Greater Springfield Regional Housing Analysis

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UMASS DONAHUE INSTITUTE Economic & Public Policy Research

Greater Springfield Regional Housing Analysis

Prepared by the UMass Donahue Institute's Economic & Public Policy Research Group

> **Project Leader** Mark Melnik, Ph. D.

Project Staff Carrie Bernstein, M.P.P.A. Gail Waterhouse, M.A. Michael McNally Thomas Peake **Research Assistants** Ellen Aron Ian Dinnie

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Metropolitan Springfield Housing Advisory Group

Jim Ayres, Community Foundation of Western Massachusetts Brendan Bailey, REALTOR® Association of Pioneer Valley Callie Clark, Massachusetts Housing Partnership (MHP) Jose Delgado, MGM Springfield Jack Dill, Colebrook Real Estate Linda Dunlavy, Franklin Regional Council of Governments **Dianne Fuller Doherty** Keith Fairey, Way Finders, Inc. Peter Gagliardi, Way Finders, Inc. Steve Goodwin, UMass Amherst Steve Huntley, Valley Opportunity Council Denise Jordan, Springfield Housing Authority Gerry McCafferty, City of Springfield Sarah Meier-Zimber, Holyoke Housing Authority Michael Moriarty, OneHolyoke Community Development Corporation Paul Murphy, Community Foundation of Western Massachusetts Paul Robbins, Paul Robbins Associates Kim Robinson, Pioneer Valley Planning Commission Sarah Szczebak, Town of Palmer Trevis Wray, Urban League of Springfield

Data Advisory Group

Jessica Atwood, Franklin Regional Council of Governments Brendan Bailey, REALTOR® Association of Pioneer Valley Douglas Hall, Pioneer Valley Planning Commission Janna Tetreault, Community Action Pioneer Valley Curtis Wiemann, City of Holyoke Trevis Wray, Urban League of Springfield

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Introduction

This report is intended as the first entry in a multi-phase repeatable housing study for the Greater Springfield region summarizing the key demographic, economic and housing indicators of the threecounty Pioneer Valley region. This study was initiated by and prepared for the Metropolitan Springfield Housing Advisory Group and is modeled on the success of the Greater Boston Housing Report Card, an ongoing annual housing study for the Boston Foundation, in its function to describe housing issues to stimulate thoughtful conversation, reflection, planning, and action. This is the Phase I Core Metrics report for the Pioneer Valley, focused on reporting data in key housing-related areas as a baseline. A Phase II report is in planning stages, to follow. Phase II is slated to analyze regional segregation and opportunity in addition to selected key housing issue vignettes. Future repeated study of Core Metrics and additional analytical reports would allow regional policymakers and thought leaders to track emerging trends and refocus housing efforts in keeping with conditions as they change.

An overview summary of the key points from this Phase I: Core Metrics work can be found on page 4 of this report.

This project was conceived of and initiated by the Metropolitan Springfield Housing Advisory Group before the onset of the current pandemic. It has now become a timely baseline to track this rapidly developing situation, which has direct relationships with housing considerations. With some key exceptions, most data sources have not yet begun to reflect the full effects of the pandemic. Nevertheless, where possible this report notes where the current crisis is likely to show marked impacts.

Housing is one of the most pressing and complicated policy and economic issues that Massachusetts faces today. Concerns over housing affordability, access, availability, and market pressures all have outsize impacts on residents' quality of life, and municipal economic development. However, often in Massachusetts, the conversation has focused specifically on housing challenges in Greater Boston.

Springfield and the overall Pioneer Valley of Western Massachusetts (defined as the three county region of Franklin, Hampshire, and Hamden counties) face their own challenges, which in some cases are different from those experienced in Greater Boston or other parts of the state. In particular, the specific characteristics of housing and the related social and economic challenges in Greater Springfield and the Pioneer Valley are not widely understood outside the region. This report aims to increase awareness of housing dynamics in the area for both state and local policymakers, housing advocates and community stakeholders, as well as the general public.

This report combines recent data on the region's demographics, economy, and housing market to create an understanding of key housing issues, needs, and challenges in the local community. Additionally, this report provides early available information on the impacts of the COVID-19 pandemic, including how the crisis is impacting trends in home sales and also exacerbating existing racial and economic inequality and may be changing the real estate market.



Over the past decade, the Pioneer Valley has seen minimal population growth overall, with Franklin County actually losing population since 2010. Projections for the next five years show the population over age 60 is expected to grow, which in turn will cause an increase in demand for housing, as an aging population generally requires more housing units per person than younger households. If housing production levels remain as they have been, there will be a projected shortfall of almost 19,000 units by 2025.

The Pioneer Valley consists of diverse urban areas, including Springfield, Massachusetts' third largest city, smaller suburbs and college towns, as well as rural towns, forest, and farmland. Many suburban and rural communities are predominantly White, while the majority of the Pioneer Valley's Black and Latino populations live in Springfield and Holyoke; 69 percent of the region's Black population lives in Springfield, and Holyoke has the highest per capita rate of Puerto Ricans of any US city outside of Puerto Rico proper. These patterns result from economic pressures as well as a long history of overt and covert racist policies and practices that created and reinforced residential segregation.

Economic disparities by race and ethnicity appear to be getting worse in the region. In 2013, the median White family income was \$78,000, while Black and Latino median family incomes were \$41,000 and \$28,000, respectively. In 2018, median White family income had jumped to \$94,000, while Black and Latino family incomes had each only increased by \$3,000, as housing costs rose. Such income disparities contribute to unequal access to homeownership, as well as a significant "rent burden" for lower income households, which are often households of color, in the region. Rent burden has remained consistent for renters, even in the economic recovery from the Great Recession, and is a common problem throughout Massachusetts.

This report concludes with a comprehensive analysis of measures related to housing itself, both instability, as well as increased cost. Measures of 'instability' relate to various elements of housing affordability and include trend data on foreclosures, vacancy rates, and homelessness. The housing market analysis includes an examination of long-term trends in home sale prices across the Pioneer Valley since 2000, the type of housing units that are driving sales, and rental list prices. As of 2019, home prices had not recovered to pre-recession levels, although home costs for both owners and renters have increased in recent years. More recently, the COVID-19 pandemic has contributed to an increase in home prices, as interest rates remain low and demand remains much higher than the inventory of homes being placed on the market.

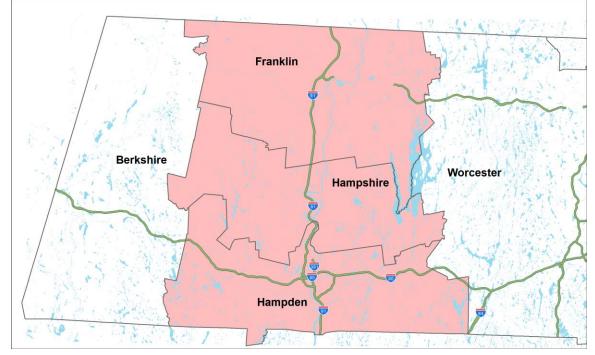
As the pandemic stretches on, it is uncertain what challenges or even some possible opportunities for the region lay ahead. As white-collar workers have worked from home in previously unimaginable numbers, essential and blue-collar workers have faced greater danger at work and precipitously high unemployment. When federal protections like the CARES Act mortgage forbearance run out at the end of 2020, and the Massachusetts tenant eviction moratorium is lifted, local and state policymakers will need to be prepared to act and address residents facing housing instability at levels previously unseen. In the meantime, small landlords stretch to continue to maintain housing during a period when some tenants are unable to make rent, and movers are making new location choices based on the new patterns of life, while municipalities brace against the headwinds of economic downturn and critical local needs.



Results

Geography

Figure 1. Pioneer Valley Geographic Overview



Source: MassGIS

This report focuses on the three western Massachusetts counties of Franklin, Hampshire and Hampden and the towns within them. These three counties are referred to collectively here as the Pioneer Valley, the colloquial name for the portion of the Connecticut River Valley that runs through the Commonwealth of Massachusetts.

The combined three-county Pioneer Valley region also exactly matches the Census geography of a combined statistical area (CSA) which for some tables and graphics are substituted for the sum of the three counties, to preserve data quality.

Despite being united under the Pioneer Valley name, the three counties all differ in geographic character. Franklin County is mostly rural whereas Hampden County is almost entirely urban. Hampshire County is a mixture of both rural areas and more densely settled small cities and towns.¹

¹ The 2010 Census found that more than half of Franklin County housing units were in rural areas, compared to nine percent of Hampden and 30 percent of Hampshire, see table H2 of the 2010 Decennial Summary File 1.



Summary

The key trends since 2010 identified by this report include the following:

- **Demographically**, the Pioneer Valley has experienced very slow growth, and this growth has varied between each county in the region.
- The region is more racially and ethnically diverse, particularly due to growth in the Hispanic population.
- The 60+ population is a growing share of the total population with the strongest growth in this group found in Franklin County.
- **Economically**, the Pioneer Valley recovered more slowly from the 2008 recession than the rest of the state including higher levels of unemployment, slower growth in employment and a delayed recovery in home prices.
- While employment grew in the region between 2010 and 2018, the labor force participation rate fell as aging residents retired and left the workforce.
- The incomes of people of color in the region tend to be lower than their White peers.
- In **Housing**, half of all renters in the Pioneer Valley are housing cost burdened (paying 30 percent or more of their income for housing). This high share is stubbornly persistent, remaining mostly the same since 2010. Meanwhile, incidence of cost burden is much lower for owners.
- People of color rent at higher rates in the region. Black and Hispanic households own their own homes at less than half the rate of the Pioneer Valley's White population, and accordingly people of color are more housing cost burdened.
- On average, older people tend to live with fewer people per unit, presenting challenges for new families and younger households in finding housing.
- The region's housing stock is very old, which further reduces the number of units that are desirable, available, or in some cases, functionally habitable for all.

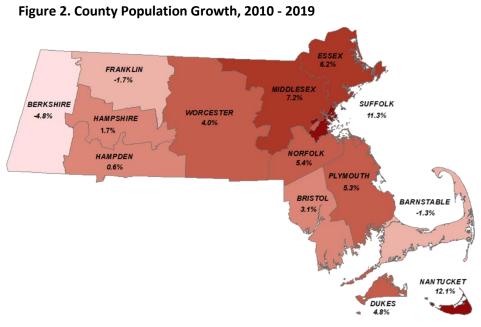
These trends are further complicated by the ongoing pandemic and recession, which have caused a sharp spike in unemployment and created an uncertain financial future for many. While the current crisis complicates the housing situation, it amplifies the importance of working towards an adequate supply of affordable housing for all Pioneer Valley residents with a growing habitable stock of units.



Demographics

Population

According to the 2019 Population Estimates from the U.S. Census Bureau, the Commonwealth's population has grown five percent since the 2010 Census. This growth over the last decade has predominantly occurred in and around the Greater Boston area, with Cape Cod (Barnstable County) and counties in the western portion of the state experiencing either flat population growth or decline.



While the Pioneer Valley's population overall is growing at a much slower rate than in other parts of the state - and is shrinking in Franklin County- the Pioneer Valley's 65+ share of population is growing; between 2010 and 2019 the retirement-age² population of Franklin County experienced a 49.1 percent increase, Hampden County experienced a 22.9 percent increase, and Hampshire County experienced a 43.9

Source: 2019 Annual Estimates of the Resident Population, U.S. Census Bureau, Population Division

percent increase. At the same time, the populations under the traditional retirement age declined in all three counties.

Another major demographic change that is occurring in the Pioneer Valley is the growth of communities of color. According to the Census' Population Estimates, since the 2010 decennial Census, the Pioneer Valley's population of people of color³ has grown 21 percent. The non-Hispanic White population has shrunk 6.4 percent in that same period. This is a slower rate of change than the state, but people of color also make up a slightly larger share of the Pioneer Valley's total population than they do of the state overall. Over 80 percent of the Pioneer Valley's people of color live in Hampden County. All three counties saw more than 20 percent growth in their populations of color since 2010.

² Retirement-age population is defined as individuals aged 65+

³ People of color are defined here as all people not self-identified in the Census Bureau data as non-Hispanic White.

Population growth is one of the most important drivers of housing demand. Given relatively slow population growth in the Pioneer Valley we would expect a higher number of vacant units in the area and for housing supply to closely match demand. However, projections based on current housing patterns suggest an ongoing housing shortage in many parts the region.

Population Age Change

In addition to changes in the number of people living in the Pioneer Valley, the age breakdown is relevant to housing demand and is projected to change over time. According to the UMDI's population projections, the population under 60 is projected to decline in all of the Pioneer Valley's counties and in its largest city, Springfield. Meanwhile, the greatest population growth is projected to be seen in age groups over the age of 60. The Pioneer Valley itself is older than the state and while the aging trend can be seen in all three counties and in Springfield, the rates of growth and decline are not equal across all areas. For example, Franklin County is much older than the two other counties in the region and the state, its 60 plus population growing 36 percent since the 2010 Census, from an already very high quarter of the county's population to 41 percent in 2019. These trends are also consistent with national and statewide aging trends. Since 2010, statewide the 60 and over age group has grown 27 percent, increasing from 19 to 24 percent of the total population. Nationally the 60+ population has grown 31 percent, increasing from 19 to 23 percent of the total population.

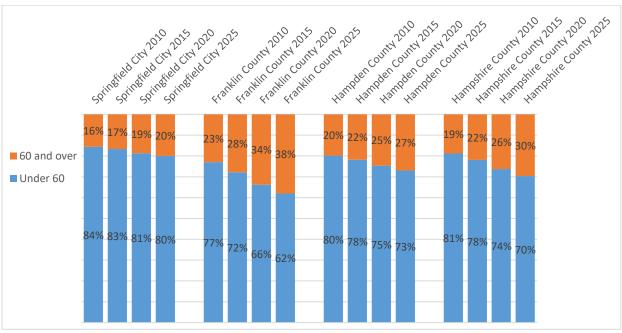


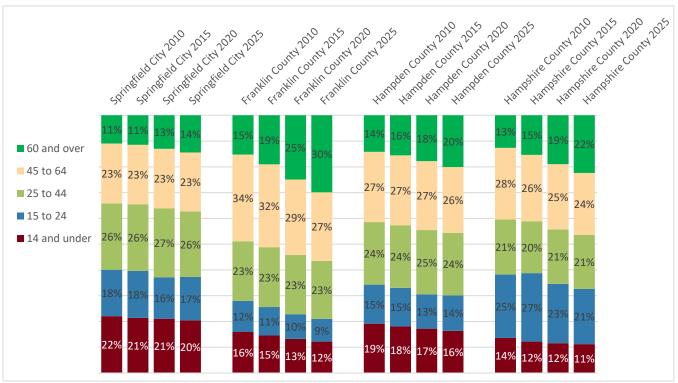
Figure 3: Projected Pioneer Valley Population by Age

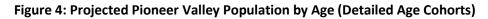
Source: UMDI Population Projections 2018, U.S. Census Bureau 2018 5-YR ACS Tables B25007 Tenure by Age, B01001 Sex by Age, B25001 Housing Units, B25004 Vacancy Status

Of the population under 60 years of age, the only age cohort which has remained relatively stable in all three Pioneer Valley Counties as well as Springfield is the 25 to 44 cohort. This age cohort is currently



occupied primarily by members of the millennial generation. Not all American generations have equal populations, some of the shifts in shares of population may be explained by which generations occupy a given age cohort in a given year. For example, the declining share of the population aged 15 to 24 coincides with millennials aging out of that generation and being replaced by the less populous generation Z.





Source: UMDI Population Projections 2018, U.S. Census Bureau 2018 5-YR ACS Tables B25007 Tenure by Age, B01001 Sex by Age, B25001 Housing Units, B25004 Vacancy Status

Age distribution change is a key factor in projecting how much housing will be needed in an area, because people's households tend to look different at different points in their life. For example, younger people who recently left their family homes are more likely to live with roommates, while people a bit older are more likely to live with their spouses and children. As their own children grow up and some leave the house, households headed by older people tend to have fewer people. All other things being held equal, and assuming no major changes in living patterns observed in the Pioneer Valley prepandemic, an aging population will require more housing for the same number of people as individual households contain less people on average. This is an important driver of the increased demand for housing units.



Projected Housing Need

UMDI projected housing unit demand out to 2025 from 2015 for all of the counties, cities, and towns within Massachusetts. The projections were developed using a combination of American Community Survey (ACS) data from the Census Bureau as well as UMDI's own population projections. These housing unit demand projections assume that households in the future will look similar to households in the most recent data.⁴ The amount of demand for housing units could change if an increased proportion of seniors started living with their children or grandchildren, for example. Using this projection method, all three counties in the Pioneer Valley are actually projected to experience a growth in housing demand of over 10 percent between 2010⁵ and 2025, but less than the projected 16.4 percent rate of growth projected for the state. Going forward past 2025, Franklin County is likely to drop at some point if the population continues its current trend of decline. The projected rates of increase in housing unit need are much higher than the UMDI projected rates of growth of just population. The difference can be explained by the aging population of the area, which will lead to less people in each housing unit than before, due to differences in how housing units are used by people in different age groups.

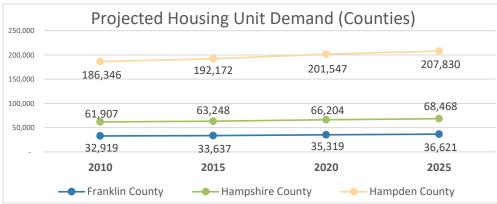


Figure 5: Projected Housing Unit Demand in the Pioneer Valley, County-Level

Assuming that trends in household formation hold, all of the largest communities in the Pioneer Valley are projected see their demand for housing units increase gently between the time of the last

Source: UMDI Housing Unit Demand Projection based on UMDI Population Projection and ACS 2014-2018 5-Year Estimates

decennial Census in 2010, and 2025. All but one community, Amherst, will see their demand gently increase in 2025 from estimated 2020 levels. In all three counties in the Pioneer Valley, the largest cities are projected to experience less housing unit demand growth than the counties they are in, except Holyoke and Westfield. This suggests that some of the smaller communities in the area are projected to grow even faster than the larger ones. UMDI did not present the projections for all communities here because those estimates are calculated using survey data (ACS), which gets less reliable the smaller the community is.

 ⁵ 2010 is the latest year where full US Census data is available. These data form the basis of the population projection which this housing unit projection is based around. The population projection was later updated based on population data for 2015. Population data for 2020 and 2025 are projected from that time, as the population projection has not been updated since then.



⁴ For more detail on the projection method used to create these data, refer to Appendix D.

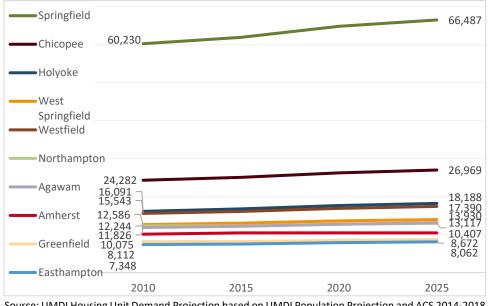


Figure 31. Levels of Foreclosures by County, 2000 to 2019Projected Housing Unit Demand in the Pioneer Valley, Municipal-Level

how the Pioneer Valley was preparing to meet this increase in housing unit demand, UMDI also examined data on the number of housing units by county from the American Community Survey from 2010 to 2018. Taking the trend in housing units observed there, and continuing it out to 2025, UMDI compared the projected number of

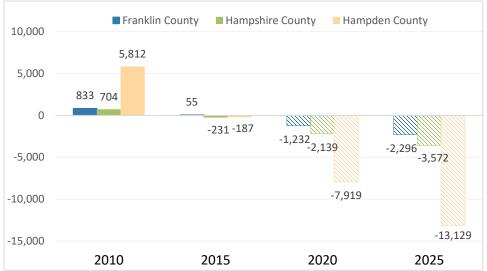
In order to assess

Source: UMDI Housing Unit Demand Projection based on UMDI Population Projection and ACS 2014-2018 5-Year Estimates

housing units to the projected housing unit demand. In 2010, due to the housing market crash, the number of housing units in Massachusetts actually exceeded the demand for housing units. Over the course of the next decade, this gap would invert. In 2015, housing units was nearly equal to housing unit demand, and by 2020, housing unit demand exceeded housing units by over 11,000 units.

Much of this shift can be explained by the pace of development for new housing units. By 2018 (the most recent year for which ACS data is available) Franklin County's housing unit stock had grown by just over 1 percent from 2010, Hampden County's stock had grown by just under 1 percent, and Hampshire County's had grown by over 2 percent. If these trends continue, so will the growing gap between supply and demand, with a projected shortfall of almost 19,000 housing units by 2025. It should be noted that there is no reason why this trend has to continue in a linear way. If a large number of housing units were built in the Pioneer Valley over the next five years, for example, that could close some of the projected gap. Whether such projects transpire or not, the relationship between housing unit supply and demand will remain a major factor in future housing price changes, as well as influencing moving choices. When fewer housing units are available, owners selling their homes and landlords can set higher prices, since home buyers and renters have fewer options, and when the prices are higher, some are unable to move to or stay in the region.





It is also not yet certain how the pandemic will affect people's demand for housing units in the region, or impact the construction of new housing units, since effects may transpire in the regional market in either direction, including pronounced levels of unemployment and health risks,

particularly among

blue-collar workers,

Source: UMDI Housing Unit Demand Projection based on UMDI Population Projection and ACS 2014-2018 5-Year Estimates; UMDI Housing Unit Projection based on ACS 1-Year Estimates from 2010 to 2018.

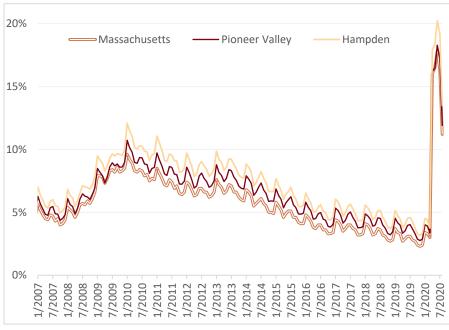
knock-on economic effects, changing motivations among city dwellers, and increased potential for white-collar mobility by working from home, alongside improved broadband access in some of the more rural northern areas of the Pioneer Valley.

Figure 7. Projected Housing Unit Gap



Economic Background

Large COVID Unemployment Spike Following Delayed Recovery from the Great Recession Figure 8. Unemployment Jan 2007 to August 2020



Hampden County unemployment has historically been higher than the regional or state rate and this persisted through to 2020. In March of 2020, as unemployment skyrocketed due to the need to respond to the COVID-19 pandemic the **Pioneer Valley** unemployment rate fell below the state rate for the first time since 2003 before rising above it again the next month. Job issues were also evident in slower employment growth, which was lower than the state average of 13.9

Source: Massachusetts ES202 Labor Force and Unemployment Data

percent in all three counties between 2010 and 2018. Franklin experienced the slowest growth in the period, with an increase of 4.9 percent compared to Hampshire's 11.8 percent and Hampden's 8.4 percent. Home prices in the region also recovered slowly like much of the state outside of the Greater Boston area.

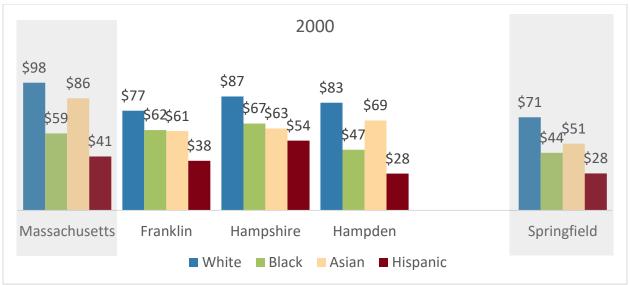
Compared to other parts of the state the Pioneer Valley had more difficulty recovering from the 2008 financial crisis and Great Recession. For a few years prior to 2008, the Pioneer Valley's unemployment had been slightly above the Massachusetts unemployment rate, but the financial crisis expanded the gap. The average gap between the Pioneer Valley and state rates between January 2010 and January 2020 was 0.9 points.

Incomes by Race and Ethnicity

The following two charts show the median income of families⁶ by race and ethnicity. Statewide in 2000, Hispanic families earned the least on average of all racial and ethnic groups and the same was true for the Pioneer Valley. Generally, incomes in the Pioneer Valley are lower than the state as a whole.

⁶ A subset of households (HH), HH median income is unavailable at the county level by race.

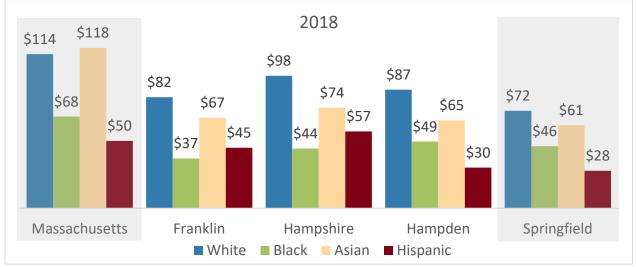






Source: 2000 Decennial Census SF4, Income in 2019 dollars.

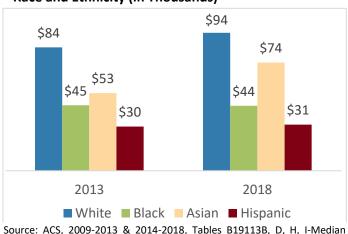
*White is non-Hispanic, Black and Asian persons may be of Hispanic ethnicity, Hispanic people may be of any race.



Source: ACS, 2009-2013 & 2014-2018, Tables B19113B, D, H, I-Median Family Income in 2019 dollars. *White is non-Hispanic, Black and Asian persons may be of Hispanic ethnicity, as Hispanic people may be of any race



In 2018, the most recent available data, Hispanic families remain the families with the lowest income statewide. Small numbers of Black families in Hampshire and Franklin Counties interfere with accurate and precise income comparison with other groups and over time, but median family income among





Black residents are clearly low. Approximately 70 percent of Valley residents were White in 2018. At the same time in the Pioneer Valley, a much smaller percentage, only about 6 percent of the population, identified as Black. Franklin and Hampshire can claim a very small share of this group with only 10 percent of Franklin's and 16 percent of Hampshire's population being people of color and of the total population only one and three percent respectively are Black.⁷ Hampden County, which has a substantially more diverse population, with 36 percent of the total population being people of color, may reveal the actual trend. In Hampden, Black median family incomes seem to have remained relatively flat since 2000, as did Hispanic median family incomes

in the region. Outside of Hampden, due to the small sample size of families of color in Franklin and Hampshire Counties it is difficult to draw conclusions about the change in incomes of these groups over time. Asian and White incomes grew noticeably from 2013 to 2018. Looking at the Pioneer Valley as a whole⁸ in 2018, we see again that overall incomes in the Pioneer Valley are lower than they are statewide, with Black families earning more than Hispanic ones.

Increases in income have not been shared equally. Between 2013 and 2018, White family incomes grew 20 percent and Asian family incomes grew even faster, increasing 50 percent in that same period, Black and Hispanic family median incomes appear to have grown much less, if at all.

While in real terms median incomes have risen across the board for most groups, some racial and ethnic groups have had their incomes stagnate, and the gap in incomes between the White population and people of color has gotten worse in most cases. For the housing market, this means that people of color are more likely to have difficulty than their White counterparts in paying for or even finding housing in their price range.

⁸ Using the Springfield-Greenfield Town, MA Combined Statistical Area, which is a geography composed of all three Pioneer Valley Counties. This geography was unavailable prior to 2013 for median family income.



Source: ACS, 2009-2013 & 2014-2018, Tables B19113B, D, H, I-Median Family Income in 2019 dollars. *White is non-Hispanic, Black and Asian persons may be of Hispanic ethnicity, Hispanic people may be of any race

⁷ In a sample-based survey, the Pioneer Valley's small Black community is not well represented, particularly in those two counties and as a result, the survey data provides unreliable results for the Black population. The margin of error (MOE) on the count of non-Hispanic Black people in Franklin County is +/- 15.1 percent compared to +/- 0.1 percent for White non-Hispanic families. In Hampshire, MOE for Black people is +/- 10.6 percent and white non-Hispanic is +/- 0.1 percent. In Hampden, the MOE for Black people is only +/- 2.2 percent compared to +/- 0.2 percent for White.

Poverty and Income by Race

People in the Pioneer Valley are in poverty at a rate above the state average. In particular, the Hispanic population is far more likely to be in poverty in the Pioneer Valley than they are statewide, with 38 percent of Hispanic people in poverty. The Black population in Hampden is much more likely to be in poverty than elsewhere in the state. The small sample size for people of color in Franklin and Hampshire Counties makes it difficult to accurately compare groups in those geographies to Hampden County, the Pioneer Valley and the state.⁹

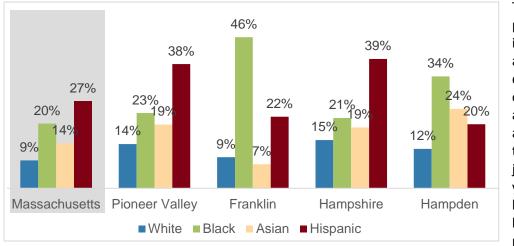


Figure 11. Percent Below Poverty by Race and Ethnicity, 2018

The national poverty line for an individual in 2018, adjusted into 2019 dollars, was just over \$12,000 in annual income. For a family of four that threshold is just over \$25,000 a year.¹⁰ This highlights that being below the poverty line is to

Source: ACS, 2014-2018, Tables S1701 Poverty Status

*White, Black, and Asian reported here are non-Hispanic. Hispanic people may be of any race

have an extremely low income relative to current costs of living. With median gross rent¹¹ in the Commonwealth was \$1,318 in 2018, monthly, over \$15,000 a year, it is unlikely that any family at or below poverty would be able to house and meet its needs on their earnings alone. Rents in the Pioneer Valley are lower than the state on average, but even Hampden County's 2018 median rent of \$901 per month or almost \$11,000 annually would constitute nearly 90 percent of an individual's earnings living at the poverty line.

The disparity in poverty between White and other groups in the Pioneer Valley is especially striking. While statewide, White people are in poverty at less than half the rate of Black people, in Hampden County White people are in Poverty at just over a third of the rate of the Black population.

In the aggregate, different racial groups in the Pioneer Valley have measurably and markedly different levels of income. Most notably, a staggering 41 percent of households of color live on less than \$25,000 annually- just below the federal poverty guideline for a household with four individuals. This

⁹ A table of the percent of people in poverty and the corresponding margins of error is available in Appendix A ¹⁰ <u>https://aspe.hhs.gov/2018-poverty-guidelines</u> adjusted into 2019 dollars.

¹¹ Gross rent includes rent payments as well as utilities and other fees associated with renting a home.

substantiates the notion that communities of color in the Pioneer Valley are the most disadvantaged economically, making them more vulnerable to high housing costs.

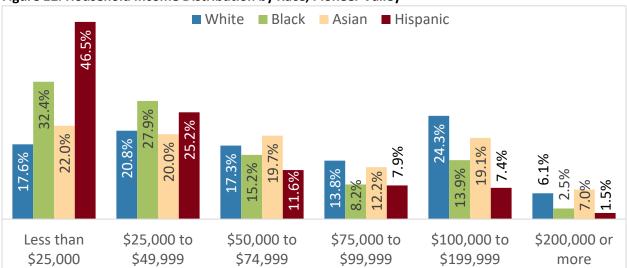


Figure 12. Household Income Distribution by Race, Pioneer Valley

Source: ACS, 2014-2018, Tables B19001B, D, H, I Household Income by Race

*In this table, Black and Asian people may also be of Hispanic ethnicity. Hispanic people may be of any race.

People of color in the Pioneer Valley live in denser, more urban areas such as Springfield and Holyoke, where rental and home prices tend to be lower. Their lower incomes are likely a causal factor: as rent is a primary expenditure and having a comparatively smaller payment every month can be a financial necessity when on a small budget, making lower cost communities critical for low income people of color, along with others on limited budgets.



Employment Situation

Labor force participation rate is the measure of people 16 and over either working or seeking work. In the Pioneer Valley a decline in this measure indicates a decline in the number of people willing or able to work. This is often due to an aging overall population, where people are increasingly retiring, or an increase in the share of population that are full-time students, but there can be other reasons.¹² Since 2010 the entire Valley's labor force participation rate has fallen. Outside of college towns, where a declining labor force participation rate is likely a sign of growing enrollment of full-time students, aging is the main source of this decline, as older people retire and leave the workforce. Because population growth is slow in the Valley, there aren't enough new people to take retirees' places in the workforce, so overall the labor force participation rate would decline. Areas with declining labor force participation have a greater share of people aging in place, continuing to reside in their housing units. This reduces the amount of housing becoming available, as well as the share of households with household budgets with sizeable discretionary spending.

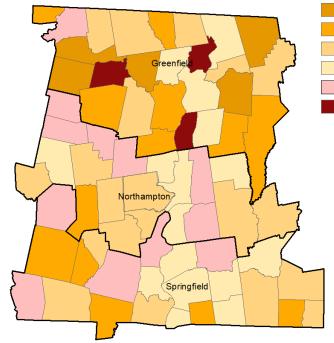


Figure 13. Labor Force Participation Rate, Change in Percentage Points, 2010 to 2018

(15.5%) - (12.3%)
(12.2%) - (6.5%)
(6.4%) - (3.5%)
(3.4%) - 0%
0.1% - 3.2%
3.3% - 6.5%

Franklin County, which has experienced the most labor force participation rate decline since 2010 also had the greatest increase in its share of people who are retirement age, increasing

from 15 percent in 2010 to nearly 22 percent of the total county population in 2018. Hampden County already had a lower labor force participation rate than the state in 2010, 62 percent versus the state average of 68 percent. Accordingly, it experienced some sharp declines in smaller communities, but in Springfield and Chicopee, decline was very low, and in Holyoke, the labor force participation rate actually increased. This change, however, was on a

Source: ACS, 2006-2010 & 2014-2018, Table S2301 Employment Status

¹² People who are on unemployment are included in labor force participation. Other reasons may include an increase in people raising families full-time, but with the Pioneer Valley's overall slow to zero population growth and limited growth in age groups below 50, this is unlikely a cause of an overall declining labor force participation rate except in specific municipalities or places. An increase in people who are unable to work such as those with a disability can also be a contributor, however many with disabilities remain in the labor force, and in the Pioneer Valley, people over 65 are a larger share of the population. Aging also increases the incidence of disabilities of certain types, such as hearing loss and mobility issues.



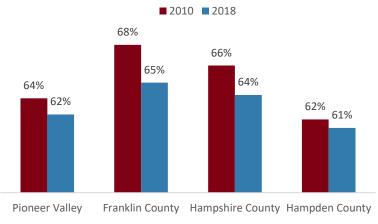
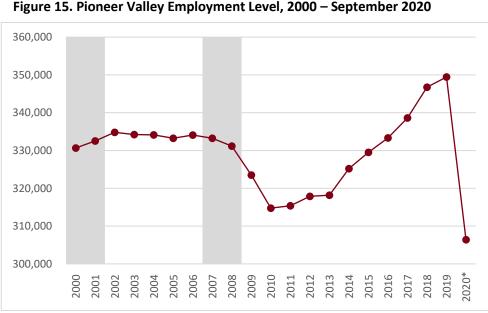


Figure 14. Labor Force Participation Rate, 2010 - 2018

Source: ACS, 2006-2010 & 2014-2018, Table S2301 Employment Status

modest basis: for example, Holyoke had the lowest participation rate of the whole region. Overall, Hampden County's rate was also already low and did not fall much over the 2010 to 2018 period. Hampden County had the lowest growth in its retirement age community, increasing from 14 percent to just under 17 percent in 2018. Hampshire lies between the two others, with the elderly share of the population growing from just under 13 percent to 17 percent in 2018, but its change in labor force

participation was the lowest of all three counties. Employment has not dropped like the labor force participation rate has, suggesting the change is driven more by the working population than by jobs. From 2010 until recently all communities in the Pioneer Valley had at least some net growth in employment as the state has recovered from the great recession. Franklin County's labor force participation rate fell more sharply than the other counties, but Franklin County did show a modest increase in its employment level, illustrating that the decline in labor force participation is not due to a loss of job opportunities, but is instead due to a loss of labor. It also shows that despite positive growth in the employment, the impact of these new jobs are limited as they have not yet been enough of an



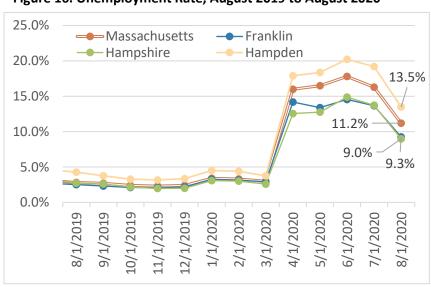
economic engine to attract a large new population of people who are ready to work to maintain a stable level of workforce participation.

In the aggregate, employment actually increased through 2018. The Pioneer Valley experienced an 11.1 percent increase in its employment level from 2010 to 2018, slightly less than the 14.7

Source: BLS LAUS, Annual Averages, 2000-2020. Grey areas indicate recessions (NBER), 2020 Value is average employment for the first 9 months of 2020.

percent increase in Massachusetts employment in that same period. This employment growth is

historical. To supplement this picture with what has happened since the onset of the COVID-19 pandemic, unemployment data, which is updated each month, is included for a more recent view of the job picture. Unemployment overall in the Pioneer Valley rose from just over three percent in March 2020 to over 16 percent a month later, followed by a temporary flattening in unemployment before another spike to over 18 percent in June. In June, the state had the highest unemployment rate in the country. At 20.2 percent, Hampden County's unemployment rate was higher than the state. The city of Springfield unemployment rate was estimated by the state of Massachusetts Office of Labor and Workforce Development at an even higher rate, nearly 26 percent. In July and August, the unemployment rates across the state declined but remained high, with Massachusetts being tied for the sixth highest unemployment in the country with New Mexico in August of 2020.



Initial unemployment claims naturally rose and fell in a similar pattern to the unemployment rate. In 2018 people of color were approximately 15 percent of the region's working age population, a share that has likely grown given population trends in the Pioneer Valley. But throughout 2020 before and after the start of the pandemic, people of color have made up more than 15 percent of initial UI claims each month. During the pandemic, the share of claims for people of color rose from

Figure 16. Unemployment Rate, August 2019 to August 2020

Source: Massachusetts ES202 Labor Force and Unemployment Data

25 percent in March to 36 percent of claims in May before declining slightly to 33 percent in June. The pre-pandemic disproportionate representation in initial UI claims suggests that people of color were already overrepresented in industries with a higher level of turnover. But the person of color share of initial UI claims also rose as the pandemic has progressed, illustrating that they are also employed in industries more directly impacted by the pandemic. As in other regions, this could have an impact on housing demand in the Pioneer Valley, and on the ability of residents who have lost their jobs either in being able to afford new places to live in the area, or keep their existing housing in the region.



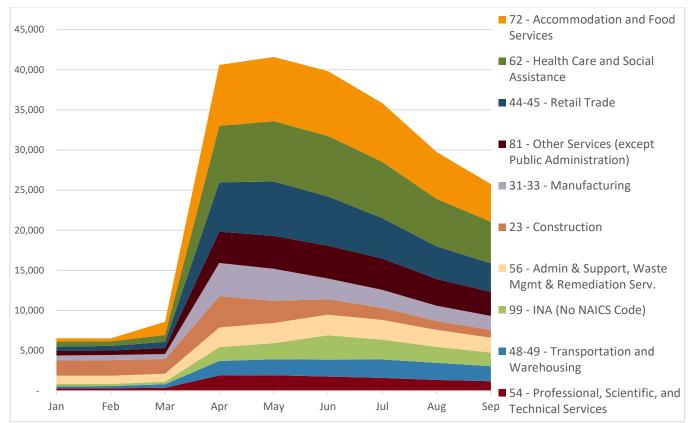


Figure 17. Top Ten Pioneer Valley Industries by Number of Massachusetts UI Claimants

Source: Massachusetts ES202 Unemployment Insurance Claimant Profiles, week of 9/12

In the five years before 2020, the largest number of unemployment insurance (UI) claimants, the count of people actively receiving unemployment insurance payments at some point in each year, in Massachusetts came from the Construction industry at 15 percent of the total for that period, followed by 10 percent of claimants coming from the Health Care and Admin & Support industries each, and 9 percent from Manufacturing and Other Services each. The average number of annual claimants in that period was just under 84,000.

That five-year average is dwarfed by unemployment due to the COVID-19 pandemic and recession that resulted in more than 280,000 claimants in the first 9 months of 2020 alone. All industries saw a larger number of claimants in the first 9 months of 2020 than any time in the five years prior. The industry distribution of UI claimants is also different. Between January and September, 30 percent of all UI claimants came from the Health Care and Accommodation industries, followed by another 12 percent of claimants from Retail. Construction remains a top source of UI claimants despite not being the largest source of claimants in 2020. Manufacturing, which provided 9 percent of pre-2020 claims, was only 6 percent of claimants in the first 9 months of 2020. Note, some of the claims had unknown industries.



Housing

Housing Prices

Median prices in the Pioneer Valley have increased an average of nearly \$60,000 since 2000, but the growth has not been steady over time. Like much of the rest of the country, home prices in the Pioneer Valley peaked in the years leading up to 2007, then the housing bubble burst and the Great Recession began. Although the Great Recession officially ended in 2009, as in other parts of the state, home prices in the Pioneer Valley continued to dip until reaching a trough in 2012, then rose.

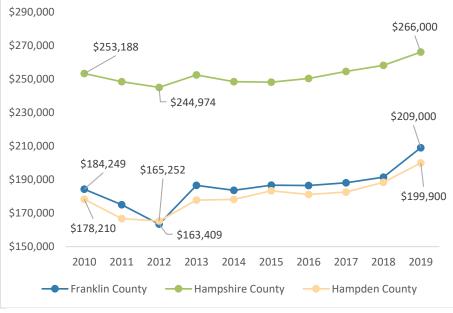


Figure 18. Median Sale Price, All Homes, 2000 – 2019

Since 2000, counties in the eastern part of the state, including Suffolk, Norfolk and Middlesex Counties, have had single family home prices that are higher than the Pioneer Valley. Greater Boston has also experienced a faster rebound from the recession than the Valley has. Berkshire County has seen a price trajectory similar to that of Hampden County, while prices in Worcester County are closer in trend to Hampshire County.

At the lowest point, in 2012, the median sale price in Hampden County was approximately \$165,000, and \$163,000 in Franklin, with home prices in Hampshire County falling to \$244,000. From 2018 to 2019, prices in both Hampden and Franklin counties saw a more notable year-over-year increase than in Hampshire, although median home prices in Hampshire County remain more than \$50,000 above homes in the rest of the Pioneer Valley. Across all of the Pioneer Valley counties, home prices had yet to recover to pre-recession levels in 2019 (the most recent complete year of data available).



Source: The Warren Group, July 2020. Expressed in 2019 dollars.

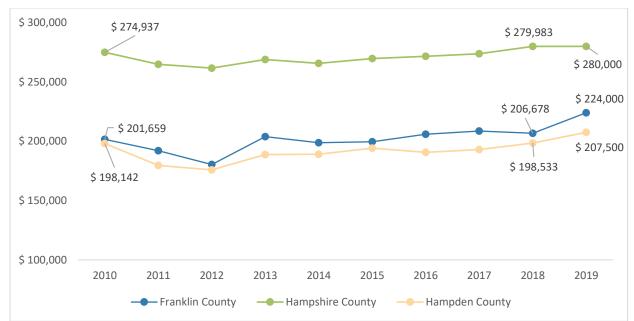
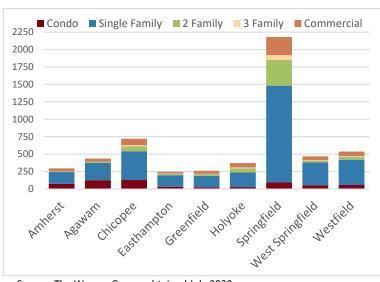


Figure 19. Median Sale Price, Single Family Homes, 2000 – 2019

Source: The Warren Group, Single Family Median Home Sales Prices, 2000 – 2019. Adjusted for inflation to 2019 dollars.

Overall, the housing market in the Pioneer Valley is primarily driven by sales in single family homes. There is variation across the region, however, with condominiums, mobile homes, two- and three-family





Source: The Warren Group, obtained July 2020

of being rented, which are not owner-occupied.

homes also in the mix. In 2019, single family sales comprised 49 percent of all home sales in Northampton compared to 70 percent in West Springfield.

The timing of when most homes were built varies by municipality, and may have an impact on both home style and type; Springfield in particular has a large portion of two-family homes.

Although owner-occupied residences account for the bulk of home sales in the Pioneer Valley, prices and the overall number of sales are also impacted by commercial home sales (large rental properties) or buildings that are purchased with the intention



When looking at the median home price across the Pioneer Valley in 2019, commercial sales make up a sizeable proportion in some municipalities like Amherst and Northampton, which both have large student populations. Conversely, Longmeadow is a bedroom community where 98 percent of sales come from single family homes.

Cities and towns across the Pioneer Valley have experienced uneven growth in home prices since their low point in 2012 after the Great Recession. The most populous cities had both some of the highest (Amherst) and close to the lowest (Springfield) median home prices in 2019. The map below shows how each municipality has fared since prices bottomed out across the region in 2012. Since 2012, home prices in

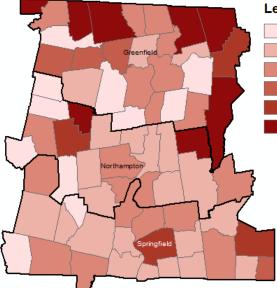
Figure 21. Median Sales Price

Highest Median Home Sale Prices in 2019		
Hadley	\$349,000	
Longmeadow	\$339,500	
Williamsburg	\$339,000	
Amherst	\$335,500	
Northampton \$320,000		

Source: The Warren Group, July 2020.

Springfield have increased 54 percent, while nearby Chicopee and Holyoke have seen price increases of 20 and 24 percent, respectively.

Figure 22. Percent Change in Home Prices, 2012 – 2019



In September 2020, the inventory of available property for sale across the Pioneer Valley was down 56 percent from September 2020, according to the REALTOR[®] Association of

Legend Price Decreasing 0.0% - 14.9% 15.0% - 29.9% 30.0% - 44.9% 45.0% - 59.9% >60.0% Moving forward, it is unclear exactly how the COVID-19 pandemic will impact the housing market in the Pioneer Valley. The beginning months of the pandemic (March and April, 2020) saw a 24 percent decrease in the number of home sales across the Pioneer Valley,¹³ and

historically low interest rates and low inventory have continued to push sale prices higher. Sales dynamics may continue to change dramatically.

Figure 23. Median Sales Price

Median Sales Price, Single Family Homes			
	Sept. 2019	Sept. 2020	
Pioneer Valley	\$230,000	\$265,000	
Franklin County	\$227,500	\$249 <i>,</i> 000	
Hampshire County	\$312,000	\$327 <i>,</i> 500	
Hampden County	\$211,000	\$244,500	

Pioneer Valley's September 2020 Single-Family Sales Report, from 1,728 homes on the market, to 763. Valley wide, median prices for single family homes have increased 6.9 percent. Homes are also spending less time on the market; in the Pioneer Valley, Source: REALTOR® Association of Pioneer Valley

¹³ <u>https://www.masslive.com/news/2020/05/pioneer-valley-home-sales-fall-24-in-april-on-coronavirus-concerns-but-real-estate-industry-sees-rebound-of-12-months-of-business-in-9-months.html</u>

homes spent 18 fewer days on the market as they did compared to the previous September.¹⁴ This trend is accelerating over time, as homes spent just five fewer days on the market in July 2020 as compared to July 2019.

Decreasing time on the market and decreases in inventory are used by real estate experts to detect a warming market (or pent-up demand). Low home inventory as compared to 2019 has been a trend since

the beginning of the pandemic. If this trend continues, it could result in increased inequality in access to homeownership for Pioneer Valley residents, especially if unemployment remains high in sectors hardest hit by the pandemic.

Although interest rates are at historic lows, a higher uptick in home prices may make homeownership inaccessible to those who have not seen their incomes increase as rapidly as well. Figure 24 compares household incomes from 2010 to 2019 in the Pioneer Valley to median home sale prices over the same period of time. Home prices have increased slowly, while household incomes have experienced much more variation. A more rapid rise in home prices,

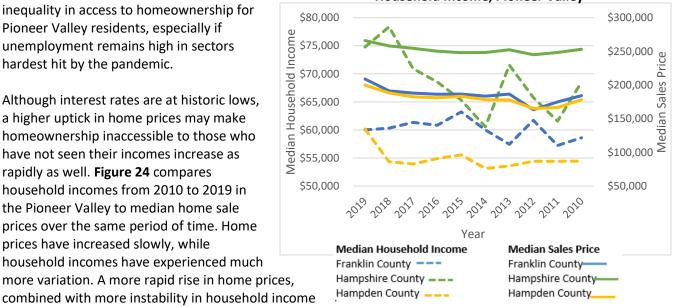


Figure 24. Median Sale Price Compared to Median Household Income, Pioneer Valley

Source: MLS Property Information Network, 2010 – 2019, ACS, 2010 – 2019 in 2020, may widen the gap in these trend lines, as well as increase the variation between the counties that comprise the Valley.

In 2018, just over a quarter of owners across all Pioneer Valley counties spent more than 30 percent of their income on housing. See Figure 28 below for more information on housing cost burden.

¹⁴ REALTOR® Association of Pioneer Valley, https://rapv.com/sites/default/files/pdf/September%202020%20RE%20Sales%20Report.pdf



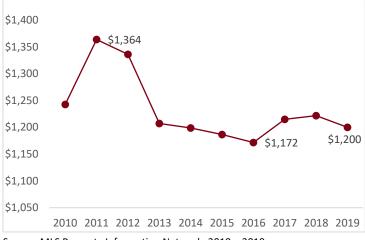


Figure 25. Median MLS Listing Rent Price, Pioneer Valley

Source: MLS Property Information Network, 2010 – 2019.

Real-time, accurate rental market data is more difficult to obtain for a full picture of the rental market than for the home sale market, because while MLS listing is required for homes, it is not required for the rental market, and rentals are sometimes not advertised or listed anywhere. Typically, rentals that do go through the formal real estate listing process are just a fraction of the total housing units available for rent. Note that the prices faced by tenants newly leasing up are usually higher than people who have been in an apartment for many years. The rental market faced by tenants seeking housing is therefore

more expensive than the prices paid by all renters, many of whom have been in their homes for long periods of time and may have long term, favorable lease terms. Therefore, even though the MLS data available is only a partial view and, like any other rental listing data source, may be distorted to include more of the higher-priced units than those which are not listed because they are more casually rented, it is still worth tracking the price trends in this partial set over time as renters struggle to afford housing.

In 2019 there were 686 apartments rented through real estate agents in the Pioneer Valley that were recorded in the Multiple Listing Service (MLS) system. One quarter of these rentals occurred in Springfield, where the median rent of apartments listed through MLS was \$1,200, which was also the median rent price on MLS listings for the entire Pioneer Valley.

More rural municipalities had rents below the median, while college towns like Northampton and Amherst saw listings higher than the median; this may be due to demand, or due to larger housing units with more than two bedrooms, since MLS listings do not specify how many bedrooms a rental property has. Since 2010, this formal listing market has dipped from its high in 2011, although this is on a small basis: there were just 358 MLS rental transactions in the Pioneer Valley.



Another, more complete source of rental market information comes from the American Community Survey (ACS). Data reported from the ACS tends to be lower than advertised or listed apartment prices, as this information includes many people who started renting their current unit years ago and signed leases indexed to lower initial rents from prior periods, not just apartments at the prices new renters face today. In addition, unlike a listing service or advertising platform, it includes all rental units in use, some which would never be advertised. Finally, because it reflects all rentals, from studio apartments to whole houses, it includes rents paid by people who are splitting the cost of the unit with roommates, where each roommate is reporting their own individual rent costs, unlike the

Geography	2010	2018	Percent Change 2010-2018
Massachusetts	\$1,183	\$1,318	11.4%
Franklin County	\$971	\$905	-6.8%
Hampden County	\$878	\$901	2.6%
Hampshire County	\$1,002	\$1,122	12.0%

Figure 26. Median Rent Price

Source: 2010 Census, ACS 5-Year 2014-2018

price advertised in an apartment listing, which reflects the entire space, but does not account for splitting rent. In 2018, the most recent year for which this information is available, rents paid by tenants in Hampshire County were shown to be the highest, and also increased since 2010, while Franklin County rentals showed a decline. Hampden County showed a small increase in rent paid since 2010, though much less of an increase than in Hampshire County's rental housing costs.

As with the home purchase market, the housing rental market faces uncertainty in response to the pandemic. In the short term, rentals prices, particularly in areas that attract student renters, may experience a drop in prices, as many students remain remote for the fall semester of the 2020 school year, and otherwise-occupied units remain empty. Yet as more workplaces continue to allow remote work, people who have been priced out of other areas in Massachusetts may look to move to the Pioneer Valley, as the cost of living is lower here than in other parts of the Commonwealth. Despite the relatively lower prices, this may drive demand and keep prices either stable or increasing in certain areas of interest.



Affordability

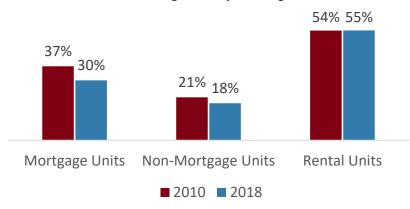
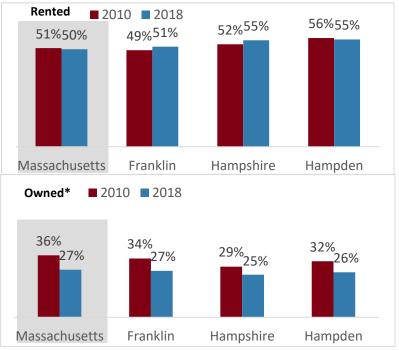


Figure 27. Pioneer Valley Households Spending 30 Percent or More of Income on Housing Costs by Housing Tenure Since the end of the Great Recession, the share of owner-led households which spent 30 percent or more of household income on housing costs has declined, while the share of renter-occupied housing units whose occupants spent 30 percent or more of household income on housing costs has remained relatively flat, starting from a very high level, with over half of renter

Source: ACS 5-Year, 2006-2010, 2014-2018, Table DP04 Selected Housing Characteristics

households in the region cost burdened. Housing costs incorporate many expenses, including monthly rent/mortgage payments, real estate taxes, and utilities. (Given that non-mortgage units are owner-occupied housing units owned free and clear, it is not surprising that the share of nonmortgage households spending 30 percent or more of household income on housing costs is substantially lower than that of mortgaged units.) Crucially important to affordability, rental housing burden of 30 percent or more is at the same level now in the region as at the end of the Great Recession: virtually the same share of renter-occupied housing units are spending 30 percent or more of their income on housing costs in 2018 as in 2010. This trend has been observed at the Massachusetts level for the same time period as well, shown in the





Source: ACS 5-Yr, 2006-2010, 2014-2018, Table DP04 Selected Housing Characteristics*Owned units include units that are owned both with and without mortgages.

See Appendix E for breakdown of households spending 50 percent or more.

bar graph of renter and owner burden in 2010 and 2018. The share of rented households spending 50

percent or more of their income on housing costs has fallen in that time, a reduction in the number of households spending half their income or more on housing costs. Renter and owners have diverging trends in affordability: at the same time as renters have continued to suffer high housing cost burden, there also been a gentle downward trend in owner housing cost burden. This trend has been consistent across the Pioneer Valley at the county level, as well as overall in Massachusetts.

Housing cost burden is not equally borne across all renters, however. Renters in the Pioneer Valley are more likely to spend 30 percent or more of their income on housing than the state average. Rental affordability has a disproportionate impact on people of color. 2018 data on housing affordability by race is unavailable via the U.S. Census but is available in the older 2013-2017 Comprehensive Housing Affordability Strategy (CHAS) Data.¹⁵ In the period from 2013 to 2017, Black, Asian and Hispanic homeowners were more likely to spend more than 30 percent of their income than White residents in the region. While less than half of White and Asian Renters spent 30 percent or more of their income on housing, more than half of Black and Hispanic renters did.

Figure 29. Cost Burden

Share of Owners with Cost Burden > 30%, 2013-2017			
	Massachusetts	Pioneer Valley	
White	25%	23%	
Black	38%	31%	
Asian	26%	32%	
Hispanic	36%	34%	
Share of Renters with Cost Burden > 30%, 2013-2017			
	Massachusetts	Pioneer Valley	
White	42%	45%	

White	42%	45%
Black	52%	53%
Asian	40%	43%
Hispanic	53%	56%

In addition to immediate financial challenges, a lack of affordability also reduces the amount of money that can be saved for a down payment on a house. In particular, the higher cost burden on people of color who rent reduces

Source: HUD CHAS Data, 2013-2017 Table 9. White, Black and Asian categories do not include individuals identifying as Hispanic.

their capacity to buy into the housing market and can strand them in the rental market. 73 percent of non-Hispanic White householders in the Pioneer Valley are owners¹⁶, while only 30 percent of householders of color own their own homes. Householders of color in the Pioneer Valley own their homes at lower rates than the state average (37 percent at the state level). Additionally people of color in the Pioneer Valley and statewide, own their homes at a much lower rate than the national average: 47 percent of householders of color nationwide own their own homes. People who rent are at particular risk of losing housing to eviction. While home owners who fall behind on payments can be foreclosed upon, in Massachusetts notice of non-payment and payments owed, a "right to cure", has to be provided 90 days in advance. Eviction does not require nearly as much notice which can leave renters, particularly people of color, who are in poverty at higher rates, in a perilous position should anything arise that prevents them from making rent such as the ongoing pandemic and recession without the aid of state or federal policy that protects tenants in a time of crisis.¹⁷

¹⁷ A federal eviction moratorium was implemented from April through July <u>but was not extended</u>. However, Massachusetts implemented its own ban <u>on both Foreclosures and eviction, extending it through October.</u>



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¹⁵ CHAS data is a series of custom tabulations of Decennial Census and Annual ACS data by HUD for the purpose of identifying the number households in need of housing assistance. For more information see Appendix C.

¹⁶ Owner households in the Census are defined this way: <u>"A housing unit is owner occupied if the owner or co-owner lives in the</u> unit even if it is mortgaged or paid for in full."

A lack of affordable housing also affects where those with low incomes can choose to live. Springfield and Holyoke, both cities where people of color make up a majority of residents, had median home sale prices in 2018 below \$200,000, putting them in the bottom half of communities in the Pioneer Valley by median price of homes. For the relatively small share of people of color who can afford to own, the most affordable homes may be in communities like those two cities rather than in their suburbs or surrounding areas. For a resident of Springfield looking to buy a home, choosing to move to a surrounding community such as Agawam, South Hadley, Longmeadow or others, where median sale prices can be \$50,000 dollars more or even higher may not be an option.

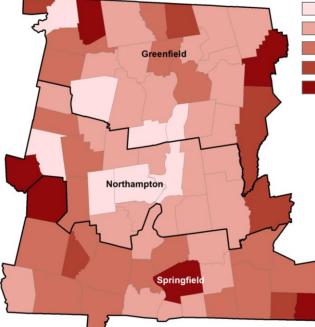
For Black and Hispanic residents of Springfield, whose incomes tend to fall below the county average (as seen in **Figure 8**) these communities are often out of reach due to their price. They are also unreachable due to a history of redlining¹⁸ and restrictions on what kinds of housing can be built in a community such as requiring single family homes on large lots when duplexes, multifamily homes, auxiliary units, denser development, and inclusionary zoning offer more affordable housing options.

¹⁸ The <u>University of Richmond's Mapping Inequality project</u> has done substantial work to illustrate the extent of redlining in US cities nationwide. In the Western Massachusetts area they have made digitally available maps of Holyoke and Chicopee, alongside the area descriptions used by the Home Owner's Loan Corporation to rate the risk of offering a loan to residents of certain communities. Racial and ethnic identity was a primary factor in the determination of loan risk at that time leading to the racist assignment of lower ratings to communities or color than neighboring and similar White communities. This system kept people of color from buying their own homes, one of the most important forms of intergenerational wealth. The harmful impact of this system is still felt today in the disproportionate rate that people of color rent, in where they live and in their substantially lower levels of wealth than their White peers.

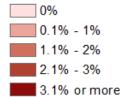


Housing Instability

Figure 30. 2015-2019 Foreclosures as a Share of 2014-2018 Owner-Occupied Housing Units



Source: The Warren Group, July 2020; ACS 5-Year 2014-2018

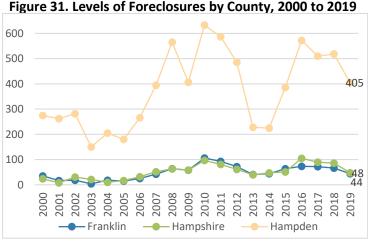


When expressed as a share of owner-occupied housing units, Springfield stands out for its disproportionately high rate of foreclosures, despite having experienced a 10.8 percent growth

in employment from 2010 to 2018. This may be due to ongoing foreclosures in Springfield continuing from the housing crisis, from previous disrepair and disinvestment, and from ongoing economic challenges including employment opportunities in Springfield either being filled by non-Springfield residents, or wages not being high enough to keep up with the cost of living, leading to foreclosures. Overall, Springfield's high rate of foreclosures per owner-occupied housing unit shows that Springfield continues to face deep challenges and has not recovered from the housing crisis since the Great Recession. Overall, the Pioneer Valley region had an owner-

occupied foreclosure rate of 1.8 percent for the 2015-2019 period, notably higher than most individual

municipalities, indicating that the foreclosures are not at all spread evenly throughout the region. Figure 31. Levels of Foreclosures by County, 2000 to 2019 provides the number of foreclosures in each county from 2000 to 2019 and shows that foreclosures predominantly occurred in Hampden County. For area foreclosures that occurred between 2015 and 2019, 35 percent occurred in Springfield, despite it having only 15 percent of the Pioneer Valley's owner occupied homes. Foreclosures slowed briefly after 2012 as banks worked to correct their records and complied with increased regulation.¹⁹ Foreclosures resumed after this period of correction and

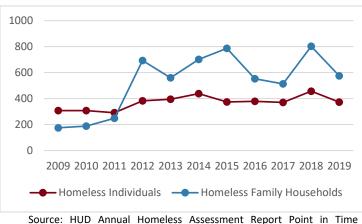


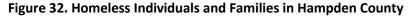
Source: The Warren Group, July 2020.

they began to slow again as the number of cases dating to the Great Recession began to clear. However, foreclosure remains a persistent issue in the area.

¹⁹ See article "New law may be reason why foreclosures down sharply" by the Massachusetts Housing Partnership, 2013

Across the Pioneer Valley, homelessness has increased since 2010. Data from a 2018 point-in-time count conducted by local organizations found 2,321 homeless individuals (those who were unsheltered, in emergency shelter, or transitional housing) in Hampden County, 307 homeless individuals in Hampshire County, and 90 homeless people in Franklin County.²⁰ These numbers do not include people who were living temporarily with friends or relatives, or other similar living situations.





Homelessness in Hampden County has increased from 2010 to 2019. While Hampden County's total population also increased (by 0.6 percent) over the period, the number of homeless individuals increased nearly three-fold, from 886 homeless persons in 2010 to 2,443 homeless persons in 2019. Homelessness data comes from the HUD's point-in-time estimates of homelessness, and represents a count of unsheltered people plus people in shelter, captured at a single point in time to prevent double counting.

It does not account for under-housed people or those otherwise at-risk. Franklin and Hampshire County homelessness estimates are available but aggregated together with Berkshire County, making them less appropriate for a study of the Pioneer Valley, but they show a similar upward trend in homelessness as Hampden County, although the level of homelessness and the rate per resident are substantially lower. In 2019 for example, the Hampshire, Franklin and Berkshire County area had less than a quarter of Hampden's homeless person population and the rate of homelessness was only 0.15th of a percent of the population compared to just over half a percent in Hampden County. It is also notable that the majority of shelter units for Western Massachusetts are in Springfield, which may impact the Hampden County numbers.²¹

The increase in the rate of homelessness could be symptomatic of several important issues, including lack of access to affordable housing and a changing job market. At the time of writing, the Commonwealth had an eviction moratorium in place until October 17th 2020, saving many who were out of work and who had run out of unemployment benefits from being destabilized. Without that moratorium, evictions are sure to begin again, increasing the number of homeless people throughout the state. One estimate of the increased homelessness related to COVID-19 estimated a 45% increase in

Source: HUD Annual Homeless Assessment Report Point in Time Estimates 2019. Total Homelessness, Sheltered and Unsheltered.

²⁰ "Homelessness in Western Massachusetts: The Numbers, the Solutions, the Partnerships," November 2018. <u>http://westernmasshousingfirst.org/wp-content/uploads/2018/11/Report-on-Homelessness-in-Western-Mass-Nov-16-2018-1.pdf</u>

²¹ "Homelessness in Western Massachusetts: The Numbers, the Solutions, the Partnerships," November 2018.

the homeless population nationwide over January 2019 levels.²² The rate of homelessness will likely increase as the current recession progresses, increasing the rate of joblessness, which increases evictions and in turn, increases the rate of homelessness.²³ The end of the eviction moratorium could result in a flood of housing loss happening all at once.

In addition, the pandemic may make it harder for under-housed people to double up or find new places to live, while at the same time it increases the risk and burden at shared facilities, congregate living, and any living arrangements with limited access to handwashing and individual space. Shelters have had to reduce the population they house to maintain social distancing and this may have increased visible homelessness.

Age of Housing

Sum of Pre-W	WII Sum of Pre-1970 Sum of 1970 and Later
U.S.	13% 39% 61%
Massachusetts	33% 60% 40%
Pioneer Valley	31% 63% 37%
Longmeadow	27% 77% 23%
Holyoke	47% 76% 24%
Springfield	40% 75% 25%
Montague	44% 74% 26%
Chicopee	34% 73% 27%
Greenfield	44% 69% 31%
West Springfield	<u>31%</u> 68% 32%
Northampton	46% 66% 34%
Wilbraham	11% 64% 36%
Palmer	35% 63% 37%
South Hadley	20% 61% 39%
Westfield	27% 58% 42%
Easthampton	28% 58% 42%
Ware	31% 57% 43%
East Longmeadow	9% 57% 43%
Ludlow	18% 55% 45%
Agawam	12% 50% 50%
Amherst	21% 44% 56%
Southwick	7% 42% 58%
Belchertown	8% 24% 76%

Figure 33. Largest Share of Housing Built Before 1970 in Top 20 Pioneer Valley Cities by Total Units

Massachusetts' housing is considerably older than the national average. The majority of units in the state were built prior to 1970, the opposite of the country. The state also has more than twice the national rate of housing dating from before World War II. Among the Pioneer Valley's 20 largest cities by number of housing units, Holyoke and Springfield have some of the oldest housing with three quarters or more of their units over 50 years old. Greenfield and Northampton also possess a large number of older units, with 69 percent and 66 percent of their units respectively, being built before 1970.

In all these locations, 40 percent or more of all units are pre-war.

Source: ACS 5-Year, 2014-2018, Table DP04 Selected Housing Characteristics

These units may have been kept in good condition through their 80+ year lifespan, but many need renovation. There is limited available data on distressed or dilapidated housing across communities in the state, though we can assume that areas with a larger share of older housing stock will have more

 ²² See Community Solutions "Analysis on unemployment projects 40-45% increase in homelessness this year" May 2020
 ²³ See https://www.law.nyu.edu/sites/default/files/upload_documents/evictions_collinson_reed.pdf a report about the relation of evictions and homelessness, by Collinson and Reed, NYU School of Public Policy, 2018



worn-down housing units. In places with higher risk of decaying housing or disinvestment, an older housing stock becomes a greater liability. Some renters and buyers won't or can't consider older housing which may lack equipment such as elevators for accessibility, or may be in need of extensive repairs. Some landlords may choose not to rent out older units because to do so may require extensive renovations just to get them in compliance with the Americans with Disabilities Act, the cost of which may not be covered by the lower rents in some Pioneer Valley locations. In addition, homes built before 1979 typically have lead paint, heavily restricting the options of section 8 voucher holders and tempting landlords to discriminate against families with children under the age of 6.

Overall, the presence of many older homes complicates the local housing market. On one hand it limits the number of units that are habitable, but on the other, it may offer some "naturally affordable" housing. Rehabilitation of buildings can signal gentrification and push out renters from their formerly affordable homes, with no increase in affordable alternatives forthcoming. While older housing stock can mean it is more affordable, housing that is affordable because it needs repairs may cause residents to develop chronic or acute health problems. Safe, decent, and affordable housing is not plentiful enough in the region to protect all of the area's lowest income renters from having to make these kinds of choices.



Vacancy

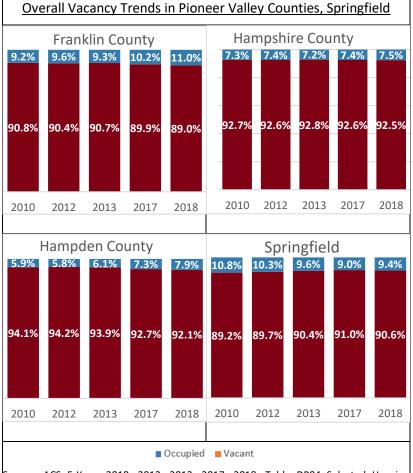


Figure 34. Vacancy Trends (Owned and Rented Combined)

Source: ACS 5-Year, 2010, 2012, 2013, 2017, 2018, Table DP04 Selected Housing Characteristics Note: Represents combined trend for both owned and rented housing combined together.

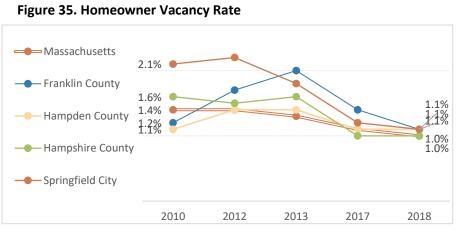
Vacancy information reflects housing the owner plans to rent or sell and excludes homes that are off the market because they are in disrepair or disuse, filling in the active-property part of the picture. Franklin, Hampshire, and Hampden Counties show a slow increase in vacant housing units from 2010 to 2018 while the City of Springfield shows a steady decrease in vacant housing units as does the state of Massachusetts. West Springfield and Wilbraham, both municipalities that neighbor Springfield, share a similar decrease in vacant housing units. Low vacancy rate usually reflect a tighter housing market. When looking across the state, there is also decreasing vacancy in densely populated cities like Springfield in eastern Massachusetts such as Lowell, Fall River, and Everett. Although Springfield is located within Hampden County, it has a trend opposite to Hampden County's.

This indicates that the other municipalities in Hampden County have strongly increasing vacancy rates, to be overcoming the trend in the region's central city. Low housing costs in Springfield represent increasingly critical options for residents as vacancy decreases, particularly for residents near, at, and under the poverty line. Some neighborhoods in Springfield afford residents accessible housing market prices, especially for apartments for rent but also for home purchases, that are unavailable in other communities in the region.



Homeowner Vacancies

Throughout Franklin, Hampshire, and Hampden Counties, the state of Massachusetts, and the city of Springfield, there was a gradual downward trend in homeowner vacancies from 2010 to 2018. In Franklin County this trend started more recently, but in the city of Springfield it began by 2012.



Similarly, Census Bureau ACS data on homeowner vacancy rates for the United States also shows a gradual decline. Marked declines in homeowner vacancies are often concurrent with increased housing prices, as the few houses that are up for sale are in higher demand, and may become more expensive.

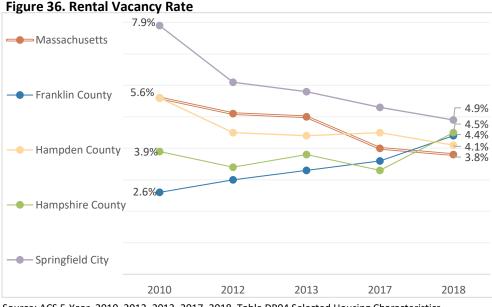
Source: ACS 5-Year, 2010, 2012, 2013, 2017, 2018, Table DP04 Selected Housing Characteristics

There are typically steady levels of homeowner vacancies once a low vacancy rate of around 1.5 to 1 percent is reached. Interestingly, since 2010, Hampden County has had no net change over the period, while the city of Springfield has dropped an entire percentage point (representing negative 90 percent change). The other municipalities within Hampden County are split pretty evenly between negative and positive percentage point changes from 2010 to 2018, even though vacancy rates declined in the state overall, and every other county in the Pioneer Valley.

Because there is lower turnover among homeowners than with renters, the vacancy rate of rental housing is typically higher than the rate of homeowner vacancy.



Rental Vacancies



Overall, the rental market vacancies in Massachusetts also decreased from 2010 to 2018, as rates did in Hampden County and the city of Springfield. Unlike the rest, however, Hampshire and **Franklin Counties** show an increasing trend in rental vacancies over the same period.

Source: ACS 5-Year, 2010, 2012, 2013, 2017, 2018, Table DP04 Selected Housing Characteristics

Hampden County, the most populous of the three, includes Springfield, Chicopee, Agawam, and Holyoke, all with decreasing rental vacancies. Decreasing vacancy rates may indicate a housing market that is tightening slightly, changing from a history of high vacancy and lower prices and activity.

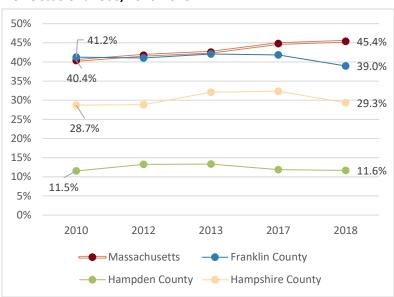
Vacancy is very unevenly distributed in the region, and even within each municipality. Within Springfield, the city has identified in prior reports that vacant units are concentrated in a few neighborhoods with long-term vacancy rates over 6 percent, including in Memorial Square, Metro Center, Old Hill and parts of Forest Park.²⁴ In 2019, MLS data shows that properties in Old Hill often were on the market longer than Springfield properties overall, where the median time on market was just under one month. Some properties sold in Forest Park in 2019 had been on the market for over one year.

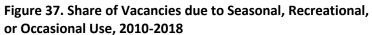
The statewide rental data is also mainly influenced by the more heavily populated communities of eastern Massachusetts, including the Greater Boston area, with its very tight housing market. In the Pioneer Valley, Hampshire and Franklin Counties are much less populated than Hampden County. This may relate to Hampshire and Franklin counties' increase in rental vacancies. As the average population age rises in both the nation and the Commonwealth, it is important to note that over time there will be fewer college-aged individuals seeking apartments and perhaps more rental vacancies in Hampshire and Franklin counties of perhaps more rental vacancies in Hampshire and Franklin counties. Adults increasingly prefer to age in their homes and communities meaning a decrease in homeowner vacancies, according to HUD research pre-dating the pandemic.²⁵

²⁴ https://www.springfield-ma.gov/housing/fileadmin/housing/Housing Study/Housing Study June 2018.pdf
 ²⁵ https://www.huduser.gov/portal/pdredge/pdr edge featd article 102014.html



With COVID changing housing needs, many are moving. Thus far there is anecdotal evidence that many moves are taking place after initial Massachusetts 'lockdowns' in March, as people adjust to pandemic patterns of life. Likely some are seeking different amenities or lower rents, and some younger adults may be 'podding' or moving back in with parents or grandparents.





In addition, Hampshire and Franklin counties typically experience seasonal demand, in summer and fall/winter/spring (for students). Seasonal, recreational or occasional use rentals account for 39 percent of Franklin and 29 percent of Hampshire's 2018 vacant units. Hampden has the smallest share of these rentals (12 percent) of any county in the state and all counties in the Pioneer Valley had a smaller share of this type of housing than the state overall (45 percent) in 2018. The state's high rate of Vacant seasonal units is driven by the Cape and Islands, 64 percent of all vacant seasonal units statewide are found there. Outside of the Cape and Islands, only Berkshire and Plymouth

Source: ACS 5-Year, 2010, 2012, 2013, 2017, 2018, Table B25004 Vacancy Status

have a higher share of seasonal units than Franklin County. These are units that are unavailable for year-round residential use and put additional pressure on the housing market in Franklin County.

The National Association of homebuilders analyzed differing vacancy rates across several metropolitan regions due to volatility from seasonal demand in areas such as vacation home sites and college towns welcoming new students when schools open. More colleges and universities are relying on remote instruction during the pandemic, which is

Figure 38. Share of Vacancies due to Seasonal, Recreational, or Occasional Use, 2018

Share of Vacant Units that are for Seasonal, Recreational, or Occasional Use							
Rank	County Share Rank County Share						
1	Dukes	96%	8	Essex	29%		
2	Barnstable	91%	9	Suffolk	17%		
3	Nantucket	91%	10	Bristol	16%		
4	Berkshire	58%	11	Middlesex	15%		
5	Plymouth	55%	12	Worcester	13%		
6	Franklin	39%	13	Norfolk	12%		
7	7 Hampshire 29% 14 Hampden 12%						

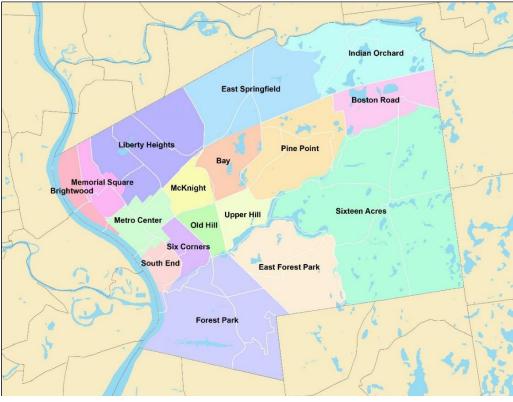
Source: ACS 5-Year, 2018, Table B25004 Vacancy Status

likely to exert a measurable downward influence on housing in the mid- Pioneer Valley.



Springfield Neighborhood Analysis

Due to how small-geography Census data²⁶ is made available, this report reports on neighborhoods of Springfield as defined by Census tracts. Springfield is the largest city in the Pioneer Valley. This means more ACS data is available, because information on Springfield Census tracts is based on the highest number of survey responses in the Valley for any town or city. This lowers margins of error on the data to work from and to match to housing data from other sources. Note that while Census tracts mostly conform to neighborhoods defined by the City, however, in a few notable instances, this is not the case. The map below overlays tracts and neighborhood boundaries to illustrate.





Source: Springfield Planning Department GIS Maps, shapefile by UMass Design Center in Springfield

Springfield neighborhoods²⁷ are shown in various colors and their component census tracts are defined by white borders. Certain neighborhoods, such as Metro Center, share tracts with bordering neighborhoods. In most instances the tracts and neighborhoods very closely overlap. For the purposes of this study, the neighborhood to which the largest portion of the tract belonged is the one it was assigned to.

 ²⁶ See Appendix A for details on the challenges of Census data in small geographies.
 ²⁷ As defined by <u>Springfield's Planning Department</u>.

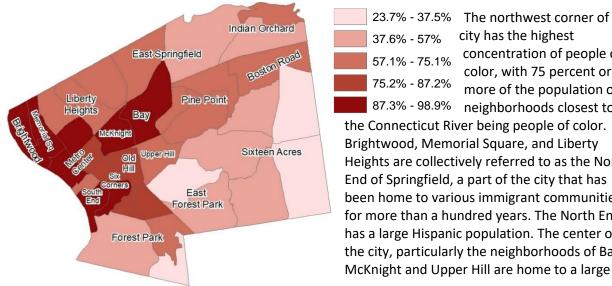


Figure 40. Percent People of Color by Tract in Springfield

37.6% - 57% 57.1% - 75.1% 75.2% - 87.2% 87.3% - 98.9%

23.7% - 37.5% The northwest corner of the city has the highest concentration of people of color, with 75 percent or more of the population of neighborhoods closest to the Connecticut River being people of color. Brightwood, Memorial Square, and Liberty Heights are collectively referred to as the North End of Springfield, a part of the city that has been home to various immigrant communities for more than a hundred years. The North End has a large Hispanic population. The center of the city, particularly the neighborhoods of Bay,

Source: ACS, 2014-2018, Table B03002 Hispanic or Latino Origin by Race

Black population. The two largest White communities in the city are found in Sixteen Acres and East Forest Park.

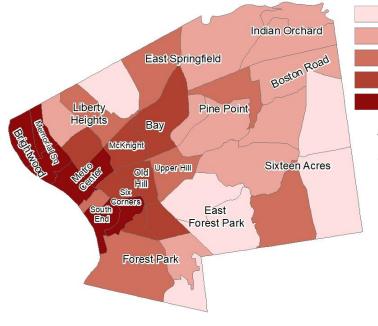


Figure 41. Poverty Rate by Tract in Springfield

4.2% - 13.7% 13.8% - 22.2% 22.3% - 29.5% 29.6% - 47.2% 47.3% - 62.3%

Parts of the city where people of color make up a larger share of the population also tend to be higher poverty, reflective of lower incomes of the populations in Pioneer

Valley. In Springfield's northwest corner, approximately half or more of all people are in poverty, in locations including Brightwood, Memorial Square and Metro Center.

Neighborhood	Share White	Share Black	Share Asian	Share Hispanic	Share All Other
Вау	10.3%	40.6%	3.9%	44.8%	0.5%
Boston Road	30.3%	22.4%	2.3%	42.3%	2.8%
Brightwood	3.1%	10.5%	0.7%	85.7%	0.0%
East Forest Park	61.8%	11.1%	5.1%	17.5%	4.4%
East Springfield	35.9%	5.0%	2.1%	56.2%	1.0%
Forest Park	32.5%	15.7%	4.3%	44.6%	2.8%
Indian Orchard	37.4%	20.1%	1.1%	36.0%	5.3%
Liberty Heights	25.9%	10.1%	1.0%	60.7%	2.3%
McKnight	11.2%	34.2%	0.6%	43.8%	10.3%
Memorial Square	5.4%	10.1%	0.0%	84.0%	0.5%
Metro Center	11.2%	16.7%	0.4%	70.1%	1.5%
Old Hill	14.0%	23.1%	0.1%	62.0%	0.7%
Pine Point	25.6%	33.2%	0.7%	36.8%	3.6%
Six Corners	15.6%	23.7%	0.9%	56.8%	2.9%
Sixteen Acres	56.5%	17.4%	1.8%	21.1%	3.3%
South End	15.8%	11.5%	4.8%	66.7%	1.2%
Upper Hill	30.8%	39.4%	1.0%	27.3%	1.6%

Figure 42. Percent of Springfield Neighborhood by Race or Ethnicity

Source: ACS 5-Year 2018, Table B03002 Hispanic or Latino Origin by Race

The median sale price of homes in the five most predominantly white neighborhoods in Springfield, East Forest Park, Sixteen Acres, Indian Orchard, East Springfield and Forest Park was \$178,000 according to sales data for 2019 from MLS. The median sale price of homes in the five neighborhoods with the most people of color, Metro Center, McKnight, Bay, Memorial Square and Brightwood was \$158,950. Besides the lower median, price the difference in the number of sales was substantial. The five neighborhoods with the most with the most people in them had over 1,000 home sales in 2019, compared to 156 in the neighborhoods with the most people of color. These two sets of neighborhoods also differed in their time on the market with the median home in the neighborhoods with the most people of color on the market ten days longer than the median top five white-dominated neighborhood homes.

There could be many reasons for this disparity, but what is certain is that there is higher turnover in homes in neighborhoods that are predominantly white and that their prices are slightly higher than in neighborhoods that are predominantly people of color. This report has established that people of color in the region are lower income and less likely to buy into the housing market, both factors that would contribute to these statistics. These data show that socio-economic relationships seen at the county and municipal geographic scale still clearly exist at the tract level.



Conclusion

From an aging population to the impacts of the COVID-19 pandemic, the Pioneer Valley is experiencing shifts and changes that will continue to have impacts on how residents access and afford housing.

Slow population growth overall should make a housing shortage less likely, but the nature of the small amount of growth negates that possibility. An increasingly elderly population occupies a disproportionate amount of units. People of color are a growing part of the population, residing primarily in the southern end of the Pioneer Valley in Hampden County, frequently unable to access pricier communities due to income constraints as well as a history of policy and practices diverting them away from certain areas of the Pioneer Valley and the state.

These demographic changes are compounded by a housing deficit that is expected to grow. Some of these issues are an outgrowth of a slow recovery from the Great Recession, which has given the Pioneer Valley more ground to make up when it comes to providing adequate housing for all of its residents. New construction of affordable housing as well as renovations of existing units to make them marketable could relieve pressure on the existing housing stock.

The COVID-19 pandemic has further complicated the economic future of the region and may likely produce more inequality in housing in the near future. Potential eviction and foreclosure loom for many without jobs as they struggle to keep up with rent and housing payments. At the same time, historically low interest rates and the desire for more space has led homebuyers with more financial security to seek homes in a market where supply is still low, causing an increase in home prices. It will be important to watch both of these trends in the coming months to get a clearer picture of the long-term impacts this pandemic will have on both the regional economy and housing market, and for whom.



Appendix A: Data Sources Overview

Data methodology:

Data for this project was gathered from a variety of sources. The single largest source for data in this report was the U.S. Census Bureau American Community Survey, an annual, sample-based survey of homes 5-Year Sample. The 5-year sample is a pool of 5 years of survey data, the higher number of responses allows for research on small geographies such as towns and tracts. For housing cost burden by race, HUD CHAS data was used. See Appendix C for a more detailed description of this public data set.

ACS data on housing is somewhat limited and lagged. For this reason, a couple of non-public sources were employed to answer questions about housing in the Pioneer Valley. The Warren Group collects and publishes data on the housing market. Data was gathered from The Warren Group on town level foreclosures in Franklin, Hampshire and Hampden Counties. Additional data on individual sale prices and time on market was aggregated and provided by Kathy Condon, President and Chief Executive Officer of the Multiple Listing Service Property Information Network.

Margins of Error for Percent in Poverty by Race from the ACS:

One of the limitations of the publicly available data from the Census Bureau is that it is sample-based survey data and therefore all data points are estimates with margins of error, which presents a challenge to accuracy and precision only when sample sizes are particularly small. As remarked upon in the report, we note here varying and sometimes large margins of error for the Percent in Poverty by Race due to small sample sizes in subparts of the region for some populations, for the three counties, for the Pioneer Valley region as a whole, and for the state overall, in the table included below.

Geography	White		Black		Asian		Hispanic	
	Percent	MOE	Percent	MOE	Percent	MOE	Percent	MOE
Massachusetts	8.5%	0.1%	19.7%	0.8%	13.8%	0.7%	26.6%	0.7%
Franklin	9.5%	1.0%	46.1%	17.7%	7.4%	7.1%	21.9%	5.5%
Hampden	14.7%	0.7%	21.5%	2.3%	18.6%	5.3%	39.5%	1.9%
Hampshire	12.0%	0.9%	34.2%	11.4%	24.2%	6.6%	19.6%	5.3%
Pioneer Valley	13.5%	0.5%	23.0%	2.3%	19.5%	3.9%	37.9%	1.8%

Appendix Figure A: Percent in Poverty and Margin of Error

Source: ACS, 2014-2018, Tables B17001D, H, I, B Poverty Status by Race



Appendix B: Census Bureau ACS Housing Definitions

Housing terminology, definitions from the Census Bureau for ACS data

Housing Unit: A housing unit is a house, an apartment, a group of rooms, or a single room occupied or intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants do not live and eat with other persons in the structure and which have direct access from the outside of the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible. If the information cannot be obtained, the criteria are applied to the previous occupants. Tents and boats are excluded if vacant, used for business, or used for extra sleeping space or vacations. Vacant seasonal/migratory mobile homes are included in the count of vacant seasonal/migratory housing units. Living quarters of the following types are excluded from the housing unit inventory: Dormitories, bunkhouses, and barracks; quarters in predominantly transient hotels, motels, and the like, except those occupied by persons who consider the hotel their usual place of residence; quarters in institutions, general hospitals, and military installations except those occupied by staff members or resident employees who have separate living arrangements.

Occupied Housing Units: A housing unit is occupied if a person or group of persons is living in it at the time of the interview or if the occupants are only temporarily absent, as for example, on vacation. The persons living in the unit must consider it their usual place of residence or have no usual place of residence elsewhere. The count of occupied housing units is the same as the count of households

Rental Vacancy Rate: The rental vacancy rate is the proportion of the rental inventory which is vacant for rent

Homeowner Vacancy Rate: The homeowner vacancy rate is the proportion of the homeowner inventory which is vacant for sale.



Appendix C: CHAS Data on Housing Cost Burden

HUD CHAS Data Compared to ACS

The Department of Housing and Urban Development (HUD) uses American Community Survey (ACS) Data from the U.S. Census Bureau to create an extensive set of data tables called CHAS (which stands for Comprehensive Housing Affordability Strategy) relevant to identifying areas in need of housing assistance. These tables quantify the number of households facing various problems and the number that are considered low income. High housing cost burden is just one problem a household may face. These specific tabulations are not available in the ACS tables, as that data is intended for answering general data questions rather than housing specific ones. HUD takes information from the individual survey responses from the ACS and re-tabulates them to make unique tables that fit their needs (and the needs of the HUD grantee organizations reporting to HUD on their activities).

Historically the CHAS data were updated only every 10 years after each Decennial Census but beginning in 2009, HUD developed a version of CHAS data based on the ACS survey. There is usually a 1-year lag between the two data sets. On August 25, 2020 HUD released updated CHAS data for the 2013-2017 period. Therefore, at the time of analysis for this report, the latest available CHAS data was for the 5 year period ending in 2017, despite ACS 5-year data being available for the 5 years ending with 2018.



Appendix D: Household Projections Methodology

Household Projections Background Information and Methodology

When projecting future housing needs for a community, established projections methods tend to focus on households rather than housing units. UMDI's housing unit demand projections follow this general approach and also considers vacancies. Our projection method draws on methods from two household projections performed for other organizations. For clarity, each occupied housing unit is considered a household, with one person in that household being identified as the head-of-household, or householder. As such, the number of housing units needed are modeled as equal to the number of households plus the number of vacant housing units.

Our model of housing demand is based on population trends. There are other potential demand factors which this approach does not utilize: The development of individual physical housing units is subject to financial conditions, local land-use restrictions, and changes in desirability of certain communities. The desirability of a community to prospective homebuyers or renters itself is the function of employment opportunity, local amenities, public safety, and the quality of transportation infrastructure, and many other socioeconomic factors. It would be difficult to predict how any, let alone all, of these factors will change in the state or its constituent counties or municipalities in the coming years. Therefore this model leverages our existing UMDI population projections combined with data on current household formation patterns and vacancy rates to estimate the number of housing units which would be needed to house this future population, at least in the absence of a major shift in any of those trends.

The first step of UMDI's method first combines population by sex and age and tenure of homeowners by age from the 2014-2018 American Community Survey at the state, county, and municipal levels. Sex and tenure are not present in both datasets, so they are aggregated into two tables, population by age and householders by age. The age categories in the population by age table are then aggregated up to match the level of detail given in the householders by age table. Age groups younger than 16, the youngest age in the householders by age table, are dropped. From there, headship rates are calculated by age by dividing the number of householders in each age group by the number of total people in that age group for Massachusetts and all of its constituent counties and municipalities.

In some cases, the American Community Survey reported that there were zero householders, either homeowners or renters, within a certain age cohort. While some of those zeroes could be accurate (they tended to occur among younger age cohorts and in either very small communities or communities with very high housing costs), they also could be the result of data suppression, as the ACS does not report household-level data if there are less than three households that would fit that description in order to avoid identifying individuals according to the US Census Bureau, who UMDI contacted about this issue. In these cases, UMDI opted to use the midpoint between zero and two and assume one householder in cells showing zeroes.



The resulting headship rates are then applied to UMDI's population projections. Again, age and sex categories over the age of 16 were aggregated to match the age cohorts in the ACS householders by age table. Headship rates are then applied to projected population estimates by age at the state, county, and municipal levels.

To project housing units from households, the number of vacant units are estimated by taking the number of housing units, also from the 2014-2018 American Community Survey, and dividing the number of housing units by the number of households. Projected households for each age and year were then multiplied by this ratio. As in the case of headship rates, the assumption being made here is that vacancy rates in future years will be comparable to those observed in the 2014-2018 dataset.

UMDI then controlled our county projections to the state projection by calculating the each county's share of projected county-level housing unit demand and applying those shares to the state-level projection. A similar process was then followed for each of the municipalities within Massachusetts' counties. The logic for controlling smaller geographies to larger ones is that larger estimates for both projections and survey data are likely to be more robust. Controlling in this fashion also ensures internal consistency across geographical levels. County level results were then aggregated up to metropolitan statistical areas (MSAs). In cases where the MSAs crossed state lines, only the Massachusetts portions were included.



Appendix E: Housing Burden

Appendix Figure B: Housing Burden

Owned*	of Household Ir	with 30% or more acome Spent on sing	Percent of Units with 50% or more of Household Income Spent on Housing		
	2010	2018	2010	2018	
Massachusetts	36%	27%	14%	11%	
Pioneer Valley	32%	26%	12%	10%	
Franklin	34%	27%	12%	10%	
Hampshire	29%	25%	9%	10%	
Hampden	32%	26%	12%	10%	

Rented	2010	2018	2010	2018
Massachusetts	51%	50%	26%	23%
Pioneer Valley	54%	55%	29%	26%
Franklin	49%	51%	28%	25%
Hampshire	52%	55%	28%	25%
Hampden	56%	55%	29%	27%

Source: ACS 5-Yr, 2006-2010, 2014-2018, Table B25070 and B25091, *Owned units include all units, both with and without mortgages

While housing burden for rented households has remained mostly the same since 2010, a smaller share of Pioneer Valley households, both renters and owners are spending 50 percent or more of their income on housing costs than in 2010.

