2020 Targeted Community Lending Plan

Executive Summary

The Federal Home Loan Bank of Boston is a cooperatively owned wholesale financial institution dedicated to serving its member financial institutions and supporting affordable housing and economic growth.

The 2020 Targeted Community Lending Plan identifies significant housing and economic development needs and investment opportunities within the communities our members serve across New England and the nation. Furthermore, this needs assessment informs the community development priorities and activities of the Federal Home Loan Bank of Boston (FHLBank Boston) including administration of our community investment programs and our outreach efforts.

The FHLBank Boston operates several primary housing and community investment programs that provide funding our members and their development partners can use to invest in communities, support affordable housing production, assist first-time homebuyers, and finance small businesses, creating longer-term economic and community benefits.

The FHLBank Boston and the FHLB system as a whole have a unique opportunity to restructure our Affordable Housing Program based on new regulations published in November 2018. Full implementation will be achieved by January 2021, reflecting new program priorities and administration, informed by this and future targeted community lending plans.

The 2020 Targeted Community Lending Plan presents the following priorities, initiatives, and targeted community lending goals for the coming year.

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2020 Community Development Priorities

1. Increase the production of high quality, affordable rental housing to respond to the persistent housing affordability crisis.

2. Recapitalize existing public housing and other "expiring" affordable housing stock.

3. Expand the production of new stock to meet the re-emerging demand for homeownership housing.

4. Build partnerships with healthcare providers, members, sponsors, and other community stakeholders and achieve long-term public and private health outcomes through housing development, investment, and preservation.

5. Encourage the continued use of cost-effective, high performance building technologies and activities to promote energy efficiency and durability, resident safety, and broader climate resiliency of communities.

6. Provide capital to support small business lending and encourage workforce development strategies across New England.

7. Support regional discussions about land use regulations to promote community engagement and affordable housing production.

2020 Initiatives, Activities, and Targeted Community Lending Goals

The Bank will administer its community investment programs, conduct community development outreach, build partnerships with stakeholders, and develop and enhance its programs to address these community development priorities. Notably for 2020, the Bank will conduct extensive outreach, planning, and research to fully implement the new AHP Regulation by January 1, 2021.

Initiative 1. Effectively administer the Bank's Housing and Community Investment programs (AHP, CDA, EBP, JNE, HHNE and NEF).

a) Develop program materials and conduct trainings to expand members' and community stakeholders' knowledge, access, and performance using our program to meet changing needs and business opportunities.
b) Conduct solutions-oriented research to ensure timely deployment and maximum benefit/leverage by our members.
c) Operate the AHP as a flexible funding source to ensure equal access and a balanced portfolio of housing initiatives responding to changing housing needs across New England and the communities our members serve.
d) The 2020 scoring priorities within the AHP are designed to meet New England's housing needs as identified in this Targeted Community Lending Plan and in partnership with other funders.

Initiative 2. Work with the Advisory Council to conduct outreach and policy development to fully implement the new AHP Regulation by January 1, 2021.

a) Conduct regional meetings with the support of Advisory Council members across New England to identify and prioritize program changes and opportunities presented by the new regulation for both AHP and EBP. These meetings will include members, housing developers, state housing finance agencies, and other community stakeholders to ensure full coverage and consideration of ideas.
b) Identify possible significant unmet housing needs and consider development of a new Targeted Fund within the AHP.
c) Research and incorporate the new scoring and monitoring opportunities offered by the new AHP Regulation to ensure the continued efficacy and relevancy of the AHP's priorities, scoring categories, and program administration.
d) Research metrics and program policies regarding readiness, sponsor capacity, cost reasonableness, and need for subsidy.
e) The information and data gathered will inform development of the 2021 Targeted Community Lending Plan and the AHP Implementation Plan.

Initiative 3. Conduct community development outreach and networking activities with members and other community partners.

a) Maintain and expand partnerships with the state housing finance agencies, the Advisory Council, Federal Reserve Bank of Boston, the Federal Deposit Insurance Corporation (FDIC), Office of the Comptroller of the Currency (OCC), and Small Business Administration (SBA).
b) Lead the 20th anniversary of the Affordable Housing Development Competition.
c) Conduct research and sponsor forums and networking opportunities to connect members and community partners to expand capital and realize new community development lending and investment opportunities.
   i. This includes Enterprise Community Partners, other community stakeholders, and health care providers.
   ii. This includes analysis and annual publication/notice about targeted community lending and affordable housing activities by our members and other community stakeholders across New England, including but not limited to participation in the Bank's housing and community investment programs, which may provide business opportunities for members to expand

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their community development investment activities and meet their Community Support requirements.

    iii.   The FHLBank Boston will work with Advisory Council members and other partners to develop a forum addressing land use regulations, innovative tools and best practices to support affordable housing production.

Initiative 4. Incorporate Bank values regarding diversity and inclusion in the planning, development, and implementation of all our housing and community investment programs.

a) Recruit diverse individuals to serve on the Bank's Advisory Council, and educate them on the Diversity & Inclusion activities of the Bank;

b) Identify affordable housing and economic development organizations that specifically work with diverse populations to create awareness of the Bank's targeted housing and community investment programs; and

c) Develop specialized partnerships with advocacy organizations in the housing and community investment industry that target and work with diverse populations.

2020 Targeted Community Lending Goals

A. Conduct up to six state or regional outreach meetings with the Advisory Council, members, state HFAs, other funders, and sponsors to obtain information and feedback regarding implementation of the new AHP Regulation to meet current and future needs and opportunities, including any potential Targeted Funds.

B. Disburse 100 percent of the subsidy funds allocated for the 2020 Jobs for New England and Helping to House New England programs.

C. Disburse $400 million in Community Development Advances, including the CDA Extra program.

D. Conduct up to 16 outreach and technical assistance meetings with members and sponsors regarding identifying community development business opportunities, how to strategically access the Bank's Housing and Community Investment programs, and/or specific technical assistance regarding the Bank's Housing and Community Investment programs.

United States and New England Overview

Population Change and Median Age

The United States population increased 5.96 percent over the past eight years and is projected to grow by 79 million people over the next 30 years[1]. The growth rate is expected to slow, however, from 2.3 million annually to 1.9 million from 2030-2040 and 1.6 million annually from 2040-2060[2]. Unlike the 6 percent national population growth rate, the New England population grew by less than one percent in five of the six New England states. The regional population is moving out of New England and is broadly being replaced

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[1] United States Census Bureau, Current Population Survey/Housing Vacancy Survey
[2] Harvard Joint Center for Housing Studies, Harvard University (HJCHS). State of the Nation's Housing: 2019

by a foreign-born population. Massachusetts, for example, lost 126,587 domestic migrants between 2010 and 2018 and gained 351,069 international migrants[3].

New England's population is aging based on median ages (39.4 in Massachusetts to 44.9 years in Maine) relative to the national average (38.2). The aging population over 65 is projected to outnumber children within the next 20 years, of particular note for New England[4]. Both the increase in international migration and our aging population will continue to have significant impact on housing demand, construction, and rehabilitation nationally and in New England.

Homelessness and Poverty

In the 2018 Annual Homeless Assessment Report, the U.S. Department of Housing and Urban Development reports that there were an average of 553,000 homeless persons in 2018, of which 65 percent were sheltered in transitional housing or emergency shelters. This is the second consecutive year that homelessness has increased nationally and within Connecticut and Massachusetts, albeit still below 2008 levels. The percentage of homeless who are unsheltered and living on the street nationally appears to be increasing (35 percent in 2018) due to the rise of unsheltered homeless individuals. Fortunately, the percentage of homeless families with children declined two percent between 2017 and 2018; 91 percent of these families are sheltered. While still below the 2007 count, the number experiencing chronic homelessness increased slightly year over year in 2018[5].

39.7 million people—12.3 percent of the total U.S. population—lived in poverty in 2017. Females of all ages represent that largest demographic living in poverty[6]. Overall, poverty rates declined since 2010 but not all states have recovered to pre-crisis levels. As of 2017, four of the six New England states still retained higher poverty rates than before the 2008 housing and economic crisis. 2017 poverty levels in Connecticut, Massachusetts, New Hampshire, and Vermont were an average of 0.6 percentage points higher than in 2007[7]. 2017 Single female -headed households in New England have, however, seen a decline in overall poverty rates since 2007, though married-couple families and single male-headed households have increased[8].

Demand

Cost-Burdens, Vacancy Rates, and Housing Prices: Rentership

There are 43.3 million renter households in the United States, about 1.98 million of which live in New England. While the national number of renter households fell slightly in 2018 from 2017, the rental market remains strong overall and especially so in New England. According to the Harvard Joint Center for Housing Studies estimates, 31 states lost renter households between 2015 and 2017—but rentership increased by 30 percent in New England over the same period.

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[3] Masnick, George. Behind the Data: Dramatic Changes in Low-Growth Cities and States. Harvard Joint Center for Housing Studies: Housing Perspectives.
[4] United States Census Bureau. Older People Projected to Outnumber Children for the First Time in United States History.
[5] United States Department of Housing and Urban Development. The 2018 Annual Homeless Assessment Report (HUD AHAR) to Congress
[6] Data USA: United States
[7] Lindsay, Jay. Big Improvements in New England Economy Tempered by Incomplete Recovery in Poverty Rates. Federal Reserve Bank of Boston
[8] Lindsay.

The 2018 national median wage needed to afford a two-bedroom apartment (housing wage) calculated by the National Low Income Housing Coalition is $22.96, while the actual mean renter wage is only $17.57, leaving a significant gap of $5.39. Consequently, over 50 percent of all renters are experiencing some degree of housing cost burden (spending 30 percent or more on housing costs for those who are cost burdened, and 50 percent or more for those severely cost burdened). Nationally, this burden is exacerbated by the 3.1 percent decrease in vacancy rates over the last 10 years and a 3.6 annual increase in overall rent cost[9].

Cost-Burdens, Vacancy Rates, and Housing Prices: Homeownership
Low homeownership vacancy rates, the rise in home prices, and heightened credit requirements have made it more difficult for new homeowners to purchase a home. Additionally, over 23 percent of all homeowners are cost burdened as costs rise with increasing demand. National homeownership rates have decreased over the last 5 years an average of two percent total—offset by a small uptick in homeownership rates in the last two years. Additionally, debt-to-income ratios have risen above 43 percent in recent years (HJCHS). The national percentage of owner-occupied units also decreased from 66.6 percent in 2010 to 63.8 percent in 2017; New England, as a region, has the lowest homeownership rates in the country second only to the West Coast. Maine has the highest percentage of owner-occupied units in the region at 73.5 percent, but Rhode Island has the lowest homeownership rate (60 percent) in the region[10].

There were, however, 2.8 million new homeowners in the last two years. Harvard's Joint Center reports that the largest increase in homeownership was in the 25-39 age group, up 2.0 percentage points since 2017. This slight increase in homeownership rates is promising for future homeownership trends, but there are still significant barriers to obtaining a home. The Urban Institute identifies four major barriers to home ownership: the difficulty saving for down payments, fluctuating interest rates, increased debt and low credit scores[11]. Not only is it more difficult to obtain a mortgage, there are still discrepancies in homeownership rates between different race and ethnic groups. The 'Black alone' racial group has maintained the lowest homeownership rate for the past five years (an average of 43 percent), followed by the Hispanic or Latino ethnicity (an average of 46.1 percent). The 'White alone' racial group maintained a significantly higher average of 72.4 percent over that same period[12].

Overall, New England states have some of the largest shares of cost-burdened homeowners of all U.S. states. As of 2017, Rhode Island had the 4th highest share of cost-burdened homeowners, followed by Connecticut in 6th and Massachusetts in 9th (HJCHS).

Housing Supply
Change in Units
The national housing stock increased overall five percent over the past eight years. The Harvard Joint Center notes, however, that housing construction as measured by permits, starts, or completions has not kept pace with household growth, rising demand for homeownership, or even to replace lost or obsolete

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[9] United States Census Bureau. Annual Estimates of the Resident Population for Selected Age Groups by Sex for the United States, April 1, 2010 to July 1, 2018. (U.S. Census)
[10] United States Census Bureau. Current Population Survey/Housing Survey
[11] Goodman, Laurie et. al., Barriers to Accessing Homeownership. The Urban Institute
[12] HJCHS, Table W-5

housing stock. For example, the number of owner-occupied units increased by about 1.1 million since 2010 but this remains insufficient to meet demand. While increasing nationally, single family starts are down one percent in the Northeast in 2018 and down 40 percent compared to the historic average (1980-2016). Multifamily starts however have increased 18 percent in the Northeast (HJCHS).

Rental construction is focused on the higher end of the market. The Harvard Joint Center reports that roughly 64 percent of asking rents in newly completed apartments had monthly rents of $1,450 or above. The rent distribution of newly constructed rental units in 2017 differs significantly among New England states. Massachusetts constructs the most rental units in New England by a 4:1 margin and constructs the most units with the highest rents over $1,600. By comparison, other New England states produced most of the rental units at a rent between $800 and $1,199. Overall, states do not produce enough units at affordable rent levels. Adding to this challenge, the supply of low-cost affordable rental housing is also shrinking. The Harvard Joint Center found that public housing stock decreased nationally, although some of this is offset by conversion through the HUD Rental Assistance Demonstration program. Additionally, the number of units with expiring affordability restrictions will accumulate to roughly 1.2 million by 2019 (HJCHS).

Supply Gap - Rental Units

Based on demand and median incomes, there is a shortage of seven million affordable rental homes for the 11 million extremely low-income renters (ELI) throughout the United States[13]. This shortage of affordable homes diminishes at higher income levels, and there appears to be a sufficient number of units affordable and available for households earning 80 percent of the area median income; however, the high percentage of households with cost burdens indicates the overall need for additional housing stock.

Supply Gap - Homeownership Units

There is also a mismatch in the type of housing currently built or currently available in the market and the increasing demand for smaller, more affordable homes. As millennials age into homebuying capability, they are increasingly interested in homes under 1,800 square feet, but these smaller, more affordable homes currently make up only 22 percent of the overall stock of housing (HJCHS). This mismatch in stock presents an issue for the future of the homebuying market.

Constraints and Opportunities

Primary impediments to housing construction include rising land prices, labor and material costs, and zoning/permitting. As reported previously in the Bank's 2019 Community Lending Plan, New England faces a construction labor shortage, compounded by an aging trades workforce. Consequently, labor costs are higher, and the building capacity is limited. Zoning and permitting barriers also delay both multifamily and single-family construction. Anecdotally, the loss of housing inventory to short-term vacation rentals or vacation homes also exacerbates the housing shortage. This is emerging both in larger municipalities like Boston but also in smaller communities with seasonal economies generally related to tourism

At the state and local levels, efforts to mitigate or remove zoning impediments are being made. Massachusetts for example is considering state-level changes to local zoning approvals to streamline the

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[13] NLIHC, The GAP. Households earning at or below 30 percent of the area median income are characterized as extremely low-income households. as

approval process, reducing the majority approval needed to a simple majority. Many communities are implementing inclusionary zoning, density bonuses, and considering adoption of form-based zoning codes. Anecdotally, inclusionary zoning is more effective in high housing demand markets. Towns with less in-demand markets—Everett and Watertown, MA, for example—are increasing the allowable number of housing permits to build leverage for future inclusionary zoning ordinances[14].

States and municipalities across New England are also considering other options to facilitate housing production. Municipalities are starting to utilize form-based zoning codes to both streamline the zoning review and appeals process, encouraging housing development, but also to retain control and community direction. Instead of separating uses, form-based zoning codes help integrate and mix uses by through physical form standards for mixed uses, landscaping, and architecture of new development. Communities are also considering other zoning changes to eliminate barriers between subdivision rules and site plan requirements which can delay or restrict the allowable number of permitted units. Moreover, progress is being made at the state and local levels to allow the development of accessory dwelling units to increase housing stock available for elders. Lastly, efforts to reuse publicly-owned buildings and land for housing are gaining momentum as stakeholders look for new development opportunities.

Insufficient capital for development and operating subsidies remain perennial challenges. Several New England states including Massachusetts and Rhode Island have recently passed or are actively considering additional bonding authority to expand capital funding for housing investments. While interest was strong for a state low income housing tax credit in Maine, due to budget and legislative constraints the credit was not approved this year. Connecticut also has recently placed a moratorium on new state bonding.

Rural Development and Challenges
Rural areas are losing population throughout the country, which impacts the primary tax base, current and future workforce/students, and local spending. For these reasons, rural areas struggle to retain and attract new businesses, and workers are left with primarily service and agriculture jobs—neither of which pay living wages. From 2003 and 2010, rural household incomes declined about 1.8 percent, correlating with a significant decline in the working-age population. Most of the population left in rural areas are older retirees as young families move to better paying job opportunities. A significant amount of government benefits—Social Security, Supplemental Security Income, and SNAP, for example—are therefore directed toward these areas and these benefits are not bridging the economic gap that exists. Poverty levels remain substantially higher in rural areas than in suburban or exurban communities, and the lack of investment stifles any possible improvement[15].

Economic Development and Opportunities
As of the second quarter of 2019, the Federal Reserve Bank of Boston notes that the unemployment rate in New England was 3.1 percent—the region's lowest rate since 2001. While New England has continued to enjoy solid job growth through May 2019, it is still at slower pace than the nation. New Hampshire continues to have the highest year-over-year job growth, while Vermont posted the largest decline in the

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[14] Laidler, John. "NIMBY? Not in these cities and towns." Boston Globe, July 25, 2019.
[15] Housing Assistance Council. Taking Stock: Rural People, Poverty, and Housing in the 21st Century. Rural America.

unemployment rate. Connecticut was the only state with a higher unemployment rate than the national average[16].

In terms of job growth and wages, The National Low-Income Housing Coalition identified that seven of the fastest growing occupations, ranging from medical assistants to food prep workers, are projected to have growing wages but still well below needed housing wage levels (NLIHC, Out of Reach). Both of these reports share concerns about the continued polarization of job growth along skill/education levels as middle-skill jobs appear to be decreasing and job growth emerging more both in higher-skill, higher-wage occupations and lower-skill, lower-wage occupations. As this polarization continues, wage and income growth will concentrate among the higher skill occupations, placing middle- and lower-income workers at additional longer-term disadvantages.

State Profile: Connecticut

Connecticut's aging population and income inequality amplify its affordable housing problems. The state also continues to struggle with homelessness and poverty. In order to address these issues, the state is investing in increasing the affordable housing stock, making the current housing stock more affordable and available, and increasing economic opportunity.

Population Change and Median Age

Connecticut's overall population remained static, decreasing by 0.04 percent over the last eight years. The state's largest metro, Fairfield County increased its population by 2.9 percent, however. The state had the lowest growth in its minority population of almost all U.S states (U.S. Census). Connecticut's median age (41) has continued to rise annually. The population of those over 65 years exceeds that of children under 14[17]. Researchers project that older adults will make up at least 20 percent of the population in almost every town in Connecticut by 2025[18].

Homelessness and Poverty

Homelessness in Connecticut grew by 17 percent from 2017 to 2018, ranking as the second largest increase nationally. This includes a 43.7 percent, or a 516-person increase in homeless families with children (HUD AHAR). Fortunately, Connecticut's poverty rate has declined since its peaks in 2011 and 2014[19]. The rate declined from 10.8 percent in 2014 to 9.6 percent in 2017—3.8 percent below the national average. Single female householders represent the highest percentage of family type in poverty; married couples represent the lowest percentage (U.S. Census).

Demand: Cost-Burdens, Vacancy Rates, and Home Prices

Rental vacancy rates decreased from 11.2 to 4.1 percent between 2010 and 2019. Homeownership vacancy rates remained stable at 0.5 percent, however[20]. Home prices overall decreased 0.5 percent between 2016-2017, though the cost of townhouses and condominiums increased 6.7 percent over the

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[16] Sullivan, Riley. New England Economic indicators: Q2 Snapshot of the New England Economy through June 26, 2019. Federal Reserve Bank of Boston.
[17] Social Explorer, United States Census Bureau. ACS 2017 (5-year Estimates). Sex by Age.
[18] Connecticut Data Collaborative. Living in an Aging Connecticut. Connecticut's Legislative Commission on Aging.
[19] FRED Economic Data. Estimated Percent of People of All Ages in Poverty for Connecticut.
[20] United States Census Bureau. Quarterly Residential Vacancies and Homeownership. April 2019.

same period[21]. The average wage needed to afford a two-bedroom apartment (housing wage) remains predominantly unaffordable throughout the state. This wage ranges from $36.25 in Stamford, $30.44 in Danbury, to $22.98 in Norwalk-New London. This cost translates to a $52,837 annual income, or $25.40/hour, needed for a family to afford a two-bedroom apartment at fair market rent. Simultaneously, the gap between this wage and median renter wage persists—a $7.86 gap statewide per National Low-Income Housing Coalition's Out of Reach 2019.

Connecticut has the highest percentage of cost-burdened renters in New England. Sixty seven percent of extremely low-income (ELI) persons live with severe cost-burdens, and 28 percent of the state's very low-income population lives with the same severe cost-burden (NLIHC Out of Reach). Moreover, about 27 percent of all homeowners are cost-burdened[22].

Supply: Change in Units, Supply Gap
The housing stock increased by about two percent over the past eight years. The ratio of owner- to renter-occupied housing stock has remained around two-to-one since 2015 (U.S. Census). Additionally, white alone households made up the largest percentage of both homeowners and renters in the state, though Black homeownership has increased slightly since 2009[23]. There is a shortage of 84,050 units for those at or below 50 percent average median income. Proportionally, there are only 38 affordable and available homes per 100 ELI renter households, and only 62 for those whose income is 50 percent of average median income. There are, however, 102 units for those at 80 percent of average median income and 107 for those at or below 100 percent average median income[24].

Economic Development Needs and Opportunities
As of 2018, the state was third in the country for GDP per capita. The industries with highest GDP growth include finance, insurance, real estate, and leasing—which altogether accounted for 29 percent of state GDP in 2014[25]. Connecticut still has the highest unemployment rate of all six New England states, and the slowest GDP growth[26]. The state's labor force participation rate is the third-lowest of all New England states at 62.8 percent and remained relatively flat over the last year with only a small increase of 0.60 percent[27].

State Profile: Maine
Maine has the oldest population of any state in the nation. State policymakers continue to focus on strategies to retain younger workers to replace the retiring workforce. Housing cost burdens remain high for extremely low-income households.

Population Change and Median Age
Maine's overall population remained flat, only increasing by 0.76 percent between 2010 and 2018, though Cumberland County, the state's most populated county, increased its population by 4.2 percent. York County population increased the most of all Maine counties at 4.6 percent, while the Aroostook County

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[21] Connecticut Realtors. Single-Family Home Sales Drop Slightly in November. December 2017.
[22] HJCHS tabulation of United States Census Bureau, 2017 American Community Survey 1-Year Estimates
[23] United States Census Bureau. Tenure (Black or African American Alone Householder). 2005-2017 American Community Survey 5-Year Estimates.
[24] National Low-Income Housing Coalition, Housing Needs by State 2019
[25] Blokhin, Andriy. 5 States with the Highest Real GDP per Capita. October 24, 2018. Investopedia.
[26] Data USA: Connecticut.
[27] Bureau of Labor Statistics. Economic News Release: Employment-population ratios of persons 16 years of age and over by region, division, and state, 2017-18 annual averages.

population decreased the most at -6.6 percent[28]. Maine remains on average the oldest state in the nation as the median age has increased to 44.9 years (U.S. Census).

Maine's counties with the highest growth rate are an average of 6.6 years younger than those with the slowest rate of growth. Additionally, the percentage of children under 18 declined over that same period, while the age group of those 65 years and older grew by the same percentage[29]. The state projects that the population of children under 18 will continue to decline by at least five percent through 2026, and the working age population will show no increase over the same period[30].

Homelessness and Poverty

There was a 10.4 percent increase in homelessness throughout the state from 2017 and 2018. Overall, only 3.9 percent of Maine's homeless population was unsheltered. Homeless individuals comprised the majority of homeless households; the next largest group were families with children, followed by veterans, chronically homeless individuals, and unaccompanied homeless youth (HUD AHAR). Poverty levels did not change significantly in the past seven years, only marginally from 12.6 to 12.9 percent. The percent of families at or below the poverty level declined slightly from 8.9 in 2016 to 8.4 percent in 2017. Families with a female householder and children under 18 remained the demographic group with the highest poverty levels[31].

Demand: Cost-Burdens, Vacancy Rates, and Home Prices

Homeowner vacancy rates remained very low at 0.7 percent from 2010 to 2019. Rental vacancy rates decreased 12 percent over that same period, leveling out at 6.1 percent in the first quarter of 2019[32]. Home sales increased 6.32 percent between 2018 and 2019, and the median sale price also increased 4.59 percent[33].

Considering both low vacancy rates and increasing prices, the income needed to afford an average two-bedroom rental home is significantly higher than the average renter wage. A statewide annual household income of $38,966 is needed to afford a two-bedroom rental home throughout the state, which translates to an average $19.91 housing wage and a difference of $8.09 to the actual average renter wage. The housing wage differs significantly between urban and non-urban areas, however. For example, the Portland area wage is $26.67, compared to only $16.24 in nonmetro areas. The average income for a four-person, extremely low-income household is $24,600, which is lower than the housing wage in any part of the state. Additionally, there is a 53 percent severe cost-burden for extremely low-income families, and about a third of the very low-income and low-income renter households is cost-burdened[34].

Supply: Change in Units, Supply Gap

There was a 3.3 percent increase in overall housing units between 2010 and 2018 according to U.S. Census data. As of 2017, single family, detached homes comprised 70.4 percent of the stock. Mobile

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[28] United States Census Bureau. Cumulative Estimates of Resident Population Change and Rankings.
[29] United States Census Bureau. Comparative Demographic Estimates American Community Survey 5-Year Estimates
[30] Maine State Economist. Maine Population Outlook 2016-2026. December 2016. Department of Administrative and Financial Services.
[31] FRED. Estimated Percent of People of All Ages in Poverty for Maine.
[32] United States Census Bureau. Quarterly Residential Vacancies.
[33] Maine Real Estate Information System, Inc. (d/b/a Maine Listings). May Home Sales Increase 6.32 Percent. June 2019.
[34] NLIHC, Housing Needs by State: Maine.

homes represented 8.4 percent of the stock. Twenty-four percent of housing units were built prior to 1939. Only 0.5 percent of units were built 2014 or later, presenting possible issues for the health and quality of housing[35].

There is a shortage of 20,086 affordable and available rental units for ELI households which equates to only 52 units available per every 100 ELI renter households. This gap varies by income. For renters at 50 percent of the area median income, there are only 79 units affordable and available per 100 households. This improves for renters earning up to 100 percent of the area median income: proportionally there are 106 units available per 100 households at this income level[36]. There is also a mismatch in the type of units available based on demand. Most of the aging population is over housed, which leaves a large stock of larger homes in the market that are not of interest to younger, smaller families (HJCHS).

Economic Development Needs and Opportunities
While Maine's GDP held at 1.9 percent between 2017-2018, employment grew at a slower pace of 0.5 percent[37]. Still the unemployment rate was 3.3 percent as of May 2019, firmly in the middle of all New England states. Consistent with its aging population, Maine's labor force participation rate is second lowest of all New England states at 61.4 percent[38].

State Profile: Massachusetts
Massachusetts' metro areas continue to grow, with the immigrant population growth exceeding the number of people leaving the state. Considering this growth, the state still struggles with high homelessness rates and housing cost-burdens for most renters. Poverty rates, however, have declined and the majority of the homeless population is sheltered. The state is dedicated to continued support for these populations and minimizing the affordable housing problem.

Population Change and Median Age
Massachusetts's overall population increased by 5.41 percent between 2010 and 2018—the largest increase of all six New England states. Much of this growth is concentrated in metro areas. Suffolk County, for example, grew the most at 11.8 percent[39]. There was, however, a 3.7 percent of out-migration in the last year. Therefore, most of this growth can be attributed to immigration significantly outpacing out-migration[40]. The median age in Massachusetts rose to 39.4 years, the lowest of all six states and the lowest growth rate as well. There was, however, a four percent decrease in children under 18 over the past eight years, but a six percent increase in millennials of prime homebuying age (U.S. Census).

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[35] United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates
[36] NLIHC, Housing Needs by State: Maine
[37] Federal Reserve Bank of Boston. Contributions to Percent Change in Real Gross Domestic Product by State and Region 2017-2018
[38] Bureau of Labor Statistics. Economic News Release: Employment-population ratios of persons 16 years of age and over by region, division, and state, 2017-18 annual averages.
[39] United States Census Bureau. Cumulative Estimates of Resident Population Change and Rankings.
[40] Masnick, George. Behind the Data.

Homelessness and Poverty

Massachusetts had the largest increase in homeless persons of all 50 states between 2017-2018, adding 2,503 or 14.2 percent – resulting in one of the highest rates of overall homelessness in the country. Massachusetts also has the highest rate of families experiencing homelessness in the country. 95 percent of all homeless are sheltered across the state (HUD AHAR). Fortunately, Massachusetts has had gains reducing poverty significantly since 2015, falling from 11.5 percent to 10.5 percent in 2017[41]. Families with a female householder with children under five years made up the highest percentage of households living in poverty[42].

Demand: Cost-Burdens, Vacancy Rates and Home Prices

Massachusetts has the lowest rental vacancy rate of all New England states. Rental vacancy rates fell by 50 percent over the last eight years, while homeowner vacancy rates remained tight at 0.9 percent (U.S. Census). Median home prices increased by 2.3 percent, and home sales increase 8.7 percent overall (U.S. Census). Residents need to earn $70,333 to afford a two-bedroom apartment in Massachusetts—the highest average of all six New England states (NLIHC Out of Reach). This translates to a $13.09 difference in what renters need to earn compared to what renters make in order to afford a two-bedroom apartment. This is the largest difference between housing and mean renter wage of all six New England states by at least $4.00. Nearly 50 percent of all renters and 22.6 percent of all homeowners are cost-burdened throughout the state[43]. Additionally, 59 percent of all extremely low-income renter households and 30 percent of very low-income households are severely cost-burdened.

Supply: Change in Units, Supply Gap

Massachusetts housing stock increased by 3.7 percent between 2010 and 2018 (U.S. Census). As of 2017, 62.4 percent of all units were owner-occupied, and 37.6 percent of all units were renter-occupied. There was a 2.6 percent increase in renter-occupied units since 2009[44].

Massachusetts has a deficit of 169,809 units for ELI households. This gap amounts to 46 units affordable and available per every 100 ELI households. Similarly, there are only 61 units per every 100 renter households earning 50 percent of the area median income, 92 and 99 units per 100 renter households earning 80 and 100 percent of area median income respectively[45]. The state's metro areas have the 'least severe' shortages of affordable and available rental homes per 100 ELI renter households, according to the National Low-Income Housing Coalition. The Boston-Cambridge-Newton, MA-NH metropolitan area has the third most affordable and available rental units of all U.S metro areas, at 46 per 100 renter ELI households.

Economic Development Needs and Opportunities

The state GDP grew 2.7 percent between 2017-2018, and employment increased one percent over the same period. While better than the national average, the unemployment rate is the second highest in New England behind Rhode Island at 3.57 percent[46]. Based on state projections, none of the top seven growth occupations pay a housing wage to workers. Retail salespersons, personal care aids, waiters and waitresses, food preparation and serving workers, cashiers, customer service representatives, and janitors/cleaners all make under $45,000—about $30,000 less than the average housing wage for the state[47].

State Profile: New Hampshire

The state's population is growing quickly, resulting in decreasing vacancy rates and rising rents that tighten the budget of an average renter. Rental cost-burdens are growing along with this squeeze on the market. The demographics of homeowner groups are split between the aging and younger populations, both with housing needs unmet by the current stock. The state is prioritizing the affordability issue as well as retrofitting older housing with energy efficient materials in order to modernize the stock.

Population Change and Median Age

New Hampshire's population grew three percent between 2010-2018, and its largest county (Hillsborough) grew 3.6 percent overall. The state is growing twice as fast as other New England states, and most of this growth can be attributed to intra-regional migration[48]. Over 50 percent of the state's population is concentrated in the southern part of the state[49]. The median age in New Hampshire is second only to Maine at 43. The state also lost 10 percent of its under-18 age group over the past eight years, while its 25-to- 44 years old age group remained at the same level over that period (U.S. Census).

Homelessness and Poverty

Homelessness decreased only 0.4 percent between 2017 and 2018. According to the U.S Department of Housing and Urban Development's Point-In-Time Estimates of Homelessness, and 89.4 percent of all homeless persons were sheltered in the state. The report also found that only 11 out of every 10,000 people were experiencing homelessness (HUD AHAR). As of 2017, there was little change in the percentage of individuals and families experiencing poverty. Slightly more than eight percent of all New Hampshire residents and five percent of all families lived below the poverty levels. This is a 0.3 percent increase and 0.1 percent decrease in respective poverty levels since 2010. Of the population in poverty 47.6 percent are families with a female householder and related children under five years[50].

Demand: Cost-Burdens, Vacancy Rates, and Home Prices

Rental vacancy rates decreased 58 percent between the first quarters of 2010 and 2019—falling from seven to 2.9 percent. Homeowner vacancy rates remained the same over that period, at only one percent (U.S. Census). The median home prices increased 6.2 percent between 2017 and 2018 while units sold decreased 1.5 percent over the same period, representing a tight housing market [51]. Residents need $46,426 annual household income to afford a two-bedroom rental home at HUD's FMR, or $23.23 an hour[52]. Residents make an average of $15.63 an hour, a difference of $7.60 between housing and average renter wage. Sixty-eight percent of extremely low-income renters are severely cost-burdened, a statistic that drops to 22 percent for the very low-income renters. Additionally, 22.4 percent of all homeowners are cost-burdened throughout the state[53].

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[41] FRED. Estimated Percent of People of All Ages in Poverty for Massachusetts. Economic Research Federal Reserve Bank of St. Louis.
[42] United States Census Bureau. Selected Economic Characteristics. 2013-2017 American Community Survey 5-Year Estimates.
[43] HJCHS tabulation of United States Census Bureau, 2017 American Community Survey 1-Year Estimates.
[44] United States Census Bureau. Households and Families. 2013-2017 American Community Survey 5-Year Estimates.
[45] NLIHC, Housing Needs By State: Massachusetts.
[46] Bureau of Labor Statistics. Economy at a Glance: Massachusetts. United States Department of Labor.
[47] Executive Office of Labor and Workforce Development. Labor Market Information: Short Term Occupational Projection. State of Massachusetts
[48] Johnson, Ken. NH Population Growth Patterns. Carsen School of Public Policy.
[49] New Hampshire Fiscal Policy Institute. Measuring New Hampshire's Municipalities: Economic Disparities and Fiscal Capacities
[50] United States Census Bureau. 2006-2010 and 2013-2017American Community Survey 5-Year Estimates.
[51] Cummings, Dave. New Hampshire Single-Family Residential Home Sales. New Hampshire Realtors.
[52] NLIHC, Housing Needs by State: New Hampshire
[53] HJCHS tabulation of United States Census Bureau, 2017 American Community Survey 1-Year Estimates.

Supply: Change in Units, Supply Gap

The supply of units in New Hampshire decreased 3.7 percent between 2010-2018, which was followed by an increase in home prices[54]. As of 2017, 63.7 percent of all units were one-unit detached units, and only 5.3 percent of all units were mobile homes[55]. The rent for over half of new units in the year 2017 was between $800 and $1,199. According to a recent state survey, this supply does not match the preferences of either its aging population or younger families looking for both smaller and cheaper units[56].

There are only 31 affordable and available homes for every 100 extremely low-income renters and this improves somewhat for very low-income renters (65 units per 100). There appears, fortunately, sufficient supply of homes for households earning either 80 or 100 percent of the area median income (approximately there are 101 and 103 homes available for households at 80 and 100 percent area median income respectively). Overall, there is still a shortage of 27,347 shortage of affordable and available units for extremely low-income renters (NLIHC Out of Reach).

Economic Development Needs and Opportunities

New Hampshire's GDP increased 2.2 percent over the past year, and employment increased 1.5 percent over the same period. The state unemployment rate was 2.6 percent as of May 2019, one percent under the national average. In the face of this progress, the state is still dependent on Massachusetts for jobs, wages, and cashflow back into the state[57]. The areas of the state closest to Massachusetts have the most governing power, largest population, and greatest draw for potential business. Therefore, the majority of the state's GDP and economic growth is limited to these areas, resulting in noticeably uneven economic growth and labor force participation[58].

State Profile: Rhode Island

While Rhode Island still struggles with poverty and unemployment, the state made significant improvements over the last decade. It has the smallest shortage of rental homes affordable and available to extremely low-income renters and the lowest percentage of severely cost-burdened extremely low-income renters of all New England states. It also, however, had the smallest population growth and significant out-migration of households over the last seven years. There remains high demand for both rental and homeownership opportunities. The state prioritizes the expansion of opportunities for low- and moderate-income households to engage in the market while minimizing cost-burdens, as well as healthy and sustainable affordable home development.

Population Change and Median Age

Rhode Island's population only grew by 0.45 percent from 2010-2018. Significant out-migration has tampered this growth. According to the Harvard Joint Center for Housing Studies, the state lost 1,790 households between 2010 and 2017. However, the state's most populated county, Providence, grew by 1.5 percent over the same period. While the state is losing households, its metro centers are still growing. Rhode Island has the second youngest median age (40.1 years) of the New England states.

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[54] United States Census Bureau. Households and Families 2013-2017 American Community Survey 5-Year Estimates.
[55] United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates.
[56] New Hampshire Housing. Housing Market Report. November 2018.
[57] New Hampshire Fiscal Policy Institute. Measuring New Hampshire's Municipalities: Economic Disparities and Fiscal Capacities.
[58] Vieira, Julia and Sletten, Phil. Measuring New Hampshire's Municipalities: Economic Disparities and Fiscal Capacities.

Homelessness and Poverty

The number and rate of homelessness continues to decline in Rhode Island, though poverty rates have slightly increased. Only 1,101 were recorded as homeless through HUD's assessment, 95 percent of whom were sheltered. The homeless composition includes 54 people in families with children, 747 individuals overall. Overall, Rhode Island has seen a 6.7 percent decline from 2017 and a 14 percent decline from 2010 in overall homeless persons (HUD AHAR). The percentage of people in poverty, however, increased 1.2 percent between 2010 and 2017, from 12.2 to 13.4 percent. The percentage of families in poverty also increased by 1.1 percent, from 8.4 to 9.5 percent[59].

Demand: Cost-Burdens, Vacancy Rates, and Housing Prices

Rental vacancy rates decreased from 8.2 percent in 2010 to 2.4 in 2019—a 70 percent decrease and the largest of all New England states[60]. Residents need an annual income of $43,393 to afford a two-bedroom home at fair market rent (NLIHC Out of Reach). Given falling vacancy rates, rents and the housing wage have risen, resulting in a significant housing wage-renter wage gap of $6.83/hour. Overall, 42.7 percent of all renters are cost-burdened throughout the state, as well as 27.9 percent of all homeowners[61].

Supply: Change in Units, Supply Gap

Rhode Island's housing stock only increased by 1.20 percent between 2010 and 2019[62]. As of 2017, detached single-family units accounted for 50 percent of units. The number of owner-occupied units increased slightly (about one percent) between 2016 and 2017, but the percentages of renter versus owner-occupied units has remained a 60/40 split since 2013[63].

There is a shortage of 22,806 available and affordable units throughout the state for the extremely low-income population. This translates to only 54 units per every 100 extremely low-income households, though very low-income persons fare a little better—76 units are affordable and available. Persons at 80 percent or higher of AMI fare the best in terms of affordable and available units. Similar to New Hampshire, proportionally the state has 101 units affordable and available per 100 renters earning 80 percent of the area median income or below, and 105 units for every 100 renters with incomes 100 percent of the area median income. Its largest metro area, Providence-Warwick, also has one of the 'least severe' gaps between demand and supply of these units for the ELI renter population (NLIHC Out of Reach).

Economic Development Needs and Opportunities

Rhode Island's GDP grew 0.6 percent since 2017, and employment grew by one percent. The labor force has also grown across most sectors with particularly strong growth in education, healthcare, construction, and professional and business services sectors[64]. Though the unemployment rate is the second highest in New England at 4.1 percent, it has continued to fall annually over the past five years[65]. Overall, more Rhode Island residents are joining the labor market.

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59 United States Census. 2013-2017 American Community Survey 5-Year Estimates.
60 Rhode Island Living. Single Family Monthly Comparisons.
61 HJCHS tabulation of United States Census Bureau, 2017 American Community Survey 1-Year Estimates.
62 United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates.
63 United States Census Bureau. Comparative Housing Characteristics 2017 American Community Survey 1-year Estimates.
64 Rhode Island Executive Office of Commerce. 2019 Overview of the Rhode Island Economy. State of Rhode Island.
65 Federal Reserve Bank of Boston, Contributions to Percent Change in Real Gross Domestic Product by State and Region 2017-2018.

State Profile: Vermont

Vermont has the second highest difference among New England states between what people earn and how much they need to afford a two-bedroom apartment. Coupled with slow population growth, increased homelessness, and a fast-aging population, the state is challenged with finding creative solutions to construct more affordable housing and grow the economy. State agencies are prioritizing investment in homeless assistance, sustainable affordability, adding more housing in tight markets, and smart growth.

Population Change and Median Age

According to the U.S. Census, Vermont's population grew by 0.09 percent, the second slowest growth level behind Connecticut. Remarkably, the state's largest county—Chittenden—grew by 5.1 percent. Still, this overall slow growth presents an issue for the state as most the state's population ages and few younger migrants are available to replace them in the workforce. Vermont has the third highest median age of all New England states (42.8) and is also losing more children under 18 and working age population than any other state.

Homelessness and Poverty

Homelessness increased 5.8 percent overall from 2010. The state's population of homeless children has increased by 17.2 percent over the past ten years and the population of homeless veterans also increased 70 percent over this period. However, Vermont was one of four states nationwide able to shelter all its homeless population (HUD AHAR). As of 2017, the percentage of people with incomes below the poverty line was 11.3 percent, a decline of 1.4 percent since 2011. 13.4 percent of all children were related of families in poverty[66].

Demand: Cost-Burdens, Vacancy Rates, and Housing Prices

Renter vacancy rates decreased 33 percent between 2010 and 2019, from 6.2 to 4.1 percent. Homeownership vacancy rates remained the same at 1.3 percent. The 2018 Vermont Housing Budget and Investment Report also notes a geographic discrepancy in vacancy rates. Vacancy rates are lowest in Grand Isle County (0.0 percent) and Addison County (0.2 percent), and highest in Chittenden and Windsor Counties (both 1.3 percent). Consequently, state funders are targeting new development in those lowest vacancy areas[67]. Median home sales prices overall increased 11.8 percent from 2018 to 2019[68]. $46,585 is the annual household income needed to afford a two-bedroom rental home at HUD's FMR, or $22.78 an hour[69]. Renters earn an average of $13.40 an hour, resulting in a $9.30 gap and a significant cost-burden for most renters. 23 percent of Vermont renters are extremely low-income, 68 percent of whom are severely cost-burdened along with 27 percent of those who make 50 percent of the average median income[70].

Supply: Change in Units, Supply Gap

Vermont's housing stock grew 4.37 percent between 2010 and 2019. Most of Vermont's housing stock is single family, detached units (66 percent). Though only 6.8 percent are mobile homes, the share has grown

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[66] United States Census Bureau. American Community Survey 2017. https://talkpoverty.org/state-year-report/vermont-2018-report/
[67] Vermont Department of Housing and Community Development. 2018 Housing Budget Investment Report.
[68] Vermont Association of Realtors. Market Data Report: Vermont May Indicators Report.
[69] NLIHC. Housing Needs by State: Vermont
[70] NLIHC.

over the past year[71]. There is a shortage of 11,876 available and affordable units for the extremely low-income population, and a shortage of 13,853 units for those renters at or below 50 percent average median income. This translates to only 35 affordable and available units per 100 extremely low-income households, and 55 units per 100 households at or below 50 percent average median income[72]. The National Low Income Housing Coalition notes that there appears to be almost enough housing stock for renters earning between 81 to 100 percent of the area median income: for every 100 households at this income level there appear to be 99 homes affordable and available for rent. (NLIHC, Out of Reach).

Economic Development Needs and Opportunities
Vermont's state GDP grew 1.2 percent between 2017-2018, and employment grew 1.3 percent over the same period. The state also has the second lowest unemployment rate, behind New Hampshire. The state also has a growing renewable energy and green business sector, along with strong industries in manufacturing, financial services and insurance, and food, beverage and consumer goods[73].

Regional Opportunities: Health and Housing in New England
Housing design and construction, community planning, and the built environment more broadly can significantly impact on public and private health outcomes. Four primary, potentially negative impacts arise from inadequate housing and access to open space: *lack of stable housing, quality and safety, affordability, physical and social characteristics of neighborhoods[74].* Each has a direct impact on a person's ability to ensure health safety. The accumulation of these impacts leads to potentially broader negative public health outcomes and increased direct and indirect health care spending by families, employers, insurers, and providers.

Lack of Stable Housing: Challenge and Opportunities
Housing instability can cause trauma, teen pregnancy, drug and alcohol use, homelessness, as well as depression and high health care costs. The health impacts of homelessness are particularly acute and costly; a Federal Reserve Bank of Boston report on homelessness found the health impacts of the chronically homeless population can add additional public health care expenses approximating $20 million and overburdening existing state social service programs[75].

These costs can and often are abated through thoughtful investment in housing stability, like offering health services, rental supports, and counseling. Boston Medical Center, Boston Children's Hospital and Brigham and Women's Hospital have joined together to form the Innovative Stable Housing Initiative, recently committing $3 million for community grants including $1.5 million for eviction prevention/mitigation[76]. This builds off of Boston Children's Hospital's comprehensive community health planning initiative focused on health supports, training childcare providers, supporting caregivers, financial literacy and education/training, and access to healthy food, recreation, and green space. Additionally, the initiative also identifies the importance of community engagement and having a lead service agency within the community to partner

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[71] United States Census Bureau. Comparative Housing Characteristics 2015 American Community Survey 1-Year Estimates.
[72] NLIHC, The GAP.
[73] Think VT. Key Industries.
[74] HealthAffairs. (June 2018) Housing and Health: An Overview of the Literature.
[75] Chiumenti, Nicholas. The Supply of Permanent Supportive Housing in Massachusetts: Comparing Availability to the Chronic Homeless Population. New England Public Policy Center: Federal Reserve Bank of Boston.
[76] McCluskey, Priyanka. "Hospitals team up on aid for housing", Boston Globe, August 7, 2019, p.B6.

with[77]. Similarly, home-based health supports like Support and Services at Home (SASH) provides lasting health benefits and cost savings. Another opportunity is to engage hospitals through financial partnerships and/or using available hospital land to construct new housing[78].

Quality and Safety: Challenge and Opportunities

Lead exposure through lead paint or lead-based materials can damage the brains and nervous systems in children. This is an especially present issue in New England, home to much of the oldest housing stock in the country. Additionally, substandard housing conditions like water leaks, poor ventilation, dirty carpets, and pest infestation association with poor health outcomes especially asthma[79].

Housing rehabilitation to remove lead hazards and asthma causing conditions, improve indoor air quality with weather-residents ventilation, and overall energy-efficiency go hand in hand with health supports identified previously. Maine recently expanded its lead abatement and lead poisoning prevention programs, expediting housing rehabilitation efforts and expanding exposure testing to one- and two-year old children consistent with U.S. Center for Disease Control intervention standards[80].

Affordability: Challenge and Opportunities

The greater the cost-burden, the less likely people can afford proper medical care and healthy foods. For example, severely cost-burdened renters are 23 percent more likely than those with less severe burdens to face difficulty purchasing food; additionally, homeowners are most likely to forego prescribed medications if they are behind on mortgage or rent payments[81]. Sacrificing preventative health efforts/expenses for housing results in immediate and long-term health consequences and higher future healthcare costs.

Providing operational subsidies and access to a range of supportive services can help alleviate some of the financial pressure residents face.

Physical and Social Characteristics of Neighborhoods: Challenge and Opportunity

Access to green space, recreation and health-promoting activities is critical for a person's health. Research shows that access to these services increases mental health and diminishes risks of heart disease, obesity, diabetes and death[82]. Often lower-cost, lower-quality housing is located in communities where such access is lacking. Moreover, facilitating this access is part of the rationale for making affordable housing investments in 'high opportunity' area which is prioritized in varying degrees and ways in state funding programs like the New England states' qualified allocation plans for Low Income Housing Tax Credits (QAPs).

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[77] Boston Children's Hospital Office of Community Health. *Healthy Children. Strong Families. Thriving Communities.* Funding Strategy Report. February 2018.
[78] Enterprise Community Loan fund. *Aligning Home and Health Care through Strategic Investment.* November 2016.
[79] New England Lead Prevention. About Lead.
[80] NLIHC. *From the Field: Maine Passes Lead Poisoning Prevention Act.* July 29, 2019.
[81] HealthAffairs. (June 2018) Housing and Health: An Overview of the Literature.
[82] Braubach M., Egorov A., Mudu P., Wolf T., Ward Thompson C., Martuzzi M. (2017) Effects of Urban Green Space on Environmental Health, Equity and Resilience. In: Kabisch N., Korn H., Stadler J., Bonn A. (eds) Nature-Based Solutions to Climate Change Adaptation in Urban Areas. Theory and Practice of Urban Sustainability Transitions. Springer, Cham

Another tool is the use of inclusionary zoning to support improved health outcomes and access to open space by helping to direct development of affordable housing facilities in 'high opportunity', low-poverty neighborhoods[83].

Regional Opportunities: Resilience/Sustainability in New England

Increasing temperatures, stronger storm surges, flooding, and increased energy consumption threaten the viability and vitality of our communities. Each potential hazard increases costs for both owners and renters, and the aggregate impact can threaten the lives of residents if left unaddressed[84].

Increasing Temperatures: Challenge and Opportunities

Increasing temperatures cause poor air quality, heat island effects, heat waves, and increase the strength of storm systems. According to the EPA, older adults, children, and low-income populations are among the most vulnerable populations to the negative health impacts of increasing temperatures. Older adults and children have vulnerable immune systems that increase the health risks of high temperature days, and poor housing quality—like lack of air conditioning and small living spaces—also increases the vulnerability of low-income populations to high temperatures[85]. Moreover, lower income households have fewer financial resources to tap into in the event of a natural disaster, and often bear the worst of the impacts.

In response, communities and funders are starting to require or incentivize resilient, heat-resistant or cooling building materials during development. Additional air sealing or envelope insulation, building orientation and shading, passive house design, natural ventilation, and minimized cement cover are all important design/location elements[86]. Design opportunities could also include common spaces with air conditioning if unable to provide individual air conditioners to each unit. One emerging best practice is planning for high heat events and having back up power and air-conditioned community centers to help elderly and other residents be able to shelter in place in such an event.

Stronger Storms and Floods: Challenge and Opportunities

Stronger storm surges and floods rise put a greater land area and population at extreme risk of flooding and displacement. How communities, developers, owners, funders, and residents each respond, to prevent and mitigate future damages/losses is critical.

Ensuring projects are in risk-free environments means incentivizing developers to cross-check flood risks or establishing a 'safe' distance from shoreline or elevation. Physically elevating structures and within buildings elevating core utilities and systems can be effective strategies to protect residents and properties[87]. Developers and architects could also consider flood-resistant construction methods, which could include adding sealants to walls, shields to openings, and additional drainage pumps to remove water quickly[88].

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[83] Tuller, David. Housing and Health: The Role of Inclusionary Zoning. Health Affairs.
[84] Health Affairs Blog, "Climate Change is The Greatest Threat to Human Health in History." December 19, 2018.
[85] United States Environmental Protection Agency. Climate Change and Heat Islands.
[86] Chase, Thomas. Multifamily Housing Resiliency Audits. New Ecology Inc
[87] Botzen, W.J.W., Aerts, J.C.J.H. & van den Bergh, J.C.J.M. Mitigation Adapt Strategy Global Change (2013) 18: 229.
[88] FEMA. Dry Floodproofing Measures.

Increased Energy Consumption: Challenge and Opportunities

Inefficient heating and cooling systems are a primary driver of increased energy consumption. Increased energy consumption contributes to additional pollution and climate change, increasing temperatures, and the severity of major natural disasters[89]. It also results in increased costs to both developers and residents[90]. Moreover, it is reasonable to expect higher energy and cooling demands in areas with rising temperatures as well as the simple result of more households demanding and competing for energy and water resources. State policy makers, funders, communities, developers and residents are, increasingly, focused on resource and energy-efficiency. This is reflected in the state QAPs, for example, but also in the development and operational best practices identified by Enterprise Green, LEED, Net Zero, and Passive House standards. States and municipalities are prioritizing energy efficiency through building 'stretch' codes to both incentivize and mandate such practices.

Another avenue is through financial underwriting by lenders, investors, and insurers. The Massachusetts Housing Partnership has developed a number of "underwriting efficiency" standards to value energy (and cost)-saving measures at the time of refinancing or acquisition. In recognition of these proactive development or operational features, MHP offers reduced fees or interest rates, reimbursements, and benchmarking services[91].

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[89] Akhmat, G., Zaman, K., Shukui, T., & Sajjad, F. (2014). Does energy consumption contribute to climate change? Evidence from major regions of the world. *Renewable and Sustainable Energy Reviews*, *36*, 123-134.
[90] Community Preservation Corporation. Underwriting Efficiency
[91] MHP. Green Retrofit Financing.

Appendix A: Summary of New England Qualified Allocation Plans

Connecticut 2018 QAP (Final)	Maine 2020 QAP (Final)	Massachusetts 2018-2019 QAP (Final)
• Enhance housing mobility and choice across income levels • Preserve at-risk affordable housing • Production of deed-restricted housing through construction, rehabilitation of vacant/blighted properties, and adaptive reuse • Ensure cost effectiveness (e.g. sf costs, subsidy per bedroom/initiative, design) • Sustainable development and energy efficiency (Passive House, high-performance design, renewable energy) • Promote housing in Areas of Opportunity • Promote vibrant, mixed-income and mixed-use neighborhoods (access to transit, TOD) • Demonstrated experience of sponsor and development team • Capital for state-supported public housing	• Efficient use of the Credit and other MaineHousing resources to maximize the development of affordable rental housing • Provide affordable rental housing for households with the lowest income to the extent possible with available resources • Provide affordable rental housing in areas with the highest need and access to services, employment, education, health care, public transportation and other opportunities important to the tenants • Provide housing that offers services, amenities and other assistance appropriate for the needs of the tenants to increase housing quality and stability • Preservation of existing affordable rental housing that is at risk of being lost due to deterioration or market conditions.	• Create new affordable housing units, especially for families • Located in areas with growth potential and locations that constitute areas of opportunity • Promote principles of fair housing • Consistent with the ten sustainable development principles • Including projects in the federal Choice Communities pipeline • Preserve existing affordable housing resources which meet preservation priorities • Extremely low-income and homeless households • Mixed-income housing • Housing for persons with disabilities, including emphasis on visitability • Development cost control • Located in areas of opportunity (e.g. access to education, employment opportunities) • Significant revitalization

New Hampshire 2019 QAP (Final)	Rhode Island 2019 QAP (Final)	Vermont 2018-2019 QAP (Final)
- Increase the supply of affordable housing through production and preservation - Affordable housing for veterans, persons with disabilities, and the homeless - Provide affordable housing in areas that have none - Non-age restricted housing - Neighborhood revitalization - Adaptive reuse of historic properties - Efficient use of existing infrastructure - Develop housing using Smart Growth principles - Sustainable housing with energy-efficient design - Mixed-income housing	- New production - Redevelop vacant and abandoned properties - Increase housing in communities that lack affordable housing - Reinvest in urban neighborhoods - Preserve affordable housing - Address healthy housing concerns - Prioritize development and revitalization in neighborhoods most affected by the foreclosure crisis - Mixed-income housing and neighborhoods - Affordable housing and services for the homeless - Efficient use of existing infrastructure - Sustainable design, including energy-efficiency - Develop housing using Smart Growth principles - Affordable housing in Areas of Opportunity (access to transportation, green space, educational and employment opportunities) - Controlling development costs and leveraging capital and operating subsidies	- Achieving perpetual affordability of housing resources and investment - Promote development in State designated downtowns, village centers, neighborhood development areas and other areas that are consistent with the state's historic settlement pattern and "Smart Growth" - Link the state's homeless assistance activities with permanent housing through systems, practices and initiatives that are informed by data and proven approaches - Increase the supply and quality of affordable housing, especially in downtowns and village centers - Housing for families - New construction must be in area with vacancy rate of five percent or less - Revitalize communities and remove blight - Provide housing that has access to public transportation - Sustainable housing with energy-efficient design - Affordable housing in high opportunity areas - Perpetual affordability - Natural disaster repairs and remediation

Appendix B: NLIHC FY2019 Housing Wage Data by State and Selected Metro/Non-Metro Areas for New England

State	FY19 Housing Wage	Annual Income Needed to Afford 2 BR FMR	Full-time jobs at minimum wage needed to afford 2 BR FMR	Monthly Rent Affordable at AMI	30% of AMI	Estimated hourly mean renter wage	Full-time jobs at mean renter wage needed to afford 2 br FMR	Shortage of rental units affordable and available for extremely low-income renters	Percent of extremely low-income renter households with severe cost burden
Connecticut	**$25.40**	**$52,837**	**2.5**	**$2,546**	**$30,554**	**$17.53**	**1.4**	**-79,172**	**67%**
Stamford-Norwalk HMFA	$36.25	$75,400	3.6	$3,608	$43,290	$22.40	1.6		
Combined Nonmetro	$21.94	$45,640	2.2	$2,523	$30,270	$12.01	1.8		
Maine	**$19.91**	**$41,416**	**1.8**	**$1,791**	**$21,494**	**$11.82**	**1.7**	**-20,086**	**53%**
Portland HMFA	$26.67	$55,480	2.4	$2,325	$27,900	$13.96	1.9		
Combined Nonmetro	$16.24	$33,787	1.5	$1,547	$18,565	$10.07	1.6		
Massachusetts	**$33.81**	**$70,333**	**2.8**	**$2,562**	**$30,742**	**$20.72**	**1.6**	**-169,809**	**59%**
Boston-Cambridge-Quincy HMFA	$42.19	$87,760	3.5	$2,833	$33,990	$24.88	1.7		
Combined Nonmetro	$23.67	$49.235	2.0	$2,251	$27,251	$12.42	1.9		
New Hampshire	**$23.23**	**$48,323**	**3.2**	**$2,287**	**$27,446**	**$15.63**	**1.5**	**-27,347**	**68%**
Western Rockingham County HMFA	$28.81	$59,920	4.0	$2,738	$32,850	$15.54	1.9		
Combined Nonmetro	$20.37	$42,368	2.8	$2,040	$24,485	$13.74	1.5		
Rhode Island	**$20.86**	**$43,393**	**2.0**	**$2,069**	**$24,827**	**$14.03**	**1.5**	**-22,806**	**54%**
Newport Middleton Portsmouth HMFA	$26.50	$55,120	2.5	$2,393	$28,710	$13.41	2.5		
Providence Fall River HMFA	$20.38	$42,400	2.2	$2,048	$24,570	$14.21	1.9		
Vermont	**$22.78**	**$47,375**	**2.1**	**$1,944**	**$23,333**	**$13.40**	**1.7**	**-11,876**	**68%**
Burlington-South Burlington MSA	$29.69	$61,760	2.8	$2,290	$27,480	$15.10	2.0		
Combined Nonmetro	$18.45	$38,383	1.7	$1,771	$21,248	$12.27	1.5		

Source: National Low-Income Housing Coalition, Out of Reach 2019.

Share of Cost-Burdened Households by State and Nation

| State	Homeowners			Renters		
	Moderately Burdened (30% or more)	Severely Burdened (50% or more)	Total Burdened	Moderately Burdened (30% or more)	Severely Burdened (50% or more)	Total Burdened
Connecticut	15.5	11.8	27.4	22.9	26.3	49.2
Maine	13.2	8.6	21.7	21.3	19.1	40.4
Massachusetts	15.5	10.9	26.4	22.5	25.4	47.9
New Hampshire	15.0	8.8	23.8	22.6	22.5	45.2
Rhode Island	16.1	11.8	27.9	20.3	22.4	42.7
Vermont	14.6	12.7	27.3	26.5	21.1	47.6
United States	**12.8**	**9.7**	**22.5**	**22.5**	**24.9**	**47.4**

Source: Harvard Joint Center for Housing Studies, State of the Nation's Housing 2019.

Demographic and Labor Market Data for New England

State	Median Age 2018	Percent Change in Median Age 2011-2018	July 2, 2018 current population	Population Change 2010-2018	Percent Change Foreign-Born Population 2010-2017	Percent Change Minority Population 2010-2018	12-month change in unemployment rate 2018-2019	Change in Employment-Population Ratio 2017-2018
Connecticut	42.7	2.7%	3,572,665	-0.04%	9.10%	13.4%	-0.40%	0.60%
Maine	44.9	2.2%	1,338,404	0.76%	8.30%	23.4%	0.00%	-0.20%
Massachusetts	39.4	0.3%	6,902,149	5.41%	133.86%	26.8%	-0.50%	1.60%
New Hampshire	43	1.9%	1,356,458	3.04%	14.30%	37.7%	-0.20%	0.20%
Rhode Island	40.1	0.7%	1,057,315	0.45%	7.98%	18.0%	-0.40%	0.30%
Vermont	42.8	1.3%	626,299	0.09%	13.59%	40.0%	-0.60%	-0.10%

Source: United States Census Bureau, Current Population Survey; Bureau of Labor Statistics: Economic News Release (Table 2. Employment-population ratios. 2017-2018 annual averages)

Distribution of Rent in New England Rental Units, New Construction between 2016-2017
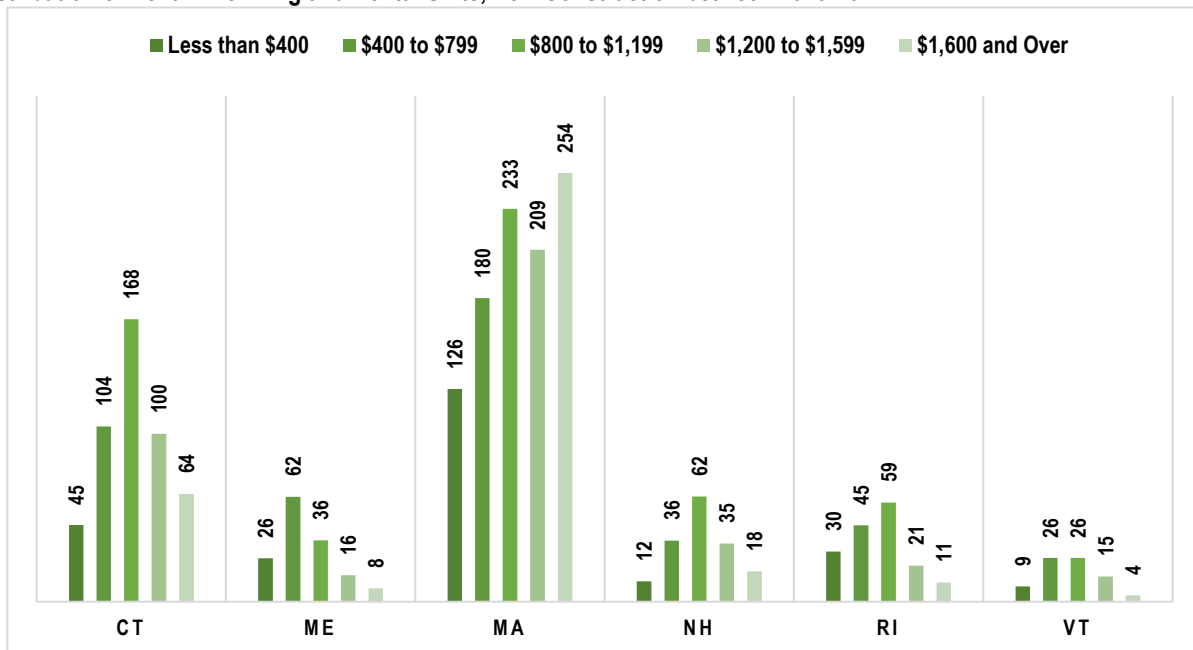
Harvard Joint Center for Housing Studies. State of the Nation's Housing 2019.

Appendix C: Summary of 2019 CLP Goals and Results

Goal 1. Lead targeted trainings and events primarily for AHP, EBP, CDA, and JNE		
	JNE	• Completed three targeted JNE Program and application webinars • Three application periods – February, June, and September • Pilot program – implemented
	HHNE	• Program rollout mid-March 2019; individualized outreach to each of the six state housing finance agencies • HOW downpayment/matching grant program rollout mid-March 2019 • Completed one HOW Program and application webinar • Completed three HOW enrollment and disbursement webinars • Multifamily pilot program – implemented
	AHP	• Completed four AHP Next Steps and Reporting webinars • Completed nine AHP application trainings • Completed eight AHP application webinars
	EBP	• Completed three 2019 EBP Application webinars • Completed four 2019 EBP Enrollment webinars • Completed one EBP for Loan Originators Webinar • Completed three 2019 EBP Disbursement webinars
	CDA	• Completed three CDA webinars
Goal 2. Develop at least three outreach activities to respond to the 2019 plan's primary or other community development priorities based on funding availability.		
		• Connecticut Affordable Lending Summit, Connecticut Mortgage Bankers Association, Plainville, CT, March 21, 2019 • One CRA For CBO's, CRA training for community organizations, FDIC, Federal Reserve, OCC, Boston, MA, April 7, 2019 • Affordable Housing Development Competition, 19th Anniversary, Boston, MA, May 7, 2019 • One CRA 101 for Lenders, Community Reinvestment Act Training, FDIC, Federal Reserve, OCC, Lowell, MA, June 11, 2019 • Co-sponsored Construction & Design for Today and Tomorrow: Part II; with CHAPA and Mass Housing, Boston, MA, June 12, 2019 • Two Hybrid CRA Banker-CBO Roundtable networking events, FDIC, Federal Reserve, OCC; Providence, RI, May 15, 2019, and Nashua, NH, September 18, 2019 • Funders' Roundtable, Affordable Housing Alliance conference, Cromwell, CT, September 19, 2019 • One CRA 201 for Lenders, Community Reinvestment Act Training, FDIC, Federal Reserve, OCC, Braintree, MA, October 3, 2019 • Webinar presentation "Generating Economic Growth - Perspectives from the Federal Home Loan Bank and Federal Reserve Bank of Boston", Massachusetts Division of Banks, November 6, 2019 • Housing & Community Investment presentation, Connecticut Executive Forum, National Association of State Credit Union Supervisors, Rocky Hill, CT, November 13, 2019

Goal 3. Conduct AHP, JNE and HHNE program research to respond to recent regulatory changes (in the case of AHP) and enhance the programs' effectiveness and administration.		
	AHP and EBP	• Internal department gap analysis of New AHP Rule
	JNE and HHNE	• Program implementation

Appendix D: Regulatory Citation and Bibliography

12 CFR 1290.6, 12 CFR 1291.13, and 12 CFR 1292.4 require that the Bank establish and maintain a community support program that provides technical assistance to members, promotes and expands affordable housing finance, identifies opportunities for members to expand financial and credit services to underserved communities, and encourages members to increase their targeted community lending and affordable housing finance activities by providing incentives and technical assistance. The 2019 Community Lending Plan is an integral part of FHLB Boston's program and, as such, also codifies the Bank's community support program overall.

12 CFR 1290.6 also requires that the Targeted Community Lending Plan should:

- reflect market research,
- Describe how FHLBank Boston will address identified credit needs and market opportunities,
- Be developed in consultation with the Advisory Council, members, and other stakeholders, and
- Establish quantitative targeted community lending performance goals.

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