

The Growing Shortage of Affordable Housing for the Extremely Low Income in Massachusetts

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POLICY REPORT 19-1





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EXECUTIVE SUMMARY

High housing costs in Massachusetts place significant financial pressure on the state's residents, whether they are homeowners or renters, families or individuals. A lack of affordable housing has the potential to negatively impact the state's economy by decreasing the region's competitiveness. While many households in the state experience affordability problems, how to best allocate federal and state dollars to address this issue depends on the population those funds are meant to serve. The lower a household's income, the more it depends on financial assistance to find housing that is affordable and to cover monthly rent payments. This is particularly true for Massachusetts's extremely low-income (ELI) renter households, defined as those with incomes at or less than 30 percent of the area median income (AMI). In 2016, 79 percent of these households were "rent burdened," spending more than one-third of their household income on rent and utilities. Due to high housing costs, ELI households often have to forgo spending on healthcare, food, childcare, or other necessities. A single financial shock—a job loss or a large medical bill—can cause this group to fall behind on rent, leading to eviction or even homelessness. Massachusetts has a large shortage of affordable and available (AA) housing units for ELI renter households, and this problem could be exacerbated if action is not taken to address the growing number of affordable housing units whose subsidies are at risk of expiring in the coming years.

This report examines existing shortages of affordable rental housing for ELI households at both the state and local levels. It finds that in 2016, there was less than one AA unit for every two ELI renter households in Massachusetts. Cities and towns vary widely in their supply of AA units, with much of the state's subsidized housing concentrated in major cities and other heavily populated areas. Communities with lower rents were associated with higher rates of rent burden in 2016, which suggests that in some cases, low incomes share the blame for the high rate of rent burden that ELI households experience.

This report also finds that much of the state's inventory of affordable housing is at risk of becoming unaffordable to ELI households when subsidies end and the owners of these expiring use units are allowed to raise rents. By 2025, 9,110 subsidized units that were occupied by ELI households in 2016 will have all of their attached subsidies expire. Twenty-five cities and towns are at risk of having all of their subsidized housing expire by this time. The potential cost of preserving all of the expiring use units—not just those units that are occupied by ELI households—while adequately growing the state's subsidized inventory, is substantial. This report estimates that by 2035, between \$843 million and \$1.03 billion will be needed annually to preserve expiring use units and increase the subsidized housing inventory sufficiently. Advocating for resources at the federal level and finding new ways to foster private and nonprofit development will help spread the cost and prevent the state from having to pick up the full tab.

This report identifies ways that the state's policymakers and housing agencies and providers can more efficiently use limited resources to address the affordable housing needs of ELI households. The first is to prioritize rental assistance in areas of the state where rents are low and the inventory of market-supplied housing is high. Doing so will take advantage of local market conditions that are favorable to rental-assistance subsidies while addressing these areas' high rates of rent burden. Tax-credit and other supply-oriented subsidies can be targeted more heavily to areas with less affordable housing stock overall. Building geographic considerations into program administration can help achieve this tailoring of resources. Second, preserving expiring subsidies in smaller cities and towns will ensure broader access to affordable housing throughout Massachusetts. The state's increasing need to preserve affordable housing is widely acknowledged and supported. Many of these units are located in major cities and metro areas; however, smaller cities and towns, while accounting for a smaller share of the subsidized housing, are at risk of seeing most or all of their subsidized units expire by 2025.

I. Introduction

A lack of affordable housing can have major repercussions for a local economy. Whether they are renters or homeowners, single adults or families, residents of high-housing-cost areas spend more on monthly rent or mortgage payments and have less available for other necessary expenses. Those who want to move into high-cost areas will find it more difficult to relocate, limiting their access to jobs or other economic resources in those areas. As affordability issues worsen, households may move outside the state, taking with them their human capital. Businesses may also relocate to another state, where they still have access to skilled labor but where they can pay lower wages in the absence of prohibitively high housing costs. A lack of affordable housing can affect households at different levels of the income distribution, but which policies and programs might best address the issue depends on the population they are intended to serve. Most federal and state affordable-housing programs focus on renters making less than the median income of the area in which they live. In particular, extremely low-income (ELI) renter households face significant financial pressure from high housing costs in Massachusetts.

ELI renter households experience precarious financial conditions. These households, with incomes at or below 30 percent of the area median income (AMI), often have trouble paying rent. In Massachusetts, more than half spent over 50 percent of their total income on gross rent (con-

Massachusetts needs to increase its supply of affordable rental units for ELI households.

tract rent plus utilities) in 2016. Almost all of these households spent more than 30 percent on gross rent; that is, they were “rent burdened.” High monthly rent bills have major consequences for ELI households. Poorer families who devote large portions of income to housing costs have to cut expenses elsewhere, sacrificing spending on healthcare, food, and other necessities. ELI households also are often tenuously housed and at constant risk of experiencing financial shocks that can lead to missed rent payments and cause them to move, be evicted, or become homeless.

Many state and federal programs that support affordable rental housing and subsidize housing costs prioritize at least some units for ELI households. Even though Massachusetts receives considerable financial support from the federal government (roughly \$2 billion in rental-assistance funding alone in 2016), affordability problems persist. The supply of units that are affordable and available for ELI households is limited. A 2017 Urban Institute study estimates that in 2014 in Massachusetts, only 34 “affordable and adequate” rental units were available for every 100 ELI households (Getsinger et al. 2017). Using similar methods, and making adjustments to account for households with temporary reductions in income, this report estimates a supply of 48.6 affordable and available (AA) units per 100 ELI households in 2016.¹ These units were affordable and occupied by ELI households, or they were vacant. Public subsidization, from state and federal sources, supplied the vast majority of these units: about 41 per 100 ELI households. Private-market units, those with no government subsidies attached to them, accounted for 7.6 units per 100 ELI households. Overall, in 2016 Massachusetts experienced a shortage of 141,291 AA rental units for ELI renter households.²

The private market often does not provide a sufficient supply of AA housing for ELI households (Leopold et al. 2015). Due to the high costs of land purchase, construction, and labor, new developments are geared largely to the higher end of the rental market, where developers can

1 Defined in this report as units occupied by ELI households, with gross rent less than or equal to 30 percent of the maximum ELI household threshold, adjusted for unit and household size.

2 Based on 2016 American Community Survey (ACS) five-year estimates found in Table 3.

attain greater returns on investment (JCHS 2015). ELI households rely heavily on housing units with attached federal and state subsidies that cover some, or all, of their monthly rent payments. In 2016, the vast majority of US Department of Housing and Urban Development (HUD) subsidized units in Massachusetts were occupied by ELI households.³ These included 76 percent of the state's public housing units, 74 percent of the Project Based Section 8 (PBS8) units, and 75 percent of Housing Choice Vouchers (HCV) holders. Even with significant subsidies, shortages of AA units persist. In 2013, the Joint Center for Housing Studies estimated there were 7.2 million ELI-affordable units nationwide, equating to 65 affordable units per 100 ELI households (JCHS 2015). After the study removed inadequate units⁴ and those occupied by higher-income households, the number of affordable units dropped to 34 per 100 ELI households.

A shortage of affordable housing for ELI households can have implications beyond simply increasing the amount of income spent on rent. Poorer families receiving no help with rent spend an estimated 55 percent less on healthcare and 38 percent less on food than do similar households receiving rental subsidies (JCHS 2015). Children in ELI households that receive rent subsidies tend to have better nutrition and less exposure to often-dangerous health hazards, such as mold and lead, compared with children in households on waiting lists and receiving no assistance (Rauh, Landrigan, and Claudio 2008). A study of children in poor families residing in public housing finds that, compared with children in households receiving no assistance, they are more likely to work as young adults, have greater personal incomes, and are less likely to be on cash welfare programs later in life (Newman and Harknass 2002).⁵ Living conditions tied to proper facilities, such as bathrooms, also improve when low- and very low-income households receive housing assistance, because many of these programs require minimum standards for unit eligibility (Collinson, Ellen, and Ludwig 2015). Lastly, lack of income, coupled with unaffordable rents, puts ELI households at high risk for residential instability, which results in an increased frequency of moves and evictions, as well as higher rates of doubling up and homelessness (Crowley 2003).⁶

This report provides estimates of ELI households and the supply of AA units, and information on future inventory at the city and town level. The goal of this report is to expand on the existing research and analysis of this population in three areas. First, by including local estimates of population and supply, this report will help inform the planning and decision-making of local policymakers and program administrators. Massachusetts places most of the administration of affordable-housing subsidies at the city and town level. Second, by removing from the analysis households that likely have temporary reductions of income, such as those that are student led, this report provides estimates of ELI households that are lower than those of other published reports but better reflect the core population that is experiencing extremely low income long term.

In 2016, less than one unit was available for every two ELI households in Massachusetts.

3 Based on data from HUD's 2016 Picture of Subsidized Household dataset (HUD 2016a).

4 Inadequate units are defined in the report as those units without bathrooms, running water, or electricity.

5 This study is limited in scope to households that lived in public housing between 1968 and 1982.

6 The literature on the impact of affordable housing on homelessness is less than conclusive, and it suggests that the effect depends on the local mobility of the homeless population. A 2015 report by Clifford and Jackson (2015) finds that the Low-Income Housing Tax Credit program (LIHTC) helped reduce rates of homelessness overall but had little effect on local-level homeless populations. Woods, Turnham, and Mills (2008) find that random assignment of Welfare to Work vouchers significantly reduced homelessness and subsequent residential instability. Corinth (2017) finds that Permanent Supportive Housing, a subsidized housing program meant for chronically homeless individuals, had a greater impact at the regional level, likely due to the migration of homeless households to areas with more services. An earlier study by Early (1998), however, finds that increases in the number of subsidized housing units of all types decreased rates of homelessness by only about five persons for every 100 units added, although the study points to the targeting of these programs to higher-income households (but still low income by HUD definition) as possibly muting the effect.

Third, this report uses publicly available data on state-funded rental subsidies to analyze the role that Massachusetts plays in funding affordable housing, thus providing a more accurate depiction of how the private market supplies affordable units at the local level.

In 2016, 28 percent of all renter households in Massachusetts were ELI households.⁷ This group tends to be older, with smaller household sizes and higher incidence of rent burden compared with the state's overall renter population. Affordable rental housing for ELI households is in short supply, and the inventory declined between 2011 and 2016, the two years analyzed in this report. The federal government supplied 76 percent of these affordable units through rental-assistance subsidies in 2016. Massachusetts state government programs played a much smaller but still important role that year, supplying about 6 percent of the affordable units.⁸

How Affordable Housing Is Supplied

Whether for homeownership or rental housing, affordable-housing policies play an important role in extending access to high-cost areas and quality forms of shelter. In the United States, the federal government and state governments contribute to the creation of affordable housing. The programs governments use depend largely on the population they intend to serve and on the local housing market where affordability is a problem. For example, incentivizing banks to issue lower-rate mortgage loans or promoting new-construction can be effective tools for keeping home prices accessible to low-income buyers. For renters, affordable-housing programs often focus on helping households cover their monthly rent bill or incentivizing property owners to charge lower monthly rents.

Broadly speaking, affordable rental housing can be supplied through three mechanisms—the private market, supply-side subsidies, and demand-side subsidies—that are often used together to create affordable units. Table 1 presents examples of some major federal and Massachusetts affordable-housing programs and policies that fall into these groups, as well as the population that is eligible for each program. The private market supplies affordable units when owners charge rents that are affordable without the assistance of government subsidies. In areas where land or construction costs are low, newly built units may be affordable on their own. Alternatively, rents may decrease as buildings age and units can no longer command a premium in the market; this process is called “filtering” (Arnott and Braid 1997; Rosenthal 2013). Demand-side subsidies, referred to in this report as rental-assistance subsidies, bridge the gap between low incomes and high rents, in effect increasing the purchasing power of low-income households (Sasser, Zhao, and Saas 2006). These programs often rely on private-market-rate units to supply housing, but they also include public housing, where the government owns the property and charges reduced rents. In contrast, supply-side subsidies promote affordability by incentivizing private-sector investment in new construction or rehabilitation of existing units. The largest of these programs is the federal government's Low-Income Housing Tax Credit (LIHTC), which provides tax breaks for developers, reducing the cost of new construction or rehabilitation in order to decrease the amount of rent revenue that the property owner must collect to meet profitability.

7 Without the removal of student-led households from the estimate, 31 percent of renter households were ELI in 2016.

8 Data on Massachusetts state-subsidized housing units were retrieved from the National Housing Preservation Database (NHPD). These data were collected, however, from the inventory of expiring use properties maintained by the Community Economic Development Assistance Corporation (CEDAC). See the online appendix for a discussion of the methods used to estimate various measures of AA units.

Table 1 Selected Affordable-Housing Programs and Policies in Massachusetts

Type	Description	Eligibility
Private-Market Sources		
New construction	Unsubsidized rental units may be affordable to many low-income households if the landlord or developer rents at a low price.	No eligibility restrictions.
Existing units		
“Filtering”	Some older rental units will decrease in price as newer units command a premium in the market.	
Demand-Side Sources/ Rental Assistance		
Housing Choice Voucher (HCV)	Household pays 30% of income toward rent. Tenant can move to a new unit and keep the subsidy.	Household income must be at or below 50% of AMI.
Project Based Section 8 (PBS8)	Household pays 30% of income toward rent. Tenant cannot move to a new unit and keep the subsidy.	
Public Housing (PH)	Household pays 30% of income toward rent. A housing authority or other government agency owns and operates the unit.	Household income must be at or below 80% of AMI.
Massachusetts Rental Voucher Program (MRVP)	Household pays 35–40% of income toward rent. An MRVP voucher can move with a tenant to another unit.	
Supply-Side Sources		
Low-Income Housing Tax Credit (LIHTC)	Reduced tax liability for developers to lower costs of new or rehabbed units.	Units must be affordable to households with incomes at or below 50% or 60% of AMI, depending on quantity of affordable units.
Chapter 40-B (Comprehensive Permit Act)	Massachusetts law giving zoning boards flexibility if 20–25% of a new housing development’s units are made affordable over the long term.	Units must be affordable to households with incomes at or below 80% of AMI.

The state is at risk of losing a significant amount of affordable housing stock that is subsidized by state and federal sources and occupied by ELI households. By 2025, 9,110 units will have all of their attached subsidies end, and that number will increase to 13,331 units by 2035. Preserving these subsidies could cost an additional \$100 million to \$122 million per year by 2025, based on 2016 per-unit rental-assistance program spending.

Within Massachusetts, cities and towns vary widely in their supply of affordable units for ELI households. Some communities have more than 60 units per 100 ELI households, while others have fewer than 30. Higher-supply areas are predominately in the eastern part of the state and located in or near larger cities, which benefit from the high concentration of federal- and state-subsidized units. Smaller cities and towns in the central and western parts of the state often have fewer subsidized units, leading to fewer affordable units overall. However, the private market in many of these smaller communities supplies modest levels of AA housing for ELI households. All communities in Massachusetts have high rates of rent burden and severe rent burden among ELI

households. However, in 2016, a higher incidence of rent burden in cities and towns was associated with lower local median rents and was found in communities with lower median household incomes overall. This indicates that lower incomes, and not higher housing costs, are a major reason ELI households experience greater financial pressure from housing costs in these areas. These communities tend to be located in Central and Western Massachusetts.

The findings of this report suggest Massachusetts needs to increase its supply of AA units for ELI households. Barring a significant increase in spending on affordable-housing development, this effort could be aided by tailoring different subsidy programs according to local conditions, leading to a more efficient use of resources. Allocating a higher percentage of rental-assistance subsidies to Central and Western Massachusetts communities would take advantage of their lower rents and larger supply of market-rate affordable units. Meanwhile, tax-credit programs designed to increase the total supply of affordable housing units could be focused on larger cities and areas with little or no market-supplied housing. Achieving these objectives is not easy; many rental-assistance programs are allocated and restricted geographically, and tax credits serve fewer ELI households compared with other housing-subsidy programs. However, Massachusetts does have control over some rental-assistance subsidies allocated at the state level, and over state-funded rental vouchers, and could incorporate geographic priorities when administering these programs.

The number of affordable units with expiring subsidies will grow in the next 10 to 20 years. Recent legislation in Massachusetts indicates that policymakers view this issue as a priority. How to best allocate preservation dollars depends on whether the goal is to preserve the greatest number of units or to maintain broad geographic access. Several cities and towns with relatively few subsidized units will see all of their housing subsidies that are property specific (that is, not able to move with the tenant) expire by 2025, while major cities will see the greatest number of expiring subsidies overall. Allocating preservation dollars to these smaller communities would help preserve wider access across the state to affordable units, and it would prevent affordable housing from becoming further concentrated in the state's major cities.

This report first discusses estimates of the ELI renter population in Massachusetts—its size and composition—using American Community Survey (ACS) five-year microdata for 2011 and 2016. It then estimates the affordable-housing supply using ACS data, data from HUD on ELI-occupied subsidized units, and estimates of state-funded subsidized housing from the National Housing Preservation Database (NHPD). This report presents estimates of ELI households in various areas of the state, along with estimates of those areas' supplies of AA units. Lastly, it uses NHPD data to discuss the future of affordable housing—how many units are likely to expire and where those units are located.

HUD Income Category Definitions

The US Department of Housing and Urban Development (HUD) uses three income threshold categories to determine eligibility for a number of subsidy programs. The categories, based on household size and location, are denoted as extremely low income (ELI), very low income (VLI), and low income (LI). This report focuses on ELI households, which are defined as households with a total annual income at or below 30 percent of the area median income (AMI).^a VLI households are at or below 50 percent of AMI, and LI households are at or below 80 percent of AMI. HUD determines AMI thresholds based on the median family incomes, adjusted for household size, in HUD Metro Fair Market Rent Areas (HMFA). These areas closely follow metropolitan areas, but in some cases they include smaller local rental housing markets. If a locality is not included in a metropolitan area, HUD defaults to a state's county borders to determine the HMFA median income (HUD 2007). In 2016, there were 19 such regions in Massachusetts. This report could have used state, or even county, median income thresholds to estimate the number of households in each category; however, public housing authorities and other administrating agencies use HMFA thresholds to determine eligibility for program applicants. Therefore, using AMI thresholds based on HMFAs yields a more accurate estimate of what local communities can expect in terms of their income-eligible household population. One caveat to this method of categorization is the potential for substantial differences in income between households counted as ELI in high-income areas and those counted as ELI in low-income areas. A low income level could qualify a household as ELI in some locations but not in others. In 2016 in Massachusetts, the maximum ELI threshold for a four-person household ranged from a total household income of \$24,300 for the New Bedford HMFA to \$31,550 for the Eastern Worcester County HMFA.^b

Cost Burden and Affordability

A commonly used measure of cost burden, or rental affordability, identifies housing costs relative to total annual household income. If a household spends 30 percent or more of its total annual household income on annual gross rent (contract rent plus utilities), the household is termed "rent burdened" (Watson et al. 2017). A household that spends 50 percent or more of its income on rent is referred to as "severely rent burdened." The 30 percent threshold originated from a need to standardize public housing rent-share payments across households and was first set at 20 percent, in the 1930s (Schwartz and Wilson 2008). Subsequent legislation meant to address rising operational costs for the federal government raised the threshold to 25 percent in 1969 and then, in 1981, to 30 percent, where it has remained. The 30 percent measure has important policy applications; however, there is debate over its accuracy as an indicator of affordability. In cases where incomes are vastly different across a region,

a The 2014 Consolidated Appropriations Act amended the definition of extremely low-income households to be either 30 percent of AMI or the federal poverty level, whichever is greater (HUD 2014). This report also makes further adjustments to the ELI definition to better reflect the long-term ELI population (see online appendix). The most substantial of these adjustments is the removal of student-led households from the ELI, VLI, and LI populations.

b Based on 2016 individual income limit areas data retrieved from HUD's Income Limits website.

the 30 percent threshold can yield substantially different affordability thresholds for that region. Other measures that take into account individual consumption decisions or residual income after necessary expenses may more accurately reflect affordability for various groups (Stone 2009). The 30 percent threshold is used by HUD to determine whether a unit is affordable for a given income category, irrespective of the occupying household's ability to afford the rent.^c In addition, the 30 percent measure's easy application across different household types and geographic areas, as well as its continued use in determining rent-share payments in most federal rental-assistance programs, has led to its adoption by state-level programs. This report classifies affordability for ELI households based on the 30 percent threshold. Affordable units are defined as those with gross rents less than or equal to 30 percent of the maximum annual household income threshold for an ELI household.^d A unit is available if it is occupied by an ELI household or is vacant (unoccupied). Affordable and available (AA) units meet both the affordability and occupancy criteria. (See the online appendix for more information on how AA units are estimated in this report.)

c Vandenbroucke (2011) outlines the methods used in determining affordability of rental units based solely on contract rent and utility costs. For a complete description of the methods used in estimating affordable units, see the online appendix.

d The number of bedrooms in a unit is assumed to match the household size (Vandenbroucke 2011).

II. Estimates of Households and Affordable Units

The number of extremely low-income (ELI) households, where they are located, and the number of affordable units available to them have important implications for how policies addressing affordability are implemented in Massachusetts. These policies include how best to allocate the finite supply of program dollars that are available to promote affordable housing. Between 2011 and 2016, the number of ELI households in Massachusetts increased by 3,000. However, as a percentage of all renter households, ELI households declined by about 1 percent during this period, illustrating that growth in the number of renter households in the state largely has involved more-affluent groups.⁹

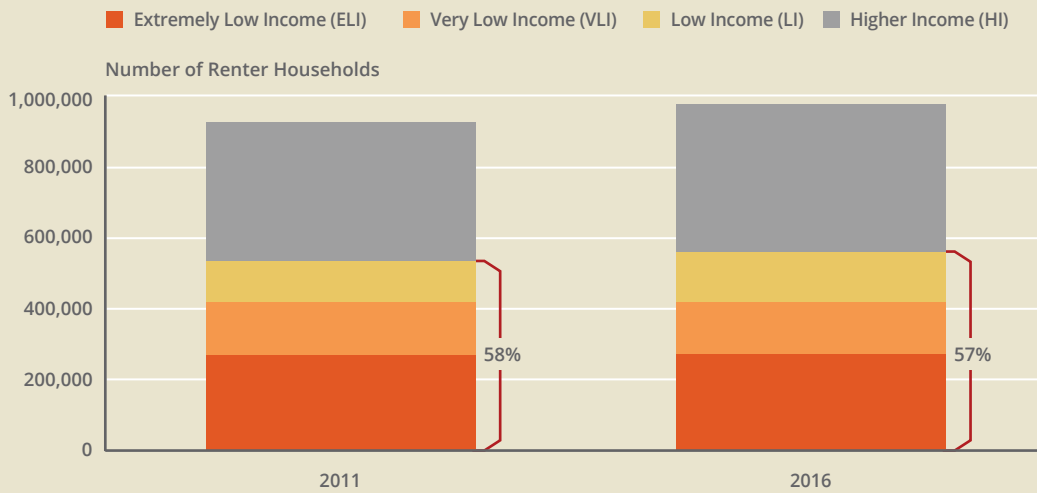
The number of affordable and available (AA) rental units for ELI households declined after 2011, to less than one AA unit for every two ELI households in 2016. The vast majority of AA units estimated in this report were supplied through US Department of Housing and Urban Development (HUD) rental-assistance programs, with a smaller but still impactful number coming from state-only funding sources. This is consistent with similar studies showing that it is often difficult for the private market to supply units at rents that are low enough for ELI households to afford (Meirzwa, Nelson, and Newburger 2010; JCHS 2015; Leopold et al. 2015; Getsinger et al. 2017). Along with the renter population, most AA rental units are located in the more-populated areas of Massachusetts; the majority of subsidized units are concentrated in these areas as well. Without subsidization of the affordable rental stock in Massachusetts, many communities would have little or no supply of affordable rental units available for ELI households.

9 Based on 2011 and 2016 ACS five-year estimates found in Figure 1.

Figure 1

The Majority of Renter Households Have Incomes Below 80 Percent of Area Median Income

Renter Households by Income Category for Massachusetts, 2011 and 2016



Source(s): ACS 5-year estimates for 2011 and 2016; HUD Income Limits for 2011 and 2016.

Note(s): The higher income (HI) category includes student-led households removed from the three lower-income groups. In total, 93,671 households in 2011 and 90,089 households in 2016 were removed from the three HUD income limit categories and assigned as HI. See "HUD Income Category Definitions," page 7, for the definitions of ELI, VLI, LI, and HI households. Estimates represent five-year averages for the periods ending in 2011 and 2016.

Massachusetts's Extremely Low-Income Renter Households

Figure 1 shows the number of renter households in 2011 and in 2016 by HUD-defined income categories. Between these two years, the total number of renter households (all income categories included) rose by 53,174, with ELI households accounting for only 6 percent of this increase. The number of very low-income (VLI) households declined during this period, while low-income (LI) and higher-income (HI) households—those with incomes greater than 80 percent of the area median income (AMI) and those that were student led—accounted for the vast majority of the renter households added.¹⁰ Although HI households were the single largest group of renter households in Massachusetts in both 2011 and 2016, the majority of renter households (57 percent) had incomes that were less than 80 percent of AMI and thus qualified for many federal and state housing-assistance programs.¹¹

10 Under HUD program guidelines, student-led households are eligible only if the household head is older than 24, married, disabled, or has a dependent child in the household. The adjustment to the number of ELI households (and other income groups) in this report could underestimate the number of households eligible for HUD program assistance (HUD 2011a). The majority of households removed from the original ELI estimate resided in and around the city of Boston.

11 Using ACS one-year microdata files reveals that ELI households have consistently accounted for 25 percent to 30 percent of all renter households over the past 10 years. Between 2006 and 2016, the number of ELI households in Massachusetts grew by just over 6 percent (compared with 14 percent for all renter households). At times, growth in the number of ELI households has outpaced that of the general renter household population. Between 2006 and 2008, the number of ELI households in Massachusetts declined by 3.6 percent, before it grew by nearly 25 percent to a peak in 2012. The relatively high variability in the number of ELI households suggests that the 2011 and 2016 estimates based on the larger ACS five-year sample overstate the total for 2016, because during that period the population increased. These estimates are also subject to error, because they use total statewide measures of AMI to estimate the number of households in each income category. Because HUD eligibility is based on local Metro Fair Market Rent Areas (HMFA), a statewide eligibility threshold does not necessarily reflect the incomes of households that meet the ELI threshold and are eligible at the local level.

In 2016, almost 30 percent of Massachusetts's ELI households lived in just three cities: Boston, Springfield, and Worcester.¹² These cities collectively were also home to nearly a quarter of the state's renter households that year; Boston alone accounted for 17.4 percent of all renter households. The remaining cities and towns had fewer total renter households and thus fewer ELI renter households. However, in many smaller and midsized cities and towns, the local ELI renter population, when expressed as a percentage of the total local renter population, was large. Ninety-three cities and towns had more than the statewide average of 28 percent of renter households qualify as ELI. In some communities, more than 40 percent of the local renter household population was estimated to qualify as ELI.¹³ Many cities and towns that would not show a high degree of need based on total ELI households display a considerably large ELI population as a share of total renter households. In the cities and towns that comprise Berkshire County, for example, 30 percent to 40 percent of the local renter population qualified as ELI. Many communities north of Boston also had a large ELI renter population in 2016 relative to their entire renter population.

While Western Massachusetts cities and towns may have relatively large ELI populations, their comparatively lower rents may make living in this part of the state more advantageous.¹⁴ However,

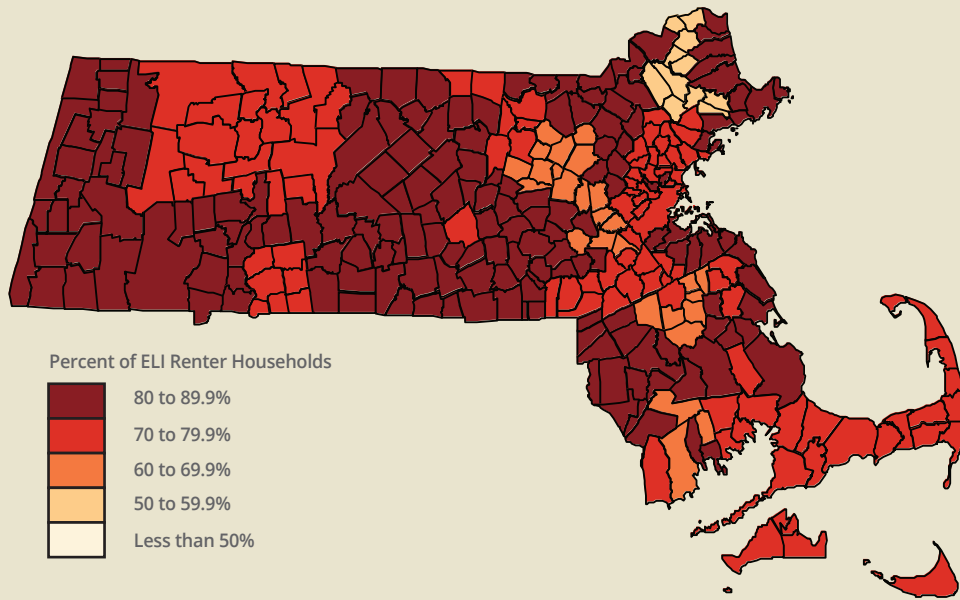
12 In 2016, there were an estimated 51,652 ELI households in Boston, 14,709 ELI households in Springfield, and 13,885 ELI households in Worcester, based on the 2016 ACS five-year microdata.

13 The percentage of local renter households that were ELI in 2016 ranged from 14.5 percent in Watertown to 49.5 percent in Springfield.

14 Central and Western Massachusetts cities and towns tended to have median rents that were 10 percent to 30 percent lower than the statewide median. In contrast, areas east of Worcester County tended to have median rents that were 20 percent to 30 percent higher; in some areas, the median rents were more than 40 percent higher than the statewide median.

Figure 2

Many Areas Outside of Boston Have High Rates of Rent Burden Despite Lower Rents
 Percent of ELI Renter Households That Are Rent Burdened by
 Massachusetts Cities and Towns, 2016



Source(s): ACS 5-year estimates for 2016; HUD Income Limits for 2016

Note(s): Of the 351 cities and towns in Massachusetts in 2016, 289 were uniquely identified and 28 additional combined city and town areas were identified based on shared census tract areas. See "HUD Income Category Definitions," page 7, for the definition of an ELI household. Estimates represent five-year averages for the period ending in 2016.

as Figure 2 shows, many of these communities saw high rates of rent burden among their ELI populations in 2016. While many of the areas outside of Boston have lower median rents, they still see persistent incidence of rent burden, including severe rent burden.¹⁵ In 2016, in cities and towns where the median rents were lower than the statewide median, the percentages of local ELI renter households that were rent burdened were higher compared with other communities,¹⁶ implying that rents, while higher in the eastern part of the state, are not the only factor determining whether an ELI household is experiencing financial distress. Incomes generally are higher in the eastern part of the state as well. In 2016, Middlesex and Norfolk counties, for example, had median household incomes that were 25 percent and 27 percent higher, respectively, than the statewide median, offsetting those areas' higher rents. The opposite is true in many Western Massachusetts communities, where substantially lower incomes negate the benefits of lower housing costs.¹⁷

15 ELI households tended to experience severe rent burden at similar levels across the state. In the majority of cities and towns in Massachusetts in 2016, from 50 percent to 69.9 percent of ELI households were severely rent burdened.

16 In 2016, city and town median gross rents relative to the statewide median were negatively correlated with the percentage of local ELI renter households that were rent burdened. This negative correlation, with a coefficient of -0.311 , was statistically significant at the 5 percent level ($p \leq 0.05$). For severely rent-burdened households, there was a small, non-significant negative correlation. Relative rents are expressed as the percentage of local median gross rent relative to the statewide median, and they ranged from 65.7 percent to 166.07 percent.

17 The four counties commonly delineated as Western Massachusetts (Franklin County, Hampden County, Hampshire County, and Berkshire County) had median household incomes that were 12 percent to 28 percent lower than the statewide median.

Table 2

**ELI Renter Households Tend To Be Older and Smaller
than the Overall Renter Population**
All Renter and Extremely Low-Income (ELI) Renter Households
for Massachusetts, 2011 and 2016

	2011		2016	
	All Renter Households	ELI Renter Households	All Renter Households	ELI Renter Households
Number of Households	924,319	271,833	977,493	274,842
Median Household Size	2	1	2	1
Median Age of Head of Household	43	53	44	54
Mean Household Income	\$49,109	\$11,690	\$56,166	\$11,980
Mean Gross Rent Paid	\$1,098	\$737	\$1,214	\$791
Rent Burdened	49%	76%	49%	79%
Severely Rent Burdened	26%	57%	26%	58%

Source(s): ACS 5-year estimates for 2011 and 2016; HUD Income Limits for 2011 and 2016.

Note(s): See "HUD Income Category Definitions," page 7, for the definitions of an ELI household, rent-burdened households, and severely rent-burdened households. Estimates represent five-year averages for the periods ending in 2011 and 2016.

Extremely Low-income Households

In Massachusetts, extremely low-income (ELI) households differ in several key ways from the overall renter-household population. ELI households tend to be older; the median age is 10 years older than that of all renter households. ELI households are also slightly smaller, with an average of just under two people per household. Though incomes are characteristically lower for this population, gross rents paid by ELI households are not equivalently low. In 2016, the average ELI household in Massachusetts, with an annual income of \$11,980 and a monthly gross rent (contract rent plus utilities) of \$790, spent about 79 percent of its income on rent and utilities. The average renter household spent about 26 percent of its annual income on gross rent that year. Incidence of rent burden and severe rent burden are much higher for ELI households. While just under half of all renter households were rent burdened in both 2011 and 2016 (that is, they spent more than 30 percent of their annual income on gross rent), more than three-quarters of ELI households met this criteria. Even starker is the difference in rates of severe rent burden. Over half of the state's ELI households paid more than 50 percent of their income toward gross rent in 2011 and 2016, compared with just over one-quarter of all renter households. Incidence of rent burden decreased slightly for the overall renter-household population between 2011 and 2016, but it increased by more than 3 percentage points among ELI households during that period.^e

^e Based on the ACS five-year sample, the average renter household paid 25.9 percent of its income toward rent in 2016, down from 26.8 percent in 2011. The average ELI renter household paid 79.2 percent of its income toward rent in 2016, up from 75.6 percent in 2011.

Table 3 Higher-Income Households Occupy Units That Are Affordable for ELI Households
Rental Units by Household Occupancy for Massachusetts, 2011 and 2016

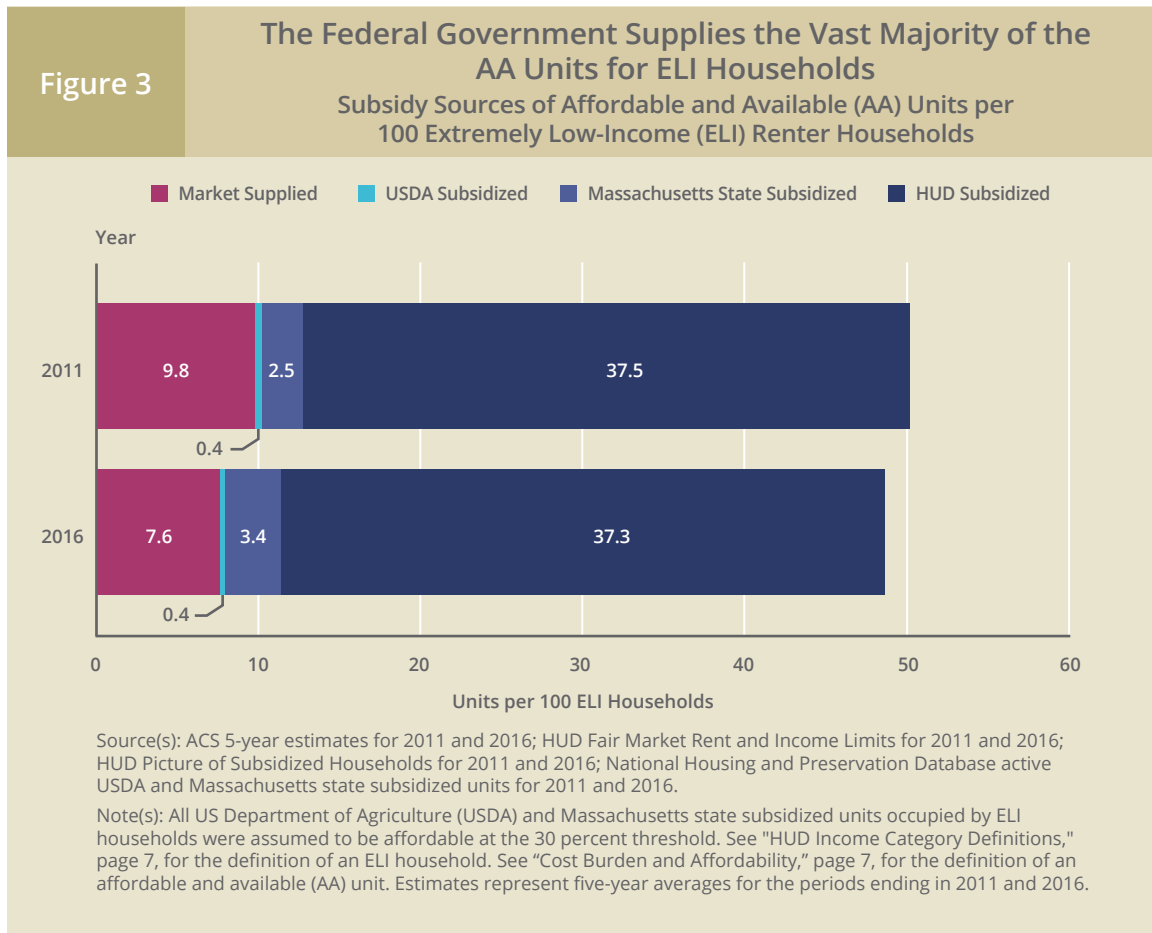
Occupied by:	2011		2016	
	Number of Affordable Units	Percent of Total Affordable Units	Number of Affordable Units	Percent of Total Affordable Units
Extremely Low Income (ELI)	130,501	63	128,037	62
Very Low Income (VLI)	28,014	14	26,929	13
Low Income (LI)	13,215	6	15,150	7
Higher Income (HI)	28,321	14	29,452	14
Vacant	6,095	3	5,514	3
Affordable to ELI	206,147	100	205,082	100
Affordable & Available to ELI	136,596	66	133,551	65
Number of ELI Households	271,833		274,842	
Affordable & Available per 100 ELI Households	50.2		48.6	

Source(s): ACS 5-year estimates for 2011 and 2016; HUD Income Limits for 2011 and 2016.

Note(s): See "HUD Income Category Definitions," page 7, for the definitions of an ELI household, rent-burdened households, and severely rent-burdened households. Estimates represent five-year averages for the periods ending in 2011 and 2016. Percent values are rounded and therefore may not sum to 100.

Supply of Affordable and Available Rental Units

At the same time that many ELI households are experiencing rent burden, affordable and available units in Massachusetts are in short supply. In 2016, there were 48.6 AA units per 100 ELI households in the state, down from 50.2 in 2011. This equates to less than one AA unit for every two ELI households. As shown in Table 3, 34 percent of ELI-affordable units were occupied by households with higher incomes, thus making them unavailable. If other income groups were not occupying affordable and otherwise available units, the total number of AA units would have been close to 75 per 100 ELI households, for both 2011 and 2016. As the overall number of renter households grew, increasingly more ELI affordable units were occupied by higher-income groups (VLI, LI, and HI). While the total number of affordable units declined by about 1,000 between 2011 and 2016, the number of AA units declined by just over 3,000, because additional affordable units were occupied by higher-income households. It is important to note that higher-income households may rent apartments that are affordable to lower-income groups due to a lack of supply at higher levels of income affordability, or due to individual choice. The rental market in Massachusetts, particularly in Boston, has for several years been one of the nation's most expensive (HUD 2016a). Any policy that aims at increasing the number of AA units for ELI renter households must take into account that a large supply of the current affordable stock is occupied by higher-income households. Unless it is restricted solely to ELI households, any new-unit creation will also see demand from higher-income households.



Communities vary in the number of affordable units that are available to their ELI populations. The number of AA units by cities and towns in the state ranged from just three to more than 30,000 in 2016. Communities that had a large ELI household population often had a correspondingly robust number of AA units. In 2016, 23 percent of the state's AA units were located in Boston. Springfield and Worcester are the two other cities with the most ELI renter households. Combined, the three cities accounted for one-third of the state's AA units in 2016.¹⁸

Sources of Affordable and Available Rental Units

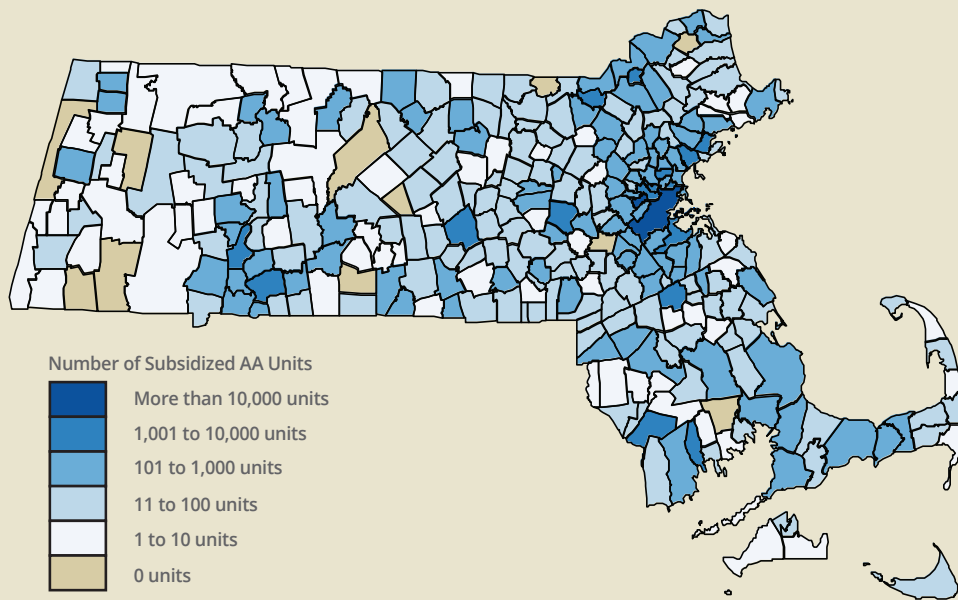
While Massachusetts has several state-funded programs designed to increase the affordable housing inventory, the bulk of AA units are supplied through HUD subsidy programs. In 2016, HUD-funded programs subsidized more than 100,000 units that were affordable and available to ELI households. These programs include large rental-assistance voucher programs such as Housing Choice Vouchers (HCV), project-based subsidies such as Project Based Section 8 (PBS8), and smaller programs targeting specific populations. In total, HUD-subsidized units accounted for three-quarters of the AA units for ELI renter households in Massachusetts in 2016. As Figure 3 shows, the number of AA units supplied by HUD changed little between 2011 and 2016. HUD funding provided 37.3 AA units per 100 ELI households in 2016; state-level programs supplied an additional 3.4 units, and US Department of Agriculture (USDA) rural housing programs supplied

¹⁸ In 2016, Boston had 31,807 AA rental units, Springfield had 7,064, and Worcester had 5,850.

Figure 4

Most Communities in Massachusetts Have Some AA Subsidized Housing Inventory

Subsidized Affordable and Available (AA) Units by Massachusetts Cities and Towns, 2016



Source(s): HUD Picture of Subsidized Households for 2016; National Housing and Preservation Database active USDA and Massachusetts state subsidized units for 2016

Note(s): Of the 351 cities and towns in Massachusetts in 2016, 289 were uniquely identified and 28 additional combined city and town areas were identified based on shared census tracts. See "HUD Income Category Definitions," page 7, for the definition of an ELI household. See "Cost Burden and Affordability," page 7, for the definition of an affordable and available (AA) unit. Subsidized AA units are those receiving government subsidies and occupied by and affordable to ELI households.

less than one unit per 100 ELI households.¹⁹ The remaining 7.6 AA units in 2016 are assumed to be market supplied and not connected with any subsidy program. Compared with 2011, the 2016 estimates represent a decrease in market-supplied AA units of just over two per 100 ELI households.

The total amount of funding that Massachusetts received from HUD for rental-assistance programs in 2016 was just over \$2 billion.²⁰ Federal rental-assistance programs are more likely to target ELI households than are other programs, and thus they have a greater impact on housing the ELI population. Public housing, PBS8, and HCV each set a requirement for the minimum number of ELI households that the program must serve. These requirements range from 40 percent of ELI households for public housing to 75 percent for HCV (NLIHC 2018). In practice, these HUD-funded programs in Massachusetts often serve far more than the minimum required percentage of ELI households. Among the three largest HUD subsidy programs in Massachusetts in 2016, 76 percent of public housing occupants, 74 percent of PBS8 occupants, and 76 percent of HCV occupants were ELI households.²¹

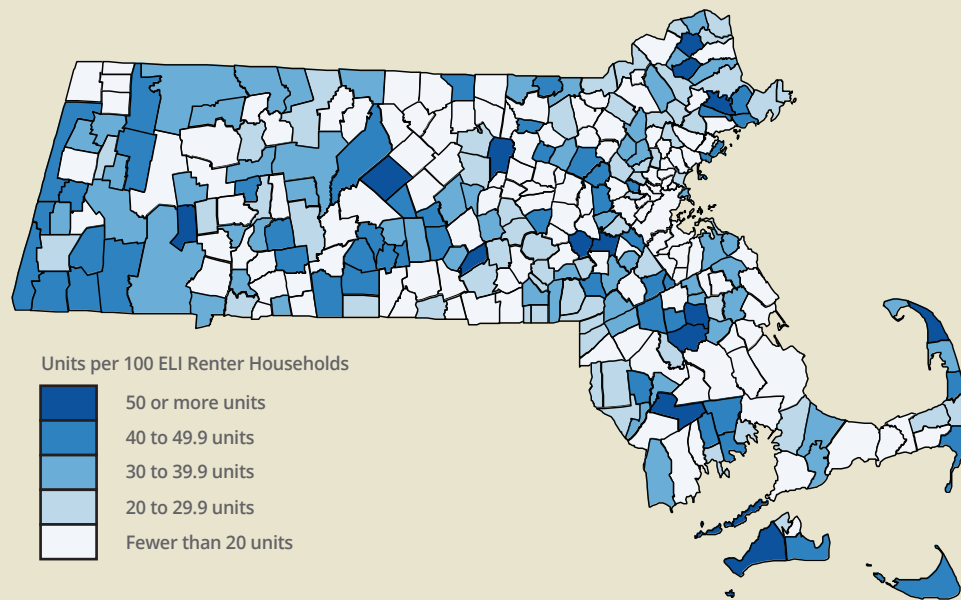
In 2016, the majority of the identified cities and towns in Massachusetts relied on HUD subsidies to provide at least half of their supply of AA units. Virtually all of the communities in Massachusetts received some HUD assistance to fund affordable housing in 2016 (Figure 4). By

19 Estimates of AA units funded through USDA and Massachusetts state sources include units that received funding from only those sources. HUD AA unit estimates originate from the Picture of Subsidized Household dataset and include any dual-funded units that use HUD funding. USDA and Massachusetts estimates come from the National Housing Preservation Database (NHPD).

20 Based on data from HUD's Community Assessment Reporting Tool, fiscal year 2016 (HUD 2016b).

21 Based on 2016 data from HUD's Picture of Subsidized Households (HUD 2016a).

Figure 5 **Smaller Communities Have Relatively More Unsubsidized, Market-supplied AA Rental Units**
Market-supplied Affordable and Available (AA) Units per 100 Extremely Low-Income (ELI) Renter Households by Massachusetts Cities and Towns, 2016



Source(s): ACS 5-year estimates for 2011 and 2016; HUD Fair Market Rent and Income Limits for 2016; HUD Picture of Subsidized Households for 2016; National Housing and Preservation Database active USDA and Massachusetts state subsidized units for 2016.

Note(s): Of the 351 cities and towns in Massachusetts in 2016, 289 were uniquely identified and 28 additional combined city and town areas were identified based on shared census tracts. See "HUD Income Category Definitions," page 7, for the definition of an ELI household. See "Cost Burden and Affordability," page 7, for the definition of an affordable and available (AA) unit. Subsidized units AA units are those receiving government subsidies and occupied by and affordable to ELI households. Estimates represent five-year averages for the period ending in 2016.

contrast, state-only-funded AA units were more concentrated, located in only 81 of the 321 identified cities and towns.²² USDA programs supplied AA units for ELI households in 47 cities and towns, or about 1 percent of the AA units statewide. In these communities, they funded an average of 45.7 percent of the AA stock, and in some communities they supplied the majority or all of the local AA-unit inventory. In cities and towns with state-funded AA units, the state programs supplied, on average, 29.4 percent of the local AA-unit inventory (and 10 percent of AA units statewide). Market-supplied AA units were few in 2016 (as shown in Figure 3). However, variation at the local level was considerable, and in some communities, particularly in Western Massachusetts, most or all of the supply of AA units estimated could be attributed to market-supplied units.

Figure 5 shows the number of market-supplied AA units per 100 ELI households in the cities and towns of Massachusetts in 2016. The major cities (Boston, Springfield, and Worcester) were estimated to have hardly any market-supplied units. By contrast, smaller communities had relatively large inventories of unsubsidized, market-supplied AA units, which may be attributable in part to the smaller ELI populations in these communities. Of the 10 communities with the highest shares of market-supplied AA units, the average number of such units in each town was 58, and the average number of ELI renter households was 106. Boston had an estimated 1,363 market-supplied AA units, but due to an ELI renter population of more than 51,000, the share of AA units was very low: 2.63 per 100 ELI households.

²² Census tracts were used to identify individual cities and towns in Massachusetts. In cases where census tracts covered more than one city or town, the census tract geographic unit was used (see online appendix).

Market-supplied units, while numbering only 7.6 per 100 ELI households statewide in 2016, make up a sizeable portion of the AA units in smaller communities. This has important implications for policymakers and administrators who want to maximize the impact of program dollars. Affordability issues are present throughout the state, but the causes of these issues likely vary. Central and Western Massachusetts communities had lower median rents but higher incidence of rent burden in 2016, relative to other parts of the state. These communities also generally had more market-supplied AA units. This situation represents an opportunity to use funding more efficiently, particularly when it comes to rental-assistance programs. Rental-assistance subsidies could be used more effectively in areas of Massachusetts where rents are lower, the number of market-supplied AA units is greater, but the incidence of rent burden is still high. In these communities, rent burden is more likely an income problem and thus would be better addressed with programs that bridge the gap between low incomes and housing costs. Meanwhile, tax-credit and other supply-side programs could be focused on increasing market-supplied AA units in the more-populated areas, where rents are higher and market-supplied units are fewer. In these communities, affordability issues more likely stem from an overall lack of rental units, which drives up prices and restricts access for ELI households.

Market-supplied units make up a sizeable portion of the affordable and available units in smaller communities.

Targeting rental-assistance funding to Central and Western Massachusetts would be advantageous for two reasons. First, these areas have high rates of rent burden, even with lower relative median rents, likely signaling that lower incomes in these areas are the primary driver. Thus, there is a need for affordable housing that does not necessarily require the building of additional units, which is a much more expensive undertaking compared with subsidizing the rents of existing units. Second, the lower rents in these areas likely mean that a greater number of units are eligible to be rented under HUD's Fair Market Rent (FMR) guidelines, thus giving ELI household's greater choice over where they can live. Rental-assistance subsidy programs, such as HCV or PBS8, would serve more households and more effectively reduce incidence of rent burden in areas where affordability issues are less a supply issue and more a function of the purchasing power of the local ELI renter households.

Massachusetts has several rental-assistance programs at its disposal that it could use to provide affordable housing for ELI households in these smaller communities. However, prioritizing the issuing of new or existing rental-assistance subsidies to rural areas will require changes to the way some programs are currently administered; some of these changes would have to come from federal agencies or would require amendments to federal law. As noted, the largest sources of rental assistance in Massachusetts are HUD's HCV and PBS8 programs. The vast majority of this funding (about 75 percent in 2016) is allocated directly to public housing authorities (PHAs).²³ PHAs administer programs within their jurisdiction, which in Massachusetts is often a single city or town. A mobile subsidy, such as an HCV, transfers to another community only when the household to which the subsidy is assigned moves. A PBS8 subsidy remains fixed at a specific address. What's more, allocations of funding from HUD to PHAs are based on formulas and distributed on a competitive basis (CBPP 2009). It is therefore unlikely that Massachusetts would be able to reallocate the majority of the federal rental assistance it receives to achieve a more effective use of resources.

23 PHAs are given wider latitude when it comes to the administration of programs at the local level. For example, HUD allows PHAs to set their own policy in determining who from waiting lists is prioritized to receive assistance, what qualifies as a family within HUD guidelines, and which additional qualifications are needed for targeted forms of assistance (HUD 2001).

Massachusetts does have authority at the state level over roughly 25 percent of the HUD rental-assistance vouchers it receives.²⁴ This funding is allocated to the state's Department of Housing and Community Development (DHCD), which, compared with PHAs, has more flexibility regarding how it can use the funds. The vouchers that the DHCD receives fall under HUD's Moving to Work (MTW) program and are intended to test innovations in the HCV program, such as supporting (among other things) financial self-sufficiency, targeting of homeless youth or those exiting foster care, and reducing administrative costs and burdens for unit owners and tenants (DHCD 2016a).²⁵ The current MTW guidelines, developed by the DHCD, do not give priority to using the vouchers in communities where they may be most effective, such as those with low rents and low income but high incidence of rent burden. Adding this preference—or simply targeting vouchers under this program to low-income, low-rent communities—would allow access to a large source of rental-assistance subsidies that could help alleviate issues of rent burden for ELI households.

Massachusetts could use its state-funded rental-assistance programs to increase rental assistance in the less-populated areas of the state. The largest of these programs is the Massachusetts Rental Voucher Program (MRVP). MRVP is similar to the HCV program, and it is funded at the state level and administered at the state level, much like the allocation of federal rental assistance. Because it does not have the same restrictions as most HUD-funded programs, MRVP could be used to target the less-populated communities where program dollars could be spent more efficiently. Currently, MRVP vouchers are assigned largely to homeless individuals and families (DHCD 2017). Because most of Massachusetts's homeless population is located in the more-populated eastern part of the state, this effectively allocates MRVP vouchers away from the Central and Western Massachusetts cities and towns with ELI populations that could benefit most from rental assistance. Defining new priorities for some groups or areas could mean fewer resources for other at-risk populations; however, if subsidy programs can be prioritized more effectively, they could serve more households with the current levels of funding.

III. Anticipating Future Subsidized-housing Needs

Massachusetts's inventory of affordable housing units is far from stagnant. Every year, units are added through the funding of new vouchers, through new construction or rehabilitation of existing units, and when private apartments enter the market at affordable rates. Units are subtracted when their restrictions on rent and occupancy expire and landlords increase rents. Units at risk of becoming unaffordable are preserved by extending the subsidies that are attached to them. Estimating when units' subsidies will end, and the units will no longer be affordable, is important for determining how to balance the preservation of existing stock with the creation of new inventory.

The analysis in this section differs from that of Section II by using a different dataset—the National Housing Preservation Database (NHPD)—to derive the number of subsidized units occupied by extremely low-income (ELI) households and the number of expiring use units overall. While the previous section addressed affordable and available (AA) units, not all of the units identified as occupied by ELI households in the NHPD are necessarily affordable. The NHPD includes data from tax-credit units and other units provided by supply-side programs that may be occupied by ELI households paying more than 30 percent of their income toward rent. Therefore, estimates of ELI-occupied units presented in Section III are not directly comparable with the estimates of

24 There were 135 PHAs in Massachusetts in 2016, based on the most recent HUD Picture of Subsidized Households data (HUD 2016a). In addition, there were nine "Regional Administering Agencies" that also administer subsidies on behalf of the DHCD, for a total of 144 agencies in the state that administer federal rental-assistance programs (DHCD 2016b).

25 Cambridge Housing Authority is the other MTW agency in Massachusetts.

Table 4

**Based on the Replacement Rate, It Is Becoming Increasingly
Difficult To Add Affordable Housing Inventory
Subsidized Units Added per One Expiring for Massachusetts, 2006–2016**

Year	1-Year Rate	3-Year Rate	5-Year Rate
2006	10.2	No Data	No Data
2007	21.2		7.8
2008	4.6		
2009	7.9		
2010	11.5	6.1	3.7
2011	6.5		
2012	5.2		
2013	6.6		
2014	1.0		
2015	5.1	2.6	
2016	8.8		

Source(s): National Housing Preservation Database new and expiring units for 2006 to 2016.

Note(s): The replacement rate is defined as the number of units added per one unit expiring. Estimates of units added per year are based on the first date any subsidy became available for the unit. Estimates of expiring use units are based on the last date any subsidy was available for the unit.

AA units in Section II. The NHPD includes only subsidized units where the subsidy is specifically attached to the address and does not move when the tenant moves. While there is a great deal of overlap between the estimates used in Section II and those in this section, Section III omits major programs such as Housing Choice Vouchers (HCV). Because the majority of units in the NHPD were estimated to be occupied by ELI households, and most AA units in both 2011 and 2016 were federally subsidized, the expiring subsidized units in the NHPD are assumed to be indicative of the future supply of AA units for ELI households.²⁶

Units with Expiring Subsidies

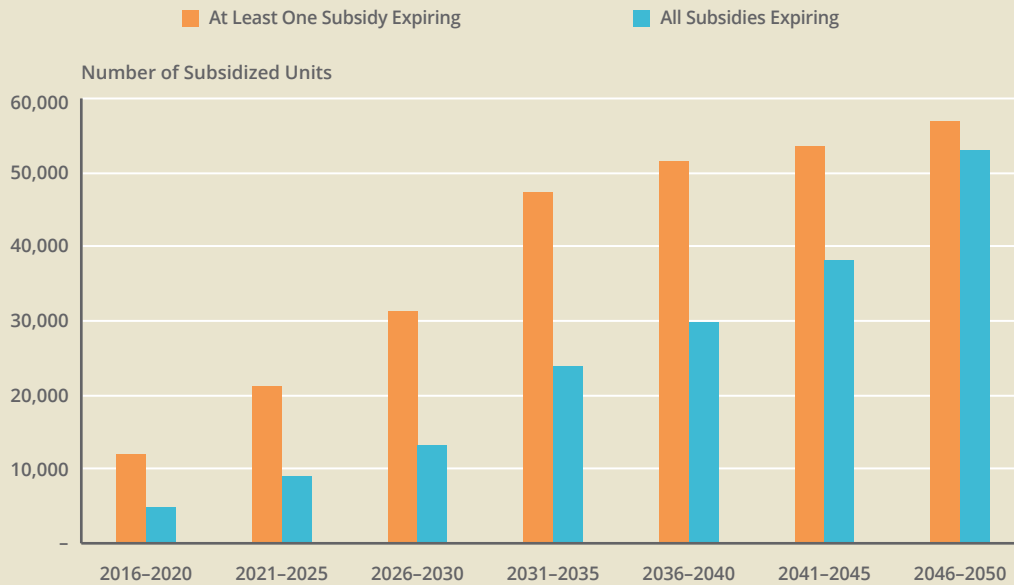
In 2016, the NHPD listed just over 137,000 active subsidized units for Massachusetts, 70 percent of which were occupied by ELI households. Between 2006 and 2016, 9,507 units had all of their attached subsidies expire. The owners of these units were thus free to raise rents or accept tenants with higher household incomes. Also during this 10-year span, 49,411 subsidized units were added, for a net growth of just under 40,000 units. The number of units whose subsidies expired varied considerably from year to year during this period, from a low of 117 units in 2007 to almost 3,000 in 2014. The number of units added also varied from one year to the next, although it remained greater than 2,000 units and averaged about 4,300. However, based on the replacement rate (the number of units added for each unit that expired), it became increasingly difficult to add affordable housing inventory in Massachusetts from 2006 to 2016. Table 4 shows the one-, three-, and five-year annual replacement rates beginning in 2006 and ending in 2016. The five-year

²⁶ For a discussion of the methods and limitations of using the NHPD, see the online appendix.

Figure 6

The Number of Expiring Subsidized Units Will Increase Rapidly in the Coming Years

Extremely Low-Income (ELI) Occupied Units with Expiring Subsidies for Massachusetts, 2016–2050



Source(s): National Housing Preservation Database 2016 active subsidized units in Massachusetts.

Note(s): Expiring units were active in 2016 and occupied by ELI households. Units with at least one subsidy expiring are based on the earliest date a subsidy attached to the unit ends. Units with all subsidies expired are based on the last date any subsidy attached to the unit ends. See "HUD Income Category Definitions," page 7, for the definition of an ELI household.

annual replacement rate ending in 2011 (covering 2007 through 2011) was 7.8 units added per one with all subsidies expired. During the following five-year period, 2012 through 2016, the annual replacement rate dropped to 3.7 units.²⁷ Although this equates to almost four units added for every one unit that leaves the state's subsidized housing stock, it nevertheless represents a substantial decrease from past levels.

While expiring subsidized units may affect households of various income levels, ELI households occupied the majority—an estimated 70 percent—of these units in 2016.²⁸ These include rental-assistance units as well as tax-credit units, regardless of the percentage of income the ELI household paid toward rent. Figure 6 shows the cumulative number of subsidized units occupied by ELI households in 2016 that are at risk of having at least one of their attached subsidies expire by 2050. By 2020, 4,957 units will have all of their attached subsidies expire. In effect, these

27 Units added each year are defined as those that became available between January 1 and December 31 of that year. Expiring subsidies are defined as those that ended during the same period, based on the last date any subsidy was available for the unit.

28 The NHPD provides the percentage of ELI occupants, if available, through the original data source (most often a HUD subsidy source). If the percentage of ELI households was missing, the property was assumed to have the larger of the statewide level, if data were available, or the minimum occupancy requirement based on state or federal requirements. For example, a Low-Income Housing Tax Credit (LIHTC) unit was assigned 10 percent (the minimum required by the state of Massachusetts) if no other subsidy was present. If the property also received a Project Based Section 8 (PBS8) subsidy, the statewide average of 74 percent was used. For properties with subsidies where no outside data were available, an average of the remaining percentage of units occupied by ELI households in the remaining properties was assigned. This largely applied to units subsidized by the US Department of Agriculture (USDA) and state-subsidized units.

units will become private-market-rate units. Just over 12,000 units are at risk of having at least one attached subsidy expire by that same year. The owner of such a unit may still be required to keep the rent low or restrict occupancy to lower-income households; however, an ELI household's ability to afford the unit will have eroded. By 2050, from 53,000 to 57,000 ELI-occupied units will have some or all of their attached subsidies expire.

The number of at-risk subsidized units—those with at least one subsidy set to expire—will increase rapidly until 2035, growing at a rate of 9,000 to 16,000 units in each five-year period after 2016. By 2035, some 47,000 ELI-occupied units will have at least one subsidy expire. While these units will not become completely unsubsidized (units may still receive longer-term subsidies, such as mortgage insurance), subsidy programs important for ELI households that were active in 2016 will have mostly ended by this time. By 2035, many of the Project Based Section 8 (PBS8) and Low-Income Housing Tax Credit (LIHTC) subsidies that were active in 2016 will have ended completely, because these subsidies have durations restricted to 20 years and 30 years, respectively.²⁹ Often, multiple subsidy sources are needed to create affordable units, especially for ELI households, and the expiration of one program can mean an increase in the share of income paid toward rent. Preserving these units, either by extending contracts or replacing expiring funding sources with new ones, will become an important issue affecting ELI households.

The looming increase in the number of affordable units with expiring subsidies will likely prompt a greater focus on preserving the existing subsidized housing stock, over new construction, in the coming years. For example, of the 9,110 subsidized units that will have all attached subsidies expire by 2025, 6,544 receive PBS8 subsidies.

Preserving or replacing these subsidized units could cost an additional \$88.2 million annually by 2025.³⁰ The funding to preserve these units could come from a variety of state and federal sources as well as the private or nonprofit sectors. The federal government, however, remains an important partner and the biggest source of funding for affordable housing for Massachusetts. The annual cost of continuing to fund all of the ELI-occupied subsidized units that will expire by 2025 could be \$100 million to \$122 million. By 2050, these expenditures could increase to between \$586 million and \$716 million per year, depending on the level of subsidy provided.³¹ Preserving the current stock of subsidized units poses a growing fiscal problem, as much as an affordable-housing problem, and one that Massachusetts likely will not be able to address on its own.

While these cost estimates represent a worst-case scenario, in practice, expiring use properties do not become unaffordable immediately after they transition to market rate, and in the case of the units subsidized through the LIHTC program, they can remain affordable for several years after subsidies end (Khadduri, Climaco, and Burnett 2012; JCHS 2015). Property owners who

By 2025, 25 cities and towns could have all of their subsidized-housing inventory become unrestricted.

29 The LIHTC program, which has been an important source for creating affordable housing in the state, began requiring a 30-year term restriction in 1990. Consequently, the bulk of LIHTC-subsidized units will begin to expire in about 2020.

30 Based on 2016 HUD per-unit funding for PBS8 in Massachusetts from HUD's Community Assessment Reporting Tool (HUD 2016b). In 2016, HUD allocated a total of \$788,733,014 for 58,461 assisted units in the state, equaling \$13,491 per assisted unit.

31 The lower cost estimate uses the HCV per-unit funding level received in 2016 of \$11,037 per unit. The higher cost estimate uses the per-unit PBS8 funding level in 2016 of \$13,491 per unit (HUD 2016b). Only units with all subsidies expiring were used to compute costs.

reach the end of their 30-year affordability restriction period can apply for new tax credits to fund capital improvements and renovations. These tax credits will guarantee the continued affordability, as well as quality, of existing stock. Massachusetts acknowledges LIHTC as a valuable tool for preserving existing affordable housing, specifically those units occupied by ELI households (DHCD 2016a).³² In addition, the state has its own housing tax-credit program to complement the federal version.

Massachusetts also has several state-funded initiatives, programs, and laws related to affordable-housing preservation, as well as access to federal dollars that could be used to address this issue. The Capital Improvements and Preservation Fund (CIPF), Housing Stability Fund (HSF), and Affordable Housing Trust Fund (AHTF) have been funded at various levels over the years to promote affordable-housing preservation.

By 2035, some 47,000 ELI-occupied units will have at least one subsidy expire.

Most recently, 2018 legislation provided for \$675 million for affordable-unit creation and preservation specifically.³³ If the entirety of this funding were used for preservation, it could prevent the expiration of subsidies for nearly 4,300 affordable units,³⁴ which is more than the number of ELI-occupied units with subsidies that are at risk of expiring by 2030. Also, the Moving to Work (MTW) program has succeeded in preserving the affordability of units subsidized through insured mortgages. The program has been used to convert mobile vouchers into project-based vouchers that ensure

affordability for 15 years (DHCD 2016b). Lastly, the state has an important legislative framework that promotes affordable-housing preservation, specifically Chapter 40-T. The law, passed in 2009, requires (among other things) owners of affected properties to notify tenants and the Department of Housing and Community Development (DHCD) when affordable-housing restrictions are going to terminate, and it provides a “right of first offer” to the DHCD or a designated third party to purchase an affordable-housing property that is going to be listed for sale. Owners, however, are under no obligation to sell (Achtenberg 2015). Chapter 40-T has been credited with helping to preserve more than 10,000 affordable units since its enactment.

The need to preserve affordable housing in Massachusetts is thus well acknowledged by policymakers and advocates alike. Barring significant increases in state or federal funding for affordable-housing preservation, the state must determine how to best prioritize its efforts and program dollars. The geographical concentrations of ELI-occupied expiring use properties will,

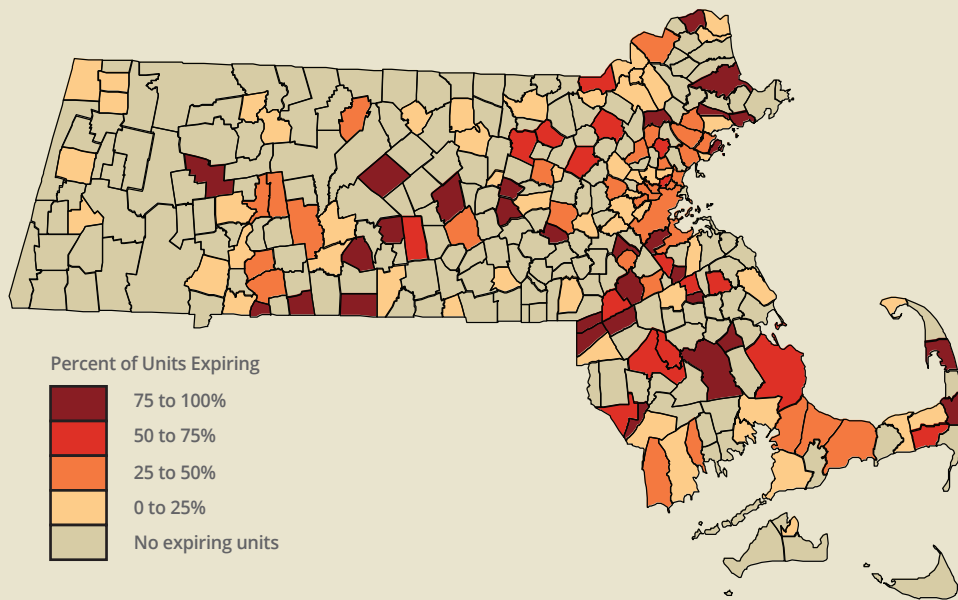
32 Massachusetts’s 2016 *LIHTC Program: Qualified Allocation Plan* (DHCD 2016a) cites preservation of existing affordable housing as a priority category for applicants seeking LIHTC funding, setting aside 30 percent of the state’s federal LIHTC allocation for preservation projects.

33 Massachusetts’s 2018 Housing Bond Bill (H.4536) authorized the financing of \$1.8 billion in housing-related programs, including the expansion of many programs geared toward preservation of current affordable-housing stock. This includes the various funds listed as well as an extension of the state’s housing tax-credit program and funding for modernizing the state’s inventory of public housing.

34 This cost estimate is based on the total amount of funding allocated for programs specifically designed to create and preserve affordable housing. It uses the per-unit cap on allowable eligible basis (max that can be claimed per unit) for preservation projects, and the provided formula for computing total allowable tax credit based on the 9 percent credit (DHCD 2016a). The per-unit cap for preservation projects in 2016 was \$175,000 per year for 10 years. It does not include funding that was provided for modernization of public housing, because these units were not included in the report’s estimate of expiring use properties.

Figure 7

Many Smaller Communities Are at Risk of Losing Large Portions of Their Subsidized Inventory
 Percent of Subsidized-Unit Inventory That Will Expire by 2025, by Massachusetts Cities and Towns



Source(s): National Housing Preservation Database, 2016 active subsidized units in Massachusetts.

Note(s): Of the 351 cities and towns in Massachusetts in 2016, 289 were uniquely identified and 28 additional combined city and town areas were identified based on shared census tracts. Expiring units are based on the first date a subsidy attached to the unit ends.

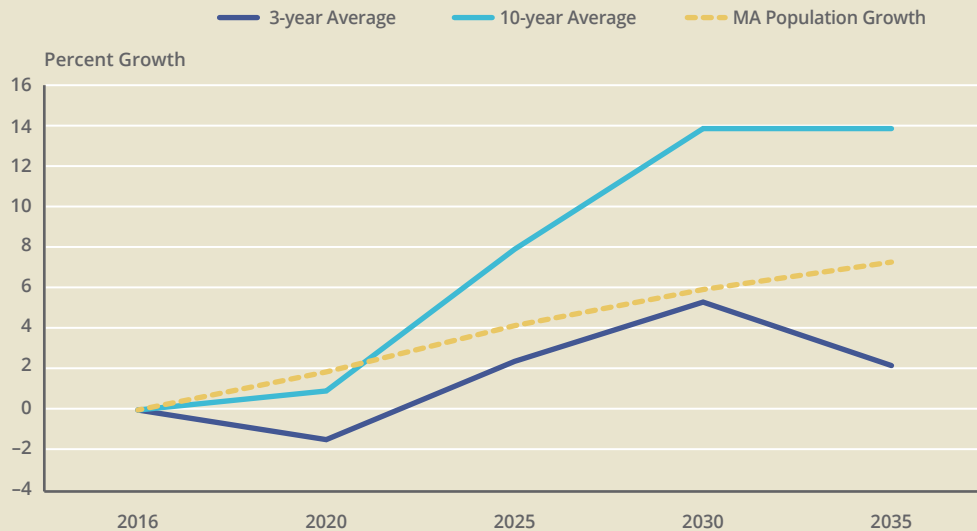
in part, dictate which areas of the state receive funding meant to preserve subsidized units for this population of renters. By 2025, 133 cities and towns in Massachusetts could have all or some of the subsidies on their ELI-occupied inventory expire. Three of those municipalities—Boston, Springfield, and Worcester—account for 46 percent of the subsidy stock at risk of expiring. This is not surprising given the concentration of affordable units in these cities, particularly in Boston. However, as Figure 7 shows, many smaller communities with relatively fewer subsidized units are at risk of seeing large portions of their subsidized ELI-occupied inventory expire by 2025.

Of the 133 cities and towns with housing subsidies scheduled to expire by 2025, 25 are at risk of having all of their inventory become unrestricted. This amounts to 759 subsidized units, or about 3 percent of the total number of ELI-occupied units. These cities and towns are dispersed across much of the state and include rural and urban communities. Forgoing preservation of these units in favor of preserving subsidized inventory in communities where it is more concentrated would put residents in these 25 communities at greater risk of becoming rent burdened. In many of these communities, large shares of the ELI renter households already are paying more than 30 percent of their income toward rent (as shown in Figure 2). Preserving subsidized affordable-housing inventories in these communities would ensure that ELI and other low-income households have geographically broader access to affordable housing.

Figure 8

Based on Past Rates, Massachusetts Could Still See Growth in Its Subsidized-housing Inventory through 2030

Projected Growth of Subsidized Rental Inventory in Massachusetts, 2016–2035



Source(s): National Housing Preservation Database, 2016 active subsidized units in Massachusetts; Population estimates from Renski and Strate (2015).

Note(s): Projected growth in the number of units is based on the net number of units added (units added minus units expired), with 2016 active units used as the base year. The 3-year average is based on the average annual number of units added during the period 2014–2016. The 10-year average is based on the average annual number of units added during the period 2007–2016. Expiring units are based on the first date any subsidy attached to the unit ends.

Growth of Subsidized-Housing Inventory

Based on past rates of new additions to the subsidized-housing inventory, Massachusetts could still see growth in the total number of subsidized units through 2030.³⁵ Figure 8 shows the total number of subsidized units in Massachusetts based on the three-year and 10-year average numbers of units added annually, minus the numbers of units with at least one subsidy expiring. All units were included regardless of the household income of the occupant. Estimates of the average number of new units added annually were constructed to account for the variation seen from year to year. Estimates are based on the first date that a unit's subsidies end and thus represent a maximum estimate of expiring use units.³⁶ Between 2006 and 2016, the number of subsidized units added annually varied by as much as 94 percent year over year, ranging from a low of 2,484 in 2007 to a high of 6,590 in 2013. The three-year annual average (from 2014 through 2016) was 3,656; the 10-year annual average (from 2007 through 2016) was 4,499 units.³⁷

³⁵ Units are counted as added to inventory in the year that the first subsidy start date is listed in the NHPD.

³⁶ Units are counted as expired in the year that the first subsidy end date is listed. This corresponds to the first date an attached subsidy will end. Many properties use multiple funding sources to promote affordability, thus it is difficult to firmly estimate when a unit becomes unaffordable through subsidy loss. Some subsidy programs in the NHPD do not directly impact affordability. For example, a unit receiving HUD mortgage insurance would still count as subsidized in the NHPD, but practically it is no longer part of the subsidized-housing inventory that affects affordability, because there are no restrictions on rent or occupancy. These subsidy programs typically have a 40-year life cycle, so using the last date a subsidy ends would likely undercount the loss to subsidized inventory in the near term. For this reason, Figure 8 uses the first date a subsidy ends to estimate expiring use units and losses to subsidized inventory, and it can be thought of as a maximum estimate of inventory loss. Using the first subsidy end date is also more relevant for ELI households that rely on many sources.

³⁷ A five-year annual average was not used because it would largely include the 2011–2013 period, when the number of new units added was uncharacteristically high relative to the rest of the series.

Taking into account expiring use units, the total subsidized-housing inventory can be expected to grow to as many as 144,000 to 157,000 units by 2030. After this period, the number of units with expiring subsidies will meet or exceed the number of additions. Growth will be stagnant, based on the 10-year annual average measure, or inventory will decline, based on the three-year annual average measure. This assumes that the expiration of any subsidy attached to a unit decreases the total inventory. The total number of units that will see their subsidies expire after 2035 is, in part, dependent on the subsidy source added after 2016. For example, if a large number of the units that are added between 2016 and 2020 are funded with LIHTC, their subsidies will expire between 2046 and 2050 (30 years after they go into effect). Other types of subsidies, such as Project Based Section 8 (PBS8), last only 20 years and would expire between 2036 and 2040. These differences in duration make estimates of expiring use units less accurate beyond 2035.

For Massachusetts to grow its subsidized housing inventory at a rate that matches its expected population growth, the state must add, on net, an average of 4,024 subsidized units annually, or 76,464 by 2035. These additions would offset the units expiring and sufficiently increase the inventory. The cost of producing or preserving this many subsidized units is substantial, and it would vary depending on the levels of subsidy that are used. For example, based on LIHTC program costs, by 2035 the cost of adding or preserving these 76,464 units could range from \$12 billion to \$17 billion in new tax-credit subsidies over 10 years.³⁸ This would be a significant loss in tax revenue for the state that may not effectively serve ELI households, because rental costs under this program are often set much higher than what this population can afford. Based on rental-assistance program costs, the cost of adding or preserving these units could range from \$840 million to \$1.03 billion in additional annual expenditure by 2035.³⁹ While less costly than the LIHTC-based estimate, preservation using rental assistance would require an ongoing commitment in order to maintain inventory. Furthermore, over the 30 years that the LIHTC restricts affordability, the tax-credit program would result in a lower annualized cost. However, ELI households would be better served by rental-assistance programs than by LIHTC-subsidized units.

Massachusetts must add, on net, more than 4,000 subsidized units annually to match population growth.

Legislation from 2018 provided roughly \$675 million for affordable-unit creation or preservation,⁴⁰ equating to 4,285 units over 10 years based on LIHTC-recommended program costs, or 5,000 to 6,000 units over 10 years based on rental-assistance program costs.⁴¹ With this recent legislation, the number of new or preserved units that will need to be added or preserved in order to match population growth by 2035 is just under 3,800 per year, or about 220 fewer units per year than without the appropriation.

Growing the state's subsidized-housing inventory at the three-year average annual rate through 2035 will equate to about \$10 billion to \$15 billion in new tax-credit subsidies, provided over the course of 10 years, or \$766 million to \$937 million per year in new rental-assistance funding by that year. However this would leave Massachusetts with a shortage of almost 7,000 subsidized units relative to the level needed to match the expected population growth. As the

38 Based on the 2016 per-unit cap on allowable eligible basis for preservation projects of \$175,000 (lower estimate) and new production projects of \$250,000 (higher estimate) (DHCD 2016a). Total LIHTC tax credits are provided each year for a total of 10 years but place affordability restrictions on subsidized units for as long as 30 years.

39 Based on the 2016 per-unit funding for the HCV (lower estimate) and PBS8 (higher estimate) programs (HUD 2016b).

40 Massachusetts's 2018 Housing Bond Bill (H.4536).

41 For the LIHTC program cost estimate, the per-unit cap of \$175,000 on allowable eligible basis for preservation projects was used (DHCD 2016a). For rental assistance, the per-unit funding received for the HCV (\$11,037) and PBS8 (\$13,491) programs was used (HUD 2016b).

number of units with expiring subsidies increases, maintaining and growing the state's inventory of subsidized housing through 2035 depends in large part on preserving these units, because they will become harder to replace with new additions to the inventory. The true cost of growing subsidized-, and by extension, affordable-housing inventory depends on a variety of factors not included in this analysis. However, the total cost likely will be high. Maintaining and expanding relationships with federal, nonprofit, and private sector partners will be important for ensuring that Massachusetts is able to maximize the number of resources it has at its disposal and is not left bearing the final cost alone.

IV. Conclusion

Extremely low-income (ELI) households accounted for 28 percent of all renter households in Massachusetts in 2016. The findings of this report show that the ELI population predominately comprises adults who are older, single adults, and adults in households without children. ELI households experience significant financial burden associated with housing costs due to the lack of units that are affordable and available (AA) to them. About 79 percent of ELI households paid more than 30 percent of their annual income toward gross rent (contract rent plus utilities) in 2016—up from 76 percent in 2011. More than half spent over 50 percent of their annual income

Geographic considerations would allow subsidy programs to take advantage of market differences.

on gross rent in each of those years. In 2016, Massachusetts had 48.6 AA units per 100 ELI households, equating to a shortage of more than 141,000 units. Subsidized housing is an important component of the state's inventory of AA units. The US Department of Housing and Urban Development (HUD) supplied the bulk of AA units in both 2011 and 2016, with the state playing a smaller, but still important role.

Massachusetts is at risk of losing subsidized housing inventory through expiring use. It is expected that in the coming years, the number

of units with expiring subsidies will increase at an accelerated rate. The subsidies attached to 9,110 ELI-occupied units in the state are at risk of expiring completely by 2025. Preserving the subsidies for these units could cost Massachusetts \$100 million to \$122 million annually by that year. Failing to preserve them could lead to a decline in the number of AA units for the ELI population. To grow the state's total subsidized-housing inventory (for households of all income levels) at a rate matching the expected population growth, 4,024 subsidized units, on net, need to be created or preserved per year by 2035, at a cost that could be an additional \$1.03 billion annually by that year, based on HUD rental-assistance program costs. This includes preserving the 9,110 units occupied by ELI households. While this cost may seem daunting, Massachusetts has demonstrated a commitment to addressing affordable-housing preservation. Resources and funding sources at the federal and state levels, along with private and nonprofit development, would help diffuse the cost across multiple actors.

This report also finds that, regarding affordable-housing issues, communities differ in several ways. While most ELI households live in heavily populated areas of the state, such households also account for sizable shares of the renter populations in smaller cities and towns. Many of these communities see high rates of rent burden and of severe rent burden, even with lower rent costs, indicating that ELI households in these areas suffer less from a shortage of affordable units than from low income. While statewide the supply of AA units was 48.6 units per 100 ELI households in 2016, it ranged locally from 28.9 to 79.3 units per 100 ELI households. When subsidized units are subtracted from the total number of AA units, smaller communities in Central and Western Massachusetts are shown to have larger inventories of market-supplied AA units, while major

cities such as Boston, Worcester, and Springfield see their AA-unit inventory nearly vanish, indicating that the market on its own does not supply these areas with affordable housing for ELI households. An estimated 25 cities and towns will have all of their subsidized-unit inventory expire by 2025, leaving these communities with only a small number of market-rate affordable units.

Massachusetts has at its disposal a number of strategies for addressing the shortage of AA units for ELI households. In particular, building geographic considerations into how rental-assistance and tax-credit subsidies are allocated would allow these programs to take advantage of market differences. Rental assistance could be focused on communities that have lower rents and larger market-supplied AA inventories but still see substantial incidence of rent burden. In these communities, lower incomes are likely driving the housing-cost concerns for ELI households, and thus the communities would benefit more from a demand-side approach to the issue. Conversely, areas without a robust inventory of market-supplied AA units would benefit more from tax-credit subsidies that incentivize the private-sector creation of affordable units.

Preserving existing subsidized units will become increasingly important in the state. Massachusetts has shown a willingness and dedication to making preservation a priority, yet funding is not limitless. Using the available resources in a way that balances maintaining access to affordable housing throughout the state with maximizing the number of units saved will be important. Most of the housing units with subsidies that are set to expire in 2025 are located in just three cities, however, a number of smaller communities are at risk of losing all of their subsidized affordable housing inventory by that year. Allocating funds for the preservation of subsidies in these communities will ensure geographically broader access to affordable housing for ELI and other low-income households.

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