable and available housing units, from 58 to 43 units per 100 ELI renter households.

Looking more broadly at the experience of all lower-income renters by region in both 2000 and 2005-06, the total number of units affordable and available to renters with incomes at or below 80 percent of AMI slightly exceeded the number of such renters in all regions. Said differently, the regional supply and demand were roughly in balance for renters with incomes at or below 80 percent of AMI.

In absolute terms in 2005-06, Region 1 had the greatest shortage of affordable and available housing units for ELI renter households (over 90,000 units, 41 percent of the state's total) and also for renters with incomes between 0-50 percent of AMI (48 percent of the state's total). Shortages were also substantial in the Southwest and Northeast (Regions 5 and 2) (Table 20).

Within Region 1, the city of Philadelphia had a much larger shortage of affordable units available to ELI renter households than its four suburban counties. Notably, however, the suburban shortage of affordable units available to renters with incomes between 0-50 percent of AMI was more than double that of the city (32,800 vs. 14,950). The difference between the two locations suggests that, in the suburbs, the number of renters with incomes between 30-50 percent of AMI roughly equaled the number of units with rents affordable to that income range. Philadelphia city, by contrast, apparently had many more units affordable to incomes between 30-50 percent of AMI than renters in that income range.

Rental vacancy rates by unit affordability to lower-income households. Vacancy rates are often used as indicators of housing supply, but they can be difficult to interpret, particularly when drawn

TABLE 20

Actual Shortages/Surpluses in Affordable and Available Housing Units in 2005-06 and Changes from 2000

	2005-06			Change from 2000		
	Affordable and Available Units with Household Incomes:			Affordable and Available Units with Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(220,369)**	**(99,912)**	**92,412**	**(50,045)***	**(22,962)***	**28,112***
Region 1: Southeast	(90,308)	(47,766)	34,082	(15,878)*	(3,386)	23,552*
Region 2: Northeast	(34,720)	(17,643)	8,434	(10,093)*	(8,295)	(5,327)
Region 3: South Central	(24,270)	(12,192)	10,143	(7,551)*	(6,529)	207
Region 4: North Central	(15,237)	(7,602)	4,786	(3,318)	(2,528)	(192)
Region 5: Southwest	(41,236)	(10,570)	28,673	(7,006)*	428	8,886
Region 6: Northwest	(14,599)	(4,140)	6,296	(6,200)*	(2,653)	987
Southeast Region: Philadelphia Metropolitan Division						
Suburban Counties	(33,414)	(32,816)	8,186	(8,794)*	(7,701)*	7,446
Philadelphia County	(56,894)	(14,950)	25,896	(7,084)*	4,316	16,106*

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level. Data for the state of Pennsylvania and each DCED region have been rounded in this table. Adding the DCED regions together will yield slightly different statewide results.

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS data, U.S. Census Bureau.

from small samples such as the ACS. For example, a high vacancy rate could signal an adequate supply of rental housing, but it could also reflect too many units of poor quality or units in locations with declining demand. But this indicator can help distinguish tight markets with growing demand from loose markets with less demand. Furthermore, having sufficient vacancies among units with below fair market rents (FMRs) is important to the successful use of vouchers.[48] Table 21 shows how vacancy rates differ across regions and how they have changed since 2000. The fact that several of the recent changes are statistically significant suggests that the ACS sample size is sufficient to provide meaningful data on vacancy rates at this level of geographic aggregation.

Overall, the statewide vacancy rates of 10 percent and above and the significant increases since 2000 among units affordable to most income ranges imply that most rental markets in Pennsylvania are relatively loose and loosening further. But there is considerable variation in the vacancy rates among DCED regions. Region 5, which includes Pittsburgh, had the highest vacancy rates among DCED regions for each affordability range.

The Philadelphia region also had high and increasing vacancy rates in each affordability range, and it experienced the greatest increase in the vacancy rates for units affordable to ELI renters from 2000 to 2005-06. The city of Philadelphia had particularly high vacancy rates among units affordable to ELI, VLI, and LI households, and vacancy rates increased for each range between 2000 and 2005-06. The high vacancy rates in Philadelphia are not surprising, since Philadelphia has struggled with its vacant housing stock, both because of the quality of the stock and also because of the city's declining population.[49] Among units affordable to ELI renter households, the suburban counties had markedly lower vacancy rates than either Philadelphia city or the state average for Pennsylvania.

Low vacancy rates can reflect needs for additional affordable rental housing. Region 2, the Northeast, had the lowest vacancy rate for ELI-affordable units in 2005-06 and also the lowest rate overall. Furthermore, it was the only region where vacancy rates dropped significantly, both overall and in the ELI income range. Region 2 contains areas such as Monroe and Pike counties that have some of Pennsylvania's greatest shortages of units affordable and available to ELI and VLI renters.

[48] The FMR for any market area, determined annually by HUD, is typically the 40th percentile rent for nonluxury units that were recently rented to a new tenant, although adjustments to this level are sometimes made. See HUD User for additional information: http://www.huduser.org/datasets/fmr.html. The FMR helps determine the subsidy that a household using a voucher receives. Specifically, the household pays 30 percent of its income in gross rent and HUD provides a rental subsidy to the household for the difference between the tenant payment and the FMR or gross rent, whichever is less. If this subsidy is not sufficient to cover the full rent of the unit, the household may pay the additional amount out of its own pocket, in which case the household will pay more than 30 percent of its income in rent, incurring a cost burden. Vacancies among below-FMR units are important for voucher success because in order to use a newly issued voucher, a potential user must search in the private market to find a unit that passes HUD's housing quality standards within 120 days of receipt (or must already live in such a unit). The lower the vacancy rate among below-FMR units, the harder it will be for the household to find an acceptable affordable unit when it is not already living in a unit that meets these standards. In this case, some households may not find a unit in the permitted time and will lose their vouchers, while others may rent a unit whose rent is above the FMR and will have at least some cost burden. See the Glossary for the definitions of FMR, rental subsidy, and voucher. In addition, Appendix D provides county-level FMRs and discusses the implications of their affordability to different income ranges.

[49] See Appendix A, Table A.7 for population changes.

TABLE 21

Vacancy Rates by Rental Affordability in 2005-06 and Percentage Changes from 2000

	2005-06				Change from 2000			
	ELI	VLI	LI	Total Vacancy	ELI	VLI	LI	Total
Pennsylvania	**11%**	**12%**	**7%**	**10%**	**1%**	**3%***	**3%***	**2%***
Region 1: Southeast	13%	15%	8%	11%	3%*	7%*	5%*	5%*
Region 2: Northeast	6%	10%	3%	6%	-3%*	0%	-1%	-1%*
Region 3: South Central	10%	7%	6%	7%	-1%	-1%	2%*	0%
Region 4: North Central	10%	9%	5%	8%	0%	2%	2%	1%
Region 5: Southwest	14%	16%	8%	12%	2%	6%*	3%*	4%*
Region 6: Northwest	12%	11%	3%	9%	2%	2%	0%	1%
Southeast Region: Philadelphia Metropolitan Division								
Suburban Counties	3%	16%	8%	9%	-2%	7%*	4%*	4%*
Philadelphia County	18%	15%	9%	13%	5%*	7%*	5%*	6%*

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS data, U.S. Census Bureau.

Additional Analysis at the Local Level: Consolidated PUMAs

The data for "consolidated" PUMAs discussed and mapped in this section provide the closest look at rental housing conditions and shortages at the local level that is possible from ACS micro-data. As Appendix E details, we aggregated the PUMAs identified in the 2005 and 2006 ACS to match the county-level CHAS data provided in Chapter 3 and Appendix D as closely as possible. In many instances in this section, we are able to analyze the ACS data by county and compare it to 2000 county-level data.[50]

Appendix G provides the 2005-06 data for consolidated PUMAs and includes changes since 2000.

Rental Housing Conditions in 2005-06 by Consolidated PUMAs

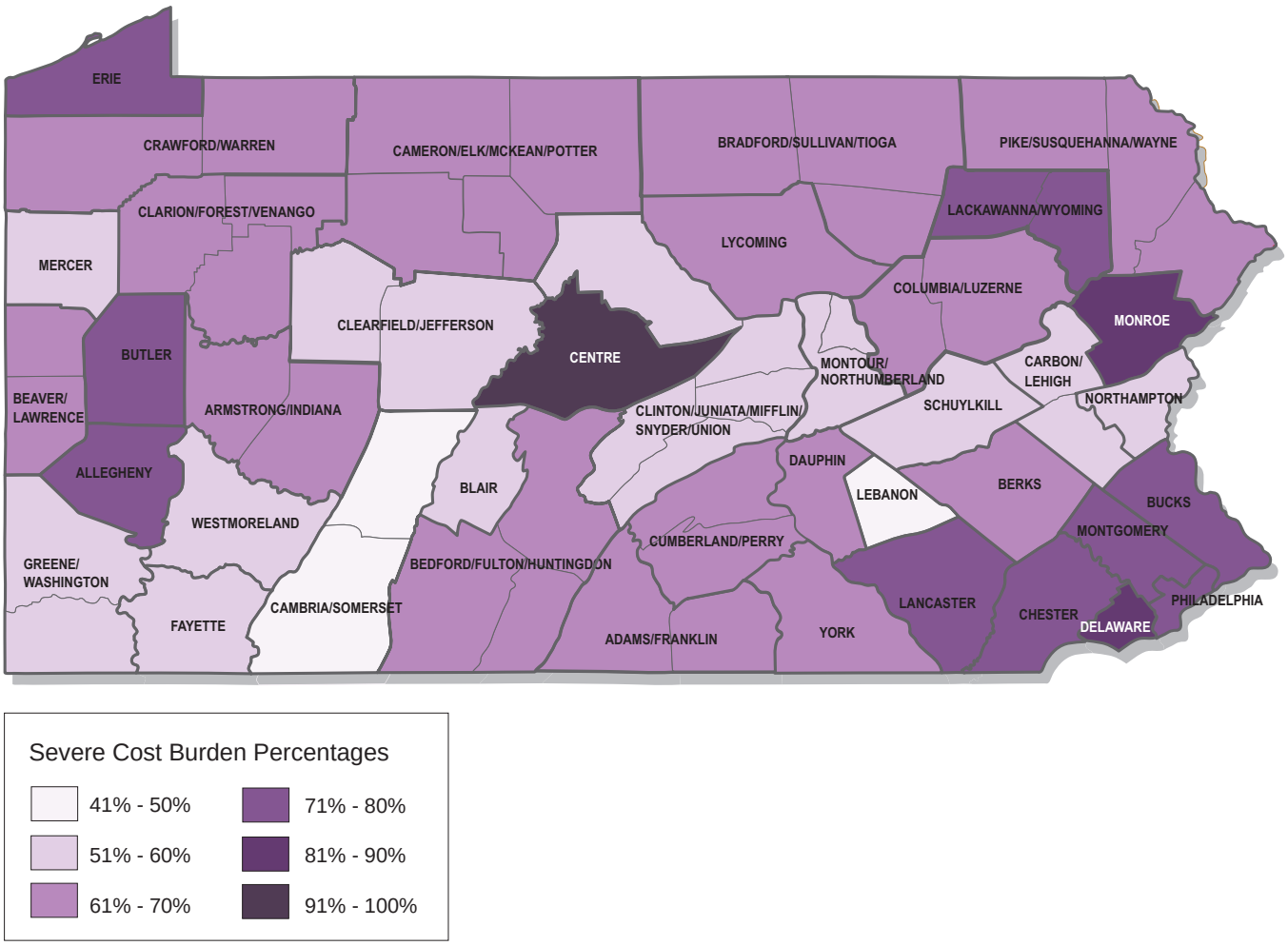
Overall, the three areas identified in 2000 as having the greatest incidence of severe cost (the Northeast section of the state bordering New Jersey, Centre County, and the Philadelphia area) continued to face this challenge at mid-decade. As Map 6 illustrates, severe cost burdens were most common among ELI renter households in the following three counties: Centre (91 percent), Monroe (85 percent), and Delaware (82 percent). Severe cost burdens were least common among ELI renters in the Cambria/Somerset area (44 percent) followed by Lebanon County (46 percent).

Table 22 provides more detail for the areas in which ELI renters were most and least likely to have severe cost burdens. In Bucks, Centre, Delaware, and Monroe counties, over 90 percent of ELI renter households had cost burdens. Furthermore, in each of these counties, over three-

[50] As discussed in Appendix E, the ACS data are not as accurate for smaller geographic areas because the sample size for ACS data is much smaller than that of the decennial census.

MAP 6

Severe Cost Burden Incidence for ELI Renter Households by Consolidated PUMAs in 2005-06



quarters of all ELI renter households had a severe cost burden. The extreme is Centre County, in which 91 percent of ELI renters actually had severe cost burdens.

Even in the areas with the lowest incidence of cost burdens, at least two-thirds of ELI renter households had a cost burden.[51] Furthermore, in all areas except Cambria/Somerset and Lebanon, at least 50 percent of ELI renter households had a severe cost burden. This means that in each area, at least 60 percent of the ELI renter households that had any cost burden actually had a severe cost burden.

Table 22 also illustrates that throughout the state, LI and VLI renters remain much less likely to face severe cost burdens in 2005-06 than ELI renters, as occurred in 2000. Monroe County had the highest percentage of LI renters with a severe cost burden statewide, but even there, only 11 percent of LI households had a severe cost burden. VLI renters were most often cost burdened in Montgomery County, but there, only 35 percent had severe cost burdens.

[51] The one exception is Blair County, in which 60 percent of ELI renters had a cost burden.

TABLE 22

Cost Burden Incidence in 2005-06

	% with Any Cost Burden			% with Severe Cost Burden		
	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**84%**	**67%**	**29%**	**69%**	**21%**	**3%**
Counties with the Largest Percentage of ELI Renters Who Had Severe Cost Burdens						
Centre County	97%	80%	38%	91%	25%	3%
Monroe County	92%	58%	30%	85%	24%	11%
Delaware County	93%	74%	33%	82%	26%	3%
Bucks County	90%	76%	48%	79%	33%	6%
Montgomery County	85%	84%	42%	78%	35%	6%
Chester County	87%	73%	41%	76%	26%	4%
Erie County	83%	68%	22%	74%	28%	2%
Counties with the Smallest Percentage of ELI Renters Who Had Severe Cost Burdens						
Montour/Northumberland Counties	68%	57%	10%	54%	20%	0%
Clearfield/Jefferson Counties	79%	47%	32%	54%	8%	0%
Clinton/Juniata/Mifflin/Snyder/Union Counties	78%	47%	21%	54%	10%	0%
Westmoreland County	74%	59%	17%	52%	22%	0%
Blair County	60%	59%	29%	51%	15%	2%
Fayette County	78%	37%	4%	51%	6%	0%
Lebanon County	78%	54%	31%	46%	6%	4%
Cambria/Somerset Counties	68%	53%	21%	44%	19%	3%

Source: Federal Reserve Bank of Philadelphia calculations based on 2005 and 2006 ACS data, U.S. Census Bureau.

Shortages of affordable rental housing. Shortages of affordable housing continued to be most pressing for ELI renters in 2005-06 and have also grown since 2000. Map 7 indicates the areas of Pennsylvania with the most severe affordable housing shortages mid-decade. The five counties identified in the previous section as having the greatest cost burden incidence for ELI renter households (Centre, Monroe, Delaware, Bucks, and Montgomery) also had the greatest shortages in affordable and available rental housing stock mid-decade. Likewise, the Cambria/Somerset area had the lowest severe cost burden incidence for ELI renter households and also had less of a shortage of affordable and available housing units for this income group than most areas of the state.[52] There is a strong negative correlation between the ratios of affordable and available units and the incidence of severe cost burden.[53] In other words, where there are fewer units per 100 ELI renter households, and thus more severe shortages, more ELI renters have severe cost burdens.

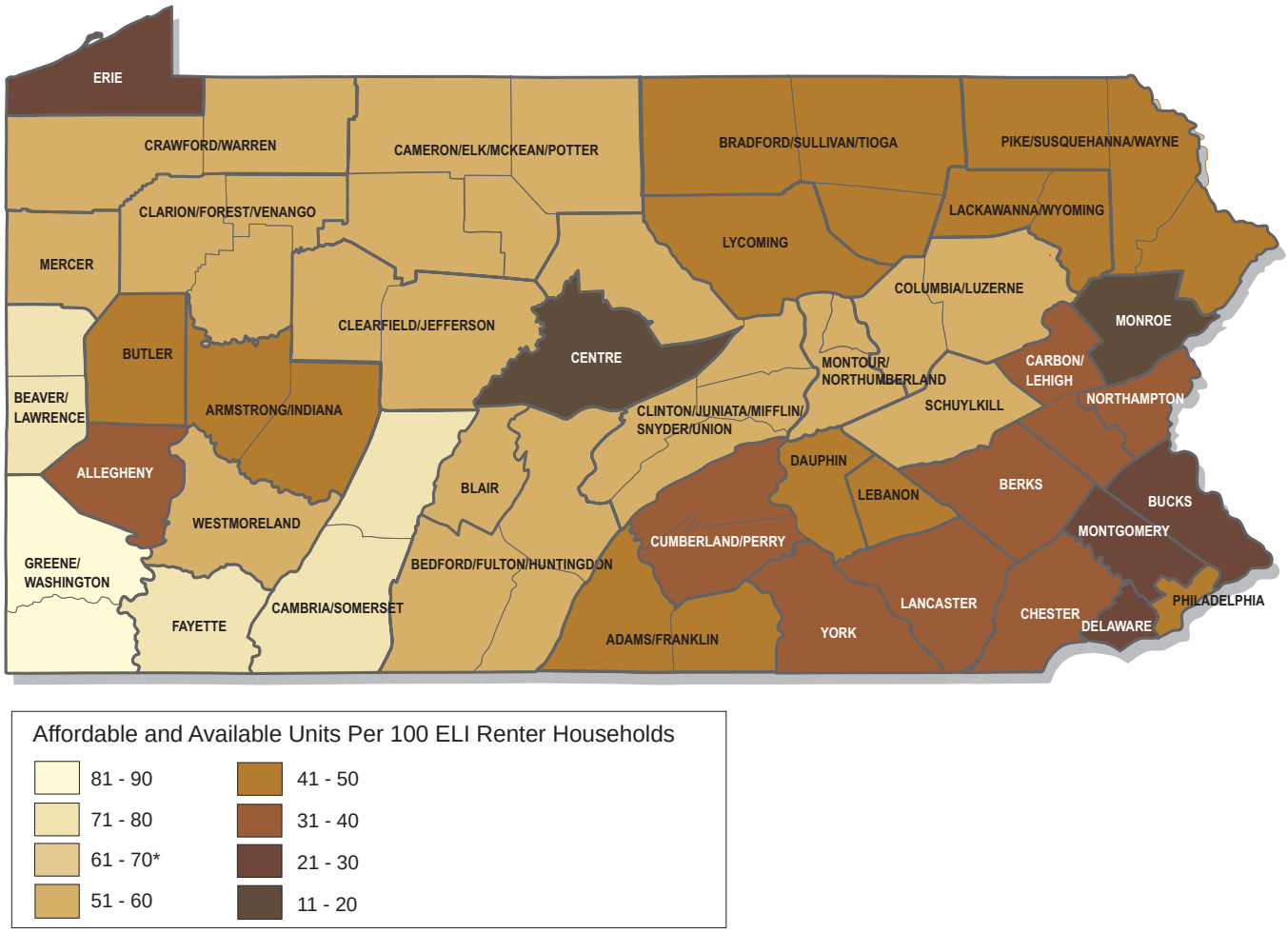
Consistent with 2000 results, Centre County had the greatest shortage of affordable

[52] Fayette County (in the Southwest region) also had a lower incidence of ELI renter households who had severe cost burdens and a smaller shortage of affordable and available housing units.

[53] The correlation coefficient of the number of affordable and available housing units per 100 ELI renters and the incidence of severe cost burden for this income group is -0.87. This coefficient is statistically significant at the 99 percent confidence level.

MAP 7

Affordable and Available Housing Units per 100 ELI Renter Households by Consolidated PUMAs in 2005-06



and available housing units per 100 ELI renter households and for households with income between 0-50 percent of AMI, with only 15 units and 43 units, respectively. Other counties that had severe shortages of affordable and available housing for ELI renter households in both 2000 and 2005-06 include Monroe and Lancaster counties, as well as the Philadelphia suburban counties of Bucks, Delaware, and Montgomery (Table 23).

Erie County, which fared better than the state average in 2000, faced a severe shortage of 29 units per 100 ELI renter households at mid-decade.[54] Erie also experienced the most significant decrease in the number of affordable and available units per 100 ELI renter households between 2000 and 2005-06 (25 units), which suggests that rental housing affordability was deteriorating in the first half of the previous decade.[55]

Several counties surrounding Allegheny

[54] Community leaders in this area noted that the severe and growing shortage of rental housing units for ELI households in Erie may also reflect significant job loss and an increase in the number of blighted buildings.

[55] The affordable and available rental housing shortages were also becoming more severe in Berks County between 2000 and 2005-06. There, the number of affordable and available units per 100 ELI renter households fell significantly by 16 units. See Appendix G, Table G.4.

TABLE 23

Affordable and Available Housing Units in 2005-06 and Changes from 2000

	2005-06			Change from 2000		
	Affordable and Available Units per 100 Renter Households with Household Incomes:			Affordable and Available Units per 100 Renter Households with Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**43**	**84**	**110**	**-6***	**-2**	**2**
Areas with the Largest Shortages of Affordable and Available Units Per 100 ELI Households						
Centre County	15	43	94	-9	-12	0
Monroe County	20	55	99	-9	-11	-7
Delaware County	21	72	112	-9*	3	8
Bucks County	25	56	104	-12*	0	6
Montgomery County	27	51	106	-5	-11	6
Erie County	29	79	108	-25*	-14	0
Lancaster County	31	73	104	-7	-8	0
Areas with the Smallest Shortages of Affordable and Available Units Per 100 ELI Households						
Clarion/Forest/ Venango Counties	57	87	112	0	-9	4
Schuylkill County	58	95	103	-18	-16	-12
Blair County	60	107	112	5	13	3
Cambria/Somerset Counties	77	107	112	0	0	0
Beaver/Lawrence Counties	79	100	112	15	4	2
Fayette County	80	113	114	8	4	2
Greene/Washington Counties	82	120	122	14	14	9

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

Sources: Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS data, U.S. Census Bureau.

County (the Pittsburgh region) in the Southwest corner of Pennsylvania (particularly the areas of Greene/Washington, Fayette, and Beaver/ Lawrence) had the greatest number of affordable and available units for ELI renter households. Even though these counties had the highest supply ratios within the state, they still faced shortages of nearly 20 units per 100 ELI renter households. Allegheny County, however, had markedly less affordable and available housing for ELI renters than most of its surrounding counties and was below the state average. [56]

In addition, vacancy rates for a number of these counties in the Southwest region, particularly Washington/Green, were quite high for units affordable to ELI renters (Appendix G, Table G.2).[57] The DCED section detailed that a high vacancy rate could signal an adequate supply of rental housing, but it could also signal too many units of poor quality or units in locations with declining demand. Additional analysis is needed

[56] In Allegheny County, there were only 40 affordable and available units per 100 ELI renter households. See Appendix G, Table G.4.

[57] Although the affordable and available rental shortages were less severe in the Southwest region, community leaders noted that much of the available rental housing stock was of poor quality and that there were many vacant and abandoned units. High vacancy rates in several of the areas in the Southwest region further indicate that the quality of affordable rental housing is likely an issue.

at the local level to determine the cause of high vacancies in this area.

Following the counties in the southwestern corner of the state, another area near the southwestern region, Cambria/Somerset, had a high number of affordable and available units per 100 ELI renter households (77 units). There were fewer than two affordable and available units for every three ELI renter households in all other areas of the state.

In absolute terms, the statewide shortage of housing units affordable and available to ELI renter households grew to over 220,000 by mid-decade. The seven areas with the greatest absolute shortages of rental units affordable and available to ELI renter households were Allegheny, Bucks, Delaware, Carbon/Lehigh, Erie, Montgomery, and Philadelphia. Nearly 60 percent of the state's overall shortage of rental housing units for ELI households was attributable to these seven counties. As found in 2000, 39 percent of the state's shortage came from Allegheny and Philadelphia counties (Table 24).

Again as in 2000, Table 24 illustrates that in most counties with the largest absolute shortages of units affordable and available to ELI renter households, the shortage of units affordable and available to renters in the wider 0-50 percent income range was absolutely smaller. These data confirm that, at mid-decade, ELI renters had not only the most pressing needs for additional affordable and available units but also that needs had grown significantly since 2000. By contrast, the surplus of units affordable and available to renters with incomes at or below 80 percent of AMI widened statewide after 2000, largely because of a significant rise in Philadelphia County.

TABLE 24

Actual Shortages/Surpluses in Affordable and Available Housing Units in 2005-06 and Changes from 2000

	2005-06			Change from 2000		
	Affordable and Available Units with Household Incomes:			Affordable and Available Units with Household Incomes:		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(220,369)**	**(99,912)**	**92,412**	**(50,045)***	**(22,962)***	**28,112***
Area with the Largest Shortages of Units Affordable and Available to ELI Renter Households						
Philadelphia County	(56,894)	(14,950)	25,896	(7,084)*	4,316	16,106*
Allegheny County	(27,955)	(12,170)	16,788	(6,410)*	(970)	6,458
Delaware County	(11,076)	(7,177)	4,534	(1,881)	(212)	3,174
Bucks County	(9,240)	(8,866)	1,172	(4,415)*	(2,426)	1,682
Montgomery County	(8,629)	(11,896)	2,351	(1,284)	(3,896)*	2,455
Carbon/Lehigh Counties	(8,166)	(6,278)	904	(2,891)*	(2,889)	(1,523)
Erie County	(7,929)	(3,454)	1,946	(4,344)*	(2,529)	16

* Changes between 2000 and 2005-2006 are statistically significant at the 90 percent confidence level.

Federal Reserve Bank of Philadelphia calculations based on 2000 CHAS data, U.S. Census Bureau and HUD, and 2005-06 ACS data, U.S. Census Bureau.

CHAPTER 5

IMPLICATIONS FOR POLICYMAKERS AND SUGGESTED RESEARCH

Next Steps

This study assesses the housing needs of Pennsylvania's lower-income renter households to help readers better understand how their needs vary across the state. Looking at the incidence of housing problems in this group in 2000 and again in 2005-06, we also explore the extent of shortages in rental housing that is both affordable and available to lower-income renters in those two periods. We found that housing problems, and especially the difficult problem of households paying more than half of their income for housing, were most common among ELI renters, the lowest income group. Rental housing shortages were also most severe for this income group. Between 2000 and 2005-06, the state's total shortage of affordable and available housing for ELI renters rose from approximately 170,000 to 220,000.

While this study was not intended to provide strategy recommendations, it offers a valuable methodology for quantifying rental housing needs.[58] State and local policymakers can use the tools provided in this study to help develop local rental housing strategies. A key finding of this study — that rental housing markets within Pennsylvania differ markedly in the extent of the shortage of units affordable and available to ELI and VLI renters, as well as in vacancy rates and population growth trends — reinforces the importance of choosing strategies that are sensitive to local housing market conditions.[59]

In particular, a shortage of affordable and available units does not necessarily mean that more rental housing units are needed. In some parts of Pennsylvania, the population is declining or stagnant, and vacancy rates are high. In these areas, housing prices may be quite low by statewide or regional standards; incomes, however, may be even lower, strongly suggesting that problems here may be more a function of a lack of income than of a lack of housing. The use of vouchers, if enough are available, may be sufficient to address most affordable rental housing needs. Vouchers are generally acknowledged to be the most cost-effective housing strategy in situations in which excessive cost burden is the primary housing problem and a sufficient number of units are

[58] Many other studies have analyzed strategies and provided recommendations on how to meet lower-income rental housing needs. In summarizing the past 50 years of federal housing programs, Charles Orlebeke (2000) concluded that a "three-pronged strategy of [housing] vouchers, block grants, and tax credits has achieved reasonably good results and attracted an unusual degree of political consensus." Strategies have also been analyzed at the state and local levels for Pennsylvania, most recently by John Kromer in his 2009 report.

[59] Bogdon, Silver, and Turner (1993) discuss more completely how local variations in household growth, housing conditions, household composition, shortages of affordable housing, and available resources should be evaluated to develop priorities for investing in housing resources.

available at moderate rents. The effectiveness of vouchers in reducing or eliminating cost burdens in any community will depend on whether an adequate stock of units of adequate quality is available at the local FMRs established by HUD.[60]

In other areas of Pennsylvania, where there are more severe affordable and available rental housing shortages, a growing population, and low vacancy rates, different rental housing strategies may be needed, which may involve expanding the affordable rental housing supply. The two largest federal supply-side programs, the low income housing tax credit (LIHTC) and HOME programs, do not target funding to ELI renters, the group that consistently faces the most severe affordable housing shortages. As noted in the most recent HUD Worst Case Needs report, "While these units are often more affordable than market-rate units, without additional rent subsidies (such as vouchers), ELI families would often have to pay well over 30 percent of their incomes for units in these programs."[61] A local housing strategy might attempt to coordinate use of vouchers in conjunction with supply-side programs to increase the likelihood that an increased supply of units will decrease cost burden among ELI renters. The National Housing Trust Fund, authorized by Congress in 2008, if funded, may become another supply-side program to help fill this gap, since its resources are to be targeted to housing affordable to ELI households.

This study, and the general observations made above, should be seen as a starting point for the more focused, detailed investigations that should be conducted when developing affordable rental housing strategies in a particular community. Some specific questions that should be pursued in such an investigation include:

- ***To what extent do units determined to be affordable and available actually meet the needs of the local lower-income renters in need of affordable housing?*** While the study looks at aggregate households and rental units, the particular characteristics of the lower-income renter population should be considered in both assessing housing needs and developing effective strategies. In particular, state and local policymakers need to know more about the make-up of the ELI renter population. This population is highly diverse and is segmented by household size, number of children, age, and disability. Some segments are likely to be better housed than others, a pattern that may vary from area to area. One area may have a surplus of small units but too few units for large families;[62] other areas may have shortages of housing that meets the needs of seniors or individuals with disabilities.

- ***What is the quality of the rental housing stock that is affordable and available to lower-income households?*** One of the most difficult issues in framing affordable housing strategies is assessing the condition of the available and affordable housing stock. Many units, particularly in areas with high vacancy rates, that may rent for affordable prices may be in such poor condition that they are not suitable living environments, and the cost of

[60] See footnote 48 for a more detailed discussion of this point. In addition, see Appendix B for a discussion of FMRs and affordable rental housing strategies, and Appendix D, Table D.1, for FMRs by county.

[61] See HUD (2007), p. 9.

[62] Nationally there are severe shortages of units for large households. Many rental housing units with three or more bedrooms are occupied by families that don't need that many bedrooms. See Appendix B and HUD (2007), Chapter 4.

upgrading them to an adequate standard may be prohibitive. Where the quantity of housing appears to be adequate but quality is a problem, local policymakers may want to give priority to rehabilitation, focusing on that part of the affordable stock that can be rendered habitable at reasonable cost. Unfortunately, most census data, including the ACS, do not enable a user to determine the quality of a jurisdiction's housing stock. As a result, state and local policymakers may have to use other means of assessing the quality of their housing stock, including code enforcement data and field surveys.

❑ ***Are the units that are currently affordable and available to lower-income renters and which meet basic quality standards likely to remain so in the future? This is a two-part issue, involving both preserving those units physically and preserving them as affordable housing.***

Preserving the Older Rental Stock. Ensuring that the existing rental stock is maintained in good condition is particularly important. In Pennsylvania, where the majority of rental housing units are found in single-family and small multifamily structures, state and local policymakers may want to pay particular attention to these properties, increasing access to financial resources for their owners, and providing incentives along with targeted code enforcement to motivate responsible property maintenance.[63] Since many of these properties are likely to be older structures, programs to increase energy efficiency and weatherize these properties are likely to be beneficial in making housing more affordable to tenants, making it more cost-effective for landlords, and prolonging the properties' useful life.

Preserving Affordability. Units that are affordable today may not stay that way. Privately owned subsidized rental housing developments may go to market as their lower-income occupancy restrictions expire. In addition, if demand increases in a particular area, rents may increase in private-market housing that is affordable today, to the point where it becomes too expensive for lower-income households. The extent to which affordability is at risk is a function of housing demand, which is far greater in some parts of Pennsylvania than in others. Where demand pressures are pushing up the price of private-market rental housing or motivating the owners of subsidized housing to bring their properties to market, state and local policymakers may want to work with nonprofits (local and national) and others to find ways to preserve the units as part of the affordable rental housing stock.

❑ ***When a local housing strategy includes an increase in rental housing supply, is local planning capacity sufficient to take advantage of opportunities and meet challenges?*** The process of developing additional rental housing, particularly if it is to be affordable to ELI households, is a complex and multifaceted one. The specialized development capacity and financial resources to acquire sites and plan new developments, while present to some degree in the state's major cities, may be much more limited in suburban or rural

[63] See Mallach (2007). In this publication, Mallach includes an analysis of the distribution and characteristics of rental housing stock, characteristics of the owners of one- to four-unit rental structures, and the market factors affecting these rental properties. Mallach also addresses policy implications for one- to four-unit rental structures.

areas. Sites that meet reasonable location criteria for affordable housing may be in short supply in some areas, and where they are available, land-use regulations may be an obstacle. Finally, since, as mentioned above, the major federal supply-side programs do not target ELI households, it may be necessary to leverage multiple funding sources, combining capital funding such as LIHTC and HOME with vouchers, to meet the most severe lower-income rental housing needs. Coordination across programs and agencies will be essential to leverage funding sources and maximize the rental housing affordable and available to the lowest income households.

❑ ***How will policymakers address the rental housing needs that are resulting from the mortgage foreclosure crisis?*** The foreclosure crisis has brought to light a host of additional questions that may have to be addressed by policymakers, including:

- ❑ How is the foreclosure crisis affecting different local affordable rental housing markets in Pennsylvania?
- ❑ Is the crisis triggering a greater need for affordable rental units as homeowners losing their homes to foreclosure seek alternative housing arrangements?
- ❑ Are foreclosed owner-occupied properties being converted to rental units? If so, how is that affecting the quality and affordability of the rental housing stock?
- ❑ What is happening to renters residing in foreclosed properties?
- ❑ Have changes in demand driven by foreclosure affected rent levels in areas heavily hit by foreclosures, and if so, in what direction?

What is actually happening is by no means clear and, in any event, is likely to vary from area to area, based not only on the intensity of local foreclosure activity but on the basis of underlying housing and economic conditions. As the above questions suggest, while the crisis may be intensifying rental demand, it may also, under some conditions, be expanding the rental housing stock. In either case, it is part of the reality of these times and cannot be disregarded in the process of framing effective local housing strategies.

Suggested Research

Some of the questions posed in the previous section can be addressed through existing research and further analysis of available data, while other questions will require additional research and analysis of new data as they become available. Still others, particularly those dealing with the effects of the foreclosure crisis, are moving targets, with conditions changing month by month.

One useful extension of this study would be to more thoroughly analyze who the ELI and VLI renters are within Pennsylvania and, having identified their salient features, better define the characteristics of housing that best meets their needs. Much of this can be accomplished using existing data, including indicators such as the distribution of units in the rental stock by number of bedrooms, or of households by type and size (i.e., large families, seniors, individuals with disabilities, etc.). Differentiating the data by these indicators would provide not only a more thorough analysis of housing needs at state and sub-state levels but also one of more use to local housing planners and developers.

Along similar lines, another useful extension of this study would be to use existing data to analyze housing affordability needs and conditions of

Pennsylvania owners. Lower-income homeowners also have cost burdens and face shortages of affordable housing. In a recent report, the Joint Center for Housing Studies at Harvard University noted that, nationally, over 60 percent of the bottom quartile of homeowners pay more than 30 percent of their incomes for housing.[64]

Where policymakers determine that additional affordable rental units are needed, that decision may trigger additional issues that may call for further locally oriented research and assessment. In addition to the traditional tools of site and land-use analysis, an analysis of where new units should be located in relation to available and projected jobs can be valuable, in light of the frequent mismatch between available jobs and affordable and available housing units.[65]

A further important area of research is to look at how affordable housing needs and shortages, for both owners and renters, are changing as a result of the mortgage foreclosure crisis. In light of the urgency of this issue and the time lag in the availability of much national data, local planners and researchers should explore locally generated data sources, such as county-level transaction and foreclosure filing data, to develop timely local assessments of these issues. A number of models are emerging around the United States, including the NEO CANDO (Northeast Ohio Community and Neighborhood Data for Organizing) system at Case Western Reserve University in Cleveland.[66]

New data sets are becoming available that will further assist state and local policymakers in developing their affordable housing strategies. In December 2008, the Census Bureau introduced the first three-year estimates of ACS data, starting with the years 2005-07. These estimates are based on a larger sample size and are more reliable than data based on one or two years when analyzing information for areas with small populations.[67] Later this year, the Census Bureau plans to release five-year estimates annually, beginning with 2005-09, for still greater accuracy at the small-area level. The methodology used in this study can easily be applied to the ACS multi-year data as they become available.

Moreover, in the near future it will become easier for state and local planners to apply the methodology used in this study. HUD is also funding additional ACS data mining that will include data by HAMFI thresholds, similar to CHAS data. Once these special tabulations become available, it will be much easier to identify trends in housing affordability and availability on a regular basis. This study can be a valuable model for processing ACS micro-data in the future to investigate issues such as housing needs of the disabled that are not directly addressed by the special CHAS-like tabulations.

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[64] See Joint Center for Housing Studies (2008), p. 23.

[65] See Lipman (2006), p. iii. This study documents the extent and effects of the mismatch between job and housing locations, noting that "in their search for lower cost housing, working families often locate far from their place of work, dramatically increasing their transportation costs and commute times. Indeed, for many such families, their transportation costs exceed their housing costs."

[66] NEO CANDO is a free social and economic data system of the Center on Urban Poverty and Community Development at Case Western. See: http://neocando.case.edu/cando/index.jsp.

[67] For a more detailed discussion on ACS data and sample sizes, refer to: http://www.census.gov/acs/www/UseData/mye/myechoosing.html.

Overview

There are 67 counties in Pennsylvania, some of which are urban and others rural. Pennsylvania is home to the major cities of Philadelphia (Philadelphia County) and Pittsburgh (in Allegheny County), in the Southeast and Southwest sections of the state, respectively. In addition, the state has a number of other key cities located within its 16 metropolitan statistical areas (MSAs), as indicated in Map A.1.[1] These cities include the state capital, Harrisburg, as well as Allentown, Bethlehem, Erie, Lancaster, Reading, and Scranton.

[1] There are 16 MSAs in Pennsylvania. Twelve MSAs are fully contained within Pennsylvania: Altoona, Erie, Harrisburg-Carlisle, Johnstown, Lancaster, Lebanon, Pittsburgh, Reading, Scranton-Wilkes-Barre, State College, Williamsport, and York-Hanover. Portions of four other MSAs are located within the state: Allentown-Bethlehem-Easton, New York-Northern New Jersey-Long Island, Philadelphia-Camden-Wilmington, and Youngstown-Warren-Boardman. See http://www.whitehouse.gov/omb/assets/omb/bulletins/fy2009/09-01.pdf.

MAP A.1
Counties and MSAs in Pennsylvania

Defining "Rural"

The term rural can be defined in several ways.[a] The Census Bureau defines urban areas (UAs) and urban clusters (UCs) based on population density and considers rural areas as areas falling outside the UAs and UCs. The Census Bureau explains that "geographic entities, such as census tracts, counties, metropolitan areas, and the territory outside metropolitan areas, often are 'split' between urban and rural territory, and the population and housing units they contain often are partly classified as urban and partly classified as rural."[b]

Because the Census Bureau does not define Pennsylvania counties as either rural or urban, this study uses the Center for Rural Pennsylvania's definition. The Center for Rural Pennsylvania classifies 48 of Pennsylvania's 67 counties as rural based on population density. Counties that have 274 persons or more per square mile are considered urban.[c] The rural Pennsylvania counties are italicized in all tables in this section.

[a] See Cromartie and Bucholtz (2008) for a discussion of different definitions of rural.

[b] More detailed information is available on the Census Bureau's website: http://www.census.gov/geo/www/ua/ua_2k.html.

[c] The list of rural counties in Pennsylvania, as well as the methodology used, is available on the Center for Rural Pennsylvania's website: http://www.ruralpa.org/rural_urban.html#maps.

Much of the rest of Pennsylvania is considered rural, particularly the northern and middle sections. The rental housing stock in rural areas often differs from the stock in urban areas, such as Philadelphia, Pittsburgh, and Harrisburg.

One interesting area of the state is Centre County, home to the main campus of Pennsylvania State University (Penn State), Pennsylvania's largest university and one of the largest public universities in the nation. As its name suggest, Centre County is located in the middle of the state. Likely because of the presence of this large university, the area has rental housing characteristics and needs that resemble those of some of the large metropolitan areas in the state, even though much of the rest of Centre County is quite rural.

Housing Tenure

Pennsylvania's rental households are heavily concentrated in urban areas, reflecting both the larger populations in urban areas and the higher propensity to rent in these areas. Over 75 percent of rental housing units in Pennsylvania are found within Pennsylvania's 19 urban counties, while only 25 percent are found within the 48 rural counties.

Philadelphia County has the highest number of renter households, 18 percent of the state's total, followed by Allegheny County (Pittsburgh), with 13 percent. Nearly half of Pennsylvania's occupied rental housing stock is found within only six of Pennsylvania's 67 counties: Philadelphia, Allegheny, Montgomery, Bucks, Delaware, and Lancaster. The city of Philadelphia and its surrounding four suburbs contain over one-third of Pennsylvania's renter-occupied housing stock.[2]

Counties with particularly high concentrations of renter households are generally urban and contain one of Pennsylvania's key cities. In terms of the percentage of the counties' households that are renters, the median percent is 30.3 percent for urban counties and 24.6 percent for rural counties, excluding Centre County.

[2] The city and county of Philadelphia constitute the same area. The Philadelphia metropolitan division consists of the five Pennsylvania counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia and includes the principal city of Philadelphia. See: http://www.whitehouse.gov/omb/assets/omb/bulletins/fy2009/09-01.pdf.

Philadelphia County has the highest percentage of renter households, followed closely by Centre County, with its large student population (41 and 40 percent, respectively). Dauphin, Allegheny, Lackawanna, and Lehigh counties are next. These four counties are home to the cities of Harrisburg, Pittsburgh, Scranton, and Allentown, respectively.

In the rural counties of Pike, Forest, Wayne, Bedford, Perry, Sullivan, and Susquehanna, 20 percent of households or less are renters.

TABLE A.1

Occupied Housing Units

	Total Occupied Housing Units	Owner-Occupied Units	Renter-Occupied Units	% That Are Renters
United States	**105,480,101**	**69,816,513**	**35,663,588**	**34%**
Pennsylvania	**4,777,003**	**3,406,167**	**1,370,836**	**29%**
Adams County	33,652	25,853	7,799	23%
Allegheny County	537,150	360,021	177,129	33%
Armstrong County	29,005	22,417	6,588	23%
Beaver County	72,576	54,379	18,197	25%
Bedford County	19,768	15,850	3,918	20%
Berks County	141,570	104,693	36,877	26%
Blair County	51,518	37,561	13,957	27%
Bradford County	24,453	18,457	5,996	25%
Bucks County	218,725	169,177	49,548	23%
Butler County	65,862	51,245	14,617	22%
Cambria County	60,531	45,242	15,289	25%
Cameron County	2,465	1,848	617	25%
Carbon County	23,701	18,525	5,176	22%
Centre County	49,323	29,673	19,650	40%
Chester County	157,905	120,500	37,405	24%
Clarion County	16,052	11,592	4,460	28%
Clearfield County	32,785	25,950	6,835	21%
Clinton County	14,773	10,778	3,995	27%
Columbia County	24,915	17,993	6,922	28%
Crawford County	34,678	26,155	8,523	25%
Cumberland County	83,015	60,635	22,380	27%
Dauphin County	102,670	67,116	35,554	35%
Delaware County	206,320	148,293	58,027	28%
Elk County	14,124	11,211	2,913	21%
Erie County	106,507	73,708	32,799	31%
Fayette County	59,969	43,859	16,110	27%
Forest County	2,000	1,652	348	17%
Franklin County	50,633	37,469	13,164	26%
Fulton County	5,660	4,473	1,187	21%
Greene County	15,060	11,158	3,902	26%

TABLE CONTINUED ON PAGE 50 ➔

TABLE A.1 CONTINUED

	Total Occupied Housing Units	Owner-Occupied Units	Renter-Occupied Units	% That Are Renters
United States	**105,480,101**	**69,816,513**	**35,663,588**	**34%**
Pennsylvania	**4,777,003**	**3,406,167**	**1,370,836**	**29%**
Huntingdon County	16,759	12,999	3,760	22%
Indiana County	34,123	24,491	9,632	28%
Jefferson County	18,375	14,177	4,198	23%
Juniata County	8,584	6,671	1,913	22%
Lackawanna County	86,218	58,284	27,934	32%
Lancaster County	172,560	122,264	50,296	29%
Lawrence County	37,091	28,660	8,431	23%
Lebanon County	46,551	33,863	12,688	27%
Lehigh County	121,906	83,896	38,010	31%
Luzerne County	130,687	91,880	38,807	30%
Lycoming County	47,003	32,653	14,350	31%
McKean County	18,024	13,482	4,542	25%
Mercer County	46,712	35,613	11,099	24%
Mifflin County	18,413	13,639	4,774	26%
Monroe County	49,454	38,742	10,712	22%
Montgomery County	286,098	210,237	75,861	27%
Montour County	7,085	5,155	1,930	27%
Northampton County	101,541	74,451	27,090	27%
Northumberland County	38,835	28,577	10,258	26%
Perry County	16,695	13,288	3,407	20%
Philadelphia County	590,071	349,651	240,420	41%
Pike County	17,433	14,787	2,646	15%
Potter County	7,005	5,421	1,584	23%
Schuylkill County	60,530	47,177	13,353	22%
Snyder County	13,654	10,451	3,203	23%
Somerset County	31,222	24,368	6,854	22%
Sullivan County	2,660	2,138	522	20%
Susquehanna County	16,529	13,144	3,385	20%
Tioga County	15,925	12,125	3,800	24%
Union County	13,178	9,671	3,507	27%
Venango County	22,747	17,378	5,369	24%
Warren County	17,696	13,847	3,849	22%
Washington County	81,130	62,570	18,560	23%
Wayne County	18,350	14,772	3,578	19%
Westmoreland County	149,813	116,847	32,966	22%
Wyoming County	10,762	8,499	2,263	21%
York County	148,219	112,816	35,403	24%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H17, http://factfinder.census.gov/home/saff/main.html?_lang=en

Income of Renters

There is a significant disparity in income between owners and renters throughout the country. Owner households earn nearly twice as much as renter households nationally and in Pennsylvania. However, within Pennsylvania, there do not seem to be any regional patterns in renter/owner income disparities.

Counties with the greatest income disparities between renters and owners include Centre, Greene, and Lawrence counties. Juniata, Pike, and Sullivan counties have more equal income distributions, but even in these counties, the median renter's income is two-thirds or less of the median owner's income.

TABLE A.2

Median Household Income in 1999 by Tenure

	Occupied Housing Units	Owner Households	Renter Households	Renter Income as Percentage of Owner Income
United States	**$41,851**	**$51,323**	**$27,362**	**53%**
Pennsylvania	**$39,987**	**$47,611**	**$24,601**	**52%**
Adams County	$42,913	$48,228	$28,360	59%
Allegheny County	$38,154	$48,066	$22,791	47%
Armstrong County	$31,694	$35,975	$20,006	56%
Beaver County	$36,963	$42,896	$22,323	52%
Bedford County	$32,647	$35,737	$21,337	60%
Berks County	$44,456	$51,927	$26,648	51%
Blair County	$32,846	$39,161	$18,449	47%
Bradford County	$34,986	$39,655	$21,989	55%
Bucks County	$59,443	$67,604	$36,426	54%
Butler County	$42,248	$48,791	$23,528	48%
Cambria County	$30,192	$34,925	$17,827	51%
Cameron County	$32,077	$35,880	$21,458	60%
Carbon County	$35,176	$39,586	$21,802	55%
Centre County	$36,295	$49,642	$20,365	41%
Chester County	$65,037	$75,403	$38,516	51%
Clarion County	$30,984	$36,821	$17,169	47%
Clearfield County	$31,407	$35,724	$18,573	52%
Clinton County	$30,890	$37,190	$17,360	47%
Columbia County	$33,944	$39,944	$20,762	52%
Crawford County	$33,688	$39,105	$20,303	52%
Cumberland County	$46,628	$54,509	$29,532	54%
Dauphin County	$41,496	$51,409	$27,280	53%
Delaware County	$49,742	$59,597	$30,319	51%
Elk County	$37,769	$43,079	$21,488	50%
Erie County	$36,578	$44,782	$21,072	47%
Fayette County	$27,582	$33,111	$16,242	49%
Forest County	$27,284	$30,357	$15,938	53%
Franklin County	$40,379	$46,100	$27,139	59%
Fulton County	$35,060	$38,435	$22,482	58%

TABLE CONTINUED ON PAGE 52 ➔

TABLE A.2 CONTINUED

	Occupied Housing Units	Owner Households	Renter Households	Renter Income as Percentage of Owner Income
United States	**$41,851**	**$51,323**	**$27,362**	**53%**
Pennsylvania	**$39,987**	**$47,611**	**$24,601**	**52%**
Greene County	$30,235	$36,463	$16,203	44%
Huntingdon County	$33,274	$37,626	$21,091	56%
Indiana County	$30,214	$36,449	$16,627	46%
Jefferson County	$31,575	$36,138	$17,275	48%
Juniata County	$34,820	$38,234	$25,694	67%
Lackawanna County	$34,386	$42,701	$20,846	49%
Lancaster County	$45,464	$53,136	$29,748	56%
Lawrence County	$33,147	$39,264	$17,118	44%
Lebanon County	$40,738	$48,115	$25,709	53%
Lehigh County	$43,413	$53,713	$26,041	48%
Luzerne County	$33,616	$40,640	$20,630	51%
Lycoming County	$34,044	$40,930	$21,348	52%
McKean County	$33,177	$39,132	$18,810	48%
Mercer County	$34,619	$39,975	$20,571	51%
Mifflin County	$31,867	$36,544	$18,453	50%
Monroe County	$46,341	$51,248	$29,054	57%
Montgomery County	$60,617	$70,631	$37,946	54%
Montour County	$37,747	$42,426	$24,524	58%
Northampton County	$44,993	$53,104	$26,456	50%
Northumberland County	$31,243	$36,475	$18,867	52%
Perry County	$41,817	$46,116	$26,631	58%
Philadelphia County	$30,431	$37,773	$21,365	57%
Pike County	$44,047	$47,412	$30,174	64%
Potter County	$32,179	$36,463	$21,444	59%
Schuylkill County	$32,580	$36,940	$19,372	52%
Snyder County	$35,996	$40,315	$23,007	57%
Somerset County	$30,715	$34,712	$18,924	55%
Sullivan County	$30,000	$33,669	$20,741	62%
Susquehanna County	$33,689	$37,500	$20,765	55%
Tioga County	$31,928	$36,885	$19,091	52%
Union County	$40,248	$46,915	$21,763	46%
Venango County	$32,406	$37,661	$18,193	48%
Warren County	$35,683	$40,122	$21,848	54%
Washington County	$37,437	$43,826	$20,452	47%
Wayne County	$34,202	$37,840	$21,201	56%
Westmoreland County	$37,095	$42,651	$21,847	51%
Wyoming County	$36,610	$40,867	$23,281	57%
York County	$45,193	$51,484	$27,648	54%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table HCT12, http://factfinder.census.gov/home/saff/main.html?_lang=en

Age of Rental Housing Stock

The median age of the rental housing stock in Pennsylvania is considerably greater than the national median (Table A.3). Older rental housing is found throughout the state in both rural and urban areas. The Northeast region of the state (Carbon, Schuylkill, Sullivan, Lackawanna, Columbia, and Luzerne counties) has a greater concentration of counties with older rental units.

Carbon, Schuylkill, and Sullivan counties have the oldest rental stock, 1940 being the median year in which the rental housing units were built. These counties are followed by Lackawanna and Northumberland counties, for which the median year is 1943.

Pike County (also in the Northeast region) has the newest rental housing stock; its median year built is 1975, followed by Monroe, Centre, Bucks, Chester, and Forest counties.

In 49 out of the 67 counties in Pennsylvania, the median age of the renter-occupied housing stock is higher than that of the owner-occupied housing stock, and in four counties the renter- and owner-occupied housing stock has the same median age. The greatest differences are found in Adams, Wayne, and Snyder counties, where the disparities in median age between renter-occupied and owner-occupied units are 22, 18, and 17 years, respectively.

TABLE A.3

Median Year Structure Was Built

	Total Occupied Units	Owner-Occupied Units	Renter-Occupied Units
United States	**1971**	**1971**	**1969**
Pennsylvania	**1957**	**1958**	**1955**
Adams County	1972	1975	1953
Allegheny County	1953	1953	1954
Armstrong County	1953	1953	1949
Beaver County	1955	1955	1952
Bedford County	1964	1966	1953
Berks County	1959	1962	1951
Blair County	1951	1951	1952
Bradford County	1959	1961	1954
Bucks County	1970	1971	1968
Butler County	1971	1972	1966
Cambria County	1949	1949	1949
Cameron County	1950	1949	1956
Carbon County	1948	1952	1940
Centre County	1971	1972	1971
Chester County	1974	1976	1967
Clarion County	1959	1958	1960
Clearfield County	1956	1958	1951
Clinton County	1961	1960	1962
Columbia County	1957	1961	1948

	Total Occupied Units	Owner-Occupied Units	Renter-Occupied Units
United States	**1971**	**1971**	**1969**
Pennsylvania	**1957**	**1958**	**1955**
Crawford County	1957	1959	1951
Cumberland County	1969	1970	1965
Dauphin County	1963	1962	1964
Delaware County	1954	1953	1958
Elk County	1955	1955	1952
Erie County	1957	1958	1955
Fayette County	1952	1952	1951
Forest County	1960	1959	1967
Franklin County	1968	1971	1956
Fulton County	1971	1972	1963
Greene County	1955	1955	1956
Huntingdon County	1962	1965	1953
Indiana County	1964	1965	1964
Jefferson County	1952	1952	1951
Juniata County	1967	1969	1960
Lackawanna County	1943	1944	1943
Lancaster County	1968	1971	1960
Lawrence County	1952	1952	1952
Lebanon County	1960	1964	1951

TABLE CONTINUED ON PAGE 54 ➔

TABLE A.3 CONTINUED

	Total Occupied Units	Owner-Occupied Units	Renter-Occupied Units
United States	**1971**	**1971**	**1969**
Pennsylvania	**1957**	**1958**	**1955**
Lehigh County	1960	1960	1961
Luzerne County	1947	1947	1948
Lycoming County	1955	1958	1948
McKean County	1945	1945	1945
Mercer County	1955	1955	1956
Mifflin County	1956	1959	1948
Monroe County	1980	1982	1971
Montgomery County	1963	1962	1964
Montour County	1967	1971	1957
Northampton County	1959	1962	1951
Northumberland County	1944	1944	1943
Perry County	1971	1973	1957
Philadelphia County	1945	1943	1950
Pike County	1981	1982	1975
Potter County	1956	1957	1948
Schuylkill County	1940	1940	1940
Snyder County	1966	1970	1953
Somerset County	1955	1956	1953
Sullivan County	1951	1954	1940
Susquehanna County	1966	1968	1956
Tioga County	1963	1964	1957
Union County	1968	1971	1956
Venango County	1951	1951	1948
Warren County	1952	1953	1945
Washington County	1956	1957	1950
Wayne County	1972	1974	1956
Westmoreland County	1959	1959	1956
Wyoming County	1970	1971	1961
York County	1968	1970	1958

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H37, http://factfinder.census.gov/home/saff/main.html?_lang=en

Renter Households by Age

Pennsylvania also has a population that is older than the national average. Given this fact, it is not surprising that Pennsylvania renters are older than renters in the nation.

Elderly renters are located throughout the state. Forest County has the highest percentage of elderly renters: 34 percent of renter-occupied units are occupied by heads of household who are 65 years of age or older. Moreover, over one-fifth of renter households in this county are occupied by renters who are at least 75 years old.[3] Forest County is followed by Lawrence, Northumberland, Schuylkill, and Luzerne counties.

Conversely, Centre County has the smallest percentage of renter households with a head of household who is 65 or older (9 percent). It is followed by Monroe and Pike counties (14 and 15 percent, respectively), the two counties with the largest increases in population since 1990.

Because of the presence of Penn State, Centre County also has the highest percentage of renter-occupied households under the age of 25, approximately 40 percent. It is followed by Indiana and Clarion counties.

[3] It is important to note that while Forest County has the highest percentage of elderly renters, it also has the smallest population and fewest renter-occupied housing units out of all counties in the state.

TABLE A.4

Renter Households by Age

	75 Years and Over	65 to 74 Years	55 to 64 Years	45 to 54 Years	35 to 44 Years	25 to 34 Years	15 to 24 Years
United States	**8%**	**6%**	**8%**	**15%**	**22%**	**28%**	**12%**
Pennsylvania	**12%**	**8%**	**9%**	**14%**	**20%**	**25%**	**11%**
Adams County	12%	6%	8%	15%	22%	25%	12%
Allegheny County	13%	9%	8%	14%	19%	26%	12%
Armstrong County	16%	9%	11%	15%	20%	21%	8%
Beaver County	13%	10%	10%	15%	21%	22%	9%
Bedford County	15%	10%	8%	14%	20%	26%	7%
Berks County	13%	8%	9%	14%	20%	25%	12%
Blair County	13%	9%	10%	14%	20%	23%	10%
Bradford County	13%	9%	10%	13%	21%	24%	10%
Bucks County	11%	8%	9%	15%	22%	27%	8%
Butler County	16%	8%	7%	14%	19%	24%	12%
Cambria County	16%	11%	11%	16%	17%	21%	8%
Cameron County	20%	7%	10%	14%	19%	24%	6%
Carbon County	15%	10%	9%	14%	24%	21%	9%
Centre County	5%	4%	4%	7%	12%	28%	40%
Chester County	10%	7%	9%	13%	22%	29%	11%
Clarion County	11%	8%	7%	14%	17%	20%	23%
Clearfield County	16%	8%	9%	11%	22%	23%	10%
Clinton County	15%	12%	8%	10%	16%	21%	19%
Columbia County	12%	7%	7%	12%	20%	23%	18%
Crawford County	13%	9%	9%	14%	20%	24%	12%
Cumberland County	12%	7%	7%	14%	20%	28%	13%
Dauphin County	9%	8%	9%	15%	23%	27%	10%
Delaware County	12%	8%	9%	14%	22%	27%	9%
Elk County	17%	10%	10%	12%	18%	24%	10%
Erie County	12%	8%	7%	14%	20%	25%	14%
Fayette County	12%	10%	10%	15%	21%	22%	9%
Forest County	21%	13%	13%	15%	20%	17%	2%
Franklin County	13%	8%	8%	13%	20%	28%	10%
Fulton County	10%	9%	10%	12%	24%	24%	11%
Greene County	11%	9%	10%	15%	22%	22%	11%
Huntingdon County	13%	9%	10%	15%	19%	21%	12%
Indiana County	10%	7%	7%	11%	15%	22%	26%
Jefferson County	17%	10%	8%	14%	20%	22%	9%
Juniata County	15%	9%	9%	13%	21%	22%	10%
Lackawanna County	16%	12%	10%	13%	19%	21%	8%
Lancaster County	13%	7%	9%	13%	21%	25%	12%
Lawrence County	19%	10%	9%	15%	19%	19%	9%
Lebanon County	14%	9%	8%	14%	22%	24%	10%
Lehigh County	14%	8%	8%	14%	20%	25%	10%
Luzerne County	16%	12%	10%	14%	18%	21%	9%
Lycoming County	12%	8%	8%	15%	21%	23%	13%

TABLE CONTINUED ON PAGE 56 ➔

TABLE A.4 CONTINUED

	75 Years and Over	65 to 74 Years	55 to 64 Years	45 to 54 Years	35 to 44 Years	25 to 34 Years	15 to 24 Years
United States	**8%**	**6%**	**8%**	**15%**	**22%**	**28%**	**12%**
Pennsylvania	**12%**	**8%**	**9%**	**14%**	**20%**	**25%**	**11%**
McKean County	16%	8%	10%	13%	19%	23%	11%
Mercer County	13%	10%	9%	15%	19%	23%	11%
Mifflin County	12%	11%	10%	15%	16%	22%	13%
Monroe County	8%	6%	9%	16%	27%	23%	11%
Montgomery County	14%	8%	8%	13%	20%	29%	8%
Montour County	11%	8%	8%	12%	26%	25%	10%
Northampton County	13%	8%	10%	14%	20%	25%	11%
Northumberland County	18%	11%	9%	14%	19%	21%	9%
Perry County	11%	9%	8%	16%	19%	27%	10%
Philadelphia County	9%	8%	9%	14%	22%	28%	12%
Pike County	7%	8%	9%	17%	31%	20%	8%
Potter County	15%	8%	10%	11%	20%	25%	11%
Schuylkill County	16%	13%	10%	14%	18%	22%	9%
Snyder County	14%	8%	10%	13%	17%	23%	15%
Somerset County	15%	11%	9%	15%	18%	22%	10%
Sullivan County	17%	9%	9%	12%	22%	20%	11%
Susquehanna County	14%	9%	10%	13%	22%	22%	10%
Tioga County	12%	8%	9%	12%	19%	24%	15%
Union County	19%	7%	10%	13%	15%	24%	13%
Venango County	12%	11%	9%	14%	22%	22%	10%
Warren County	14%	8%	8%	17%	20%	25%	8%
Washington County	15%	10%	9%	14%	19%	22%	10%
Wayne County	14%	8%	11%	15%	22%	22%	7%
Westmoreland County	14%	9%	10%	15%	20%	23%	8%
Wyoming County	8%	9%	11%	15%	22%	24%	11%
York County	10%	7%	8%	14%	22%	27%	12%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H14, http://factfinder.census.gov/home/saff/main.html?_lang=en

Renter-Occupied Units: Structure Size

Over half of Pennsylvania's renter-occupied housing units are in small structures (four units or less). At the county level, however, there is more variation in structure size. In general, large urban areas, such as the Philadelphia metropolitan division and Allegheny County (which contains Pittsburgh), tend to have more rental units in large structures (10 units or more), while rural areas have more rental units in small structures.[4]

[4] The Philadelphia metropolitan division is part of the Philadelphia-Camden-Wilmington MSA and includes five counties: Philadelphia, Bucks, Chester, Delaware, and Montgomery. The county and city of Philadelphia constitute the same area. Nearly 45 percent of all structures with 10 or more units statewide are located in this metropolitan division. In addition, several of these counties have a high percentage of rental units in large structures, particularly Bucks and Montgomery counties (both 41 percent). Philadelphia city has more rental units in large structures (68,500) than any other county in the state, followed by Allegheny County, which has 57,600.

Centre County, while rural, is an exception. Centre County has the highest percentage of structures with 10 or more units (45 percent), likely because of the presence of Penn State and the need to house both the student population and workers at the university and related service industries. It is followed by the four suburban counties in the Philadelphia region: Montgomery and Bucks (both 41 percent), Delaware (36 percent), and Chester (33 percent). Allegheny and Lehigh counties, which include the cities of Pittsburgh and Allentown, respectively, also have a high percentage of rental housing stock in structures with 10 or more units.

Pike County has the highest percentage of single-unit (attached or detached) structures at 71 percent, followed by Monroe (57 percent), Forest (53 percent), and Juniata and Sullivan (both approximately 51 percent).

Fulton County has the highest percentage of mobile homes (27 percent), far exceeding the state average of 3 percent of renter-occupied housing units being mobile homes. In general, there is a greater incidence of renters occupying mobile homes in rural counties than in urban counties.

TABLE A.5

Renter-Occupied Units by Structure Size*

	1 Unit, Detached	1 Unit, Attached	2 Units	3 or 4 Units	5 to 9 Units	10 to 19 Units	20+ Units	Mobile Homes
United States	**24%**	**6%**	**9%**	**12%**	**12%**	**11%**	**22%**	**4%**
Pennsylvania	**18%**	**16%**	**14%**	**14%**	**11%**	**8%**	**17%**	**3%**
Adams County	31%	14%	16%	15%	9%	4%	4%	9%
Allegheny County	18%	12%	13%	13%	13%	11%	22%	0%
Armstrong County	44%	6%	13%	9%	6%	2%	9%	12%
Beaver County	31%	7%	13%	15%	12%	6%	12%	4%
Bedford County	45%	3%	10%	12%	5%	4%	5%	16%
Berks County	18%	19%	13%	17%	11%	8%	13%	2%
Blair County	28%	7%	16%	14%	11%	6%	13%	4%
Bradford County	34%	2%	17%	13%	5%	2%	10%	17%
Bucks County	14%	11%	9%	10%	14%	17%	24%	1%
Butler County	28%	6%	14%	12%	9%	9%	13%	10%
Cambria County	28%	14%	15%	14%	9%	4%	12%	4%
Cameron County	23%	4%	24%	15%	5%	1%	18%	10%
Carbon County	24%	23%	15%	14%	7%	5%	8%	4%
Centre County	14%	8%	8%	9%	13%	14%	31%	3%
Chester County	17%	15%	7%	12%	13%	15%	18%	3%
Clarion County	38%	1%	9%	10%	11%	4%	10%	17%

TABLE CONTINUED ON PAGE 58 ➔

* The category of boats, RVs, and vans is not included in this table. In most counties within Pennsylvania, boats, RVs, and vans account for less than 0.3 percent of occupied rental housing units. The one exception is Cameron County, in which 0.6 percent of renter households live in boats, RVs, or vans.

TABLE A.5 CONTINUED

	1 Unit, Detached	1 Unit, Attached	2 Units	3 or 4 Units	5 to 9 Units	10 to 19 Units	20+ Units	Mobile Homes
United States	**24%**	**6%**	**9%**	**12%**	**12%**	**11%**	**22%**	**4%**
Pennsylvania	**18%**	**16%**	**14%**	**14%**	**11%**	**8%**	**17%**	**3%**
Clearfield County	41%	3%	13%	12%	7%	4%	10%	10%
Clinton County	26%	10%	14%	13%	14%	4%	10%	8%
Columbia County	28%	11%	17%	17%	10%	3%	6%	9%
Crawford County	33%	3%	19%	11%	10%	5%	7%	12%
Cumberland County	19%	15%	11%	15%	16%	10%	10%	4%
Dauphin County	11%	18%	9%	15%	16%	13%	16%	2%
Delaware County	8%	20%	13%	14%	9%	11%	25%	0%
Elk County	37%	1%	23%	15%	6%	1%	11%	7%
Erie County	21%	5%	23%	16%	11%	6%	15%	3%
Fayette County	35%	9%	13%	11%	9%	3%	8%	12%
Forest County	52%	1%	4%	2%	2%	8%	16%	15%
Franklin County	29%	17%	13%	15%	10%	5%	5%	7%
Fulton County	46%	2%	10%	4%	6%	4%	0%	27%
Greene County	39%	5%	9%	8%	7%	5%	8%	19%
Huntingdon County	39%	5%	15%	11%	7%	1%	8%	14%
Indiana County	33%	4%	11%	10%	11%	10%	10%	12%
Jefferson County	41%	2%	15%	11%	7%	3%	12%	9%
Juniata County	42%	9%	6%	7%	10%	5%	7%	14%
Lackawanna County	17%	6%	29%	23%	11%	4%	9%	1%
Lancaster County	18%	18%	12%	15%	15%	8%	11%	3%
Lawrence County	35%	5%	14%	13%	11%	4%	12%	7%
Lebanon County	18%	21%	15%	17%	11%	5%	9%	3%
Lehigh County	10%	16%	11%	15%	14%	15%	18%	1%
Luzerne County	19%	17%	17%	18%	9%	4%	14%	2%
Lycoming County	23%	13%	17%	13%	13%	7%	8%	5%
McKean County	41%	2%	17%	11%	6%	2%	12%	8%
Mercer County	32%	3%	13%	12%	14%	8%	11%	8%
Mifflin County	29%	16%	16%	11%	8%	2%	7%	9%
Monroe County	48%	9%	11%	10%	8%	3%	4%	7%
Montgomery County	11%	13%	10%	14%	10%	13%	28%	0%
Montour County	30%	15%	15%	16%	10%	2%	7%	7%
Northampton County	16%	21%	14%	16%	12%	7%	12%	2%
Northumberland County	19%	27%	13%	14%	7%	3%	14%	4%
Perry County	36%	9%	10%	10%	15%	1%	5%	12%
Philadelphia County	4%	31%	15%	13%	8%	5%	24%	0%
Pike County	67%	5%	8%	8%	4%	1%	2%	6%
Potter County	46%	1%	15%	9%	4%	4%	5%	17%
Schuylkill County	19%	28%	12%	14%	9%	4%	10%	4%
Snyder County	37%	11%	13%	11%	7%	2%	7%	11%

TABLE CONTINUED ON PAGE 59 ➔

TABLE A.5 CONTINUED

	1 Unit, Detached	1 Unit, Attached	2 Units	3 or 4 Units	5 to 9 Units	10 to 19 Units	20+ Units	Mobile Homes
United States	**24%**	**6%**	**9%**	**12%**	**12%**	**11%**	**22%**	**4%**
Pennsylvania	**18%**	**16%**	**14%**	**14%**	**11%**	**8%**	**17%**	**3%**
Somerset County	34%	7%	14%	10%	10%	5%	7%	13%
Sullivan County	51%	0%	11%	9%	13%	2%	7%	6%
Susquehanna County	37%	2%	14%	13%	6%	0%	9%	17%
Tioga County	37%	2%	16%	11%	3%	3%	11%	17%
Union County	29%	9%	12%	16%	10%	5%	9%	10%
Venango County	39%	2%	16%	11%	7%	4%	11%	9%
Warren County	33%	3%	18%	15%	7%	3%	10%	10%
Washington County	35%	6%	13%	12%	9%	6%	13%	6%
Wayne County	45%	2%	15%	12%	6%	1%	6%	13%
Westmoreland County	33%	7%	15%	11%	10%	6%	13%	6%
Wyoming County	37%	3%	13%	14%	9%	4%	1%	20%
York County	18%	18%	14%	15%	12%	7%	9%	5%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Table H32, http://factfinder.census.gov/home/saff/main.html?_lang=en

Quality Measures

The 2000 decennial census does not provide much data on the quality of rental housing in Pennsylvania, particularly at the county level.[5]

Consistent with state averages, overcrowding is a more prevalent problem than units lacking (or sharing) complete plumbing or kitchen facilities in almost every county. Only in Butler, Clarion, Elk, Forest, Greene, McKean, and Sullivan counties was the percentage of rental housing units lacking complete plumbing or kitchen facilities greater than the percentage that was overcrowded.

Philadelphia County has the highest percentage of renter households that are overcrowded (8 percent), followed by Centre County (7.7 percent) and Berks County (5.9 percent).

Overall, plumbing is a greater challenge in Pennsylvania's rural counties, while a lack of complete kitchen facilities and overcrowding are issues in both rural and urban counties.

Clarion County has the highest percentage of renter households lacking or sharing complete plumbing facilities and complete kitchen facilities (3.1 percent and 3.3 percent, respectively). For counties lacking or sharing complete plumbing, Forest (2.6 percent), Greene (2.6 percent), and Snyder (2.3 percent) counties follow Clarion. For counties lacking or sharing complete kitchen facilities, Elk (2.0 percent), McKean (2.0 percent), Lebanon (1.9 percent), and Northampton (1.9 percent) counties follow Clarion.

The Census Bureau also shows percentages of units that are both overcrowded and lacking complete plumbing. The data show that being overcrowded and lacking complete plumbing are isolated

[5] More detailed data on quality are available at the national level and for the Philadelphia and Pittsburgh metropolitan statistical areas (MSAs) from the American Housing Survey. Such data are not available at the state or county level for Pennsylvania.

occurrences, and renters do not typically have both of these problems.[6] At the state level, only 0.1 percent of units are overcrowded and also lack plumbing. Forest and Clarion counties have the highest percentage of units that are overcrowded and also lack plumbing, but these percentages are still very low (0.9 and 0.7 percent, respectively).

These percentages seem modest, but they do not prove that Pennsylvania's rental housing stock is in good condition. The decennial census does not include sufficient data to assess the structural conditions or quality of rental housing units. Community development leaders in several areas of the state argue that much of the supply of rental housing in their areas is of poor quality: Although the units may be affordable, they are not in the condition in which renters would want to inhabit them.[7] More thorough analysis is needed at the local level to assess the condition of Pennsylvania's rental housing stock.

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[6] The decennial census does not publish the number of units that are overcrowded and lacking or sharing a complete kitchen.

[7] The Federal Reserve Bank of Philadelphia's Community Affairs staff members routinely conduct outreach meetings with lenders, government officials, and community development leaders around the Third Federal Reserve District, which includes the eastern two-thirds of Pennsylvania. During these meetings, we have consistently heard that much of Pennsylvania's rental housing stock is of poor quality and in need of repair.

TABLE A.6

Quality Measures for Renter Households

	Total Renter Households	% Lacking Complete Plumbing	% Lacking Complete Kitchen	% Overcrowded	% Overcrowded and Lacking Complete Plumbing
United States	**35,663,588**	**1.0%**	**1.3%**	**11.0%**	**0.2%**
Pennsylvania	**1,370,836**	**0.8%**	**1.2%**	**4.0%**	**0.1%**
Adams County	7,799	0.7%	0.6%	5.3%	0.0%
Allegheny County	177,129	0.5%	1.0%	2.3%	0.0%
Armstrong County	6,588	0.8%	0.7%	1.6%	0.0%
Beaver County	18,197	0.4%	0.6%	2.2%	0.0%
Bedford County	3,918	1.1%	0.9%	1.9%	0.0%
Berks County	36,877	1.2%	1.8%	5.9%	0.3%
Blair County	13,957	0.4%	0.4%	2.4%	0.0%
Bradford County	5,996	0.6%	0.8%	1.7%	0.0%
Bucks County	49,548	0.5%	0.9%	4.8%	0.1%
Butler County	14,617	0.4%	1.7%	1.4%	0.0%
Cambria County	15,289	0.4%	0.6%	1.2%	0.0%
Cameron County	617	0.0%	1.5%	1.8%	0.0%
Carbon County	5,176	0.4%	0.7%	1.7%	0.0%
Centre County	19,650	0.6%	0.8%	7.7%	0.1%
Chester County	37,405	0.5%	0.9%	4.7%	0.1%
Clarion County	4,460	3.1%	3.3%	2.5%	0.7%
Clearfield County	6,835	0.6%	0.7%	1.5%	0.0%
Clinton County	3,995	0.5%	0.3%	1.7%	0.0%

TABLE CONTINUED ON PAGE 61 ➔

TABLE A.6 CONTINUED

	Total Renter Households	% Lacking Complete Plumbing	% Lacking Complete Kitchen	% Overcrowded	% Overcrowded and Lacking Complete Plumbing
United States	**35,663,588**	**1.0%**	**1.3%**	**11.0%**	**0.2%**
Pennsylvania	**1,370,836**	**0.8%**	**1.2%**	**4.0%**	**0.1%**
Columbia County	6,922	0.4%	0.9%	3.0%	0.0%
Crawford County	8,523	1.3%	1.8%	2.9%	0.2%
Cumberland County	22,380	0.4%	1.0%	2.3%	0.0%
Dauphin County	35,554	0.7%	1.0%	4.8%	0.1%
Delaware County	58,027	0.5%	1.4%	4.4%	0.1%
Elk County	2,913	0.5%	2.0%	0.3%	0.0%
Erie County	32,799	0.7%	1.5%	2.8%	0.1%
Fayette County	16,110	0.6%	0.6%	2.1%	0.0%
Forest County	348	2.6%	0.9%	0.9%	0.9%
Franklin County	13,164	1.0%	0.6%	2.7%	0.1%
Fulton County	1,187	0.8%	0.3%	1.2%	0.0%
Greene County	3,902	2.6%	0.8%	2.1%	0.0%
Huntingdon County	3,760	0.9%	0.9%	1.6%	0.0%
Indiana County	9,632	1.0%	1.3%	2.8%	0.0%
Jefferson County	4,198	0.7%	0.6%	1.5%	0.1%
Juniata County	1,913	0.9%	0.8%	3.2%	0.2%
Lackawanna County	27,934	0.4%	0.8%	1.2%	0.0%
Lancaster County	50,296	1.3%	1.7%	3.8%	0.1%
Lawrence County	8,431	1.1%	1.4%	2.0%	0.1%
Lebanon County	12,688	0.9%	1.9%	3.3%	0.1%
Lehigh County	38,010	0.9%	1.3%	5.0%	0.2%
Luzerne County	38,807	0.7%	0.8%	1.5%	0.1%
Lycoming County	14,350	0.6%	1.5%	1.7%	0.1%
McKean County	4,542	0.4%	2.0%	1.3%	0.0%
Mercer County	11,099	0.9%	1.4%	2.2%	0.2%
Mifflin County	4,774	1.0%	1.2%	1.9%	0.1%
Monroe County	10,712	0.4%	0.4%	3.8%	0.1%
Montgomery County	75,861	0.4%	0.9%	3.9%	0.0%
Montour County	1,930	1.4%	1.2%	3.4%	0.1%
Northampton County	27,090	0.9%	1.9%	3.2%	0.1%
Northumberland County	10,258	0.7%	0.7%	1.5%	0.0%
Perry County	3,407	0.4%	0.5%	2.4%	0.0%
Philadelphia County	240,420	1.1%	1.4%	8.0%	0.2%
Pike County	2,646	0.5%	0.4%	3.5%	0.0%
Potter County	1,584	0.4%	0.6%	3.6%	0.0%
Schuylkill County	13,353	0.8%	0.9%	1.4%	0.0%
Snyder County	3,203	2.3%	1.7%	3.2%	0.2%
Somerset County	6,854	0.8%	1.3%	2.2%	0.1%
Sullivan County	522	1.5%	1.0%	1.3%	0.0%

TABLE CONTINUED ON PAGE 62 ➔

TABLE A.6 CONTINUED

	Total Renter Households	% Lacking Complete Plumbing	% Lacking Complete Kitchen	% Overcrowded	% Overcrowded and Lacking Complete Plumbing
United States	**35,663,588**	**1.0%**	**1.3%**	**11.0%**	**0.2%**
Pennsylvania	**1,370,836**	**0.8%**	**1.2%**	**4.0%**	**0.1%**
Susquehanna County	3,385	0.6%	1.0%	2.5%	0.0%
Tioga County	3,800	0.7%	0.3%	1.7%	0.0%
Union County	3,507	0.6%	1.7%	1.9%	0.0%
Venango County	5,369	0.9%	1.2%	1.3%	0.0%
Warren County	3,849	0.6%	0.8%	1.1%	0.0%
Washington County	18,560	0.6%	0.9%	2.4%	0.0%
Wayne County	3,578	0.5%	0.6%	2.1%	0.0%
Westmoreland County	32,966	0.4%	0.8%	1.5%	0.0%
Wyoming County	2,263	0.4%	0.8%	1.5%	0.0%
York County	35,403	0.9%	1.7%	3.0%	0.0%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Source: U.S. Census Bureau, "2000 Census – Summary File 3," Tables H20, H22, H48, and H51. http://factfinder.census.gov/home/saff/main.html?_lang=en

Population and Housing Unit Changes

Population

The 1990 and 2000 decennial census files and 2006 population estimates provided by the U.S. Census Bureau allow evaluation of population growth at the county level between 1990 and 2006.[8]

The population in the United State grew 20 percent between 1990 and 2006, while Pennsylvania experienced only a 4 percent population growth. At the county level, there was great variation in growth during this time.

Counties on the northeastern border of the state experienced the greatest population growth. Most notably, Pike County grew by 104 percent and Monroe County grew by 70 percent. Forest and Wayne counties also experienced considerable population increases of 46 percent and 29 percent, respectively. Despite the high growth rates, these counties still contain a relatively small portion of the state's total population.[9]

Much of the population growth in the Northeast area of Pennsylvania, including Monroe, Pike, and Wayne counties, can be attributed to the immigration of residents from the New York metropolitan area,

[8] Population estimates are prepared annually after the last published decennial census. Data are re-estimated every year, and data from the most current estimate supersede data from earlier estimates. We used the 2008 population estimates to obtain the 2006 data. For additional information, see http://factfinder.census.gov

[9] In 2000, the four counties of Forest, Monroe, Pike, and Wayne accounted for 1.9 percent of the total population and in 2006 they accounted for 2.2 percent.

many of whom commute back to New York or New Jersey on a daily or weekly basis to work.[10] This increase in population added to the pressure on the housing market. Other chapters and appendices of this report show that Monroe and Pike counties have some of the most severe shortages of affordable rental housing for extremely low-income renters in the state.

Other areas throughout the state experienced considerable population declines, including Cambria County (10 percent), Cameron, Philadelphia, and Warren counties (all 9 percent), and Allegheny County (8 percent). The population is clearly declining in Pennsylvania's two largest cities, Philadelphia and Pittsburgh (Allegheny County). Although population is declining in Philadelphia, it is growing substantially in several suburban counties that also comprise the Philadelphia metropolitan division, most notably Chester County (27 percent) and Bucks and Montgomery counties (14 percent each). Delaware County experienced only modest growth (1 percent).

[10] Several community leaders in Monroe, Pike, and Wayne counties provided this information. More specific data on Monroe County is available in a report produced by The Reinvestment Fund, "A Study of Mortgage Foreclosure in Monroe County, Pennsylvania 2000-2003." This report includes a description of the population dynamics in Monroe County, including an overview of commuting patterns.

TABLE A.7

Population Changes Between 1990 and 2006

			Population Changes		
	Total Population 2000	Percentage of Total Pennsylvania Population in 2000	Between 1990-2000	Between 2000-2006	Between 1990-2006
United States	**281,421,906**		**13%**	**6%**	**20%**
Pennsylvania	**12,281,054**	**100.0%**	**3%**	**1%**	**4%**
Adams County	91,292	0.7%	17%	9%	28%
Allegheny County	1,281,666	10.4%	-4%	-5%	-8%
Armstrong County	72,392	0.6%	-1%	-4%	-6%
Beaver County	181,412	1.5%	-3%	-4%	-7%
Bedford County	49,984	0.4%	4%	-1%	4%
Berks County	373,638	3.0%	11%	7%	18%
Blair County	129,144	1.1%	-1%	-3%	-4%
Bradford County	62,761	0.5%	3%	-2%	1%
Bucks County	597,635	4.9%	10%	3%	14%
Butler County	174,083	1.4%	15%	4%	19%
Cambria County	152,598	1.2%	-6%	-4%	-10%
Cameron County	5,974	0.0%	1%	-10%	-9%
Carbon County	58,802	0.5%	3%	6%	9%
Centre County	135,758	1.1%	10%	6%	16%
Chester County	433,501	3.5%	15%	10%	27%
Clarion County	41,765	0.3%	0%	-4%	-4%
Clearfield County	83,382	0.7%	7%	-1%	6%
Clinton County	37,914	0.3%	2%	-2%	0%

TABLE CONTINUED ON PAGE 64 ➔

TABLE A.7 CONTINUED

			Population Changes		
	Total Population 2000	Percentage of Total Pennsylvania Population in 2000	Between 1990-2000	Between 2000-2006	Between 1990-2006
United States	**281,421,906**		**13%**	**6%**	**20%**
Pennsylvania	**12,281,054**	**100.0%**	**3%**	**1%**	**4%**
Columbia County	64,151	0.5%	2%	1%	2%
Crawford County	90,366	0.7%	5%	-2%	3%
Cumberland County	213,674	1.7%	9%	6%	15%
Dauphin County	251,798	2.1%	6%	1%	7%
Delaware County	550,864	4.5%	1%	0%	1%
Elk County	35,112	0.3%	1%	-6%	-6%
Erie County	280,843	2.3%	2%	0%	1%
Fayette County	148,644	1.2%	2%	-3%	0%
Forest County	4,946	0.0%	3%	42%	46%
Franklin County	129,313	1.1%	7%	8%	15%
Fulton County	14,261	0.1%	3%	3%	7%
Greene County	40,672	0.3%	3%	-3%	0%
Huntingdon County	45,586	0.4%	3%	0%	3%
Indiana County	89,605	0.7%	0%	-2%	-2%
Jefferson County	45,932	0.4%	0%	-2%	-2%
Juniata County	22,821	0.2%	11%	1%	12%
Lackawanna County	213,295	1.7%	-3%	-2%	-5%
Lancaster County	470,658	3.8%	11%	5%	17%
Lawrence County	94,643	0.8%	-2%	-4%	-5%
Lebanon County	120,327	1.0%	6%	5%	11%
Lehigh County	312,090	2.5%	7%	7%	15%
Luzerne County	319,250	2.6%	-3%	-2%	-5%
Lycoming County	120,044	1.0%	1%	-2%	-1%
McKean County	45,936	0.4%	-3%	-4%	-7%
Mercer County	120,293	1.0%	-1%	-2%	-3%
Mifflin County	46,486	0.4%	1%	-1%	0%
Monroe County	138,687	1.1%	45%	17%	70%
Montgomery County	750,097	6.1%	11%	3%	14%
Montour County	18,236	0.1%	3%	-2%	1%
Northampton County	267,066	2.2%	8%	8%	17%
Northumberland County	94,556	0.8%	-2%	-4%	-6%
Perry County	43,602	0.4%	6%	3%	9%
Philadelphia County	1,517,550	12.4%	-4%	-4%	-9%
Pike County	46,302	0.4%	66%	24%	104%
Potter County	18,080	0.1%	8%	-4%	4%
Schuylkill County	150,336	1.2%	-1%	-2%	-4%
Snyder County	37,546	0.3%	2%	1%	4%

TABLE CONTINUED ON PAGE 65 ➔

TABLE A.7 CONTINUED

			Population Changes		
	Total Population 2000	Percentage of Total Pennsylvania Population in 2000	Between 1990-2000	Between 2000-2006	Between 1990-2006
United States	**281,421,906**		**13%**	**6%**	**20%**
Pennsylvania	**12,281,054**	**100.0%**	**3%**	**1%**	**4%**
Somerset County	80,023	0.7%	2%	-2%	0%
Sullivan County	6,556	0.1%	7%	-5%	2%
Susquehanna County	42,238	0.3%	5%	-2%	2%
Tioga County	41,373	0.3%	1%	-2%	-1%
Union County	41,624	0.3%	15%	5%	20%
Venango County	57,565	0.5%	-3%	-4%	-7%
Warren County	43,863	0.4%	-3%	-6%	-9%
Washington County	202,897	1.7%	-1%	1%	0%
Wayne County	47,722	0.4%	19%	8%	29%
Westmoreland County	369,993	3.0%	0%	-2%	-2%
Wyoming County	28,080	0.2%	0%	-1%	-1%
York County	381,751	3.1%	12%	8%	22%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Sources: Three data sets from the U.S. Census Bureau:1) "1990 Census – Summary File 3"; 2) "2000 Census – Summary File 3"; and 3) "2008 Population Estimates" of 2006 data. http://factfinder.census.gov/home/saff/main.html?_lang=en

Housing Units

Comparing three-year American Community Survey (ACS) estimates for 2005-07 with decennial census data, total housing units in the United States increased by 23 percent between 1990 and 2005-07, while total housing units in Pennsylvania increased by 10 percent.[11] The increases were lower for rental housing units. For the United States, the rental housing stock grew by 11 percent and in Pennsylvania by 4 percent.

Within Pennsylvania, the number of rental housing units grew at approximately the same rate as the population between 1990 and 2005-07. Nearly all of the growth in both rental housing and population actually occurred between 1990 and 2000.

At the county level, Pike and Monroe counties experienced the greatest increase in rental housing units, 101 percent and 56 percent, respectively, between 1990 and 2005-07. The growth in rental housing is in line with the population growth in Pike County (104 percent and 101 percent, respectively). But in Monroe County, rental housing stock did not grow as quickly as the population (56 percent and 70 percent, respectively).

[11] The U.S. Census Bureau's annual population estimates program also provides data on total housing units, but these data do not distinguish between owner-occupied, renter-occupied, and vacant units. See American Factfinder for additional information: http://factfinder.census.gov/. Because of the data limitations with the annual population estimates, this study uses ACS data. ACS three-year estimates are available for geographic areas with populations greater than 20,000. In addition, ACS one-year estimates are available for geographic areas with populations greater than 65,000. This study used the three-year estimates because three-year estimates provide data for more counties in Pennsylvania than the one-year estimates.

Greene County experienced the greatest decrease in rental housing units, 17 percent. Allegheny, Beaver, and Lawrence counties were next, each losing 10 percent. All four counties are located in the Southwest corner of the state.

Note: The 2005-07 ACS three-year estimates include data for geographies with populations of 20,000 or more. Six counties in Pennsylvania have populations under this threshold, so their housing unit changes cannot be calculated from these data: Cameron, Forest, Fulton, Montour, Potter, and Sullivan.

TABLE A.8

Housing Unit Changes Between 1990 and 2005-07

	Housing Units in 2000		% Change 1990 to 2000		% Change 2000 to 2005-07		% Change 1990 to 2005-07	
	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units
United States	**115,904,641**	**35,663,588**	**13%**	**8%**	**9%**	**2%**	**23%**	**11%**
Pennsylvania	**5,249,750**	**1,370,836**	**6%**	**4%**	**4%**	**0%**	**10%**	**4%**
Adams County	35,831	7,799	19%	4%	9%	9%	30%	13%
Allegheny County	583,646	177,129	1%	-3%	1%	-7%	2%	-10%
Armstrong County	32,387	6,588	2%	-2%	1%	9%	3%	7%
Beaver County	77,765	18,197	2%	-5%	2%	-5%	4%	-10%
Bedford County	23,529	3,918	8%	4%	3%	9%	12%	13%
Berks County	150,222	36,877	12%	11%	6%	5%	19%	16%
Blair County	55,061	13,957	1%	1%	2%	1%	3%	2%
Bradford County	28,664	5,996	6%	8%	2%	6%	8%	14%
Bucks County	225,498	49,548	13%	7%	6%	-1%	20%	6%
Butler County	69,868	14,617	18%	14%	9%	9%	29%	24%
Cambria County	65,796	15,289	-2%	-8%	1%	2%	-2%	-6%
Cameron County	4,592	617	4%	-4%	N/A		N/A	
Carbon County	30,492	5,176	11%	6%	6%	5%	18%	12%
Centre County	53,161	19,650	15%	15%	8%	0%	25%	15%
Chester County	163,773	37,405	17%	10%	11%	3%	30%	13%
Clarion County	19,426	4,460	8%	8%	3%	1%	11%	9%
Clearfield County	37,855	6,835	10%	7%	2%	18%	13%	26%
Clinton County	18,166	3,995	10%	6%	4%	4%	14%	11%
Columbia County	27,733	6,922	8%	11%	4%	4%	12%	16%
Crawford County	42,416	8,523	5%	0%	2%	0%	7%	-1%
Cumberland County	86,951	22,380	13%	8%	7%	8%	21%	16%
Dauphin County	111,133	35,554	8%	3%	4%	-3%	13%	0%
Delaware County	216,978	58,027	3%	6%	2%	-4%	4%	2%
Elk County	18,115	2,913	5%	9%	1%	0%	6%	9%
Erie County	114,322	32,799	5%	3%	3%	-2%	8%	1%
Fayette County	66,490	16,110	8%	4%	1%	5%	9%	9%
Forest County	8,701	348	3%	-4%	N/A		N/A	

TABLE CONTINUED ON PAGE 67 ➔

TABLE A.8 CONTINUED

	Housing Units in 2000		% Change 1990 to 2000		% Change 2000 to 2005-07		% Change 1990 to 2005-07	
	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units
United States	**115,904,641**	**35,663,588**	**13%**	**8%**	**9%**	**2%**	**23%**	**11%**
Pennsylvania	**5,249,750**	**1,370,836**	**6%**	**4%**	**4%**	**0%**	**10%**	**4%**
Franklin County	53,803	13,164	11%	5%	9%	11%	21%	17%
Fulton County	6,790	1,187	10%	9%	N/A		N/A	
Greene County	16,678	3,902	4%	-3%	3%	-14%	7%	-17%
Huntingdon County	21,058	3,760	9%	2%	4%	3%	14%	5%
Indiana County	37,250	9,632	7%	15%	3%	-2%	10%	13%
Jefferson County	22,104	4,198	4%	4%	3%	9%	7%	13%
Juniata County	10,031	1,913	18%	12%	4%	16%	22%	29%
Lackawanna County	95,362	27,934	4%	0%	2%	6%	6%	6%
Lancaster County	179,990	50,296	15%	9%	7%	9%	23%	19%
Lawrence County	39,635	8,431	2%	-3%	2%	-7%	4%	-10%
Lebanon County	49,320	12,688	10%	3%	7%	-1%	19%	1%
Lehigh County	128,910	38,010	9%	10%	6%	1%	15%	11%
Luzerne County	144,686	38,807	4%	-1%	2%	-3%	6%	-4%
Lycoming County	52,464	14,350	6%	5%	2%	6%	8%	12%
McKean County	21,644	4,542	1%	-2%	0%	-1%	1%	-3%
Mercer County	49,859	11,099	2%	-3%	3%	3%	6%	0%
Mifflin County	20,745	4,774	6%	-1%	2%	11%	8%	10%
Monroe County	67,581	10,712	23%	29%	14%	21%	41%	56%
Montgomery County	297,434	75,861	12%	7%	5%	-6%	17%	1%
Montour County	7,627	1,930	11%	4%	N/A		N/A	
Northampton County	106,710	27,090	12%	13%	8%	-2%	21%	11%
Northumberland County	43,164	10,258	3%	-1%	1%	-1%	4%	-2%
Perry County	18,941	3,407	11%	11%	4%	-10%	15%	0%
Philadelphia County	661,958	240,420	-2%	5%	0%	-1%	-2%	4%
Pike County	34,681	2,646	12%	50%	13%	33%	27%	101%
Potter County	12,159	1,584	7%	3%	N/A		N/A	
Schuylkill County	67,806	13,353	2%	0%	2%	5%	5%	5%
Snyder County	14,890	3,203	9%	10%	4%	10%	14%	20%
Somerset County	37,163	6,854	4%	2%	2%	0%	6%	2%
Sullivan County	6,017	522	10%	7%	N/A		N/A	
Susquehanna County	21,829	3,385	7%	9%	3%	19%	11%	30%
Tioga County	19,893	3,800	9%	3%	4%	13%	13%	17%
Union County	14,684	3,507	14%	18%	5%	10%	20%	30%
Venango County	26,904	5,369	0%	-6%	1%	10%	1%	3%
Warren County	23,058	3,849	4%	-2%	1%	5%	5%	3%
Washington County	87,267	18,560	4%	-3%	5%	-2%	9%	-6%

TABLE CONTINUED ON PAGE 68 ➔

TABLE A.8 CONTINUED

	Housing Units in 2000		% Change 1990 to 2000		% Change 2000 to 2005-07		% Change 1990 to 2005-07	
	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units	Total Housing Units	Renter-Occupied Units
United States	**115,904,641**	**35,663,588**	**13%**	**8%**	**9%**	**2%**	**23%**	**11%**
Pennsylvania	**5,249,750**	**1,370,836**	**6%**	**4%**	**4%**	**0%**	**10%**	**4%**
Wayne County	30,593	3,578	7%	18%	6%	20%	14%	41%
Westmoreland County	161,058	32,966	5%	-3%	3%	2%	8%	-1%
Wyoming County	12,713	2,263	7%	-2%	4%	4%	12%	2%
York County	156,720	35,403	16%	7%	9%	4%	27%	12%

Note: Italicized counties are classified as rural by the Center for Rural Pennsylvania.

Sources: Three data sets from the U.S. Census Bureau: 1) "1990 Census – Summary File 3"; 2) "2000 Census – Summary File 3"; and 3) "2005-2007 American Community Survey Three Year Estimates." http://factfinder.census.gov/home/saff/main.html?_lang=en6

APPENDIX B
MEASURING NATIONAL NEEDS FOR AFFORDABLE RENTAL HOUSING: A BRIEF REVIEW OF PAST RESEARCH AND STRATEGY RECOMMENDATIONS

Background

Federal programs to assist lower-income renters began in the 1930s with the construction of public housing. Since then, rental housing programs have expanded to include privately owned assisted housing, where the federal subsidies are tied to the housing unit, and tenant-based assistance, where a federally subsidized voucher helps the tenant afford privately owned units. The number of households needing such rental assistance was originally estimated by counting those with low incomes that live in inadequate or overcrowded housing or pay excessive shares of income for housing.[1]

Rental assistance has never been an entitlement, so admission is based on waiting lists. In 1979 and 1983, Congress gave preference in admission to rental assistance programs to income-eligible households with the most severe housing problems, including those who were homeless, lived in severely inadequate housing, or paid more than half of their income for rent and utilities. The subset of unassisted renters who had incomes below 50 percent of HUD-adjusted area median family income (HAMFI) as defined by Congress and the severe housing problems listed above became known as those with "worst case needs" for rental assistance.[2]

In 1990, the Senate Appropriations Committee directed HUD to report on worst case housing needs annually and "urge[d] the Department to develop a strategic plan [outlining] how the Federal Government . . . can help to eliminate or substantially reduce the number … in this worst case needs category."[3] All of HUD's resulting reports provided data on the extent of worst case housing needs and also contributed new methodologies for analyzing those needs. As described in this appendix, several reports also discussed strategies for reducing needs.

HUD's Worst Case Needs Reports

Between 1991 and 2007, HUD produced 10 reports to Congress using the American Housing Survey (AHS) as the primary data source.[4] HUD's reports to Congress detail the types of housing problems

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[1] For rental housing programs, the 1974 Housing and Community Development Act defined low income as incomes less than or equal to 80 percent of area median family incomes as adjusted by the Secretary of HUD. Thus, all three of the income groups highlighted in this study are low income.

[2] HUD (2007) gives this definition of worst case needs, p. 1. Also, as noted in the first chapter of HUD's 1998 Worst Case Needs report, the homeless population is given preference in admission into rental assistance programs, but estimates of the number of homeless are generally not included in the counts of worst case needs in HUD's reports because the AHS surveys count only persons in housing units.

[3] See HUD (1991), p. 1

[4] The 2007 report lists all of the Worst Case Needs reports in its third footnote, p. 7. Most of the HUD Worst Case Needs publications are available online at http://www.huduser.org.

Definitions of Housing Problems

Housing problems include unaffordable gross rents, crowding, and physically inadequate housing. The AHS provides the most complete measure of physically inadequate housing but only at the national level and selected metropolitan areas.[a] Most sources of data below the national level, including the decennial census and the ACS, ask only whether plumbing and kitchen facilities are complete. Key housing problems mentioned in this study include:

Cost/Rent Burdened (or severely burdened)	Paying more than 30 (or 50) percent of household income on gross rent (contract rent plus utilities)
Crowded[b]	Having more than one person per room
Physically Inadequate Housing	
Severely Inadequate Housing Unit (AHS definition)	Having severe plumbing, heating, upkeep, hallway, or electrical problems
Moderately Inadequate Housing Unit (AHS definition)	Having plumbing, heating, upkeep, hallway, or kitchen problems, but no severe problems
Lacking Complete Kitchen or Bathroom Facilities (the only census/ACS data on housing quality)	Facilities incomplete or not for exclusive use of the household
Worst Case Needs (HUD definition)	Unassisted renters with incomes at or below 50 percent of HAMFI who have one of two priority problems: 1. They are paying more than half of their income for housing; or 2. They are living in severely substandard housing.

[a] A national AHS survey is conducted biennially, and AHS surveys for 47 selected metropolitan areas are conducted approximately every six years, on a rotating basis. See the U.S. Census Bureau's website for additional information on the AHS: http://www.census.gov/hhes/www/housing/ahs/ahs.html.

[b] The Census Bureau does not have an official definition for overcrowding. This study considers overcrowding as households with more than one occupant per room. See Blake et al. (2007) for a detailed discussion of different definitions of overcrowding and a literature review.

experienced by renters and owners classified by income and household characteristics, for the nation as a whole, for four census regions, and within these regions, for cities, suburbs, and nonmetropolitan areas.[5]

Of most relevance to this study, HUD's Worst Case Needs reports find that:

- Between 1978 and 2001, the number of renter households with worst case needs rose from 3.96 million to 5.07 million, and most of that growth occurred before 1995.[6] Between 2003 and 2005, the number of worst case needs households jumped to 5.99 million.[7]
- Among renters not receiving housing assistance in 2005, 72 percent of renters with extremely low

[5] The AHS is conducted by the Census Bureau for HUD. Its purpose is to collect comprehensive data on the nation's housing stock, including "apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers." The national AHS survey is conducted biennially, and surveys for 47 selected metropolitan areas are conducted approximately every six years, on a rotating basis. The national sample covers some 55,000 housing units, while each metropolitan area sample covers 4,100 or more housing units. The U.S. Census Bureau's website has additional information: http://www.census.gov/hhes/www/housing/ahs/ahs.html.

[6] The 1978-1999 trend is provided in "Trends in Worst Case Needs for Housing, 1978-1999" (2003), Table A-4, and the 2001 estimate on p. ix of that report.

[7] See HUD (2007), p. 1.

incomes, but only 27 percent of renters with very low incomes, had worst case housing needs. More than three-fourths (77 percent) of those with worst case needs were ELI.[8]

- Severe "worst case" problems were rare among higher-income renters and owners. In 2005, only 7 percent of LI renters had severe rent burdens or severely inadequate housing.[9]
- Housing problems mainly occurred because households had excessive cost burdens. Between 1978 and 2005, among renters with incomes below 50 percent of HAMFI, the share with a severe cost burden rose from 30 to 46 percent. By contrast, the incidence of inadequate housing fell from 16 to 9 percent during the same period, and crowding remained at 4 percent. [10] Whereas in 1978 two-thirds of worst case needs renters lived in adequate and uncrowded housing with severe rent burden as their only housing problem, by 2005 83 percent had only a rent burden.[11]
- The 50 percent growth in worst case needs between 1978 and 2005 occurred despite increasing participation in rental assistance programs. The share of renters with incomes between 0-50 percent HAMFI who reported receiving housing assistance rose from 20 to 28 percent. Yet in both years, 37 percent of all renters at 0-50 percent HAMFI were unassisted with worst case needs.[12]

Measuring Housing Shortages in Worst Case Needs Reports[13]

In preparing its third Worst Case Needs report for Congress, published in June 1994, HUD considered possible factors underlying such needs. It found that worst case needs were strongly correlated with shortages of housing with rents affordable to ELI households.[14] Since then, HUD reports have explored shortages of affordable housing in a variety of ways and documented their close relationship to worst case needs.

All of the HUD Worst Case Needs reports since 1994 have examined numbers of units affordable to extremely low-income renters and renters with incomes less than or equal to 50 percent, their changes over time and shortages compared to all renters, and geographic differences in trends and the extent of shortages. An important indicator developed in these reports is the "mismatch" ratio, an indicator to assess the discrepancy between the number of rental units needed by renters of various income categories and the number that are affordable to them.[15]

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[8] See HUD (2007), pp. 1-2.

[9] See HUD (2007), Table A-1a, p. 56

[10] 1978 data calculated from Table A-3 of HUD (2003), p. A-6, and 2005 data calculated from Table A-4 of HUD (2007), p. 61-62.

[11] 1978 data calculated from Table A-4 of HUD (2003), p. A-8, and 2005 data calculated from Table 7 of HUD (2007), p. 70.

[12] Calculated from 1978 data in Table A-3 of HUD (2003), p. A-6, and 2005 data in Table A-4 of HUD (2007), p. 61-62.

[13] While this appendix primarily focuses on HUD's Worst Case Needs reports, other studies have assessed the need for affordable rental housing using AHS data. Most notably, the Millennial Housing Commission (MHC), established by Congress in 2000 to assess affordable housing and HUD's programs, used national AHS data in its report, *Meeting Our Nation's Housing Challenges*. Like the Worst Case Needs reports, this report finds that there is a "critical shortage of affordable apartments" for ELI renters and that "higher-income households outbid lower-income households for rental units in an effort to limit their housing expenses, sharply reducing the number of units affordable to others."

[14] To measure shortages, rents affordable to ELI renter households are defined as rents less than or equal to 30 percent of income at the upper end of the ELI income range, which is 30 percent of local HAMFI. See HUD (1994), p. 3. HUD also found that in CHAS state-level data, severe rent burdens were, surprisingly, not related in 1990 to vacancy rates among affordable units.

[15] See HUD (2007), p. 90.

In almost every period and location examined, numbers of rental units affordable to extremely low-income renters fell while the number of ELI renters grew.[16] Between 1991 and 1999, for example, the "mismatch" ratio of numbers of units affordable per 100 ELI renters across the United States fell from 89 to 78.[17]

Some ratios above 100 in these reports suggested that there were more "affordable" units than renters needing them at incomes above 30 percent of HAMFI. But closer examination revealed that many of the units technically affordable to renters at a specific income threshold were actually occupied by renters with higher incomes, making them unavailable to renters with incomes below that threshold.

In response to this weakness, a second more specific "mismatch" ratio was developed to indicate shortages in the units that were both affordable *and* available to renters. From 1991 to 1999 and then 2005, the U.S. mismatch ratio for units affordable and available to ELI renter households fell from 52 to 42 to 40, while that for units affordable and available to renter households with incomes at or below 50 percent of HAMFI fell from 87 to 78 to 77.[18]

Recent Worst Case Needs reports have extended this concept to compare units that are affordable, available, and *adequate* to the numbers of renters needing them, thus documenting the even greater shortages of adequate units.[19] Such an approach also illustrates the special difficulties facing large families. For example, comparing the 2005 supply of units with five+ rooms to households with five+ persons, the number of affordable, available, adequate, and sufficiently large units per 100 large ELI renter households was found to be only 20.7 averaged across the nation.[20]

In studying shortages of affordable housing, HUD's Worst Case Needs reports also explored the availability and characteristics of units with rents below local fair market rents (FMRs). FMRs are used in the voucher program to determine the maximum level of subsidy that a household with a voucher can receive.[21] Whether a household can eliminate a rental cost burden by using a voucher depends on its ability to find a housing unit with a below-FMR rent. [22] One would expect that the ease with which the household would be able to do so would be closely tied to the availability of *vacant* units with below-FMR rents. Evidence from the Worst Case Needs reports provides suggestive, though indirect, evidence that this is indeed the case. In 1999, for example "locations with lowest vacancy rates among units with rents below local FMRs were also those where shortages of housing both affordable and available to extremely low income renters were worst" and worst case needs were high. These vacancy rates were lowest in suburbs and cities in the West and

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[16] The 1997-99 period was an exception in which the number of ELI renters dropped more than the number of units affordable to them. See HUD (2003), p xi.

[17] See HUD (2003), Table A-15, p. A-32.

[18] See HUD (2007), Exhibit 4-3, p. 37, and HUD (2003), Table A-15, p. A-32. For a number of reasons these indicators are probably optimistic. For example, units are classified as affordable and available for ELI households based on income at the top of the ELI range but may not be affordable to those ELI households whose incomes are lower. In addition, some units classified as affordable and available may be too small for large ELI families or located in undesirable neighborhoods.

[19] See HUD (2007), Chapter 4.

[20] See HUD (2007), Exhibit 4-14, p. 43.

[21] See the Glossary for a discussion of how the maximum rental subsidy is determined.

[22] See the Glossary for additional information on FMRs, rental subsidies, the use of vouchers, and the possibility that a household with a voucher will not necessarily eliminate cost burden.

Northeast and were particularly low for large units with three or more bedrooms. [23]

The Worst Case Needs reports also consider a number of other issues of relevance for understanding how subsidized housing programs are likely to affect the housing options of the lowest-income renters. For example, they document disparities across MSAs in the income level (measured relative to HAMFI) at which the subsidy from a housing voucher phases out. As of 2002, this relative income ranged from a low of 34.5 percent of HAMFI in Cedar Rapids to a high of 76.3 percent of HAMFI in San Francisco, although, statutorily, no household with an income above 50 percent of HAMFI would actually be eligible for a voucher.[24] In addition, the reports discuss how the level of a community's FMR also affects the participation of the lowest-income households in other housing programs, such as LIHTC and HOME. The way that these issues play out in Pennsylvania is discussed in Appendix D.

Measuring Rental Housing Needs at State and Local Levels: CHAS Data

While the AHS has been the primary source of data for recent Worst Case Needs studies, neither the national AHS nor the AHS metropolitan area surveys provide data for states and local areas. The Cranston-Gonzalez National Affordable Housing Act of 1990 (NAHA) required states and local jurisdictions to prepare and submit "comprehensive housing affordability strategies" (or CHAS) describing their housing needs and housing market conditions in order to receive funds for many HUD programs.

To help states and local jurisdictions develop the CHAS strategies mandated by the NAHA, HUD funded special tabulations of 1990 census data that classified renter and owner households and their housing problems by income and housing units and their characteristics by affordability.[25] Both household income and housing unit affordability were categorized based on HUD's HAMFI groups to make the data directly relevant to HUD's major housing and community development programs. The primary purpose of CHAS data was to make it possible to assess housing needs and shortages of affordable housing at smaller geographic levels, including all states and counties.[26]

When the 1990 CHAS data became available, the third HUD Worst Case Needs report compared CHAS data results on income distribution, housing problems, and affordable housing against AHS data.[27] The two sources were found to be "remarkably similar with regard to the incidence of rent burden and severe rent burden." The report also concluded that severe rent burdens "can serve as a quite complete proxy for worst case needs."[28]

A decade later, HUD funded equivalent CHAS tabulations from 2000 census data. After the 2000

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[23] See HUD (2003), p. 70.

[24] See HUD (2003), p. 72.

[25] See the Library of Congress's website (http://thomas.loc.gov/) for NAHA language. Data elements on the CHAS special tabulations include income, tenure, household type, race and ethnicity, and housing problems of households, and affordability, size, age, vacancy status, and physical condition of housing units.

[26] The basic CHAS data are available at http://socds.huduser.org/scripts/odbic.exe/chas/reports.htm.

[27] The CHAS data report income more completely than the AHS because the decennial census questionnaire has more detailed income questions than the AHS does. Nevertheless, the shares of renters identified as having ELI or VLI were quite similar in the two data sources. See HUD's 1994 report, Appendix C.

[28] See HUD (1994), p. 39.

CHAS data became available, the National Low Income Housing Coalition (NLIHC) examined how housing problems and shortages of affordable housing varied among states and changed from 1990-2000. Its report *Losing Ground in the Best of Times: Low Income Renters in the 1990s* documented that while housing conditions improved for most Americans throughout the decade, housing problems, including severe rent burdens, became more concentrated among ELI renters and their access to affordable rental units declined.[29]

Strategies to Reduce Worst Case Needs and Provide Affordable Housing

Federal Strategies

As noted above, HUD was charged in 1990 with developing a strategic plan to reduce worst case needs within limited resources. Similarly, the NAHA required states and local jurisdictions to develop CHAS in order to receive funds from HUD for the new HOME program, as well as for community development block grants (CDBGs) and other assisted rental housing programs.

In the second Worst Case Needs report (HUD 1992), the first Bush administration responded to Congress's charge in some detail. Examining rental housing conditions in the late 1980s in 44 large MSAs with 46 percent of the U.S. population and half of U.S. renters, the report concluded that tenant-based assistance could solve most worst case problems. Certificates or vouchers could be used in their current home for the many worst case households whose only housing problem was a severe rent burden, or they could be used in other units with below-FMR rents for most of those who needed to move because their current units were overcrowded or inadequate. Direct comparisons of vacant below-FMR units with the number of households needing other housing "demonstrate that in most of these [metropolitan areas] *all* worst case needs could be solved through tenant-based assistance and light rehabilitation."[30] The report argued that units provided through HOME and the LIHTC could provide the expanded supply needed to eliminate worst case needs in several years if funds for those programs were better directed to the locations and households that most need them. To summarize, the cost-effective strategies advocated were:

- Primary reliance on tenant-based assistance
- Preference in rental assistance programs, including public housing and assisted projects, for worst-case families
- Cost-effective use of HOME and CDBG funds for moderate rehabilitation and better targeting of LIHTC funds toward the most needy locations and households.

No Worst Case Needs report issued under the Clinton administration developed a strategic plan to reduce worst case needs as explicitly as the 1992 report. But each report advocated continued targeting of assistance to worst case needs or extremely low-income renters, and "most important of all—[continued] Federal funding for expanding rental housing assistance."[31] When Congress was considering raising income levels and dropping preferences for admission to rental assistance and assisted projects, Secretary

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[29] See Nelson et al. (2004), p. 1.

[30] HUD (1992), p. x.

[31] HUD (1996), p. ii.

of Housing and Urban Development Andrew Cuomo argued, based on the worst case results, that three-fourths of tenant-based assistance should be reserved for extremely low-income families. The administration also sought to expand tenant-based assistance and production of affordable housing through HOME and the LIHTC.[32] Under the second Bush administration, the three worst case reports published were strictly factual, with none mentioning or advocating any strategies. In 2008, however, Congress cited the severe shortages of housing affordable to extremely low-income renters in authorizing the National Housing Trust Fund.

Local Differences and Local Strategies

In 1993, the Urban Institute published a report by Amy Bogdon, Joshua Silver, and Margery Austin Turner. Based on regional and metropolitan summaries of the newly released 1990 CHAS data, it examined housing conditions and problems to "illustrate ways in which communities throughout the U.S. may describe and then analyze their local housing markets in order to develop strategies for addressing housing problems and needs."[33] In developing local strategies, it stressed the importance of identifying the underlying causes of local housing market problems, noting that the market dynamics underlying excessive housing cost burdens among very low-income renters "vary substantially from place to place. Different remedies are called for in high-growth communities with an absolute shortage of units from those preferable for slow-growth communities with persistently high vacancy rates."[34]

The handbook recommended that those developing local strategies ask which groups of households most need public-sector assistance to meet their housing needs and which housing activities are best suited to addressing these priority needs for housing assistance. To illustrate this, they discuss which combinations of housing market factors affect the strengths and weaknesses of the three basic tools available to deliver housing assistance. These are subsidized production of new units, subsidized acquisition and rehabilitation of existing units, and direct rental assistance to households so that they can afford existing units.[35]

For a conference evaluating the impact of high-tech economies on local housing problems during the late 1990s, Nelson developed "effective local low-income housing strategies from market characteristics" and discussed the implications of these different strategies for desirable federal policies. After exploring how housing problems and market characteristics vary across 44 MSAs, she examined eight MSAs with great variation in local housing market conditions to identify "a desirable program mix…, whether more vouchers could be used or whether additional supply is needed and, if so, at what rents." She concludes that "federal policy should target sufficient resources to severe housing needs through many more vouchers and programs that permit and encourage effective local choices."[36]

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[32] HUD (1998), pp. 37-38.

[33] Bogdon et al. (1993), p. 1.

[34] Bogdon et al. (1993), p. 76.

[35] Bogdon et al. (1993), pp. 94-97.

[36] Nelson (2002), p. 417.

A New Resource to Measure Rental Housing Needs: American Community Survey

Since 1996, the Census Bureau has been phasing in the American Community Survey (ACS) to provide economic, social, demographic, and housing data annually. The 2005 ACS survey was the first to represent a full sample for the United States, including approximately 3 million housing units.[37]

The main advantage of the ACS is that the data are provided annually by the Census Bureau. However, because the sample size for ACS data is much smaller than that for the decennial census housing and population long form, annual ACS results are not as accurate for small regions. Another problem for our purpose is that rather than identifying each county, the ACS micro-data files identify public use micro-data areas, or PUMAs.[38] In addition, as is the case with standard census products, the ACS data do not group households by HAMFI low-income categories, so users are not able to use them to assess the affordability of rental housing to ELI, VLI, and LI renters, or the housing problems of households in these income groups, without combining them with other data.

Despite the limitations of this data set, ACS data provide a valuable new resource for assessing rental housing affordability between decennial censuses.[39] In *Housing at the Half: A Mid-Decade Progress Report from the American Community Survey*, the NLIHC analyzed 2005 state-level ACS data and found that there were large shortages of affordable and available housing for ELI renter households in all 50 states and the District of Columbia. There were shortages as measured by this indicator for renter households with incomes between 0-50 percent AMI in 49 states and the District of Columbia.[40]

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[37] The Census Bureau's Technical Paper 67, "Design and Methodology: American Community Survey," discusses the ACS and its history: http://www.census.gov/acs/www/Downloads/tp67.pdf. In 2006, the ACS added data on group quarters, but they are not included in the analysis of rental housing in this study.

[38] Appendix E provides a more detailed description of PUMAs and their relationship to PA counties. It also documents how PUMAs and counties were consolidated for analysis in this study and the other adjustments made to the ACS data.

[39] HUD is now planning to fund CHAS tabulations from the ACS for 2005-07. These data have not yet been released.

[40] Pelletiere and Wardrip (2008), p. 12. North Dakota was the only state without a shortage of units for renters with incomes between 0-50 percent AMI. In this study, households were grouped into ELI, VLI, and LI categories by comparing household income to each state's median family income. Thus, the estimates of income groups are less accurate than ones that compare each household's income to its county's official HAMFI.

APPENDIX C
METHODOLOGY FOR CALCULATING AFFORDABLE AND AFFORDABLE AND AVAILABLE RENTAL HOUSING UNITS USING CHAS DATA

Methodology

To analyze the affordability and availability of Pennsylvania's rental housing stock, we used special tabulations of the decennial census data called comprehensive housing affordability strategies (CHAS) data. CHAS data are available for 1990 and 2000 from HUD.[1]

Several indicators calculated from CHAS data are used in this study to assess Pennsylvania's rental housing needs:

1. Housing problems for renters
2. Vacancy rates
3. Affordable rental housing units
4. Affordable and available rental housing units

Housing Problems for Renters

Three housing problems were calculated from the CHAS data for ELI, VLI, and LI renters:

1. Cost burden
2. Housing lacking complete kitchen or plumbing facilities
3. Overcrowding, defined as more than one person per room.[2]

The first problem, cost burden, occurs when a renter is paying more than 30 percent of household income on rent and utilities ("gross rent"). Renters with "severe" cost burden are defined as those paying more than 50 percent of income on gross rent.

The second two problems are referred to as "housing unit" problems. According to the U.S. Census Bureau, complete plumbing facilities include (1) hot and cold piped water, (2) a flush toilet, and (3) a bathtub or shower, for the sole use of a household. Complete kitchen facilities include (1) a sink with piped water; (2) a range, or cooktop and oven; and (3) a refrigerator, also for the sole use of a household.[3]

These measures are the only housing quality measures included within the CHAS data. The more

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[1] CHAS data are funded by HUD for state and local housing planning use. The 1990 data were re-released in September 2003 and are available on CD by contacting the U.S. Census Bureau. The 2000 data are available through HUD's website: http://www.huduser.org/datasets/cp.html. These data were re-released in November 2004.

[2] The Census Bureau does not have an official definition for overcrowding. Following standard practice, this study defines overcrowding as households with more than one occupant per room. See Blake et al. (2007) for a detailed discussion of different definitions of overcrowding and a literature review.

[3] Source: U.S. Census Bureau, "2000 Census – Summary File 3," http://factfinder.census.gov/home/saff/main.html?_lang=en

comprehensive quality measures available through the American Housing Survey are available only at the national level, the regional level, and for select metropolitan areas.

Vacancy Rates

The most commonly used measure to assess rental housing supply is the vacancy rate. Yet, vacancy rates do not indicate if an available unit is in adequate condition.

While this study provides vacancy rates for each area analyzed, it does not focus on these data as the primary indicator of rental housing supply. Instead, this study gives more weight to measures of shortages of affordable housing that can be calculated from CHAS data, as defined in the next section.

Affordable Rental Housing Units

This study calculates the numbers of renter households by HUD-adjusted area median family income (HAMFI) group and the number of rental housing units affordable to each group, assuming that gross rents that are 30 percent or less of income are affordable. The shortage/surplus of units affordable to an income group is the difference between these two numbers.

Example: State of Pennsylvania in 2000

	Household Income ≤ 30.0% AMI (ELI)	Household Income 30.1 - 50.0% (VLI)	Household Income 50.1-80.0% (LI)	Household Income > 80.0%	Total
Total Renter Households by HAMFI Group*	**334,600**	**242,571**	**298,571**	**495,140**	**1,370,882**
% Distribution of HAMFI Groups	24%	18%	22%	36%	100%
Total Occupied and Vacant Rental Housing Units Affordable to HAMFI Group	**320,803**	**558,684**	**499,467**	**98,813**	**1,477,767**
Occupied Rental Housing Units	287,874	509,140	479,822	94,046	1,370,882
Vacant Rental Housing Units	32,929	49,544	19,645	4,767	106,885
Total Shortage/Surplus of Units Affordable to HAMFI Group (Total Housing Units – Total Renter Households Within Group)	**(13,797)**	**316,113**	**200,896**	**(396,327)**	**106,885**

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

* Values for total renter households are from CHAS File A10C in this example. Using CHAS files F5C and F5D to determine the total renter households by HAMFI group is also feasible and will produce slightly different results due to suppression and rounding rules for the two separate files. In other sections of the report, we have used files F5C and F5D to calculate total households. The total renter households shown in the various CHAS tables may also differ slightly from the totals in the SF3 decennial census files.

In order to more easily compare the affordability of rental housing across the state or time using CHAS data, we regularly report affordable housing unit shortages/surpluses as "mismatch" ratios (per 100 renter households). To do so, we calculated the total units affordable per 100 renter households as detailed in the following table. For example, for every 100 ELI renter households in Pennsylvania, there were 96 housing units affordable to them. The results identify a modest shortage of rental housing units affordable to ELI households but a surplus of units affordable to households with incomes between 0-50 percent AMI

and 0-80 percent of AMI. The measures suggest that there is not a substantial need for additional rental housing units for any HAMFI group, including those that were ELI.

	Household Income ≤ 30.0% AMI (ELI Renters)	Household Income 0.0- 50.0%	Household Income 0.0-80%
Affordable Units per 100 Renter Households* (Total Housing Units/Total Renter Households * 100)	96	152	157

* The results for household incomes that are between 0-50 percent of AMI and 0-80 percent of AMI are cumulated to include all households with incomes at or below the income threshold and all rental housing units affordable at or below that threshold. For example, for households with incomes between 0-50 percent of AMI, the calculation is: (320,803+558,684)/(334,600+242,571)*100.

Affordable and Available Rental Housing Units

Calculations from the CHAS data to estimate whether the units that are affordable to a particular HAMFI group are actually available to them are performed as follows:

Step 1: Determine the income of the occupants actually residing in the rental housing units in each affordability range. In addition, determine the number of vacant units in each affordability range.

Example: State of Pennsylvania

	Rent Affordable to:				
Rental Units Are Occupied by:	Household Income ≤ 30.0% AMI	Household Income 30.1- 50.0%	Household Income 50.1-80.0%	Household Income > 80.0%	Total Renters by HAMFI Group
Renters with Household Incomes ≤ 30.0% AMI	131,347	121,043	69,794	12,416	334,600
Renters with Household Incomes between 30.1 - 50.0% AMI	57,919	107,439	66,929	10,284	242,571
Renters with Household Incomes between 50.1-80.0%	44,501	127,240	111,712	15,118	298,571
Renters with Household Incomes ≥ 80.0%	54,107	153,418	231,387	56,228	495,140
Total Occupied Units	**287,874**	**509,140**	**479,822**	**94,046**	**1,370,882**
Total Vacant Units	**32,929**	**49,544**	**19,645**	**4,767**	**106,885**

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

Step 2: From the preceding table, add all cells in which units are affordable to those at each low-income threshold and occupied by renters with incomes less than or equal to the applicable thresholds. (The cells that should be added together for those with household incomes less than or equal to 50 percent of AMI are highlighted in red in the chart above as an example.)

	Rent Is Affordable to Those at Specified Income Levels and Occupied by Renters At or Below the Income Level:		
	Household Income ≤ 30.0% AMI	Household Income 0.0- 50.0%	Household Income 0.0-80%
Final Occupied Units	131,347	417,748	837,924

Step 3: Using the table from Step 1, determine the vacant units available to each HAMFI group and cumulate the values at or below each threshold.

	Household Income ≤ 30.0% AMI	Household Income 0.0- 50.0%	Household Income 0.0-80%
Final Vacant Units (cumulated)	32,929	82,473	102,118

Step 4: Add the total occupied units and total vacant units at each threshold. To estimate if there is a shortage or surplus of affordable and available units, subtract the total renter households with incomes below each threshold from the total affordable and available units.

	Household Income ≤ 30.0% AMI	Household Income 0.0- 50.0%	Household Income 0.0-80%
Total Units Affordable and Available (Final Occupied Units + Final Vacant Units)	164,276	500,221	940,042
Total Renter Households	334,600	577,171	875,742
Total Shortage/Surplus of Units Affordable to Income groups (Total Affordable and Available Units-Total Households)	(170,324)	(76,950)	64,300
Affordable and Available Units Per 100 Renter Households* (Total Affordable and Available Units/Total Renter Households * 100)	49	87	107

* The results from the table above are cumulated. For example, to determine the affordable and available units per 100 renter households for those with household income between 0-80 percent, the calculation is: (940,042)/(334,600+242,571+298,571)*100.

Income Limits, Affordable Rents, and Fair Market Rents

An inherent complication of both CHAS data and HUD's income eligibility rules is the difficulty of translating HUD-adjusted area median family income (HAMFI) or affordability cutoffs into easy-to-understand current dollars (or vice versa). To do this for each Pennsylvania county, Table D.1 lists the 1999 median family incomes (MFI) calculated from 2000 census data that were used in preparing the CHAS tabulations, which varied from $34,345 in Forest County to $58,666 in Pike County.[1]

The four-person very low-income limits shown in the second column do not always equal 50 percent of the area MFI (as indicated in the third column) because of some of the adjustments required by law.[2] Specifically, in nonmetropolitan counties very low-income limits can be no less than 50 percent of the average median family income for all nonmetropolitan counties in the state: In 1999 this provision imposed a floor of $20,850 for nonmetropolitan counties in PA. The official very low-income limit in Forest County, the county with the lowest income, for example, was actually 60.7 percent of that county's median family income. Extremely low-income limits are not shown in the table because in almost all areas, they are three-fifths of the very low-income limits. As the fourth column of D.1 illustrates, for three-person families, poverty thresholds are close to 30 percent of HAMFI in most Pennsylvania counties.[3]

The fifth, six, and seventh columns indicate the two-bedroom rents affordable to each HAMFI income threshold (for ELI, VLI, and LI renter households). The eighth column of the table lists the official two-bedroom FMRs set by HUD for each county in 1999, while the ninth gives household income — expressed as a percentage of HAMFI — at which these two-bedroom FMRs equal 30 percent of income. A household whose income relative to HAMFI is at or above this percentage would not receive any benefit from a voucher; i.e., this is the point at which the rental subsidy a voucher provides is completely phased out.[4] In all but 13 Pennsylvania counties, this phase-out occurs at a point where income relative to HAMFI is less than 50 percent. This means that in the large majority of Pennsylvania

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[1] See HUD's website for additional information on MFI values and adjustments made in the CHAS data: http://www.huduser.org/datasets/cp.html.

[2] The very low-income limit is defined to apply to a family or household of four people. HUD's household size adjustments define an income limit for a one-person household as 70 percent of this base. Expressed as a percentage of the base, the other household size adjustments are: for two persons, 80 percent; three persons, 90 percent; five persons, 106 percent; six persons, 112 percent; plus an additional 6 percent of base for every additional person.

[3] See http://www.census.gov/prod/2003pubs/c2kbr-19.pdf for additional information on the 1999 poverty thresholds.

[4] See the Glossary for the definitions of FMRs, rental subsidy, and vouchers.

counties, some VLI households, while statutorily eligible for the voucher program, would not be able to benefit from it.[5]

The rental subsidy phase-out income is also important for understanding the extent to which the lowest-income households might benefit from the low income housing tax credit (LIHTC) program and the HOME program, both of which are intended to add units affordable to lower-income renters. In particular, the income level relative to HAMFI at which the voucher subsidy phases out is a key indicator of whether units funded by LIHTCs are likely to have below-FMR rents.[6] Adding such units is desirable because it increases the number of units that can be used with a voucher without the voucher holder incurring a cost burden and, more fundamentally, increases the likelihood that a household with a newly issued voucher will be successful in finding a unit where the voucher can be used in the time period allotted for doing so.[7] However, there is no guarantee that LIHTC units will have rents below the FMR. If the rental subsidy from a voucher phases out at a point where income relative to HAMFI is less than 50 percent, this implies that the community's FMR is lower than the maximum rent that the owner of an LIHTC project is allowed to charge for a unit.[8] Then if project owners charge the maximum rent allowed, a household with a voucher will incur a cost burden if it lives in an LIHTC unit.[9] This situation has the potential to occur in the large majority of Pennsylvania counties where the rental subsidy phases out at an income level relative to HAMFI below 50 percent.[10] (See column 9.)

HOME units, for which rents are capped by statute at the FMR, will be affordable, without a subsidy, to any renter whose income is above the rental subsidy phase-out point. Because the phase-out point is in the 41 percent to 49 percent range for the large majority of Pennsylvania counties (see Column 9), HOME units should be affordable to at least some VLI renters in these counties.[11]

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[5] Pennsylvania counties mirror U.S. averages in 2002. As indicated by HUD in its Worst Case Needs series, almost half the U.S. population and three-fourths of the nonmetropolitan population lived in locations where FMRs were affordable to some households with incomes below 50 percent of HAMFI. See HUD (2003), p 73; http://www.huduser.org/publications/affhsg/worstcase03.html.

[6] See HUD (2003) pp. 70-72. The LIHTC program is by far the largest source of new subsidized housing in the country.

[7] In order to use a newly issued voucher, a potential user must search in the private market to find a unit that passes HUD's housing quality standards within 120 days of receipt (or must already live in such a unit). The lower the number of units with below-FMR rents, the harder it will be for the household to find an acceptable affordable unit when its current unit does not meet necessary standards. Some households may not find a unit in the permitted time and will lose their vouchers, while others may rent a unit whose rent is above the FMR and will have at least some cost burden.

[8] By statute, the maximum rent that the owner of an LIHTC project may charge is the rent that is just affordable to a household whose income is 50 percent of HAMFI or the rent that is just affordable to a household whose income is 60 percent of HAMFI, depending on the particular LIHTC project. It can be shown that when the phase-out of the rental subsidy from a voucher occurs at a point where income relative to HAMFI is less than 50 percent, the FMR in that community is less than the rent that is just affordable to a household with an income that is 50 percent of HAMFI; i.e., the FMR is lower than either of the two "maximum allowable rents" that are possible for an LIHTC project.

[9] See the Glossary for an explanation of why a household with a voucher incurs a cost burden if it rents a unit whose rent is higher than the FMR.

[10] If this situation occurred, there would obviously be no gain in the number of units that rent below FMR. However, it is possible that the construction of LIHTC units could still ease the shortage of units affordable and available to the lowest-income households. If households with higher incomes were occupying part of the existing affordable stock but move to the new LIHTC units, some affordable but previously unavailable units may become available to the lowest-income renters.

[11] See the Glossary for information about the HOME program.

TABLE D.1

Income Limits and Affordable Rents

					Two-Bedroom Rent Affordable at HAMFI Income Thresholds*				
	1999 Median Family Income	HUD Very Low-Income Limit, Four Person	VLI limit as actual % of Median Family Income	Three-Person Poverty Threshold ($13,290) as % of HAMFI	ELI House-holds	VLI House-holds	LI House-holds	Two-Bedroom FMR in 1999	% of HAMFI at Which FMR = 30% of Income
Adams County	$48,956	$24,500	50.0%	27%	$331	$551	$882	$503	46%
Allegheny County	$47,712	$23,850	50.0%	28%	$322	$537	$858	$495	46%
Armstrong County	$38,346	$20,850	54.4%	32%	$281	$469	$750	$429	46%
Beaver County	$47,712	$23,850	50.0%	28%	$322	$537	$858	$495	46%
Bedford County	$37,855	$20,850	55.1%	32%	$281	$469	$750	$429	46%
Berks County	$53,531	$26,750	50.0%	25%	$361	$602	$963	$544	45%
Blair County	$40,180	$20,850	51.9%	32%	$281	$469	$750	$431	46%
Bradford County	$40,780	$20,850	51.1%	32%	$281	$469	$750	$442	47%
Bucks County	$58,613	$29,300	50.0%	23%	$396	$659	$1,055	$722	55%
Butler County	$47,712	$23,850	50.0%	28%	$322	$537	$858	$495	46%
Cambria County	$37,610	$20,850	55.4%	32%	$281	$469	$750	$439	47%
Cameron County	$39,342	$20,850	53.0%	32%	$281	$469	$750	$429	46%
Carbon County	$52,462	$26,250	50.0%	25%	$354	$591	$945	$669	57%
Centre County	$50,697	$25,350	50.0%	26%	$342	$570	$912	$624	55%
Chester County	$58,613	$29,300	50.0%	23%	$396	$659	$1,055	$722	55%
Clarion County	$38,028	$20,850	54.8%	32%	$281	$469	$750	$429	46%
Clearfield County	$38,172	$20,850	54.6%	32%	$281	$469	$750	$429	46%
Clinton County	$38,190	$20,850	54.6%	32%	$281	$469	$750	$429	46%
Columbia County	$43,721	$21,850	50.0%	30%	$295	$492	$786	$480	49%
Crawford County	$40,846	$20,850	51.0%	32%	$281	$469	$750	$429	46%
Cumberland County	$52,348	$26,150	50.0%	25%	$353	$588	$942	$559	48%
Dauphin County	$52,348	$26,150	50.0%	25%	$353	$588	$942	$559	48%
Delaware County	$58,613	$29,300	50.0%	23%	$396	$659	$1,055	$722	55%
Elk County	$46,752	$23,400	50.1%	28%	$316	$527	$843	$429	41%
Erie County	$44,845	$22,400	49.9%	30%	$303	$504	$807	$441	44%
Fayette County	$47,712	$23,850	50.0%	28%	$322	$537	$858	$495	46%
Forest County	$34,345	$20,850	60.7%	32%	$281	$469	$750	$429	46%
Franklin County	$47,131	$23,550	50.0%	28%	$318	$530	$848	$435	41%
Fulton County	$40,354	$20,850	51.7%	32%	$281	$469	$750	$429	46%
Greene County	$37,390	$20,850	55.8%	32%	$281	$469	$750	$429	46%

TABLE CONTINUED ON PAGE 84 ➔

TABLE D.1 CONTINUED

					Two-Bedroom Rent Affordable at HAMFI Income Thresholds*				
	1999 Median Family Income	HUD Very Low-Income Limit, Four Person	VLI limit as actual % of Median Family Income	Three-Person Poverty Threshold ($13,290) as % of HAMFI	ELI House-holds	VLI House-holds	LI House-holds	Two-Bedroom FMR in 1999	% of HAMFI at Which FMR = 30% of Income
Huntingdon County	$40,438	$20,850	51.6%	32%	$281	$469	$750	$429	46%
Indiana County	$38,412	$20,850	54.3%	32%	$281	$469	$750	$429	46%
Jefferson County	$37,495	$20,850	55.6%	32%	$281	$469	$750	$429	46%
Juniata County	$39,775	$20,850	52.4%	32%	$281	$469	$750	$429	46%
Lackawanna County	$43,721	$21,850	50.0%	30%	$295	$492	$786	$480	49%
Lancaster County	$52,877	$26,450	50.0%	25%	$357	$595	$952	$576	48%
Lawrence County	$41,644	$20,850	50.1%	32%	$281	$469	$750	$429	46%
Lebanon County	$52,348	$26,150	50.0%	25%	$353	$588	$942	$559	48%
Lehigh County	$52,462	$26,250	50.0%	25%	$354	$591	$945	$669	57%
Luzerne County	$43,721	$21,850	50.0%	30%	$295	$492	$786	$480	49%
Lycoming County	$41,188	$20,850	50.6%	32%	$281	$469	$750	$441	47%
McKean County	$41,044	$20,850	50.8%	32%	$281	$469	$750	$429	46%
Mercer County	$41,853	$20,950	50.1%	32%	$282	$471	$754	$439	47%
Mifflin County	$38,647	$20,850	53.9%	32%	$281	$469	$750	$429	46%
Monroe County	$52,471	$26,250	50.0%	25%	$354	$591	$945	$664	56%
Montgomery County	$58,613	$29,300	50.0%	23%	$396	$659	$1,055	$722	55%
Montour County	$45,261	$22,650	50.0%	29%	$306	$510	$816	$451	44%
Northampton County	$52,462	$26,250	50.0%	25%	$354	$591	$945	$669	57%
Northumberland County	$39,578	$20,850	52.7%	32%	$281	$469	$750	$460	49%
Perry County	$52,348	$26,150	50.0%	25%	$353	$588	$942	$559	48%
Philadelphia County	$58,613	$29,300	50.0%	23%	$396	$659	$1,055	$722	55%
Pike County	$58,666	$29,350	50.0%	23%	$396	$660	$1,056	$712	54%
Potter County	$38,065	$20,850	54.8%	32%	$281	$469	$750	$429	46%
Schuylkill County	$41,414	$20,850	50.3%	32%	$281	$469	$750	$447	48%
Snyder County	$41,986	$21,000	50.0%	32%	$284	$473	$756	$430	46%
Somerset County	$37,610	$20,850	55.4%	32%	$281	$469	$750	$439	47%
Sullivan County	$37,628	$20,850	55.4%	32%	$281	$469	$750	$429	46%
Susquehanna County	$39,601	$20,850	52.7%	32%	$281	$469	$750	$429	46%

TABLE CONTINUED ON PAGE 85 ➔

TABLE D.1 CONTINUED

					Two-Bedroom Rent Affordable at HAMFI Income Thresholds*				
	1999 Median Family Income	HUD Very Low-Income Limit, Four Person	VLI limit as actual % of Median Family Income	Three-Person Poverty Threshold ($13,290) as % of HAMFI	ELI House-holds	VLI House-holds	LI House-holds	Two-Bedroom FMR in 1999	% of HAMFI at Which FMR = 30% of Income
Tioga County	$37,966	$20,850	54.9%	32%	$281	$469	$750	$429	46%
Union County	$47,660	$23,850	50.0%	28%	$322	$537	$858	$564	53%
Venango County	$39,420	$20,850	52.9%	32%	$281	$469	$750	$429	46%
Warren County	$42,907	$21,450	50.0%	31%	$289	$483	$772	$429	44%
Washington County	$47,712	$23,850	50.0%	28%	$322	$537	$858	$495	46%
Wayne County	$40,647	$20,850	51.3%	32%	$281	$469	$750	$515	55%
Westmoreland County	$47,712	$23,850	50.0%	28%	$322	$537	$858	$495	46%
Wyoming County	$43,721	$21,850	50.0%	30%	$295	$492	$786	$480	49%
York County	$52,715	$26,350	50.0%	25%	$356	$593	$948	$544	46%

Source: Federal Reserve Bank of Philadelphia calculations based on income limits and FMRs provided on HUD USER: http://www.huduser.org/datasets/pdrdatas.html

* To calculate the monthly dollar rent that is affordable at each HAMFI threshold requires assumptions about the number of people housed per bedroom: no bedrooms, 70 percent of base; one bedroom, 75 percent; two bedrooms, 90 percent; three bedrooms, 104 percent, etc. This formula assumes that an efficiency unit houses one person and a one-bedroom unit houses 1.5 persons, and that each additional bedroom houses another 1.5 persons. Therefore, the two-bedroom rents shown in the table as "affordable" to incomes at 30 percent, 50 percent, and 80 percent of HAMFI are calculated as if three-person families lived in those units.

Income Distributions of Lower-Income Renter Households and Housing Problems

According to the CHAS data, there were 1,370,602 renter households in Pennsylvania in 2000, of which 24 percent were ELI, 18 percent were VLI, and 22 percent were LI.

At the county level, Philadelphia and Fayette had the highest shares of ELI households, 38 percent and 37 percent, respectively. The Philadelphia suburban counties of Bucks, Chester, and Montgomery, and Montour County had the lowest shares of ELI households.

The prevalence of housing problems varies by county. Over 80 percent of ELI renter households in Centre and Monroe counties had housing problems. Even in counties where the problems are least common, specifically Forest County (49 percent) and Juniata County (52 percent), approximately half of ELI renter households had problems.[12]

Among VLI households, the Philadelphia suburban counties of Bucks, Chester, Delaware, and Montgomery counties had the highest percentage of housing problems.

[12] Forest County has the fewest renter households so its results may well be skewed due to rounding.

TABLE D.2

Income Distribution and Housing Problems by County in 2000

		% Distribution of Renter Households			% with Any Problem (Housing Unit Problem or Cost Burden)		
	Total Renter Households*	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**1,370,602**	**24%**	**18%**	**22%**	**71%**	**63%**	**28%**
Adams County	7,843	16%	17%	26%	69%	64%	24%
Allegheny County	177,059	25%	17%	21%	70%	65%	32%
Armstrong County	6,597	21%	21%	25%	71%	49%	16%
Beaver County	18,177	24%	19%	22%	70%	51%	20%
Bedford County	3,914	21%	16%	27%	67%	49%	16%
Berks County	36,856	23%	18%	24%	71%	65%	27%
Blair County	13,971	25%	21%	20%	69%	56%	23%
Bradford County	5,973	20%	18%	23%	70%	57%	15%
Bucks County	49,495	15%	14%	23%	71%	79%	41%
Butler County	14,618	21%	18%	23%	74%	61%	26%
Cambria County	15,295	25%	22%	22%	63%	50%	12%
Cameron County	618	19%	20%	23%	68%	34%	13%
Carbon County	5,189	28%	20%	25%	69%	52%	13%
Centre County	19,615	29%	22%	21%	81%	75%	36%
Chester County	37,389	14%	13%	21%	76%	78%	43%
Clarion County	4,480	29%	21%	20%	76%	46%	20%
Clearfield County	6,837	24%	22%	23%	64%	44%	15%
Clinton County	3,991	28%	21%	24%	71%	48%	18%
Columbia County	6,952	23%	20%	22%	71%	56%	26%
Crawford County	8,516	22%	20%	24%	70%	58%	26%
Cumberland County	22,372	17%	16%	24%	73%	68%	25%
Dauphin County	35,522	20%	16%	24%	69%	66%	28%
Delaware County	58,019	23%	16%	23%	76%	78%	34%
Elk County	2,896	18%	22%	27%	63%	39%	12%
Erie County	32,728	24%	20%	22%	72%	60%	24%
Fayette County	16,132	37%	20%	21%	66%	39%	8%
Forest County	370	24%	29%	25%	49%	38%	13%
Franklin County	13,153	17%	16%	25%	68%	61%	17%
Fulton County	1,226	22%	18%	22%	61%	51%	11%
Greene County	3,923	28%	23%	22%	68%	44%	14%
Huntingdon County	3,802	21%	19%	22%	57%	41%	14%
Indiana County	9,653	29%	23%	19%	76%	58%	24%
Jefferson County	4,202	25%	23%	23%	62%	51%	13%
Juniata County	1,922	16%	17%	24%	52%	38%	15%
Lackawanna County	27,907	23%	19%	22%	66%	55%	23%
Lancaster County	50,267	17%	17%	25%	77%	70%	27%
Lawrence County	8,435	25%	23%	22%	70%	55%	25%

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TABLE D.2 CONTINUED

		% Distribution of Renter Households			% with Any Problem (Housing Unit Problem or Cost Burden)		
	Total Renter Households*	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**1,370,602**	**24%**	**18%**	**22%**	**71%**	**63%**	**28%**
Lebanon County	12,670	21%	20%	25%	65%	51%	19%
Lehigh County	37,989	22%	19%	22%	73%	67%	32%
Luzerne County	38,758	23%	19%	22%	65%	57%	24%
Lycoming County	14,341	20%	19%	24%	71%	67%	31%
McKean County	4,544	23%	22%	21%	73%	55%	18%
Mercer County	11,088	22%	19%	23%	69%	56%	31%
Mifflin County	4,799	26%	20%	22%	66%	51%	17%
Monroe County	10,692	21%	17%	22%	81%	74%	37%
Montgomery County	75,832	14%	13%	21%	74%	77%	43%
Montour County	1,933	15%	18%	25%	78%	52%	26%
Northampton County	27,065	23%	17%	23%	70%	65%	28%
Northumberland County	10,275	21%	23%	23%	65%	51%	14%
Perry County	3,435	19%	21%	24%	64%	46%	12%
Philadelphia County	240,354	38%	17%	19%	72%	66%	30%
Pike County	2,639	22%	20%	28%	76%	68%	26%
Potter County	1,619	20%	23%	21%	65%	65%	24%
Schuylkill County	13,376	21%	22%	22%	57%	50%	18%
Snyder County	3,190	17%	19%	23%	63%	62%	26%
Somerset County	6,853	23%	22%	25%	67%	42%	13%
Sullivan County	556	19%	21%	25%	67%	52%	11%
Susquehanna County	3,430	20%	22%	23%	65%	60%	20%
Tioga County	3,789	24%	22%	23%	65%	51%	17%
Union County	3,527	25%	18%	24%	71%	53%	21%
Venango County	5,362	25%	21%	21%	67%	46%	14%
Warren County	3,835	17%	20%	26%	61%	50%	12%
Washington County	18,549	27%	20%	21%	70%	48%	14%
Wayne County	3,563	20%	21%	22%	73%	64%	24%
Westmoreland County	32,956	24%	20%	23%	65%	51%	13%
Wyoming County	2,271	20%	19%	21%	68%	58%	23%
York County	35,398	19%	18%	26%	74%	66%	18%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

* For special tabulations of census data, the Census Bureau institutes special rounding rules that cause some discrepancies between total data counts. The total renter-occupied household counts in this table are based on the summation of CHAS files F5C and F5D. These numbers do not match total renter-occupied household counts from the decennial census SF3 file or totals found in other CHAS tables, such as CHAS Table A10C. More information on rounding of special tabulations of the census data is available through HUD: http://www.huduser.org/datasets/cp/CHAS/Rounding.htm.

Statewide, 69 percent of the ELI renter households had a cost burden and 53 percent had a severe cost burden. Therefore, over three-fourths of ELI renter households with a cost burden actually had a severe cost burden. At the county level, the same pattern held in 2000. In every county, over 60 percent of the ELI renter households that had a cost burden were actually severely cost burdened.

ELI renters in three different areas of the state faced the greatest severe cost burden challenges. The first area was the Northeast section of the state bordering New Jersey. Monroe County faced the greatest challenge: 68 percent of ELI renter households had severe cost burdens. ELI renters in Pike and Wayne counties also faced high cost burdens. The second area was Centre County, likely because of the presence of Pennsylvania State University and the need to house both the student population and low-income workers, and the third area was the Philadelphia suburban counties, particularly Chester, Delaware, and Montgomery. VLI renters in Centre County and the Philadelphia suburban counties also had high cost burdens.

TABLE D.3
Cost Burden Incidence in 2000

	% with Any Cost Burden (Rent Greater Than 30% of Income, Moderate or Severe Cost Burden)			% with Severe Cost Burden (Rent Greater Than 50% of Income)		
	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**69%**	**60%**	**23%**	**53%**	**16%**	**3%**
Adams County	67%	58%	14%	47%	15%	1%
Allegheny County	68%	63%	29%	53%	20%	4%
Armstrong County	69%	47%	14%	52%	11%	0%
Beaver County	69%	49%	17%	46%	12%	1%
Bedford County	65%	47%	11%	48%	8%	1%
Berks County	68%	60%	20%	50%	13%	2%
Blair County	68%	55%	19%	51%	12%	2%
Bradford County	68%	55%	13%	48%	14%	1%
Bucks County	69%	77%	36%	58%	32%	5%
Butler County	71%	58%	24%	56%	13%	4%
Cambria County	63%	48%	10%	42%	7%	1%
Cameron County	68%	31%	10%	44%	3%	0%
Carbon County	69%	50%	10%	48%	7%	0%
Centre County	79%	72%	30%	67%	28%	4%
Chester County	74%	75%	37%	61%	32%	5%
Clarion County	72%	45%	14%	56%	14%	3%
Clearfield County	63%	43%	12%	47%	8%	3%
Clinton County	69%	46%	16%	49%	13%	1%
Columbia County	69%	53%	21%	56%	15%	1%

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TABLE D.3 CONTINUED

	% with Any Cost Burden (Rent Greater Than 30% of Income, Moderate or Severe Cost Burden)			% with Severe Cost Burden (Rent Greater Than 50% of Income)		
	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**69%**	**60%**	**23%**	**53%**	**16%**	**3%**
Crawford County	68%	54%	21%	44%	10%	3%
Cumberland County	72%	67%	23%	57%	16%	2%
Dauphin County	67%	62%	23%	52%	13%	1%
Delaware County	74%	75%	29%	63%	25%	4%
Elk County	63%	36%	10%	48%	8%	1%
Erie County	70%	58%	19%	53%	15%	2%
Fayette County	65%	37%	6%	46%	5%	1%
Forest County	49%	34%	9%	31%	15%	0%
Franklin County	66%	54%	14%	50%	11%	2%
Fulton County	58%	51%	8%	42%	7%	0%
Greene County	64%	43%	9%	44%	9%	3%
Huntingdon County	56%	38%	10%	38%	7%	0%
Indiana County	74%	55%	21%	57%	16%	3%
Jefferson County	60%	48%	11%	41%	8%	1%
Juniata County	47%	35%	10%	35%	8%	1%
Lackawanna County	65%	54%	22%	48%	14%	1%
Lancaster County	74%	65%	22%	58%	17%	3%
Lawrence County	67%	52%	22%	45%	14%	2%
Lebanon County	63%	45%	14%	40%	8%	1%
Lehigh County	70%	63%	27%	52%	18%	2%
Luzerne County	64%	56%	22%	47%	14%	1%
Lycoming County	70%	66%	26%	56%	19%	2%
McKean County	72%	55%	16%	58%	13%	2%
Mercer County	67%	55%	26%	51%	14%	2%
Mifflin County	63%	47%	15%	49%	7%	1%
Monroe County	80%	74%	33%	68%	19%	2%
Montgomery County	72%	74%	39%	61%	29%	6%
Montour County	75%	48%	21%	50%	26%	5%
Northampton County	69%	60%	25%	52%	17%	2%
Northumberland County	64%	49%	13%	44%	13%	1%
Perry County	61%	43%	8%	39%	9%	1%
Philadelphia County	69%	59%	21%	55%	14%	3%
Pike County	76%	68%	20%	61%	21%	1%
Potter County	64%	63%	18%	50%	17%	3%
Schuylkill County	56%	49%	14%	38%	9%	1%
Snyder County	59%	56%	21%	45%	12%	1%

TABLE CONTINUED ON PAGE 90 ➔

TABLE D.3 CONTINUED

	% with Any Cost Burden (Rent Greater Than 30% of Income, Moderate or Severe Cost Burden)			% with Severe Cost Burden (Rent Greater Than 50% of Income)		
	ELI Households	VLI Households	LI Households	ELI Households	VLI Households	LI Households
Pennsylvania Total	**69%**	**60%**	**23%**	**53%**	**16%**	**3%**
Somerset County	65%	40%	11%	48%	6%	2%
Sullivan County	59%	49%	6%	39%	14%	0%
Susquehanna County	64%	58%	14%	49%	14%	2%
Tioga County	65%	48%	12%	50%	12%	0%
Union County	68%	50%	18%	54%	16%	6%
Venango County	66%	43%	12%	46%	10%	1%
Warren County	59%	47%	10%	41%	6%	2%
Washington County	69%	45%	12%	45%	9%	0%
Wayne County	72%	63%	20%	63%	21%	1%
Westmoreland County	65%	49%	11%	44%	9%	1%
Wyoming County	66%	58%	20%	53%	16%	2%
York County	71%	62%	14%	53%	12%	1%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

While severe cost burden afflicted over half of ELI renters statewide in 2000, housing unit problems were far less common. In every county, being cost burdened was far more prevalent for renter households than having a housing unit problem.

A few counties have a particularly high percentage of ELI renter households with at least one housing unit problem, but there do not appear to be any regional patterns to this occurrence. These counties include Berks, Centre, Clarion, Lancaster, and Philadelphia.

TABLE D.4
Housing Unit Problems in 2000

	% with At Least One Housing Unit Problem		
	ELI Households	VLI Households	LI Households
Pennsylvania Total	**7%**	**6%**	**5%**
Adams County	7%	7%	10%
Allegheny County	4%	4%	3%
Armstrong County	5%	3%	2%
Beaver County	4%	3%	3%
Bedford County	5%	3%	4%
Berks County	12%	9%	8%
Blair County	3%	3%	4%
Bradford County	2%	6%	2%
Bucks County	9%	5%	7%
Butler County	4%	5%	4%
Cambria County	2%	3%	2%
Cameron County	3%	3%	3%
Carbon County	3%	2%	4%
Centre County	11%	12%	9%
Chester County	7%	6%	8%
Clarion County	12%	2%	7%
Clearfield County	3%	3%	5%
Clinton County	3%	4%	2%
Columbia County	4%	6%	5%
Crawford County	6%	5%	7%
Cumberland County	5%	3%	4%
Dauphin County	10%	7%	6%
Delaware County	8%	8%	6%
Elk County	2%	3%	2%
Erie County	7%	4%	5%
Fayette County	4%	3%	3%
Forest County	4%	4%	4%
Franklin County	5%	9%	3%
Fulton County	5%	2%	4%
Greene County	8%	4%	6%
Huntingdon County	5%	3%	5%
Indiana County	5%	6%	4%
Jefferson County	3%	4%	2%
Juniata County	7%	4%	5%
Lackawanna County	2%	2%	2%
Lancaster County	11%	8%	5%
Lawrence County	4%	6%	3%

	% with At Least One Housing Unit Problem		
	ELI Households	VLI Households	LI Households
Pennsylvania Total	**7%**	**6%**	**5%**
Lebanon County	7%	7%	5%
Lehigh County	10%	7%	6%
Luzerne County	3%	3%	2%
Lycoming County	5%	3%	5%
McKean County	3%	3%	2%
Mercer County	4%	3%	5%
Mifflin County	4%	7%	2%
Monroe County	6%	3%	6%
Montgomery County	7%	6%	5%
Montour County	8%	8%	6%
Northampton County	7%	7%	5%
Northumberland County	2%	3%	2%
Perry County	5%	5%	4%
Philadelphia County	11%	12%	9%
Pike County	2%	2%	7%
Potter County	6%	8%	7%
Schuylkill County	3%	2%	3%
Snyder County	10%	7%	5%
Somerset County	6%	3%	3%
Sullivan County	7%	3%	6%
Susquehanna County	6%	3%	6%
Tioga County	1%	4%	5%
Union County	4%	4%	6%
Venango County	2%	4%	3%
Warren County	4%	3%	2%
Washington County	5%	4%	3%
Wayne County	2%	7%	5%
Westmoreland County	3%	2%	2%
Wyoming County	4%	1%	3%
York County	8%	6%	5%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables F5C and F5D, http://www.huduser.org/datasets/cp.html

Shortages of Affordable Rental Housing

Table D.5 lists both the affordable and the affordable and available units per 100 renter households by county for Pennsylvania. The Philadelphia metropolitan division[13] and Centre County had the fewest units affordable to ELI renters. At the county level, Centre and Delaware counties had the fewest units affordable to ELI renters, with 54 and 56 units per 100 renter households, respectively. They were followed by three other counties within the Philadelphia metropolitan division: Philadelphia, Montgomery, and Bucks.

There did not appear to be shortages of affordable rental units for VLI or LI renters across the state. Centre County is the only county with a very modest shortage for renter households with incomes between 0-50 percent of AMI (95 units per 100 renter households).

While these ratios appear to show adequate supplies of affordable housing units in many areas of Pennsylvania, closer analysis shows that many units were not actually available to the lowest income renters. The second half of the table details the actual shortage of rental housing units to renters at each threshold.

The previous section identified three areas within the state in which ELI renters faced severe cost burdens (the Northeast section bordering New Jersey, Centre County, and the Philadelphia suburban counties). These areas were also the areas with the greatest shortage of affordable and available housing units per 100 renter households. In addition, the Lancaster area had a notable shortage of affordable rental housing.

Cambria, Elk, and Juniata counties had the greatest supply of affordable and available housing units per 100 ELI renter households. In each of these counties, there were over 80 units of affordable and available housing per 100 renter households.

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[13] The Philadelphia metropolitan division includes the county of Philadelphia and the four suburban counties of Bucks, Chester, Delaware, and Montgomery. Also, the city and county of Philadelphia constitute the same area. For a list of all metropolitan statistical areas and metropolitan divisions in the United States, see: http://www.whitehouse.gov/omb/assets/omb/bulletins/fy2009/09-01.pdf.

TABLE D.5

Affordable and Affordable and Available Housing Units Per 100 Renter Households in 2000

	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania Total	**96**	**152**	**157**	**49**	**87**	**107**
Adams County	123	210	175	42	86	105
Allegheny County	90	140	161	51	85	109
Armstrong County	157	197	158	56	97	109
Beaver County	140	180	162	64	99	111
Bedford County	183	228	165	59	99	110
Berks County	96	165	160	52	92	108

TABLE CONTINUED ON PAGE 93 →

TABLE D.5 CONTINUED

	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania Total	**96**	**152**	**157**	**49**	**87**	**107**
Blair County	109	159	156	54	93	109
Bradford County	160	211	172	65	102	111
Bucks County	75	114	173	37	56	98
Butler County	114	172	157	47	89	105
Cambria County	170	196	158	82	108	113
Cameron County	201	240	181	70	123	120
Carbon County	125	196	151	65	111	115
Centre County	54	95	128	24	55	94
Chester County	98	132	181	39	64	100
Clarion County	127	166	150	53	90	108
Clearfield County	159	188	151	63	101	108
Clinton County	121	153	141	56	88	105
Columbia County	111	177	160	45	95	108
Crawford County	143	188	161	59	98	110
Cumberland County	103	171	180	42	83	110
Dauphin County	102	168	174	56	93	114
Delaware County	56	121	158	30	69	104
Elk County	215	236	160	83	116	113
Erie County	112	165	157	54	94	109
Fayette County	138	175	140	72	109	112
Forest County	237	189	137	70	103	108
Franklin County	154	236	182	63	104	111
Fulton County	200	236	177	66	107	112
Greene County	167	173	146	69	98	109
Huntingdon County	195	218	171	73	103	110
Indiana County	102	138	143	40	82	105
Jefferson County	158	182	147	65	99	108
Juniata County	263	267	181	86	108	108
Lackawanna County	122	172	166	57	95	112
Lancaster County	88	179	169	38	82	104
Lawrence County	133	150	147	63	90	108
Lebanon County	122	206	159	56	103	109
Lehigh County	80	127	161	43	76	108
Luzerne County	127	180	164	58	99	112
Lycoming County	104	164	164	46	86	109
McKean County	131	178	157	55	96	110
Mercer County	132	163	164	61	88	108

TABLE CONTINUED ON PAGE 94 →

TABLE D.5 CONTINUED

	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania Total	**96**	**152**	**157**	**49**	**87**	**107**
Mifflin County	123	191	155	57	107	112
Monroe County	76	126	167	29	67	106
Montgomery County	71	123	181	32	62	100
Montour County	153	221	181	54	98	109
Northampton County	85	142	161	46	80	106
Northumberland County	164	197	162	70	103	113
Perry County	182	226	167	69	109	112
Philadelphia County	67	126	136	45	85	106
Pike County	86	134	146	33	72	105
Potter County	143	180	164	53	88	108
Schuylkill County	177	207	168	76	110	115
Snyder County	167	200	172	56	88	106
Somerset County	172	206	151	65	106	108
Sullivan County	240	248	171	73	112	115
Susquehanna County	162	187	163	59	94	110
Tioga County	137	165	151	54	89	107
Union County	107	180	150	44	90	104
Venango County	144	191	156	61	101	110
Warren County	172	235	173	62	112	115
Washington County	131	183	157	67	107	114
Wayne County	133	151	167	41	74	109
Westmoreland County	139	195	160	65	105	113
Wyoming County	135	176	171	46	83	107
York County	108	201	169	52	96	110

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

In absolute terms, there is a shortage of 170,324 affordable and available housing units for ELI renter households in the state of Pennsylvania. From this measure, the five counties with the greatest shortages of affordable and available housing units for ELI renter households are Allegheny, Delaware, Lancaster, Montgomery, and Philadelphia. Furthermore, 55 percent of the state's overall shortage of 170,324 rental housing units for ELI households can be attributed to these five counties.

TABLE D.6

Absolute Shortages/Surpluses of Affordable and Available Housing Units in 2000

	Affordable and Available Units		
	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania Total	**(170,324)**	**(76,950)**	**64,300**
Adams County	(729)	(353)	238
Allegheny County	(21,545)	(11,200)	10,330
Armstrong County	(590)	(94)	386
Beaver County	(1,580)	(44)	1,347
Bedford County	(339)	(13)	252
Berks County	(4,085)	(1,140)	1,790
Blair County	(1,605)	(433)	847
Bradford County	(422)	44	401
Bucks County	(4,825)	(6,440)	(510)
Butler County	(1,650)	(620)	460
Cambria County	(684)	551	1,397
Cameron County	(35)	55	77
Carbon County	(525)	266	586
Centre County	(4,345)	(4,500)	(855)
Chester County	(3,255)	(3,710)	(5)
Clarion County	(618)	(228)	234
Clearfield County	(608)	17	357
Clinton County	(489)	(229)	137
Columbia County	(885)	(160)	382
Crawford County	(755)	(75)	560
Cumberland County	(2,168)	(1,252)	1,223
Dauphin County	(3,195)	(874)	3,067
Delaware County	(9,195)	(6,965)	1,360
Elk County	(87)	190	255
Erie County	(3,585)	(925)	1,930
Fayette County	(1,629)	852	1,527
Forest County	(25)	6	22
Franklin County	(845)	156	827
Fulton County	(86)	30	83
Greene County	(338)	(31)	254
Huntingdon County	(213)	42	239
Indiana County	(1,685)	(924)	360
Jefferson County	(360)	(13)	238
Juniata County	(42)	50	92
Lackawanna County	(2,725)	(560)	2,220
Lancaster County	(5,275)	(3,095)	1,295

	Affordable and Available Units		
	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania Total	**(170,324)**	**(76,950)**	**64,300**
Lawrence County	(804)	(389)	462
Lebanon County	(1,160)	166	776
Lehigh County	(4,750)	(3,655)	1,840
Luzerne County	(3,765)	(155)	2,920
Lycoming County	(1,515)	(780)	825
McKean County	(463)	(77)	287
Mercer County	(950)	(555)	570
Mifflin County	(529)	152	391
Monroe County	(1,570)	(1,354)	391
Montgomery County	(7,345)	(8,000)	(105)
Montour County	(132)	(10)	101
Northampton County	(3,420)	(2,135)	1,100
Northumberland County	(658)	153	877
Perry County	(202)	129	260
Philadelphia County	(49,810)	(19,265)	9,790
Pike County	(389)	(314)	91
Potter County	(150)	(80)	77
Schuylkill County	(690)	601	1,282
Snyder County	(245)	(138)	112
Somerset County	(538)	194	392
Sullivan County	(27)	25	49
Susquehanna County	(278)	(90)	222
Tioga County	(424)	(187)	189
Union County	(499)	(143)	87
Venango County	(519)	26	350
Warren County	(244)	172	352
Washington County	(1,674)	652	1,792
Wayne County	(423)	(382)	200
Westmoreland County	(2,735)	800	2,869
Wyoming County	(249)	(152)	98
York County	(3,145)	(540)	2,250

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Tables A10C and A12, http://www.huduser.org/datasets/cp.html

Rental Vacancy Rates by Unit Affordability to Lower-Income Households

Vacancy rates are often used as indicators of housing supply, but they can be difficult to interpret. For example, a high vacancy rate could signal an adequate supply of rental housing, but it could also result from too many units of poor quality and/or units in locations with declining demand.

At the county level, there is a moderate positive correlation between vacancy rates and the number of affordable and available units per 100 ELI renter households.[14] Indeed, low vacancy rates can indicate a need for additional affordable rental housing units. For example, Pike and Monroe counties have two of the lowest vacancy rates in the state for units affordable to ELI renters (2 percent and 4 percent, respectively) and also have some of the most severe rental housing shortages per 100 ELI renters (see Table D.5). But other counties with very low vacancy rates —Forest, Montour, and Snyder — do not have such severe shortages of affordable and available rental housing.

Two of the three counties with the lowest shortage of affordable housing units per 100 renter households, Cambria and Elk, also have the two highest vacancy rates among units affordable to ELI renter households.

[14] The correlation coefficient of the ratios of affordable and available housing units per 100 ELI renters and vacancy rates for this income group is 0.52 and is statistically significant at the 99 percent confidence level.

TABLE D.7
Vacancy Rates by Rental Affordability in 2000

	Vacancy Rates			
	ELI Households	VLI Households	LI Households	Total Vacancy
Pennsylvania Total	**10%**	**9%**	**4%**	**7%**
Adams County	7%	4%	2%	4%
Allegheny County	13%	12%	5%	9%
Armstrong County	8%	7%	3%	6%
Beaver County	10%	9%	4%	8%
Bedford County	8%	8%	2%	7%
Berks County	10%	8%	3%	7%
Blair County	9%	9%	2%	7%
Bradford County	10%	9%	1%	7%
Bucks County	3%	7%	4%	4%
Butler County	9%	7%	2%	7%
Cambria County	15%	6%	4%	9%
Cameron County	10%	16%	4%	12%
Carbon County	15%	9%	7%	11%
Centre County	7%	3%	2%	4%
Chester County	5%	9%	3%	5%
Clarion County	9%	4%	8%	6%
Clearfield County	7%	7%	2%	6%

TABLE CONTINUED ON PAGE 97 ➔

TABLE D.7 CONTINUED

	Vacancy Rates			
	ELI Households	VLI Households	LI Households	Total Vacancy
Pennsylvania Total	**10%**	**9%**	**4%**	**7%**
Clinton County	8%	5%	2%	5%
Columbia County	14%	7%	1%	7%
Crawford County	10%	9%	3%	8%
Cumberland County	7%	7%	6%	7%
Dauphin County	13%	11%	6%	9%
Delaware County	7%	10%	4%	6%
Elk County	16%	6%	3%	9%
Erie County	12%	9%	4%	8%
Fayette County	12%	8%	4%	9%
Forest County	4%	11%	9%	8%
Franklin County	9%	9%	1%	7%
Fulton County	10%	6%	2%	7%
Greene County	9%	8%	3%	7%
Huntingdon County	9%	6%	5%	7%
Indiana County	9%	9%	5%	7%
Jefferson County	8%	7%	1%	6%
Juniata County	7%	6%	1%	5%
Lackawanna County	9%	12%	4%	8%
Lancaster County	8%	6%	3%	5%
Lawrence County	8%	10%	2%	7%
Lebanon County	9%	7%	4%	7%
Lehigh County	7%	10%	5%	7%
Luzerne County	8%	12%	4%	9%
Lycoming County	7%	11%	4%	7%
McKean County	10%	8%	3%	7%
Mercer County	9%	9%	2%	7%
Mifflin County	12%	10%	0%	9%
Monroe County	4%	10%	4%	6%
Montgomery County	5%	11%	4%	6%
Montour County	4%	13%	2%	8%
Northampton County	4%	10%	4%	6%
Northumberland County	11%	10%	3%	9%
Perry County	12%	7%	2%	8%
Philadelphia County	12%	7%	4%	7%
Pike County	2%	9%	3%	5%
Potter County	9%	7%	5%	7%
Schuylkill County	12%	11%	3%	10%
Snyder County	4%	8%	3%	5%
Somerset County	10%	6%	1%	7%

TABLE CONTINUED ON PAGE 98 ➔

TABLE D.7 CONTINUED

	Vacancy Rates			
	ELI Households	VLI Households	LI Households	Total Vacancy
Pennsylvania Total	**10%**	**9%**	**4%**	**7%**
Sullivan County	8%	14%	0%	10%
Susquehanna County	8%	9%	3%	7%
Tioga County	7%	8%	3%	6%
Union County	4%	6%	10%	6%
Venango County	10%	6%	1%	6%
Warren County	12%	12%	1%	10%
Washington County	14%	10%	3%	10%
Wayne County	4%	14%	4%	7%
Westmoreland County	11%	10%	4%	9%
Wyoming County	7%	7%	2%	5%
York County	14%	7%	4%	7%

Source: Federal Reserve Bank of Philadelphia calculations based on CHAS data, U.S. Census Bureau and HUD, 2000, Table A12, http://www.huduser.org/datasets/cp.html

APPENDIX E
USING 2005 AND 2006 ACS DATA TO ASSESS RENTAL HOUSING NEEDS

Overview

To assess rental housing problems and shortages of affordable housing as currently as available data allow, this report uses micro-data from the 2005 and 2006 American Community Surveys (ACS). The Census Bureau has been phasing in the ACS since 1996 to provide economic, social, demographic, and housing data annually. The 2005 ACS survey was the first to represent a full sample for the United States, including approximately 3 million housing units.[1]

Because ACS data provide a valuable new resource for assessing rental housing affordability between decennial censuses, a major purpose of this report is to explore the usefulness of ACS data for counties within Pennsylvania.[2] The main advantage of the ACS is that data are provided annually. But because the sample size for ACS data is much smaller than that for the decennial census housing and population long form, annual ACS results are not as accurate for small regions.[3] Therefore, rather than identifying each county, the ACS public use micro-data files now available identify public use micro-data areas, or PUMAs. For our interests, a further disadvantage is that ACS data are not yet released in a format that is as easy to use as CHAS to assess rental housing affordability. Instead, as is the case with standard census products, the ACS data do not group households by HAMFI low-income categories. To use the ACS to assess the affordability of rental housing to ELI, VLI, and LI renters, or the housing problems of households in these income groups, we had to combine them with data on HUD's official HAMFI cutoffs.

To overcome or reduce these limitations, we tabulated ACS micro-data to approximate the summary data we used from the 1990 and 2000 comprehensive housing affordability strategies (CHAS) tabulations on renters by income and rental housing units by affordability category. The result is that our ACS tabulations are not exactly comparable to the 1990 and 2000 CHAS tabulations in several respects, including available geography and sample size.

In tabulating the ACS micro-data, we followed the approach advocated and used by the NLIHC in its 2008 study,[4] in order to use all available data elements to calculate housing-cost-to-income ratios for

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[1] The Census Bureau's Technical Paper 67, "Design and Methodology: American Community Survey," discusses the ACS and its history: http://www.census.gov/acs/www/Downloads/tp67.pdf. In 2006, the ACS added data on group quarters, but they are not included in the analysis of rental housing in this study.

[2] HUD is now planning to fund CHAS tabulations from the ACS for the years 2005-07. These data have not yet been released.

[3] The 2006 ACS PUMS files sample 1 percent of housing units, while the 2000 census housing and population long form was generally collected for a sample of 17 percent (one in six). See American Factfinder for additional information on sample sizes. Census: http://www.census.gov/prod/cen2000/doc/sf3.pdf . ACS: http://www.census.gov/acs/www/Downloads/2006/AccuracyPUMS.pdf

[4] See Pelletiere and Wardrip (2008).

as many renters as possible. We believe this approach provides more accurate and complete counts of renters with housing cost burdens in 2005-06 than the standard Census Bureau procedures used for past CHAS tabulations, and thus it provides better and more complete estimates of current conditions for renters and their housing. As discussed below, however, it does mean that differences between our 2000 and 2005-06 estimates of the number and incidence of households with housing cost burdens must be interpreted with care.

Relating ACS PUMAs to Pennsylvania Counties to Define Comparable Geographic Areas

The 2005 and 2006 ACS data come from smaller samples (averaging 1 percent of the housing units each year) than the one-in-six "long form" samples in the 1990 and 2000 decennial censuses that underlie the CHAS tabulations. The smallest geographical areas identified on the ACS micro-data are the public use micro-data areas (PUMAs) developed for the 2000 census micro-data. According to the U.S. Census Bureau, "PUMAs are special non-overlapping areas that partition a state, and each PUMA contains a population of about 100,000. State governments drew the PUMA boundaries at the time of the 2000 census."[5]

Because PUMAs must each have a population of at least 100,000 to meet Census Bureau confidentiality requirements, PUMA boundaries do not always match county boundaries.[6] In many instances in Pennsylvania, particularly in populous urban areas, several PUMAs are located within a single county, most notably in Philadelphia and Allegheny counties. In other instances, several counties with low population are combined into a single PUMA, such as Cameron, Elk, McKean, and Potter counties within PUMA 400.

To be able to compare county-level CHAS data from 1990 and 2000 to the 2005-06 ACS data, we had to collapse both PUMAs and counties. The following table details the consolidated PUMAs and counties used to analyze sub-state differences and changes since 2000 in this study.

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[5] See the U.S. Census Bureau's website for additional details on the use of PUMAs for ACS data http://www.census.gov/acs/www/Products/users_guide/acs_2006_reference_maps.htm.

[6] See the U.S. Census Bureau's website for maps on PUMAs: http://www.census.gov/geo/www/maps/puma5pct.htm.

Pennsylvania	
PUMAs	County
2801, 2802	Adams and Franklin Counties
1701, 1702, 1703, 1801, 1802, 1803, 1804, 1805, 1806, 1807	Allegheny County
2400	Armstrong and Indiana Counties
2001, 2002	Beaver and Lawrence Counties*
2700	Bedford, Fulton, and Huntingdon Counties
3401, 3402	Berks County
2600	Blair County
500	Bradford, Sullivan, and Tioga Counties
3901, 3902, 3903, 3904	Bucks County
1900	Butler County

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TABLE CONTINUED

Pennsylvania	
PUMAs	County
2501, 2502	Cambria and Somerset Counties
400	Cameron, Elk, McKean, and Potter Counties
3600, 3701, 3702	Carbon and Lehigh Counties
1300	Centre County
4301, 4302, 4303	Chester County
1500	Clarion, Forest, and Venango Counties
1400	Clearfield and Jefferson Counties
1200	Clinton, Juniata, Mifflin, Snyder, and Union Counties
901, 902, 903	Columbia and Luzerne Counties*
300	Crawford and Warren Counties
3101, 3102	Cumberland and Perry Counties
3001, 3002	Dauphin County
4201, 4202, 4203, 4204	Delaware County
100, 200	Erie County
2300	Fayette County
2201, 2202	Greene and Washington Counties
801, 802	Lackawanna and Wyoming Counties
3301, 3302, 3303	Lancaster County
2900	Lebanon County
1000	Lycoming County
1600	Mercer County
700	Monroe County
4001, 4002, 4003, 4004, 4005, 4006	Montgomery County
1100	Montour and Northumberland Counties
3801, 3802	Northampton County
4101, 4102, 4103, 4104, 4105, 4106, 4107, 4108, 4109, 4110, 4111	Philadelphia County
600	Pike, Susquehanna, and Wayne Counties
3500	Schuylkill County
2101, 2102, 2103	Westmoreland County
3201, 3202, 3203	York County

*We also report the 2005-06 ACS data by DCED regions, as described in the main report, and tabulate the 1990 and 2000 CHAS data into DCED regions for comparisons over time. Thus, when we collapsed PUMAs to more closely align with counties, we also had to consider DCED regional boundaries. In two instances, we modified the DCED boundaries so that our DCED regions could be aggregated from the ACS PUMAs. Specifically, we placed Lawrence County in Region 5 because it was included in PUMA 2001 with part of Beaver County. Similarly, we put Columbia County in DCED Region 2 because it was included in PUMA 903 with part of Luzerne County.

Procedures Used in Preparing 2005 and 2006 ACS Data for Analysis

The 2005-06 ACS data we analyzed in this study are available as micro-data, which provide individual housing unit records. We combined two years of ACS data to increase the size of our sample and, thus, the accuracy of our results. This aggregation is particularly important for the smaller regions of Pennsylvania, in which fewer sample records are available. Even when combining two years of data, results are inevitably more precise at the larger state and DCED region levels than in the smaller consolidated PUMA levels presented in the study.

To transform the ACS data into tabulations of renter households and rental units similar to the 1990 and 2000 CHAS data, we compared both income and gross rent for each household to its location's HUD-adjusted area median family income (HAMFI) threshold, making the statutorily required adjustments for household size or number of bedrooms. Specifically, we determined whether renter household income qualified as ELI, VLI, or LI based on HUD's official very low-income limits for metropolitan statistical areas and counties, incorporating the required adjustments for family size.[7] We used the MSA and county-level very low-income thresholds as the base for our classifications, which does not always equal exactly half of the median family income.[8] More specifically, for the 2005 data, we applied HUD's 2005 very low-income limits and for the 2006 data, we applied the 2006 very low-income limits.[9] When an area contained multiple MSAs and/or counties, we weighted the HAMFIs by total households in each MSA and/or county.[10] To determine the income ranges to which each unit is "affordable" (assuming that 30 percent of income is affordable), the income thresholds were adjusted by HUD's required bedroom factors.[11]

Estimates of Rental Housing Costs and Housing-Cost-to-Income Ratios

For one key indicator, we decided to calculate gross rents from ACS data, and thus housing-cost-to income ratios, in a way different from the usual Census Bureau approach that underlies both the 1990 and 2000 CHAS tabulations. This procedural difference means that our ACS estimates of households with moderate or severe housing cost burdens in 2005-06 tend to be somewhat higher than would result from estimates that strictly followed CHAS procedures.

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[7] HUD's income limits are available through the HUD User website for each year. 2005: http://www.huduser.org/Datasets/IL/IL05/pa_fy2005.pdf and 2006: http://www.huduser.org/Datasets/IL/IL06/pa_fy2006.pdf.

[8] The major exception is that in nonmetropolitan counties the very low-income threshold must be no lower than half of the average median family income for all nonmetropolitan counties. HUD's "Fiscal Year 2008 HUD Income Limits Briefing Materials" discuss the differences between an area's median family income and its very low-income thresholds and all the adjustments that are required. ELI and LI income thresholds were calculated as three-fifths and eight-fifths, respectively, of the VLI threshold.

[9] In June 2003, the Office of Management and Budget announced MSA boundary changes, including within Pennsylvania; see http://www.whitehouse.gov/omb/bulletins_b03-04/. HUD's 2005 income limits were based on the previous MSA boundaries and are directly comparable to boundaries in 2000; however, the 2006 income limits were based on the new MSA boundaries. The OMB boundary changes should not have any significant impact on the findings of this study, particularly at the state and DCED regional levels.

[10] Within the CHAS data, both household income and housing unit affordability are based on HUD's HAMFI income groups. When we aggregated county-level 1990 and 2000 CHAS data so that they were comparable to 2005-06 ACS data at the PUMA level, the weighting of HAMFIs was inherent in the aggregation process.

[11] As described in HUD's "Affordable Housing Needs 2005: A Report to Congress" the bedroom adjustment procedure "is similar to, but distinct from, the adjustment of income limits." To summarize, it assumes that an efficiency unit houses one person and a one-bedroom unit houses 1.5 persons, and that each bedroom houses an additional 1.5 persons. See http://www.huduser.org/Publications/pdf/AffHsgNeeds.pdf (pp. 90-91) for additional information on adjustment factors.

We followed the methodology used by the National Low Income Housing Coalition (NLIHC) when it analyzed national and state-level 2005 ACS data in its report *Housing at the Half: A Mid-Decade Progress Report from the 2005 American Community Survey*, because this methodology provides more complete estimates of renters with cost burdens.[12] NLIHC researchers provide more information on this approach and its effects in an article in HUD's *Cityscape* journal.[13] Most relevant to our research, the authors estimate that the standard bureau approach failed to count the housing affordability experience of almost 8 percent of U.S. renters, and that almost one-third of the uncounted renters actually had severe housing cost burdens.[14]

Cost Burden Calculations

In order to determine if a renter household is cost burdened, we must compare two measures: gross rent and household income. If gross rent exceeds 30 percent of household income, the renter is considered cost burdened; if rent exceeds 50 percent of household income, the renter has a severe cost burden.

Differences between the Census Bureau and NLIHC measures of gross rent and household income when not all data are present within the ACS micro-data are detailed below, as well as our approach.

1. Utility Costs and Monthly Rent - If a housing unit record indicates that a renter does not pay monthly rent but does have utility costs, such as electric, gas, heating, or water, the Census Bureau does not calculate gross rent or determine if this renter is cost burdened within the PUMS files. The Census Bureau leaves the data field blank.[15] The NLIHC recommends calculating gross rent based only on utilities' costs and using this alternative number as a measure of the renter's cost burden. Our analysis follows the NLIHC's approach of calculating cost burden based on utility costs when possible, even if no monthly rent is paid.

2. No Reported Household Income - The Census Bureau does not include households that report no household income or a negative household income in its cost burden calculations. But if housing costs (rent and utilities) are greater than zero, the NLIHC argues that these renters with no household income or negative household income have severe cost burdens. We followed the NLIHC's methodology.

Housing Affordability Calculations

The methodology we use to calculate housing unit shortages with the ACS data is the same as the methodology used with CHAS data. To our knowledge, no procedural differences exist that would have any significant impact on comparing the data between years.

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[12] See Pelletiere and Wardrip (2008).

[13] See Wardrip and Pelletiere (2008). To quote from its abstract: "Researchers often use the housing cost-to-income ratios (HCIRs) provided in the ACS Public Use Microdata Sample housing file to evaluate the level of housing cost burden for renters and owners and to estimate the proportion of households spending more than a specified level of income, often 30 percent or 50 percent, on shelter. In this article, we show that these variables should be used with caution, identifying 3.2 million households in the 2006 ACS for which the Census Bureau does not calculate an HCIR, even though useful housing cost and income data are available for these households…This article explores these issues, explains how researchers can develop an alternative HCIR, and describes the resulting distribution of households by housing cost burden."

[14] See Wardrip and Pelletiere (2008), Exhibit 5, p. 338.

[15] The data field is GRPIP – or gross rent as a percentage of household income.

Implications for Data Analysis in This Study

The results of the report show that the incidence of cost burden was rather substantially higher in 2005-06 than in 2000 at the state and most local levels. Part of those increases undoubtedly results from our choosing the NLIHC methodology to measure housing-cost-to-income ratios in analyzing the 2005-06 ACS data. However, shortages in affordable housing also worsened, and the methodology used to assess these shortages was the same in 2000 and 2005-06. Because the increases in cost burden are consistent with the worsening shortages of affordable housing, we conclude that they are basically real rather than merely an artifact of our different procedure. To emphasize, however, that our 2005-06 methodology improves upon that used in 2000 rather than following it exactly, the text refers to "differences" between the 2000 and 2005-06 estimates of cost burden. For each of the other variables studied, our methodology is the same as that used to prepare the 1990 and 2000 CHAS data, and we examine "changes" between 2000 and 2005-06.

APPENDIX F
CHANGES BETWEEN 1990 AND 2000 BY DCED REGIONS AND CONSOLIDATED PUMAS

This study focuses mainly on analyzing housing problems and shortages of affordable rental housing at the beginning and middle of the previous decade. For those interested, this appendix summarizes changes between 1990 and 2000. First, we look briefly at the state of Pennsylvania compared with the United States and its neighboring states in those years. Next, we discuss how conditions changed at sub-state levels for Pennsylvania.

Unless otherwise noted, we calculated the data in the tables in this appendix from two data sources:

- 1990 CHAS data, U.S. Census Bureau and HUD, data available on CD by contacting the Census Bureau
- 2000 CHAS data, U.S. Census Bureau and HUD, http://www.huduser.org/datasets/cp.html.

Each of these CHAS data sets contains data at national, state, and local levels. In this appendix, the data are aggregated for DCED regions and consolidated PUMAs so that interested readers can compare changes in the 1990-2000 decade within Pennsylvania to those for the 2000 to 2005-06 period presented and discussed elsewhere in this study.

Rental Housing Conditions in the United States, Pennsylvania, and Neighboring States, 1990-2000

In its 2004 study, the National Low Income Housing Coalition (NLIHC) used the 1990 and 2000 CHAS data to assess how housing conditions and needs changed at the national and state levels between 1990 and 2000.[1]

The NLIHC's study shows that rental housing conditions improved in Pennsylvania between 1990 and 2000. As Table F.1 summarizes, the shares of lower-income renters who had any housing problems fell for all three lower-income groups (ELI, VLI, and LI renters), but the improvement was least (3 percentage points) for the ELI renters, the income group that most often had some problem. (In 2000, 71 percent of ELI renters in Pennsylvania experienced some housing problem.) Statewide, the 1990-2000 improvement was greatest for the LI group, with a drop of 10 percentage points to only 28 percent.

More important, the incidence of severe rent burdens also dropped in Pennsylvania between 1990 and 2000 for both ELI and VLI renters. Again, the decline was appreciably greater for VLI renters (6 percentage points) than for ELI renters (2 percentage points).

[1] We did not perform the calculations in this initial section because one of the co-authors of this study was also a co-author of the NLIHC study. Instead, we present the results in this appendix as they appear in the NLIHC report; see Nelson et al. (2004).

TABLE F.1

Housing Problems and Shortages Among Renter Households in the United States, Pennsylvania, and Neighboring States in 2000, and Changes from 1990*

	2000			Change from 1990		
	% with Any Problem (Housing Unit Problem or Cost Burden)			% with Any Problem (Housing Unit Problem or Cost Burden)		
	ELI	VLI	LI	ELI	VLI	LI
United States	**74%**	**71%**	**40%**	**-3%**	**-4%**	**-5%**
Pennsylvania	71%	63%	28%	-3%	-6%	-10%
Delaware	71%	69%	32%	-1%	-5%	-7%
Maryland	73%	68%	32%	-1%	-7%	-11%
New Jersey	74%	76%	45%	-1%	-1%	-10%
New York	77%	76%	49%	-3%	0%	1%
Ohio	71%	62%	22%	-4%	-7%	-8%
West Virginia	65%	57%	24%	-6%	-5%	-9%
	% of Renter Households with a Severe Cost Burden			% of Renter Households with a Severe Cost Burden		
	ELI	VLI	LI	ELI	VLI	LI
United States	**56%**	**20%**	**4%**	**-2%**	**-3%**	**0%**
Pennsylvania	53%	16%	3%	-2%	-6%	0%
Delaware	53%	18%	2%	1%	-4%	-1%
Maryland	54%	13%	2%	-2%	-8%	-1%
New Jersey	57%	21%	4%	0%	-6%	-1%
New York	60%	26%	5%	1%	1%	0%
Ohio	53%	13%	2%	-4%	-4%	0%
West Virginia	48%	15%	2%	-4%	-3%	0%

Note: Income ranges are cumulative in this next section (i.e., 0-30%, 0-50%, and 0-80%)

	Affordable and Available Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
United States	**43**	**75**	**103**	**-1**	**-1**	**-5**
Pennsylvania	49	87	107	1	6	-3
Delaware	49	83	110	-4	10	-4
Maryland	47	83	105	0	9	0
New Jersey	37	64	98	-5	0	-2
New York	35	60	94	-2	-7	-5
Ohio	53	96	111	3	8	-1
West Virginia	57	93	112	0	1	-6

Note: The 1990 and 2000 state-level data for Pennsylvania presented in *Losing Ground* are similar to state-level data presented in other sections of this appendix and other chapters of this study, although some values vary slightly due to rounding. In addition, the data in this study come from the CHAS files re-issued in November 2004, whereas data in the NLIHC's 2004 report come from the initial CHAS files issued in September 2003.

* See Chapter 3 and Appendix C for additional descriptions of the indicators in this table.

Source: Tables 1a, 1b, and 4, *Losing Ground in the Best of Times: Low Income Renters in the 1990s*, National Low Income Housing Coalition; see Nelson et al. (2004).

These greater improvements for VLI renters may well reflect an easing of shortages of housing affordable to them during the decade. The best indicator of shortages – the ratio of units both affordable and available to different income ranges – rose from 81 to 87 units per 100 renter households with incomes below 50 percent of AMI. But most of the improvement apparently occurred in the upper end of that income range, because for ELI renters, this "mismatch" ratio rose only marginally, from 48 to 49 units per 100 renters.

Table F.1 also shows that the decade's improvements for VLI renters were greater for Pennsylvania and several of its neighbors than average changes for the U.S. Although shortages of affordable and available housing actually worsened slightly in the U.S. on average for all three income groups, shortages of units affordable and available to renters with incomes below 50 percent of AMI eased appreciably in Delaware, Maryland, and Ohio as well as in Pennsylvania. Drops in the incidence of severe rent burdens and housing problems among VLI renters were correspondingly relatively higher in these states.

Changes in Renter Housing Problems and Shortages of Affordable Housing Within Pennsylvania

On average, the shares of Pennsylvania renter households falling into the ELI, VLI, and LI categories remained relatively constant between 1990 and 2000, as did rental vacancy rates, suggesting that neither the demand for nor the supplies of rental housing changed greatly. But both cost burden pressures and affordable housing shortages eased in many locations across the state.

Income Distribution

Despite relative stability in the income distribution of lower-income rental households at the state level between 1990 and 2000, a few regions and counties experienced significant changes in the percentage of renter households that were ELI.

Regionally, the largest significant changes in shares of lower-income rental households occurred in DCED regions 1, 5, and 6. Shares of ELI renter households fell by 2 and 3 percentage points, respectively, in DCED regions 5 and 6. But shares of ELI renter households rose by 2 percentage points in DCED Region 1 (Philadelphia).

At the local level, Monroe County experienced the greatest increase (8 percent) in ELI renter households. In Centre County, Pike/Susquehanna/Wayne counties, and Cumberland/Perry counties the number of ELI renter households also rose 4 percent each. The consolidated area of Cameron/Elk/McKean/Potter counties experienced the greatest decrease (7 percent) in ELI renter households. Fayette County also experienced a significant decrease.

TABLE F.2

Income Distribution of Lower-Income Renter Households in 2000 and Change from 1990

	2000			Change from 1990		
	Distribution of Lower-Income Renters (as % of Total Renters)			Distribution of Lower-Income Renters (as % of Total Renters)		
	ELI	VLI	LI	ELI	VLI	LI
Pennsylvania	**24%**	**18%**	**22%**	**0%***	**1%***	**1%***
Region 1	**28%**	**16%**	**20%**	**2%***	**2%***	**0%**
Bucks County	15%	14%	23%	2%*	1%*	0%
Chester County	14%	13%	21%	0%	2%*	0%
Delaware County	23%	16%	23%	3%*	2%*	0%
Montgomery County	14%	13%	21%	3%*	2%*	-1%
Four Philadelphia Suburban Counties	**17%**	**14%**	**22%**	**2%***	**2%***	**-1%**
Philadelphia County	38%	17%	19%	1%*	1%*	0%
Region 2	**23%**	**19%**	**22%**	**1%***	**1%***	**0%**
Berks County	23%	18%	24%	2%*	1%	0%
Bradford/Sullivan/ Tioga Counties	21%	20%	23%	-2%*	-2%*	3%*
Carbon/Lehigh Counties	23%	19%	22%	1%	2%*	-2%*
Columbia/Luzerne Counties	23%	20%	22%	0%	0%	0%
Lackawanna/Wyoming Counties	23%	19%	22%	0%	0%	1%
Monroe County	21%	17%	22%	8%*	5%*	3%*
Northampton County	23%	17%	23%	1%	0%	0%
Pike/Susquehanna/ Wayne Counties	21%	21%	24%	4%*	3%*	2%*
Schuylkill County	21%	22%	22%	-1%	1%	2%*
Region 3	**18%**	**17%**	**25%**	**1%***	**2%***	**0%**
Adams/Franklin Counties	17%	16%	25%	3%*	0%	-1%
Cumberland/Perry Counties	17%	17%	24%	4%*	2%*	-1%
Dauphin County	20%	16%	24%	-1%	2%*	2%*
Lancaster County	17%	17%	25%	1%	1%	1%
Lebanon County	21%	20%	25%	3%*	1%	0%
York County	19%	18%	26%	1%*	2%*	1%
Region 4	**24%**	**21%**	**22%**	**0%**	**1%***	**1%***
Bedford/Fulton/ Huntingdon Counties	21%	18%	24%	0%	-3%*	3%*
Blair County	25%	21%	20%	0%	1%	0%
Cambria/Somerset Counties	24%	22%	23%	-3%*	4%*	0%
Centre County	29%	22%	21%	4%*	2%*	-1%
Clinton/Juniata/Mifflin/ Snyder/Union Counties	24%	19%	23%	3%*	0%	1%*
Lycoming County	20%	19%	24%	-2%*	1%	3%*
Montour/ Northumberland Counties	20%	22%	23%	-2%	1%	1%

TABLE CONTINUED ON PAGE 109 ➔

TABLE F.2 CONTINUED

	2000			Change from 1990		
	Distribution of Lower-Income Renters (as % of Total Renters)			Distribution of Lower-Income Renters (as % of Total Renters)		
	ELI	VLI	LI	ELI	VLI	LI
Pennsylvania	**24%**	**18%**	**22%**	**0%***	**1%***	**1%***
Region 5	**25%**	**18%**	**21%**	**-2%***	**1%***	**2%***
Allegheny County	25%	17%	21%	-1%*	1%*	2%*
Armstrong/Indiana Counties	26%	22%	22%	-1%	3%*	1%
Beaver/Lawrence Counties	25%	20%	22%	-2%*	0%	2%*
Butler County	21%	18%	23%	-3%*	-1%	3%*
Fayette County	37%	20%	21%	-5%*	-1%	4%*
Greene/Washington Counties	27%	21%	21%	-4%*	3%*	1%
Westmoreland County	24%	20%	23%	-4%*	2%*	1%*
Region 6	**23%**	**20%**	**22%**	**-3%***	**1%***	**2%***
Cameron/Elk/McKean/Potter Counties	21%	22%	23%	-7%*	2%*	3%*
Clarion/Forest/Venango Counties	27%	21%	21%	-1%	2%*	0%
Clearfield/Jefferson Counties	25%	22%	23%	-2%	1%	1%
Crawford/Warren Counties	20%	20%	24%	-1%*	-1%*	2%*
Erie County	24%	20%	22%	-3%*	1%*	2%*
Mercer County	22%	19%	23%	-3%*	-1%	2%*

* Changes between 1990 and 2000 are statistically significant at the 90 percent confidence level.

Cost Burden

Cost burden pressures eased between 1990 and 2000 throughout Pennsylvania, particularly for VLI renters (Table F.3). The incidence of any cost burden among all renters dropped by 3 percentage points, while the incidence of severe cost burdens dropped by 1 percentage point. Among VLI renters, the incidence of any cost burden fell by 7 percentage points, and the incidence of severe cost burden dropped by 6 percentage points, from 22 to 16 percent.

With a decrease of 10 percentage points, Region 1 (Philadelphia) experienced the greatest decrease in severe cost burden for VLI renter households and was the only one larger than the state's average 6-percentage-point drop. With one-fifth of its VLI renters having severe burdens, however, it remained the DCED region in which ELI and VLI renters were most likely to have severe burdens, particularly in its suburbs. Regions 3 and 5 (South Central and Southwest, respectively) had drops of 6 percentage points in severe cost burden for VLI renter households, consistent with the state average.

Region 6 (Erie) experienced the greatest decrease (a fall of 7 percentage points, to only 50 percent) in the share of ELI renter households that had a severe cost burden and also had the largest increase in affordable rental housing supply relative to renters.[2] Region 4's drop of 5 percentage points, to 52 percent, also exceeded the state's average drop of 2 percentage points in ELI renter households with severe cost

[2] This improvement may reflect Region 6's above average decrease in ELI renters, as noted in a previous section of this appendix.

burdens. Region 1 also had a larger-than-average drop, 3 percentage points, but only in its central city. The Philadelphia suburban counties continued to have the most severe shortages of affordable housing and greatest cost burden pressures in the state.

Despite the overall improvements in cost burden statewide, certain areas, especially Monroe County, did face substantial increases in severe cost burden for ELI renters during the decade. By 2000, Monroe and Centre counties had the highest incidence of ELI renters with a cost burden, over 10 percentage points higher than the state average. These two counties also had the highest incidence of severe cost burden: two-thirds of ELI renters paid more than 50 percent of their incomes in rent.

These two counties had quite different experiences during the 1990s: Cost burdens eased in Centre County but became more severe in Monroe County. Monroe County experienced the greatest increase (12 percent) in the percentage of ELI renter households with a severe cost burden between 1990 and 2000, while Centre County had a decrease of 12 percent.

TABLE F.3

Cost Burden Incidence in 2000 and Change from 1990

	2000								Change from 1990							
	% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden				% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**69%**	**60%**	**23%**	**34%**	**53%**	**16%**	**3%**	**17%**	**-3%***	**-7%***	**-11%***	**-3%***	**-2%***	**-6%***	**0%***	**-1%***
Region 1	**70%**	**66%**	**29%**	**37%**	**57%**	**21%**	**4%**	**20%**	**-3%***	**-8%***	**-15%***	**-4%***	**-3%***	**-10%***	**-1%***	**-1%***
Bucks County	69%	77%	36%	32%	58%	32%	5%	15%	-4%*	-2%	-19%*	-5%*	-4%	-5%*	-3%*	0%
Chester County	74%	75%	37%	31%	61%	32%	5%	15%	5%*	1%	-12%*	-1%	5%*	-6%*	1%	1%
Delaware County	74%	75%	29%	38%	63%	25%	4%	20%	-2%	-6%*	-17%*	-2%*	-1%	-12%*	-1%	1%
Montgomery County	72%	74%	39%	31%	61%	29%	6%	14%	-2%	-5%*	-15%*	-3%*	-2%	-13%*	0%	1%
Four Philadelphia Suburban Counties	**72%**	**75%**	**35%**	**33%**	**61%**	**29%**	**5%**	**16%**	**-1%**	**-4%***	**-16%***	**-3%***	**-1%**	**-10%***	**-1%***	**1%***
Philadelphia County	69%	59%	21%	41%	55%	14%	3%	24%	-4%*	-11%*	-13%*	-5%*	-4%*	-10%*	-2%*	-2%*
Region 2	**67%**	**58%**	**22%**	**32%**	**50%**	**15%**	**2%**	**15%**	**-1%***	**-5%***	**-9%***	**-2%***	**0%**	**-3%***	**-1%***	**0%**
Berks County	68%	60%	20%	32%	50%	13%	2%	14%	0%	-4%*	-9%*	-1%*	-2%	-6%*	0%	0%
Bradford/ Sullivan/ Tioga Counties	66%	52%	12%	28%	49%	13%	1%	13%	-3%	-5%*	-8%*	-5%*	-4%*	-2%	-1%*	-3%*
Carbon/Lehigh Counties	70%	62%	25%	34%	52%	17%	2%	16%	-2%	-6%*	-11%*	-2%*	0%	-4%*	0%	1%

TABLE CONTINUED ON PAGE 111 ➔

TABLE F.3 CONTINUED

	2000								Change from 1990							
	% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden				% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**69%**	**60%**	**23%**	**34%**	**53%**	**16%**	**3%**	**17%**	**-3%***	**-7%***	**-11%***	**-3%***	**-2%***	**-6%***	**0%***	**-1%***
Columbia/ Luzerne Counties	65%	56%	22%	31%	49%	14%	1%	14%	-4%*	-4%*	-3%*	-3%*	0%	1%	0%	0%
Lackawanna/ Wyoming Counties	65%	54%	21%	31%	48%	14%	1%	14%	-4%*	-5%*	-5%*	-3%*	-1%	-2%	-2%*	-1%
Monroe County	80%	74%	33%	38%	68%	19%	2%	18%	12%*	1%	-31%*	1%	12%*	-28%*	-8%*	3%*
Northampton County	69%	60%	25%	33%	52%	17%	2%	16%	3%	-11%*	-12%*	-3%*	3%	-6%*	0%	1%
Pike/ Susquehanna/ Wayne Counties	70%	62%	18%	33%	58%	18%	1%	16%	1%	-1%	-18%*	-1%	-2%	-11%*	-3%*	0%
Schuylkill County	56%	49%	14%	26%	38%	9%	1%	10%	-9%*	-5%	-6%*	-5%*	-11%*	-2%	0%	-3%*
Region 3	**70%**	**61%**	**19%**	**29%**	**53%**	**14%**	**2%**	**13%**	**-1%**	**-6%***	**-9%***	**-1%***	**-1%**	**-6%***	**0%**	**0%**
Adams/Franklin Counties	66%	56%	14%	24%	49%	13%	1%	11%	-3%	-11%*	-5%*	-2%*	-5%*	-2%	0%	0%
Cumberland/ Perry Counties	71%	63%	21%	29%	54%	15%	2%	13%	-3%	-2%	-12%*	0%	-4%	-7%*	1%	1%
Dauphin County	67%	62%	23%	30%	52%	13%	1%	13%	1%	-6%*	-13%*	-2%*	2%	-8%*	0%	-1%
Lancaster County	74%	65%	22%	31%	58%	17%	3%	13%	2%	-6%*	-8%*	-1%*	2%	-6%*	0%	0%
Lebanon County	63%	45%	14%	26%	40%	8%	1%	10%	-2%	-8%*	-3%	0%	-2%	-3%	0%	0%
York County	71%	62%	14%	29%	53%	12%	1%	13%	-3%	-5%*	-12%*	-1%*	-4%*	-7%*	0%	0%
Region 4	**68%**	**55%**	**18%**	**32%**	**52%**	**15%**	**2%**	**16%**	**-5%***	**-5%***	**-6%***	**-3%***	**-5%***	**-4%***	**0%**	**-2%***
Bedford/Fulton/ Huntingdon Counties	60%	43%	10%	23%	43%	7%	1%	11%	-6%*	-3%	0%	-3%*	-10%*	-1%	0%	-2%*
Blair County	68%	55%	19%	33%	51%	12%	2%	16%	-8%*	-9%*	-7%*	-5%*	-6%*	-7%*	1%	-3%*
Cambria/ Somerset Counties	63%	46%	11%	28%	44%	7%	2%	13%	-4%*	-6%*	-9%*	-4%*	-4%*	-5%*	1%	-3%*
Centre County	79%	72%	30%	46%	67%	28%	4%	27%	-8%*	-9%*	-15%*	-3%*	-12%*	-12%*	-1%	-3%*
Clinton/Juniata/ Mifflin/Snyder/ Union Counties	64%	48%	17%	29%	48%	11%	2%	14%	-1%	-7%*	-2%	0%	1%	-5%*	1%	1%
Lycoming County	70%	66%	26%	33%	56%	19%	2%	15%	-10%*	1%	-3%	-2%*	-6%*	0%	1%	-2%*
Montour/ Northumberland Counties	65%	49%	14%	27%	45%	14%	1%	13%	-6%*	-4%	-5%*	-4%*	-6%*	3%	-1%	-1%

TABLE CONTINUED ON PAGE 112 ➔

TABLE F.3 CONTINUED

	2000								Change from 1990							
	% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden				% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**69%**	**60%**	**23%**	**34%**	**53%**	**16%**	**3%**	**17%**	**-3%***	**-7%***	**-11%***	**-3%***	**-2%***	**-6%***	**0%***	**-1%***
Region 5	**68%**	**56%**	**23%**	**33%**	**51%**	**15%**	**3%**	**17%**	**-2%***	**-9%***	**-10%***	**-5%***	**-2%***	**-6%***	**0%**	**-2%***
Allegheny County	68%	63%	29%	35%	53%	20%	4%	18%	0%	-7%*	-13%*	-4%*	1%	-7%*	0%	-1%*
Armstrong/ Indiana Counties	73%	52%	18%	35%	56%	14%	2%	18%	-5%*	-11%*	-7%*	-4%*	-9%*	-8%*	-3%*	-4%*
Beaver/ Lawrence Counties	69%	50%	18%	31%	46%	13%	1%	14%	-5%*	-14%*	-9%*	-8%*	-9%*	-8%*	0%	-5%*
Butler County	71%	58%	24%	33%	56%	13%	4%	16%	-2%	1%	6%*	0%	-1%	-2%	3%*	-1%
Fayette County	65%	37%	6%	33%	46%	5%	1%	18%	-6%*	-11%*	-7%*	-9%*	-4%*	-1%	0%	-4%*
Greene/ Washington Counties	68%	45%	11%	31%	44%	9%	1%	14%	-3%*	-16%*	-8%*	-7%*	-7%*	-4%*	0%	-5%*
Westmoreland County	65%	49%	11%	29%	44%	9%	1%	13%	-4%*	-7%*	-8%*	-6%*	-6%*	-4%*	1%*	-4%*
Region 6	**68%**	**52%**	**17%**	**31%**	**50%**	**12%**	**2%**	**15%**	**-6%***	**-7%***	**-4%***	**-5%***	**-7%***	**-2%***	**1%***	**-3%***
Cameron/Elk/ McKean/Potter Counties	68%	49%	14%	29%	53%	12%	2%	14%	-1%	-5%*	-5%*	-5%*	1%	-1%	2%*	-2%*
Clarion/Forest/ Venango Counties	69%	43%	13%	31%	50%	12%	2%	16%	-7%*	-17%*	-6%*	-6%*	-14%*	-4%*	1%*	-4%*
Clearfield/ Jefferson Counties	62%	45%	12%	28%	45%	8%	2%	13%	-7%*	-6%*	-9%*	-6%*	-8%*	-5%*	2%*	-3%*
Crawford/ Warren Counties	66%	52%	17%	29%	43%	9%	2%	11%	-8%*	-7%*	-2%	-5%*	-13%*	-9%*	1%*	-5%*
Erie County	70%	58%	19%	34%	53%	15%	2%	16%	-6%*	-5%*	-4%*	-4%*	-6%*	1%	0%	-2%*
Mercer County	67%	55%	26%	31%	51%	14%	2%	14%	-5%	-3%	0%	-4%*	-4%	1%	0%	-2%*

* Changes between 1990 and 2000 are statistically significant at the 90 percent confidence level.

Shortages of Affordable Rental Housing

Affordable housing shortages eased across Pennsylvania as a whole between 1990 and 2000 (Table F.4). Housing shortages improved the most in the Northwest region of the state, which includes Erie. Region 6 experienced the greatest increase in the number of affordable and available housing units relative to ELI renters, rising by eight units per 100 renter households. Regions 4 and 5 also improved.

Region 1 was the only region to experience a decrease in the number of units affordable and available to two of the three income groups (ELI renters and renters with incomes below 80 percent of AMI). While affordable rental housing shortages eased in most areas of the state between 1990 and 2000, they worsened in the Philadelphia region. A closer look at Philadelphia shows shortages within the city easing slightly, but shortages worsened significantly in the suburban counties. Delaware County had the state's largest decrease in the number of affordable and available units per 100 ELI renter households between 1990 and 2000, a loss of 11 units.[3]

By 2000, Centre County had the greatest shortages of affordable and available units for ELI renters and for renter households with incomes between 0-50 percent of AMI. Despite improvement during the decade, there were only 24 affordable and available units for every 100 ELI renter households and 55 affordable and available units for every 100 renters with incomes between 0-50 percent of AMI. This need is likely due to the presence of Pennsylvania State University. Monroe and Delaware counties also faced shortages; these counties had only 29 and 30 affordable and available units for every 100 ELI renter households, respectively. Other areas with substantial needs for affordable and available units for ELI renters include Montgomery, Bucks, Lancaster, and Chester counties.

Counties with smaller affordable housing shortages were found throughout the state. At the sub-regional level, the areas of Cambria/Somerset counties, Schuylkill County, and Fayette County had the relatively greatest numbers of affordable and available housing units per 100 ELI renter households in 2000, with ratios above 70. Montour/Northumberland and Schuylkill counties had the greatest increases in affordable and available housing units per 100 ELI renter households from 1990 to 2000. Other areas with significant increases in the number of affordable and available housing units per 100 ELI renter households between 1990 and 2000 include Bradford/Sullivan/Tioga, Clarion/Forest/Venango, Crawford/Warren, and Greene/Washington.

[3] The change in affordable and available housing units for ELI renter households between 1990 and 2000 is only significant for the suburban counties. The change is not significant for Philadelphia County.

TABLE F.4

Affordable and Available Housing Units in 2000 and Changes from 1990

	2000						Change from 1990					
	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households			Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**96**	**152**	**157**	**49**	**87**	**107**	**10***	**15***	**-7***	**1***	**5***	**-3***
Region 1	**68**	**124**	**150**	**42**	**78**	**104**	**3***	**11***	**-11***	**-1**	**3***	**-8***
Bucks County	75	114	173	37	56	98	3	23*	-3	-2	5	-7
Chester County	98	132	181	39	64	100	7	15*	-5	0	6	-4
Delaware County	56	121	158	30	69	104	-8*	14*	-21*	-11*	5	-9*
Montgomery County	71	123	181	32	62	100	4	23*	-8	0	11*	-3
Four Philadelphia Suburban Counties	**70**	**122**	**172**	**33**	**63**	**101**	**0**	**19***	**-10***	**-4***	**7***	**-6***
Philadelphia County	67	126	136	45	85	106	4*	8*	-12*	1	2	-8*
Region 2	**110**	**163**	**163**	**52**	**90**	**109**	**6***	**15***	**-4**	**0**	**8***	**0**
Berks County	96	165	160	52	92	108	5	10	-13*	2	8*	-5
Bradford/Sullivan/ Tioga Counties	154	194	163	61	97	110	33*	32*	1	11*	8*	0
Carbon/Lehigh Counties	86	137	160	47	81	109	-1	14*	-8	-1	7*	-3
Columbia/Luzerne Counties	125	179	164	56	98	111	16*	18*	4	3	10*	3
Lackawanna/Wyoming Counties	123	173	166	56	94	112	8	13*	0	1	9*	3
Monroe County	76	126	167	29	67	106	-27*	22*	1	-6	16*	15
Northampton County	85	142	161	46	80	106	-4	22*	-6	-6	11*	-3
Pike/Susquehanna/ Wayne Counties	129	159	159	45	80	108	-16*	18*	-6	1	9*	4
Schuylkill County	177	207	168	76	110	115	39*	32*	-4	15*	14*	1
Region 3	**107**	**189**	**172**	**49**	**91**	**109**	**5***	**16***	**-11***	**2**	**10***	**0**
Adams/Franklin Counties	143	227	179	55	97	109	-5	2	-6	6	9	0
Cumberland/Perry Counties	115	180	178	46	87	110	-1	10	-14	4	12*	2
Dauphin County	102	168	174	56	93	114	7	18*	-11	-2	7	-1
Lancaster County	88	179	169	38	82	104	2	24*	-8	0	10*	-1
Lebanon County	122	206	159	56	103	109	-1	6	-7	0	12	3
York County	108	201	169	52	96	110	12*	19*	-19*	7*	12*	-2
Region 4	**124**	**168**	**154**	**54**	**89**	**107**	**19***	**12***	**-5**	**4***	**5***	**0**
Bedford/Fulton/ Huntingdon Counties	191	224	169	66	102	110	31*	30*	6	8*	4	2

TABLE CONTINUED ON PAGE 115 ➔

TABLE F.4 CONTINUED

	2000						Change from 1990					
	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households			Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**96**	**152**	**157**	**49**	**87**	**107**	**10***	**15***	**-7***	**1***	**5***	**-3***
Blair County	109	159	156	54	93	109	11	6	-6	2	5	-3
Cambria/Somerset Counties	171	199	156	77	107	112	43*	14	-7	8*	1	-4
Centre County	54	95	128	24	55	94	9*	18*	-3	5*	13*	5
Clinton/Juniata/Mifflin/ Snyder/Union Counties	135	187	156	56	96	107	11*	11	-10	3	10*	2
Lycoming County	104	164	164	46	86	109	21*	18*	-4	4	10*	2
Montour/ Northumberland Counties	163	200	164	68	103	112	42*	21	-2	17*	9	3
Region 5	**109**	**157**	**158**	**56**	**92**	**110**	**20***	**23***	**-3**	**3***	**6***	**-2**
Allegheny County	90	140	161	51	85	109	11*	24*	-4	-1	6*	-2
Armstrong/Indiana Counties	120	159	149	45	87	107	27*	12	-11	5	2	-4
Beaver/Lawrence Counties	138	170	157	64	96	110	40*	32*	0	10*	10*	-1
Butler County	114	172	157	47	89	105	17*	10	-6	1	-1	-6
Fayette County	138	175	140	72	109	112	33*	23*	2	10*	4	-1
Greene/Washington Counties	138	181	155	67	106	113	39*	22*	0	11*	8	-1
Westmoreland County	139	195	160	65	105	113	36*	27*	-2	8*	6	-2
Region 6	**134**	**178**	**158**	**58**	**96**	**109**	**33***	**21***	**-4**	**8***	**5***	**-2**
Cameron/Elk/McKean/Potter Counties	159	198	160	63	102	111	46*	30*	-1	9*	7	-3
Clarion/Forest/Venango Counties	138	180	153	57	96	109	35*	27*	0	11*	9*	1
Clearfield/Jefferson Counties	159	185	150	64	100	108	39*	16*	-7	8*	-1	-7
Crawford/Warren Counties	150	201	164	60	102	111	34*	33*	0	11*	10*	-2
Erie County	112	165	157	54	94	109	32*	15*	-6	8*	5	-2
Mercer County	132	163	164	61	88	108	22*	17	-3	0	1	-5

* Changes between 1990 and 2000 are statistically significant at the 90 percent confidence level.

In absolute terms, there was a shortage of 170,324 affordable and available housing units for ELI renter households in the state of Pennsylvania in 2000. Of this total, Region 1 had the greatest shortage among DCED regions, 44 percent of the state's total.

The seven areas with the greatest shortages of affordable and available housing units for ELI renter households were Allegheny, Bucks, Carbon/Lehigh, Delaware, Lancaster, Montgomery, and Philadelphia. Over 60 percent of the state's overall shortage of rental housing units for ELI households was attributable to these seven areas. Indeed, 42 percent of the state's shortage came from only two counties, Allegheny and Philadelphia, home to Pennsylvania's two largest cities of Pittsburgh and Philadelphia.

TABLE F.5

Actual Shortages/Surpluses in Affordable and Available Housing Units in 2000 and Changes from 1990

	Shortages and Surpluses of Affordable and Available Units for Renter Households in 2000			% of Total			Change from 1990		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(170,324)**	**(76,950)**	**64,300**	**100%**	**100%**	**100%**	**(11,840)***	**18,521***	**(18,998)***
Region 1	**(74,430)**	**(44,380)**	**10,530**	**44%**	**58%**	**16%**	**(13,230)***	**(2,924)**	**(17,196)***
Bucks County	(4,825)	(6,440)	(510)	3%	8%	-1%	(1,232)*	(886)*	(1,666)*
Chester County	(3,255)	(3,710)	(5)	2%	5%	0%	(525)*	(207)	(686)
Delaware County	(9,195)	(6,965)	1,360	5%	9%	2%	(3,232)*	(828)	(2,371)*
Montgomery County	(7,345)	(8,000)	(105)	4%	10%	0%	(1,977)*	(332)	(928)
Four Philadelphia Suburban Counties	**(24,620)**	**(25,115)**	**740**	**14%**	**33%**	**1%**	**(6,966)***	**(2,253)***	**(5,651)***
Philadelphia County	(49,810)	(19,265)	9,790	29%	25%	15%	(6,264)*	(671)	(11,545)*
Region 2	**(24,627)**	**(9,348)**	**13,761**	**14%**	**12%**	**21%**	**(3,114)***	**5,586***	**1,769**
Berks County	(4,085)	(1,140)	1,790	2%	1%	3%	(686)*	687	(705)
Bradford/Sullivan/Tioga Counties	(873)	(118)	639	1%	0%	1%	229*	341*	45
Carbon/Lehigh Counties	(5,275)	(3,389)	2,426	3%	4%	4%	(1,018)*	390	(264)
Columbia/Luzerne Counties	(4,650)	(315)	3,302	3%	0%	5%	143	1,999*	1,038
Lackawanna/Wyoming Counties	(2,974)	(712)	2,318	2%	1%	4%	(3)	1,102*	705
Monroe County	(1,570)	(1,354)	391	1%	2%	1%	(895)*	(356)	703*
Northampton County	(3,420)	(2,135)	1,100	2%	3%	2%	(980)*	633	(194)
Pike/Susquehanna/Wayne Counties	(1,090)	(786)	513	1%	1%	1%	(349)*	(6)	311
Schuylkill County	(690)	601	1,282	0%	-1%	2%	445*	796*	130
Region 3	**(16,719)**	**(5,663)**	**9,936**	**10%**	**7%**	**15%**	**(2,111)***	**4,355***	**1,095**
Adams/Franklin Counties	(1,574)	(197)	1,065	1%	0%	2%	(185)	515	112
Cumberland/Perry Counties	(2,370)	(1,123)	1,483	1%	1%	2%	(579)*	474	522
Dauphin County	(3,195)	(874)	3,067	2%	1%	5%	(234)	667	223

TABLE CONTINUED ON PAGE 117 ➔

TABLE F.5 CONTINUED

	Shortages and Surpluses of Affordable and Available Units for Renter Households in 2000			% of Total			Change from 1990		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(170,324)**	**(76,950)**	**64,300**	**100%**	**100%**	**100%**	**(11,840)***	**18,521***	**(18,998)***
Lancaster County	(5,275)	(3,095)	1,295	3%	4%	2%	(742)*	1,018*	(15)
Lebanon County	(1,160)	166	776	1%	0%	1%	(190)	580*	271
York County	(3,145)	(540)	2,250	2%	1%	3%	(181)	1,101*	(18)
Region 4	**(11,919)**	**(5,074)**	**4,977**	**7%**	**7%**	**8%**	**284**	**1,959***	**445**
Bedford/Fulton/ Huntingdon Counties	(638)	59	574	0%	0%	1%	136	137	100
Blair County	(1,605)	(433)	847	1%	1%	1%	10	293	(227)
Cambria/Somerset Counties	(1,222)	745	1,789	1%	-1%	3%	681*	100	(692)
Centre County	(4,345)	(4,500)	(855)	3%	6%	-1%	(913)*	(97)	425
Clinton/Juniata/Mifflin/ Snyder/Union Counties	(1,804)	(308)	819	1%	0%	1%	(256)	605*	367
Lycoming County	(1,515)	(780)	825	1%	1%	1%	154	459	232
Montour/Northumberland Counties	(790)	143	978	0%	0%	2%	472*	462	240
Region 5	**(34,230)**	**(10,998)**	**19,787**	**20%**	**14%**	**31%**	**3,999***	**7,581***	**(3,918)***
Allegheny County	(21,545)	(11,200)	10,330	13%	15%	16%	(3)	4,387*	(2,196)
Armstrong/Indiana Counties	(2,275)	(1,018)	746	1%	1%	1%	17	(26)	(320)
Beaver/Lawrence Counties	(2,384)	(433)	1,809	1%	1%	3%	984*	1,272*	(309)
Butler County	(1,650)	(620)	460	1%	1%	1%	(5)	(103)	(376)
Fayette County	(1,629)	852	1,527	1%	-1%	2%	729*	314	(55)
Greene/Washington Counties	(2,012)	621	2,046	1%	-1%	3%	1,098*	920*	(155)
Westmoreland County	(2,735)	800	2,869	2%	-1%	4%	1,179*	817	(507)
Region 6	**(8,399)**	**(1,487)**	**5,309**	**5%**	**2%**	**8%**	**2,332***	**1,964***	**(1,193)**
Cameron/Elk/McKeon/ Potter Counties	(735)	88	696	0%	0%	1%	432*	284	(163)
Clarion/Forest/Venango Counties	(1,162)	(196)	606	1%	0%	1%	348*	446*	105
Clearfield/Jefferson	(968)	4	595	1%	0%	1%	226	(69)	(436)*
Crawford/Warren Counties	(999)	97	912	1%	0%	1%	353*	539*	(121)
Erie County	(3,585)	(925)	1,930	2%	1%	3%	850*	689	(256)
Mercer County	(950)	(555)	570	1%	1%	1%	123	75	(322)

Note: Values for DCED regions and for the four suburban Philadelphia counties have been rounded in this table and may vary slightly from the summation of consolidated PUMAs in those regions or suburban counties in the Philadelphia area.

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

Rental Vacancy Rates by Unit Affordability to Lower-Income Households

Region 3 had the greatest increase in vacancy rates for units affordable to ELI renter households. The local results are consistent with these findings, since the areas of Adams/Franklin, Dauphin, Lebanon, and York experienced the largest increases in vacancy rates for units affordable to ELI renter households during this time.

Meanwhile, at the local level, Blair and Delaware counties had the largest significant decreases (5 percentage points each) in the vacancy rates for units affordable to ELI renters.

TABLE F.6
Vacancy Rates by Rental Affordability in 2000 and Change from 1990

	2000				Change from 1990			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**10%**	**9%**	**4%**	**7%**	**1%***	**0%***	**-1%***	**0%**
Region 1	**10%**	**8%**	**4%**	**6%**	**-1%**	**-3%***	**-3%***	**-2%***
Bucks County	3%	7%	4%	4%	-1%	-3%*	-6%*	-4%*
Chester County	5%	9%	3%	5%	2%*	1%	-3%*	0%
Delaware County	7%	10%	4%	6%	-5%*	-2%*	-1%*	-1%*
Montgomery County	5%	11%	4%	6%	1%	1%	-2%*	-1%*
Four Philadelphia Suburban Counties	**5%**	**9%**	**4%**	**5%**	**-1%***	**-1%**	**-3%***	**-2%***
Philadelphia County	12%	7%	4%	7%	0%	-4%*	-3%*	-3%*
Region 2	**9%**	**10%**	**4%**	**7%**	**3%***	**2%***	**-2%***	**1%***
Berks County	10%	8%	3%	7%	4%*	-1%	-2%*	0%
Bradford/Sullivan/ Tioga Counties	9%	9%	2%	7%	2%*	1%	0%	1%*
Carbon/Lehigh Counties	9%	10%	5%	7%	4%*	2%*	-2%*	1%
Columbia/Luzerne Counties	9%	11%	3%	8%	3%*	5%*	0%	3%*
Lackawanna/ Wyoming Counties	9%	12%	4%	8%	3%*	4%*	-1%	2%*
Monroe County	4%	10%	4%	6%	1%	-6%*	-11%*	-6%*
Northampton County	4%	10%	4%	6%	1%*	2%	-2%*	0%
Pike/Susquehanna/ Wayne Counties	6%	10%	3%	7%	1%	-3%*	-4%*	-1%
Schuylkill County	12%	11%	3%	10%	2%	2%	-1%	2%*
Region 3	**10%**	**8%**	**4%**	**7%**	**5%***	**1%***	**1%***	**2%***
Adams/Franklin Counties	9%	7%	1%	6%	5%*	2%*	-1%*	2%*
Cumberland/Perry Counties	8%	7%	6%	7%	4%*	1%	3%*	2%*
Dauphin County	13%	11%	6%	9%	6%*	3%*	1%*	3%*
Lancaster County	8%	6%	3%	5%	4%*	0%	0%	1%*
Lebanon County	9%	7%	4%	7%	5%*	2%*	2%*	3%*

TABLE CONTINUED ON PAGE 119 ➔

TABLE F.6 CONTINUED

	2000				Change from 1990			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**10%**	**9%**	**4%**	**7%**	**1%***	**0%***	**-1%***	**0%**
York County	14%	7%	4%	7%	8%*	0%	-1%	1%*
Region 4	**10%**	**8%**	**3%**	**7%**	**-1%***	**1%***	**0%**	**1%***
Bedford/Fulton/ Huntingdon Counties	9%	7%	3%	7%	-1%	0%	1%	0%
Blair County	9%	9%	2%	7%	-5%*	2%*	-2%*	0%
Cambria/Somerset Counties	14%	6%	3%	8%	-4%*	-1%*	1%	-1%
Centre County	7%	3%	2%	4%	-2%	-4%*	-1%*	-2%*
Clinton/Juniata/Mifflin/ Snyder/Union Counties	8%	7%	3%	6%	3%*	3%*	2%*	3%*
Lycoming County	7%	11%	4%	7%	3%*	5%*	0%	3%*
Montour/ Northumberland Counties	11%	10%	3%	9%	3%	2%*	1%	3%*
Region 5	**12%**	**11%**	**5%**	**9%**	**1%**	**0%**	**0%**	**1%***
Allegheny County	13%	12%	5%	9%	2%*	-1%*	0%	1%*
Armstrong/Indiana Counties	8%	8%	4%	7%	-4%*	-2%	2%*	0%
Beaver/Lawrence Counties	10%	9%	3%	8%	-2%*	-3%*	0%	-1%
Butler County	9%	7%	2%	7%	0%	1%	0%	1%*
Fayette County	12%	8%	4%	9%	1%	1%	3%*	2%*
Greene/Washington Counties	13%	9%	3%	9%	2%	1%	0%	2%*
Westmoreland County	11%	10%	4%	9%	0%	1%	2%*	1%*
Region 6	**10%**	**8%**	**3%**	**8%**	**-1%**	**0%**	**0%**	**0%***
Cameron/Elk/ McKean/ Potter Counties	12%	8%	4%	8%	2%*	-1%	1%	1%*
Clarion/Forest/ Venango Counties	9%	5%	5%	6%	-1%	-3%*	2%*	0%
Clearfield/Jefferson Counties	7%	7%	2%	6%	-4%*	-5%*	-1%*	-3%*
Crawford/Warren Counties	11%	10%	3%	9%	0%	3%*	1%*	2%*
Erie County	12%	9%	4%	8%	0%	2%*	0%	1%*
Mercer County	9%	9%	2%	7%	-1%	2%	1%	1%

* Changes between 1990 and 2000 are statistically significant at the 90 percent confidence level.

APPENDIX G
CHANGES BETWEEN 2000 AND 2005-06 BY DCED REGIONS AND CONSOLIDATED PUMAS

We calculated the data in the tables in this section from two data sources:

- 2000 CHAS data, U.S. Census Bureau and HUD, http://www.huduser.org/datasets/cp.html
- 2005 and 2006 ACS data, U.S. Census Bureau, Pennsylvania PUMS files, http://www.census.gov/acs/www/Products/PUMS/acspums_archived.html.[1]

Commentary for this section appears in Chapter 4 of the main report.

[1] For data analyzed in this study, we used PUMS files for the state of Pennsylvania provided by the NLIHC, which included adjustments it made for cost burden, as described in Appendix E.

TABLE G.1
Income Distribution of Lower-Income Renter Households in 2005-06 and Change from 2000

	2005-06			Change from 2000		
	Distribution of Lower-Income Renters (as % of Total Renters)			Distribution of Lower-Income Renters (as % of Total Renters)		
	ELI	VLI	LI	ELI	VLI	LI
Pennsylvania	**28%**	**19%**	**22%**	**4%***	**1%***	**0%**
Region 1	**32%**	**16%**	**20%**	**4%***	**1%**	**0%**
Bucks County	24%	15%	22%	8%*	1%	-1%
Chester County	18%	14%	23%	3%	1%	1%
Delaware County	25%	21%	20%	2%	5%*	-2%
Montgomery County	16%	17%	20%	2%	4%*	-1%
Four Philadelphia Suburban Counties	**21%**	**17%**	**21%**	**4%***	**3%***	**-1%**
Philadelphia County	43%	16%	19%	5%*	-1%	0%
Region 2	**26%**	**21%**	**23%**	**3%***	**2%***	**0%**
Berks County	24%	22%	21%	1%	4%	-2%
Bradford/Sullivan/ Tioga Counties	28%	25%	18%	7%	5%	-6%
Carbon/Lehigh Counties	31%	18%	24%	8%*	-1%	2%
Columbia/Luzerne Counties	24%	25%	22%	1%	6%*	0%
Lackawanna/ Wyoming Counties	25%	22%	20%	3%	3%	-1%
Monroe County	24%	19%	23%	3%	2%	1%
Northampton County	25%	16%	28%	2%	-1%	6%
Pike/Susquehanna/ Wayne Counties	27%	20%	17%	6%	-1%	-7%
Schuylkill County	28%	20%	27%	6%	-2%	5%

TABLE CONTINUED ON PAGE 122 ➔

TABLE G.1 CONTINUED

	2005-06			Change from 2000		
	Distribution of Lower-Income Renters (as % of Total Renters)			Distribution of Lower-Income Renters (as % of Total Renters)		
	ELI	VLI	LI	ELI	VLI	LI
Pennsylvania	**28%**	**19%**	**22%**	**4%***	**1%***	**0%**
Region 3	**21%**	**19%**	**24%**	**3%***	**1%**	**-1%**
Adams/Franklin Counties	16%	19%	27%	-1%	3%	1%
Cumberland/Perry Counties	16%	15%	26%	-1%	-2%	2%
Dauphin County	26%	20%	18%	5%*	4%	-6%*
Lancaster County	21%	19%	23%	4%*	3%	-3%
Lebanon County	25%	18%	23%	4%	-2%	-2%
York County	23%	18%	27%	5%*	0%	1%
Region 4	**26%**	**21%**	**23%**	**2%**	**1%**	**1%**
Bedford/Fulton/ Huntingdon Counties	29%	19%	24%	8%	1%	0%
Blair County	27%	18%	24%	1%	-3%	4%
Cambria/Somerset Counties	26%	24%	22%	1%	2%	0%
Centre County	37%	20%	21%	8%*	-2%	0%
Clinton/Juniata/ Mifflin/Snyder/Union Counties	17%	19%	29%	-6%*	0%	6%
Lycoming County	21%	21%	24%	2%	2%	-1%
Montour/ Northumberland Counties	24%	30%	16%	4%	8%	-7%*
Region 5	**29%**	**20%**	**22%**	**3%***	**1%**	**1%**
Allegheny County	28%	19%	21%	4%*	2%	0%
Armstrong/Indiana Counties	31%	18%	22%	5%	-4%	1%
Beaver/Lawrence Counties	26%	20%	28%	2%	0%	5%
Butler County	22%	14%	26%	1%	-4%	4%
Fayette County	36%	21%	25%	0%	0%	4%
Greene/Washington Counties	31%	24%	22%	4%	3%	0%
Westmoreland County	29%	23%	21%	5%*	3%	-2%
Region 6	**28%**	**19%**	**21%**	**5%***	**-1%**	**-2%**
Cameron/Elk/ McKean/Potter Counties	26%	17%	24%	5%	-5%	1%
Clarion/Forest/ Venango Counties	31%	20%	17%	4%	-1%	-4%
Clearfield/Jefferson Counties	26%	23%	24%	1%	1%	1%
Crawford/Warren Counties	22%	17%	22%	2%	-3%	-3%
Erie County	33%	16%	19%	10%*	-4%	-3%
Mercer County	22%	28%	24%	0%	9%*	1%

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

TABLE G.2

Vacancy Rates by Rental Affordability in 2005-06 and Changes from 2000

	2005-06				Change from 2000			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**11%**	**12%**	**7%**	**10%**	**1%**	**3%***	**3%***	**2%***
Region 1	**13%**	**15%**	**8%**	**11%**	**3%***	**7%***	**5%***	**5%***
Bucks County	0%	8%	11%	9%	-3%*	2%	7%*	4%*
Chester County	3%	17%	5%	7%	-2%	8%	1%	2%
Delaware County	5%	21%	5%	11%	-1%	12%*	2%	5%*
Montgomery County	5%	16%	8%	10%	-1%	5%	4%*	4%*
Four Philadelphia Suburban Counties	**3%**	**16%**	**8%**	**9%**	**-2%**	**7%***	**4%***	**4%***
Philadelphia County	18%	15%	9%	13%	5%*	7%*	5%*	6%*
Region 2	**6%**	**10%**	**3%**	**6%**	**-3%***	**0%**	**-1%**	**-1%***
Berks County	5%	11%	3%	7%	-5%	3%	1%	1%
Bradford/Sullivan/ Tioga Counties	6%	11%	1%	7%	-3%	3%	-1%	0%
Carbon/Lehigh Counties	2%	11%	4%	6%	-7%*	0%	-1%	-1%
Columbia/Luzerne Counties	6%	10%	3%	7%	-3%	-1%	-1%	-1%
Lackawanna/ Wyoming Counties	9%	8%	2%	6%	1%	-4%	-1%	-2%
Monroe County	2%	9%	4%	5%	-2%	-1%	0%	0%
Northampton County	4%	12%	3%	6%	0%	2%	-1%	0%
Pike/Susquehanna/ Wayne Counties	7%	6%	0%	4%	2%	-4%	-3%*	-3%
Schuylkill County	11%	3%	0%	5%	-1%	-7%*	-3%	-5%*
Region 3	**10%**	**7%**	**6%**	**7%**	**-1%**	**-1%**	**2%***	**0%**
Adams/Franklin Counties	8%	6%	2%	5%	0%	-1%	0%	-1%
Cumberland/Perry Counties	10%	4%	1%	4%	2%	-3%	-5%*	-3%*
Dauphin County	16%	8%	16%	13%	4%	-3%	10%*	4%*
Lancaster County	3%	5%	5%	5%	-4%*	-1%	2%	0%
Lebanon County	14%	7%	5%	7%	5%	0%	0%	0%
York County	9%	8%	5%	7%	-4%	1%	1%	0%
Region 4	**10%**	**9%**	**5%**	**8%**	**0%**	**2%**	**2%**	**1%**
Bedford/Fulton/ Huntingdon Counties	16%	4%	1%	8%	7%	-2%	-2%	1%
Blair County	3%	17%	6%	10%	-5%	7%	4%	3%
Cambria/Somerset Counties	15%	8%	2%	9%	1%	2%	-1%	1%
Centre County	19%	4%	8%	8%	12%	1%	6%*	5%*
Clinton/Juniata/Mifflin/ Snyder/Union Counties	2%	10%	2%	6%	-6%*	3%	-1%	0%
Lycoming County	10%	10%	3%	7%	3%	-1%	-1%	-1%

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TABLE G.2 CONTINUED

	2005-06				Change from 2000			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**11%**	**12%**	**7%**	**10%**	**1%**	**3%***	**3%***	**2%***
Montour/ Northumberland Counties	8%	10%	6%	8%	-3%	-1%	3%	-1%
Region 5	**14%**	**16%**	**8%**	**12%**	**2%**	**6%***	**3%***	**4%***
Allegheny County	13%	22%	9%	14%	1%	10%*	4%*	5%*
Armstrong/Indiana Counties	6%	9%	7%	8%	-3%	1%	3%	1%
Beaver/Lawrence Counties	18%	9%	0%	10%	9%*	0%	-3%*	2%
Butler County	8%	13%	0%	6%	-1%	6%	-2%*	0%
Fayette County	17%	6%	0%	11%	6%	-2%	-4%*	1%
Greene/Washington Counties	23%	15%	2%	16%	11%*	5%	-2%	6%*
Westmoreland County	5%	11%	9%	9%	-6%*	1%	5%	0%
Region 6	**12%**	**11%**	**3%**	**9%**	**2%**	**2%**	**0%**	**1%**
Cameron/Elk/McKean/ Potter Counties	20%	10%	3%	11%	7%	2%	0%	3%
Clarion/Forest/ Venango Counties	16%	9%	4%	11%	7%	4%	-1%	4%
Clearfield/Jefferson Counties	7%	10%	0%	7%	-1%	4%	-2%*	1%
Crawford/Warren Counties	16%	12%	2%	10%	5%	1%	-1%	1%
Erie County	9%	10%	3%	8%	-3%	1%	-1%	0%
Mercer County	11%	16%	4%	9%	2%	7%	1%	3%

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

TABLE G.3

Cost Burden Incidence in 2005-06 and Change from 2000

	2005-06								Change from 2000							
	% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden				% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**84%**	**67%**	**29%**	**44%**	**69%**	**21%**	**3%**	**24%**	**15%***	**7%***	**6%***	**10%***	**16%***	**5%***	**1%***	**8%***
Region 1	**87%**	**74%**	**37%**	**50%**	**75%**	**24%**	**4%**	**29%**	**17%***	**7%***	**9%***	**13%***	**18%***	**4%***	**0%**	**9%***
Bucks County	90%	76%	48%	48%	79%	33%	6%	26%	22%*	-1%	12%*	16%*	22%*	1%	1%	11%*
Chester County	87%	73%	41%	39%	76%	26%	4%	18%	13%*	-2%	5%	8%*	15%*	-5%	-2%	4%
Delaware County	93%	74%	33%	48%	82%	26%	3%	27%	19%*	-1%	3%	10%*	19%*	1%	-1%	8%*
Montgomery County	85%	84%	42%	41%	78%	35%	6%	21%	13%*	10%*	3%	10%*	18%*	6%	0%	7%*
Four Philadelphia Suburban Counties	**89%**	**78%**	**41%**	**44%**	**80%**	**31%**	**5%**	**23%**	**17%***	**3%**	**6%***	**11%***	**19%***	**2%**	**0%**	**7%***
Philadelphia County	86%	69%	33%	55%	73%	18%	3%	35%	17%*	10%*	12%*	14%*	18%*	4%	1%	11%*
Region 2	**82%**	**64%**	**29%**	**42%**	**65%**	**18%**	**4%**	**22%**	**14%***	**5%***	**7%***	**10%***	**15%***	**3%**	**3%***	**7%***
Berks County	85%	70%	28%	43%	70%	17%	3%	22%	17%*	10%*	8%	11%*	21%*	4%	1%	7%*
Bradford/ Sullivan/ Tioga Counties	87%	66%	18%	45%	67%	19%	0%	23%	20%*	14%	6%	17%*	18%*	5%	-1%*	10%*
Carbon/Lehigh Counties	79%	75%	29%	46%	60%	23%	2%	23%	9%*	14%*	4%	12%*	9%*	6%	0%	7%*
Columbia/ Luzerne Counties	82%	57%	23%	39%	62%	18%	8%	21%	17%*	1%	1%	8%*	13%*	4%	7%*	7%*
Lackawanna/ Wyoming Counties	79%	58%	24%	39%	71%	19%	2%	22%	13%*	3%	3%	8%*	22%*	5%	0%	8%*
Monroe County	92%	58%	30%	40%	85%	24%	11%	27%	12%*	-16%	-3%	2%	17%*	5%	10%	9%*
Northampton County	88%	73%	45%	47%	59%	7%	5%	18%	19%*	13%	21%*	14%*	7%	-10%*	2%	2%
Pike/Susquehanna/ Wayne Counties	73%	52%	27%	35%	67%	26%	0%	23%	3%	-10%	9%	3%	9%	7%	-1%*	7%
Schuylkill County	72%	49%	28%	37%	57%	8%	7%	19%	16%*	0%	14%	11%*	19%*	-1%	5%	9%*
Region 3	**82%**	**67%**	**20%**	**36%**	**66%**	**16%**	**2%**	**17%**	**12%***	**6%***	**1%**	**7%***	**13%***	**3%**	**0%**	**5%***
Adams/Franklin Counties	75%	67%	13%	29%	64%	13%	0%	13%	9%	11%	-1%	5%	15%	1%	-1%*	2%
Cumberland/ Perry Counties	82%	80%	14%	30%	70%	25%	0%	15%	11%	17%*	-7%	1%	16%*	10%	-2%*	3%
Dauphin County	79%	70%	25%	40%	65%	10%	3%	19%	12%*	8%	3%	10%*	13%*	-3%	2%	6%*
Lancaster County	87%	71%	22%	39%	73%	22%	2%	20%	13%*	6%	-1%	8%*	16%*	5%	-1%	7%*
Lebanon County	78%	54%	31%	37%	46%	6%	4%	14%	14%	9%	17%*	10%*	6%	-2%	4%	4%
York County	82%	55%	19%	35%	62%	14%	2%	18%	11%*	-7%	5%	6%*	9%	1%	1%	5%*
Region 4	**79%**	**62%**	**26%**	**40%**	**64%**	**20%**	**3%**	**21%**	**10%***	**7%***	**7%***	**8%***	**12%***	**5%***	**1%**	**5%***
Bedford/Fulton/ Huntingdon Counties	89%	59%	14%	40%	61%	28%	0%	23%	29%*	15%	4%	17%*	18%	21%	-1%*	12%*

TABLE CONTINUED ON PAGE 126 ➔

TABLE G.3 CONTINUED

	2005-06								Change from 2000							
	% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden				% of Renter Households with Any Cost Burden				% of Renter Households with a Severe Cost Burden			
	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total	ELI	VLI	LI	Total
Pennsylvania	**84%**	**67%**	**29%**	**44%**	**69%**	**21%**	**3%**	**24%**	**15%***	**7%***	**6%***	**10%***	**16%***	**5%***	**1%***	**8%***
Blair County	60%	59%	29%	34%	51%	15%	2%	17%	-8%	5%	9%	0%	0%	4%	0%	1%
Cambria/ Somerset Counties	68%	53%	21%	35%	44%	19%	3%	16%	4%	8%	10%	7%*	0%	12%*	1%	4%
Centre County	97%	80%	38%	62%	91%	25%	3%	39%	18%*	8%	7%	16%*	24%*	-3%	-1%	13%*
Clinton/Juniata/ Mifflin/Snyder/ Union Counties	78%	47%	21%	30%	54%	10%	0%	11%	14%	-1%	5%	1%	5%	-2%	-2%*	-3%
Lycoming County	77%	76%	39%	42%	68%	26%	9%	22%	7%	10%	13%	9%*	12%	7%	7%	7%
Montour/ Northumberland Counties	68%	57%	10%	35%	54%	20%	0%	19%	3%	8%	-4%	8%	9%	6%	-1%*	6%
Region 5	**83%**	**64%**	**27%**	**44%**	**65%**	**24%**	**4%**	**24%**	**15%***	**8%***	**5%***	**11%***	**14%***	**8%***	**1%**	**8%***
Allegheny County	86%	71%	34%	47%	71%	29%	5%	27%	18%*	8%*	5%	12%*	18%*	9%*	1%	9%*
Armstrong/Indiana Counties	80%	62%	30%	43%	68%	25%	8%	27%	7%	10%	12%	8%	13%	11%	6%	9%*
Beaver/Lawrence Counties	79%	63%	24%	40%	62%	21%	3%	21%	11%*	12%	6%	9%*	16%*	8%	1%	7%*
Butler County	87%	67%	31%	41%	72%	20%	8%	21%	16%*	9%	8%	8%*	16%*	7%	4%	5%
Fayette County	78%	37%	4%	37%	51%	6%	0%	19%	13%*	0%	-2%	4%	5%	1%	-1%*	1%
Greene/ Washington Counties	79%	51%	18%	41%	55%	12%	0%	20%	11%*	6%	6%	10%*	11%	3%	-1%*	6%*
Westmoreland County	74%	59%	17%	40%	52%	22%	0%	21%	9%*	9%	6%	11%*	7%	12%*	-1%	8%*
Region 6	**82%**	**61%**	**24%**	**40%**	**67%**	**18%**	**2%**	**23%**	**14%***	**9%***	**7%***	**10%***	**17%***	**6%***	**0%**	**8%***
Cameron/Elk/ McKean/Potter Counties	86%	60%	32%	41%	68%	6%	0%	19%	18%*	10%	18%	12%*	15%	-5%	-2%*	5%
Clarion/Forest/ Venango Counties	78%	58%	14%	39%	67%	17%	0%	24%	9%	14%	1%	8%	16%*	5%	-2%*	8%
Clearfield/ Jefferson Counties	79%	47%	32%	40%	54%	8%	0%	16%	17%*	3%	20%*	11%*	9%	1%	-2%*	3%
Crawford/ Warren Counties	85%	64%	20%	34%	65%	14%	1%	17%	19%*	12%	3%	6%	22%*	5%	-1%	6%
Erie County	83%	68%	22%	44%	74%	28%	2%	30%	13%*	10%	3%	10%*	21%*	14%*	0%	14%*
Mercer County	77%	61%	27%	41%	57%	20%	8%	20%	9%	7%	1%	10%*	6%	6%	6%	6%

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

TABLE G.4

Affordable and Available Housing Units in 2005-06 and Changes from 2000

	2005-06						Change from 2000					
	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households			Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**77**	**135**	**150**	**43**	**84**	**110**	**-19***	**-17***	**-8***	**-6***	**-2**	**2**
Region 1	**56**	**113**	**147**	**38**	**78**	**111**	**-11***	**-11***	**-4**	**-4***	**0**	**7***
Bucks County	48	93	154	25	56	104	-27*	-22	-19	-12*	0	6
Chester County	80	109	160	33	59	101	-18	-23	-20	-6	-5	1
Delaware County	46	113	156	21	72	112	-10	-8	-2	-9*	3	8
Montgomery County	60	93	167	27	51	106	-11	-29*	-14	-5	-11	6
Four Philadelphia Suburban Counties	**55**	**102**	**160**	**25**	**60**	**106**	**-15***	**-20***	**-13**	**-8***	**-3**	**6**
Philadelphia County	57	120	138	43	89	114	-10*	-6	2	-2	4	9
Region 2	**86**	**138**	**146**	**43**	**84**	**105**	**-24***	**-25***	**-17***	**-9***	**-6**	**-4**
Berks County	70	145	156	36	95	109	-26*	-20	-5	-16*	3	1
Bradford/Sullivan/ Tioga Counties	96	155	152	43	93	111	-58*	-39	-12	-17	-4	1
Carbon/Lehigh Counties	62	107	136	39	71	103	-24*	-30*	-24	-8	-11	-6
Columbia/Luzerne Counties	111	158	143	53	92	105	-14	-22	-21	-2	-6	-7
Lackawanna/ Wyoming Counties	99	140	152	48	82	108	-24	-33	-15	-8	-12	-4
Monroe County	76	101	149	20	55	99	0	-24	-18	-9	-11	-7
Northampton County	74	131	145	37	83	105	-11	-11	-16	-9	2	-1
Pike/Susquehanna/ Wayne Counties	112	134	151	47	78	102	-17	-25	-8	2	-2	-6
Schuylkill County	114	173	137	58	95	103	-63*	-34	-30	-18	-16	-12
Region 3	**80**	**161**	**163**	**40**	**84**	**108**	**-28***	**-28***	**-8**	**-9***	**-7**	**-1**
Adams/Franklin Counties	113	190	166	43	83	106	-30	-36	-14	-12	-15	-3
Cumberland/Perry Counties	88	193	174	40	82	104	-27	13	-4	-6	-6	-6
Dauphin County	80	139	173	50	86	120	-21	-28	-1	-6	-7	6
Lancaster County	71	144	159	31	73	104	-17	-35*	-10	-7	-8	0
Lebanon County	80	184	158	44	100	108	-42	-22	-1	-12	-3	-1
York County	72	164	154	38	93	108	-36*	-37	-15	-14	-3	-2
Region 4	**104**	**149**	**146**	**48**	**86**	**106**	**-20***	**-19**	**-8**	**-6**	**-4**	**-1**
Bedford/Fulton/ Huntingdon Counties	123	188	148	51	100	108	-68*	-37	-21	-15	-1	-2
Blair County	105	171	158	60	107	112	-4	12	2	5	13	3
Cambria/Somerset Counties	150	173	150	77	107	112	-21	-26	-6	0	0	0
Centre County	32	72	119	15	43	94	-22*	-23	-9	-9	-12	0

TABLE CONTINUED ON PAGE 128 ➔

TABLE G.4 CONTINUED

	2005-06						Change from 2000					
	Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households			Affordable Units per 100 Renter Households			Affordable and Available Units per 100 Renter Households		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**77**	**135**	**150**	**43**	**84**	**110**	**-19***	**-17***	**-8***	**-6***	**-2**	**2**
Clinton/Juniata/ Mifflin/Snyder/Union Counties	168	207	157	56	97	108	33	20	1	0	1	1
Lycoming County	91	133	153	43	69	103	-13	-31	-11	-3	-17	-6
Montour/ Northumberland Counties	132	158	150	55	102	110	-31	-42	-14	-13	-1	-2
Region 5	**91**	**143**	**149**	**51**	**93**	**114**	**-18***	**-13***	**-8**	**-5**	**1**	**4**
Allegheny County	66	123	152	40	84	115	-24*	-17*	-8	-11*	-1	6
Armstrong/Indiana Counties	99	153	144	42	91	106	-21	-6	-4	-3	4	-1
Beaver/Lawrence Counties	146	170	145	79	100	112	8	0	-12	15	4	2
Butler County	95	163	154	41	81	103	-18	-9	-3	-6	-8	-2
Fayette County	142	185	136	80	113	114	4	10	-4	8	4	2
Greene/Washington Counties	143	177	152	82	120	122	6	-4	-3	14	14	9
Westmoreland County	101	156	145	55	99	111	-38*	-39*	-15	-10	-7	-2
Region 6	**90**	**154**	**154**	**43**	**90**	**110**	**-44***	**-24***	**-3**	**-15***	**-6**	**1**
Cameron/Elk/McKean/ Potter Counties	122	187	167	54	101	118	-37	-11	7	-9	-1	7
Clarion/Forest/ Venango Counties	108	143	158	57	87	112	-31	-37	5	0	-9	4
Clearfield/Jefferson Counties	141	169	143	53	103	108	-17	-16	-6	-11	3	0
Crawford/Warren Counties	118	206	179	52	104	116	-32	5	14	-8	2	4
Erie County	52	136	153	29	79	108	-60*	-30	-4	-25*	-14	0
Mercer County	101	128	135	51	93	104	-31	-35	-28	-9	5	-4

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

TABLE G.5

Actual Shortages/Surpluses in Affordable and Available Housing Units in 2005-06 and Changes from 2000

	Shortages and Surpluses of Affordable and Available Units for Renter Households in 2005-06			% of Total			Change from 2000		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(220,369)**	**(99,912)**	**92,412**	**100%**	**100%**	**100%**	**(50,045)***	**(22,962)***	**28,112***
Region 1	**(90,308)**	**(47,766)**	**34,082**	**41%**	**48%**	**37%**	**(15,878)***	**(3,386)**	**23,552***
Bucks County	(9,240)	(8,866)	1,172	4%	9%	1%	(4,415)*	(2,426)	1,682
Chester County	(4,470)	(4,878)	130	2%	5%	0%	(1,215)	(1,168)	135
Delaware County	(11,076)	(7,177)	4,534	5%	7%	5%	(1,881)	(212)	3,174
Montgomery County	(8,629)	(11,896)	2,351	4%	12%	3%	(1,284)	(3,896)*	2,455
Four Philadelphia Suburban Counties	**(33,414)**	**(32,816)**	**8,186**	**15%**	**33%**	**9%**	**(8,794)***	**(7,701)***	**7,446**
Philadelphia County	(56,894)	(14,950)	25,896	26%	15%	28%	(7,084)*	4,316	16,106 *
Region 2	**(34,720)**	**(17,643)**	**8,434**	**16%**	**18%**	**9%**	**(10,093)***	**(8,295)**	**(5,327)**
Berks County	(6,255)	(871)	2,368	3%	1%	3%	(2,170)	269	578
Bradford/Sullivan/Tioga Counties	(1,758)	(391)	818	1%	0%	1%	(885)	(273)	179
Carbon/Lehigh Counties	(8,166)	(6,278)	904	4%	6%	1%	(2,891)*	(2,889)	(1,523)
Columbia/Luzerne Counties	(4,875)	(1,740)	1,418	2%	2%	2%	(225)	(1,425)	(1,884)
Lackawanna/Wyoming Counties	(4,132)	(2,712)	1,653	2%	3%	2%	(1,158)	(2,000)	(665)
Monroe County	(2,376)	(2,388)	(89)	1%	2%	0%	(806)	(1,034)	(480)
Northampton County	(3,965)	(1,786)	923	2%	2%	1%	(545)	350	(177)
Pike/Susquehanna/Wayne Counties	(1,562)	(1,113)	120	1%	1%	0%	(472)	(327)	(393)
Schuylkill County	(1,633)	(366)	318	1%	0%	0%	(943)	(967)	(964)
Region 3	**(24,270)**	**(12,192)**	**10,143**	**11%**	**12%**	**11%**	**(7,551)***	**(6,529)**	**207**
Adams/Franklin Counties	(2,089)	(1,444)	879	1%	1%	1%	(515)	(1,247)	(187)
Cumberland/Perry Counties	(2,721)	(1,611)	603	1%	2%	1%	(351)	(488)	(881)
Dauphin County	(4,410)	(2,163)	4,353	2%	2%	5%	(1,215)	(1,289)	1,286
Lancaster County	(7,785)	(5,823)	1,467	4%	6%	2%	(2,510)*	(2,728)	172
Lebanon County	(1,782)	(11)	697	1%	0%	1%	(622)	(177)	(79)
York County	(5,483)	(1,141)	2,146	2%	1%	2%	(2,338)*	(601)	(105)
Region 4	**(15,237)**	**(7,602)**	**4,786**	**7%**	**8%**	**5%**	**(3,318)**	**(2,528)**	**(192)**
Bedford/Fulton/Huntingdon Counties	(1,298)	18	532	1%	0%	1%	(660)	(41)	(43)
Blair County	(1,534)	415	1,175	1%	0%	1%	71	848	327
Cambria/Somerset Counties	(1,273)	785	1,877	1%	-1%	2%	(51)	40	88
Centre County	(6,541)	(6,712)	(908)	3%	7%	-1%	(2,196)*	(2,212)	(53)
Clinton/Juniata/Mifflin/ Snyder/Union Counties	(1,450)	(233)	963	1%	0%	1%	355	75	144
Lycoming County	(1,897)	(2,016)	322	1%	2%	0%	(382)	(1,236)	(504)

TABLE CONTINUED ON PAGE 130 ➔

TABLE G.5 CONTINUED

	Shortages and Surpluses of Affordable and Available Units for Renter Households in 2005-06			% of Total			Change from 2000		
	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI	0-30% AMI	0-50% AMI	0-80% AMI
Pennsylvania	**(220,369)**	**(99,912)**	**92,412**	**100%**	**100%**	**100%**	**(50,045)***	**(22,962)***	**28,112***
Montour/Northumberland Counties	(1,246)	143	826	1%	0%	1%	(456)	(1)	(153)
Region 5	**(41,236)**	**(10,570)**	**28,673**	**19%**	**11%**	**31%**	**(7,006)***	**428**	**8,886**
Allegheny County	(27,955)	(12,170)	16,788	13%	12%	18%	(6,410)*	(970)	6,458
Armstrong/Indiana Counties	(2,807)	(719)	663	1%	1%	1%	(532)	300	(84)
Beaver/Lawrence Counties	(1,417)	(2)	2,304	1%	0%	2%	967	432	495
Butler County	(2,002)	(1,051)	319	1%	1%	0%	(352)	(431)	(142)
Fayette County	(1,313)	1,328	2,114	1%	-1%	2%	317	476	587
Greene/Washington Counties	(1,230)	2,286	3,615	1%	-2%	4%	782	1,665	1,569
Westmoreland County	(4,514)	(243)	2,872	2%	0%	3%	(1,779)	(1,043)	3
Region 6	**(14,599)**	**(4,140)**	**6,296**	**7%**	**4%**	**7%**	**(6,200)***	**(2,653)**	**987**
Cameron/Elk/McKeon/ Potter Counties	(1,151)	38	1,144	1%	0%	1%	(416)	(51)	448
Clarion/Forest/Venango Counties	(1,410)	(704)	904	1%	1%	1%	(248)	(508)	298
Clearfield/Jefferson	(1,570)	169	766	1%	0%	1%	(602)	165	171
Crawford/Warren Counties	(1,347)	218	1,211	1%	0%	1%	(348)	121	298
Erie County	(7,929)	(3,454)	1,946	4%	3%	2%	(4,344)*	(2,529)	16
Mercer County	(1,194)	(407)	326	1%	0%	0%	(244)	149	(244)

Note: Values for DCED regions and for the four suburban Philadelphia counties have been rounded in this table and may vary slightly from the summation of consolidated PUMAs in those regions or suburban counties in the Philadelphia area.

* Changes between 2000 and 2005-06 are statistically significant at the 90 percent confidence level.

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GLOSSARY

American Community Survey (ACS) – Since 1996, the Census Bureau has been phasing in the ACS to provide annual economic, social, demographic, and housing data. Beginning with the 2005 ACS, which was the first to represent a full sample for the United States, the Census Bureau has provided one-year estimates for geographic areas with a population of 65,000 or more.

American Housing Survey (AHS) – This survey is conducted by the Census Bureau for HUD. It collects data on the nation's housing stock, including "apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers." The national AHS survey is conducted biennially, and surveys for 47 selected metropolitan areas are conducted approximately every six years, on a rotating basis. Two metropolitan areas within Pennsylvania are surveyed by the AHS: Philadelphia and Pittsburgh.

Affordable Rental Units – Housing is assumed to be affordable if a household spends 30 percent or less of its income on gross rent, i.e., rent and utilities.

Affordable Rental Housing Shortage – By definition, shortage occurs when the total number of renter households at or below a specified income threshold is greater than the total number of rental housing units affordable at that threshold. This shortage can also be expressed as a ratio of units per 100 renters: When the ratio is less than 100, there is a shortage.

Affordable and Available Rental Housing Units – These are affordable rental units that are available to an income group. They include (1) housing units affordable at an income threshold that are occupied by renter households at or below that specified income threshold; and (2) units that are vacant, but intended for rent, and affordable to renter households at the specified threshold.

Affordable and Available Rental Housing Shortage – By definition, shortage occurs when the total number of renters at or below a specified income threshold is greater than the total number of affordable rental units *available* to renters at the threshold. This shortage can also be expressed as a ratio of units per 100 renters: When the ratio is less than 100, there is a shortage.

Area Median Income (AMI) – See the definitions of family and HUD-adjusted area median family income (HAMFI). *This study uses AMI and HAMFI interchangeably.*

Comprehensive Housing Affordability Strategies (CHAS) Data – To help states and local jurisdictions develop their CHAS, which were mandated by the National Affordable Housing Act of 1990, HUD funded special tabulations of 1990 and 2000 census data that classified renter and owner households and their housing problems by income in relation to HAMFI, and housing units and their characteristics by affordability.

Cost Burden/Rent Burden – A cost burden exists when a household pays more than 30 percent of household income for housing. A rent burden exists when a renter pays more than 30 percent of household income on gross rent, i.e., rent and utilities. *This study uses cost burden and rent burden interchangeably.*

Extremely Low Income (ELI) Renters – ELI renters are renter households with incomes less than or equal to 30 percent of HAMFI.

Fair Market Rent (FMR) – FMRs are established annually by HUD for each metropolitan area and nonmetropolitan county in the U.S. The FMR is used in the Housing Choice Voucher program as the basis for determining the payment standard, which is the maximum subsidy allowed for renting a moderately priced housing unit in a local area (see rental subsidy and voucher definitions). *This study uses "FMR" rather than "payment standard" in discussing rental subsidies and the voucher program. At local discretion, public housing agencies may set payment standards within 90 to 110 percent of the FMR.*

Family – In this study, "family" is defined in two quite different ways that should be distinguished. As discussed below, HUD's official HAMFI thresholds are based on adjustments to area median family income. "Family" here follows the Census Bureau's definition in including only persons related by blood, marriage, or adoption. It thereby excludes single individuals living alone or in a household with other unrelated persons and is not the same as a "household." For HUD rental programs, by contrast, the definition of "family" has been expanded over the years to include single persons and thus effectively includes all households.

HOME – The HOME Investment Partnerships Program is a federal affordable housing supply program established by the National Affordable Housing Act of 1990 and administered by HUD. It provides grants to state and local governments ("participating jurisdictions") to fund affordable housing for renters and homeowners with incomes at or below 80 percent of HAMFI. By statute, 90 percent of renters assisted by HOME funds must have incomes at or below 60 percent of HAMFI. Also by statute, rents of units assisted with HOME funds must be the lesser of the local FMR or affordable to incomes at 65 percent of HAMFI.

Housing Problem – This refers to either a cost burden or a housing unit problem.

Housing Unit Problem – This refers to a housing unit that lacks plumbing or kitchen facilities or is overcrowded.

HUD – This acronym refers to the U.S. Department of Housing and Urban Development.

HUD-Adjusted Area Median Family Income (HAMFI) – The area median family income refers to the median income of all families in a given geographic area, such as a county, state, or metropolitan area. To establish income eligibility for its programs, HUD annually establishes thresholds of area median family income adjusted by household size and other factors required by statute. *This study uses HAMFI and area median income (AMI) interchangeably.*

Low Income Housing Tax Credit (LIHTC) Program – The LIHTC program, established by the Tax Reform Act of 1986, provides a tax credit to encourage private equity in the development and rehabilitation of affordable rental housing. Rents must be chosen to be affordable to households with income at either 50 or 60 percent of HAMFI. Projects financed through this program must meet certain requirements, including remaining affordable to income-eligible renters for 30 years. The program is typically administered by state housing finance agencies. LIHTCs are also called Section 42 credits, in reference to the applicable section of the Internal Revenue Code.

Low Income (LI) Renters – LI renters are renter households with incomes between 50.1 percent and 80 percent of HAMFI.

Lower Income – This category includes households with incomes less than or equal to 80 percent of HAMFI. It includes ELI, VLI, and LI renter households.

Moderately Inadequate Housing Unit – The AHS defines this as a housing unit having plumbing, heating, upkeep, hallway, or kitchen problems, but no severe problems.

Overcrowding – Overcrowding occurs when there is more than one person per room.

Public Use Micro-data Sample (PUMS) – PUMS files from the ACS show population and housing unit responses collected on individual questionnaires without identifying the household. Each one-year sample contains approximately 1 percent of the total number of housing units in the United States.

Public Use Micro-data Areas (PUMAs) – PUMAs are the smallest geographical areas identified on the ACS micro-data. They are special nonoverlapping areas that partition a state, each with a population of at least 100,000. State governments drew the PUMA boundaries at the time of the 2000 census.

Rental subsidy – In this study, a rental subsidy is the monetary amount of assistance provided by the federal government through the Housing Choice Voucher program (see voucher definition). For a family given a voucher, the subsidy is generally the difference between 30 percent of a family's adjusted gross income up to the FMR (or local "payment standard" if different from the FMR) or the gross rent of the unit, whichever is less (see FMR definition). If this subsidy is not sufficient to cover the full rent of the unit, the household has the option to pay the additional amount out of its own pocket. The subsidy is paid by the local public housing agency, on behalf of HUD, directly to the landlord. *(Note: Family is defined for HUD program eligibility to effectively include all households. See 24 CFR 982.)*

For example, a family's adjusted gross monthly income is $900, and it can afford to pay $270 per month in gross rent (30 percent of $900). The FMR in the area is $500 per month. The family has a voucher and is eligible to receive a rent subsidy up to $230 ($500-$270). If the family rents a unit at a cost less than the FMR, the subsidy paid to the landlord will be less than $230. If the family rents a unit priced at the FMR, the subsidy will be $230. However, if the family rents a unit with a cost greater than the FMR, it will have some cost burden because the $230 subsidy will be paid to the landlord and the family will be responsible for paying more than $270 per month.

Severe Cost Burden/Rent Burden – A severe cost/rent burden occurs when a renter pays more than 50 percent of household income on rent and utilities.

Severely Inadequate Housing Unit – The AHS defines this as a housing unit having severe plumbing, heating, upkeep, hallway, or electrical problems. The specific problems are defined in each AHS publication and also in each of HUD's Worst Case Needs reports (e.g., HUD 2003).

Very Low Income (VLI) Renters – VLI renters are renter households with incomes between 30.1 percent and 50 percent of HAMFI.

Voucher – Vouchers are provided to extremely low- and very low-income families through the Housing Choice Voucher program, a federal housing assistance program administered by HUD. The voucher program is a tenant-based rental assistance program that enables a family to choose to live in any private rental unit that is available and meets program requirements, including housing quality standards. Local public housing agencies, which administer the program on behalf of HUD, provide the vouchers to income-eligible families and pay the monthly rent subsidies to the landlord. The amount of the subsidy for the unit is based on the family's adjusted gross income and the FMR or local payment standard (see rental subsidy and FMR definitions). By statute, at least 75 percent of families admitted to the program must have incomes below 30 percent of HAMFI.

The use of tenant-based rental assistance was originally authorized in the Housing and Community Development Act of 1974, which amended the U.S. Housing Act of 1937 that created the nation's public housing program. The Housing Choice Voucher program in its current form was created as part of the Quality Housing and Work Responsibility Act of 1998. Specific details for the voucher program are given in 24 CFR 982.

Worst Case Needs – This is HUD's term for unassisted renters with incomes at or below 50 percent of HAMFI who have one of the two priority problems that formerly gave renters preference in admission to rental assistance programs: (1) They are paying more than half of their income for housing or (2) they are living in severely substandard housing. If the data were available, complete estimates of worst case needs would also include anyone who is homeless.