



# A HOUSING HURDLE

DEMOGRAPHICS DRIVE NEED FOR MORE HOMES

DALE KNAPP, DIRECTOR



# Executive Summary

## A Housing Hurdle

Since 2010, the aging of the oldest baby boomers into their retirement years has been a major factor in Wisconsin's current labor shortage. As the younger half of that generation ages past 65 and out of the labor force during 2020-2030, these shortages will likely worsen. Perhaps equally as important as that in 2030, the number of housing units occupied by residents 65 or older will increase by 80% compared to 2010. As a result, during this decade Wisconsin will need to build nearly 140,000 housing units to accommodate its under 65 population.

That number assumes migration patterns during 2020-2030 are similar to the prior decade, resulting in a decline of 130,000 in the state's prime working age population. Addressing this decline with increased migration will lessen worker shortages, but it will also compound Wisconsin's housing challenge by adding another 60,000 to 72,000 housing units to the already needed 140,000. That would bring the total need to 200,000 or more, which may prove difficult to achieve due to several headwinds.

First, new housing requires a lot to be created. In the early 2000s, communities in Wisconsin were creating 12,000 to 21,000 lots per year. However lot creation declined significantly in the second half of the decade due largely to the housing-led Great Recession. In 2010, fewer than 1,300 lots were created. Since then lot creation has slowly increased. However, the 5,340 lots created in 2020 is well below the number needed annually to achieve the housing demand in 2030.

While Wisconsin has affect the number of lots created, it does not have control over the second headwind: rising interest rates. Home construction is very interest-rate sensitive and mortgage rates have been rising rapidly since last spring due to the Federal Reserve's monetary "tightening." As a result, building permits for new home construction nationally have fallen significantly. While we do not know what the future holds, a look at previous housing cycles indicates that the decline in home building could last for two years or more with new home construction falling 60% to 80% from its recent highs. That would make it very difficult to build the number of housing units the state needs.

Longer term, the state may have a very different problem—too much housing. The state's under-18 population is the smallest it has been in decades. This means fewer young adults looking for housing over the next 20 years. After 2030, some of the homes of the older baby boomers will be back on the market. After 2040, that number will grow. Depending on how many homes are built over the next seven years to meet Wisconsin's current housing needs, we may begin to see housing surpluses in some parts of the state.



# A Housing Hurdle

## Demographics Drive Need For More Homes

Dale Knapp, Director

Wisconsin is facing historic demographic challenges, many of which have been explored in previous studies by Forward Analytics. Our October “*Moving In*” report highlighted the state’s growing worker shortage due to a combination of the retirement of the baby boomer generation over the next eight years and insufficient migration into Wisconsin from other states. The bottom line from that study: Unless migration patterns improve, the state’s 25-64 year old population will decline by nearly 130,000.

One might expect that a reduction of that magnitude would help to ease the shortage of affordable workforce housing that has been documented in several recent studies.<sup>1</sup> That is not the case. Wisconsin’s under 65 population will likely continue to face a housing crunch.

The primary reason for this seeming contradiction is that while the vast majority of baby boomers will exit the workforce as they age past 65, they will not be leaving their homes. Like generations before them, they will continue to live in their current home or maybe move to a smaller one for another 15 years or more. Effectively, they will be reducing the housing stock available for those in their prime working years. New housing units will need to be built for the young adults who will enter the workforce during this decade.

The analysis in this study shows that Wisconsin will likely need to build approximately 140,000 new housing units between 2020 and 2030 to

<sup>1</sup> See Wisconsin Realtors Association, “*Falling Behind*,” September 2019 and Wisconsin Southwestern Regional Planning Commission, “*Regional Housing and Workforce Study for Southwestern Wisconsin*,” April 2019.

compensate for the loss of workforce housing due to an aging population. If the state can attract more people of prime working age from elsewhere to solve its 25-to-64 year old problem, the number of units needed will grow significantly.

This urgent need for housing in the short and medium term may also create a very different challenge longer term. Wisconsin’s youth population has been shrinking for two decades. Fewer children today means fewer young workers in the future and a shrinking demand for housing by 2040 and beyond. That is about the same time that many of the baby boomer homes will begin coming back on the market, possibly leading to an excess of housing.

### A CHANGING POPULATION

The amount and type of housing needed in a city, county, or state depends on population in several ways. First, the number of units depends largely on the size of the adult population since it is adults who own or rent housing units.

Second, the age mix of the adult population also affects housing demand. Residents who are 75 or older are about 3.5 times more likely to be living alone than those who are 35 to 64 years of age. With fewer adults per household, an older population needs more housing units compared to a similarly-sized middle-age population.

The type of housing needed (rentals, single family homes, or condominiums) depends on the age mix as well as the number of children. Individuals 45 or older are much more likely to be homeowners than their younger counterparts. Areas with older populations will generally need fewer apartments for current residents but may need to build more to attract younger populations.

Wisconsin's 65-or-older population is expected to increase by 334,000 by 2030, while the number of adults under 65 will fall by 130,000.

The number of families with children can also affect the type of housing needed. Generally, families with children desire more space and are more likely to be homeowners than renters.

*Coming Demographic Changes*

Wisconsin's 2020 adult population by age is shown in Table 1. Note that among the 10-year age groups, the most populous is the 55-to-64 cohort. This is the younger half of the baby boom generation that will be aging past 65 during this decade. The entire baby boom generation (ages 55 to 74) totaled more than 1.5 million residents in 2020, or 32% of the state's adult population. For perspective, the number of 55-to-74 year old residents in 2000 (the prior generation) totaled just 813,000.

More important for this study is the projected change in population between 2020 and 2030.<sup>2</sup> Wisconsin's adult population is projected to grow

<sup>2</sup> The estimates were generated under the assumptions that births, deaths, and migration patterns during 2020-2030 are similar to the 2010-2020 patterns. The estimates account for the "excess" deaths associated with Covid-19 in 2020 and 2021.

Table 1: Wisconsin's Adult Population By Age, 2020 and Projected 2030

Age Group	2020	2030 est.	Change
Under 35	1,297,687	1,290,686	-7,001
35-44	735,843	752,796	16,953
45-54	718,170	728,273	10,103
55-64	837,245	687,130	-150,115
<b>Under 65</b>	<b>3,588,945</b>	<b>3,458,885</b>	<b>-130,060</b>
65-74	618,102	736,120	118,018
75+	405,253	621,258	216,005
<b>65+</b>	<b>1,023,355</b>	<b>1,357,378</b>	<b>334,023</b>
<b>Total</b>	<b>4,612,300</b>	<b>4,816,263</b>	<b>203,963</b>

by nearly 204,000 over the decade. That increase is less than the 265,000 added in the 2010s and the 353,000 increase during 2000's.

Ten-year changes will vary widely between age groups. By 2030 all of the baby boomers will be 65 or older. As a result, that part of the adult population is expected to grow by more than 330,000. At the same time, the state's under-65 adult population will likely decline by approximately 130,000. Small gains among those 35-54 will be swamped by a decline of 150,000 in the 55-64 year old cohort.

The modest increase in the number of adults combined with the shift in the age structure of the adult population is what will drive the need for additional housing.

**WISCONSIN HOUSING STOCK**

In 2020, the number of housing units in Wisconsin totaled just over 2.7 million according to the U.S. Census Bureau. Of that, 2.4 million were occupied. These are a combination of single family homes, condominiums, duplexes, and apartments. Of the 300,000 that were unoccupied, 58% were seasonal units, 12% were for rent, and the remainder were either for sale, recently sold or rented, or vacant for some other reason.

To understand the likely increased demand for housing between 2020 and 2030, trends in occupied housing are explored. The Census Bureau reports these units by the age of the "householder," who is the person "in whose name the housing unit is owned or rented."<sup>3</sup> Thus, the age of one of the adults in the home is known but not the age of any other adults occupying the unit.

Table 2 on page 7 shows occupied housing units, from 1990 through 2020. In addition to total occupied housing, it displays housing by the age of the householder. Several takeaways from the table are important.

First, 10-year increases in occupied housing units have slowed over the past 30 years. From 1990 to 2000, the number of units grew by more than 262,000. During the ensuing two decades, growth slowed to 192,000 and 151,000 respectively. These changes are partly reflective of the slowing growth in the state's adult population during these years. They also reflect the signif-

<sup>3</sup> For housing units that are owned or rented jointly, one adult is designated as the householder. Dormitories, bunkhouses, and barracks are not included in these figures.

Table 2: Wisconsin's Occupied Housing By Age, 1990-2020 (Baby Boomers Highlighted)

	1990	2000	2010	2020
Under 35	500,879	471,068	493,591	481,400
35-44	398,566	477,146	418,528	390,308
45-54	267,718	419,359	498,140	426,054
55-64	239,241	268,480	384,409	488,851
65-74	226,858	223,079	234,285	364,727
75+	188,856	225,472	247,933	277,021
Total	1,822,118	2,084,604	2,276,886	2,428,361
Change		262,486	192,282	151,475
65+ share	22.8%	21.5%	21.2%	26.4%

ificant slowdown in housing construction during and after the 2008 Great Recession.

Second, due to the size of the cohort, the number of housing units occupied by baby boomers (highlighted in the table) is very large. In 2010, baby boomers were 45 to 64 years of age and occupied nearly 900,000 housing units. In 1990, the prior 20-year “generation” was that same age and occupied just 507,000 units. On a per capita basis, baby boomers occupied 3.3% more housing units than their older counterparts.

Finally, the initial impact of the baby boomers on workforce housing is shown in the bottom line of the table. As the older half of that generation aged past 65 the share of housing occupied by those 65 or older climbed to 26% from about 21% in both 2000 and 2010. The young baby boom cohort is much larger and occupies more housing units. As they age past 65 this share will likely approach, or even exceed, one third of total housing.

That raises an important question: How many housing units will need to be built for the young generation that will become adults and enter the workforce by 2030 and for those currently working but struggling to find affordable housing?

#### ESTIMATING HOUSING NEED

Estimating housing need can be difficult because preferences can change over time. For example, the percentage of adults nationally living alone has risen from 12.8% in 1980 to 15.9% in 2020, driven largely by increases in the 35 to 64 year old population. More people living alone requires more housing units.

More recently, the number of young adults (ages 25 to 34) nationally living with their parents has risen significantly. Between 2000 and 2020, the

share of this age group living with their parents rose from 9.7% to 16.7%. This has the effect of decreasing the demand for housing.

Two often cited reasons for living at home include lack of affordable housing and the high cost of living due at least partly to student loan debt.<sup>4</sup> This means that some of this decreased demand for housing is really hidden demand and would likely be realized if sufficient affordable housing was available. To the extent that the national percentage applies to Wisconsin, this implies that as many as 52,000 young people may have been in the market for housing in 2020 if it was affordable. That translates into a hidden demand for 26,000 (two young adults per unit) to 52,000 (one per unit) housing units.

#### Housing/Population Trends

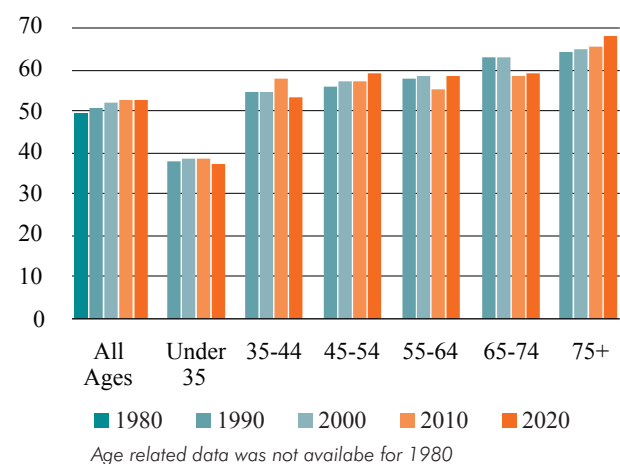
One very basic way to estimate housing need is to use the relationship between occupied housing and the adult population over time. This ratio rose from 49.4 units per 100 adults in 1980 to 52.2 in 2000 (see Figure 1, left group of bars). Since then, the ratio has changed little, rising slightly to 52.6 in 2020.

An increase in this ratio indicates fewer adults per household. The average number of adults per household declined from 2.02 in 1980 to 1.92 in 2000. In 2020 it was little changed at 1.90.

Age-specific housing-to-population ratios are also shown in Figure 1. Unlike the overall ratio

<sup>4</sup> A recent study by TD Ameritrade also found less “stigma” associated with living with parents among Generation Z compare to earlier generations.

Figure 1: Housing to Population Ratios Housing per 100 Residents By Age, 1990-2020



To fully address all of Wisconsin's potential housing needs will require more than 225,000 housing units to be built between 2020 and 2030.

discussed above, these tell us nothing about the average number of adults per household because within each age group, there are multi-generational households such as a grandparent living with an adult child's family or a young adult living at home with his or her parents while attending college or beginning their work career. The housing data captures the householder but not the other adults in the home. Thus, these ratios only indicate the numeric relationship between households and population at different ages.

Applying these ratios to the estimated 2030 population generates a plausible range of housing needed assuming no change in housing preferences.<sup>5</sup> These baseline or "status quo" estimates indicate the state will need about 140,000 new housing units by 2030. That assumes the projected decline of 130,000 in Wisconsin's under-65 adult population comes to fruition.

#### *Additional Demand?*

Addressing the state's drop in the prime working-age population (25 to 64) will require added migration into the state over the decade and would likely require incentives funded by the state or by a public-private partnership. Increased migration would create additional housing demand. Replacing the entire expected decline in this cohort will require an additional 60,000 to 72,000 housing units over the decade. If migra-

<sup>5</sup> To test their ability to forecast housing, the overall housing-to-population ratio and the age specific ratios were tested for 2010 and 2020 using Wisconsin Department of Administration population projections published in 2004 and 2013, respectively. In both years, projected housing was greater than actual housing, with nearly all of the excess housing projected due to actual adult population lagging projections by 69,000 and 54,000 respectively.

tion filled just half the deficit, then the range of increased demand would be halved.

An additional source of demand was discussed above, the implied housing demand among young adults who are living with their parents but likely prefer to be on their own. That number could reach 54,000 by 2030 implying a "hidden" housing demand of at least 27,000.

Addressing all of the state's potential housing needs requires construction of at least 227,000 units. If, however, the migration and affordability challenges are only partially addressed, the "need" could be reduced to less than 200,000.

#### *Owner Occupied or Rentals?*

In addition to the question of how many total housing units, it is important to have a sense of the type of housing likely to be needed. The Census Bureau reports estimates of owner-occupied housing (typically single family homes and condominiums) which can be used in conjunction with the total housing forecast to project this need. While owner-occupied housing currently accounts for two-thirds of all housing in Wisconsin, it may need to account for a much higher percentage of newly constructed housing.

The reason for the out-sized need for owner occupied housing is again related to the size of the baby boom generation. Members of this cohort are at ages where home ownership is very high: 81% for those 65 to 74 and 71% for those 75 or older. As the older baby boomers aged past 65 during the previous decade, the 65-or-older share of owner-occupied housing climbed from 23% to 30%. During the current decade, it could approach 38% despite those 65 or older accounting for just 23% of the adult population.

When the age range is expanded to those 45 or older, the challenge becomes more obvious. In 2020, those 45 or older owned 73% of all owner-occupied housing. That percentage has grown from 63% in 2000 and 68% in 2010.

The number of homes occupied by those 45 or older is expected to increase from 1.19 million in 2020 to about 1.28 million in 2030. If, hypothetically, no single family homes were built during 2020-2030, this age group would own nearly 80% of these homes, leaving an insufficient number for the young adults looking to buy their first home. Thus, more single family homes will need to be built than might be expected.



The number of single family homes needed depends on various assumptions. If the state is only looking at a “status quo” goal of 140,000 total housing units needed by 2030, then roughly 100,000 will need to be single family homes or condominiums.

If the state were to successfully address the 25-to-64 year old population decline, more single family homes will be required. Historically, the state’s strength in attracting people from other states is in the 30-to-54 year old age range. This demographic has home ownership rates between 75% and 80%. That translates to an added demand for about 50,000 single family homes.

Addressing the affordable housing issue for young adults temporarily living at home may not require much in additional owner occupied housing. Relatively few in this age group are homeowners. Rather, this group will initially need quality yet affordable rental units.

#### ATTAINABLE?

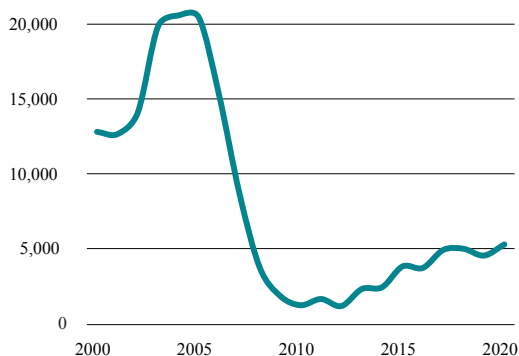
If these are reasonable estimates of the housing units needed by 2030, the next question is: Can Wisconsin build this many housing units over a 10-year period? Several headwinds might make this difficult.

#### *Too Few Lots?*

A housing unit needs to be built on a lot. To build 140,000 or 200,000 or more housing units, local communities will need to create a sufficient number of lots. But lot creation is down dramatically from the early 2000s.

During 2000-2006, the number of lots created each year in Wisconsin ranged from 12,600 to 20,600 (see Figure 2). Creation began to slow in 2007 and then the Great Recession occurred,

Figure 2: Lot Creation Down But Increasing 2000-2020



Insufficient lot creation, modest growth in building permits, and rising interest rates are hindering the state’s ability to meet its housing needs by 2030.

resulting in a significant decline in the housing market. That had a large negative effect on the number of lots being created.

Over the next several years lot creation dropped precipitously, reaching 1,293 in 2010, less than 8% of the average number created during 2000-2006.

Since 2010, annual lot creation in Wisconsin has rebounded slowly to 5,340 in 2020. However, that still is only a third of the 2000-2006 average.

Permits for new housing show a similar trend. The number of permits for construction of single family homes was robust during the early 2000s. However, by 2011 they had declined almost 80%. Like the lot creation numbers, building permits have slowly increased but remain well below their early 2000s level.

#### *Rising Interest Rates*

A more recent headwind has begun to blow in the form of rising interest rates due to inflation which reached 9% in June 2022. In their attempt to reduce inflation to around 2%, the Federal Reserve (Fed) began to raise interest rates in March of 2022 with relatively large increases from June to November of that year. The pace of their rate hiking is the fastest in history with the federal funds rate rising from 0.25% in March to 4% in November. The Fed is expected to continue raising interest rates into the spring of 2023.

When the Fed increases the federal funds rate, mortgage rates tend to rise. The average 30-year mortgage rate climbed from 3.8% in March 2022 to 7.1% in mid-November. With additional rate hikes likely at the end of 2022 and into 2023, mortgage rates will continue to climb.

With a declining youth population, a burst of new housing over the next several years could result in too many housing units by 2040 and after.

Higher mortgage rates make owning a home with a mortgage much more costly, thus slowing home purchases. Individuals or families who were intending to build often put those plans on hold until rates move back down.

This effect was beginning to be seen in the summer of 2022. In June, existing home sales nationally were down 14% over the prior year. By October, the year-over-year decline was 28%.

Building permits for new homes began to fall in April and the decline has since accelerated. By October 2022, building permits for single family homes were 22% lower than in the prior October.

Given the expectations of continued rate hikes, new home construction will likely slow further. For how long is unclear. However, Table 3 provides a snapshot into what has happened in prior cycles. The table shows the last four major downturns in national housing permits. Most importantly, it shows the length of the decline in months and the percentage decline in permits.

If we are at the beginning of a cycle similar to past ones, a two-year decline in the number of housing starts is in the realm of possibility. That said, this time could be different and the decline

Table 3: Major Housing Cycles  
U.S. Housing Permits, Cycle Duration and Decline (Thousands)

Peak	Permits	Trough	Permits	Months	% Decline
Dec-72	2,419	Mar-75	709	27	-70.7%
Jun-78	1,983	Oct-81	731	40	-63.1%
Jan-90	1,748	Jan-91	786	12	-55.0%
Sep-05	2,763	Apr-09	521	43	-81.1%
Mar-22	1,879	?	?	?	?

could last a year or less. Either way, this is a headwind over which the state has no control.

No matter the length of the cycle, Wisconsin's population will continue to age, baby boomers will retire and young adults will begin their work careers creating a demand for new housing. If building does not keep pace, housing shortages will grow throughout the state.

#### FINAL THOUGHTS

Housing, and in particular affordable housing, is a critical component to a growing economy. In Wisconsin's case, about 140,000 new housing units will be needed by 2030 to maintain the status quo. That number could grow to 240,000 if the state addresses the decline in the working-age population and the shortage of affordable housing for young adults beginning their working careers.

#### *Creating a Longer-Term Problem?*

While these needs are pressing, solving the current and short-term future housing need may create longer-term issues. In particular, will Wisconsin have too much housing by 2040 or 2050?

Wisconsin's current youth population will be entering adulthood over the next 18 years. They will be entering the workforce and looking for housing. Due to more than a decade of declining births, this cohort is 6.4% smaller than the 2000 cohort and is the smallest in at least a half century. This decline means fewer housing units will be needed as members of this group become young adults.

Over the next 25 years, more and more of the homes owned by baby boomers, a large share of the housing stock, will come on the market. Will this lead to an excess of housing in the future?

A rudimentary estimate using current housing patterns and estimated population from the state's Demographic Services Center (generated in 2013) indicates the state will need approximately 2.64 million housing units in 2040. That figure is 217,000 more than Wisconsin had in 2020.

These population estimates assumed Wisconsin births would increase from 2015 through 2030. Since that has not happened, the above housing estimate may be too high. In other words, the additional housing needed over the next 20 years may be less than 200,000. That creates the great conundrum: If Wisconsin solves all of its housing challenges in this decade, it may also be creating a problem of too much housing in the future.



