



# Michigan Statewide Housing Needs Assessment

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# Introduction

It has been about 11 years since the start of the Great Recession, and six since it ended. According to statistics that measure its activity, Michigan's housing market has improved from its low point a decade ago. Since then, MSHDA policies have been centered on nurturing economic recovery both in communities and among individual households. These activities have emphasized:

- Placemaking in urban areas to support and maintain vibrant urban neighborhoods
- Workforce housing for both owners and renters to aid households earning between 60% and 120% of Area Median Income (AMI)
- The financing of affordable housing, with and without supportive services, for households earning less than 60% of AMI
- Increasing homeownership opportunities among first-time homebuyers and other consumers.

Recent trends in Michigan's housing markets will impact how these policy initiatives are carried out into the next decade. In order to study these trends in more depth, MSHDA has created this Statewide Housing Needs Assessment. It uses Census data from the American Community Survey as well as other sources to investigate how the three major components of market dynamics are trending: demand, supply and pricing/affordability.

This document provides a description of the methodology used throughout the investigation, as well a look at some of the resulting findings statewide and by region. For quicker reading, MSHDA is providing an Executive Summary which highlights some of the key findings in an easily digestible form. Finally, a data resource that will provide information on 386 local markets around the state will be available on MSHDA's website soon.

# Demand

The way that demand, supply and pricing relate to each other determine the parameters of the housing market in Michigan. The current state of the housing market here has been impacted by these trends in the past. One way to explore the ramifications of changing market signals is to study trends in housing construction.

# Past Production

In 2017, the Census Bureau estimated that Michigan had just short of 4.96 million housing units. This is up from 4.58 million the previous year—an increase of about 8%. This compares to an estimated 9.96 million residents who live in the state. The number of housing units has been steadily increasing since 2010 at an annualized rate of approximately 9,000 units. Figure 1 shows the trend.



#### Figure 1

Michigan, like many other states, experienced a dramatic slowdown in residential construction due to the Great Recession. However, the pattern of recovery in construction activity has not been even across the state's landscape. Some areas continue to lag others.

Figure 2 shows the statewide trend in building permits issued, a good proxy for the construction of new housing units. Two major slowdowns are evident in the series, which begins in 1980 and ends in 2017. The first hit in the early 1980s and coincided with very high interest rates. The second was the recession that occurred in the early 1990s. Another, less drastic fall occurred in the early 2000s. By far, however, was the fall that marked the Great Recession.

Building activity shows that the recession hit earlier in Michigan than it did in other places, with the first decrease in permit issuance taking place in 2005. Further decreases happened through 2009. After a rocky start in 2010 and 2011, permitting activity again started to pick up. However, it is still low by historical standards; 2017's figure of about 24,000 is still lower than the peak of activity in 2004. One needs to go back all the way to 1983 to see similar levels.

Since gaining traction, the recovery in building permit activity has seen gains of about 2,400 per year on average. To put this recovery into perspective, the amount of increase after the 1980-82 downturn was 8,200 on average. In the 1990s, the amount was just under 3,700 units.

The relationship between multifamily and single-family construction has also varied over time. Three regimes in the data seem to be evident, pointing to differing development conditions within the two construction sectors. The first took place between 1980 and 1990, when multifamily made up a



Figure 2

significant proportion of new construction in the state—an average of about 37% annually through that period. The second phase saw a dramatic downturn, when multifamily accounted for about half of

its previous levels: between 1991 and 2013, multifamily units comprised an average of about 16% of all permitted units. Finally, the current period is seeing a strong upturn in multifamily construction. Since 2014, multifamily units have comprised about 27% of all new construction on average. The trend moving forward implies continued expansion.

One of the aspects of the Michigan's housing market that this data shows is the strength of the signal to develop that homebuilders (of both for-sale and rental housing units) pick up over time. The demand for new housing which is reflected in part by new construction is detailed further in the next section.

# Demographic drivers of housing demand Population, Household and Job Growth

There are two main types of demographic growth in an area--population and household growth. Households are the consumers of housing and change in the number of households is likely the most important factor in a market's housing demand. Households are the smallest economic unit of an economy. At this level, many decisions about resource allocation and expenditure are made. One of the most basic is what type and how much shelter it will consume.

Population change is important to study, but in terms of housing it is vital to know how population relates to households. Population change feeds into household change, but only determines a part of it. It is entirely possible for populations in an area to increase, but for its household count to stay relatively stable or even decrease. Equally important is how easy it is for a

Change in the number of households is likely the most important factor in a market's housing demand.

household to be established, how large households are growing (in terms of how many people are included in the average household), and other factors.

To gauge future shifts in household counts, some method for projecting them into at least the short term is necessary. Most rely on using population estimates and projections as a base and then make assumptions about household formation that lead to household projections. An important estimate that bridges the gap between population and household change is the headship rate, or the number of households present in an area per adult. This rate varies with age, general economic conditions, and other factors. Taking this headship rate keyed to age cohorts and applying them to similar age cohorts in population projections will yield projected household counts. This is the methodology used to compute household projections in this study.

# Population Growth

The first step in this analysis is to derive a set of short-term population projections by age group for the state's housing markets. This was done using the Hamilton-Perry forecast method, which uses two decennial census population counts for age groups as the only input. Given the change measured in the age cohorts in the given census years (called cohort change ratios, or CCRs), a ten-year projection can be produced applying those rates of change.

According to the results of this analysis the state's population is expected to climb to over 10,000,000 by 2020. The last time the state was this populous was 2007, just as the Great Recession was starting to hit. This is an increase of about 369,000 residents since 2010.

Spatially, the data show an interesting pattern of change. The geographic frame for this and other analyses in this report is the Public Use Microsample Area, or PUMA. These regions are defined for use with the American Community Survey and include not less than 100,000 residents each. Michigan has 68 of them, and they completely tile the state. In less populous regions, PUMAs are often multicounty groupings; in more densely-populated areas they include only parts of counties.

In terms of absolute population numbers, southeastern Michigan PUMAs should start to experience at least a slower decrease than the general trend since 2000. This is especially true for Detroit PUMAs.

While all of them logged significant declines between 2000 and 2010, MSHDA projections show that two—the Downtown/Midtown area (+18,000) as well as the city's southwest portion (+1,500)—will record gains by 2020. While other portions of the city are still expected to lose residents, the amount of the loss is only about 2% of that experienced in the 2000s (-6,300 vs. about -370,000).

As multiple national-scale studies of population change have shown, much of the strong growth in the state is expected to take place in more suburban/exurban locales. About half of the growth expected to occur in Michigan through 2020 (189,000 of a total of 369,000) will be in just six PUMAs—northern and central Macomb County, Northwestern Wayne County, Livingston County, southeastern Kent County and eastern Ottawa County. At the same time, the five regions displaying the largest declines in population are mostly either central cities (Flint and Detroit) or older near suburbs of Detroit (central Wayne County, southeastern Oakland County).

The regions displaying the largest population declines are central cities or older suburbs Percentage gains and losses tell a slightly different story. The average percentage gain between 2010 and 2020 is about 8%, while the average loss is about 4%. Overall, the average population change was 3.8%. The largest rates of positive population change are expected to occur in northern and central Macomb County. Except for a 20% increase in Downtown/Midtown Detroit's population, all the PUMAs with

the largest rates of growth are in suburban or exurban locations. Conversely, the largest percentage decreases in population are expected in north central and northeastern Detroit, Flint and its inner suburbs, central Wayne County and southeastern Oakland County.

# Household Growth

Research by the Terner Center for Housing Innovation at the University of California Berkeley and the Kansas City Federal Reserve Bank uses a composite approach to forecasting household counts. According to them, household growth stems from three trends:

- **Changes in the headship rate**: The headship rate is the number of heads of household per adult population. It is very much related to household formation trends, which in turn rely on larger-scale economic and social factors. Changes in these conditions, like an increased tempo in job creation, could create more households by pushing headship rates higher.
- **Growth in the adult population**: While population and household growth may not happen in lockstep, the two are still closely related. If trends behind the formation of households stay constant, increasing numbers of residents should also bring about increased numbers of households.
- **Changes in age distribution**: Household formation varies with age, as older population segments having considerably higher rates than younger ones. In addition, older households tend to have fewer persons in them, so increases among those groups would tend to have a positive influence on household counts, all other things being equal.

To understand how households are formed, and to better estimate how many households will be resident in the state in 2020, all three of these aspects should be noted. In Michigan two of the three statistics—population growth and an increasingly older population—have registered gains, putting upward pressure on the state's household count. However, in most age groups the headship rate has

mainly decreased, albeit at a modest pace. This would tend to moderate the household projection somewhat.

To compute the projection, three scenarios were used. The first assumes that the changes in agespecific headship rates seen between 2000 and 2010 will simply carry forward through 2020. This is a conservative method, since the increase in economic activity should bring with it better economic conditions and with them, higher headship rates.

The second scenario uses a 5% increase in the headship rates among the two youngest adult cohorts (ages 15 through 34). This models the improvements that the state and national economies have demonstrated since the end of the Great Recession. Other headship rates were not changed, since most remained relatively stable between 2000 and 2010.

The last scenario is the most aggressive. It posits 5% increases among both the younger and oldest cohorts (15 to 24, and 75 or older). The increase among the youngest adult households was kept, assuming continued moderate economic improvements. The larger headship rate among older seniors was included assuming those changes present between 2000 and 2010 would continue and expand to reach slightly younger senior households. In addition, as the population ages, smaller households and larger headship rates can be expected.

Under the most conservative scenario, the state's household count should reach just over 4.1 million by 2020—an 8% increase. This represents a gain of about 300,000 from the 2010 Census figure. This compares very favorably to the increase of about 22,000 between 2000 and 2010.

More aggressive scenarios are also positive. Increasing younger adult headship rates pushes the projection up by about one percent, to nearly 4.2 million households. The most aggressive scenario shows a slightly higher household count. Using the increased headship rates yields gains between 1% and 1.6% higher than the most conservative scenario.

Map 1 displays how household growth is expected to vary geographically through the end of the decade. Under all three of the projection scenarios, the precipitous drop in households that Detroit experienced through the last decade is expected to change to moderate growth, ranging from 0.2% in the northeastern portion of the city, to over 26% in the Downtown/Midtown/Riverfront region (making this PUMA the third-fastest growing in the state). Flint is still on track to lose over 10% of its households between 2010 and 2020, but the rate of decrease is expected to slow by nearly one third. Older suburbs are also continuing to decline in household count, but like Flint, at much slower rates.

Continued gains are expected to occur in more exurban or suburban PUMAs around the state, in keeping with the long-term trend in the United States and Michigan. The two PUMAS expected to add the most households are Central and Northern Macomb County—the same leaders from the last decade.



#### Job Growth

The demand for housing, in addition to being related to growth in households and population, is also influenced by economic factors including employment growth. In areas where job counts are increasing, local housing markets may see an increased demand for dwellings. Conversely, regions that lose jobs also tend to lose population, as workers move out to take advantage of new opportunities elsewhere. Michigan has had a long history (as have other manufacturing-based economies in the United States) of dealing with cyclical downturns in the economy and related population outflows.

The Great Recession was no different in this respect than other episodes of job loss in the state. As the long-lasting decrease in manufacturing activity (centered in large disruptions in the auto industry) have lingered in Michigan, the state has lost good-paying manufacturing employment. Efforts to diversify Michigan's economy may just be coming to fruition in at least some areas of the state.

To investigate the patterns of job gains and losses around Michigan, Census information was aggregated to PUMAs. The data are from a Census website called On the Map, which disseminates ES-202 data down to the block level. Map 2 shows the geographic distribution of job change. It shows the number of jobs located within a PUMA, rather than the number of jobs held by the residents living in the PUMA.

Statewide, the number of jobs almost reached its pre-Recession level in 2015. Michigan lost about 470,000 jobs between 2005 and 2009 but gained back just over 400,000 between 2009 and 2015.

Recently, more PUMAs have gained in employment, but not in large enough amounts to wipe away the decade's losses. Between 2012 and 2015, only six PUMAs lost jobs. Four PUMAs gained over 10,000 jobs in that short period; three in Oakland County, and one in Wayne County's western suburbs. Even with these strong gains, only 25 of the 68 had more jobs in 2015 than in 2005.

There are eight PUMAs that had more than 100,000 jobs in 2015. These include locations in Kent, Ingham, Washtenaw, Oakland and Wayne counties. Of these, three (southeastern Kent, Ann Arbor and Southfield) have more than they did in 2015.

Recently, more PUMAs have gained in employment, but not in large enough amounts to wipe away the Great Recession's losses



#### Household Income

Economic activity, in addition to job growth, is an important factor in helping to determine levels of demand in a housing market. As income increases, demand for housing—both in terms of the number of units and their quality—increases. For individual households or families, rising incomes can mean that it is easier for an adult child to obtain their own housing, leading to the creation of a new household and the need for an additional dwelling unit. Or, a growing family with both increasing incomes and a need for more space could opt to purchase a larger home. Demand for seasonal units also increases with higher incomes.





Income varies both over time and between tenures. Figure 3 shows this data. A large decrease in household incomes occurred during the Great Recession, a decline that has not yet been fully reversed. Pre-recession, the state's overall median household figure was just under \$60,000 (in 2017 dollars). The largest decline during this period occurred at the height of the recession, when it fell to just over \$50,000 (again in 2017 dollars). Incomes remained steady through 2013, and steadily increased until they reached about \$55,000 in 2017. This is still lower than the state's 2005 median.

The Great Recession did not affect the difference between incomes of owner and renter households. Table 5 compares all three income trends—overall, owner and renter. The data show that owners have incomes over twice as large as renter households. The two move in tandem for the most part, following larger patterns in the economy. Despite this similarity, a few key differences between the tenures exist.

First, unlike owner households, renter income has exceeded its pre-Recession high. In 2017, incomes are about \$1,500 higher than they were in 2005. This may mean that higher-income renters are entering the market and not buying homes at present.

Second, despite not reaching their 2005 levels, owner household income has increased slightly faster than renter incomes have. Given the types of jobs that have proliferated in the wake of the recession, and their wage levels, this is not surprising. It does signal, however, that owners as a group might have a bit more flexibility in how much to spend on housing than renters would.

Higher-income renters are entering the market, and not buying homes at present. Map 3 shows the geographic distribution of household income in the state by PUMA in 2017. The general pattern shows differences between urban, suburban and rural places. Of the three, suburbs (especially those more distant from city centers) are growing most rapidly.



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In southeast Michigan, large income gradients exist. The highest median incomes in the state, near \$100,000 annually, are found in suburban and exurban Oakland County. The lowest, under \$30,000, are in Detroit. It is important to note that these extremes in income are present in the same metropolitan area. Median incomes are also low in Flint, which has incomes like many PUMAs in Detroit. In the Southeast, other exurban areas have high incomes, such as Livingston County, western Oakland County, western Washtenaw County, and northern Macomb county.

Outstate, a similar differential between center city and suburb exists, but not to the same extent. Suburban Kent County, along with Ottawa County, has higher median incomes than Grand Rapids. The southern half of the Lower Peninsula, outside of the smaller metro areas, has a higher income than the more rural northern half or the Upper Peninsula.

# Vulnerable populations

The above analysis covers the general markets in the state in terms of general demographic drivers of housing demand. In a statewide analysis, it is also important to discuss market trends among sectors of demand that have historically faced challenges in meeting their shelter needs. Michigan's racial groups are discussed first.

# Racial and ethnic patterns

Michigan's racial makeup has stayed relatively steady over the last 17 years. Table 1 shows the percentage of the population in the state represented by each major group.

	2017	2012	2007	2000
Total Population	9.96M	9.88M	10.07M	9.94M
% White Alone	78%	79%	79%	80%
% Black or African American Alone	14%	14%	14%	14%
% American Indian and Alaska Native Alone	1%	1%	1%	1%
% Asian Alone	3%	3%	2%	2%
% Native Hawaiian and Other Pacific Islander Alone	0%	0%	0%	0%
% Some Other Race Alone	1%	1%	2%	1%
% Two or More Races	3%	3%	2%	2%

Table 1

During this time, the White population in the state declined as a share of the total, as well as in absolute numbers. Change among the state's African American residents have been similar. The groups that have gained the most (in absolute terms, not necessarily in overall percentages) have been Asian and those who identify as mixed-race. In absolute numbers, the Asian population grew the most between 2000 and 2017, adding about 75% to its total. Those identifying as belonging to two or more races increased by over 50%, and those of other races increased by about 10%.

One aspect of the housing market that displays racial disparity is homeownership. Table 2 shows the trend in this statistic since 2000. Homeownership peaked in 2007—the start of the Great Recession—for all racial groups except "other race". Since then, the rate for whites declined three percentage points, while the figure for African Americans fell by nearly 10 points. Households headed by persons of two or more races saw decreases nearly as large as African Americans. Currently, all groups other than African Americans have a homeownership rate of over 50%.

	Homeownership Rate			
	2017	2012	2007	2000
White	77%	77%	80%	78%
Black or African American	42%	43%	49%	51%
American Indian and Alaska Native	64%	64%	65%	60%
Asian	57%	59%	61%	50%
Some other race	58%	53%	55%	49%
Two or more races	54%	54%	62%	57%

Table 2

The precipitous fall in African American homeownership rates is important to understand and reverse. Over the course of the Great Recession, impacts of predatory lending and job loss led in part to this situation. Outside of the obvious equity issues that result from so many people being negatively impacted by these events, the continued decline in homeownership among African Americans has limited that community's ability to create household wealth.

Map 4 displays the geographic pattern of African American homeownership. Higher rates correspond to areas of the state with higher rates of homeownership in general and seem to be correlated with higher levels of income especially in more suburban areas west and north of the city of Detroit.

In terms of major ethnicities, Hispanics seem to be recouping their pre-Recession homeownership rates. In 2017, about 59% of Hispanic households owned their shelter, up slightly from the 2007 figure. The continued decline in homeownership among African Americans has limited that community's ability to create household wealth.



# Seniors

The age distribution of Michigan residents reflects a rapidly aging population. Census data shows that the age cohorts with the largest rates of growth over the last 10 years have been comprised of residents over the age of 65. Table 3 shows the state's population divided between seven age groups—Preschool Age (four years and less), School Age (between the ages of 5 and 14), High School/College (aged from 15 to 24), Working Age (from 25 to 64), Young Retirees (from 65 to 74), Mature Retirees (from 75 to 84) and Eldest Seniors (aged 85 or more).

		Change			
	2007	2012	2017	2007-12	2012-17
Preschool Age	634 <i>,</i> 525	573,235	567,852	-9.7%	-0.9%
School Age	1,359,696	1,284,837	1,205,440	-5.5%	-6.2%
High School/College	1,430,199	1,413,320	1,364,837	-1.2%	-3.4%
Working Age	5,368,281	5,178,881	5,170,439	-3.5%	-0.2%
Young Retirees	654,668	790,669	986 <i>,</i> 269	20.8%	24.7%
Mature Retirees	453,232	444,751	488,153	-1.9%	9.8%
Eldest Seniors	171,221	207,551	209,209	21.2%	0.8%

#### Table 3

The data indicate that working age persons in the state are still the largest group, at just over half of the total in 2017. However, the pattern of the last few years shows expansion among older cohorts (especially young and mature retirees) and a moderate decrease in school-aged and college-aged individuals. This is important for the housing market, since a household's needs change as it ages; smaller housing units would likely be in higher demand, and continuing maintenance or upkeep of one's home becomes a larger issue. This could put pressure on the housing stock in some markets which might see a larger shift towards demand for smaller units, especially if their average unit size is larger than the new market is interested in.

Cost may be an issue as well. Seniors tend to have relatively low incomes and cannot afford the same amount of housing as a younger working household. Census statistics bear this out as well; Table 4 shows the level of median income in each of four broad age categories. Incomes are in real 2017 dollars.

The geographic distribution of median age is detailed in Map 5. Younger populations are generally located in central cities and a few close-in suburbs of Detroit, Grand Rapids, Lansing and Ann Arbor. The location of the state's universities plays a role in this distribution. Conversely, the highest median ages are found in the northern part of the state, especially in the northeastern portion of the Lower Peninsula.

	Median Income			Change		
Age of Householder	2007	2012	2017	2007-12	2012-17	
All Households	\$ 57,526	\$ 50,203	\$ 54,909	-13%	9%	
Householder under 25 years	\$ 26,998	\$ 21,766	\$ 31,464	-19%	45%	
Householder 25 to 44 years	\$ 62,987	\$ 53,919	\$ 60,447	-14%	12%	
Householder 45 to 64 years	\$ 72,316	\$ 61,780	\$ 67,001	-15%	8%	
Householder 65 years and over	\$ 37,806	\$ 38,037	\$ 42,097	1%	11%	

Table 4

Households headed by individuals aged 65 or more have the second-lowest level of income, at about \$42,000. However, due to income supports such as Social Security, this was also the only group to see increases between 2007 and 2012. Rising incomes were much more common among all age groups after the Great Recession.

While changes in income have been positive for seniors, it is also true that the lower incomes among seniors make the availability of appropriate, affordable housing units an important concern. This is especially true for senior renters, who may have difficulty affording annual rental increases on fixed incomes.

Lower income levels among seniors make the availability of appropriate, affordable housing units an important concern



#### Persons with Disabilities

Data from the 2017 American Community Survey shows that nearly 1.4 million persons in the state have at least one disability—about 14% of Michigan's residents. Ambulatory difficulties are the most common, affecting about seven percent of the population. Cognitive and independent living difficulties afflict about five percent of the population each. Figure 4 shows this data.

The incidence of disability is higher among some minorities—African Americans and Native Americans as well as the aged. About a third of persons aged 65 or over have at least one disability, and nearly half of persons over the age of 74 are similarly disabled.

The severity of disability also increases with age. About 14% of persons aged 65 or over have an independent living difficulty, but nearly a quarter of those aged at least 75 have similar issues. This, paired with lower incomes, imperil the ability of some in this group to afford both shelter and the level of care they need to live independently.



Figure 4

# Summary of Housing Demand Indicators

The descriptions of housing demand indicators lead to some important conclusions.

- Trends in demographic drivers indicate that, at least for the short term, demand should continue to be relatively strong in most markets of the state. This is especially true for portions of the city of Detroit, which is expected to see better household growth dynamics in at least a few regions of the city through 2020. If the economy continues to improve, demand for housing should remain strong.
- The state's economy has improved greatly from the Great Recession, but income and jobs data suggest that Michigan still has room for growth. Household incomes have not yet increased to pre-Recession levels; jobs still lag as well.
- While the general housing market improves, certain submarkets—both in terms of places and consumers—still face difficulties. Growing senior populations have their own set of housing challenges, from cost and affordability to independence and service provision. The uneven rates of homeownership among racial groups is a cause for alarm, as low rates lock out many state residents from effective asset appreciation. Finally, the wide distribution of disabilities among Michigan residents also increases the need for housing that meets the needs of the affected population. This includes both service provision to aid in independent living as well as universal design attributes to make units physically welcoming.

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# Current Housing Characteristics (Supply)

# Housing supply by type and tenure

As we have seen, demand indicators for Michigan's housing markets are improving after the Great Recession's real estate crash. The next section talks about the other half of market dynamics, supply. Many types of data can be used to analyze the units available (or potentially available) for consumers to use. These describe how a resident obtains the right of use to a unit, the age of the units, the types of building in which they are included, and other factors.

# Tenure patterns

An important consideration in the study of housing markets is how shelter is held by its users. There are two primary methods, owning and renting. Each method has advantages and disadvantages for individual households, and the decision to buy or rent a home is an important one having to do with lifecycle issues, income expectations, job availability, and other factors.

Homeownership has several advantages that it imparts upon households, including shelter provision and asset building. However, the existence of a strong rental market in most areas is important as well, since it can provide lower-cost shelter for those who need it. In addition, it is more suitable for new households, or residents that are more likely to be mobile due to employment or family circumstances.



High rates of homeownership have been common in the state for decades, often outstripping the national figures. This has historically been an effect of higher rates of compensation among the automotive-dominated economies of many regions of the state and a relatively large number of rural residents. The tumult that the Great Recession—and the problems that period caused in the automotive industry—led to an historic decline in homeownership, but recent trends seem to indicate that owning a home is again on the rise. Figure 5 shows the number of homeowners and renters in the state since 2005. Owner households started to decrease shortly before the Great Recession started nationally and continued declining between 2006 and 2014. Since then, however, their numbers have grown but are not yet to their pre-Recession high.

Rentership among Michigan households has moved in a mostly opposite direction. The number of renters increased through about 2014, plateaued for a few years, and have decreased since 2016. If economic conditions are stable or improve, one could expect homeownership to edge back towards its pre-2006 level.

The homeownership rate dips below 50% in only four PUMAs, three of which are in Detroit Regional differences in homeownership are shown in Map 6. There are two types of places in the state that have the highest homeownership rates. One is comprised of rural areas in the north and northeastern parts of Michigan. The other is in the exurban regions of the southeastern part of the state. Other rural and small-town-dominated regions have homeownership rates higher than the state average of 71% as well. The homeownership rate dips below 50% of the total in only four PUMAs, three of which are in the city of Detroit. Other major Michigan cities have rates close to parity between owners and renters.

#### Units per structure

The built environment is an important consideration in housing markets. Places that are dominated by one type of physical structure, like single-family detached buildings, will have a different "feel" than those whose housing is located primarily in multifamily structures. The types of housing one sees in neighborhoods has much to do with planning and zoning rules that differ from place to place, both between and within cities.

Different types of housing structure create different mixes of population density. Least dense settlements are often in neighborhoods of single-family detached stock. These are found in rural and suburban locales, with large lot sizes. Conversely, the densest neighborhoods have a significant proportion of residents that live in multifamily structures. These can include anything from row houses or townhomes to multistory multifamily buildings.

For regions that want to increase density, a structure type that has received much attention over the last decade or so is "missing middle" housing. This includes buildings that are attached single family units (like row houses) through structures with up to nine included units. This housing type fits into near-downtown neighborhoods that act as bridges between less-dense suburban zones and the downtown.

Housing structure type varies by tenure as well. In general, Michigan's owner-occupied stock is predominately comprised of single-family detached structures, while renter units exist in a larger number of building types. Figure 6 shows this situation.



Figure 6

Single-family detached dwellings are by far the most common structure type for owner-occupied homes in Michigan. As there are many more owners than renters in the state, it is also true that this structure type makes up a large majority of Michigan's housing units. Nearly 90% of Michigan's owner households live in these structures. Much smaller shares exist as "missing middle" units and mobile homes.



#### Map 7

Renter housing stock is far more varied but is also concentrated at the lower end of the density spectrum. The two major structure types in which rental is located (comprising about 68% of all rental units) are single-family detached and "missing middle" housing. Multifamily structures (those which contain more than ten units) account for about only one-third of rental units.



Map 7 shows the geographic distribution of missing middle housing among owners. The locations in which this housing type is more common include some inner-city locations, especially in Detroit, Ann Arbor and Grand Rapids. Many more suburban areas also have relatively high proportions, possibly related to the distribution of condominium development and associated townhome designs. Missing middle construction for owner-occupied homes is relatively rare in most of the rest of Michigan.

The distribution of renter households living in single-family detached housing is depicted in Map 8. A concentration of renter single-family detached stock stretches over both rural areas (where the density of settlement is lower) and cities like Flint, Detroit and Lansing. Suburban places have relatively low percentages on this measure, likely a reflection of how expensive single-family stock is to purchase and develop there.



#### Мар 9

Map 9 displays the distribution of mobile homes in Michigan. Both owner and renter tenures are combined in this graphic. The pattern shows that mobile homes tend to be more common in rural areas where land is relatively less expensive, and other types of more affordable housing alternatives are uncommon.

#### Age of Structure

For some consumers, older houses offer charm and interesting neighborhoods. Older housing can also be a reservoir of affordability, since older units tend to be less expensive to acquire than new ones. However, age also implies the need for upkeep and rehab, keeping some units out of the reach of prospective inhabitants who might not have the resources to do this effectively. Depending on their condition, older units could also add to neighborhood blight.

Figure 7 shows the decade in which the state's housing was built. Columns exist for overall stock, and owner and renter units.

The state's housing is old. Nearly half of it dates to before 1970, which means that about one of every two units is older than 50 years. Conversely, only about 12% of it was constructed in 2000 or after.

Nearly half of the state's homes date back to before 1970

Not much difference exists between owner and renter stock in terms of age, but there is a slight tendency for renter stock to be slightly older—about a quarter of owner stock was built after 1980, while 20% of renter stock is of a similar vintage.

The next series of maps shows where the oldest and newest stock is in the state in the owner and renter submarkets. Map 10 shows the distribution of the state's owner stock that was built before 1960.







The highest proportions of the oldest owner stock are concentrated in a few types of places. One is in Michigan's larger urban centers. Flint and Detroit are prominent by this measure, as are some of Detroit's closer suburbs. Moderate amounts are in rural and regional centers around the state; the southern Lower Peninsula and the entirety of the Upper Peninsula are examples of this.

Areas with the lowest concentrations of older owner stock are the more exurban parts of the state around its larger cities. This includes northern Macomb and Oakland counties near Detroit, Washtenaw County outside of Ann Arbor, and Kent County north and east of Grand Rapids. Ottawa County, eastern Genesee County, and the northwestern portion of the Lower Peninsula also have elevated percentages.

Map 11 shows where the newest owner stock has been built. One thing to notice is the small amount of stock this variable refers to; the highest concentrations show PUMAs that have more than 2.5% of their units built after 2013. The top category on the oldest stock map indicated a concentration of over 75%.



Geographically, new construction is concentrated in the suburban and exurban places near Detroit, Lansing, Ann Arbor, Kalamazoo and Grand Rapids. The northwest Lower Peninsula also has a relatively high percentage. Lower concentrations are found in many of the state's major cities (like Detroit, Lansing and Grand Rapids).

Renter units built before 1960 have a similar geographical distribution to older owner-occupied units. Map 12, which shows where older rental units are located, indicates that rental stock of this vintage tends to be in central cities around the state, especially in Wayne County and Flint. Relatively fewer older units are in the northern and western suburbs of Detroit, Ottawa and Kent counties, among other locations.

New for-sale construction is concentrated in suburban and exurban areas near Michigan's largest cities.



The geography of recently-built renter units (shown in Map 13) is different from where new owner construction has occurred. Higher concentrations of new units have been built in a few urban cores (Kalamazoo, Ann Arbor and Lansing in particular) as well as some suburban and exurban locales in southeastern and western Michigan. Fewer units were built in the northeastern portion of the Lower Peninsula, the eastern Upper Peninsula, and much of the Flint and Saginaw areas.



#### Number of Rooms in Housing Units

The number of rooms that a unit has is a handy proxy for its size. The Census measures this variable by asking respondents to report how many rooms their unit has. In this instance, rooms do not include bathrooms, but do count kitchens, bedrooms, and other living space. Larger units tend to be more expensive than smaller ones, and in general demand for different housing sizes varies with age and family cycle events (marriage, grown children leaving the home, divorce, etc.).

Figure 8 shows how unit size varies overall, as well as between owner and rental homes. In 2017, about 60% of all units had at least six rooms. Owner stock tended to have more, while renter stock was much smaller. In that submarket, just over 70% of homes had fewer than five rooms.

The geography of unit size among owner units is shown on Map 14. It highlights the difference between suburban and exurban regions with larger housing units on one side, vs. older urban and rural areas that have smaller stock on the other.

The median size of renter units is drawn on Map 15. The spatial pattern of housing unit size among renter dwellings is almost opposite that of owners. Among renters, larger apartments tend to be in older markets or rural areas where single-family attached units make up a larger share of the housing stock. Where more classic apartment units are common, the size of renter units tends to drop.



Figure 8





# Quality of stock: overcrowding, lacking plumbing

Michigan's housing stock is generally not plagued by widespread problems with physical condition or overcrowding. Nationally, measures of physical quality such as available plumbing or kitchen facilities, have improved over the last 50 years. Overcrowding is a different story, but even that indicator has shown improvement over time.

Figure 9 shows quality indicators by tenure in 2017. Overall, renter stock exhibited more housing issues than owner, especially with overcrowding (measured as the percentage of living units with more than one person per room). This condition is roughly three times worse in rental units than in owner units. Also, about twice as many rental units lack plumbing compared to owner units.



Figure 9



Map 16 presents the geography of overcrowded units in Michigan in 2017. Although there are a few missing data points, the general pattern of owners living in overcrowded units shows a bias towards older stock in some urban cores (Detroit, Lansing and to a lesser extent Grand Rapids) and older suburbs of Detroit.


Overcrowded renter units have a slightly different distribution, as Map 17 shows. A tendency towards larger cities is evident, but not universal. Some suburbs around Flint, Detroit and Grand Rapids have overcrowding issues as well.

## Costs

The previous sections of this study review major characteristics of both demand and supply. The data on demand shows that at least for the short to moderate term, growth should continue. It also demonstrates that heightened housing demand is not universally distributed across the state.

Supply, on the other hand, gives a more mixed picture. The number of units statewide has been increasing, but the pace of growth is very low and relatively few new units are being built. Existing homes, historically a source of affordable housing, are getting to the point where maintenance costs, amenities and other features may make them less attractive to buy and more expensive to occupy. Changes among consumers of housing, like smaller households or older residents, may also influence which types of units are in more demand than others.

These trends impact the price of housing. Pricing in this instance is broken into two concepts for the purposes of this analysis. The first is the price to acquire housing. Among owners, that would be the amount of money for which a house sells. A proxy of this measure is the value of housing reported to the Census through the American Community Survey. Prices are likely somewhat lower than values, but the different statistics should at least move in the same direction over time to a large extent. Renter household costs to acquire housing would be contract rent, or the amount of money due to the landlord as stipulated by a rental agreement, or lease. It is true that this is not the only cost due to a landlord to start occupancy since it does not include safety deposits, pet fees, concessions, or other considerations. Unfortunately, these other costs are not collected by the Census, so researchers are left with contract rents.

### Value

The value of owner-occupied housing has yet to reach its pre-Recession high. Figure 10 shows the trend in this variable since 2005 in 2017 dollars. Home values in Michigan started falling prior to the onset of the Great Recession by about two years and hit its minimum in 2013. That means the state's owneroccupied units lost value over about eight years, and only started gaining it back in 2014. In 2017, values were still about \$20,000 lower than at their 2006 peak.

The value of owneroccupied housing has yet to reach its pre-Recession high

Map 18 depicts the distribution of median values of housing around the state. The pattern it shows is reminiscent of many of the maps already presented in the demand and supply sections of this study. Highest median values tend to be in Southeast Michigan's suburbs and Kent County. Higher-than-median values are also found in the suburban territories of most of the state's major cities.

Conversely, lower-value stock can be found in most rural areas of the state as well as in most of Michigan's central cities. Detroit and Flint have the lowest values, while other urban PUMAs are closer to the statewide median. The only major city that has a different cost profile is Ann Arbor, where the median value is over \$600,000.



#### Figure 10

Value tends to vary by the characteristics of a home. While the American Community Survey doesn't describe value by the number of rooms, it does contain information on values by age of unit. As expected, new stock is valued more highly than older homes. Statewide, the median value for older homes (those built before 1960) is approximately \$94,000. For units built after 2013, the median is just over \$136,000, a difference of about 45%.

The statewide median value for older homes is about \$94,000; for units built after 2013, it is over \$136,000

Map 19 shows the value pattern among units built before 1960. Older homes with higher values are found in three types of places—suburbs in Southeast and Central Michigan, West Michigan (based around the Grand Rapids suburbs) and tourist-oriented areas in the northwestern Lower Peninsula and Lake Michigan Coast.

Central city locations are different from each other in this variable. Detroit has the lowest-valued older homes, but other major cities are different--ranging from a high in Ann Arbor to a low in Lansing.

The geography of the value of more-recent homeowner construction is a bit different. This data is displayed in Map 20. The highest value homes are again in suburban Southeast Michigan, specifically in the Troy-Birmingham-Bloomfield area. Other zones of high value new construction are in western Wayne County, Ann Arbor, southern Oakland County and Van Buren and Cass counties.

An interesting change in the pattern, however, has to do with increasing values in the Thumb, the I75 corridor up to Bay City (excluding the Flint suburbs), and the more rural areas near Kent County and the Lake Michigan shoreline. Lower-value new construction dwellings have a distribution concentrated in

many of the state's urban cores like Detroit, Lansing, Kalamazoo and Grand Rapids. The Flint suburbs have more moderately-valued homes as well, as does the northern part of the Lower Peninsula.



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#### **Owner** Costs

As discussed previously, pricing of housing entails two considerations; initial price and continuing cost. The level of continuing costs in the owner submarket depends very highly on whether a mortgage was used to purchase the home. In general, mortgages and other home loan products are expensive and a major portion of a homeowner's shelter expenditures. The other parts of this recurring cost are insurance, taxes, condominium fees and other items.

Map 21 shows where ownership through mortgages is more common across Michigan. While it is true that about 60% of homeowners have mortgage debt, the distribution of households that carry mortgages varies geographically. The pattern that the map shows is again reminiscent of other maps in this report. Higher incidences of mortgaged status tend to occur in suburban locales, the eastern portion of the Upper Peninsula and more rural areas of the Lower Peninsula. Lower incidences of mortgaged homeowners occur in the central cities of Flint and Detroit



Map 21



Figure 11

Figure 11 describes the trends in owner costs in Michigan since 2005. Three curves are depicted; the blue shows overall median costs and the orange and gray show the median cost for homeowners with and without mortgages.

Overall, the median level of ongoing cost to homeowners decreased from its high point of about \$1,250 in 2008. The issues around foreclosure and mortgage rates after that year caused this to fall, to just under \$1,000 by 2013, and slightly lower than this level by 2017.

Two major differences exist between median costs of owners with and without mortgages. The first is the obvious difference in cost level between the two. In 2005, costs among mortgaged owners were about three times higher than those without mortgages. By 2017, the difference was narrower, but mortgaged costs were still over double those of non-mortgaged householders.

The second is the trend over time in level. While mortgaged owner costs had noticeable declines during the period, owners without mortgages did not; their level of expenditure stayed constant through the period. Since these owners do not carry mortgage debt, the major components of their cost burden (local taxes, for example) are more constant year to year, and do not introduce as much variability as changing interest rate levels or other mortgage loan issues.

While costs for homeowners with mortgages noticeably declined after the Recession, but costs for unmortgaged owners did not.

The level of expenditure on monthly owner costs varies from

place to place. Map 22 shows the overall distribution of monthly owner costs around Michigan. A clear

difference exists between suburban locales and both rural and city center areas. Higher levels of expenditure in the highest-cost markets are at least double those of lower-cost markets. The highest-cost markets are in Oakland, Livingston, Macomb, Washtenaw and western Wayne counties. Lower-cost markets are mostly in the northern part of the state, as well as Detroit and Flint.





Map 23 shows the geography of mortgaged owner monthly costs. The three highest-cost PUMAs for homeowners with mortgages are Ann Arbor, Troy and Birmingham/Bloomfield. These three places have median costs over \$1,800 per month. PUMAs located near these places, as well as in southeastern Kent County near Grand Rapids, also have very high mortgaged homeowner costs. Lower costs are found in the rural portion of Northern Michigan, as well as Flint, several markets in Detroit, and Lansing.



The geographic pattern of median costs per month for homeowners without mortgages is revealed in Map 24. Much of the pattern is the same as for mortgaged homeowners, but a few additional PUMAs in other metro areas—Lansing most notably—appear in the top cost categories. The Upper Peninsula, as well as scattered rural PUMAs in the Lower Peninsula and the cities of Detroit and Flint are at the other end of the cost spectrum.

## Renter Costs

Renter housing also has costs associated with both acquisition and ongoing occupancy. The concept of gross rent signifies the occupancy cost and includes both contract rent due to the landlord as well as other necessary expenditures, including utilities.

Figure 12 shows how median rents have changed over time in Michigan (in 2017 dollars). Contract rents (the amount of money due to the landlord) is in orange, while gross rents are in gray.

Rent levels have not varied to the same extent as home values or cost. Two aspects of this data are important to note. The first is that rent levels have not varied to the same extent as home values or cost. During the entire 2005 to 2017 period, gross rents only varied between \$800 and \$850—a five-percent swing between the low point in 2007 and 2012 and the high in 2015.

The second aspect is that the non-rent portion of renter costs—chiefly utility costs—have not changed much over the period. The difference between contract and gross rents have remained between \$125 and \$150 over the entire period of study.



Figure 12



The geographic distribution of gross rent is depicted in Map 25. Three larger areas of higher renter cost are evident, all familiar from other housing indicators presented previously. The first is the outer suburbs of Detroit in Southeastern Michigan, especially Ann Arbor, Birmingham/Bloomfield and Troy. The second, at a slightly lower level, is in the Grand Rapids metro area in Kent and Ottawa counties. Finally, the northwestern sector of the Lower Peninsula has a similar median gross rent to the Grand Rapids region. Conversely, lower levels of gross rent are common in Northern Michigan and portions of the southwestern corner of the state. The city of Flint has a median gross rent among the lowest in the state, while most Detroit PUMAs have a somewhat higher level.

# Affordability

The notion of the affordability of housing stock ties the price of housing (either owner or renter) to levels of household income. Over time there have been varying ideas about how much income housing should cost the average household. For a long while, the standard was 25%. If a household spent more than that amount of income for housing, it was said to be shelter overburdened. Over the years, that indicator was changed to 30% of household income, which is the standard used in this report.

It is important for a community's housing stock to have a variety of price points available to its residents so that households at every income level can find safe, secure and modern shelter. A lack of appropriately-priced housing can cause several problems for a community, from increases in stress levels and other ill health indicators, to increases in homelessness. Difficulties in the employment market can also occur, as workers are forced to move further away from their jobs, leaving them dependent on longer commutes.

A lack of appropriatelypriced housing can cause several problems, such as increases in ill health and homelessness.

## Shelter overburden

Overall, the level of shelter overburden in Michigan has improved with increasing incomes earned by households after the Great Recession. Figure 13 shows the trend in overburden over time.

The blue line shows the level of overburden among all owners, while the orange curve represents renter data. Both curves decreased over time, and the 2017 figure is lower than those obtained during the Great Recession. In 2017, less than 20% of owners paid more than 30% of their income towards owner costs. This is down from a maximum of about 30% between 2006 and 2010.



Until 2017, over half of Michigan's renters were overburdened; currently that figure is 45% The renter data shows that a larger issue exists in affordability of renter stock. Until 2017, over half of all renters were overburdened. It fell below that mark for both 2016 and 2017 as the employment situation in the state continued to improve. Renter overburden also decreased less than owner overburden did during the same time and increased later in the Recession compared to owners.



### Owners: Mortgaged vs. Non-mortgaged

Since mortgage status implies different costs owed by the household, it is important to separate data on cost burden for owners by mortgage status. Statewide, about 23% of homeowners with mortgages were cost burdened in 2017. Map 26 shows how shelter overburden among mortgaged owners varies by geography.

Specifically, it shows the median mortgaged owner income spent on the

Nearly one quarter of homeowners with mortgages in Michigan are cost overburdened

median mortgaged owner housing cost. It is a general measure, with higher percentages showing areas where overburden is more prevalent. Two urban-based regions have much higher percentages; Detroit and Flint. The rural area north of Bay City also has an elevated proportion. Lower percentages are common in suburban and rural PUMAs along 196 between Muskegon and Livingston County.

Map 27 covers owner households without mortgages. In general, percentages of income spent on housing are lower, and overburden only effects 13% of non-mortgaged owners. Regions of increased spending are in older Detroit suburbs, the cities of Detroit and Flint proper, and rural areas north of



Grand Rapids. Lansing and Kalamazoo also have higher rates. On the low end are Grand Rapids and its western and northern suburbs.

## Renters

Among renter households, the statistic used to gauge housing affordability is the percentage of income spent on gross rent. Statewide, nearly 45% of renters are rent burdened.

The geographic distribution of rent burden is depicted in Map 28. PUMAs that have a high level of rental cost vs. income are numerous; about 1/3 of these regions have high levels of overburden. Specifically, areas of higher cost burden are found in Detroit and Flint. Median overburden is also high in the central portion of the Lower Peninsula. Overburden levels are particularly low in the far northern Detroit suburbs in Oakland and Macomb County, as well as Lapeer, eastern Genesee, St. Joseph and Branch counties.



# Affordability gap analysis

Another way to gauge the affordability of housing stock is to more directly compare the incomes of consumers with the cost of housing. Two analyses were conducted to do this. The first looks at both the number of households in each of the state's income quintiles and the supply of housing that is either affordable and available to them. The second assesses the number of units affordable to them regardless of whether they are currently available.

Quintiles divide a distribution into five equal parts. Households included in the first quintile (Q1) are comprised of the 20% of households with the lowest household incomes. Q2 includes the next 20% of households and can be labelled as households with lower-middle incomes, and so on, until Q5—the upper-income tier—is reached. Table 5 shows the highest and lowest incomes among households in each quintile, as well as the rents and purchase price points that would be affordable to their members. Affordable rents are assumed to equal 30% of income on a monthly basis, while owner prices are 2.75 times yearly household income.

		Quintile Limits				Affordable Rents			Owner				
Quintile		Lower		Higher		Lo	wer	Higher		L٥	wer	Higher	
Q1	Lower		Less thar	ו \$2	3,455		Less than \$587			Less than \$64,500			
Q2	Lower Middle	\$	23,455	\$	43,459	\$	587	\$	1,086	\$	64,501	\$	119,512
Q3	Middle	\$	43,460	\$	68,520	\$	1,087	\$	1,713	\$	119,515	\$	188,430
Q4	Upper Middle	\$	68,521	\$	107,864	\$	1,714	\$	2,697	\$	188,433	\$	296,626
Q5	Upper	\$207,865 or More			\$2,698 or More			\$296,629 or More					

### Table 5

The number of households in a quintile were compared to the number of units they can afford. These comparisons are made in two ways. One is computing the balance between household counts in quintiles and the number of units affordable to them. More units than households leads to a surplus situation, while the opposite condition identifies a deficit of affordable housing. For rental units, since the gross rent information includes renters that occupy their dwellings without payment of rent, the balance does not equal 0 like it does for owner-occupied homes. In addition, due to the nature of the data for rental units, the top two quintiles of income and rental stock prices were combined. The other analysis involves computing the percentage of all stock on the market that is affordable to a given income quintile. These statistics were generated both on a statewide basis and for PUMAs.

Table 6 shows the statewide figures for both owner and renter submarkets. The renter information shows that in terms of surpluses and deficits, households earning in the first (lowest) and fourth and

The largest deficits of rental housing are for households in the lowest and highest income fifth (highest) quintiles have large deficits of housing affordable to them. Of the two, the lowest quintile has the largest; there are approximately 200,000 households in the state without a correspondingly affordable unit. This situation explains some of the large levels of renter overburden that were previously discussed. The deficit at the higher end of the scale is sizeable, and points to some opportunity to construct higher-end units in

Michigan. It also suggests that many upper-income households live in apartments that significantly

reduce their shelter costs. In turn, construction of higher-end units could free up apartments that are more appropriately priced for less-affluent occupants.

	Rei	nter	Owner				
		Available and	Available and				
Quintile	Balance	Affordable	Balance	Affordable			
Q1	-195,970	19,392	91,619	19,506			
Q2	272,290	39,285	89,572	15,987			
Q3	8,316	9,878	98,009	12,668			
Q4	144 076	5 227	-34,084	7,216			
Q5	-144,070	5,227	-245,116	8,603			
Total	-59,439	73,783	0	63,981			

Table 6

Current market conditions make the creation of units leasing at very high price points difficult in most Michigan markets. A household in the lower end of the fourth quintile can afford a gross rent of about \$1,700 per month. In many regions, market conditions are not conducive to the construction of units with rents at this level on a large scale. The map of gross rents presented previously shows this— currently, only markets near central Oakland County are this expensive. These conditions likely exist in other locales as well, but at scales that may not make their creation feasible from either a market or financial perspective.

The balance in owner households shows surpluses at lower levels of income and increasing shortages as incomes increase. The largest surplus, just under 100,000 units, exists among Q3 households. Surpluses at Q1 and Q2 levels are slightly smaller. A deficit of about 34,000 units exists for Q4 households, and a much larger one (approaching a quarter of a million homes) exists at Q5 incomes. The least expensive home priced at Q5 levels is just under \$300,000, and the lowest income in Q5 is approximately \$107,000. Data presented earlier in the study show that the areas with median values this high are relatively few and limited to suburban and exurban regions of Southeastern and Western Michigan. New construction, which has a higher value in general, seems to be targeted at that general price point or higher, and has a broader geographic reach than existing housing valued similarly.

### Affordable Owner Stock Balance by Income Level

The following maps (29 through 33) describe the surplus or deficit of housing units affordable to each quintile. Much geographic variation exists. Much of it centers around the difference between the more quickly-growing suburbs that tend to be located on the outskirts of urban areas on one hand, and conditions in both major urban cores and in more rural areas on the other. However, there are differences between larger urban areas as well.

Map 29 shows the situation regarding Q1-affordable units around the state. Large deficits exist in more exurban areas around Detroit, Lansing, Flint and Grand Rapids. Ann Arbor and Grand Rapids also have shortages of stock priced at this level. Areas in the northwestern corner of the Lower Peninsula also have relatively few units of this type. Conversely, most rural areas in the state are running at least slight

surpluses, while the largest oversupply is concentrated in Detroit, Flint, Saginaw and the western half of the Upper Peninsula.

Q2-affordable owner stock, shown in Map 30, has a slightly different pattern. While the outer suburbs of Detroit, Ann Arbor and Grand Rapids still feature large deficits, the cities of Detroit and Flint also have fewer units at this price point than households that can afford them. Except for those two places, larger cities in Michigan display at least moderate surpluses. Rural areas again have a relatively large number of units priced in this range.

The distribution of homes affordable to Q3 households is shown in Map 31. Statewide, this is the price point with the largest amount of surplus. The largest unit surpluses are found mostly in suburban areas, but those closer in to major cities have somewhat higher numbers. Higher surpluses are also found in the suburban areas surrounding Flint, Lansing and Grand Rapids, as well as the cities of Kalamazoo and Grand Rapids. Deficits of housing priced at this level exist mostly in the cities of Detroit and Flint, but the Upper Peninsula and scattered rural and smaller-center PUMAs also register shortages.

The major axis of difference in housing prices in the state—growing outer suburbs vs. both the inner urban cores and rural areas—is very evident in the maps showing both Q4- and Q5-affordable housing (Maps 32 and 33). Statewide, both cohorts show shortages, and in the case of Q5 a significant one. The pattern is stronger in Q4, where much of the surplus is in exurban Detroit, Lansing and Grand Rapids. Q5 is different, in that the city of Detroit and Flint show either slight deficits or actual surpluses.

Taken together, the maps showing the stock balance affordable to the state's income quintiles underlines the recurrent theme of difference between types of regions in the state. Core metro areas tend to have surpluses of lower-priced stock and deficits of higher-priced homes. Suburbs, especially those farther from these centers, tend to have the reverse pattern. Rural areas (at least outside of tourism-centered areas) also tend to show deficits in higher-priced stock and at least small surpluses in lower-priced homes. This is important because it underlines how hard it is for lower-income households to find appropriately-priced stock in areas that hold economic opportunity.

In addition, it would be a mistake to assume that the surpluses of lower-priced housing stock in both urban and rural areas are necessarily a sign of affordability. As we shall see later in the study, the less-expensive stock tends to be older. This can cause issues with cost, as households may need to spend large sums to modernize their units.

It is a mistake to think that surpluses of lower-cost housing are necessarily a sign of affordability.









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Map 33

## Affordable Rental Stock Balance by Income Level

Maps 34 through 37 show the same information for renter households. The balance between Q1affordable rental stock and households is depicted in Map 34. The pattern shows very high deficits— 10,000 or more units—in Western Detroit, and significant shortfalls in other portions of that city, along with Grand Rapids, Warren, the Ypsilanti area and Pontiac. Smaller deficits tend to be associated with rural areas, as well as most other major Michigan cities.

Map 35 displays the situation with Q2 units. Strong surpluses of this stock exist in Grand Rapids, Detroit and Lansing, as well as Ypsilanti, the southwestern Grand Rapids suburbs, and other scattered PUMAs. Smaller surpluses tend to be found in more rural areas around the state, as well as exurban territory.

Map 36 shows that surpluses of Q3-affordable stock are concentrated in exurban Detroit, Lansing and Grand Rapids. These are also the areas in Map 37 that show the largest shortages for Q4 and Q5 rental units.

The picture drawn by this data shows a similar pattern to the owner stock balances, in that in many respects the urban/suburban/rural split is evident. Also, the surpluses in the lowest quintile are again likely overstated, as the units in this group tend to be old, and perhaps not well-suited to meet the needs of modern households.

The deficits for the most-expensive stock are also perhaps not as clear-cut as the numbers suggest; as incomes increase, households tend to opt for homeownership rather tha renting their shelter. In that case, building more expensive units may not work well in the marketplace, depending on local conditions.

As incomes increase, households tend to own homes.





Map 35





## Owner Stock Available and Affordable by Income Level

The second broad analysis of the amount of stock per income group is to determine the amount of currently-marketed homes (either owner or renter) that is affordable to each income quintile. Since the previous information on stock affordable didn't consider whether it was on the market, these maps show a more accurate picture of the environment faced by households currently looking to acquire housing. Maps 38 through 42 show this information.

Map 38 shows large concentrations of owner stock available and affordable to households in Q1. Most homes for sale in much of Detroit and Flint are in this category, as are homes in eastern Ottawa and more rural portions of Kalamazoo County. Low concentrations are in more affluent suburbs of Detroit and Grand Rapids, as well as the cities of Kalamazoo, Ann Arbor and Grand Rapids.

High levels of Q2-affordable for-sale homes are found in several PUMAs around the state, as Map 39 displays. They include urban areas (like the central portion of the city of Detroit), other major cities (Lansing and Grand Rapids), smaller centers (Warren and Saginaw), and rural places (PUMAs between Grand Rapids and Lansing, as well as two Northern Michigan regions). In this instance higher levels are not as concentrated geographically as lower values, which are chiefly found in suburban areas near Grand Rapids, Lansing, Ann Arbor and Detroit.

Units affordable to Q3 homebuyers (Map 40) show a slightly stronger geographical pattern tied to suburbs than the stock affordable to lower-income quintiles. Highest concentrations are found in the Pontiac and Roseville/St. Clair Shores area; slightly lower levels are common in Grand Rapids, Ann Arbor, and other areas.

Many PUMAs in the southeastern portion of the state have relatively high levels of owner stock affordable to Q4 consumers. This data is shown in Map 41. Most of these are in more suburban locales around Detroit and Lansing. The city of Ann Arbor had a high percentage available at this price range. Lower values tended to be in or near larger cities, as well as in more rural areas.

The last map in this series (Map 42) to the right shows the distribution of stock affordable to Q5 households. Large majorities of homes for sale in northwestern Oakland County, southeastern Kent County and western Ottawa County are in this price range. Other PUMAs that have a large amount of the highest-priced stock are in southeastern Oakland County, Allegan County and the western part of the Upper Peninsula.

The pattern of for-sale homes using this data show that lower asking prices are often available near city centers, where stock tends to be older. Areas with newer stock, or regions that have attracted jobs and new households over the last few years, tend to have higher-priced units on the market. This situation tends to limit where lower-income households can purchase shelter, and often reinforces patterns of affluence that have existed for decades in the state.

Areas with newer stock tend to have higher-priced units, which limits where lower-income households can purchase shelter.










## Rental Stock Available and Affordable to Different Income Levels

Of the 74,000 rental units that were marketed in 2017, 58,000 were affordable to households in the lower two quintiles, with units affordable to Q2 households (corresponding roughly with LIIHTC income levels) accounted for nearly 40,000 units. Of the balance remaining, Q3 comprised the largest group of about 10,000.

Map 43 shows the Q1 situation. Relatively few of the rental units on the market in 2017 were affordable to Q1 households in northwestern Michigan, the greater Grand Rapids area, Kalamazoo, Lansing, Ann Arbor, Ypsilanti, the Bay City -Midland area, St. Clair County, and much of Wayne, Oakland and Macomb counties. Conversely, high percentages of rental stock in the Thumb, southwest Michigan and Monroe counties were within this price range.

Q2 rental stock was more prevalent in suburban or small-city locales, as Map 44 displays. Many PUMAs in central and southern Macomb County had large proportions of this stock, as did other places in suburban Detroit, the Lansing area, and the northwestern Lake Michigan shoreline counties. Cities like Kalamazoo and Lansing also had relatively large percentages of stock renting in this range. Conversely, areas with relatively low numbers of similar units included both more affluent suburbs (western Wayne and Oakland counties, for example), larger cities like Flint, Ann Arbor and Pontiac, and rural areas in the Upper Peninsula and Michigan's Thumb.

The amount of stock renting for prices affordable to Q3 was relegated to fewer areas in the state. Map 45 shows this data. Large percentages of stock fell in this category in only six of the state's PUMAs, including southern Kent County suburbs of Grand Rapids, much of southeastern Oakland County, and a portion of northeastern lower Michigan. Small percentages were common in most other places, especially in the western part of the Lower Peninsula. Most of the state's major cities had moderate amounts of stock at this price except for Detroit. Four of the city's six PUMAs had very low concentrations of stock at this price.

The most expensive rental units have a limited geographic distribution. Map 46 shows the spatial pattern of the most expensive units on offer. It was even more limited in its geographic availability. Urban and suburban locales tend to have higher percentages of stock priced at this level, including the far western portion of Wayne County, the cities of Grand Rapids and Ann Arbor,

scattered suburbs of Detroit in Wayne and Oakland counties, and two areas in outstate Michigan: the eastern Upper Peninsula and the Ionia-Belding-Greenville area.

Available and affordable rental units tend to echo the geography of similar owner units, except for a more rural bias in the distribution of the lowest-priced available stock. The same caveat exists for rentals and lower-priced stock, however. Many of these units tend to be older, and therefore more difficult for households to occupy. The parameters of this issue is explored more deeply in the next section of this study.









## Current portfolio of "affordable" units by location

Data presented in this report implies strongly that a large proportion of the state's residents have ongoing housing affordability issues. These are more strongly felt among renters, about a quarter of whom pay at least half of their income for shelter costs. Data on housing affordable to different income levels points to some stark shortfalls in the necessary number of units available, especially for lower incomes.

This is an interesting finding, since the data on the balance of affordable units across the state point to strong surpluses in lower-priced stock. The likely explanation for this is the quality of the stock on offer at lower price points; it would tend to be smaller and older, and in neighborhoods that have fewer economic and educational opportunities. This contrasts with other areas of the state with more recently-built stock.

Affordable housing can be divided into two groups: units with low rents but no subsidy, or units with deed restrictions or other aid that mandate lower rents. In order to meet this need, two approaches to affordable housing exist. One concentrates on the housing stock which is inexpensive due to age or condition, without having to engage governmental or other supports to write down rents. This is known as naturally occurring affordable housing, or NOAH. The other is the creation of deed-restricted affordable housing, which generally uses some resource from federal or state sources, such as the federal departments of Housing and Urban Development, Agriculture and the Treasury, or Michigan's state

housing development authority. The funding sources used include LIHTC, HOME funds, Rural Development programs, and MSHDA funds, among others. In these projects, rents are limited by an agreement between the owner and the agency providing the financing.

Another type of assistance, given directly to renters rather than to developers, is the Housing Choice Voucher. With it, a tenant can choose their dwelling, and use the voucher to cover the difference between the street rent charged by the landlord and 30% of a tenant's income. Housing Choice Vouchers can make it easier for low-income tenants to take advantage of educational and job opportunities in higher-cost areas, if they are able to find housing of high-enough quality and a landlord willing to take the voucher.

## "NOAH"

It is difficult to say how many naturally-occurring affordable units there are in Michigan, as usually only an upper cost limit on this housing's rent is given—generally \$800. This likely varies from place to place. To link with this literature, it is the standard used in this analysis.

Map 47 shows the distribution of units that rent at this threshold. The areas with the lowest concentrations of this housing tend to be suburban locales, as well as the central cities of Kalamazoo, Lansing and Ann Arbor. High concentrations, over 60% of all units for lease, are found in both urban areas (like Detroit and Flint), smaller population centers like Saginaw and Warren, and rural areas across the state.



Map 48 on the right shows housing that is for sale for under \$100,000. This is roughly the top limit for the first tercile of sales price in the state—the value that divides home prices into thirds. This value is picked because it likely describes an average starter home—small size, modest amenities and an older floorplan. Not surprisingly, areas with older housing stocks score well on this indicator. This includes Flint, Detroit, and some rural areas in the state as well, such as the Thumb. Lower concentrations of lower-priced housing are found in the suburban belts around Detroit and Grand Rapids, as well as the northern Lower Peninsula.

In Michigan, the characteristics of lower-priced housing, both in terms of renters and owners, is an important consideration to make in assessing whether the state has enough affordable housing to meet its resident's needs. For example, the information presented above for dwellings affordable to lower income households show a large deficit for Q1 units, but a large surplus of Q2 units. This data bolsters the observation made throughout this study that a great deal of overburden exists among renter households in general, and lower-income renters. A similar situation exists among owner households of modest means.



Part of this seemingly contradictory situation is the attractiveness of the lower-priced stock to prospective owners and renters. A strong relationship exists between price and quality, measured in terms of size and age. Less-expensive units tend to be smaller and older, as the set of charts below shows. Both conditions limit a unit's ability to meet the needs and expectations of the households occupying them.

The charts on the next few pages cover the situation for both rental and owner units. Two price categories are shown. The first refers to naturally-occurring affordable housing—for rentals, these are identified as dwellings renting for less than \$800. Owner units in this group are valued at less than \$100,000. Non-NOAH homes are above these price points.

Data for unit age are in Figure 14. The age of the unit is very much related to its NOAH status. For example, pre-1950 housing is comprised of about 190,000 units priced at NOAH levels, and only about 60,000 at non-NOAH levels. Just over a quarter of NOAH rental housing is of this vintage. Post-2000 units are split nearly evenly between NOAH and non-NOAH, but only about 8% of NOAH units were built that recently. This compares to about 14% of non-NOAH units.





Figure 14

Unit size, as measured by the number of bedrooms per unit, is the subject of Figure 15. About ¾ of all NOAH renter units (approximately 534,000) include two or fewer bedrooms. At the same time, about 59% of non-NOAH units (251,000) are that size. Owner NOAH homes are even more concentrated in smaller units. About a third, or 287,000 owner homes, have two or fewer bedrooms. About 13% of non-NOAH homes are similarly-sized.







# About 50% of NOAH units have overburdened tenants.

Figure 16 refers to the level of overburden among residents of NOAH and non-NOAH units. Given that these dwellings are supposed to be affordable, it would follow that very low levels of overburden would exist in them. However, the data show that this is not the case; residing in NOAH units does not

guarantee low levels of overburden. On the contrary, about 50% of rental NOAH units have overburdened resident households. Half of that total are severely overburdened. The situation among owner households is very similar; rates of overburden between NOAH and non-NOAH households are approximately the same, with slightly higher rates of overburden among NOAH owner residents. Again, if these units were affordable, one could reasonably assume that overburden rates should be lower than they are.





Figure 16

## Deed-restricted affordable units

The data in Table 7 shows the number of deed-restricted affordable units and Housing Choice Vouchers in existence in Michigan as of 2017. Deed-restricted affordable housing refers to units that have some type of income requirement for tenants that is enshrined in the project's regulatory agreement. Monies used to construct these units are given to developers in exchange for legally-binding agreements that guarantee the continuing affordability of the project. Some double-counting is likely, especially between the HUD and LIHTC figures; often, LIHTC is used to refinance and rehab HUD units.

Programs	# Units
Public Housing	21,439
Housing Choice Vouchers	61,421
Mod Rehab	219
Project Based Section 8	55,964
RentSup/RAP	171
S236/BMIR	2,630
202/PRAC	3,229
811/PRAC	538
All HUD Programs	145,610
All LIHTC	88,262
Low-Income LIHTC	74,279
USDA Section 515	7,651
USDA Section 515 with Rental Assistance	3,725

## Table 7

There are about 228,000 units of affordable housing and housing choice vouchers in Michigan. Between all these sources, there are approximately 228,000 units of affordable housing and HCV in the state. While this sounds like a large number, it equates to about 41% of all the overburdened rental households in the state. In addition, waiting lists to receive a voucher or move into a deed-restricted unit are very long, often many months or years. Finally, the geographic distribution of these units is not uniform, leaving

some areas of the state with fewer affordable units to meet their needs.

The spatial distribution of deed-restricted affordable housing is shown in Map 49. A distinct and familiar pattern is depicted, with suburban areas having relatively few deed-restricted units, and core city locales having more. Much of the state's rural and regional centers tend to have a moderate amount of this housing available.



A more targeted way of assessing whether a given area has a good supply of deed-restricted affordable housing is to compare income with supply more directly. Most deed-restricted programs target households earning less than 80% of AMI, an income level that is roughly equivalent to the first two income quintiles presented earlier. Map 50 shows the distribution of deed-restricted units per 100 households in the first two income quintiles. The suburban/urban/rural splits are still noticeable, but more of southern rural Michigan registering as slightly above average.

Housing Choice Vouchers represent a different path towards affordability. Unlike deed-restricted units, where rental subsidies are tied to a physical address, HCVs travel with the tenant. If a landlord chooses to participate in the program, and their unit meets housing quality standards, a tenant can reside in an apartment of their choosing. Income targeting for this aid is at 50% of AMI for most but can go up to 80% of AMI if a household meets certain requirements. Vouchers cover the cost difference between 30% of resident income and the rent charged by the landlord.

HUD maintains data on HCV use, and it finds that approximately 61,000 vouchers are currently in circulation in Michigan. Their geographic distribution is shown in Map 51. In order to control for



population differences, the number of HCVs per 100 households is shown. HCVs seem to be more concentrated in larger cities than deed-restricted housing is. The cities of Grand Rapids and Detroit have high levels of HCV use, as do Lansing, Flint and Saginaw to a lesser extent. Conversely, very low concentrations are in the fast-growing suburbs and exurbs in Southeast Michigan and eastern Ottawa County. Most rural areas in northern Michigan also have lower levels of HCV use.

Map 52 shows a more targeted way of gauging intensity of HCV use. It compares the number of households in Q1 and Q2 of the income distribution (roughly comparable to the income limits used for HCVs) to the number of vouchers in use. The high concentrations in Detroit, Grand Rapids and Lansing are still evident, as are low levels of use among lower-income households in suburban locales near Flint, Detroit and Grand Rapids.







Map 52

# Observations and Conclusions

Taken together, basic trends in all parts of the state's housing markets point to marked improvement since the end of the last recession. It is important to note that, as 2019 opens, the United States is in its 115<sup>th</sup> consecutive month of economic expansion--the second longest since this recordkeeping started. At this point, the next downturn in the economy is probably going to happen sooner rather than later. Partly because it was hit so hard from the last recession, and partly because much of the projections of continued strength in housing markets rely on continued economic recovery, Michigan is at risk of seeing many of the positive trends described earlier slow or reverse.

Several challenges exist to the state's housing market, in addition to continued forward progress on economic recovery and improvement. Given the high amount of overburden among renters, for many Michigan residents shelter costs stand in the way of economic security. This situation exists even in the face of numerical surpluses of "affordable" stock, including NOAH units.

However, these surpluses are illusory. NOAH units are older and smaller than the Michigan's overall housing stock and are not suitable for most potential residents. In addition, households occupying NOAH units are generally more likely to be overburdened, paying more than they can for a likely obsolete dwelling.

The uneven geography of housing market strength in Michigan is a challenge. Another challenge is the uneven geography of housing market strength around the state. Looking over the maps in this report, three general areas of high performance can be seen, measured in terms of price, ongoing cost, quality and other factors.

The first is the belt of exurban suburbs at the far western edge of the Detroit metro area, including Washtenaw, western Wayne, Livingston, Oakland and Macomb counties. This region also includes Ann Arbor, which has been one of the stronger housing markets in the state over the last few decades. These places have long been noted as destinations for households moving from older, more central-city locations.

The second region of strong housing market performance is centered on Grand Rapids. Like Southeast Michigan, the strongest performers are outside of the center city, concentrating in southern Kent and Ottawa counties. Finally, especially in terms of cost, the region around Traverse City is included in the list of high-performing PUMAs, based on tourism centered on its natural amenities.

At the other end of the spectrum, several PUMAs have exhibited little change since the Great Recession's end. These are mainly concentrated in Detroit and Flint. Often, rural areas have similar trends to these two cities, in terms of the age, size and cost of dwellings.

Aging populations are an important influence on the housing markets of rural areas, as the median ages of those regions are much higher than in Michigan's cities. This fact, when coupled with the age of the housing stock in rural Michigan, calls for some action to ensure that seniors can live in homes appropriate to their income and lifestyle.

Considering these issues, it is useful to explore the following additions to current MSHDA activities, in order to support housing markets across the state:

• Discovering methods to expand the supply of housing affordable and available to households earning less than 50% of AMI around the state. The data point to shortcomings in the stock priced to this segment of households. Rehab of these units could prove effective, depending on their condition and the necessary level of expenditure to bring them to market norms. Creation of housing at all price points could act to expand the choices for less-affluent consumers as vacancy chains are created. In some markets, this could facilitate the filtering down-market of formerly-expensive units.

In any case, the creation of additional lower-priced stock is likely going to grow in importance if, as expected, the long-running economic expansion starts to cool.

- Exploring aspects of senior housing. This is important since many elderly households need housing solutions geared towards their lifestyle (limited savings due to changes from pensions to 401K and other savings plans, longer lifespans with increased need for supportive services, higher housing costs vs. incomes, unit amenities and layouts, etc.). The market is generally not delivering these units fast enough to meet demand, and as a result many of these residential choices are prohibitively expensive for those who need them.
- Enlarging the footprint of the Authority in rural areas. Contrary to conventional thought, it might pay dividends to study how rural housing needs mesh with urban ones and create policies that would benefit both at the same time. Many of the same basic issues are operative in both types of communities—attracting new jobs and new residents, finding creative ways to deal with older stock, retention of younger workers, and other obstacles to growth.
- Finding ways of more effectively marketing and distributing owner rehab funds. If the volume of these efforts could be expanded, issues stemming from Michigan's relatively older housing stock could be dealt with more effectively. Targeted home rehabs designed to maintain and improve mobility as time passes could make aging in place an option for seniors wishing to remain in their homes and neighborhoods. It would also eventually increase the amount of safe and modern starter homes for purchase.

Now that we have some distance from the events of the Great Recession, it would be helpful to conduct a **review of programs put in place to ameliorate the worst of that period's effects on affordable housing.** No one is expecting the next downturn to be as severe, but it must also be said that the resource base to act in an economic downturn is different from what it was 10 years ago. What could the state's housing stakeholders do to stabilize important aspects of the affordable housing finance industry in Michigan, and what tools would be needed from the Federal government?