

THE COST OF LIVING

*Milwaukee County's Rental Housing
Trends and Challenges*



WISCONSIN
POLICY FORUM

ABOUT THE WISCONSIN POLICY FORUM

The Wisconsin Policy Forum was created on January 1, 2018, by the merger of the Milwaukee-based Public Policy Forum and the Madison-based Wisconsin Taxpayers Alliance. Throughout their lengthy histories, both organizations engaged in nonpartisan, independent research and civic education on fiscal and policy issues affecting state and local governments and school districts in Wisconsin. The Wisconsin Policy Forum is committed to those same activities and to that spirit of nonpartisanship.

PREFACE AND ACKNOWLEDGMENTS

This report was made possible by the family of Norman N. Gill, who was the director of the Milwaukee-based Citizens Governmental Research Bureau (now the Wisconsin Policy Forum) for 39 years. The Gill family's generous contribution has provided for the creation of the Norman N. Gill Civic Engagement Fellowship, under which the Wisconsin Policy Forum annually hires a graduate student fellow to conduct a research project under the tutelage of its staff. The 2017-18 Norman N. Gill Fellow, Yaidi Cancel Martinez, was the lead author of this report.

We would also like to thank the City of Milwaukee's Department of City Development, LISC Milwaukee, UW-Madison Department of Planning and Landscape Architecture, and the Forum's Economic Development Committee for sharing data and expertise in support of this research.



THE COST OF LIVING

*Milwaukee County's Rental Housing
Trends and Challenges*

August 2018

Study authors:

Yaidi Cancel Martinez, 2017-18 Norman N. Gill Fellow

Joe Peterangelo, Senior Researcher

Rob Henken, President

TABLE OF CONTENTS

- Executive Summary3
- Introduction7
- Rental Housing Demand.....8
- Renter Characteristics 12
- Rental Housing Supply..... 17
 - Vacancy rate..... 17
 - Structure type & size..... 18
 - Housing options 19
 - Number of bedrooms..... 20
- The Cost of Renting..... 22
 - Rent by number of bedrooms 24
- Rental Housing Affordability 26
 - Affordability by county..... 26
 - Supply-demand mismatch..... 27
 - Rent burden..... 29
- Conclusion 40
- Appendix 42
- Notes..... 49



EXECUTIVE SUMMARY

In recent years, Milwaukee’s affordable housing challenges have received considerable attention at the city, county, and regional levels. For example, the city of Milwaukee recently unveiled a plan to develop or preserve 10,000 units of affordable housing; Milwaukee County is leading a push to “end chronic homelessness;” and affordable housing was the subject of a major planning effort by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Yet, as compellingly documented by Matthew Desmond in his 2016 book, *Evicted*, alarming concerns about the availability of affordable rental housing in Greater Milwaukee remain.

In this report, we seek to provide important context by assessing the rental housing market in Milwaukee County. Among the questions we examine:

- *How does the demand from low-income renters compare to the current supply of affordable rental housing options in Milwaukee County?*
- *How do Milwaukee County’s rental housing supply and demand characteristics compare with those of other counties in Wisconsin and nationally?*
- *How has the region’s affordable housing landscape changed since the Great Recession?*

Overall, our analysis shows that the median cost of renting a home in Milwaukee County is not particularly high and that there is a sufficient supply of available rental units to meet the overall demand. However, we also find a sizable gap in the supply of units that would be deemed affordable for the county’s predominantly low-income renter population, indicating that the primary challenge is low incomes, as opposed to high rents.

Specific key findings that emanate from our research include the following:

The percentage of households in Milwaukee County who rent rather than own their homes is the highest among large counties in the Midwest. Just over half (50.6%) of Milwaukee County households rented their homes in 2016. Only 10 counties in the U.S. with populations over 500,000 had higher rates of renting that year, as shown in the table below. Since 2005, there has been a shift from owning to renting in Milwaukee County and nationally.

Highest renter-occupancy rates among U.S. counties with populations over 500,000 (2016)

County	Population	Percent renter-occupied housing	Rank (by % renter-occupied)
Bronx County, New York	1,455,720	80.7%	1
New York County, New York	1,643,734	77.0%	2
Kings County, New York	2,629,150	70.5%	3
Hudson County, New Jersey	677,983	69.4%	4
Suffolk County, Massachusetts	784,230	64.4%	5
San Francisco County, California	870,887	62.1%	6
Essex County, New Jersey	796,914	57.3%	7
Queens County, New York	2,333,054	55.9%	8
Los Angeles County, California	10,137,915	55.4%	9
Dallas County, Texas	2,574,984	50.7%	10
Milwaukee County, Wisconsin	951,448	50.6%	11
Will County, Illinois	689,529	19.4%	136








Source: U.S. Census Bureau ACS 1-year estimates



The median cost of renting a home in Milwaukee County is stable and continues to be relatively low compared with surrounding counties and national peers. The median monthly rent in Milwaukee County was \$834 in 2016, which was only \$6 higher than in 2005 after adjusting for inflation.ⁱ Milwaukee County’s median rent was lower than most surrounding counties, Dane County (Madison), Hennepin County (Minneapolis), and Cook County (Chicago). It was also much lower than the national median of \$981.

Milwaukee County’s median household income has reverted to pre-recession levels but is not high enough to afford the county’s median rent. Among renter households in Milwaukee County, median monthly income increased from \$2,242 in 2010 to \$2,631 in 2016, which returned it to its 2005 level. Despite that increase, households earning the county’s median monthly income in 2016 remained \$45 short of being able to afford the county’s median monthly rent without spending more than 30% of their income on housing. A 30% rent-to-income (RTI) threshold is a standard used to define housing affordability nationally. With the exception of Racine County, the median incomes in surrounding counties and the state are high enough to afford median rents, as shown below.

Rental housing affordability analysis based on monthly median incomes and rents, 2016

Location	Renter Median Household Income	Median Rent	MAR*	Median RTI Gap**	
Milwaukee County	\$2,631	\$834	\$789	-\$45	
Racine County	\$2,635	\$831	\$790	-\$41	
Waukesha County	\$3,683	\$976	\$1,105	\$129	
Ozaukee County	\$3,147	\$907	\$944	\$37	
Washington County	\$3,319	\$858	\$996	\$138	
Dane County	\$3,372	\$975	\$1,012	\$37	
Wisconsin	\$2,820	\$802	\$846	\$44	

*MAR is the median maximum affordable rent based on a 30% RTI.

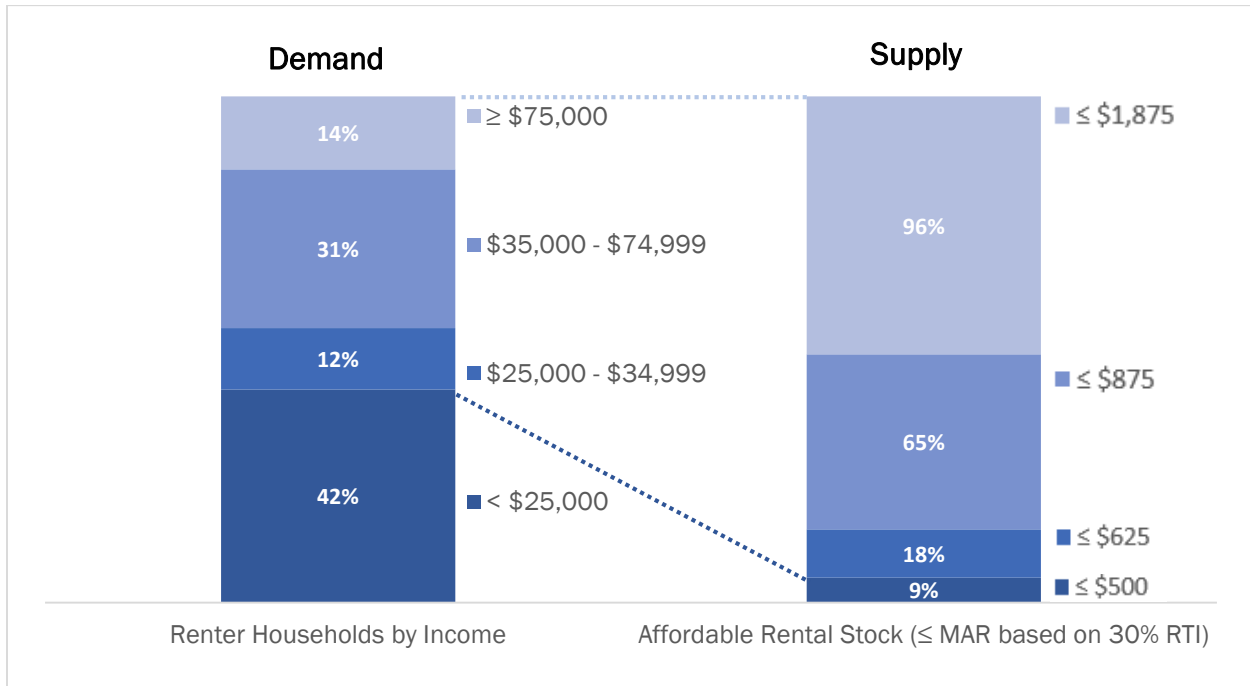
** Source: Wisconsin Policy Forum analysis of difference between the median rent and MAR based on U.S. Census data. A red sign means the MAR is below the median rent. Yellow means the MAR is less than \$100 above the median rent. Green means the MAR is more than \$100 above the median rent.

Roughly half of Milwaukee County’s renter households are rent burdened, meaning they spend at least 30% of their income on rent. In 2016, 49.9% of renter households in Milwaukee County were rent burdened.ⁱⁱ That was a higher percentage than in surrounding counties and the state. This problem spiked during the recession and has improved since that time, but the percentage of rent-burdened households was only slightly lower in 2016 than in 2005. We also estimate that more than half of rent-burdened households in Milwaukee County spend at least 50% of their income on rent. Also, while not as severe, rent burdens are growing in some surrounding communities, as well; in fact, the share of rent-burdened households in Ozaukee and Washington counties increased by 13.6 and 8.9 percentage points respectively between 2005 and 2016.

Rent burdens affect African-American households at twice the rate of white households in Milwaukee County. In the four-county Milwaukee metro area, approximately 40% of African-American households spent at least half of their income on rent compared with 21% of white households.ⁱⁱⁱ While the cost of renting is often somewhat lower in those census tracts, lower incomes and higher unemployment rates among African-Americans are major factors contributing to this problem.

There continues to be a mismatch between income and rents in Milwaukee County. While 42% of renter households in Milwaukee County earned less than \$25,000 per year in 2016, only 9% of rental units charged monthly rents those households could afford (\$500 or less), as shown in the chart below.^{iv} For households earning less than \$25,000 per year, there was a shortage of roughly 50,000 affordable housing units in 2005, while in 2016 that number had increased to 63,000.

Demand for and supply of affordable rental units in Milwaukee County by income, 2016



Source: Wisconsin Policy Forum analysis of U.S. Census Bureau ACS 1-year estimates

Overall, the characteristics and trends within Milwaukee County’s rental housing market convey a serious policy challenge. On the one hand, they point to the need for policymakers to increase the supply of housing that will be affordable for extremely low-income households. On the other hand, they raise more difficult economic and workforce development policy dilemmas given that low incomes, rather than high rents, appear to be the primary issue.

In any case, meeting the need for affordable housing in Milwaukee County is likely to require even greater participation and collaboration in both the public and private sectors. As noted in this report, the good news is that new efforts have been initiated in both sectors, such as the increased activity of CDFIs and the City of Milwaukee’s use of TIF to support affordable housing development. Yet, additional strategies may be needed to address gaps on both the supply side (for example, building or rehabilitating low-income rental units and affordable, market-rate units) and the demand side (for example, finding ways to increase incomes or provide additional rental assistance to low-income households).

Addressing the demand side of the equation may be necessary to meet the needs of Milwaukee County residents, but also may be more difficult for local policymakers to achieve than efforts to increase the affordable housing supply. For example, expanding access to housing vouchers would require a major shift in social safety net programs at the federal level, while raising incomes would require substantial long-term gains in economic development that may be influenced more by

regional, state, and global economic factors than local policies. On the other hand, increasing the supply of affordable housing units, while still challenging and costly, can be tackled through multiple strategies involving both the private sector and governments at all levels.

We hope the data and analysis in this report encourage policymakers to address the issue of affordable housing with increased urgency and a greater sense of collaboration and innovation, and that it will inform ongoing planning and policy deliberations in Milwaukee County and throughout southeast Wisconsin.



INTRODUCTION

Milwaukee's affordable housing challenges have received considerable attention from policymakers in recent years, with the city of Milwaukee recently unveiling a plan to develop or preserve 10,000 units of affordable housing; joint efforts by the city and Milwaukee County to create hundreds of new units for low-income residents with mental illness; and a major push by the county to "end chronic homelessness."

Affordable housing in the broader region also was the subject of a major planning effort by the Southeast Wisconsin Regional Planning Commission (SEWRPC) that culminated in 2013. Yet, as compellingly documented by Matthew Desmond in his 2016 book, *Evicted*, alarming concerns about the availability of affordable rental housing in Greater Milwaukee remain.

In this report, we seek to provide important context by assessing the rental housing market in Milwaukee County. Among the questions we probe:

- *How does the supply of affordable rental housing options in Milwaukee County compare to the demand from low-income renters?*
- *How do Milwaukee County's rental housing supply and demand characteristics compare with those of other counties in Wisconsin and nationally?*
- *How has the region's affordable housing landscape changed since the Great Recession?*

To help answer our research questions, we collected and analyzed data from federal, state, and private sector sources. Those include the U.S. Census Bureau, U.S. Department of Housing and Urban Development (HUD), Wisconsin Housing and Economic Development Authority (WHEDA), Wisconsin Realtors Association (WRA), Milwaukee County Housing Division, Urban Institute, and Zillow, among others.

While federally-assisted rental housing is vital, our focus in this report is on the private rental market, which is where most renters reside. In fact, Milwaukee County's publicly-funded rental housing assistance programs help less than one out of every three low-income renter households, and that assistance is shrinking due to federal budget cuts.^v

This is the second time in the past decade that the Forum has addressed the region's affordable housing landscape. Our 2009 report, *Give Me Shelter*, found that 56.6% of households making less than 30% of the area median income spent more than half of their income on rent and were squeezed into very limited affordable housing options.^{vi} Furthermore, we found that most low-income renters did not receive public subsidies and relied on the private rental market, and the quality of more than 40% of the private rental housing stock was inadequate.

Nearly a decade later, Milwaukee County and the State of Wisconsin are recovering from the Great Recession. Downtown Milwaukee has been experiencing unprecedented growth and Foxconn Technology Group's massive manufacturing facility in Racine County is about to make changes in the regional economy.

With this backdrop, now is an important time to re-assess the current state of the county's rental housing market. We hope this analysis provides insight for policymakers and civic leaders working to ensure Milwaukee County and the larger region have the right mix of housing options to meet the needs of the community.

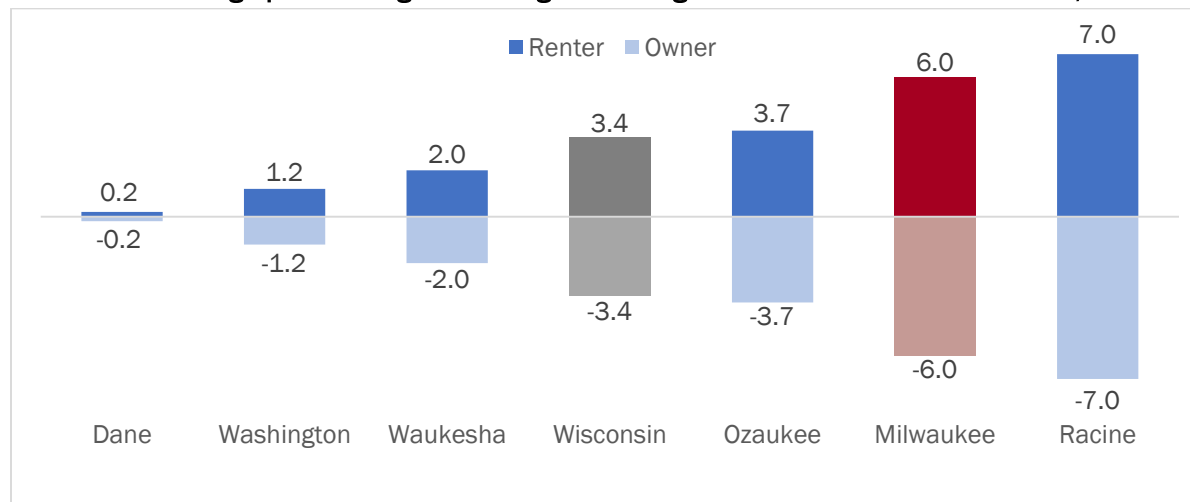
RENTAL HOUSING DEMAND

Prior to exploring rental housing affordability issues, it is important to understand the market's demand and supply characteristics. These include demographic and socio-economic conditions of current and prospective tenants, vacancy rates, structural conditions, and costs included in rent. In this section, we track rental housing demand characteristics in Milwaukee to determine how they have changed pre- and post-recession and how Milwaukee County compares with the state and selected counties. Subsequent sections address characteristics of renter households and Milwaukee County's supply of affordable housing.¹

The Great Recession led to a resurgence of renters nationally. In 2016, the net number of renter households in the U.S. grew by nearly 10 million, representing the 12th consecutive year of growth.^{vii} We observe similar trends statewide and regionally.

In many Wisconsin counties, including Milwaukee County, an increase in renter-occupancy mirrored a drop in owner-occupancy between 2005 and 2016, as shown in **Chart 1**. Dane County was an exception. Renter-occupancy increased by over five percentage points in Racine and Milwaukee counties during the same period, which was significantly higher than the state average and more than twice the rate of increase in Waukesha and Washington counties.

Chart 1: Percentage point change in renting vs. owning in selected Wisconsin counties, 2005-2016

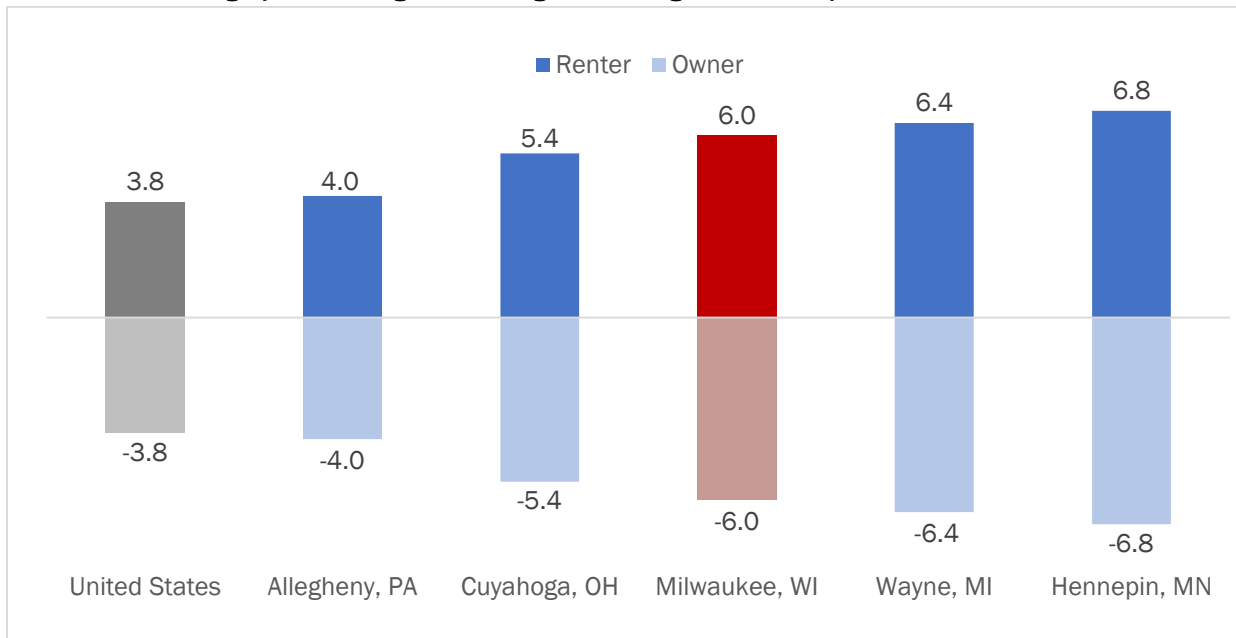


Source: U.S. Census Bureau American Community Survey (ACS) 1-year estimates

The shifts from owner- to renter-occupancy in Milwaukee and Racine counties was higher than the national average. However, they were comparable to the peer counties we analyzed in other states. As shown in **Chart 2**, Hennepin (Minneapolis, MN) and Wayne (Detroit, MI) counties had slightly stronger shifts than Milwaukee County, while the shifts in Cuyahoga (Cleveland, OH) and Allegheny (Pittsburgh, PA) counties were somewhat smaller.

¹ Throughout this report, we use the term household to refer to an occupied housing unit per U.S. Census Bureau definitions: <https://www.census.gov/housing/hvs/definitions.pdf>. (See p. 3.)

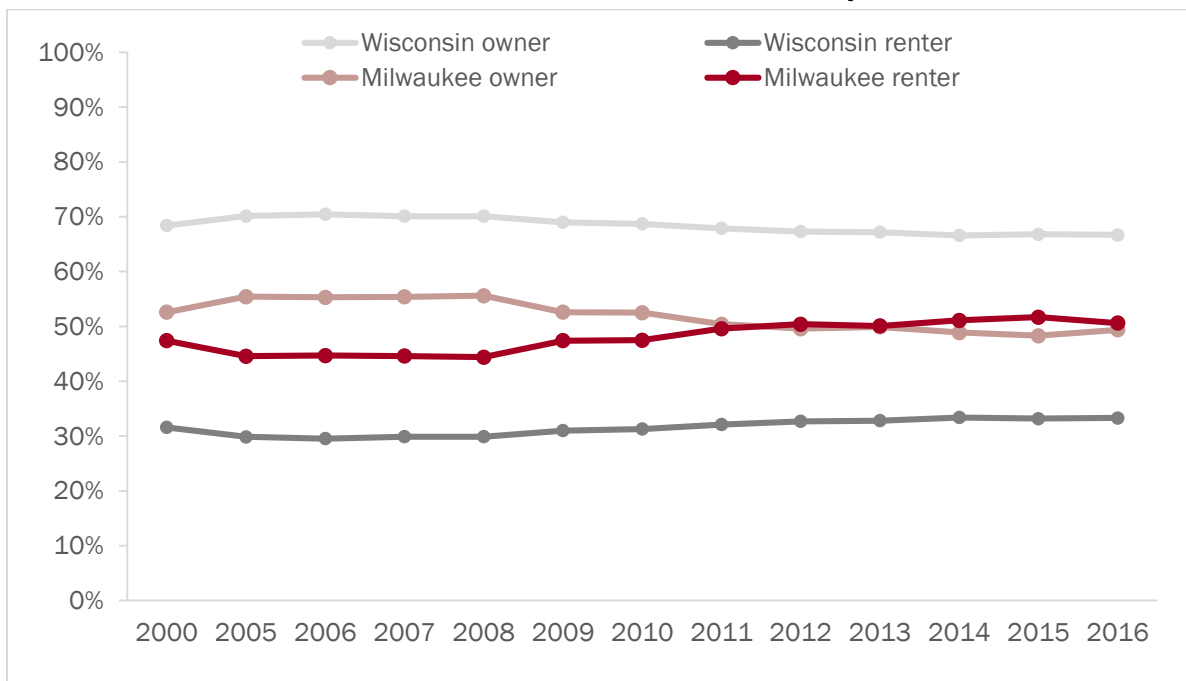
Chart 2: Percentage point change in renting vs. owning in national peer counties, 2005-2016



Source: U.S. Census Bureau ACS 1-year estimates

Since 2011, Milwaukee County households have been split roughly in half between renters and owners, with slightly more renters (50.6%) than owners in 2016 (**Chart 3**). The county's largest shift in housing tenure occurred between 2008 and 2011, when owner-occupancy dropped from 55.6% to 50.4% and renter-occupancy increased from 44.4% to 49.6%.

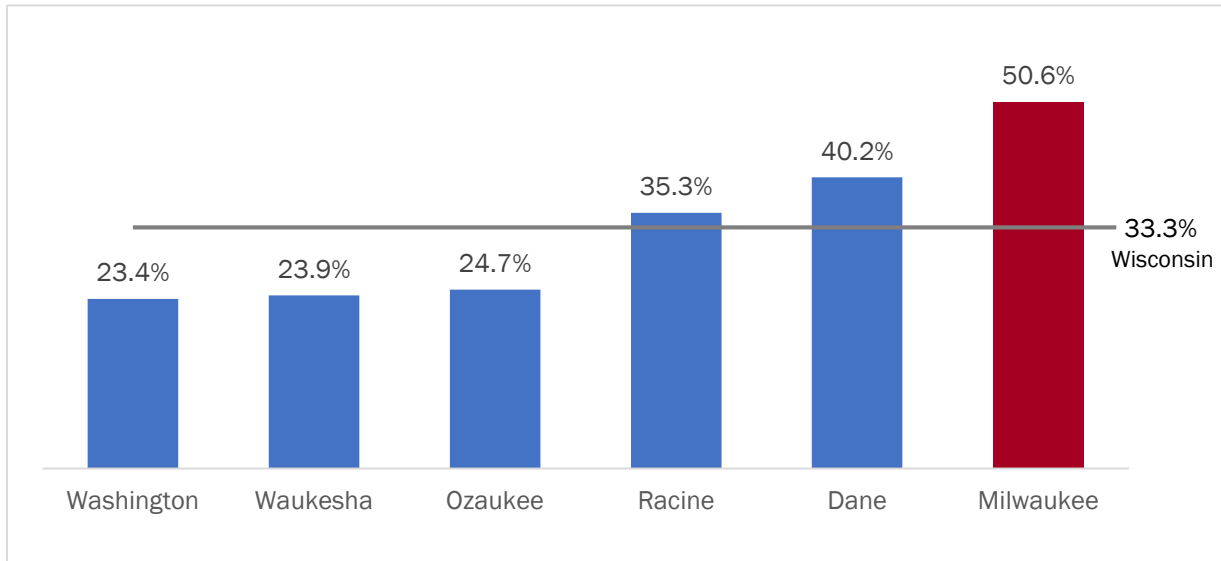
Chart 3: Renter vs. owner tenure in Wisconsin and Milwaukee County, 2000-2016



Source: U.S. Census Bureau ACS 1-year estimates

Milwaukee County's share of renter-occupied housing is not only higher than surrounding counties, Dane County, and the state (**Chart 4**), but also the highest among large counties in the Midwest. Furthermore, Milwaukee County's renter-occupancy rate ranks 11th nationally among the 136 counties with populations over 500,000, as shown in **Table 1**. Six of the 10 highest-ranked counties are in the New York City metropolitan area, which is the most populous metro in the U.S., while the other four that exceeded Milwaukee similarly are in far more populous metros. The unusually high share of renter-occupancy in Milwaukee County translates into a high demand for rental housing.

Chart 4: Renter-occupancy rates in selected Wisconsin counties, 2016



Source: U.S. Census Bureau ACS 1-year estimates

Table 1: Highest renter-occupancy rates among U.S. counties with populations over 500,000 (2016)

County	Population	Percent renter-occupied housing	Rank (by % renter-occupied)
Bronx County, New York	1,455,720	80.7%	1
New York County, New York	1,643,734	77.0%	2
Kings County, New York	2,629,150	70.5%	3
Hudson County, New Jersey	677,983	69.4%	4
Suffolk County, Massachusetts	784,230	64.4%	5
San Francisco County, California	870,887	62.1%	6
Essex County, New Jersey	796,914	57.3%	7
Queens County, New York	2,333,054	55.9%	8
Los Angeles County, California	10,137,915	55.4%	9
Dallas County, Texas	2,574,984	50.7%	10
Milwaukee County, Wisconsin	951,448	50.6%	11
Denver County, Colorado	693,060	50.0%	12
Fulton County, Georgia	1,023,336	49.9%	13
Miami-Dade County, Florida	2,712,945	49.4%	14
DeKalb County, Georgia	740,321	49.3%	15
Will County, Illinois	689,529	19.4%	136

Source: U.S. Census Bureau ACS 1-year estimates

SUMMARY

Our analysis of rental housing demand in Milwaukee County pre- and post-recession reveals the following insights:

- **Shift from owning to renting.** The share of Milwaukee County households that rent as opposed to owning their homes increased by six percentage points between 2005 and 2016. That shift was higher than in most surrounding counties and the state, but similar to shifts that occurred in peer counties nationally.
- **Very high rate of renters.** The share of households in Milwaukee County that rent rather than own their homes is higher than in all surrounding counties and the highest among all counties in the Midwest with populations over 500,000. Since 2012, slightly over 50% of all households in Milwaukee County have been renters.

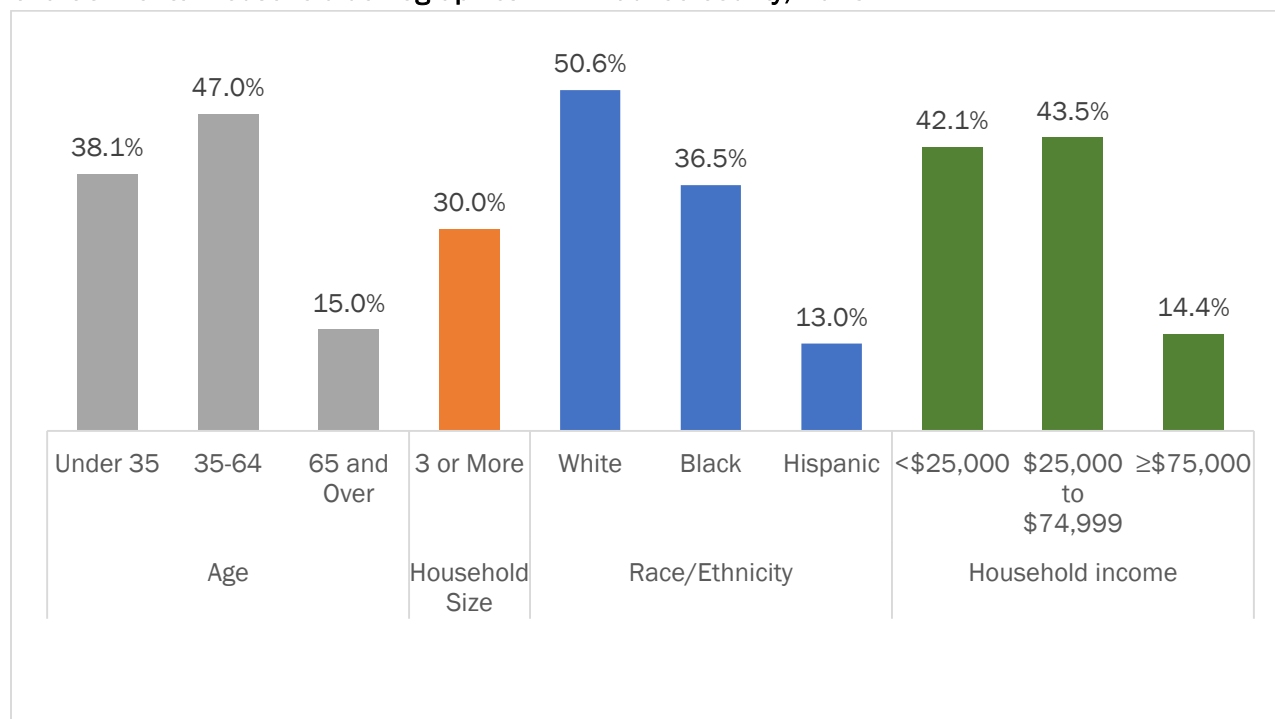


RENTER CHARACTERISTICS

Population characteristics influence housing tenure and drive demand in the rental market. These, in turn, influence affordability.

In **Chart 5**, we summarize important demographic and socio-economic characteristics of Milwaukee County’s renter households. We find that it is the most racially diverse in the state, with 49% non-white residents. The county also has a relatively young renter population, with close to 40% of renter households headed by individuals under 35 years old; and about a third of its renter households are large (three or more persons). While not shown in the chart, we find that this percentage of large households is high compared with surrounding counties.²

Chart 5: Renter household demographics in Milwaukee County, 2016



Source: U.S. Census Bureau ACS 1-year estimates

The surge in rental housing demand since 2005 is broad and includes increased demand from older adults, large households, and non-white households (especially African-American). It also includes an increased share of households with higher incomes (over \$75,000 per year).³ Meanwhile, the share of white renter households diminished.

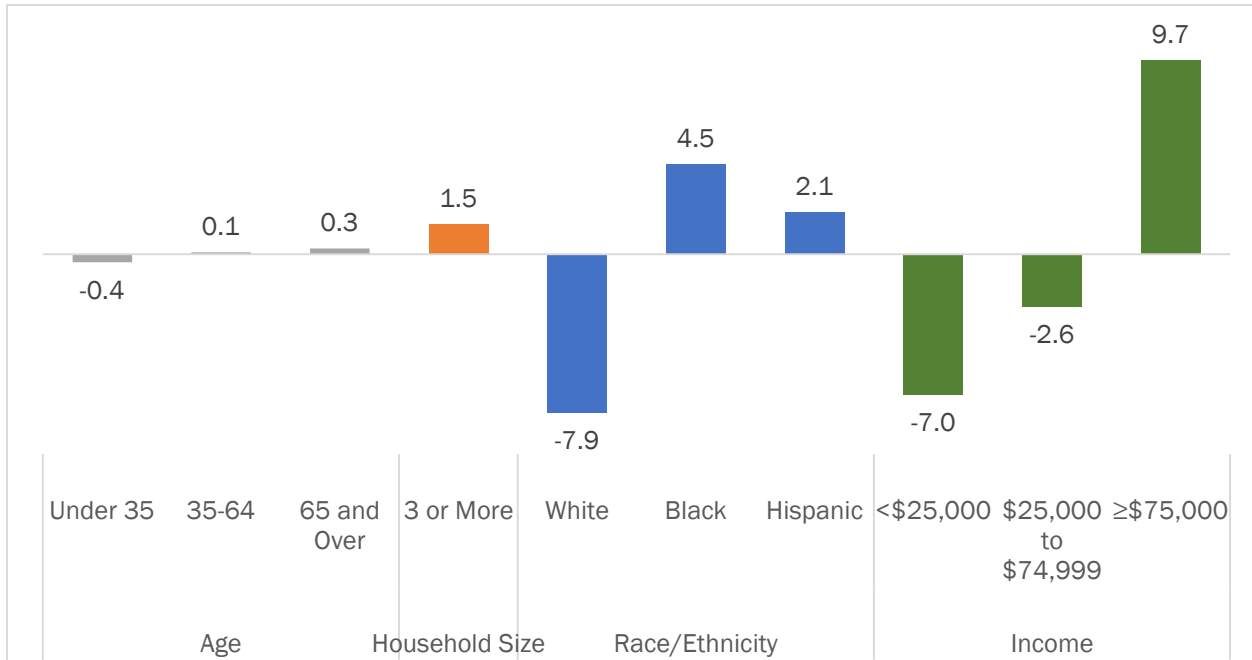
Chart 6 provides an overview of these trends. We show the percentage point change that occurred between 2005 and 2016 in the share of renter-occupied housing units inhabited by each demographic group. For example, in 2005, 4.7% of renter-occupied housing units were inhabited by

² Racine County’s share of renter households with three or more persons is 7.7 percentage points higher than Milwaukee County’s. All other counties in the region have lower shares of large renter households.

³ The surge of non-white renters does not necessarily indicate those individuals are also in the higher-income bracket or that they are also larger households. Each characteristic is independent of the others in our analysis.

households earning \$75,000 per year or more, while in 2016 that percentage had increased to 14.4%, resulting in a 9.7 percentage point increase during that period.

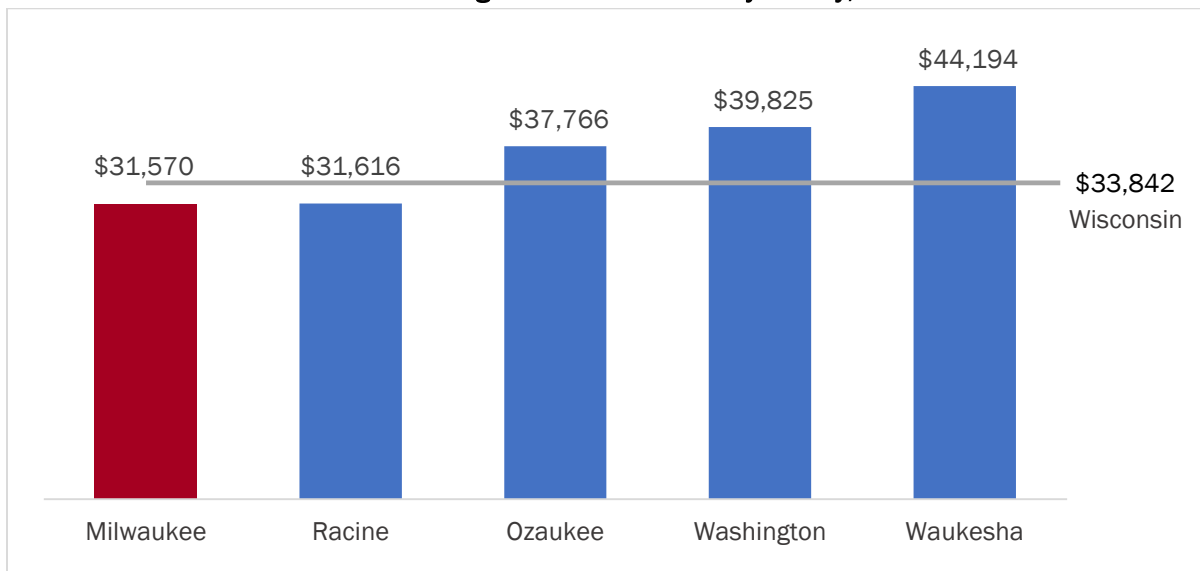
Chart 6: Percentage point change for renter household categories in Milwaukee County, 2005-2016



Source: U.S. Census Bureau ACS 1-year estimates

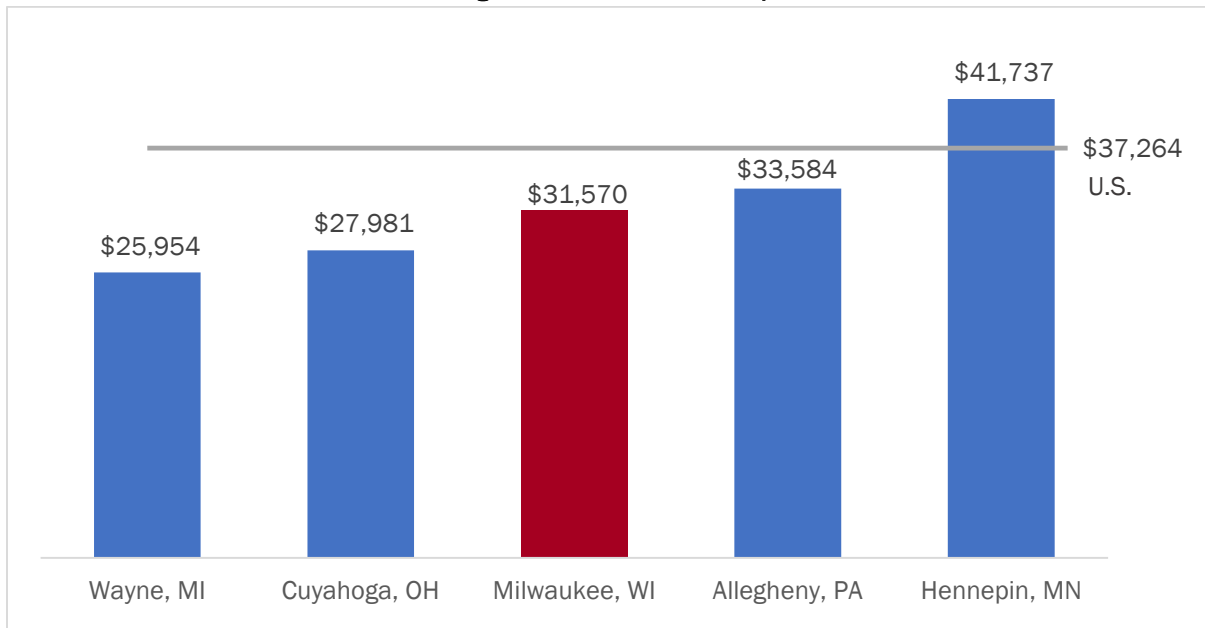
With regard to income, in 2016, Milwaukee County's median renter household income was \$31,570. That was lower than the state's and the lowest among adjacent counties, as shown in **Chart 7**. Milwaukee County's median renter income is higher than those in some Midwestern peer counties but lower than the national median (**Chart 8**).

Chart 7: Median annual income among renter households by county, 2016



Source: U.S. Census Bureau ACS 1-year estimates

Chart 8: Median annual income among renter households in peer counties, 2016



Source: U.S. Census Bureau ACS 1-year estimates

While median renter household income increased by over \$2,000 nationally, in Milwaukee County it remained relatively flat, decreasing by \$24 between 2005 and 2016 (**Table 2**). Median renter household income also decreased in most adjacent counties, with the most significant drop in Ozaukee County. Ozaukee County’s median renter household income remains more than \$6,000 higher than Milwaukee County’s, however.

Table 2: Median annual income among renter households, adjusted to 2016 dollars

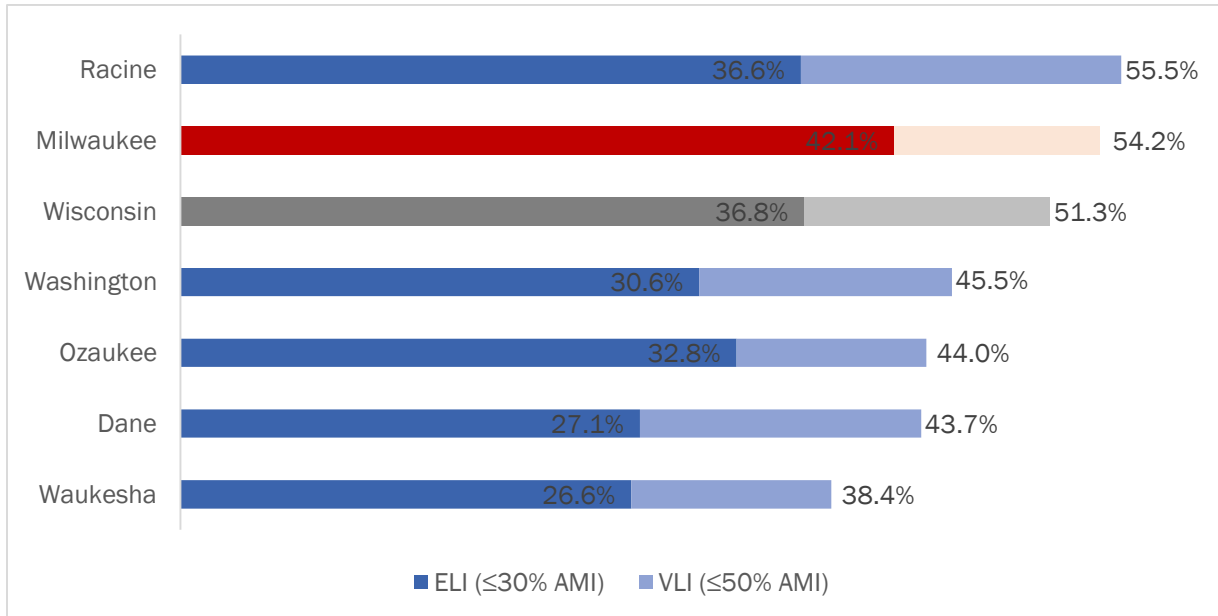
Location	2005	2010	2016	Change (2005-2016)
Milwaukee County	\$31,594	\$26,900	\$31,570	-\$24
Racine County	\$34,405	\$26,302	31,616	-\$2,789
Waukesha County	\$44,381	\$39,015	\$44,194	-\$187
Ozaukee County	\$48,508	\$34,358	\$37,766	-\$10,742
Washington County	\$44,846	\$38,934	\$39,825	-\$5,021
Dane County	\$38,770	\$34,912	\$40,465	\$1,695
United States	\$35,031	\$33,431	\$37,264	\$2,233

Source: U.S. Census Bureau ACS 1-year estimates

Unsurprisingly, Milwaukee County has a higher percentage of extremely low-income renter households than surrounding counties and the state, as shown in **Chart 9**, though Racine County has more combined very and extremely low-income renters. *Very low-income* (VLI) households are defined as those earning 50% or less of the Area Median Income (AMI), or roughly up to \$35,000 per

year, while *extremely low-income* (ELI) households are those earning 30% or less of the AMI, or roughly up to \$25,000 per year.⁴

Chart 9: Percent of VLI and ELI renter households in selected Wisconsin counties, 2016



Source: U.S. Census Bureau ACS 1-year estimates; HUD 2016 income guidelines

Milwaukee County’s share of renter households with annual incomes under \$25,000 decreased by seven percentage points between 2005 and 2016 but remains higher than surrounding counties and the state. However, over a third of renter households in all surrounding counties but Waukesha have incomes under \$25,000.⁵ This suggests the need for affordable housing, especially for ELIs, is not unique to Milwaukee County but also is a concern at the regional level.

SUMMARY

Our review of demographic and income characteristics for renter households in Milwaukee County reveals the following insights:

- Increase in African-American renters.** Our analysis suggests that the Great Recession pushed many African-American households that were formerly homeowners into the rental market. Between 2005 and 2016, the share of owner-occupied housing units inhabited by African-American households dropped 3.3 percentage points while the share of renter-occupied housing units inhabited by African-Americans increased 4.5 percentage points. That was similar to the national trend.^{viii} Meanwhile, renter-occupancy by white households in Milwaukee County decreased by 7.9 percentage points.⁶ Both renter- and owner-occupancy increased among

⁴ The fiscal year 2014 Consolidated Appropriations Act changed the definition of ELI and may not round to 30% of AMI. In our analysis we used HUD’s ELI limit definition for four-person households for 2016.

⁵ While Milwaukee, Waukesha, and Washington counties had a net drop in renter population with annual incomes under \$25,000 between 2005 and 2016, Ozaukee County had a 3.8 percentage point increase, suggesting a possible shift in renter population and income from Milwaukee to Ozaukee County, migration of low-income population from other counties, or loss in income from existing households. According to net migration data from the U.S. Census Bureau, over 200 low-income households earning \$15,000-\$24,999 moved from Milwaukee to Ozaukee County between 2007 and 2011.

⁶ Milwaukee County was the only county in the region to see an increase in owner-occupancy among white households.

Hispanic/Latino households in Milwaukee County during the same period, reflecting that group's overall population growth in the county and region.^{ix}

- **Growth in larger renter households.** Compared to adjacent counties, Milwaukee County had the largest increase in renter households with three or more persons between 2005 and 2016. This suggests a potential increase in families with children and/or an increase in 'doubling-up' conditions (such as housemates).
- **Low household incomes among renters.** Coming out of the Great Recession, we observe an overall increase in renter household income compared with 2010 estimates. However, Milwaukee County's renter household incomes are among the lowest in southeast Wisconsin.
- **Percentage of poor renters declining but still substantial.** The percentage of Milwaukee County's renter households that were very low-income and extremely low-income has declined since 2005, yet more than half of the county's renters still meet one of those definitions. Most neighboring counties also experienced declines in their percentages of VLI and ELI renter households, though Ozaukee County experienced an increase.

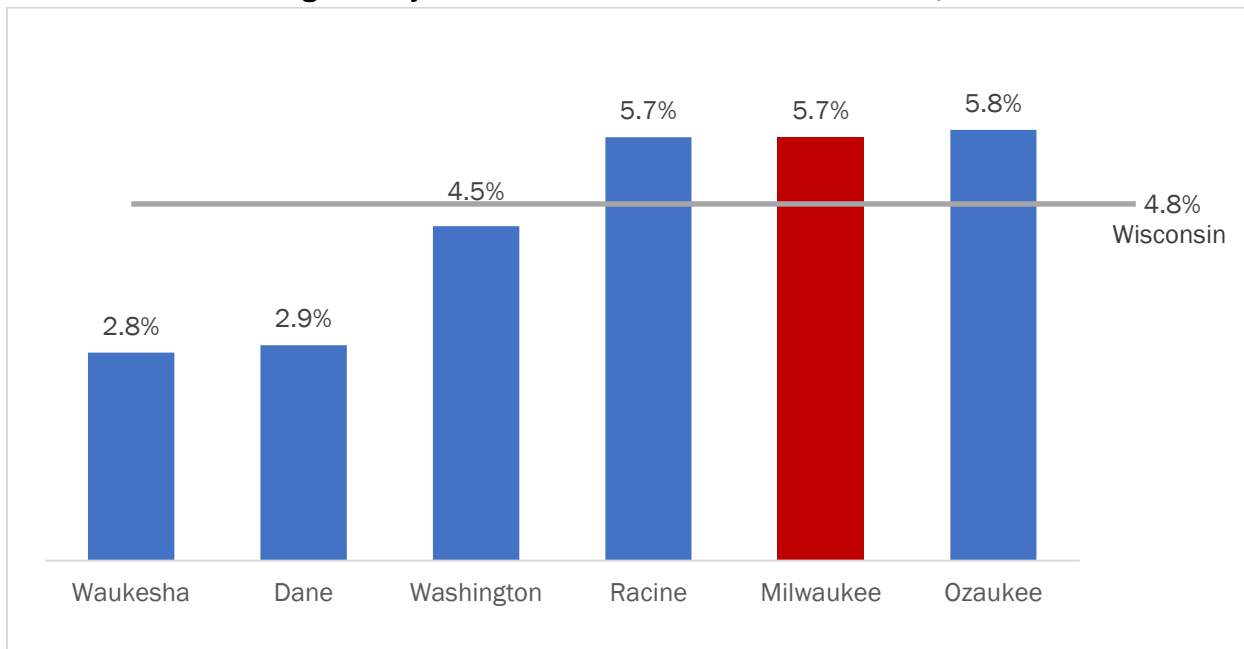
RENTAL HOUSING SUPPLY

A healthy and diverse supply of private rental housing may increase opportunities for affordability. We explore supply in Milwaukee County by examining rental vacancies, along with the type, size, and age of residential buildings. Post-recession changes in Milwaukee County's rental housing supply reflect new housing developments, shifts in preferences among renters, and challenges related to quality and cost.

VACANCY RATE

According to SEWRPC, rental vacancy rates should be maintained between 4% and 6% to allow for adequate consumer choice.^x As shown in **Chart 10**, Milwaukee County's rental vacancy rate falls at the high end of that range and is higher than the rates of all adjacent counties except Ozaukee. It is also higher than the statewide rate. These data suggest relatively high rental housing availability in Milwaukee County, especially compared with Waukesha and Dane counties, where tight rental markets were reflected in vacancy rates below 3% in 2016.

Chart 10: Rental housing vacancy rates in Wisconsin and selected counties, 2016



Source: U.S. Census Bureau ACS 1-year estimates

Tightening in the rental market occurred immediately following the Great Recession. In Milwaukee County, the rental vacancy rate dropped to its lowest post-recession level in 2011 at 3.2%. In 2016, the rental vacancy rate rose to 5.7%, which almost matched its 2005 peak of 5.9%. This increase in rental vacancies may reflect growth in rental housing supply as a result of a recent boom in multifamily (MF) housing developments and an increase in households renting single-family homes that were previously owner-occupied.^{7,xi}

⁷ Based on U.S. Census Bureau Building Permits Survey data and U.S. HUD adjustments on multi-family developments in Milwaukee County. The rate of annual multi-family building activity in 2016 was twice the rate in 2007.

Rental vacancy rates are not even across the county, however, with higher rates in inner-city neighborhoods and in scattered areas in the suburbs (see **Map A** in Appendix). In surrounding counties, rural areas where less than 30% of the housing stock is in the rental market also exhibit high rental vacancy rates. Factors such as an aging rental housing stock, structural deficiencies, and a slight increase in home ownership may have driven up rental vacancies in Milwaukee County and surrounding counties in recent years.^{xii}

STRUCTURAL AGE AND QUALITY

Milwaukee County's rental housing stock is among the oldest in the state, with 80.6% of its supply built before 1980 and 37% built prior to 1939.^{xiii} In 2016, the median age of the rental housing stock in Milwaukee County was 60 years. By comparison, in Waukesha County the median age of rental housing units was 35 years, the lowest among adjacent counties.

Milwaukee County has the highest rate of structural deficiency within its housing stock in the region.^{8, xiv} For example, in 2015, close to 20,000 housing units in Milwaukee County were considered deficient due to open cracks or holes and roughly 1,100 units due to incomplete plumbing.

STRUCTURE TYPE & SIZE

Milwaukee County has a diverse rental housing stock by structure type and size. However, the distribution of rental units by

Are older homes naturally-occurring affordable housing?

Some experts argue that older rental housing units are “naturally occurring affordable housing” (NOAH) and consider them an essential part of the affordable housing stock.¹ NOAHs include residential properties that maintain relatively low rents without government subsidies. However, older housing units in Milwaukee County vary greatly in size and quality.



In Milwaukee County, the largest share of older rental housing units are single-family homes and duplexes.

Some older housing units may be considered NOAH due to their larger depreciation in value, particularly in inner-city neighborhoods. The NOAH theory does not necessarily apply to older housing units in more affluent neighborhoods, however, such as Milwaukee's East Side.

Nationally, critics of this theory have argued that NOAHs often do not serve the needs of low-income renters, as rents for many units are at or above the area median or are of such a substandard quality to not be considered safe and decent housing.²

1. City of Milwaukee (2018). *Anti-Displacement Plan*.
2. NLIHC (2016). *Naturally Occurring Affordable Housing Benefits Moderate Income Households, but not the Poor*.

⁸ Estimates based on 2015 U.S. Census ACS and American Housing Survey (AHS) data on housing quality measures for Milwaukee County and the four-county Milwaukee metro area. Housing units with structural deficiencies (or substandard housing units) have damages that expose the units to outdoor elements (such as rain or pests) and lack one of the following: complete plumbing, electricity, hot or cold running water, bathroom facilities, heating problems, or exposed wire. (Eggers and Maumen, 2013; U.S. Census Bureau)

type is clustered by geographic area.⁹ A large percentage of single-family (SF) units are in the suburbs, particularly in the northeast part of the county. Duplexes are clustered around the urban core and high-density MF units are split between downtown Milwaukee and the suburbs.

The most affordable market-based rental housing units tend to be in MF housing.^{xv} Those range from duplexes to rental housing developments with 10 or more units. In 2016, Milwaukee County's MF rental housing units were closely split between duplexes (28.4%) and high-density buildings (33.2%). This is unique in Wisconsin and reflects Milwaukee's predominantly vintage stock of duplexes and growing number of high-rise developments.¹⁰

More than \$3 billion of public and private investment since 2005 has contributed to a rise in MF housing construction in Milwaukee's downtown.^{xvi} Approximately 1,600 MF units have been developed downtown since 2010, and more than 1,000 additional units were under construction as of 2016. In suburban areas, including Wauwatosa, there also has been a surge in apartment construction. However, many of the new developments both in downtown and in the suburbs cater to higher-income tenants, with monthly rents typically ranging from \$1,215 to \$1,550 for a one-bedroom unit, \$1,750 to \$2,135 for a two-bedroom unit, and close to \$2,300 for a three-bedroom unit.^{xvii}

Single family (SF) housing, defined as individual detached housing units, also is an important rental housing option. However, compared to the MF housing portfolio, SF housing currently accounts for a small share of the overall rental market. Approximately one of every five rental units in Wisconsin and one of six in Milwaukee County are SF units.^{xviii}

HOUSING OPTIONS

From 2005 to 2016, Milwaukee County experienced a modest increase in renter-occupied MF units, likely due in large part to increased development of new high-density apartment buildings.¹¹ As illustrated in **Chart 11**, however, the increase in renter-occupied units in MF structures of all types was almost as high as the increase in renter-occupancy in SF housing.¹² Thus, many renter households opted for SF housing and/or many SF units that were previously owner-occupied switched to the rental market.

Nationally, when construction of new homes slowed during the Great Recession, a substantial demand for SF homes was met by a migration of previous homeowners to the rental market.^{xix} Between 2005 and 2015, the national stock of SF rental homes increased by four million units, lifting the rental occupancy share of SF homes from 34% to 40% – the highest in a decade.^{xx}

Milwaukee County followed a similar trend with a 4.7 percentage point increase of SF units in the rental market between 2005 and 2016, according to U.S. Census estimates. This was higher than the increases that took place statewide and in all surrounding counties but Racine, which had a 7.6 percentage point increase in SF rental units.

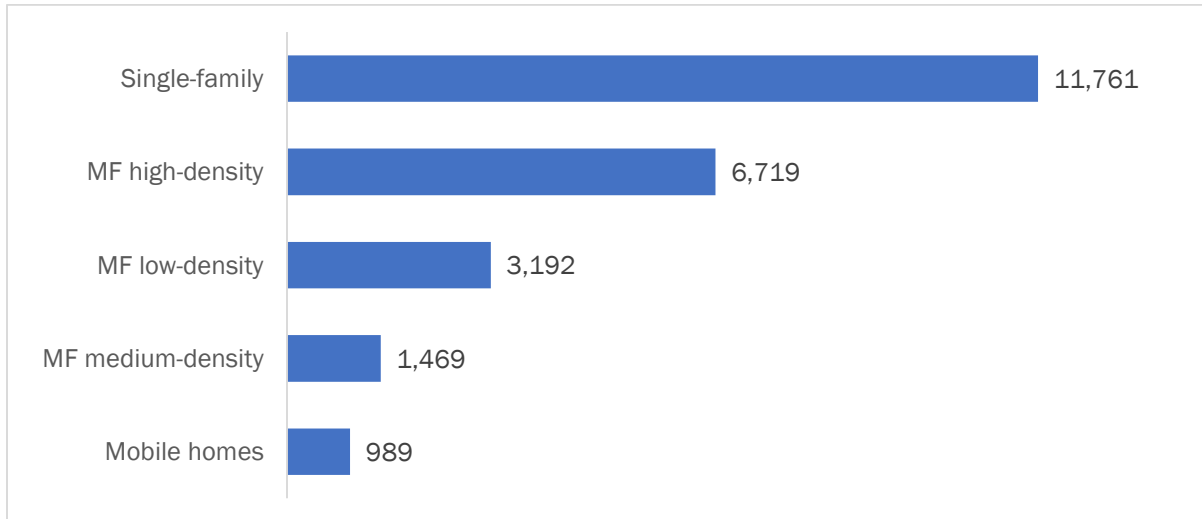
⁹ See Map B in Appendix.

¹⁰ Milwaukee County has the highest share of duplexes in the state (U.S. Census Bureau housing data).

¹¹ In our analysis, we characterize MF housing as low-density, medium-density, and high-density based on the number of units in each building. Duplexes are considered low-density MF units, while medium-density MF housing includes buildings with three-to-nine units. High-density MF buildings contain 10 units or more.

¹² A total of 11,380 renter households moved into any type of MF housing between 2005 and 2016. Estimates tabulated from U.S. Census Bureau ACS 1-year estimates.

Chart 11: Increase in renter-occupied units by structure type in Milwaukee County, 2005-2016



Source: U.S. Census Bureau ACS 1-year estimates

NUMBER OF BEDROOMS

The number of bedrooms included in rental housing units also plays an important role in determining affordability. In Milwaukee County, approximately 70% of renter households live in one and two-bedroom units. The remaining roughly 30% live in larger units with three bedrooms or more and in studios or units without bedrooms.

While one and two-bedroom units continue to dominate the rental market, the overall rate of renters occupying those units declined slightly between 2005 and 2015, while occupancy of larger and smaller units increased slightly during the same period (**Table 3**). The modest increases in studios and larger rental units parallels the increase of renters in SF units and the surge in new high-density MF developments in recent years.

Table 3: Share of total renter-occupied housing units in Milwaukee County by number of bedrooms

Unit Size (#BRs)	2015	Percentage point change (2005-2015)	
Studio (0 BRs)	5.1%	1.6	▲
1 BRs	27.9%	-1.6	▼
2 BRs	42.2%	-2.6	▼
3 or More BRs	24.8%	2.6	▲

Source: U.S. Census Bureau ACS 1-year estimates

SUMMARY

The following observations emerge from our analysis of Milwaukee County’s rental housing supply:

- **Sufficient supply of rental housing.** Milwaukee County’s rental vacancy rate is higher than in most surrounding counties and the state but remains within SEWRPC’s recommended range. This suggests the county has enough rental housing to meet current demand.

- **Recent shifts in housing options.** The mix of rental housing units in Milwaukee County shifted slightly post-recession, with an increased number of studio apartments and larger units with three bedrooms or more, and fewer one and two-bedroom units. This corresponds with an increase in single-family rental occupancy and an increase in the development of large multifamily housing complexes.
- **Aging housing stock.** Milwaukee County's rental housing stock ranks among the oldest in the state and has a higher rate of structural deficiency than surrounding counties.

THE COST OF RENTING

Our next step in assessing rental housing affordability in Milwaukee County is to take a look at the actual cost of renting. In this section, we compare median rents in Milwaukee County with those of other counties both close to home and nationally, and we also drill down to the neighborhood level in the city of Milwaukee. We also explore rent costs for various types of housing units.

Median gross rent (herein median rent) includes contract rent plus utilities. When adjusted for inflation, Milwaukee County’s median monthly rent has not changed much since 2005, as shown in **Table 4**. In fact, the 2016 median rent of \$834 was only \$6 higher than it was in 2005. That increase was nearly identical to the increase that occurred statewide.

Table 4: Median rent in Milwaukee County and selected counties in Wisconsin, 2005-2016

Location	2005	2016	Change (2005-2016)		
			Unadjusted	*Adjusted (2016 dollars)	
Milwaukee County	\$668	\$834	\$166	\$6	—
Racine County	\$681	\$831	\$150	-\$13	▼
Waukesha County	\$806	\$976	\$170	-\$23	▼
Ozaukee County	\$711	\$907	\$196	\$25	▲
Washington County	\$677	\$858	\$181	\$19	▲
Dane County	\$746	\$975	\$229	\$50	▲
Wisconsin	\$643	\$802	\$159	\$5	—

Source: U.S. Census Bureau 1-year estimates. Inflation-adjusted to 2016 dollars using Consumer Price Index (CPI).

* A green symbol indicates an increase of more than \$8. A red symbol indicates a decrease of at least \$10. A yellow symbol indicates a change of less than \$10 in either direction.

Among adjacent counties, Ozaukee County had the highest increase in median rent between 2005 and 2016 (\$196 or \$25 after adjusting for inflation). Waukesha County’s median rent of \$976 was the highest in southeast Wisconsin in 2016 and also among the highest in the state. Racine County’s 2016 median rent of \$831 was the lowest among the selected counties, with Milwaukee next at \$834. Despite being the lowest in southeast Wisconsin, median rents in Milwaukee and Racine counties are higher than the state’s median.

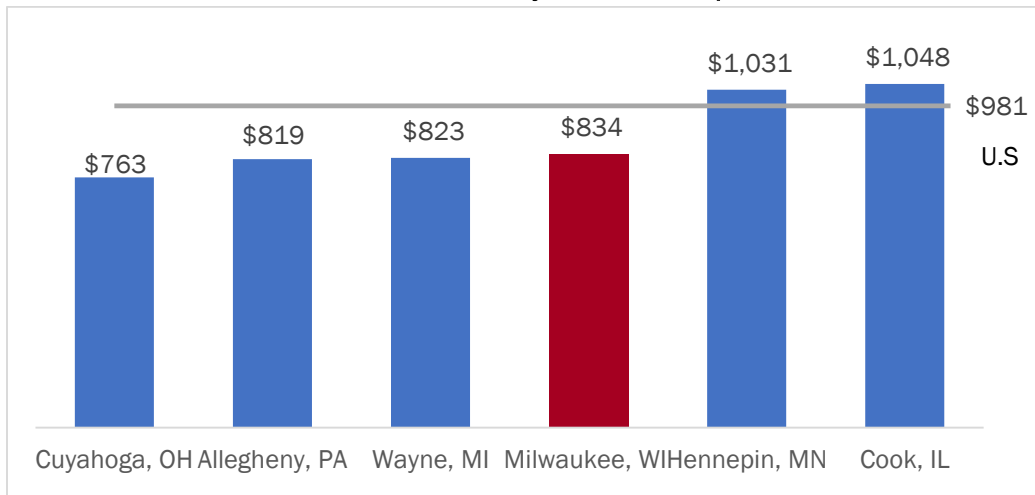
Compared with peer counties across the nation, the median rent in Milwaukee County is higher than in Wayne (Detroit, MI), Cuyahoga (Cleveland, OH), and Allegheny (Pittsburgh, PA) counties but much lower than in Hennepin (Minneapolis, MN) and Cook (Chicago, IL) counties and nationally, as shown in **Chart 12**.¹³ Thus, Milwaukee County’s overall rental market continues to be relatively inexpensive.

Within Milwaukee County and southeast Wisconsin, median rent varies greatly among neighborhoods, as shown in **Map 1**. While higher median rents between \$951 and \$1,861 are mostly found in the suburbs, median rents in census tracts corresponding with Milwaukee’s downtown, Third Ward, East Side, and Bayview neighborhoods are in the same range.^{14, xxi}

¹³ A similar ranking was observed in our 2009 report.

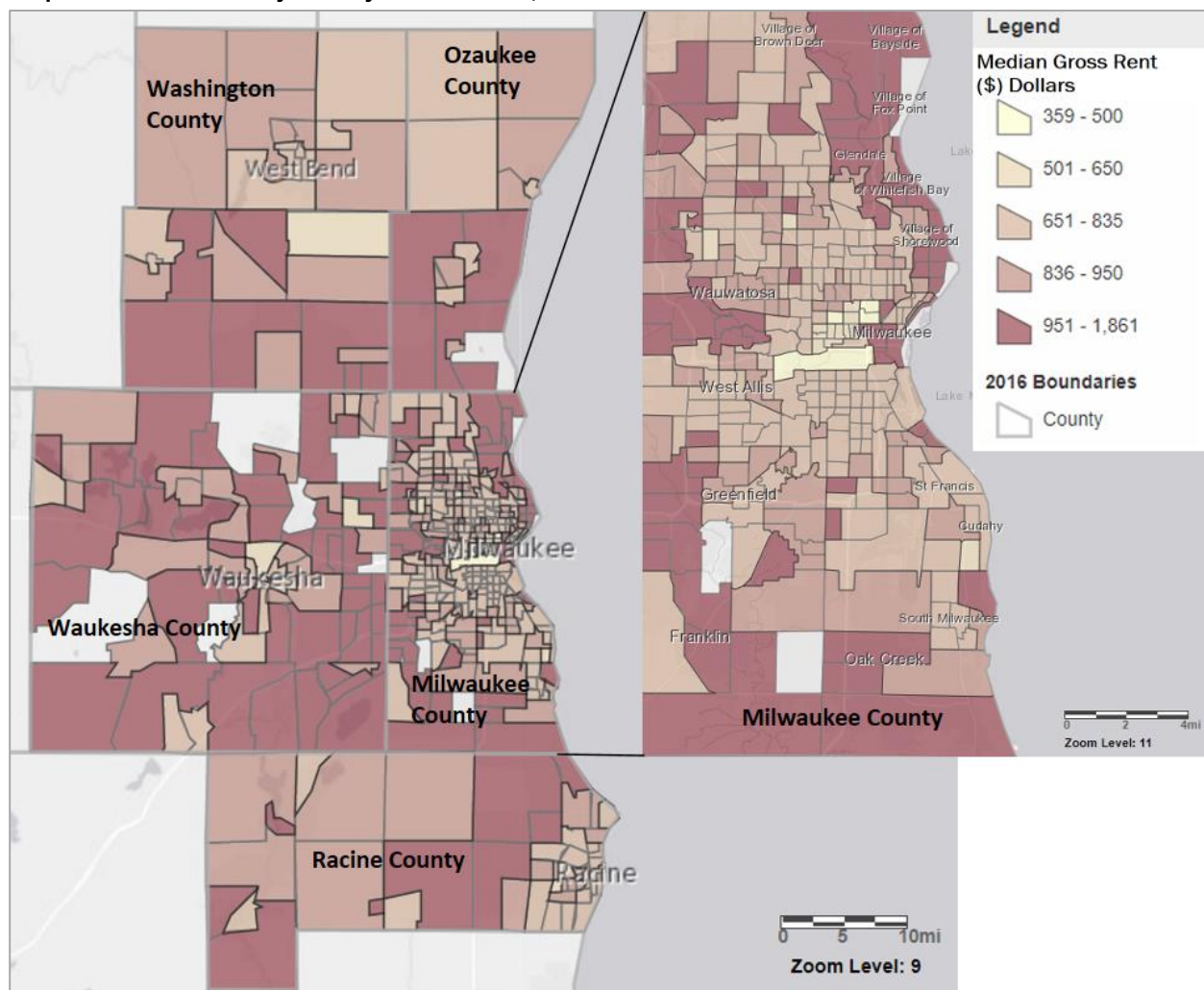
¹⁴ City of Milwaukee neighborhoods identified using Neighborhood Identification Project Data and corresponding maps.

Chart 12: Median rent in Milwaukee County and national peers, 2016



Source: U.S. Census Bureau ACS 1-year estimates

Map 1. Median monthly rent by census tract, 2016



Source: U.S. Census Bureau ACS 5-year estimates



Conversely, many census tracts with median rents under \$836 per month are in Milwaukee’s inner city. But some, including several corresponding with the Riverwest, Harambee, and Lindsay Heights neighborhoods, have seen rent increases over the last 10 years, resulting in monthly median rents of \$836 or above in 2016.¹⁵

Unmet demand for housing in the suburbs and in some city neighborhoods, as suggested by lower rental vacancies, may be one factor driving up rents.¹⁶ Another factor may be increased redevelopment and economic investment in some inner-city neighborhoods in recent years, which has raised property values and housing costs.^{xxii} Additionally, research has shown that desirable amenities, higher-ranked schools, and access to employment opportunities increase property values, which may also increase rents, particularly in the suburbs and in areas experiencing recent economic investment.^{xxiii}

RENT BY NUMBER OF BEDROOMS

The median rent figures cited above include all housing units. When we consider rent levels by number of bedrooms, however, a more varied picture emerges.

In 2016, HUD’s Fair Market Rent (FMR) standards for Milwaukee County ranged from \$596 per month for studios to \$1,206 for units with three bedrooms or more.¹⁷ According to private real estate data, however, actual average monthly rents listed in 2016 for smaller units were higher than the FMRs: \$929 for studios, \$978 for 1-bedroom, and \$1,080 for 2-bedroom units.^{xxiv} Rents for units with three bedrooms or more did not vary significantly from the FMR. **Chart 13** summarizes these two sets of rent estimates by number of bedrooms.^{18,xxv}

Since 2005, studios and units with three or more bedrooms have had the highest increase in average rents, while rents for one- and two-bedroom units decreased slightly.^{xxvi} One plausible explanation for the decrease in average rents for one- and two-bedroom units could be the location, age, and condition of the units. As previously noted, a considerable share of duplexes in Milwaukee County are older and are located in Milwaukee’s inner-city, where rents tend to be at or below the county’s median. Another explanation could be supply and demand dynamics.

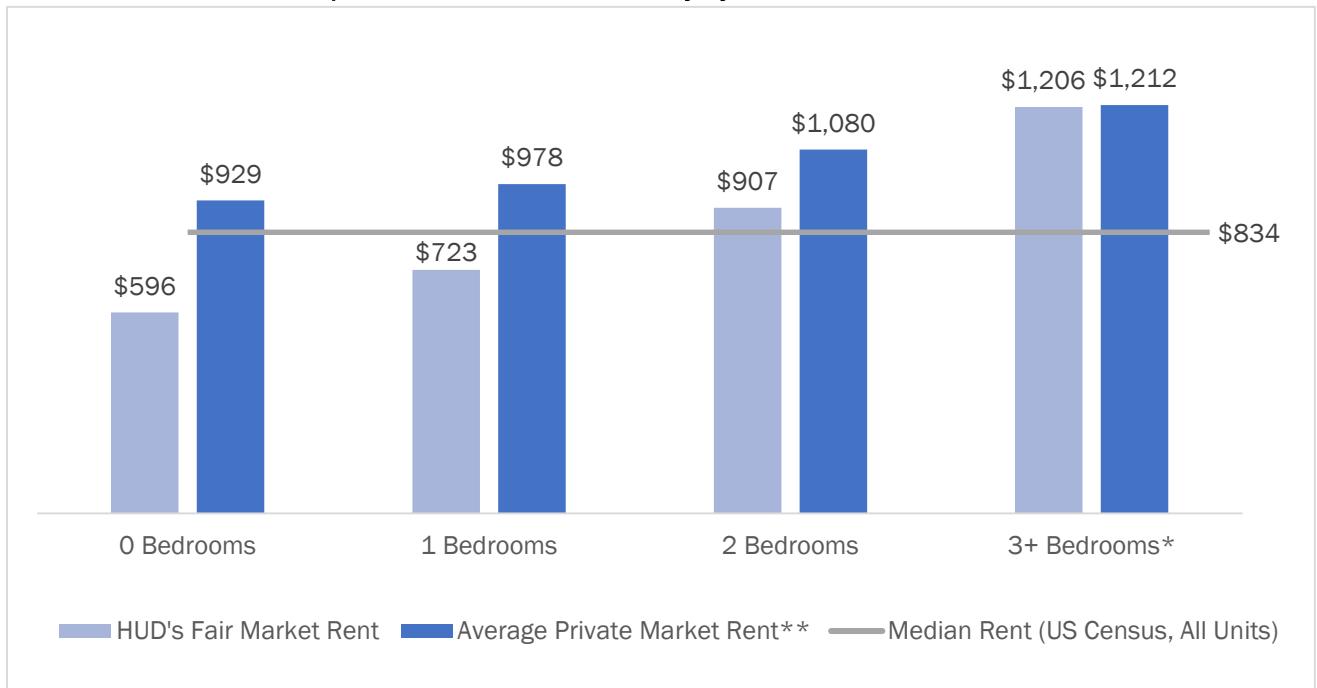
¹⁵ See Maps C and D in Appendix for information on median rents by census tract.

¹⁶ See Map A in Appendix.

¹⁷ Each year, HUD publishes Fair Market Rent standards (FMRs) that are used to estimate the cost of rent by number of bedrooms in a given metropolitan area or county for federal assistance purposes. Annual data on FMRs can be found here: <https://www.huduser.gov/portal/datasets/fmr.html>.

¹⁸ Additional research suggests that rents in the private market are higher than U.S. Census and HUD FMR estimates (Boeing and Waddell, 2017).

Chart 13. Rental cost comparison for Milwaukee County by number of bedrooms, 2016



Source: U.S. Census Bureau 1-year estimates; HUD Fair Market Rents; Zillow and RentCafe.com

*Average rent for units with three bedrooms or more

** Wisconsin Policy Forum analysis of average rents from Zillow and RentCafe.com

SUMMARY

Our analysis of the cost of rental housing in Milwaukee County shows only modest changes have occurred since 2005. Specifically:

- **Median rent continues to be relatively low.** The median monthly rent in Milwaukee County was \$834 in 2016, which was lower than most surrounding counties and substantially lower than the national median (\$981). This is consistent with our 2009 report, which found that Milwaukee County’s median rent was modest compared with national peers.
- **Median rent is stable.** Milwaukee County’s median monthly rent stayed relatively flat in inflation-adjusted dollars between 2005 and 2016, increasing by just \$6. That was nearly identical to the \$5 increase that took place statewide.

RENTAL HOUSING AFFORDABILITY

Rental housing affordability largely depends on income. According to the U.S. Census Bureau, a rental housing unit is *affordable* if a household spends no more than 30% of its income on gross rent, which includes contract rent and utilities.^{xxvii} The U.S. Department of Housing and Urban Development (HUD) also uses the 30% rent-to-income (RTI) ratio as a baseline in defining rent burdens.

For consistency and comparability, we use the 30% RTI standard in our analysis to estimate the maximum affordable monthly gross rent households can afford (herein, maximum affordable rent or MAR). If households spend more than 30% of their income on gross rent, then they are considered *moderately rent burdened*, as illustrated in **Figure 1**. If they spend 50% or more, they are *severely rent burdened*.

Figure 1. Housing affordability scale based on household rent-to-income (RTI) ratio



These definitions of housing affordability allow us to:

- Examine the relative affordability of the rental housing market in Milwaukee County and surrounding counties by comparing median household incomes with the MAR;
- Analyze the demand for and supply of affordable rental housing by income;
- Estimate changes in the gap or surplus of affordable rental housing stock by income; and
- Describe pre- and post-recession changes in the prevalence of housing rent burdens.

In Milwaukee County, there is longstanding debate regarding the affordability of the rental housing market. The county has long had lower median rents than most surrounding counties and modest rents compared with Midwestern peers. However, Milwaukee County's median rent is not affordable for a substantial share of households – in particular those with annual incomes under \$25,000, which comprised 42% of all renter households in 2016.








In our 2009 report, we concluded that the rental housing affordability crisis in Milwaukee County was driven by low incomes rather than high rents. We also identified a supply mismatch that was squeezing low-income renters into unaffordable rental units. Here, we take a fresh look at those issues to see whether and how they may have changed.

AFFORDABILITY BY COUNTY

In 2016, the median monthly household income among Milwaukee County renters of \$2,631 was not enough to afford the county's monthly median rent of \$834 without exceeding the 30% RTI

threshold, as shown in **Table 5**. A similar RTI mismatch existed in Racine County. This suggests that in both counties, a substantial portion of the rental housing supply is unaffordable for renters at the bottom of the income ladder.

Table 5. Rental housing affordability analysis based on monthly median incomes and rents, 2016

Location	Renter Median Household Income	Median Rent	MAR*	Median RTI Gap**	
Milwaukee County	\$2,631	\$834	\$789	-\$45	
Racine County	\$2,635	\$831	\$790	-\$41	
Waukesha County	\$3,683	\$976	\$1,105	\$129	
Ozaukee County	\$3,147	\$907	\$944	\$37	
Washington County	\$3,319	\$858	\$996	\$138	
Dane County	\$3,372	\$975	\$1,012	\$37	
Wisconsin	\$2,820	\$802	\$846	\$44	

*MAR is the median maximum affordable rent based on a 30% RTI.

** Source: Wisconsin Policy Forum analysis of difference between the median rent and MAR based on U.S. Census data. A red sign means the MAR is below the median rent. Yellow means the MAR is less than \$100 above the median rent. Green means the MAR is more than \$100 above the median rent.

Both counties have a larger share of ELI households with annual incomes under \$25,000 than the other counties analyzed, which contributes to the lower median incomes and MARs. However, the current median rents in Milwaukee and Racine counties are also lower than the other neighboring counties, which suggests that, as we found in our 2009 analysis, the rental affordability problem is largely driven by low incomes rather than by high rents.

SUPPLY-DEMAND MISMATCH

Our analysis also suggests that mismatches in supply and demand likely factor into the housing affordability problem. The rise in demand for rental housing after the Great Recession, along with a shortage in the supply of housing units affordable to renters with low to moderate incomes, has widened gaps in affordable housing access. These forces, combined with reductions in the supply of subsidized rental housing, long wait lists to access housing choice vouchers, and eligibility restrictions for recently-evicted renters, have left many households without affordable housing options.^{xxviii}

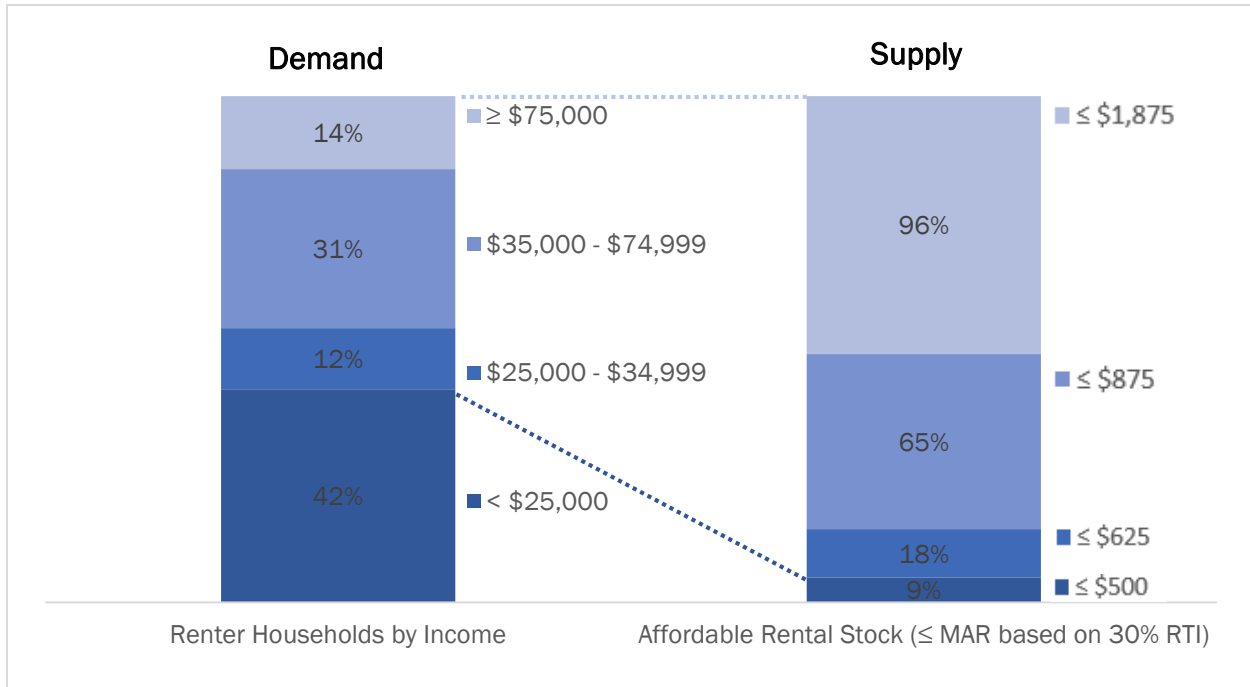
In 2016, there were roughly 81,000 ELI renter households in Milwaukee County, or 42% of total renter households. As **Chart 14** illustrates, those renters confronted a substantial shortage of affordable rental units.¹⁹ Of an estimated 193,000 renter-occupied units in Milwaukee County, roughly 9% were affordable to ELI renter households, leaving approximately 63,000 ELI renter households lacking affordable units. Moreover, most of those units had only one bedroom, thus limiting the choices for larger households such as families with children.²⁰ Also, these estimates are

¹⁹ For this calculation, we used U.S. Census Bureau ACS 2016 estimates for renter households with annual incomes of \$24,999 or less and used for reference HUD’s 2016 ELI limit definition for four-person households, which was an annual household income of \$24,300 in 2016.

²⁰ According to U.S. Census Bureau 2016 estimates, 45% of Milwaukee County’s housing units with monthly rents under \$500 had one bedroom, 32% had two bedrooms, 12% had three or more bedrooms, and 10% had no bedrooms.

conservative; the gap may be larger as we did not account for higher-income households renting units affordable to ELIs.²¹

Chart 14. Demand for and supply of affordable rental units in Milwaukee County by income, 2016

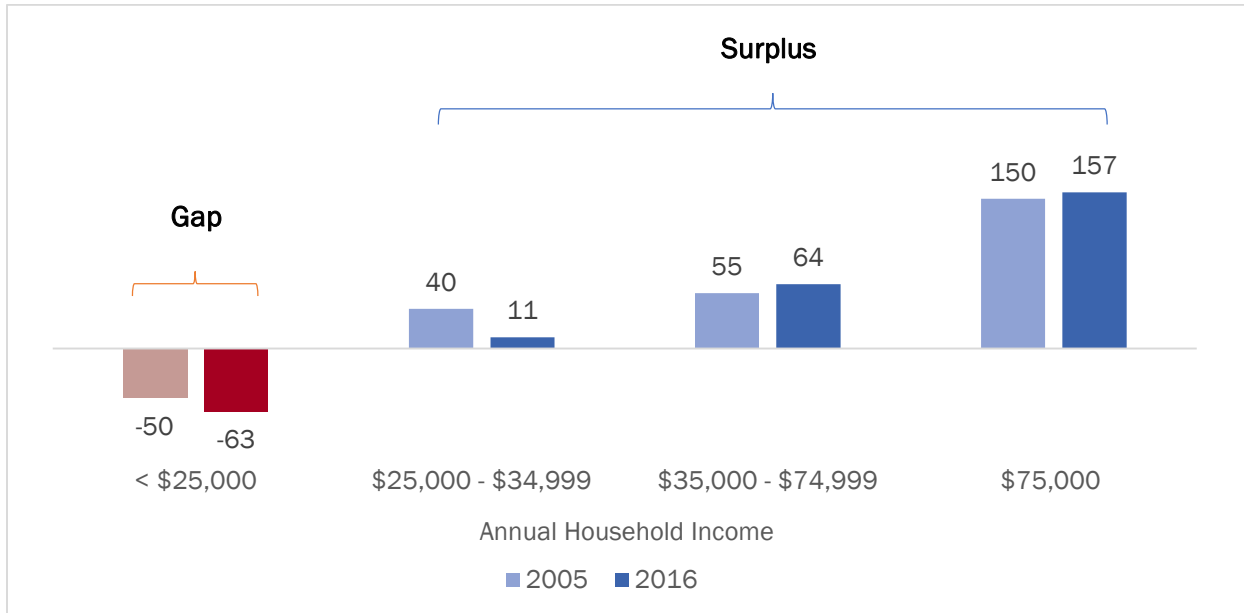


Source: Wisconsin Policy Forum analysis of U.S. Census Bureau ACS 1-year estimates

The gap in rental housing available to households with incomes under \$25,000 has grown since 2005, as shown in **Chart 15**. Meanwhile, higher-income households increasingly have experienced a surplus of rental housing options. Also, while renter households earning between \$25,000 and \$34,999 continued to experience a surplus of affordable housing options in 2016, that surplus has shrunk dramatically since 2005. That suggests that if rents rise at a faster rate than incomes, then the affordable housing gap may extend beyond ELIs to groups further up the income ladder.

²¹ Our analysis is based on renter-occupied housing at or below the MAR for each income group.

Chart 15. Gap/surplus of affordable rental housing units (in thousands) by income level, 2005-2016



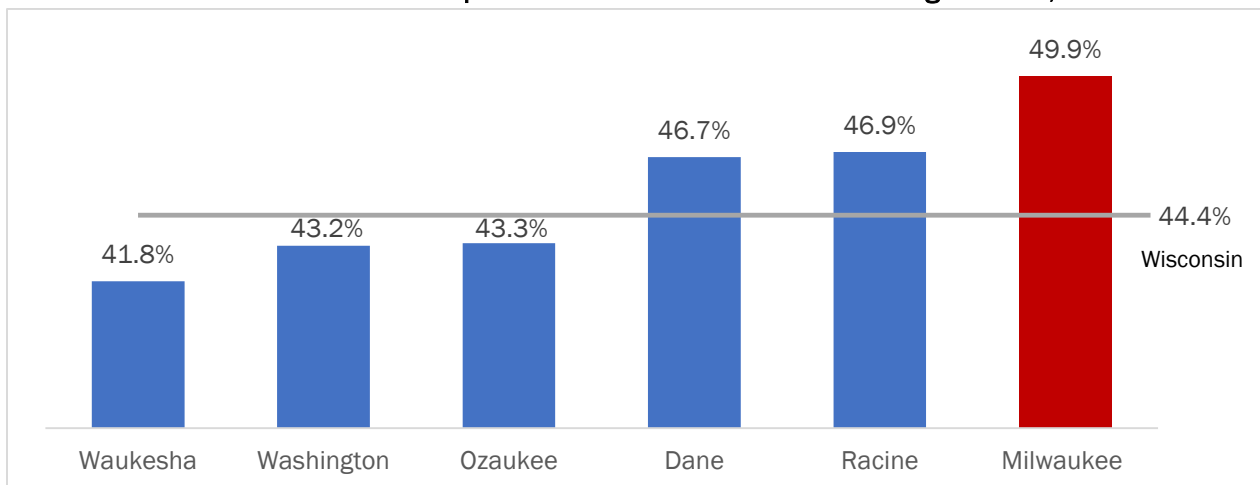
Source: Wisconsin Policy Forum analysis of U.S. Census Bureau ACS 1-year estimates²²

RENT BURDEN

In 2016, approximately 50% of renter households in the U.S. spent 30% or more of their income on rent.^{xxix} This was a decline from a year earlier, though the drop was attributed to an increase in higher-income renters in the market rather than an improvement in affordability.^{xxx}

The same trend is observed in Milwaukee County, where 49.9% of renter households spent 30% or more of their income on gross rent in 2016, as shown in **Chart 16**.^{xxxi} That was a higher share of rent-burdened households than surrounding counties, Dane County, and the state.

Chart 16. Share of households that spent 30% or more of their income on gross rent, 2016



Source: U.S. Census Bureau ACS 1-year estimates

²² The gaps and surpluses of units are based on number of renter-occupied units based on 30% RTI for each income level.

While the share of rent-burdened households decreased six percentage points from a record-high in 2012, Milwaukee County’s rental market has continued to be unaffordable for at least 47% of its renter households since 2005.²³ We also estimate that more than half of those rent-burdened households spend 50% or more of their income on rent, which is also the highest in the region.²⁴

As shown in **Table 6**, the rent burden faced by substantial numbers of Milwaukee County renter households is not a new development. In fact, median rent has been consistently higher than the MAR in Milwaukee County since 2005.²⁵ However, the median RTI gap has dropped substantially since the recession, falling from \$144 in 2010 to \$45 in 2016. This is mainly a result of median incomes returning to pre-recession levels.

Table 6. Median RTI gap analysis for Milwaukee County in 2016 dollars








Milwaukee County	2005	2010	2016	Change (2005-2016)
Median Monthly Income	\$2,633	\$2,242	\$2,631	-\$2
Median Monthly Rent	\$828	\$815	\$834	\$6
Max Affordable Monthly Rent*	\$790	\$673	\$789	-\$1
RTI Gap	-\$38	-\$143	-\$45	-\$6

Source: Wisconsin Policy Forum analysis of difference between median rent and MAR.

*Based on a 30% RTI.

While the percentage of rent-burdened households improved slightly in Milwaukee County in 2016 when compared to 2005, the opposite was true in some neighboring counties, as shown in **Table 7**. In particular, Ozaukee and Washington counties experienced substantial increases in rent-burdened households during the recession, and those increased levels had barely receded by 2016.

Table 7. Share of households that spent 30% or more of their income on gross rent, 2005-2016

Location	2005	2010	2016	Percentage point change (2005-2016)	
Milwaukee County	51.1%	55.0%	49.9%	-1.2	
Racine County	44.9%	52.3%	46.9%	2.0	
Waukesha County	42.9%	46.6%	41.8%	-1.1	
Ozaukee County	29.7%	45.0%	43.3%	13.6	
Washington County	34.3%	43.6%	43.2%	8.9	
Dane County	47.7%	52.9%	46.7%	-1.0	
Wisconsin	44.1%	49.4%	44.4%	0.3	

Source: U.S. Census Bureau ACS 1-year estimates

Note: A green sign means the percentage lowered by more than 0.5 points. A green sign means the percentage increased by more than 0.5 points. A yellow sign means the percentage neither increased nor decreased by more than 0.5 points.

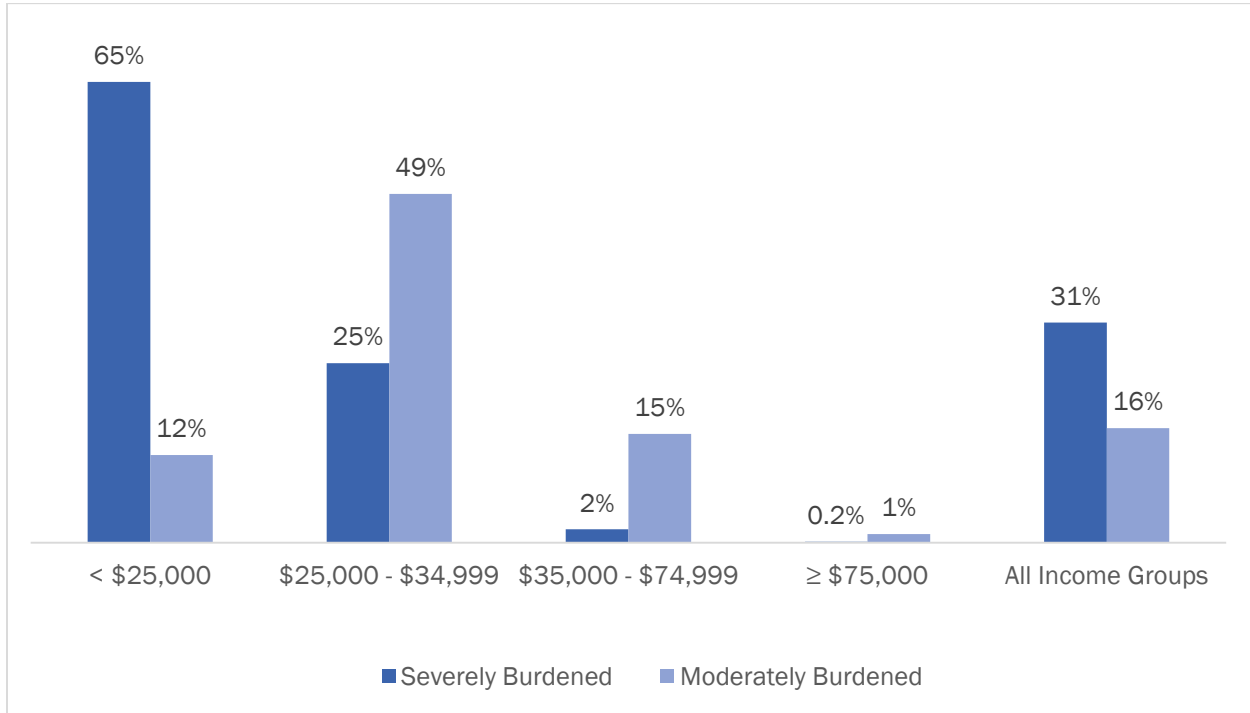
²³ See Chart A in Appendix for rent burden trend data for 2005 to 2016.

²⁴ We extrapolated our 2016 estimates from the 2010-2014 CHAS data. An eight-year CHAS data trend from 2006-2014 shows 55% of rent-burdened households spent more than half of their income on rent.

²⁵ Based on inflation-adjusted median rents. See Table A in Appendix for detailed analysis of median RTI gaps for Milwaukee and surrounding counties for 2005, 2010, and 2016. Median rent in Washington County also increased during this period (2005-2010). However, it was less than \$115 compared to the MAR and, therefore, continued to be relatively affordable to its renter household population. The median rent in Milwaukee County was \$144 higher than the MAR, which was relatively unaffordable for its renter population.

In **Chart 17**, we provide a broader perspective of the percentages of renter households facing rent burdens by income category. Unsurprisingly, lower-income households are more likely to be severely or moderately burdened. In surrounding counties, we observed similar disparities among renter household income groups. Comparisons with pre-recession data show moderate-income households have experienced an increase in severe rent burden, particularly in Racine and Washington counties.²⁶

Chart 17. Share of households that are rent burdened in Milwaukee County by income group, 2016

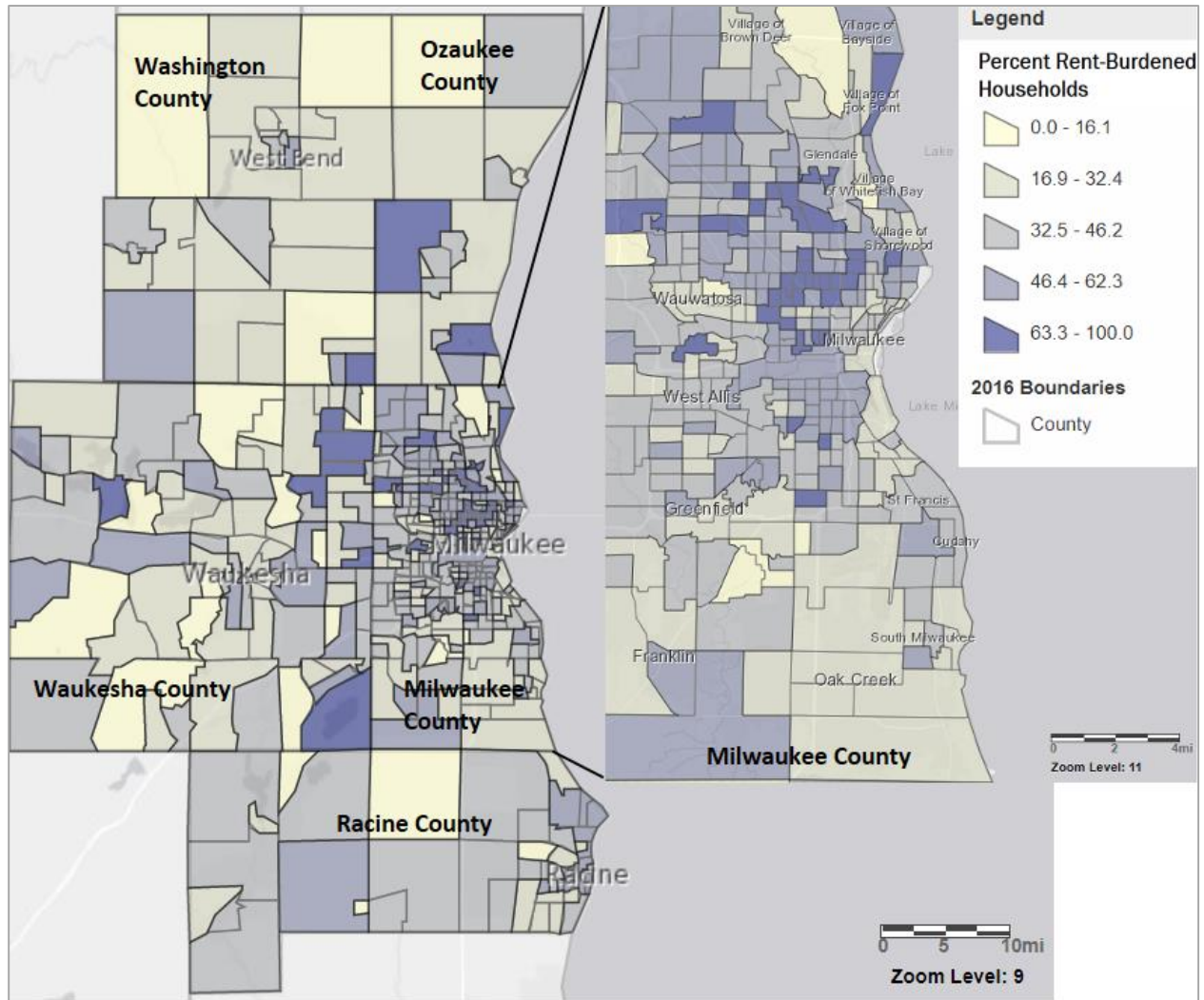


Source: U.S. Census Bureau ACS 1-year estimates

From a geographical perspective, rent-burdened households are concentrated in inner-city Milwaukee, as shown in **Map 2**. We also observe concentrations of rent-burdened households in some suburban areas of the metro area, including portions of Mequon, Muskego, and Menomonee Falls, where more than half of renter households spent over 30% of their income on rent in 2016.

²⁶ These counties have seen consistent increases in rent burdens among moderate-income renter households based on analysis of CHAS data from 2006 and 2014 and U.S. Census Bureau ACS 1-year estimates from 2005 to 2016.

Map 2. Share of households spending more than 30% of their income on rent by census tract, 2016



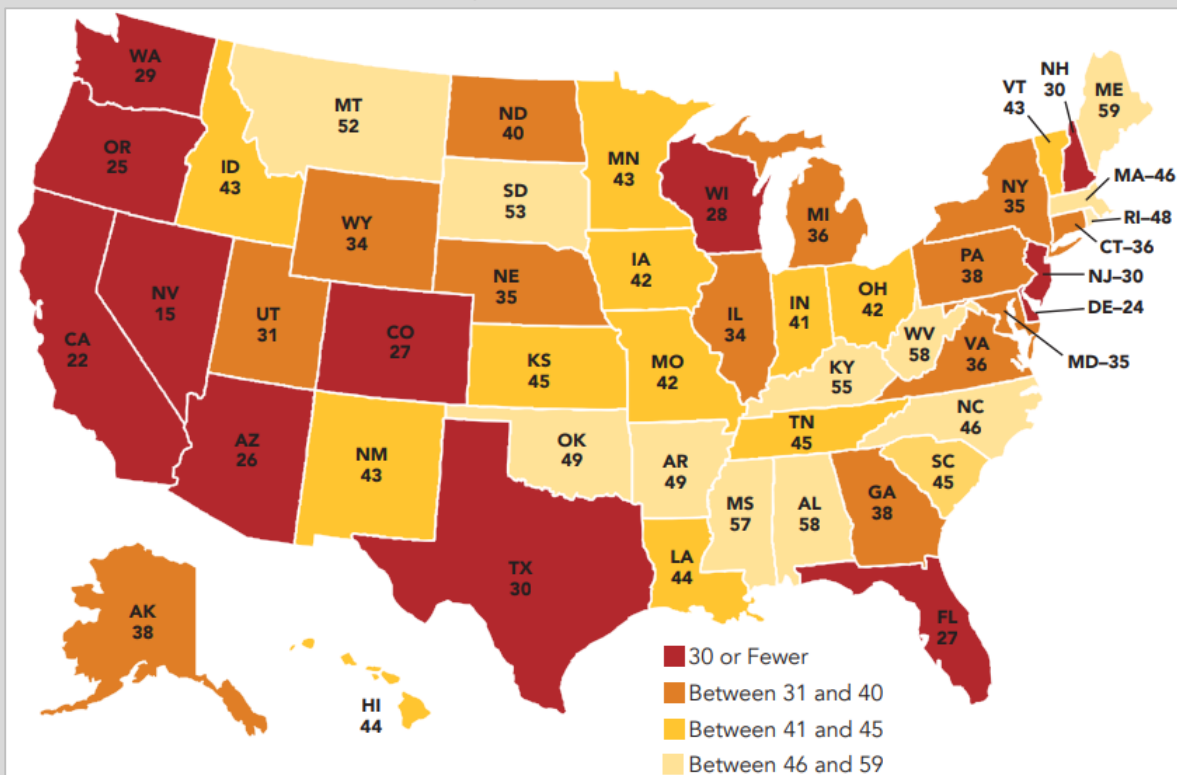
Source: U.S. Census Bureau ACS 2012-2016 estimates.

Wisconsin's affordable rental housing gap among the largest in the U.S.

ELI households only can afford 35% of the nation's rental housing stock, according to a 2018 report by the National Low-Income Housing Coalition (NLIHC). In Wisconsin, that gap is even higher. As shown in the map below, only 28% of rental units in Wisconsin are affordable to ELI households – the lowest among Midwestern states.

The shortage of rental housing stock affordable to the lowest-income renters translates into higher rent burdens across the state. In Wisconsin, approximately 36% of households spend more than one third of their income on rent. In Milwaukee and Racine counties, the percentages are even higher, as discussed throughout this report.

Share of rental housing units affordable to ELI households, 2016



Source: NLIHC 2018 Gap Report and tabulations of 2016 U.S. Census data

WAGE-TO-RENT GAP

Gaps between wages and rents are a significant problem facing millions of low to moderate income American households.^{xxii} In the four-county Milwaukee metropolitan area, this problem is prevalent despite slow but steady economic recovery since the recession.²⁷ One explanation may be that much of the recent job growth has been in service sectors, such as food and beverage, which typically provide lower wages.^{xxiii}

To afford the 2016 monthly median rent of \$834 in Milwaukee County, renters would need to earn at least \$16.04 per hour at a full-time job, or \$33,360 annually. This calculation assumes renters will spend no more than 30% of their income on rent. If only one resident in the household works and earns the state's minimum wage of \$7.25 per hour, then that person would need to work at least 88 hours per week to afford the county's median rent.

In the four-county Milwaukee metropolitan area, close to 220,000 jobs (26% of total jobs) pay less than \$13.50 in mean hourly wages. Individuals in those jobs who are employed full-time and are the sole workers in their households can afford a maximum monthly rent of roughly \$700. **Table 8** shows mean wage information and affordable rent estimates for some of the largest lower-paying occupations in metro Milwaukee and indicates that each of these occupations provides insufficient wages to afford the median rent of \$834 in Milwaukee County.²⁸

Table 8. Affordable rents for selected occupations in metro Milwaukee, 2016

Job Type	Total Jobs	Hourly Mean Wage	Annual Mean Wage	Affordable Rent*
Combined Food Preparation	22,600	\$9.02	\$18,750	\$469
Waiters and Waitresses	12,150	\$9.89	\$20,560	\$514
Cashiers	13,290	\$10.07	\$20,950	\$524
Personal Care Aides	26,210	\$10.80	\$22,460	\$562
Janitors and Cleaners	13,250	\$11.74	\$24,430	\$610
Retail Salespersons	26,040	\$12.13	\$25,230	\$631
Nursing Assistants	9,560	\$13.33	\$27,720	\$693

Source: U.S. Department of Labor, Bureau of Labor Statistics, 2016

*Affordable rents based on 30% RTI ratios

As shown in **Chart 18**, approximately 40% of renter households in metro Milwaukee with at least one employed household member were rent burdened.²⁹ We also estimate that more than one-third of those rent-burdened households were spending 50% or more of their income on rent and were thus severely rent burdened.

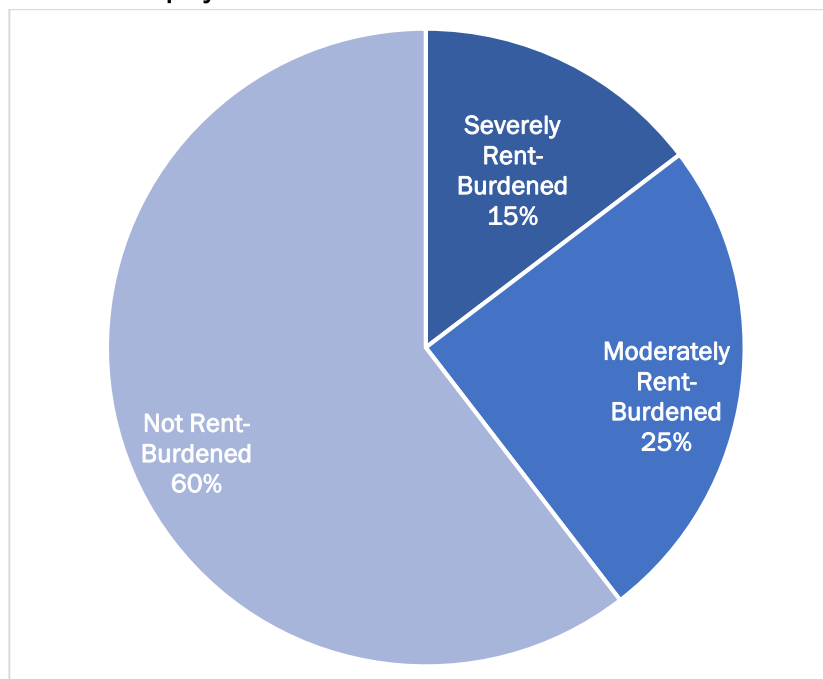
²⁷ Since 2011, jobs in the Milwaukee metro area increased 1.1% per year, with most job growth in the suburbs and Milwaukee's downtown.

²⁸ Sample of detailed sector occupations with approximately 10,000 or more individuals employed in metro Milwaukee with hourly mean wages under \$13.50.

²⁹ Based on U.S. Census Bureau American Housing Survey (2015) sample estimates for metro Milwaukee, approximately 67,200 out of 171,100 employed renter households earning wages and salaries spent 30% or more of their income on rent. Of these rent-burdened working households, approximately 25,000 spent half or more of their income on rent. Due to data limitations, we were only able to analyze this at the metropolitan area level rather than at the county level. It is likely that the share of employed rent-burdened households may be higher in Milwaukee County due to its larger concentration of low-to-moderate income renters.

In a more detailed analysis, we also found more than one-third of employed individuals in the Milwaukee metro area were earning wages that were insufficient to afford the metro area’s median rent.³⁰ This provides another plausible explanation for why rent burdens are prevalent despite recent job growth: A substantial percentage of employed households are unable to afford rental units because wages are too low.

Chart 17. Employed households in metro Milwaukee that are rent burdened, 2015



Source: U.S. Census Bureau American Housing Survey, 2015.
*Data only includes renter households earning wages or salaries.

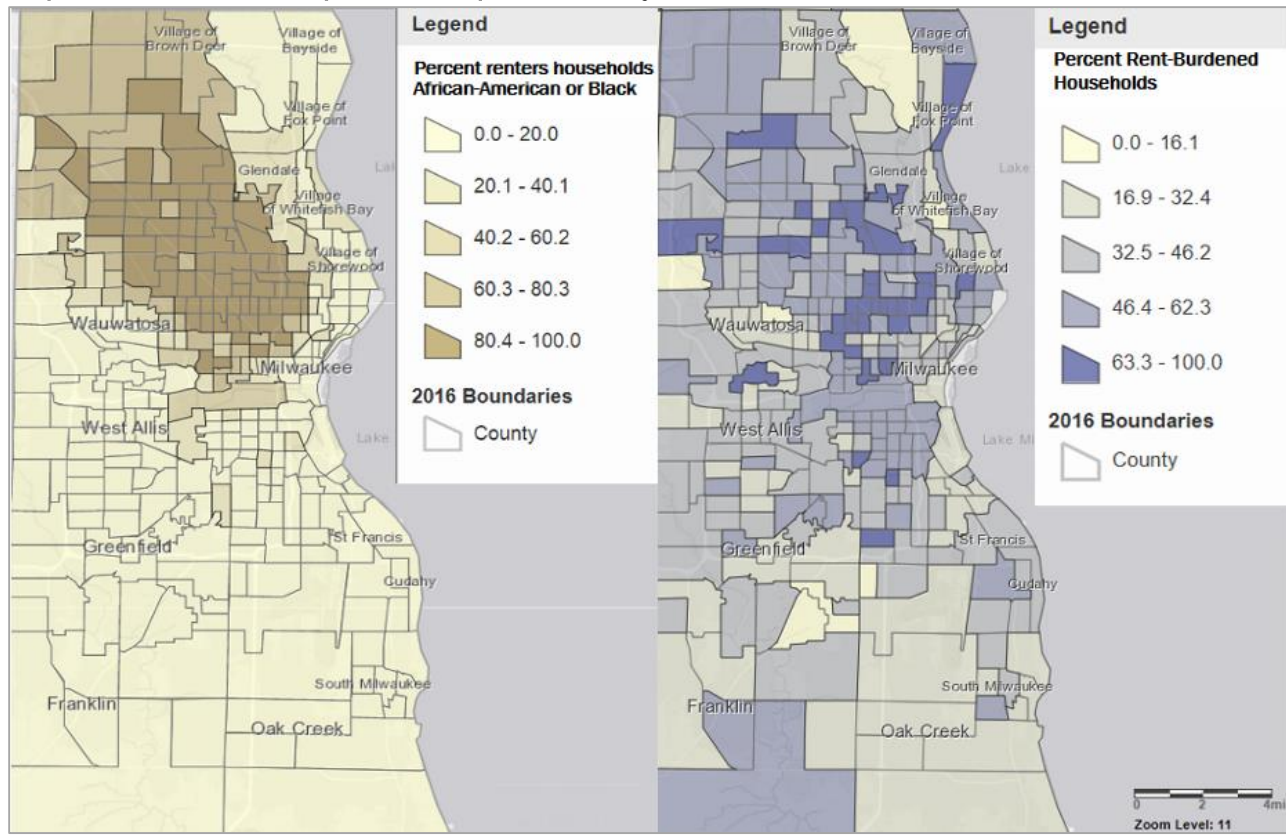
RACIAL DISPARITIES

Nationally, 47% of African-American and 44% of Hispanic/Latino households spent more than 30% of their income on rent in 2016, compared with 28% of white households.^{xxxiv} Severe rent burdens were nearly twice as common among African-American households (25%) as white households (13%). In the Milwaukee metro area, the disparities were similar; approximately 40% of African-American households were severely rent burdened compared to 21% of white households.^{xxxv}

In Milwaukee County, the strongest concentrations of rent-burdened households are in predominantly African-American census tracts on Milwaukee’s north side, as illustrated in **Map 3**. Households in some of these areas, such as the Amani, Lindsay Heights, and Harambee neighborhoods, spend among the highest share of their incomes on rent in Milwaukee County. The mix of low incomes, high unemployment rates (between 16% and 24%), and rents above the county’s median contribute to the higher percentage of rent-burdened households.^{xxxvi}

³⁰ Approximately 33% (or 275,060) of total employees in the Milwaukee metro area earned, on average, less than \$16 in mean hourly wages. Most were in service and support sectors. Estimates are based on U.S. Bureau of Labor Statistics (2015) data.

Map 3: Rent burdens are prevalent in predominantly African-American census tracts, 2016



Source: U.S. Census Bureau ACS 2012-2016 estimates of renter households.

Rent burdens are less prevalent in predominantly Hispanic/Latino census tracts on Milwaukee's south side. However, rent burdens are more prevalent in predominantly Hispanic/Latino census tracts than in predominantly white census tracts.

Notably, in some neighborhoods with large Hispanic/Latino populations, such as Muskego Way, Clarke Square, and Historic Mitchell Street, median rents increased faster than median renter household incomes between 2005 and 2012.³¹ If rents continue to outpace incomes, rental housing in some of these neighborhoods could become unaffordable to residents.

³¹ Based on U.S. Census Bureau ACS estimates at the census tract level and geographic analysis, median rents in those neighborhoods increased from a range of \$651-835 per month to a range of \$836-\$950 per month while median annual incomes remained relatively stagnant, ranging from \$20,001 to \$25,000. See Maps E and F in Appendix for more information.

SUMMARY

Rental housing affordability continues to be a pressing issue in Milwaukee County, its surrounding counties, and the state. Our analysis produces the following key findings:

- **There is a substantial mismatch between incomes and rents in Milwaukee County.** In 2016, a household earning the median monthly income in Milwaukee County was \$45 short of being able to afford the median monthly rent without exceeding the 30% rent-to-income threshold. We observe a similar gap in Racine County (\$41). The median incomes in the other counties in southeast Wisconsin and the state are high enough to afford median rents.
- **Low-income households are experiencing a growing affordability squeeze.** The gap in supply of affordable rental housing has widened since 2000 for the lowest-income renter households in Milwaukee County and surrounding counties, and may now be affecting more moderate-income renters. In 2016, only 9% of rental housing units were affordable to the 42% of renter households in Milwaukee County that were ELI. That compares to 17% in 2000.
- **Rent burdens have been persistent over time.** Milwaukee County continues to have a higher share of rent-burdened households than surrounding counties, largely due to its lower median income. Since 2005, at least 47% of Milwaukee County's renter households have spent 30% or more of their income on rent and roughly half of those spent at least 50% of their income on rent. This problem spiked during the recession and has improved since that time, but the percentage of rent-burdened households was only slightly lower in 2016 than in 2005 (49.9% vs. 51.1%).
- **Housing affordability is a common problem for working households.** Approximately 40% of renter households in the four-county Milwaukee metro area that are earning wages or salaries are rent burdened, meaning they are spending at least 30% of their income on rent. More than one-third of those households are spending at least 50% of their income on rent.
- **Rent burdens are more pronounced among African-American households in Milwaukee County.** In many predominantly African-American census tracts on the City of Milwaukee's north side, more than half of all renter households spent over 30% of their income on rent in 2016. Lower incomes and higher unemployment rates are both contributing factors. Countywide, the percentage of African-American households that are rent burdened is twice as high as among white households.

PROMISING PRACTICES

In our 2009 report, *Give Me Shelter*, we assessed public and private sector interventions being used to address housing affordability challenges in Milwaukee County. Our analysis found a lack of private sector investment in affordable rental housing development and redevelopment at that time. In particular, we noted a lack of involvement by Community Development Financial Institutions (CDFIs) in the affordable housing sphere.

Since then, several CDFIs have become more engaged in affordable housing development and support. Other public-private initiatives to expand affordable rental housing development have been initiated as well. Below, we highlight a few of these efforts already being utilized locally to increase access to affordable housing. Although none of these approaches provides a “full-spectrum” solution, they each appear to hold promise for reducing some of the housing affordability gaps highlighted in this report.

Increased investments by CDFIs in affordable housing

CDFIs are private entities that provide lending, technical assistance, and economic development services to underserved and low-income communities that often lack access to traditional financing. Milwaukee County has several CDFIs that allocate resources to affordable rental housing development, including Forward Community Investments (FCI), IFF, Impact Seven, Legacy Redevelopment Corp., Local Initiatives Support Corporation (LISC), Northwest Side Community Development Corporation, and the Wisconsin Preservation Fund Inc.

LISC Milwaukee, for example, provides loans to finance affordable rental housing developments. To date, LISC Milwaukee has provided funding for the development of 2,734 affordable homes in the city.¹ The organization also is working with the City of Milwaukee and private and nonprofit stakeholders to develop mixed-income rental and for-sale homes through a Strategic Acquisition Fund in areas where the city plans to extend its streetcar service, including the King Drive Neighborhood.² LISC Milwaukee also is working to expand affordable housing in neighborhoods identified as Opportunity Zones (OZs) throughout the city.³



The Mitchell Street Market Lofts are an example of recently developed affordable housing in Milwaukee that resulted from public-private partnerships.

Expanding affordable housing through tax-increment financing

Tax-increment financing (TIF) is a public finance tool used to spur economic development within a designated district. Through TIF, property taxes generated by new development within a tax-increment district (TID) are used to pay for up-front investments within that district, such as infrastructure improvements.

Since 2009, Wisconsin municipalities have been allowed to extend TIDs for one year and to use the incremental revenue collected in that year to support affordable housing. TIDs can only be extended if their up-front investments have already been fully paid back.⁴ In 2013, the City of Milwaukee became the first municipality in the state to enact an ordinance allowing TIDs to be extended for that purpose.

In our 2009 report, we found that Milwaukee’s use of TIF was too modest to impact the rehabilitation and production of affordable housing. Earlier this year, city leaders unveiled a plan to build or revamp affordable housing units citywide, in part through the use of TIF. As of 2018, the city has over 70 TIDs.⁵

The city also is in the process of reviewing its TIF guidelines to encourage development of more affordable housing units.⁶

Low-Income Housing Tax Credits and affordable housing

Milwaukee County and surrounding counties have been slowly expanding their affordable housing portfolio through Low-Income Housing Tax Credits (LIHTCs). As of March 2018, there are over 16,000 LIHTC rental units in Milwaukee County alone, the largest concentration among surrounding counties.⁷

Federally issued under Section 42 of the IRS Code and overseen by The Wisconsin Housing and Economic Development (WHEDA), LIHTCs allow public and private investors to receive a credit on federal taxes owed in return for providing funds to develop or renovate affordable rental housing to low-income renters, typically at or below 60% of the AMI. Some of the units developed with LIHTCs may also serve as workforce housing due to proximity to job centers and access to transportation.⁸

While each of these examples shows promise in the development of affordable housing, rent burden and wage-to-rent gaps continue to be significant issues in Milwaukee County. Additional strategies may be needed, therefore, to bridge gaps and increase access to affordable housing.

FHLB's Affordable Housing Program

Another resource that has boosted affordable housing development in Milwaukee is the Affordable Housing Program operated by the Federal Home Loan Bank (FHLB) system. In 2017, for example, the FHLB of Chicago provided \$4.4 million in subsidies to support seven affordable housing development projects in Milwaukee.⁹



The \$82 million first phase of Milwaukee's Westlawn public housing redevelopment was financed with a LIHTC award allocated by WHEDA and equity investment by a private bank.

Photo: Milwaukee Housing Authority

Sources

1. LISC (2018). <http://www.lisc.org/milwaukee/our-work/affordable-housing/>
2. City of Milwaukee (2018). A Place in the Neighborhood: Anti-Displacement Plan for the Neighborhoods Surrounding Downtown Milwaukee. Department of City Development. February 2018 ed.
3. Opportunity Zones are designated historically-disinvested and low-income areas in which investors and developers, under the recently passed Tax Cuts and Jobs Act of 2017, may receive federal tax incentives for real estate, business and other community development initiatives if the investment is held for 10 years. More information on OZs can be found at: <https://www.cdfifund.gov/Pages/Opportunity-Zones.aspx>
4. Wis. Stat. sec. 66.1105(6)(g). The municipality must use at least 75% of the tax increments to "benefit affordable housing."
5. City of Milwaukee (2018). Milwaukee Tax Increment Financing. 2016 Annual report of Milwaukee Tax Increment Financing Districts. <http://city.milwaukee.gov/TaxIncrementalFinancing#.Wy1nLFVKg7a>
6. City of Milwaukee (2018). Framework of the 10,000 homes initiative. Expanding the use of Tax Increment Financing to Support Affordable Housing; p. 3. Available online: <https://milwaukee.legistar.com/LegislationDetail.aspx?ID=3503723&GUID=A88DDF49-57BD-41EE-9163-1DC8298A1161>
7. WHEDA (2018). Allocated Tax Credit Projects. Multifamily data library. <https://www.wheda.com/Multifamily-Data-Library/>
8. Southeastern Wisconsin Regional Planning Commission. (2013). A Regional Housing Plan for Southeastern Wisconsin: 2035; P.324.
9. https://www.fhlbc.com/docs/default-source/community-investment/affordable-housing-program/ahp-program-policy-and-forms/2017-ahp-awards.pdf?sfvrsn=b18915a0_4

CONCLUSION

Our analysis of Milwaukee County's affordable housing landscape shows the county has a growing population of renters that is increasingly African American and increasingly comprised of households with three or more persons. While the share of renter households with annual incomes under \$25,000 has decreased in recent years, 42% still fall into that "extremely low income" category.

Against this backdrop, we observe that the county's average rents are not inordinately high when compared to peer cities and there is a sufficient supply of rental units to meet the overall demand. However, we also find a sizable gap in the supply of units that would be deemed affordable for the county's predominantly low-income renter population, indicating that the primary challenge is low incomes, as opposed to high rents.

Specific key findings include the following:

- **The share of households in Milwaukee County who rent rather than own their homes is the highest among large counties in the Midwest.** Just over half (50.6%) of Milwaukee County households rented their homes in 2016. Only 10 counties in the U.S. with populations over 500,000 had higher rates of renting than Milwaukee County that year, and most of those are located in the New York metropolitan area and other major metro areas on the east and west coasts. Since 2005, there has been a shift from owning to renting in Milwaukee County and nationally.
- **The median cost of renting a home in Milwaukee County is stable and continues to be relatively low compared with surrounding counties and national peers.** The median monthly rent in Milwaukee County was \$834 in 2016, which was only \$6 higher than in 2005 after adjusting for inflation. Milwaukee County's median rent was lower than most surrounding counties, Dane County (Madison), Hennepin County (Minneapolis), and Cook County (Chicago). It was also much lower than the national median of \$981.
- **Milwaukee County's median household income has reverted to pre-recession levels but is not high enough to afford the county's median rent.** Among renter households in Milwaukee County, median monthly income increased from \$2,242 in 2010 to \$2,631 in 2016, which returned it to its 2005 level. Despite that increase, households earning the county's median monthly income in 2016 remained \$45 short of being able to afford the county's median monthly rent without spending more than 30% of their income on housing. A 30% rent-to-income threshold is a standard used to define housing affordability nationally. With the exception of Racine County, the median incomes in surrounding counties and the state are high enough to afford median rents.
- **There continues to be a mismatch between income and rents in Milwaukee County.** While 42% of renter households in Milwaukee County earned less than \$25,000 per year in 2016, only 9% of rental units charged monthly rents those households could afford (\$500 or less). For households earning less than \$25,000 per year, there was a shortage of roughly 50,000 affordable housing units in 2005, while in 2016 that number had increased to 63,000.
- **Roughly half of Milwaukee County's renter households are rent burdened, meaning they spend at least 30% of their income on rent.** In 2016, 49.9% of renter households in Milwaukee County were rent burdened. That was a higher percentage than in surrounding counties and the state.

This problem spiked during the recession and has improved since that time, but the percentage of rent-burdened households was only slightly lower in 2016 than in 2005. We also estimate that more than half of rent-burdened households in Milwaukee County spend at least 50% of their income on rent. Also, while not as severe, rent burdens are growing in some surrounding communities, as well; in fact, the share of rent-burdened households in Ozaukee and Washington counties increased by 13.6 and 8.9 percentage points respectively between 2005 and 2016.

- **Rent burdens affect African-American households at twice the rate of white households in Milwaukee County.** In the four-county Milwaukee metro area, approximately 40% of African-American households spent at least half of their income on rent compared with 21% of white households. While the cost of renting is often somewhat lower in those census tracts, lower incomes and higher unemployment rates among African-Americans are major factors contributing to this problem.

Overall, the characteristics and trends within Milwaukee County's rental housing market convey a serious policy challenge. On the one hand, they point to the need for policymakers to increase the supply of housing that will be affordable for extremely low-income households. On the other hand, they raise more difficult economic and workforce development policy dilemmas given that low incomes, rather than high rents, appear to be the primary issue.

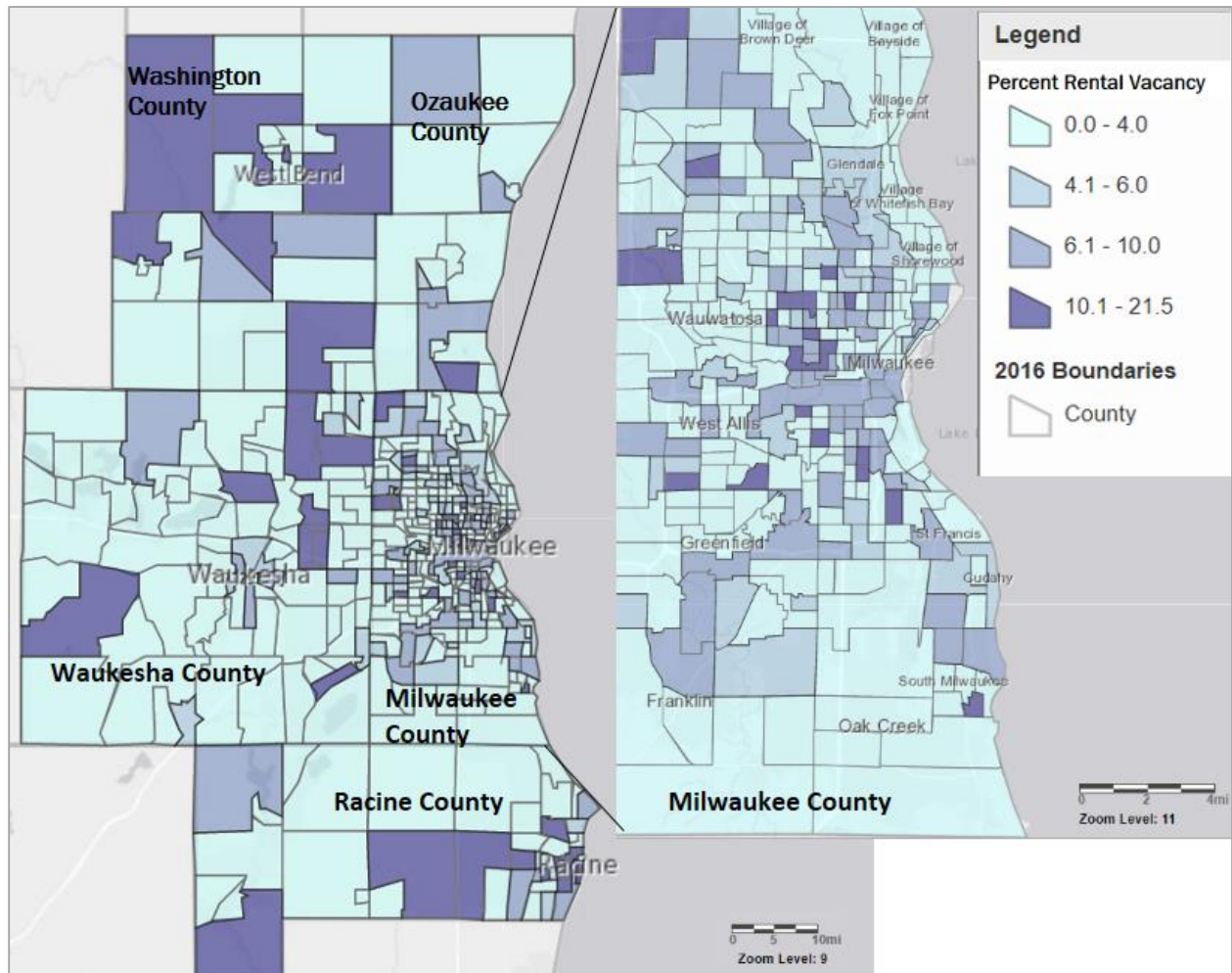
In any case, meeting the need for affordable housing in Milwaukee County is likely to require even greater participation and collaboration in both the public and private sectors. As noted in this report, the good news is that new efforts have been initiated in both sectors, such as the increased activity of CDFIs and the City of Milwaukee's use of TIF to support affordable housing development. Yet, additional strategies may be needed to address gaps on both the supply side (for example, building or rehabilitating low-income rental units and affordable, market-rate units) and the demand side (for example, finding ways to increase incomes or provide additional rental assistance to low-income households).

Addressing the demand side of the equation may be necessary to meet the needs of Milwaukee County residents, but also may be more difficult for local policymakers to achieve than efforts to increase the affordable housing supply. For example, expanding access to housing vouchers would require a major shift in social safety net programs at the federal level, while raising incomes would require substantial long-term gains in economic development that may be influenced more by regional, state, and global economic factors than local policies. On the other hand, increasing the supply of affordable housing units, while still challenging and costly, can be tackled through multiple strategies involving both the private sector and governments at all levels.

We hope the data and analysis in this report encourage policymakers to address the issue of affordable housing with increased urgency and a greater sense of collaboration and innovation, and that it will inform ongoing planning and policy deliberations in Milwaukee County and throughout southeast Wisconsin.

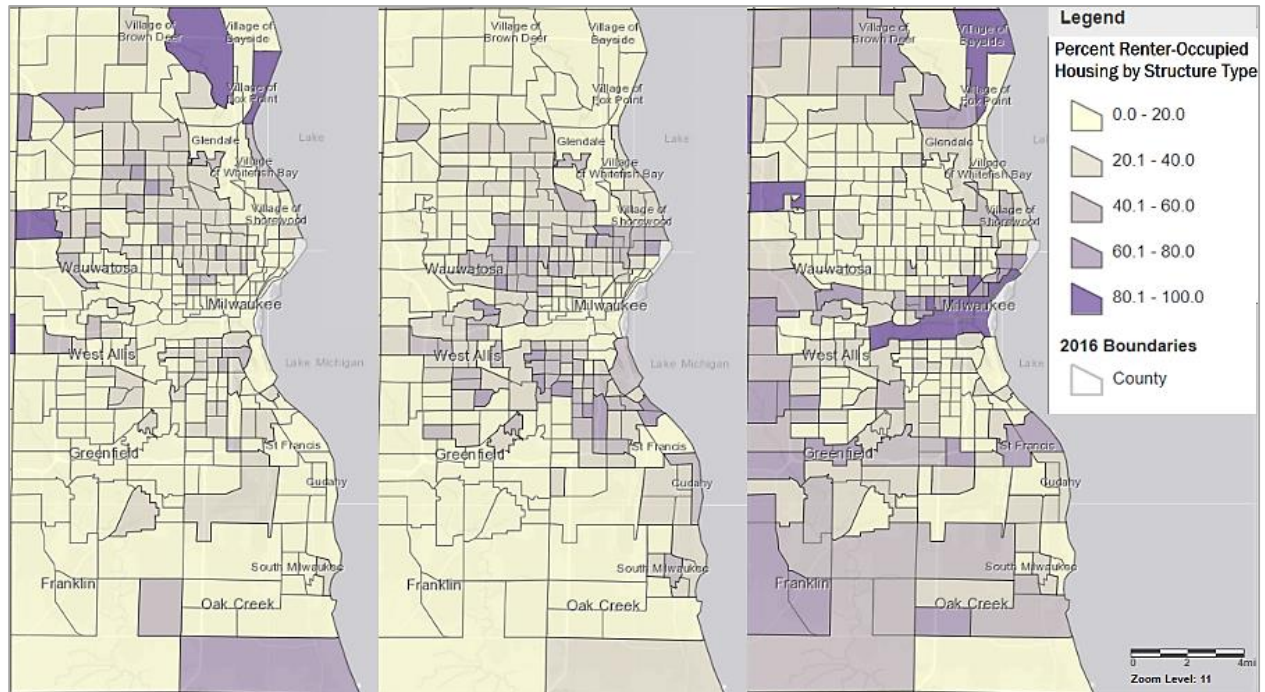
APPENDIX

Map A: Rental vacancy rates by census tract, 2016



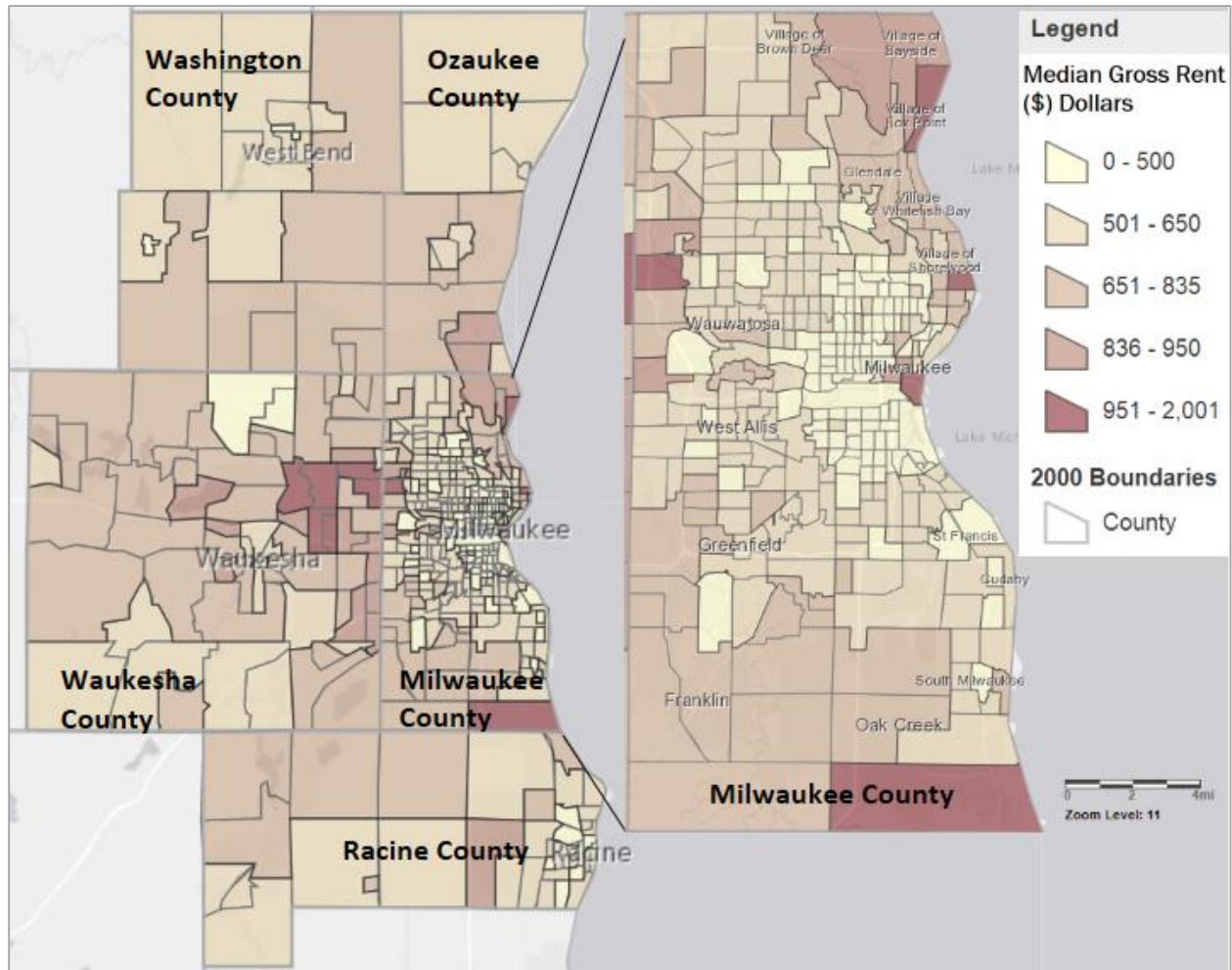
Source: U.S. Census Bureau ACS 5-year estimates

Map B. Renter-occupied housing units by structure type in Milwaukee County census tracts, 2016



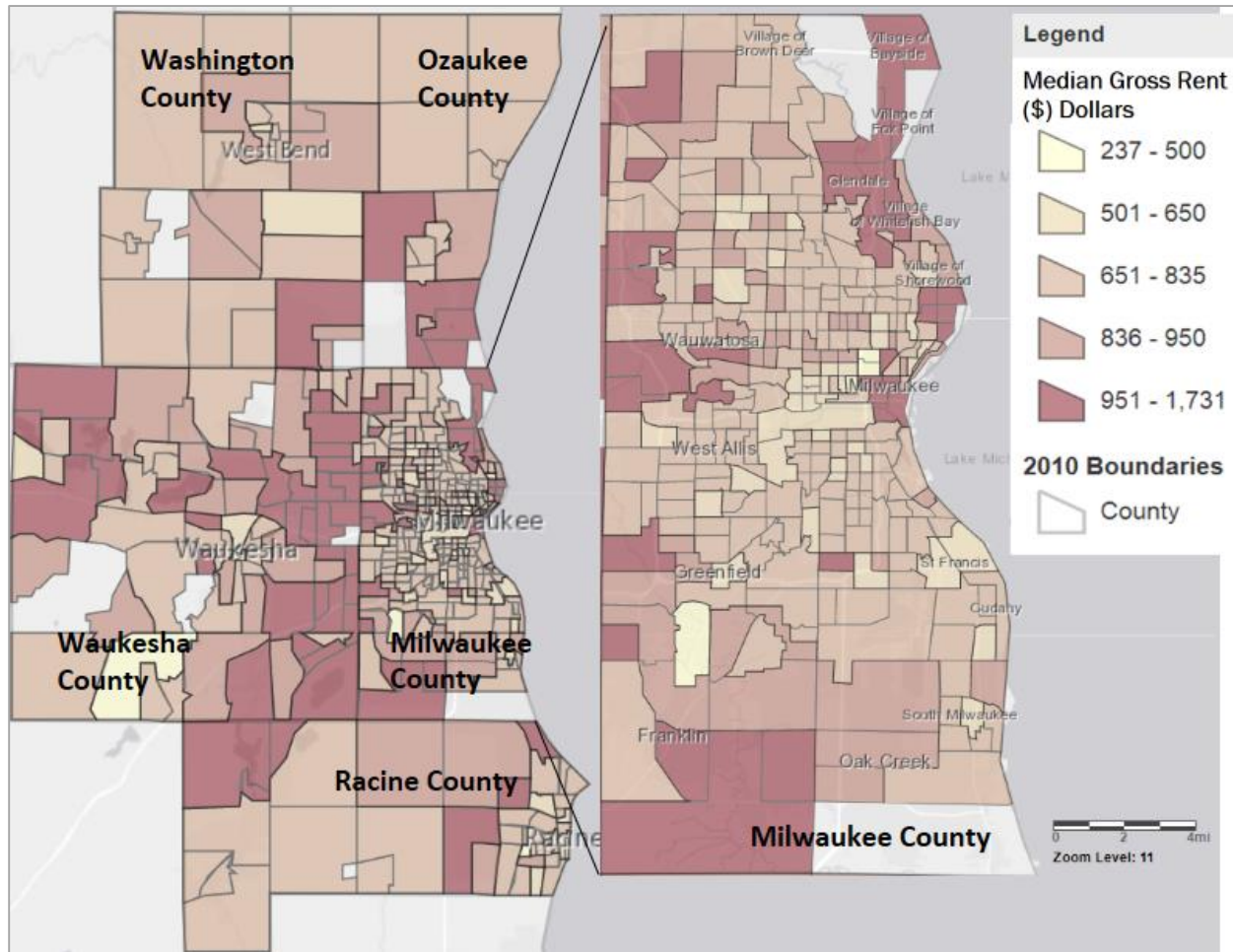
From left to right: Percent renter-occupied single-family homes; percent duplexes (both units renter-occupied); percent high-density multifamily rental buildings (10+ units). Source: U.S. Census Bureau ACS 5-year estimates.

Map C. Median gross rent by census tract, 2000



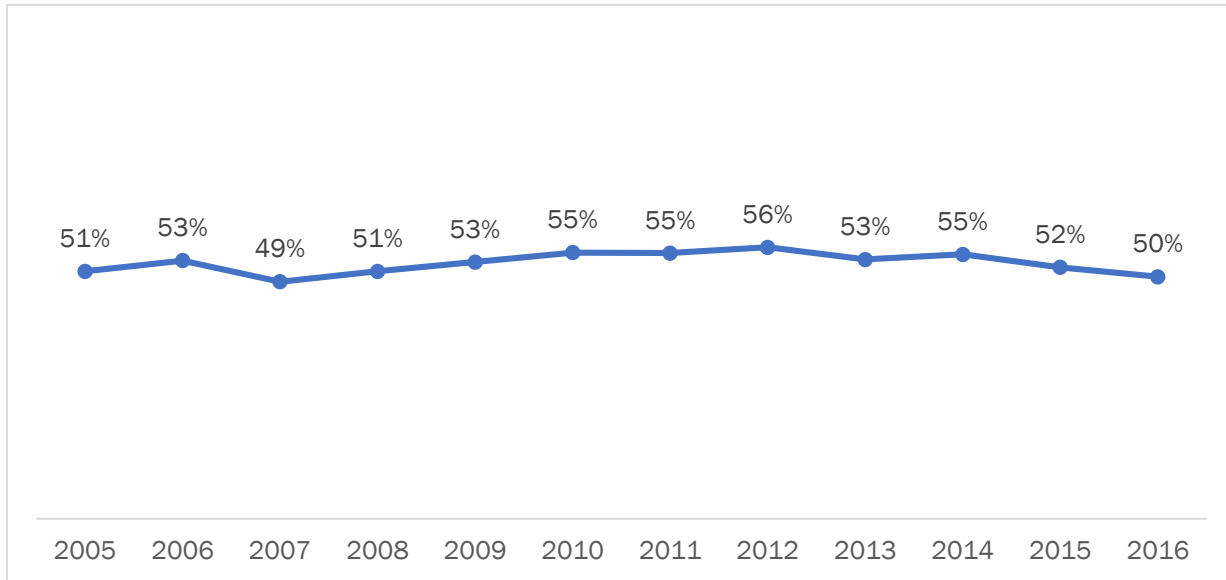
Source: U.S. Census Bureau. Table SF3 Sample Estimates

Map D. Median gross rents by census tract, 2006-2010



Source: U.S. Census Bureau ACS 5-year estimates.

Chart A. Milwaukee County households that spent 30% or more of their income on rent, 2005-2016



Source: U.S. Census Bureau ACS 5-year estimates

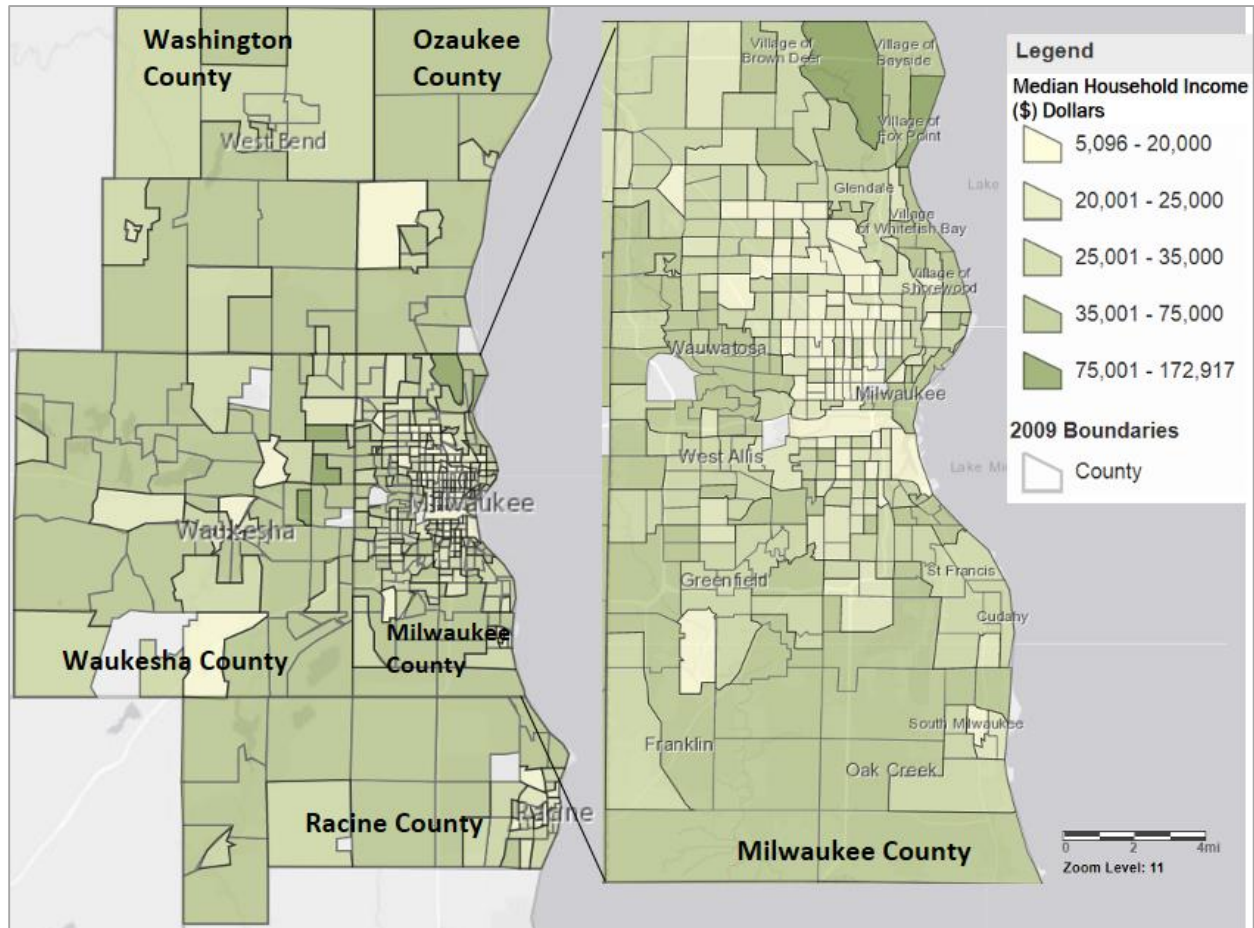
Table A. Median RTI gap analysis for Milwaukee and Surrounding Counties

County	Years	Renter Median Household Income	Median Rent	MAR*	Median RTI Gap
Milwaukee	2005	\$2,632	\$828	\$790	-\$38
	2010	\$2,242	\$815	\$673	-\$143
	2016	\$2,631	\$834	\$789	-\$45
	Change	-\$2	\$6	-\$1	-\$6
Racine	2005	\$2,867	\$844	\$860	\$16
	2010	\$2,192	\$784	\$658	-\$126
	2016	\$2,635	\$831	\$790	-\$41
	Change	-\$232	-\$13	-\$70	-\$56
Washington	2005	\$3,737	\$839	\$1,121	\$282
	2010	\$3,244	\$858	\$973	\$116
	2016	\$3,319	\$858	\$996	\$138
	Change	-\$418	\$19	-\$126	-\$144
Ozaukee	2005	\$4,042	\$882	\$1,213	\$331
	2010	\$2,863	\$801	\$859	\$58
	2016	\$3,147	\$907	\$944	\$37
	Change	-\$895	\$25	-\$269	-\$294
Waukesha	2005	\$3,698	\$999	\$1,110	\$110
	2010	\$3,251	\$950	\$975	\$25
	2016	\$3,683	\$976	\$1,105	\$129
	Change	-\$16	-\$23	-\$5	\$19

Source: Wisconsin Policy Forum analysis of median rent and MAR, using U.S. Census Bureau ACS 1-year estimates

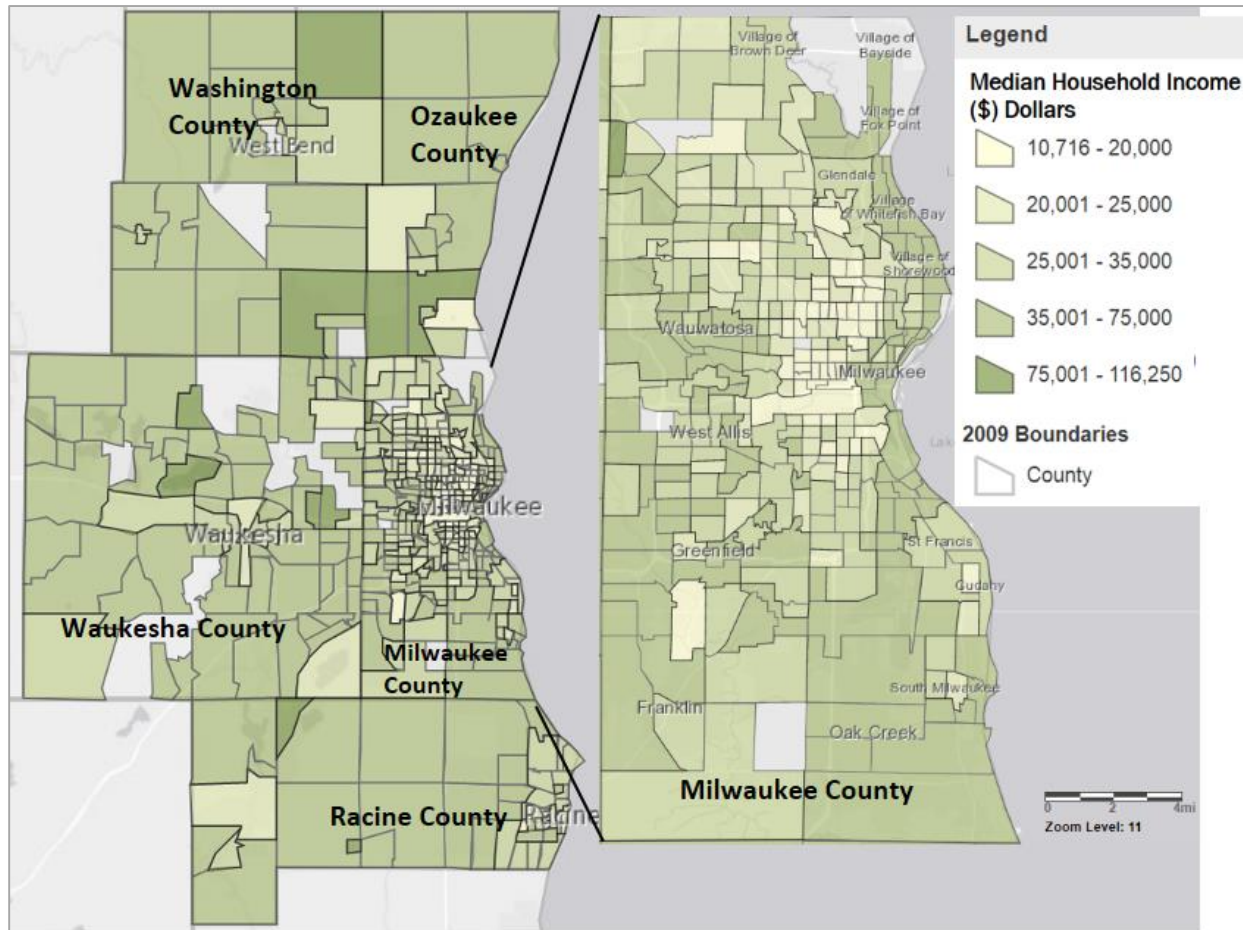
*MAR is the median maximum affordable rent based on a 30% RTI.

Map E. Median household income by census tract, 2005-2009



Source: U.S. Census Bureau ACS 5-year estimates.

Map F. Median household incomes by census tract, 2012-2016



Source: U.S. Census Bureau ACS 5-year estimates.

NOTES

- ⁱ U.S. Census Bureau (2016) American Community Survey 1-year estimates.
- ⁱⁱ U.S. Census Bureau (2016) American Community Survey 1-year estimates for renter households that spent 30% or more of their income on rent. DP04 tabulation.
- ⁱⁱⁱ U.S. Census Bureau (2015) American Housing Survey. Custom tabulations for renter-occupied households in the Milwaukee metropolitan area.
- ^{iv} For this calculation, we used U.S. Census Bureau ACS 2016 estimates for renter households with annual incomes of \$24,999 or less and used for reference HUD's 2016 ELI limit definition for four-person households, which was an annual household income of \$24,300 in 2016.
- ^v U.S. Census Bureau (2015). American Housing Survey. Data on Unassisted Renter Households that Qualify for Federal Housing Assistance, 2015. Custom tabulations for the Milwaukee MSA. Available online at: <https://www.census.gov/programs-surveys/ahs/data/interactive/ahstablecreator.html>. Accessed on 11/30/2017. Similar statistics were also published by the Urban Institute (2017) *Mapping America's Rental Housing Crisis*, Milwaukee County analysis based on US Census and HUD 2010-2014 estimates.
- Federal housing budget cut proposal from the White House (2018). FY 2019 Budget of the US Government. Office of Management and Budget; p. 63. <https://www.whitehouse.gov/wp-content/uploads/2018/02/budget-fy2019.pdf>
- ^{vi} Horton R., Curtis D., Million L. Henken R., Dickman A. (2009). Give Me Shelter: Responding to Milwaukee County's Affordable Housing Challenges. *Public Policy Forum*; P. 26-27.
- ^{vii} Harvard Joint Center for Housing Studies (2017). State of the Nation's Housing 2017; P.4. Harvard University. Cambridge, MA. Available online at: http://www.jchs.harvard.edu/sites/default/files/harvard_jchs_state_of_the_nations_housing_2017.pdf Accessed on 11/15/2017.
- ^{viii} Harvard Joint Center for Housing Studies (2017). State of the Nation's Housing 2017; P.4-P.19. Harvard University. Cambridge, MA. Available online at: http://www.jchs.harvard.edu/sites/default/files/harvard_jchs_state_of_the_nations_housing_2017.pdf Accessed on 11/15/2017.
- ^{ix} Levine (2016). Latino Milwaukee: A Statistical Portrait. Center for Economic Development. University of Wisconsin-Milwaukee. Available online at: https://www.greatermilwaukeefoundation.org/files/7914/6215/2972/Latino_Milwaukee_Study_2016.pdf Accessed on 5/8/2018.
- ^x Southeastern Wisconsin Regional Planning Commission. (2013). A Regional Housing Plan for Southeastern Wisconsin: 2035; P.20.
- ^{xi} U.S. Census Bureau ACS 1-year estimates (2005-2016). Physical Housing characteristics by Tenure. Table S2504. U.S. Housing and Urban Development (2017). Market at a Glance: Milwaukee County, WI. Analysis of U.S. Census Bureau and Building Permits Survey data from 2007 to 2017 with data preliminary through September 2017. More recent versions can be found online at: <https://www.huduser.gov/portal/ushmc/mag.html>
- ^{xii} Wisconsin Realtor Association (2017). Housing Stats by Month. Housing sales data for Milwaukee County and Counties in the Southeast Wisconsin Region. Data downloaded on March and June 2018. Most recent data available online at: https://www.wra.org/Resources/Property/Wisconsin_Housing_statistics/
- U.S. Department of Housing and Urban Development (2017). Comprehensive Market Analysis: Milwaukee-Waukesha-West Allis, Wisconsin. Office of Policy Development and Research. Available online at: https://www.huduser.gov/portal/publications/pdf/MilwaukeeWI_comp_2014.pdf
- ^{xiii} US Census Bureau (2016) American Housing Survey. Selected Housing Characteristics by Housing Tenure. Table S2503.
- ^{xiv} Wisconsin Policy Forum (2018). Combined estimates on housing quality deficiency measures from the American Housing Survey (2015) and the US Census Bureau American Community Survey (2015). Eggers, F. J., & Moumen, F. (2013). American Housing Survey: Housing Adequacy and Quality as Measured by the AHS. Available online at U.S. Census: <https://www.census.gov/content/dam/Census/programs-surveys/ahs/publications/HousingAdequacy.pdf> Accessed on 11/10/2017.
- ^{xv} Southeastern Wisconsin Regional Planning Commission. (2013). A Regional Housing Plan for Southeastern Wisconsin: 2035; P.14.
- ^{xvi} U.S. Department of Housing and Urban Development (2017). Comprehensive Market Analysis: Milwaukee-Waukesha-West Allis, Wisconsin. Office of Policy Development and Research; P. 11. Available online at: https://www.huduser.gov/portal/publications/pdf/MilwaukeeWI_comp_2014.pdf
- ^{xvii} U.S. Department of Housing and Urban Development (2017). Comprehensive Market Analysis: Milwaukee-Waukesha-West Allis, Wisconsin. Office of Policy Development and Research; P.11. Available online at: https://www.huduser.gov/portal/publications/pdf/MilwaukeeWI_comp_2014.pdf
- ^{xviii} U.S. Census Bureau (2016). Physical Housing characteristics by Tenure. Table S2504.

-
- ^{xix} Harvard Joint Center for Housing Studies (2013). America's Rental Housing: Evolving Markets and Needs; P.3. Harvard University. Cambridge, MA. Available online at: http://www.jchs.harvard.edu/sites/default/files/jchs_americas_rental_housing_2013_1_0.pdf Accessed on 1/8/2018
- ^{xx} Harvard Joint Center for Housing Studies (2016). State of the Nation's Housing 2016; http://www.jchs.harvard.edu/sites/default/files/son_2016_200dpi_ch5.pdf P.27. Harvard University. Cambridge, MA. Available online at: Accessed on 11/20/2017.
- ^{xxi} City of Milwaukee (2018). Map Milwaukee Portal. Neighborhood boundaries as defined by the Milwaukee Neighborhood Identification Project, 2000-2007. <https://city.milwaukee.gov/DownloadMapData3497.htm#.W0zwT9VKjcs>
- ^{xxii} City of Milwaukee (2018). Anti-Displacement Plan for Neighborhoods Surrounding Downtown Milwaukee. Department of City Development. February 2018 Ed; p.26.
- ^{xxiii} Moos, M., Vinodrai, T., Revington, N., & Seasons, M. (2018). Planning for Mixed Use: Affordable for Whom? *Journal of the American Planning Association*, 84(1), 7-20.
- Nguyen-Hoang, P., & Yinger, J. (2011). The capitalization of school quality into house values: A review. *Journal of Housing Economics*, 20(1), 30-48.
- Roback, J. (1982). Wages, Rents, and Quality of Life. *Journal of Political Economy*, 90(6); 1257-1278.
- ^{xxiv} Zillow (2018). Milwaukee County rent list price estimates: Data from 2012 through 2018. Available online at: <https://www.zillow.com/milwaukee-wi/home-values/> Accessed on 3/21/2018
- Rentcafe (2018). Milwaukee Rental Market Trends: Average Rent by Year. Available online at: <https://www.rentcafe.com/average-rent-market-trends/us/wi/milwaukee/>. Accessed on 3/21/2018
- ^{xxv} Boeing, G., & Waddell, P. (2017). New Insights into Rental Housing Markets across the United States: Web Scraping and Analyzing Craigslist Rental Listings. *Journal of Planning Education and Research*, 37(4), 457-476.
- ^{xxvi} U.S. Census Bureau (2018). American Community Survey 1-year Estimates. Bedrooms by Gross Rent – Universe: Renter-Occupied Housing Units (2005-2016) C25068 tabulations.
- ^{xxvii} Schwartz and Wilson (2006). Who can Afford to Live a Home? A Look at Data from the 2006 American Community Survey. US Census Bureau Report. Available at: <https://www.census.gov/housing/census/publications/who-can-afford.pdf>
- ^{xxviii} Milwaukee County Housing Division (2018), Section 8 Voucher Program. <http://county.milwaukee.gov/section8>
- White House (2018). FY 2019 Budget of the US Government. Office of Management and Budget; p. 63. <https://www.whitehouse.gov/wp-content/uploads/2018/02/budget-fy2019.pdf>
- National Low Income Housing Coalition (2018). President's Budget Calls for Drastic Cuts to Affordable Housing. Available at: <http://nlihc.org/article/presidents-budget-calls-drastic-cuts-affordable-housing>
- ^{xxix} US Census Bureau (2016). Selected housing characteristics. DP04. Estimate based on renter-occupied units as an equivalent to renter households.
- ^{xxx} Harvard Joint Center for Housing Studies (2017). State of the Nation's Housing 2017; P.4-P.19. Harvard University. Cambridge, MA; P. 16. Available online at: http://www.jchs.harvard.edu/sites/default/files/harvard_jchs_state_of_the_nations_housing_2017.pdf Accessed on 1/20/2018.
- ^{xxxi} U.S. Census Bureau (2016) American Community Survey. Estimates for renter households that spent 30% or more of their income on rent. DP04 tabulation.
- ^{xxxii} National Low Income Housing Coalition (2016). Out of Reach Report; p.1-6. Available online at: http://nlihc.org/sites/default/files/oor/OOR_2016.pdf Accessed on 4/20/2018
- Dolbeare, Cushing N. (2001). Housing Affordability: Challenge and Context. *Cityscape: A Journal of Policy Development and Research*. 5(2); P. 111-130.
- ^{xxxiii} U.S. Department of Housing and Urban Development (2017). Comprehensive Market Analysis: Milwaukee-Waukesha-West Allis, Wisconsin. Office of Policy Development and Research. Available online at: https://www.huduser.gov/portal/publications/pdf/MilwaukeeWI_comp_2014.pdf
- ^{xxxiv} Harvard Joint Center for Housing Studies (2017). State of the Nation's Housing 2017; Harvard University. Cambridge, MA; P. 31. Available online at: http://www.jchs.harvard.edu/sites/default/files/harvard_jchs_state_of_the_nations_housing_2017.pdf Accessed on 5/9/2018.
- ^{xxxv} US Census Bureau American Housing Survey (2015). Custom tabulations for renter-occupied households in the Milwaukee metropolitan area.
- ^{xxxvi} U.S. Census Bureau (2016). American Community Survey. Five-year Estimates for Median Gross Rent, Renter Household Income, Rent Burden and Unemployment rate. DP04, DP03 and S2503 Tabulations.