ATTACHMENT A:
SUMMARY BACKGROUND

HISTORY OF THE PIONEER VALLEY REGION FOR 2024 CEDS

OVERVIEW

The Pioneer Valley Region in Western Massachusetts is comprised of Hampden and Hampshire Counties. Located in southern New England and bisected by the Connecticut River, the Pioneer Valley covers more than 1,179 square miles and is home to approximately 628,000 people living in 43 communities. Politically and economically, the region has long been in the shadow of Boston and eastern Massachusetts, the more populous parts of the Commonwealth.

The earliest known name for the region is the Kwinitekw (Connecticut River) Valley, as it was called by the Nipmuc peoples who inhabited it in the 17th century.[1] Kwinitekw means "long river" in the local Nipmuc language and is one of the most fertile river valleys in the world.[2] White settlers Anglicized the name as the "Connecticut" River Valley, and it was not until the early 20th century that the name Pioneer Valley emerged. The term "Pioneer Valley" was developed by travel writers of the 1920s and 1930s for motorists who were the first generation to take a driving vacation. The Pioneer Valley Association in 1939 then used magazine advertisements to lure visitors to Hampden, Hampshire and Franklin counties as a travel destination.[3]

In many ways, the Connecticut River has been the defining economic feature of the Pioneer Valley throughout its history. Its major urban centers lie along the river or within its watershed. The river served as an easier and economical means of transportation north and south for Native Americans, fur traders and early settlers in the 17th century, and in the 18th and 19th centuries its power was harnessed for mills of all varieties. A skilled labor force developed, leading to technological advancements, particularly in metal crafting, that in turn supported industries such as machine manufacturing and printing. Starting in 1839, Springfield – the largest city in the Pioneer Valley then and now – was connected by rail to other cities and additional strengths in insurance and finance took hold.

The 19th century saw two other industrial concentrations emerge which gained momentum during the 20th century and remain major players today: education and healthcare. The Pioneer Valley is home to 13 highly ranked colleges and universities, the largest of which is the University of Massachusetts (UMass) in Amherst, the "flagship" of the UMass system. Baystate Health is the largest healthcare provider in Western Massachusetts and is consistently one of the region's top employers. At this writing, "eds and meds" are key sectors of the Pioneer Valley's economic identity.

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[1] Restorative Native Research in the Kwinitekw (Connecticut River Valley) | Springfield Museums; An alternative spelling is Quinnehtukqut - "place of the long river" Native Americans of Quinnehtukqut - QUINNEHTUKQUT NIPMUC NEWS from the Nipmuc Indian Association of Connecticut (nativetech.org); The name of the state of Connecticut derives from the Mohegan word Quinnitukqut, meaning "long, tidal river." University of Connecticut Office of the Provost | Recognizing Connecticut's Indigenous Legacy (uconn.edu)

[2] The Long River (ourbelovedkin.com); We Are On Native Land: The Native Names Project - Kestrel Land Trust (kestreltrust.org)

[3] Replaced by 'West Mass,' 'Pioneer Valley' name was once center of region's tourism brand - masslive.com

The region also includes significant areas of prime farmland, due to the richness of the glacial soils along the river, some of the most fertile in the nation. Pioneer Valley farmers have produced vegetables, dairy products, meat, maple syrup, tobacco, and fiber for centuries. At the present day, many of them are still small family-run enterprises that sell direct to the consumer via farm stands, farmers markets and CSAs (community supported agriculture), as well as directly to food banks and restaurants. There has also been some development of value-added facilities to process local foods to create additional products.

Throughout this history, there have been those who benefitted from the economic activities of each period and those who were discriminated against and subjugated through land takings, exclusion from opportunity, and oppression. These included Native Americans, Black people, European immigrants, and Latinos, including Puerto Ricans. In the present day, the dominant culture will need to work intentionally and persistently to overcome a legacy of distrust due to these actions.

EARLY YEARS OF THE CONNECTICUT RIVER VALLEY

Unfortunately, as English colonial settlers arrived in the region during the 1600s and 1700s, they systematically and violently displaced the local Indigenous Peoples of western Massachusetts. Native Americans had been hunting, gathering, farming and trading in the Connecticut River Valley for at least 12,000 years, with the Agawams and the Nonotucks among the Indigenous groups that inhabited the area. These populations were decimated by disease in the 17th and 18th centuries as they were exposed to European diseases to which they had no immunity, including smallpox, measles, tuberculosis, cholera and bubonic plague.[4] While this was initially not intentional, there are cases documented of intent to pass sickness along to the Native peoples.[5] At the same time, English colonists in New England enslaved thousands of Native Americans. Massachusetts became the first English colony to legalize slavery in 1641, and as a result of warfare with the Native populations, the colonists kept many captured Native Americans as slaves. Later, colonists turned to the courts to get control of their labor, or imported Native Americans from Florida and the Carolinas, or simply claimed free Native Americans as slaves.[5]

At first, for those Native Americans who survived disease and slavery, it appeared that fur trade with the English could be a useful arrangement that would provide new goods and secure new English allies. From the White settlers the Indigenous people acquired tools and materials, and in some cases protection against their traditional enemies. However, at the same time, William Pynchon and his son, John, negotiated a series of Indian deeds to secure the most desirable farming and settlement lands for English colonists, and this was the original town of Springfield, which then included what is now known as Agawam, Chicopee, East Longmeadow, Hampden, Holyoke, Longmeadow, Ludlow, West Springfield, and Wilbraham.[7] Pynchon and other colonial leaders began to exploit tribal trade debts to bargain for more land while expanding the influence of English government and religion over the Indigenous population.[2]

The legacy of the Indigenous peoples of the Connecticut River Valley is still apparent, however, with tobacco and corn remaining as major crops in the area, and many locations named for the valley's earliest inhabitants.[8] Descendants of native peoples still live in the region, although they are few. While there are 94,000 Native Americans living in Massachusetts, according to the 2020 U.S. Census, only about 4,500 of them are descendants of local tribes, mostly from Wampanoag, Nipmuc and Mashpee Wampanoag.[9]

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[4] Exactly How New England's Indian Population Was Decimated - New England Historical Society

[5] Fenn, Elizabeth. (2000). Biological Warfare in Eighteenth-Century North America: Beyond Jeffery Amherst. Journal of American history (Bloomington, Ind.). 86. 1552-80. 10.2307/2567577 from Investigating the Smallpox Blanket Controversy (asm.org)

[6] Origin Stories: The Pequot War and Indigenous Enslavement in New England | Events | Boston Public Library (bibliocommons.com) Research by Margaret Newell, Ph.D at Ohio State University, author of Brethren by Nature: New England Indians, Colonists and the Origins of American Slavery (Cornell University Press, 2015) and other books.

[7] Founding New Communities - Odanak (history.museum) © 2020 Pocumtuck Valley Memorial Association (PVMA)/Memorial Hall Museum, Deerfield, MA. All rights reserved.

[8] Nonotuck Histories Essay by Margaret M. Bruchac - HISTORIC NORTHAMPTON

[9] https://www.bostonplans.org/getattachment/2915f430-e0d2-45ec-bfd8-39240bbb9760

The Black community in the region also dates to the colonial period and included both enslaved and free people of color. Much of the available information for this period is focused on Springfield, as it was the largest community in the region and it encompassed a much greater area at the time, as mentioned above. The 1860 census for Springfield listed 276 "free colored" residents, or just under 2% of the city's population, a very small minority.[10] Upper class Whites brought enslaved Blacks from the south for their own use, but these were not enumerated.[11]

Although Pioneer Valley colonists were complicit in slavery and some even owned slaves themselves, during the period leading up to the Civil War, the Pioneer Valley region was also a locus of abolitionist sentiment and activity, particularly in the largest settlement of Springfield. By the 1830s many Pioneer Valley communities participated in the Underground Railroad, a secret network of escape routes and hiding places used by Blacks fleeing slavery in the South and making their way to freedom in the northern U.S. and Canada.[12] The routes led from Springfield, Westfield, and Southampton north to Cummington, Ashfield, and Charlemont and from Hatfield to Whately and Greenfield.[13]

When the Civil War began in April of 1861, both the Springfield Armory and the Smith & Wesson Company played a crucial role in providing arms for the Union Army.[14] These wartime activities required an increased labor force, which led to population growth that continued into the 20th century. After the Civil War, the Pioneer Valley's Black population grew rapidly as Blacks migrated from the South to escape ongoing segregation and persecution. Black residents remained at about 2% of the population, however, and far less than that were employed as skilled laborers.[15]

Industrial Revolution and Growth of Skilled Workers

The Connecticut River Valley played a key role in the Industrial Revolution that changed economic and social life in the United States during the nineteenth century. The river itself provided transportation and power, and the Springfield Armory attracted skilled craftsmen and engineers and was the site of significant technological improvements in armaments, machinery, and metalwork. Rail lines to Boston and Albany, completed in 1841, made Springfield a regional hub of industry and innovation, in everything from ice skates to automobiles.

As industrialization in the United States increased the demand for workers, millions of people from abroad began to migrate into the country. They came for a variety of reasons — to seek better lives, new opportunities, as well as to escape from oppression. The newly built canals of Holyoke diverted water from the Connecticut River to power numerous mills and factories, all of which needed laborers. Large numbers of Blacks from the South were also recruited by Holyoke factories to fill wartime labor shortages, but all but a few hundred left within a few years for higher-paying jobs in the automobile industry in Detroit.[16]

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[10] Springfield, MA - Our Plural History (stcc.edu)
[11] Strahan, Derek, "Red Lines and Black Neighborhoods: A History of Race and Segregation in Springfield, Massachusetts," 2024, p.4.
[12] Springfield, MA - Our Plural History (stcc.edu)
[13] The Underground Railroad - David Ruggles Center for History and Education
[14] Springfield, MA - Our Plural History (stcc.edu)
[15] Strahan, p10-11, 15
[16] Springfield, MA - Our Plural History (stcc.edu)

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Most immigrant groups experienced prejudice upon arrival in the United States, with backlash from labor unions, social organizations, politicians, religious factions, and everyday citizens. Two of the ways that prejudice and racism manifested and resulted in long-term residential segregation was the practice of "redlining" and the use of racially restricted covenants in property deeds. Redlining was the practice of categorically denying access to mortgages not just to individuals but to whole neighborhoods. Between 1935 and 1940, an agency of the federal government, the Home Owners' Loan Corporation, graded the American neighborhoods on behalf of banks, saving and loans, and other lenders who made mortgages. If those residents were African Americans, or to a lesser extent immigrants or Jews, the U.S. government deemed them a threat to the stability of home values and described their presence as an "infiltration." Maps were created to designate neighborhoods by letter and color, with red areas considered "hazardous." The Pioneer Valley was Prospective homebuyers in these areas were unlikely to receive financing. Furthermore, in higher-graded areas, the deeds of property owned by Whites included covenants forbidding the use or sale of property to people of the "Negro or Mongolian race." These practices were legal and practiced for decades. Finally, the 1968 Fair Housing Act finally outlawed redlining and restrictive covenants, although it was not always enforced.[18] These exclusionary practices dramatically affected the relative wealth—as well as the health—of different racial groups in the Pioneer Valley and United States and is an ongoing legacy.[19]

Though many Blacks left the South hoping to escape racism, they encountered it in the North as well, even in supposedly progressive places like Springfield and Holyoke. Redlining was practiced in both cities. Blacks were also repressed in the workplace; most employers would only hire Blacks for low-paying, low-skill jobs such as janitors, house cleaners, chauffeurs, and hotel-workers, though by the 1930's a small number of Blacks were working as machinists, masons, tailors, barbers, and carpenters.[20] Increased production at the Springfield Armory during World War II expanded opportunities for Black workers, and many developed the skills necessary to secure steady employment after the war. Education and rising wages remained the key to upward social mobility, but poor schools and the expense of higher education limited opportunities for most Blacks. Still, a significant number managed to earn college degrees, becoming writers, teachers, ministers, doctors, dentists, and lawyers and joining a small but growing Black middle class.[21]

As the Black population of the Connecticut River Valley grew, new organizations emerged to promote racial equality and improved opportunities in education and employment. In 1913, Dr. John N. DeBerry, minister of St. John's Church in Springfield, began the Dunbar Community League, now called the Urban League of Springfield. Progress toward improvements in civil rights also came with the formation of local chapters of the National Association for the Advancement of Colored People (NAACP) in both Springfield and Holyoke. These early civil rights organizations would form the foundation of the movement for equal rights that began to gather steam across the nation in the mid-1950s.[22]

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[17] Ibid
[18] How Neighborhoods Used Restrictive Housing Covenants to Block Nonwhite Families | HISTORY
[19] Mapping Inequality (richmond.edu)
[20] Our Plural History – STCC.edu
[21] Springfield_Sociological_Survey_1940.pdf (forgeofinnovation.com)
[22] Springfield, MA - Our Plural History (stcc.edu)

Numerous groups settled in the Springfield area, many in successive waves which often paralleled national immigration trends. Each of these groups came to the area as foreigners, each with unique histories and cultures. However, over time, these cultures and histories became intertwined, resulting in new cultural and social patterns that would come to define life in the Connecticut River Valley. The new immigrants' cultures, religions and customs were often regarded with disdain by Americans of Northern European ancestry like the English. For many, the immigrants' very existence was a direct challenge to notions of what it meant to be American. However, despite the power of such sentiments, these groups left an indelible mark on the nation and its culture. Each brought unique social customs, religious beliefs, and world outlooks, which in turn contributed to the newly forming American culture.

Industrialization in the Connecticut River Valley spurred further technological innovations, and the Connecticut River Valley attracted creative, entrepreneurial individuals from around the country and around the world. Prominent examples include the Smith and Wesson Company on Stockbridge Street in Springfield, a company which grew into a world leader in the production of military and police firearms. Charles and Frank Duryea built the world's first gasoline-powered automobile in Springfield in 1893, and their second car won the first motor-car race in the U.S. in 1895. The following year, the Duryea brothers built thirteen identical motor-cars and were thus the first to bring "mass production" to the automobile industry.[23] The number of innovations in technology and manufacturing processes that originated in Springfield attest to the city's leading role in industrial development in the United States during the nineteenth and early twentieth centuries.

European Immigration

The 19th and 20th centuries saw significant immigration from Europe, the Caribbean, and Central America. Most of these immigrants were fleeing famine, poverty, persecution, and political repression in their home countries and sought economic opportunity and a new life in America. As they generally encountered racism and bigotry in the United States, including the Pioneer Valley, immigrants from similar regions tended to settle together in concentrated areas and form their own relatively self-sufficient communities.

The region experienced an influx of Irish immigrants in the wake of the potato famine that ravaged Ireland in 1845. The burgeoning industrial village at Hadley Falls, upriver from Springfield, attracted many of these immigrants desperate for food, shelter, and work. By 1855, the Irish constituted a third of the approximately 5,000 inhabitants of the newly renamed town of Holyoke. Large numbers of Italian immigrants came to the region in successive waves starting in the 1860's and continuing until after World War II. Greeks first arrived in Springfield during the mid-1880s, but it was not until the Ottoman Empire began to disintegrate in the early 20th century that Greeks started to immigrate in significant numbers.

During the late 19th century, Polish immigrants fleeing poverty and political repression arrived in the Pioneer Valley region to begin new lives as small farmers and factory workers. In 1880 the town of Chicopee reported its first Polish settlers, and other towns shortly thereafter. Beginning in the 1840s, famine prompted many French-Canadians to immigrate to the United States, and French-Canadians were the single largest source for new immigration to Holyoke, MA from the 1860s until after the turn of the century, reaching a peak population of 16,000 in 1910. As several waves of Jewish immigrants fleeing

[23] Ibid

persecution and pogroms in central and eastern Europe occurred in the 19th and early 20th centuries, most arrived in New York City and some made their way north to Springfield and Holyoke in the late 1870s and early 1880s. Armenians also fled persecution and violence during the Armenian Genocide of the mid 1890s-1915, and originally settled in New York and Massachusetts. Since the early 1900s, Springfield has been host to a vibrant Armenian community with many new arrivals settling in Indian Orchard.[24]

However, over time, while these first European immigrants were stigmatized, they were eventually accepted and incorporated into the "White" majority, particularly as greater numbers of Black people migrated north from the segregation and poverty of the Deep South. This enabled the earliest colonists and established White families in the Pioneer Valley to maintain their superior class.[25]

Another significant element of the current Pioneer Valley population includes a wide range of Asian immigrants – Cambodians, Vietnamese, Filipinos, Koreans, Japanese, Thais, Chinese, East Indians, Laotians and other Asian ethnicities. In fact, by 2006, Asians comprised the fastest growing minority population in the Valley, with much of this growth in the Vietnamese community in Hampden County, which includes the cities of Springfield, West Springfield, Chicopee and Agawam. Many Vietnamese in the Valley are not immigrants but refugees who fled their homeland at the end of the Vietnam War, which also involved Cambodia and Laos in Southeast Asia.

The Latino Community

Beginning in the 1950s, there was a growing number of migrants from the U.S. Territory of Puerto Rico, a trend which continued throughout the 20th century, with a significant concentration in Holyoke. The region now has a large percentage of persons who were born in Puerto Rico, the U.S. Virgin Islands or to American parents in these areas. Regardless of their legal status as citizens, persons who moved to the United States from these areas likely have lived experiences that more closely resemble the experience of immigrants than of citizens born in the United States because of local attitudes and ignorance about their true status.[26]

A sharp decline in Puerto Rico's agricultural economy during the Great Depression combined with the displacement of rural workers by intensive industrialization after World War II produced a mass exodus of more than half a million during the 1940s and 1950s. New communities were established in Springfield and Holyoke, Massachusetts, as Puerto Rican migrants moved north in search of employment in seasonal agriculture and blue-collar industries, and more affordable housing than was available in New York City where many had first arrived. Many settled in neighborhoods once populated by other ethnic groups such as the Irish, Italians, and Jews.

Because many of the mid-century immigrants were young, unskilled rural workers, with little education and knowledge of the English language, the experience of first-generation Puerto Ricans was similar to earlier immigrants arriving under similar conditions. Often excluded from jobs, housing and schools, they struggled at the lower end of the U.S. economy. The civil rights movement led to slowly improving conditions for all minority groups, however, and Latinos benefited from expanded bilingual education programs, political mobilization, and new laws prohibiting discrimination in employment.

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[24] Springfield, MA - Our Plural History (stcc.edu)

[25] Constructing the White Race - JSTOR Daily; Working Toward Whiteness: How America's Immigrants Became White: The Strange Journey from Ellis I… - Harvard Book Store

[26] Springfield, MA - Our Plural History (stcc.edu); Puerto Ricans have been U.S. citizens since 1917. The political status of Puerto Rico is that of an unincorporated territory of the United States officially known as the Commonwealth of Puerto Rico (Spanish: Estado Libre Asociado de Puerto Rico, literally 'Free Associated State of Puerto Rico'). Thus, the island of Puerto Rico is neither a sovereign nation nor a U.S. state. Puerto Rico - Wikipedia

The Puerto Rican population of the Connecticut River Valley has grown steadily since the 1980s, making Springfield and Holyoke into regional centers of Latino culture and opportunity. The Valley draws Spanish-speaking immigrants from abroad and from larger cities such as Boston and New York. Latinos now comprise the fastest-growing ethnic group in the Connecticut River Valley of western Massachusetts.[27]

Today, the Pioneer Valley is increasingly diverse, culturally, racially, and linguistically. In Hampden County, 16% of the population is foreign-born and in Hampshire County, 11%. The fastest growing immigrant segment is the Latinx community, primarily from the Dominican Republic, El Salvador, and Guatemala, followed by the Asian community, primarily from China and Vietnam. In Springfield, 39.7% of the population speaks a language other than English in their homes. In West Springfield, the K-12 student population speaks 47 languages other than English.

In addition, the Pioneer Valley features one of the highest per capita lesbian, gay, bisexual, and transgender, queer, intersex, asexual, and other (LGBTQIA+) populations in the United States.[28] The cities of Northampton and Springfield, in particular, feature vibrant LGBTQIA+ communities which are largely integrated into the cities' diverse populations.

The Pioneer Valley is also a popular, year-round tourist destination—a role that it has played historically. Travelers are drawn to the Pioneer Valley by its lively college towns, such as Northampton and Amherst; the resurgent city of Springfield; its unspoiled nature, numerous parks, and recreational facilities, including New England's largest and most popular amusement park, Six Flags New England in Agawam; its cultural and historical sites, such as the Emily Dickinson House in Amherst, the Springfield Armory National Historical Site, and the Basketball Hall of Fame.[29]

[27] Springfield, MA - Our Plural History (stcc.edu)
[28] LGBTQIA+ stands for lesbian, gay, bisexual, transgender, queer (and in some cases, "questioning"), intersex, asexual (and sometimes "ally"), and the "+" is for a plethora of other orientations and identities. What Each of the Letters in LGBTQIA+ Means — Best Life (bestlifeonline.com)
[29] Wikipedia

BACKGROUND SUMMARY

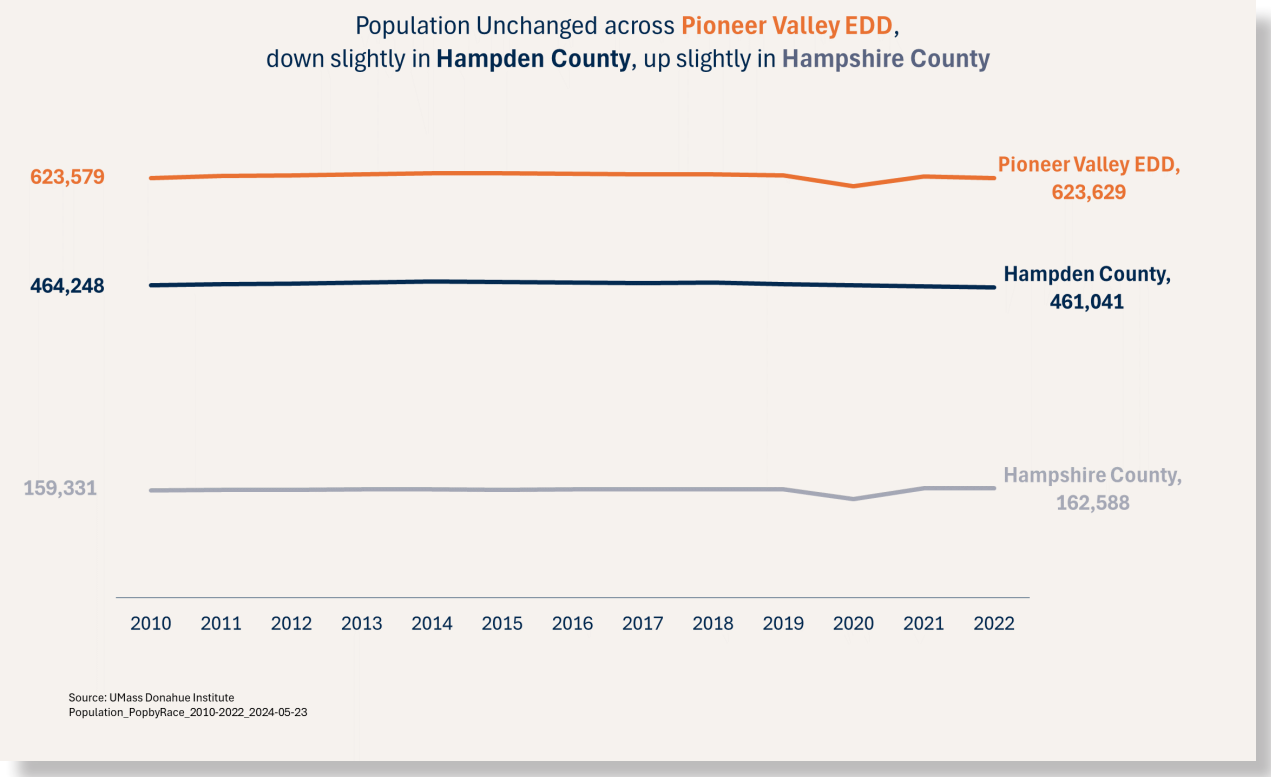
Local Economic Conditions

The Pioneer Valley region has many economic assets. It is home to 13 highly ranked colleges and universities, large healthcare providers, many large and mid-sized employers, numerous small businesses, a significant agricultural sector, and a vibrant arts community. Historically, the top three industries most important to the region's economic success have been health care, educational services, and advanced manufacturing; other important industry sectors include finance and insurance; professional, scientific and technical services; accommodation and food services; and agriculture and sustainable food systems.

Leaders in the region must acknowledge that the ongoing racial disparities which have been part of the Pioneer Valley's economy since at least the 17th century pose a significant threat to our economic health and resiliency. Structural racism, first directed at Indigenous Native Americans and later at people of color and immigrants, has resulted in excluding potential workers, segregating residents by race, and holding back entrepreneurship.

Demographics

According to the US Census Bureau's Population Estimates Program, the 2022 population for the Pioneer Valley region was 623,629. This is only slightly higher than the 2010 population of 623,579 and includes a recovery from a brief loss of population in Hampshire County during the COVID-19 pandemic (primarily due to the temporary closure of several liberal arts colleges and the University of Massachusetts). The population of Hampden County is significantly higher than that of Hampshire County, because the region's major cities (including Springfield, Holyoke, and Chicopee) and greater metropolitan region are located there.



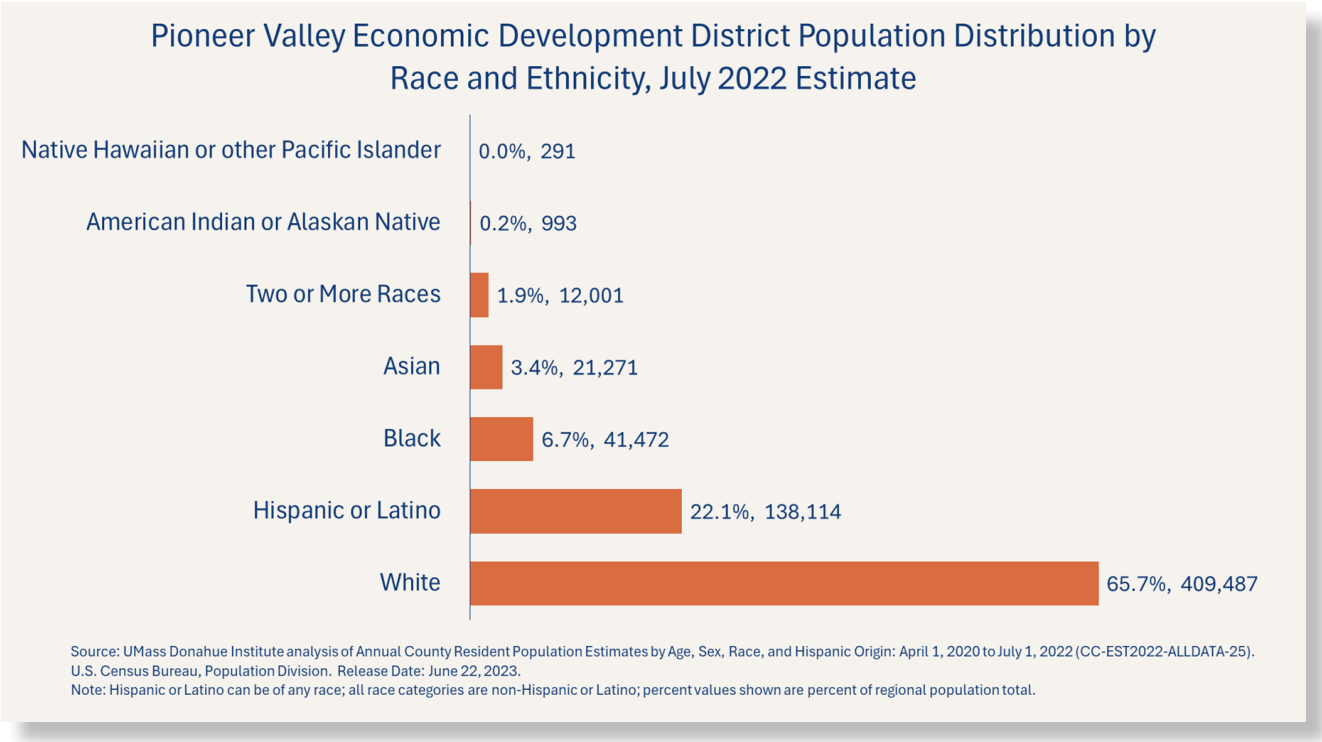
Almost every year since the late 1990s has seen an out-migration from the Pioneer Valley and a decrease in the native natality rate, a trend which has been noted nationwide. If not for immigration from a range of countries, the local population would have dropped to the point where it impacted state and federal funding, and diminished industrial interest from potential employers.

In Pioneer Valley's small and rural communities, the population has experienced very slow rates of growth, generally no more than 1% per year. Also, the population that remains is gradually shifting from working-age people and young families to retirees and empty-nesters, reducing school enrollment and the pool of potential workers.

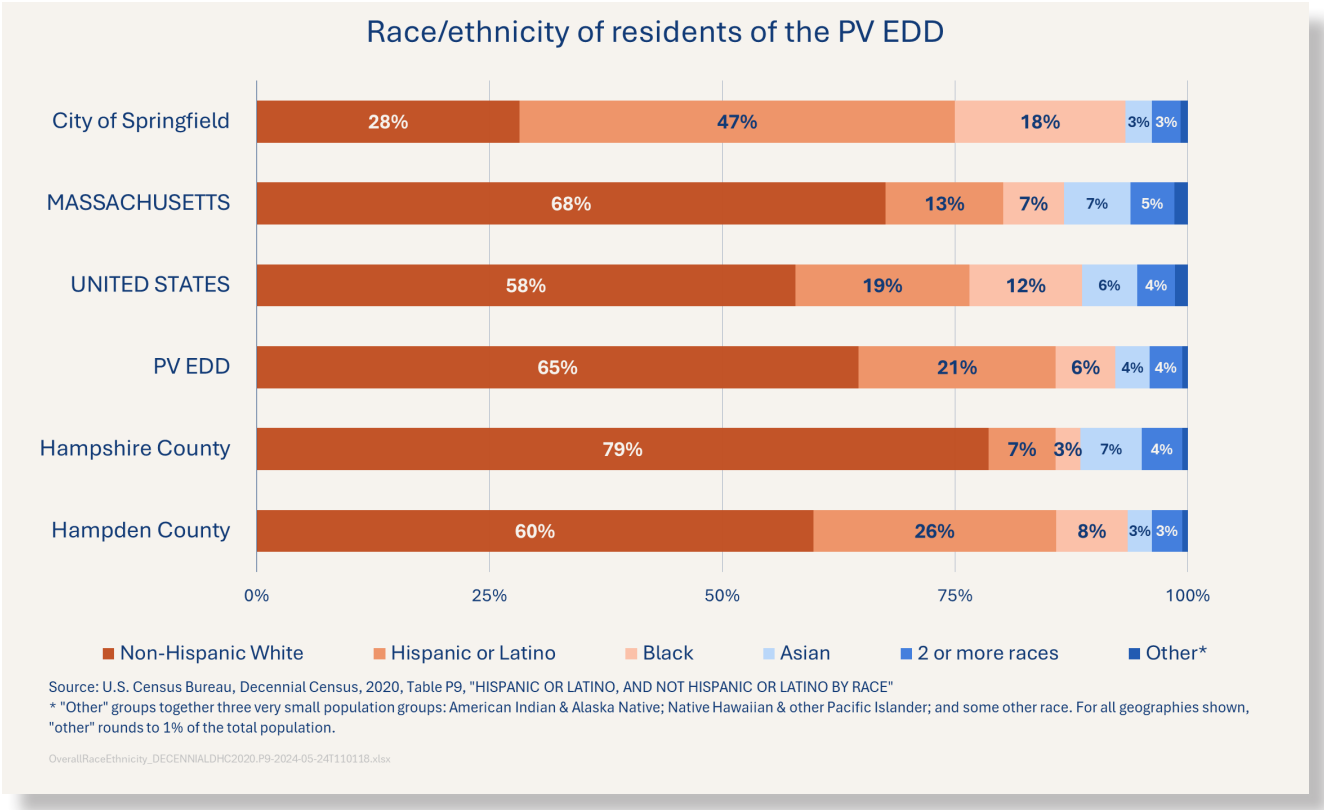
Municipality	County	2010	2020	2021	2022	2023	Population Change, 2010-2023	Population Change, 2020-2023
Springfield	Hampden	153,570	155,280	154,993	154,007	153,672	102	-1,608
Chicopee	Hampden	55,306	55,448	55,222	54,939	54,838	-468	-610
Westfield	Hampden	41,121	40,743	40,621	40,501	40,509	-612	-234
Amherst	Hampshire	38,718	27,796	40,264	40,124	40,277	1,559	12,481
Holyoke	Hampden	39,917	38,154	37,866	37,689	37,628	-2,289	-526
Northampton	Hampshire	28,663	27,324	29,538	29,419	29,370	707	2,046
West Springfield	Hampden	28,357	28,768	28,663	28,479	28,424	67	-344
Agawam	Hampden	28,451	28,626	28,440	28,373	28,406	-45	-220
Ludlow	Hampden	21,136	20,766	20,854	20,859	20,845	-291	79
South Hadley	Hampshire	17,737	16,287	18,188	18,087	17,992	255	1,705
East Longmeadow	Hampden	15,793	16,389	16,346	16,337	16,378	585	-11
Easthampton	Hampshire	16,050	16,177	16,114	16,073	16,031	-19	-146
Longmeadow	Hampden	15,810	15,813	15,698	15,621	15,621	-189	-192
Belchertown	Hampshire	14,661	15,339	15,392	15,367	15,339	678	0
Wilbraham	Hampden	14,226	14,581	14,526	14,506	14,518	292	-63
Palmer	Hampden	12,145	12,425	12,385	12,330	12,315	170	-110
Ware	Hampshire	9,867	10,040	10,003	9,928	10,067	200	27
Southwick	Hampden	9,506	9,220	9,212	9,185	9,195	-311	-25
Monson	Hampden	8,568	8,134	8,115	8,091	8,104	-464	-30
Southampton	Hampshire	5,804	6,220	6,233	6,228	6,195	391	-25
Granby	Hampshire	6,242	6,103	6,096	6,071	6,060	-182	-43
Hadley	Hampshire	5,252	5,315	5,295	5,287	5,277	25	-38
Hampden	Hampden	5,141	4,953	4,939	4,910	4,913	-228	-40
Brimfield	Hampden	3,619	3,689	3,691	3,689	3,699	80	10
Hatfield	Hampshire	3,259	3,338	3,336	3,323	3,319	60	-19
Holland	Hampden	2,481	2,596	2,586	2,570	2,565	84	-31
Williamsburg	Hampshire	2,490	2,498	2,492	2,475	2,469	-21	-29
Huntington	Hampshire	2,184	2,095	2,090	2,077	2,071	-113	-24
Wales	Hampden	1,844	1,827	1,818	1,806	1,802	-42	-25
Russell	Hampden	1,784	1,639	1,637	1,631	1,627	-157	-12
Westhampton	Hampshire	1,603	1,617	1,626	1,625	1,626	23	9
Granville	Hampden	1,571	1,537	1,536	1,528	1,525	-46	-12
Pelham	Hampshire	1,323	1,282	1,274	1,271	1,265	-58	-17
Chester	Hampden	1,339	1,225	1,220	1,216	1,211	-128	-14
Blandford	Hampden	1,227	1,213	1,212	1,208	1,204	-23	-9
Worthington	Hampshire	1,159	1,192	1,191	1,187	1,179	20	-13
Chesterfield	Hampshire	1,226	1,185	1,186	1,178	1,173	-53	-12
Goshen	Hampshire	1,058	960	957	949	944	-114	-16
Montgomery	Hampden	846	817	816	817	825	-21	8
Cummington	Hampshire	868	827	825	820	819	-49	-8
Plainfield	Hampshire	648	632	634	636	637	-11	5
Tolland	Hampden	490	468	466	466	467	-23	-1
Middlefield	Hampshire	519	389	394	393	392	-127	3

Source: US Census Bureau, Population Division, "Subcounty Resident Population Estimates: April 1, 2020 to July 1, 2023"

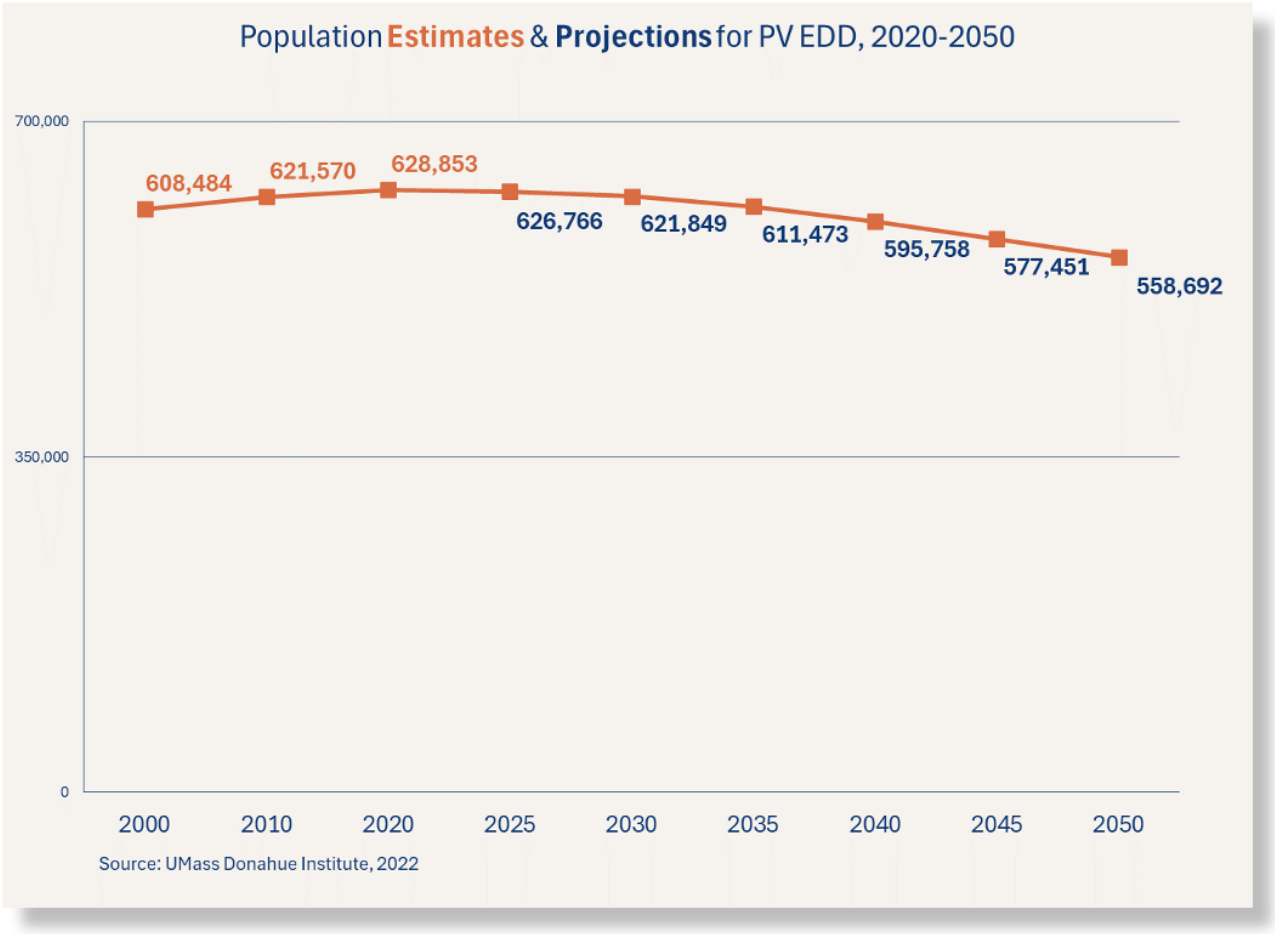
Drilling down to the community level, we see that most communities have lost population since 2010. Trends since 2020 (i.e. since COVID-19 show almost all communities with reduced 2023 population. Three notable exceptions include Amherst, Northampton, and South Hadley, home to five of the largest colleges in the region. The closing of campuses during COVID lowered the Census counts in 2020. The table—which is sorted by 2023 population—shows that Springfield is the only community with population exceeding 100,000. There are also 16 cities and towns with populations exceeding 10,000.

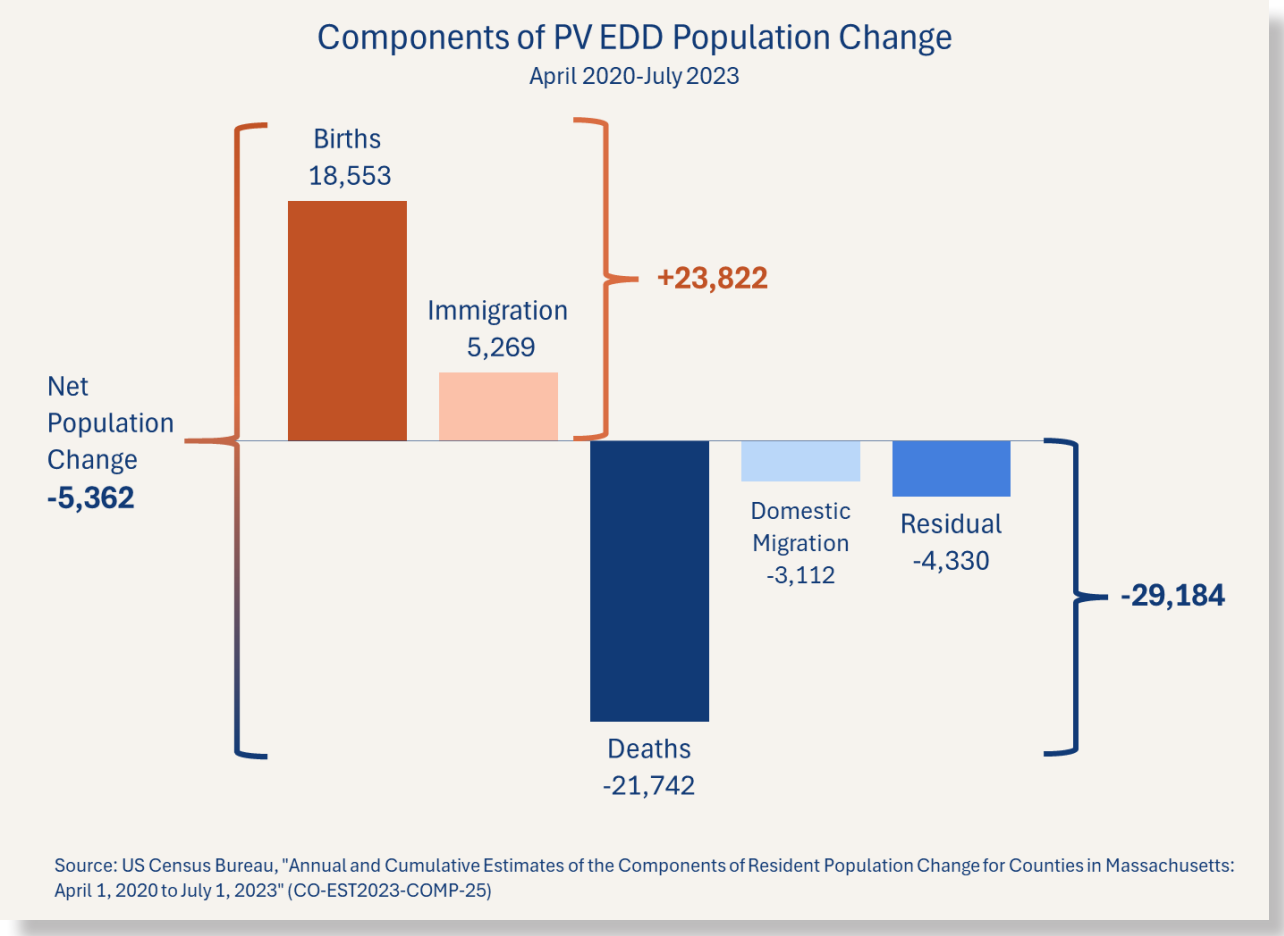


Some areas within the region have much higher Latino and Black populations, particularly Springfield, as shown below. The region as a whole has a smaller percentage of People of Color than the United States, but a higher percentage than the overall Massachusetts average. Hampshire County is the subregion with the highest majority white population.



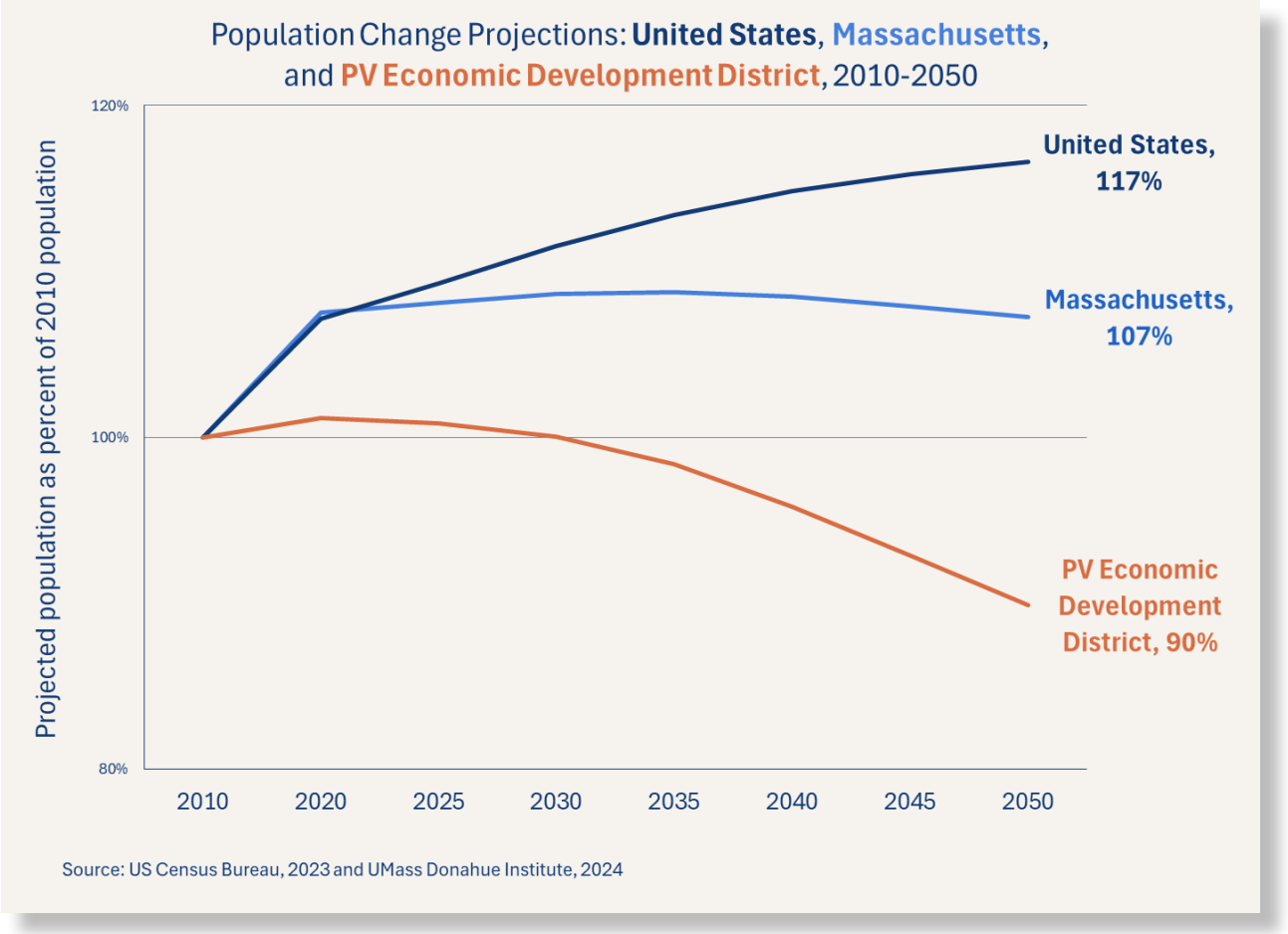
Population estimates from the U.S. Census show that the region's total population has increased over the past 20 years. However, projections of future population show a gradual decline over the next three decades. There are many reasons for this, including decreasing birth rates, aging population, and emigration to other states.





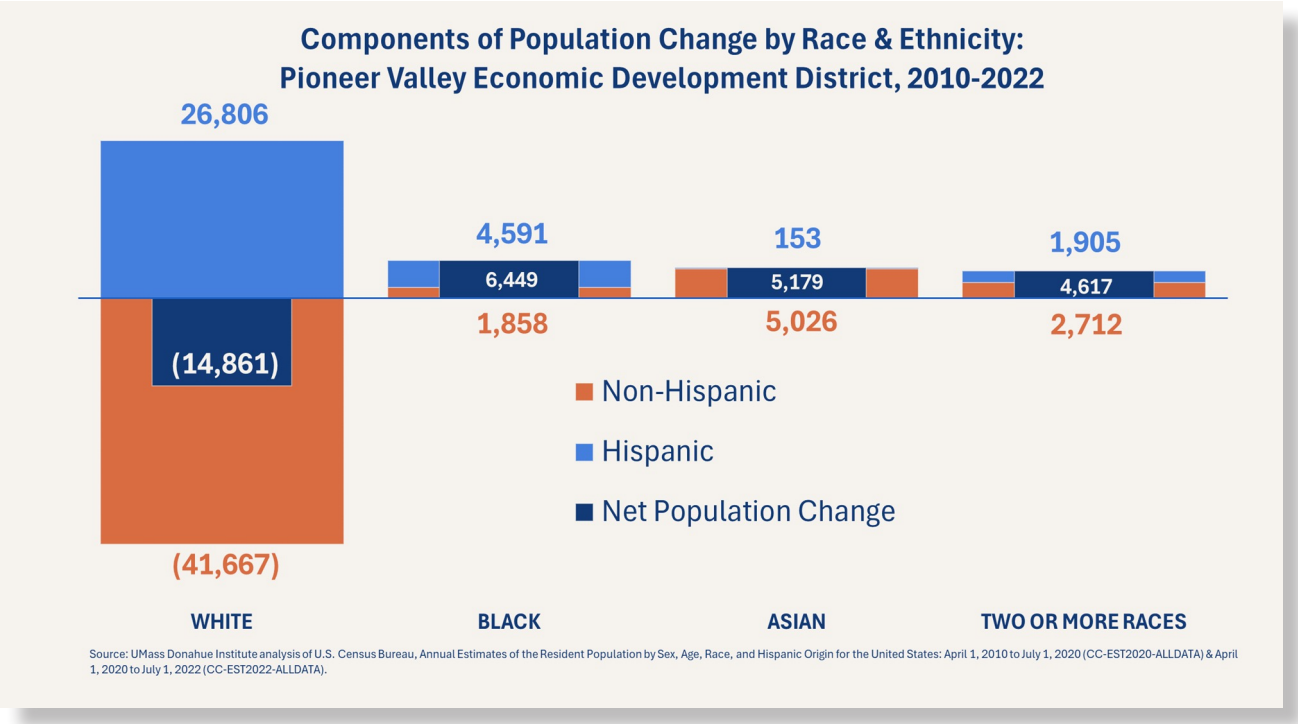
Looking only at the most recent years, since the peak of the COVID-19 pandemic, overall population in the region has declined by 5,362, largely the result of Deaths outpacing Births. Domestic migration in this time period ended up being less than the influx of international immigrants.[1]

[1] A residual component reflects population change that cannot be attributed to any of the identified categories.



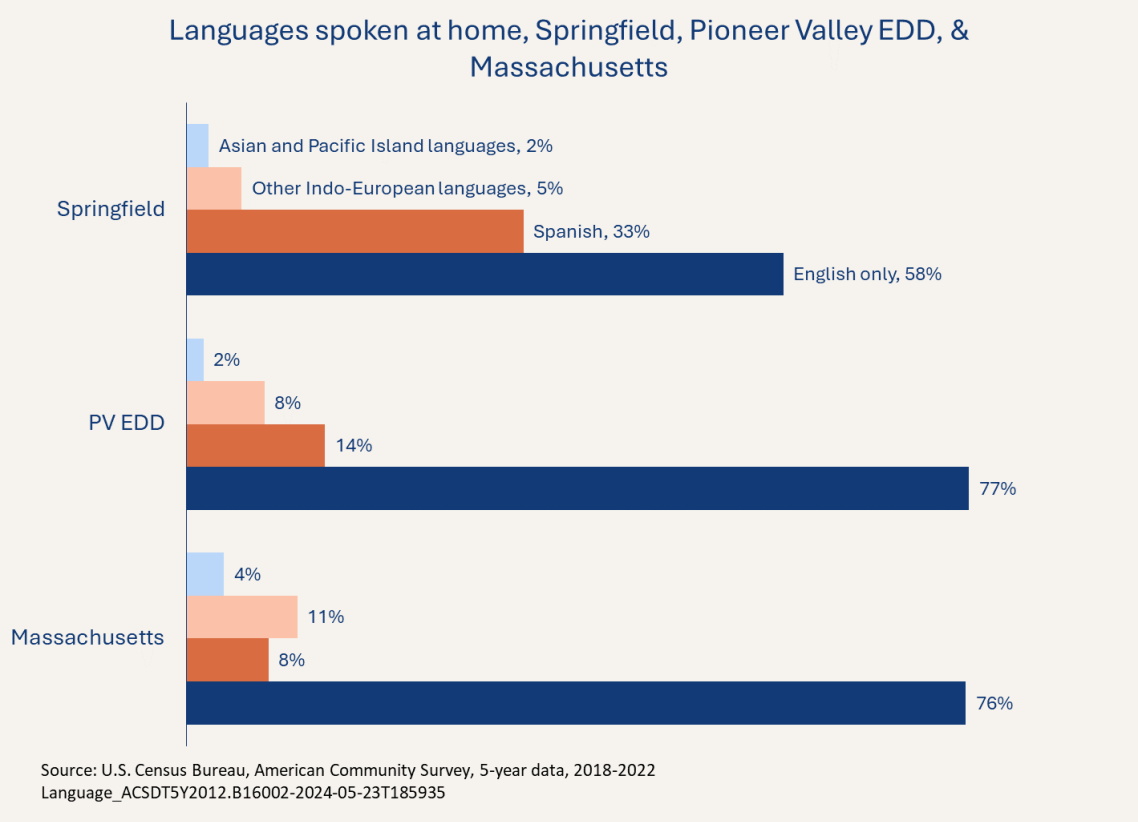
Comparing population trends and projections for the Pioneer Valley Economic Development District with the Commonwealth of Massachusetts and the United States, we see that – indexed to 2010 population, by 2050, the PVEDD is expected to see a 10% decline in population, compared with 17% growth for the nation, and 7% growth for the state.

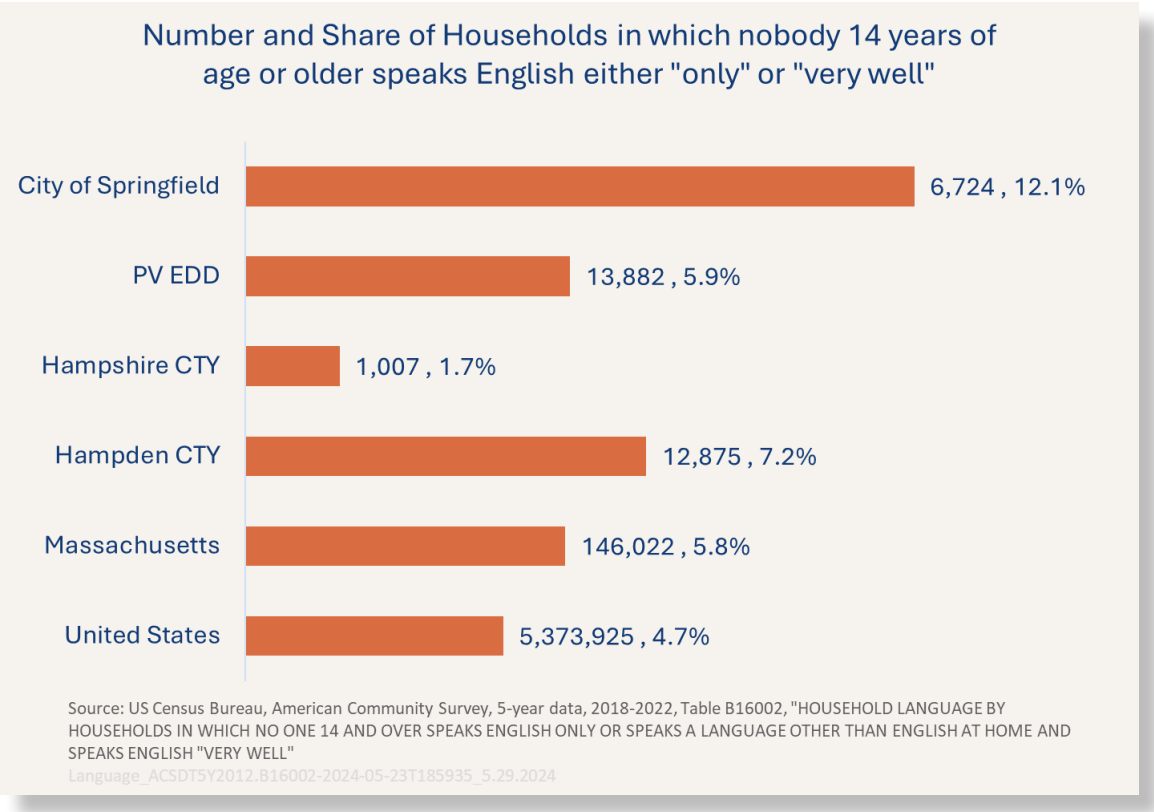
The chart below shows that all of the population growth in the region is from Hispanic, Black, and other residents of color. The White population has declined by nearly 15,000 people since 2010.



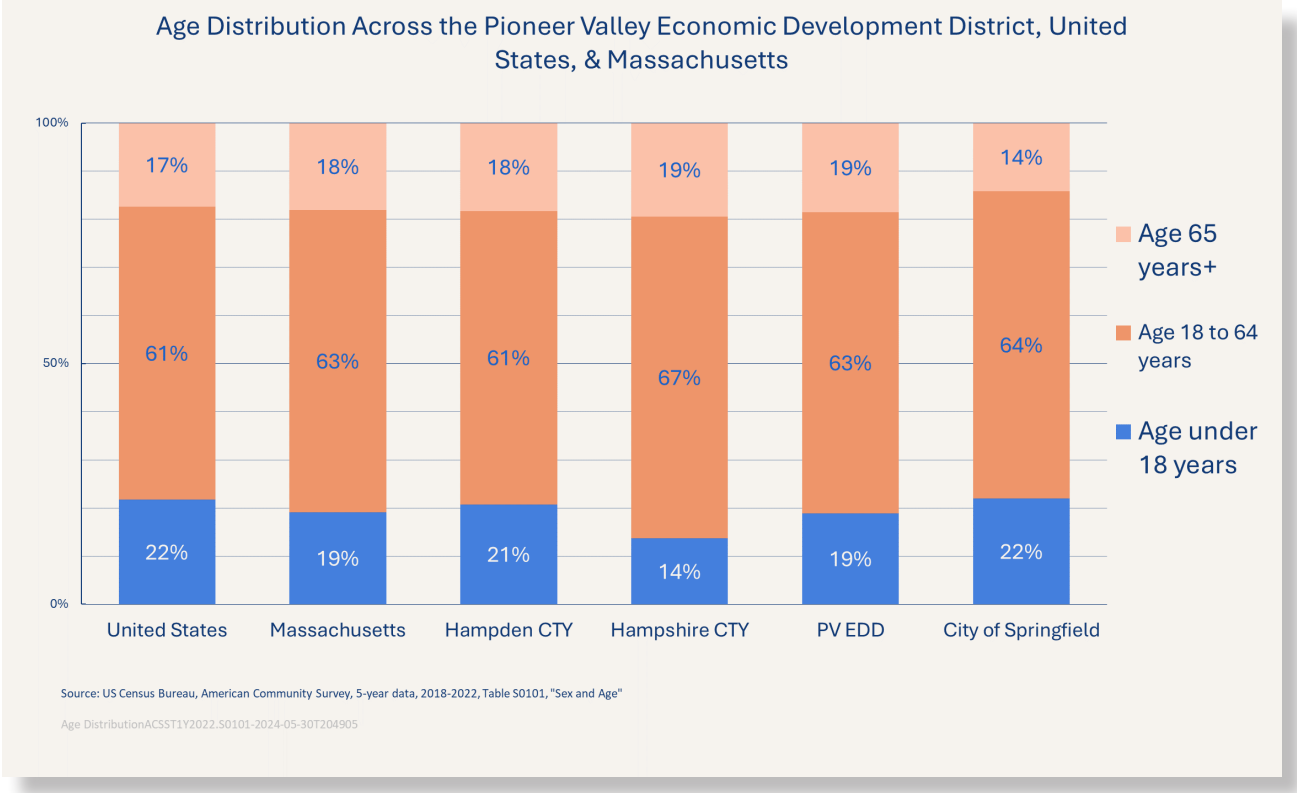
Source: UMass Donahue Institute analysis of U.S. Census Bureau, Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States: April 1, 2010 to July 1, 2020 (CC-EST2020-ALLDATA) & April 1, 2020 to July 1, 2022 (CC-EST2022-ALLDATA).

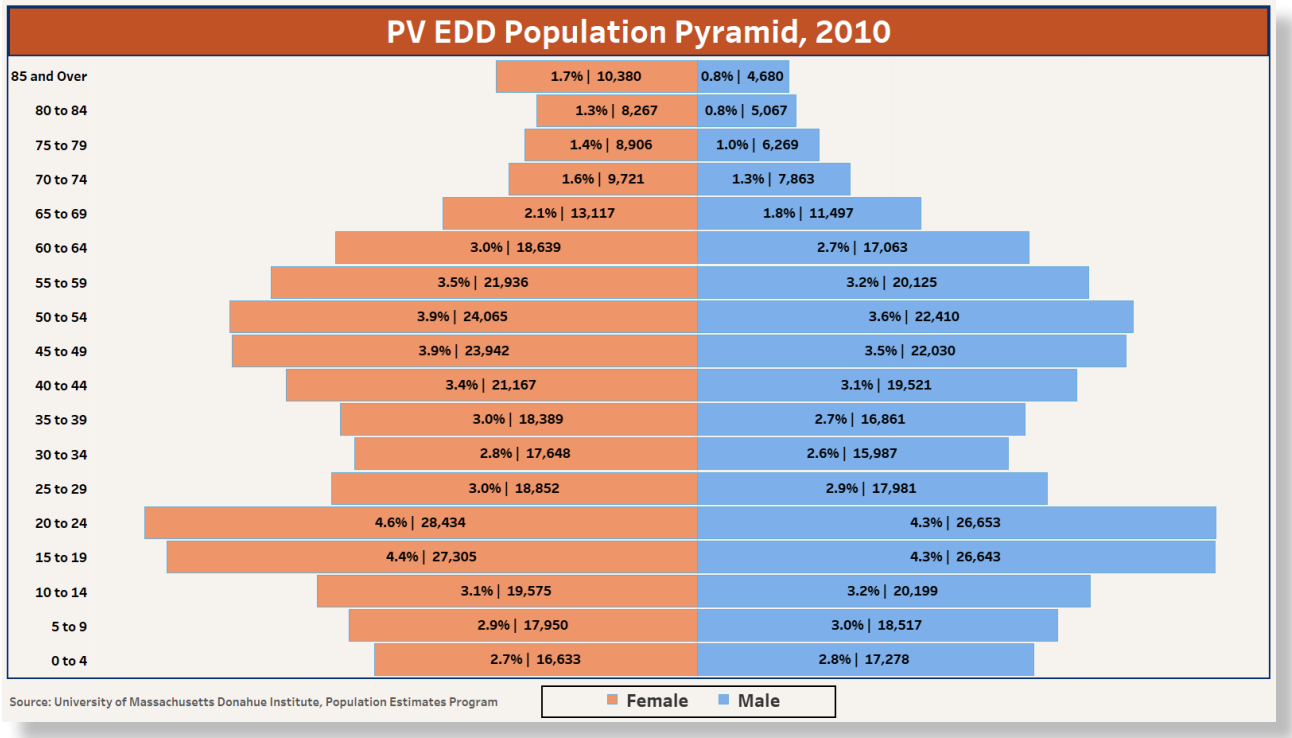
In correlation with the figures above showing a high Latino population, it is in the city of Springfield that the most Spanish is spoken – more than double the amount spoken in the full District and three times the amount in the Commonwealth as a whole. In fact, in many cases Spanish is the only language spoken; lack of English language fluency affects 12% of the population in Springfield.

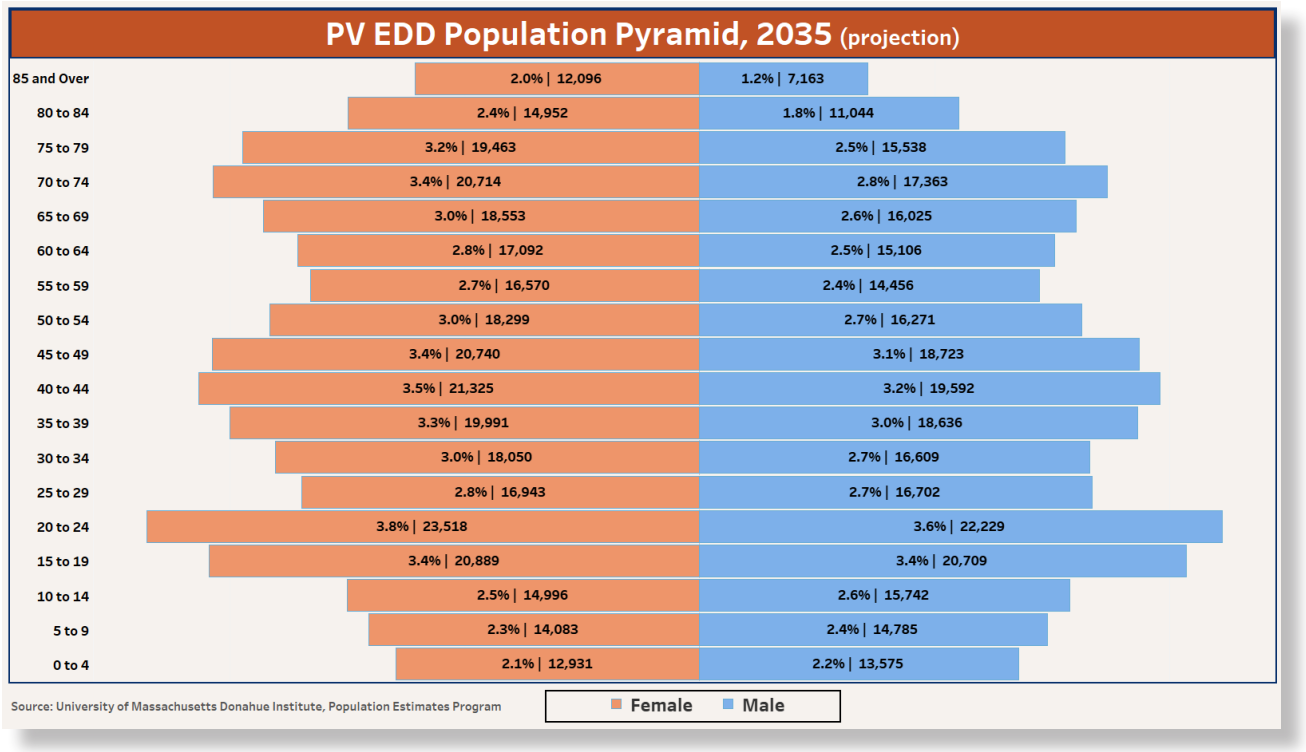




The age distribution of the Pioneer Valley EDD population is very similar to the state and the country, with Hampden County having a younger population than Hampshire County. The highest number of youth and lowest number of seniors is in the City of Springfield, in Hampden County.

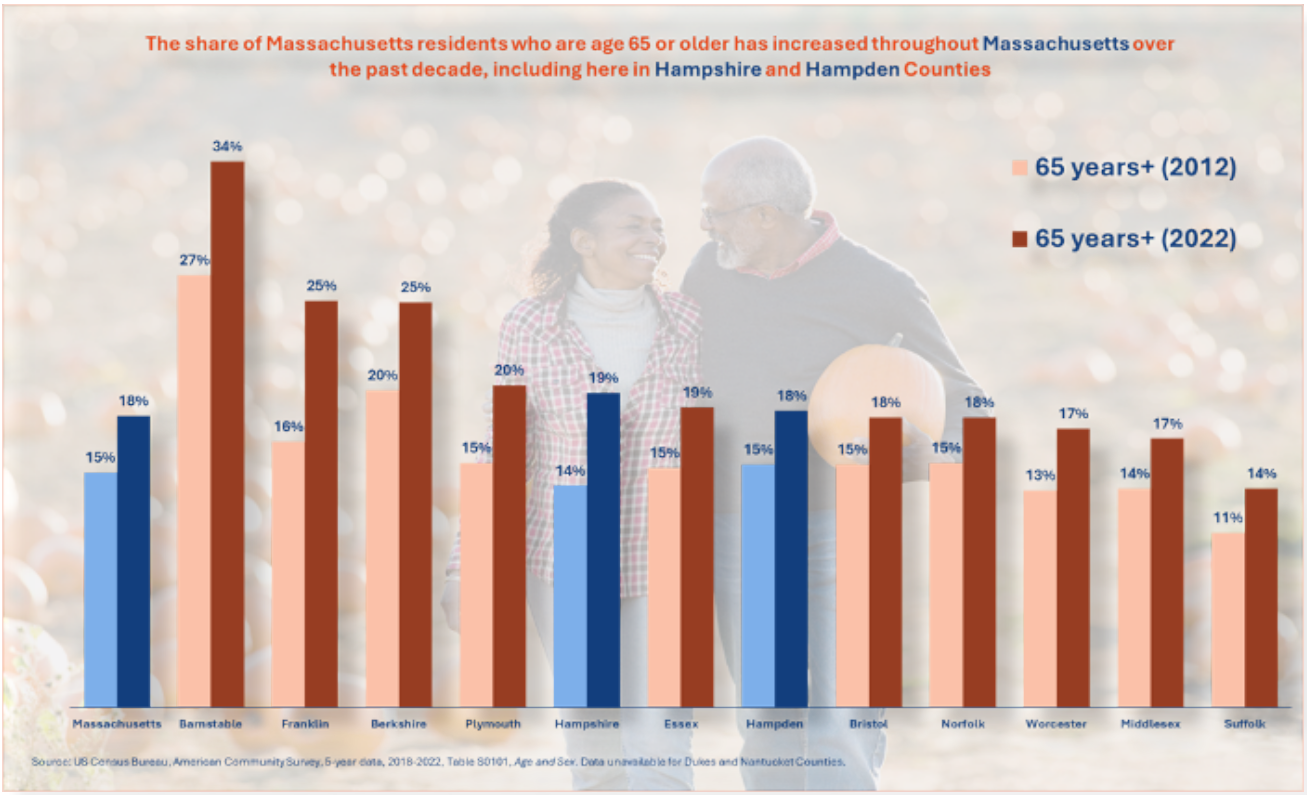


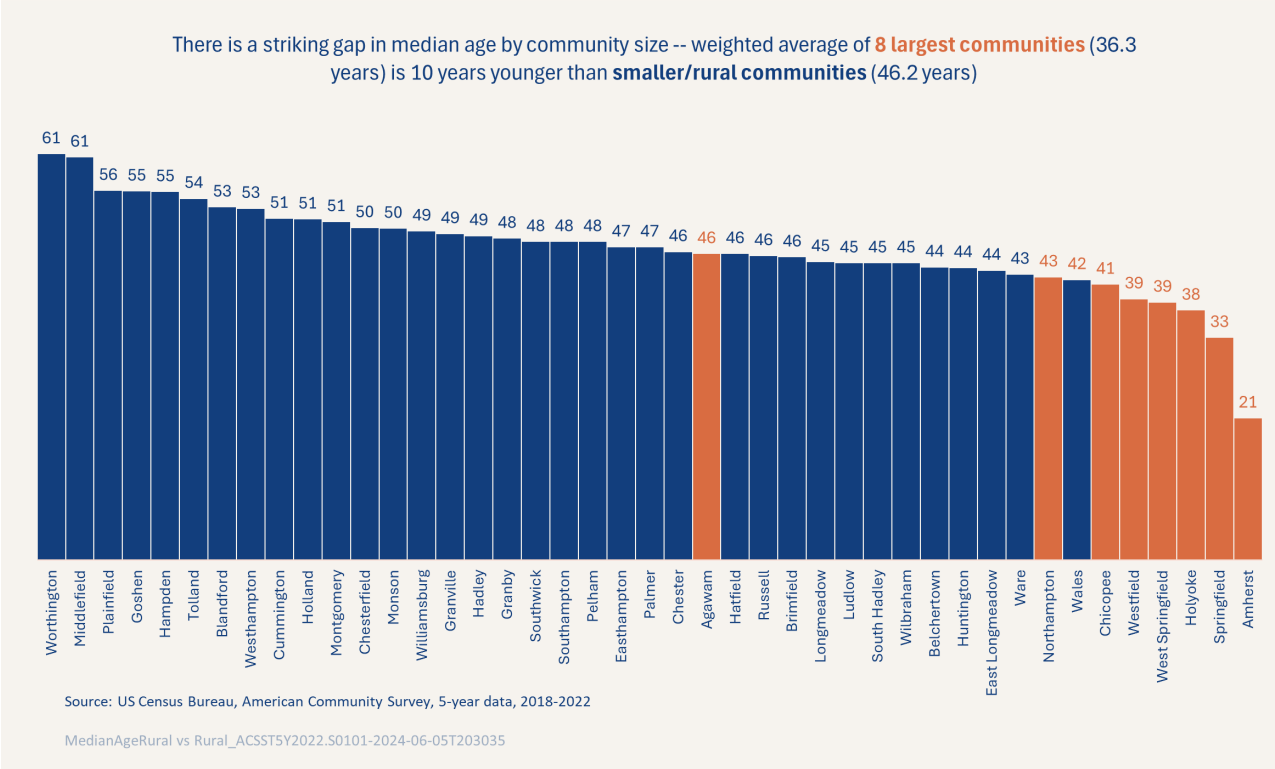




The aging of the regional population can also be seen when comparing the share of residents age 65 and over time. In the chart below, we see that in every county in Massachusetts, this has been a growing share, comparing two periods of time (2008-2012 and 2018-2022). Both Hampden and Hampshire Counties have had similar shares of seniors over both periods, and both counties are very similar to the overall Massachusetts share.

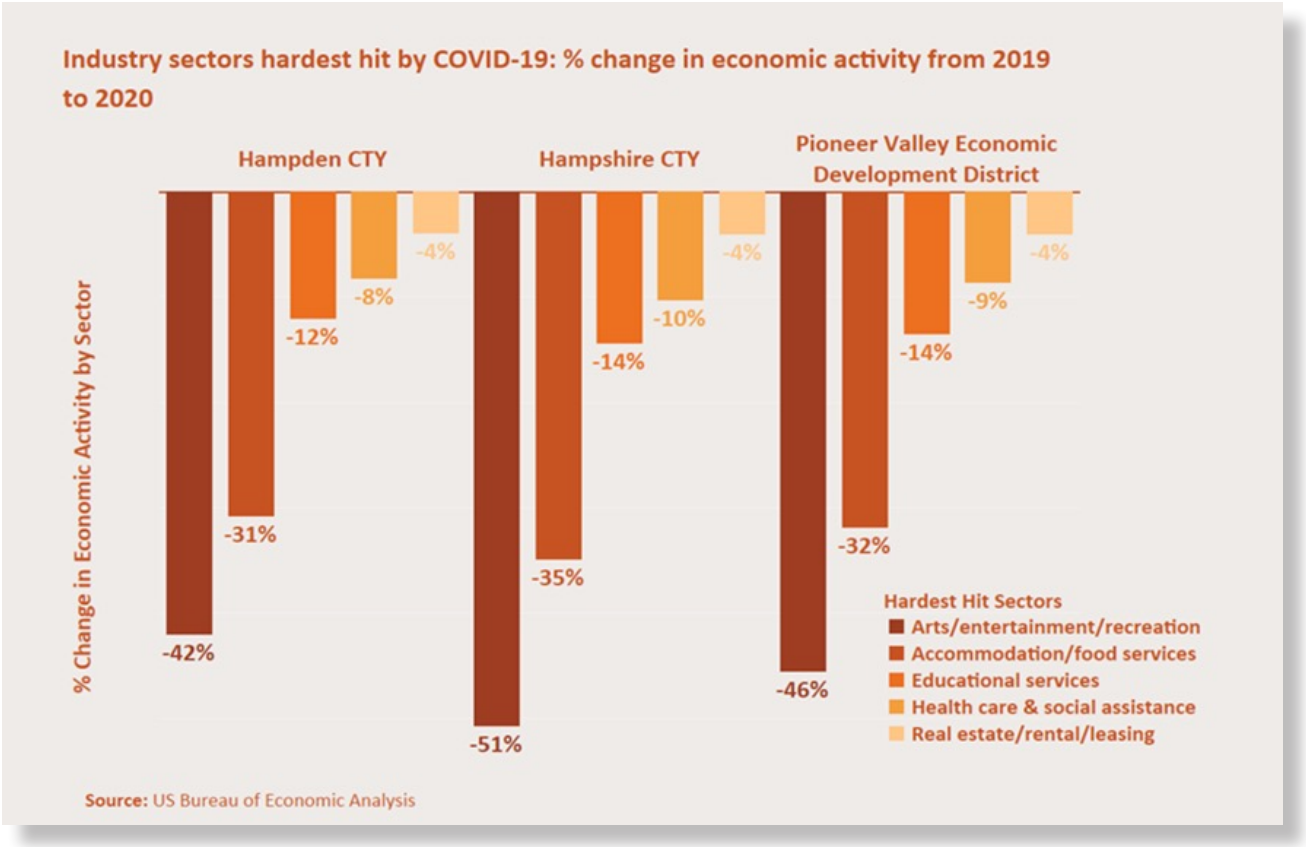
Also, we see that the aging of our region is coupled with a distinct disparity between our urban and rural communities. Seven of the eight largest communities in the PVEDD fall within the eight lowest median ages, and the median ages range from 21 years to 61 years. Moreover, the weighted median age of the 35 rural communities is 10 years older than the weighted average of the eight largest communities (46.2 years vs 36.3 years).


The share of Massachusetts residents who are age 65 or older has increased throughout Massachusetts over the past decade, including here in Hampshire and Hampden Counties
65 years+ (2012)
65 years+ (2022)
15% 18%
27% 34%
16% 25%
20% 25%
15% 20%
14% 19%
15% 19%
15% 18%
15% 18%
15% 18%
13% 17%
14% 17%
11% 14%
Massachusetts
Barnstable
Franklin
Berkshire
Plymouth
Hampshire
Essex
Hampden
Bristol
Norfolk
Worcester
Middlesex
Suffolk
Source: US Census Bureau, American Community Survey, 5-year data, 2018-2022, Table S0101, Age and Sex. Data unavailable for Dukes and Nantucket Counties.

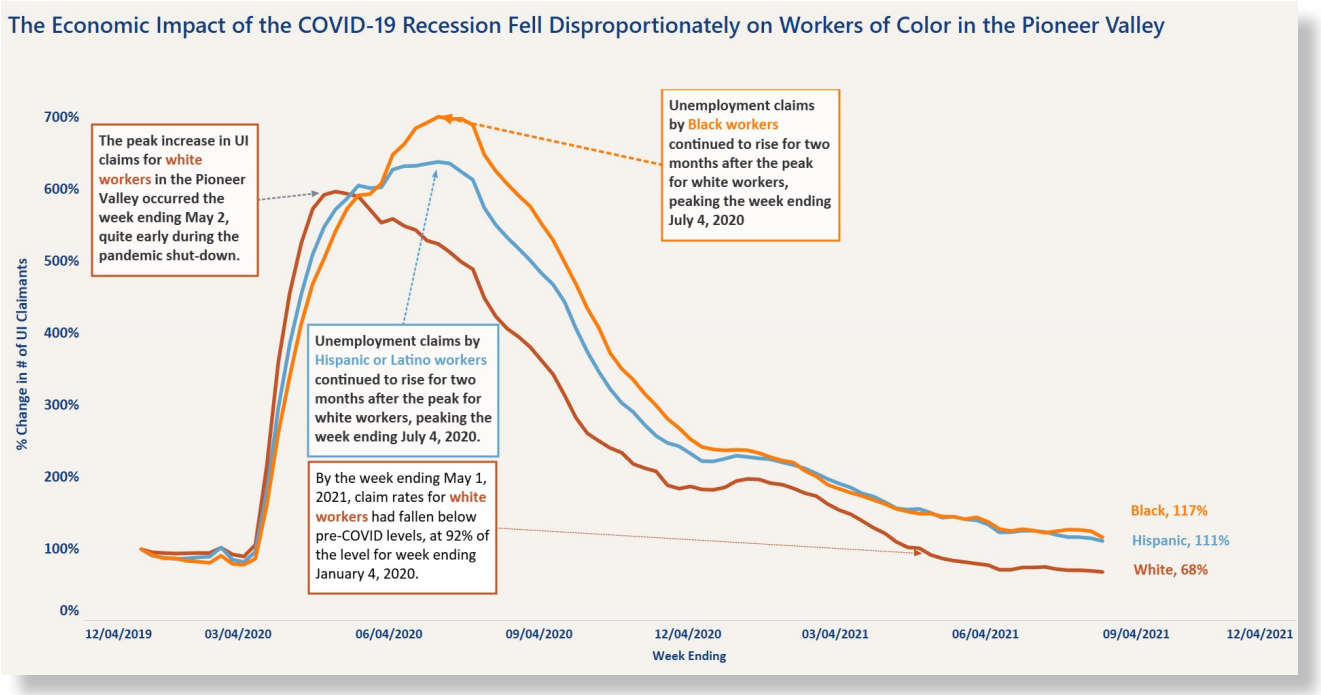

There is a striking gap in median age by community size -- weighted average of 8 largest communities (36.3 years) is 10 years younger than smaller/rural communities (46.2 years)
61 61 56 55 55 54 53 53 51 51 51 50 50 49 49 49 48 48 48 48 47 47 46 46 46 46 46 45 45 45 45 44 44 44 43 43 42 41 39 39 38 33 21
Worthington
Middlefield
Plainfield
Goshen
Hampden
Tolland
Blandford
Westhampton
Cummington
Holland
Montgomery
Chesterfield
Monson
Williamsburg
Granville
Hadley
Granby
Southwick
Southampton
Pelham
Easthampton
Palmer
Chester
Agawam
Hatfield
Russell
Brimfield
Longmeadow
Ludlow
South Hadley
Wilbraham
Belchertown
Huntington
East Longmeadow
Ware
Northampton
Wales
Chicopee
Westfield
West Springfield
Holyoke
Springfield
Amherst
Source: US Census Bureau, American Community Survey, 5-year data, 2018-2022
MedianAgeRural vs Rural_ACSST5Y2022.S0101-2024-06-05T203035

COVID-19 PANDEMIC AND ECONOMIC SHUTDOWN

During 2020, like most regions across the United States, the Pioneer Valley experienced a substantial decrease in the size of its economy due to the COVID-19 pandemic. The inflation-adjusted value of goods and services (i.e., the Gross Domestic Product [GDP]) declined by $1.6 billion (5.3%). The reduced demand for goods and services hit small businesses especially hard, undercutting their revenues dramatically. In the initial weeks of the COVID-19 shutdowns, small business revenues declined steeply – by 40.6% in Hampden County and 58.1% in Hampshire County – and remained below January 2020 levels throughout 2020 and into 2021. Five industrial sectors that are the backbone of the regional economy dropped by 4%-51% between 2019 and 2020.



As the pandemic took hold, unemployment rates spiked, remaining well above pre-pandemic levels at the end of 2021. In Hampden County, home to the vast majority of the region's BIPOC residents (93% of the Hispanic/Latino population, and 90% of the region's Black population) unemployment peaked at 18.6% in April 2020. Hampshire County's peak was lower at 12.9%. Among the municipalities in the Pioneer Valley, April 2020 unemployment rates topped 20% in two cities (Springfield and Holyoke) and exceeded 15% in another 15 cities and towns. While we do not have county level unemployment rates broken down by gender, race and ethnicity, we know from unemployment-insurance-claims data that women and Black, Indigenous and People of Color (BIPOC) workers shouldered a disproportionate share of the unemployment burden.

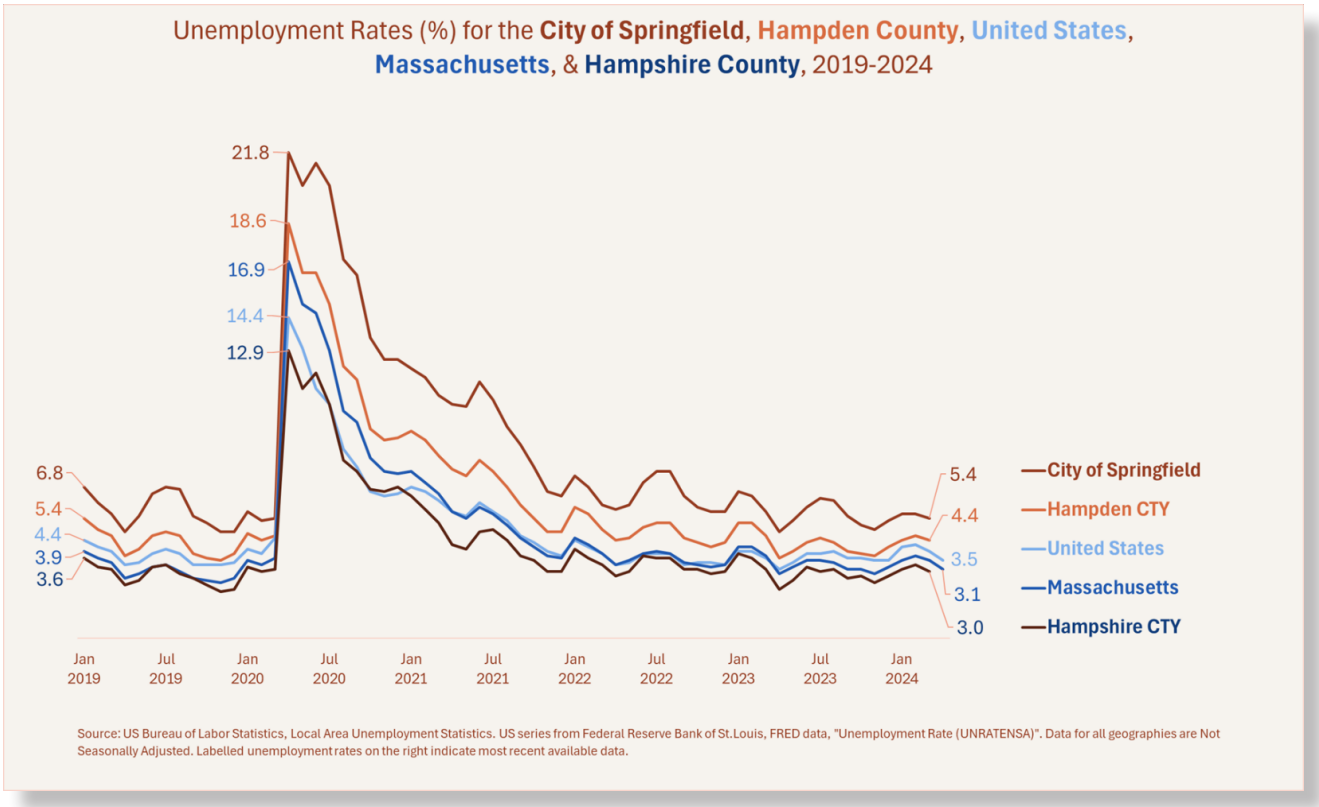


The economic shutdown due to the pandemic was momentous for our region, the country, and the world. The impact on the Pioneer Valley was significant, causing regional economic development and business support agencies and organizations to re-think their modes of operation, how and why they conducted certain activities, and imagining new ways of engaging with residents, businesses, and local leaders. By the end of 2021, unemployment rates had mostly, but not entirely, recovered, though rates remained higher in the PV EDD's urban centers. Some regional businesses continue to struggle to adjust to persistent changes in the regional economy.

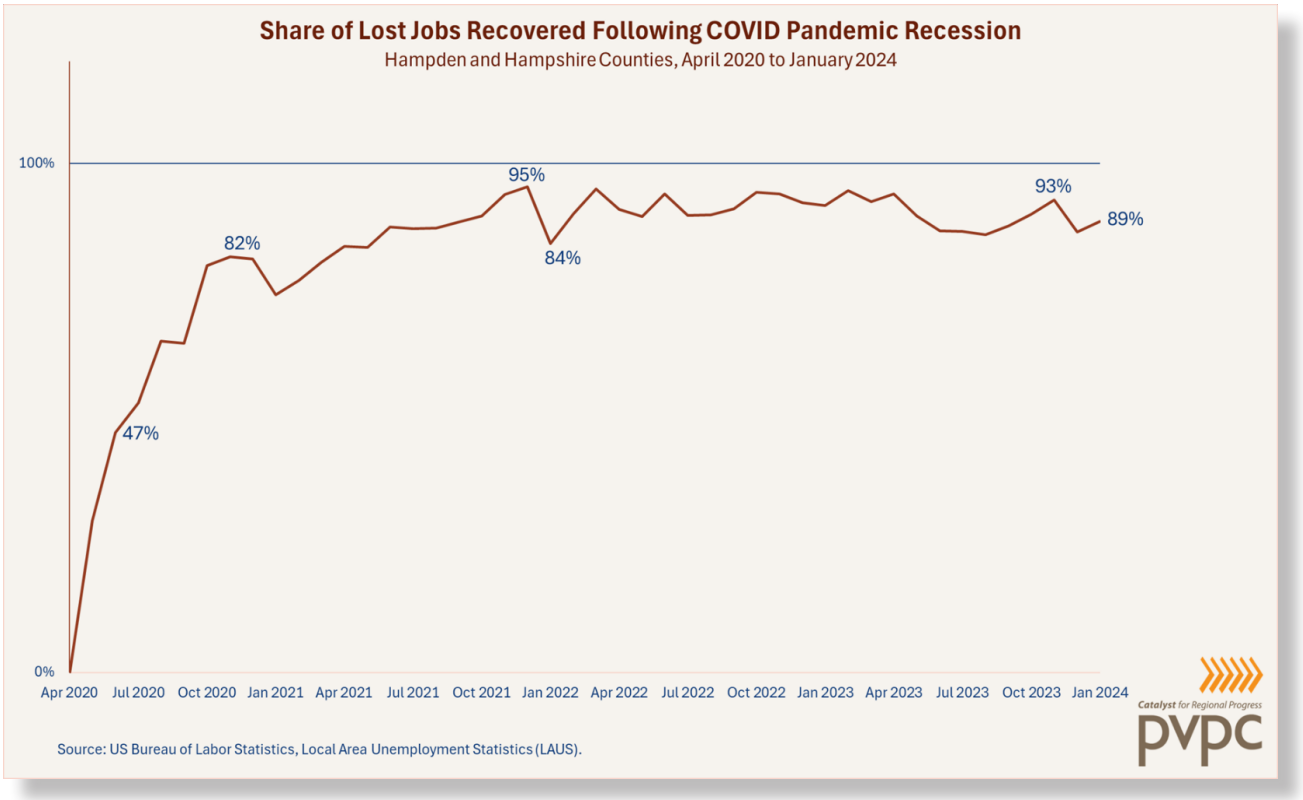
POST-COVID RECOVERY

By early 2024, unemployment rates for all regions had recovered to below pre-COVID levels. While this accurately reflects improvements in the regional economy, it also reflects a reduction in the labor force, as some workers have fallen out of the labor force, and therefore are not counted as unemployed.

Although every community in the PV EDD experienced spikes in unemployment rates during the peak of the COVID-19 pandemic, the disparities by region have remained notably persistent, with the City of Springfield experiencing region-leading unemployment levels, and Hampshire County experiencing unemployment rates consistently below the statewide averages.

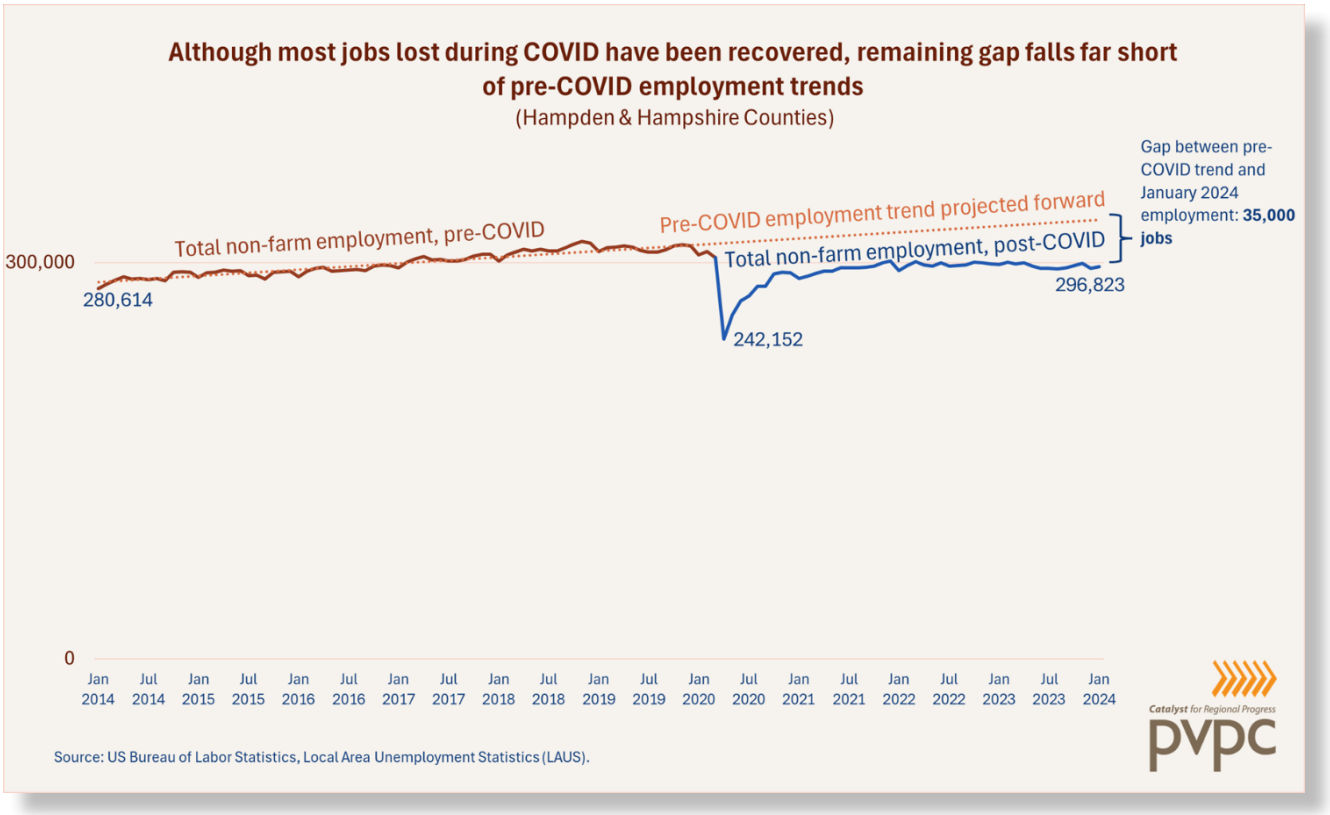


One sign of the lingering impact of the COVID-19 pandemic is evident in the number of jobs held in the region. In the chart below, we see that within a year of the peak pandemic downturn in April 2020, most of the jobs had been recovered. Since then, however, the region has remained "stuck", fluctuating between 84% and 93% of lost jobs recovered.



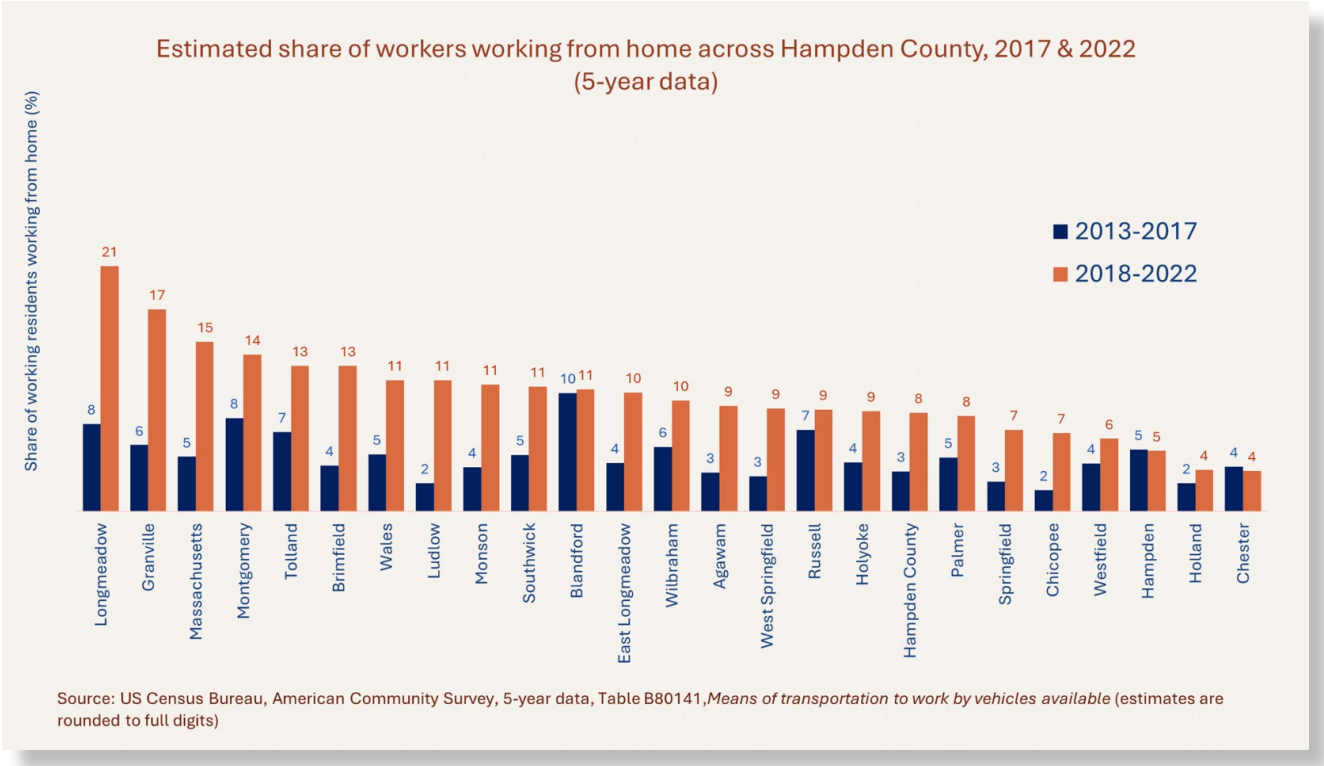
COVID-19'S LINGERING IMPACT ON THE REGIONAL ECONOMY

Pre-COVID, the region's economy was quite robust, having recovered well from the 2008-2009 recession. Like all other regions, tens of thousands of jobs were lost during the COVID shutdown, but most were reinstated or newly created fairly quickly after businesses reopened. Nevertheless, the upward trajectory pre-COVID was lost, and total employment has never fully recovered to those levels.

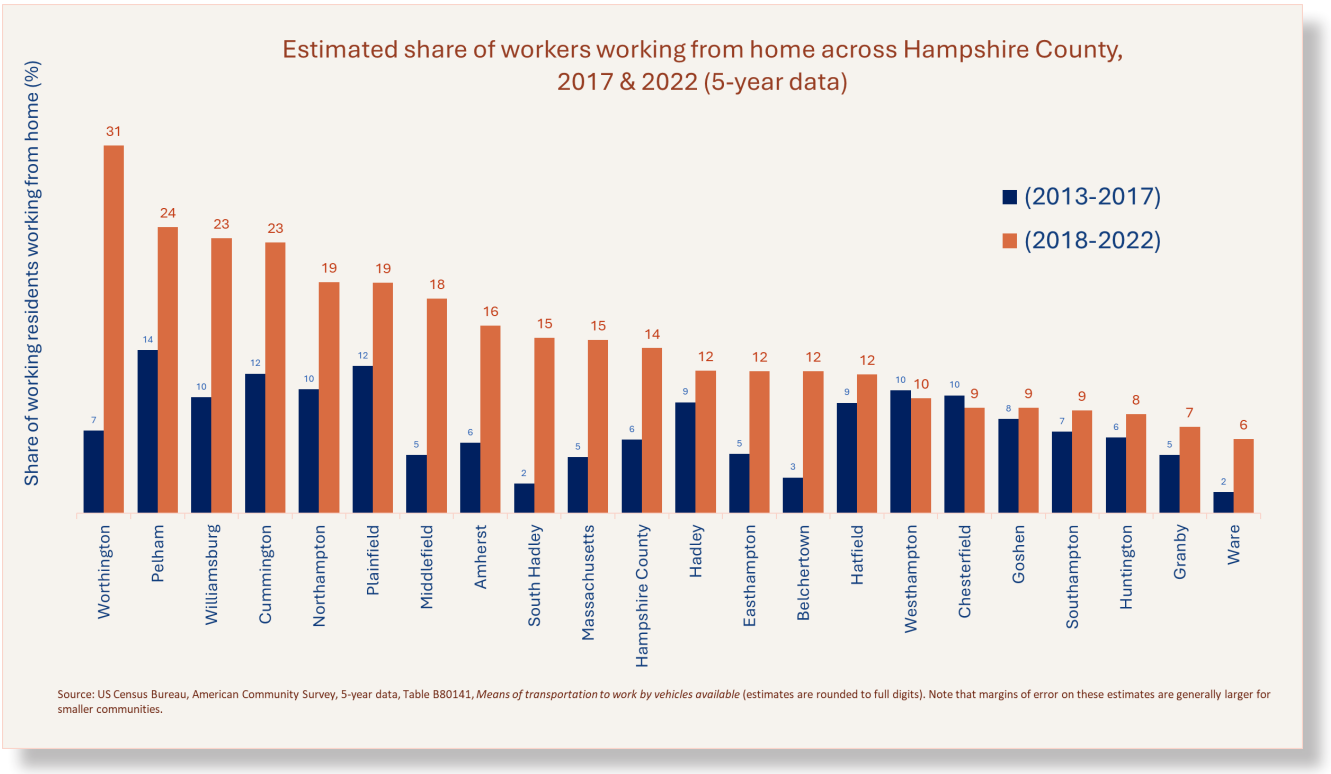


One of the most significant impacts of the COVID-19 pandemic on jobs and workforce issues is the shift to remote work, primarily from workers' homes. Only a small portion of the workforce worked remotely prior to the pandemic, but that number doubled or tripled during and after it. Although there has been a significant move back to the workplace, in some cases with employers now requiring fully in-person work, most workplaces that allowed remote work are still allowing it to some degree.

One interesting note from these charts is that in some of the more rural areas, such as the towns of Blandford, Westhampton, and Chesterfield, a significant share of workers has always worked from home, and that did not significantly change due to COVID.



Source: US Census Bureau, American Community Survey, 5-year data, Table B80141, *Means of transportation to work by vehicles available* (estimates are rounded to full digits)

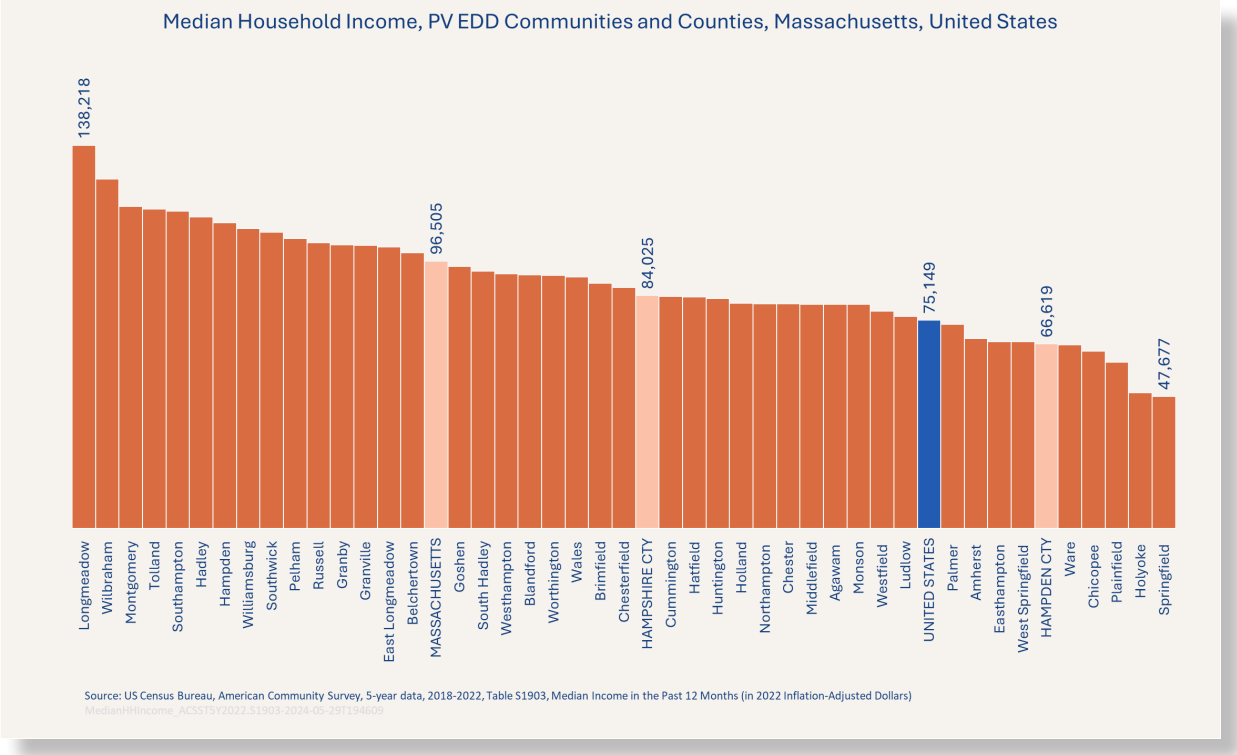


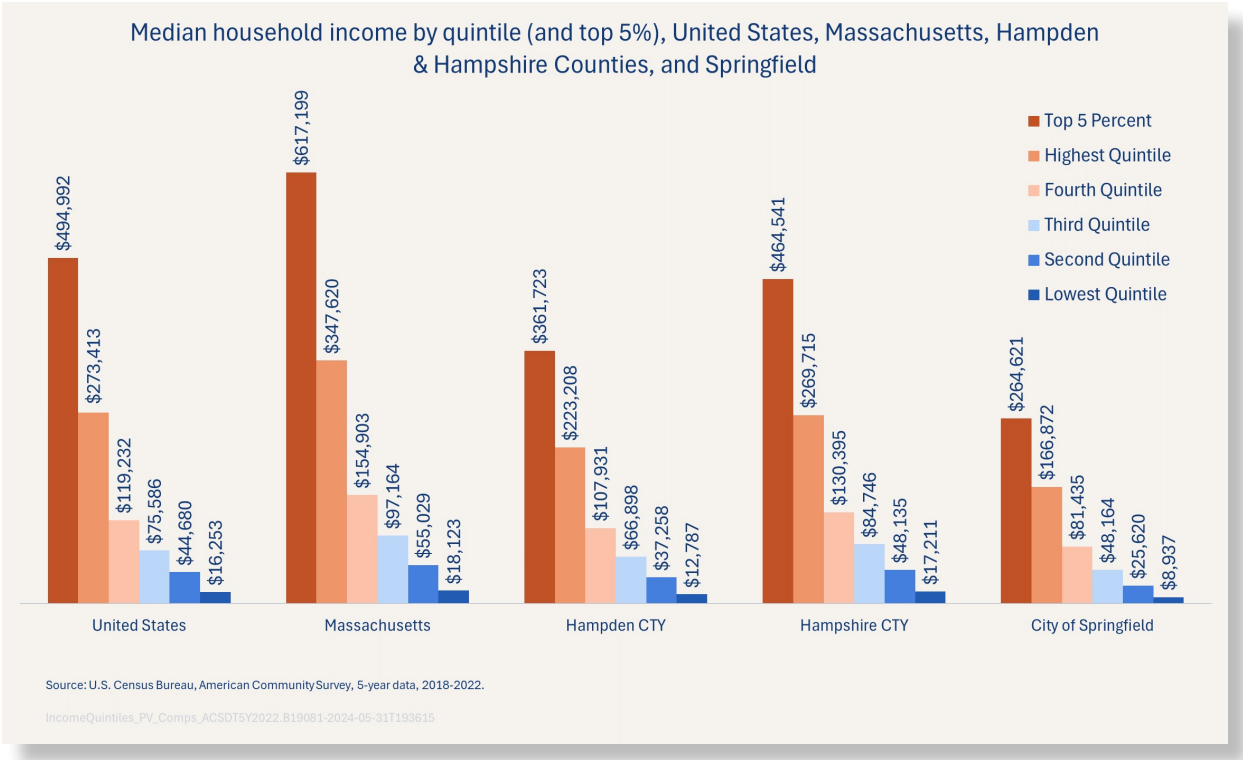
The COVID-19 pandemic recession both revealed and exacerbated deep inequities in the Pioneer Valley economy, with Black, Indigenous, and other People of Color (BIPOC) workers feeling a greater impact and for longer than others. The persistent gap between the unemployment rates in Hampden and Hampshire Counties remains substantial, driven by the much higher unemployment rates in Hampden County's largest cities (Springfield, Holyoke, and Chicopee).

Although the population of the region is majority White, the Hispanic and Latino population is a fast-growing portion, and there is a significant Black population, as well. Other ethnicities, including Asian and those of two or more races, comprise a small minority, while American Indian, and Pacific Islander residents are very few.

ECONOMIC WELL-BEING INDICATORS

When all communities in the region are compared, the vast range of median household income can be seen. Most of the region has lower incomes than the median for the Commonwealth of Massachusetts, but many communities (14) are on the higher end of the range. However, by comparison, most of the Pioneer Valley has median incomes above that for the United States as a whole. The lowest incomes are seen in the largest cities of Springfield, Holyoke and Chicopee as well as the towns of Ware and Plainfield. Ware is a former industrial community in a relatively rural area, and Plainfield is a very small town at the extreme northwest of the region, bordered by Berkshire and Franklin Counties.





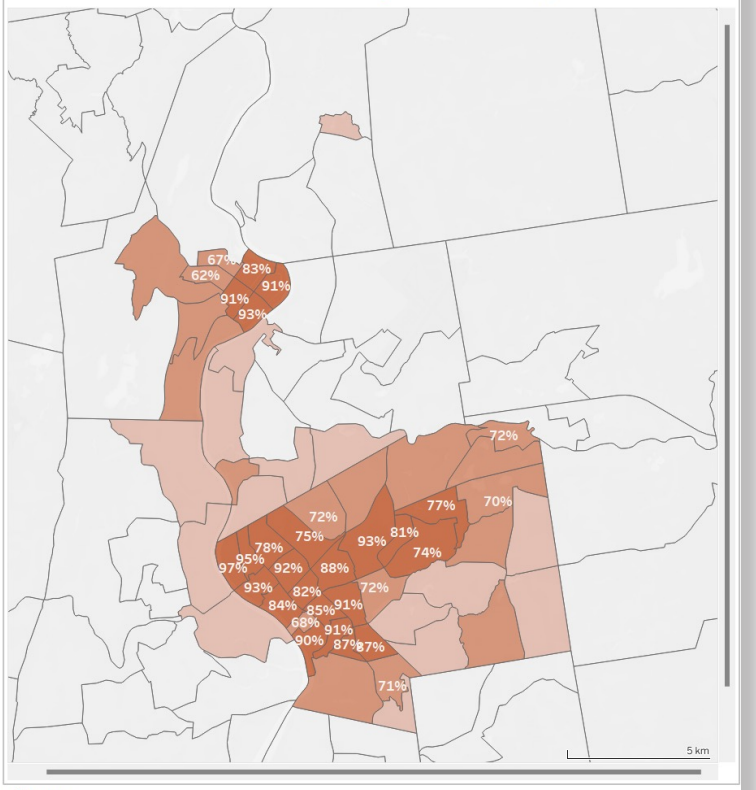
Poverty and inequality

The area has persistent high levels of poverty, particularly for people of color. In 2019, the year before the pandemic, the overall poverty rate in the Pioneer Valley was 16.3% versus 11.1% for the State of Massachusetts. The poverty rate for the African American community in 2019, however, was 22.7% and for the Latinx community was even higher at 38.7%. The chart below compares poverty rates in the region between 2016 and 2020.

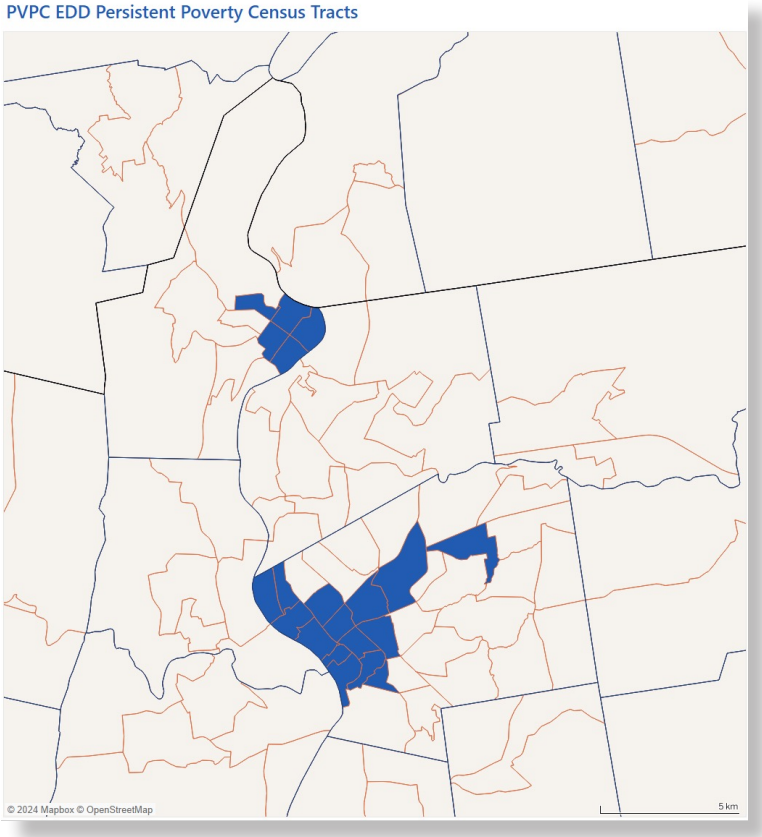
City/County/Region	Overall Poverty Rate	Black or African American alone	Two or more races	Hispanic or Latino origin (of any race)	White alone, not Hispanic or Latino
Springfield	25.5%	24.3%	29.5%	35.2%	12.5%
Massachusetts	9.8%	17.6%	15.5%	23.0%	6.7%
Hampden County	15.7%	24.1%	26.2%	33.5%	7.6%
Hampshire County	10.6%	20.2%	16.8%	17.9%	9.4%

The Census Bureau released a report on May 9, 2023 (Census Bureau Releases New Report About Persistent Poverty at County and Census-Tract Level) which listed census tracts with persistent levels of poverty from 1989-2019. PVPC overlaid these tracts with demographic data regarding BIPOC populations to gain a better sense of disadvantaged communities in Springfield. This analysis revealed that census tracts with persistent poverty levels correlated nearly perfectly with areas where most residents were BIPOC.

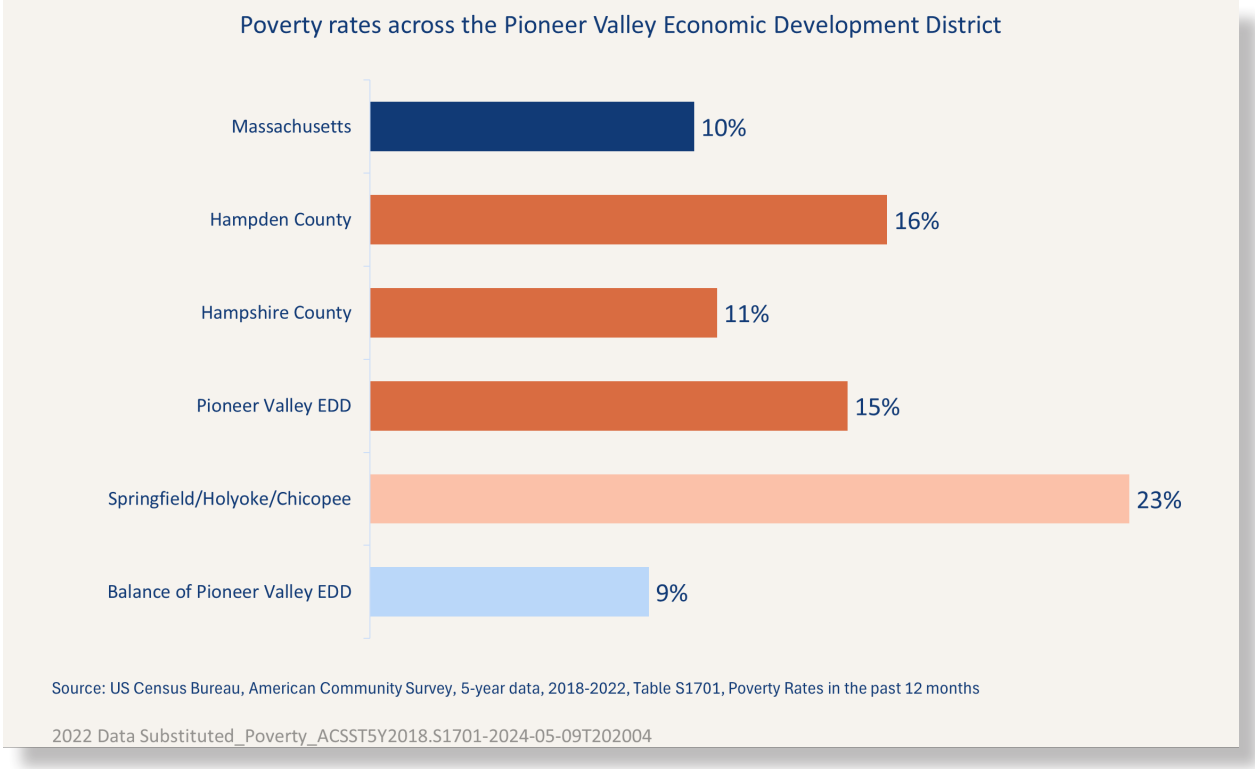
BIPOC Percent of All Residents by Census Tract, 2020



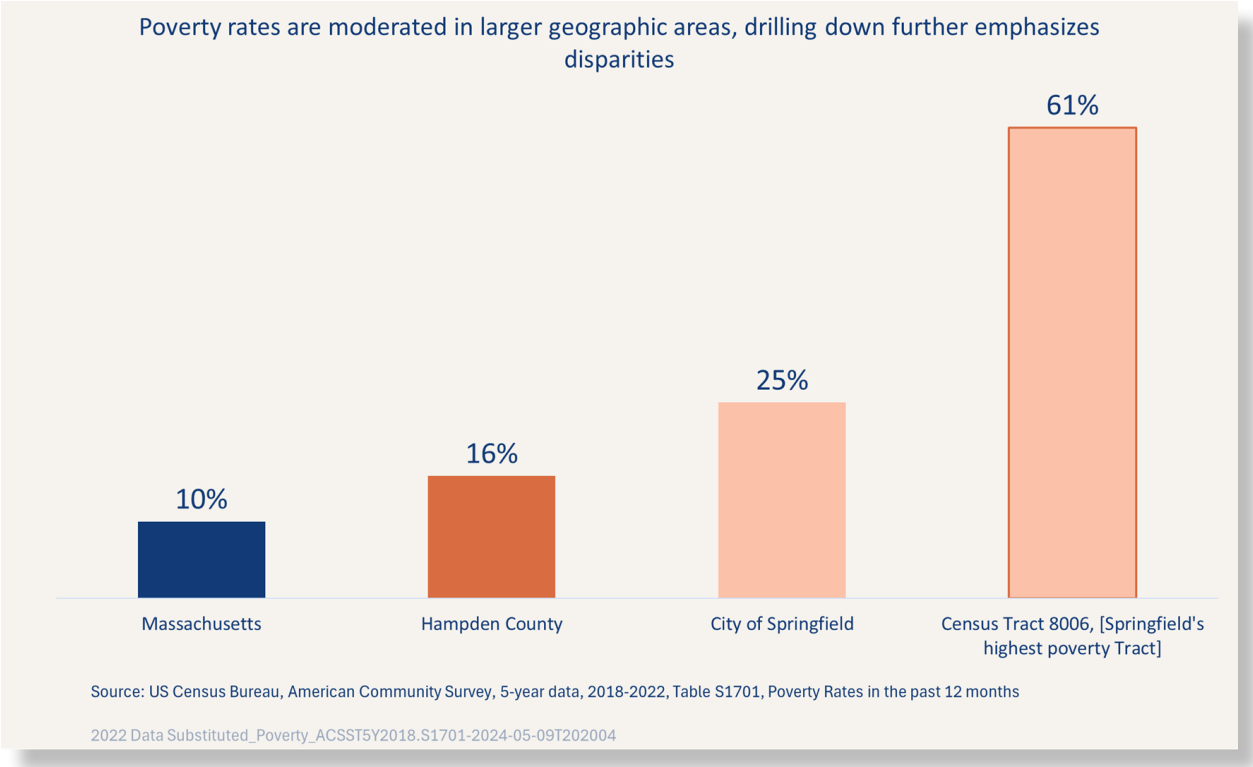
PVPC EDD Persistent Poverty Census Tracts

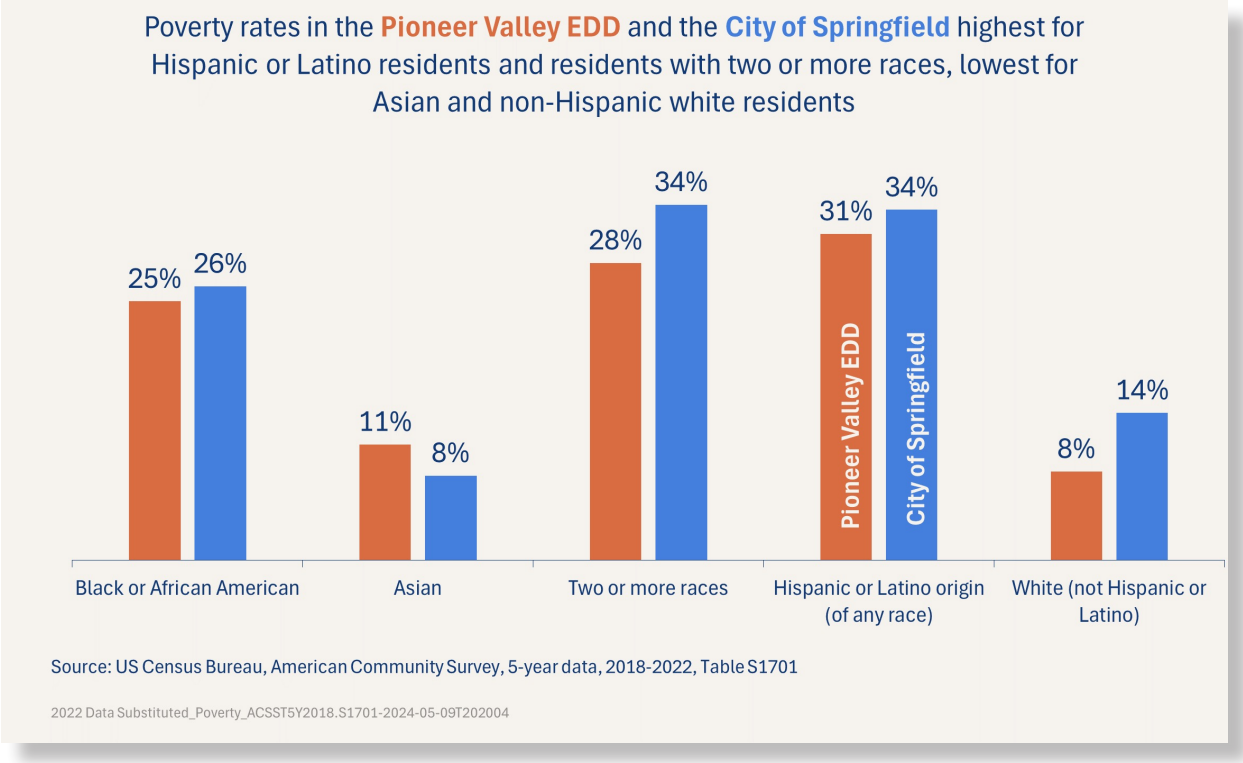


As might be expected given the high income disparities, poverty rates are high in parts of the Pioneer Valley EDD. The cities of Springfield, Holyoke, and Chicopee have some of the highest poverty rates in the country and are more than twice as high as in Massachusetts overall.

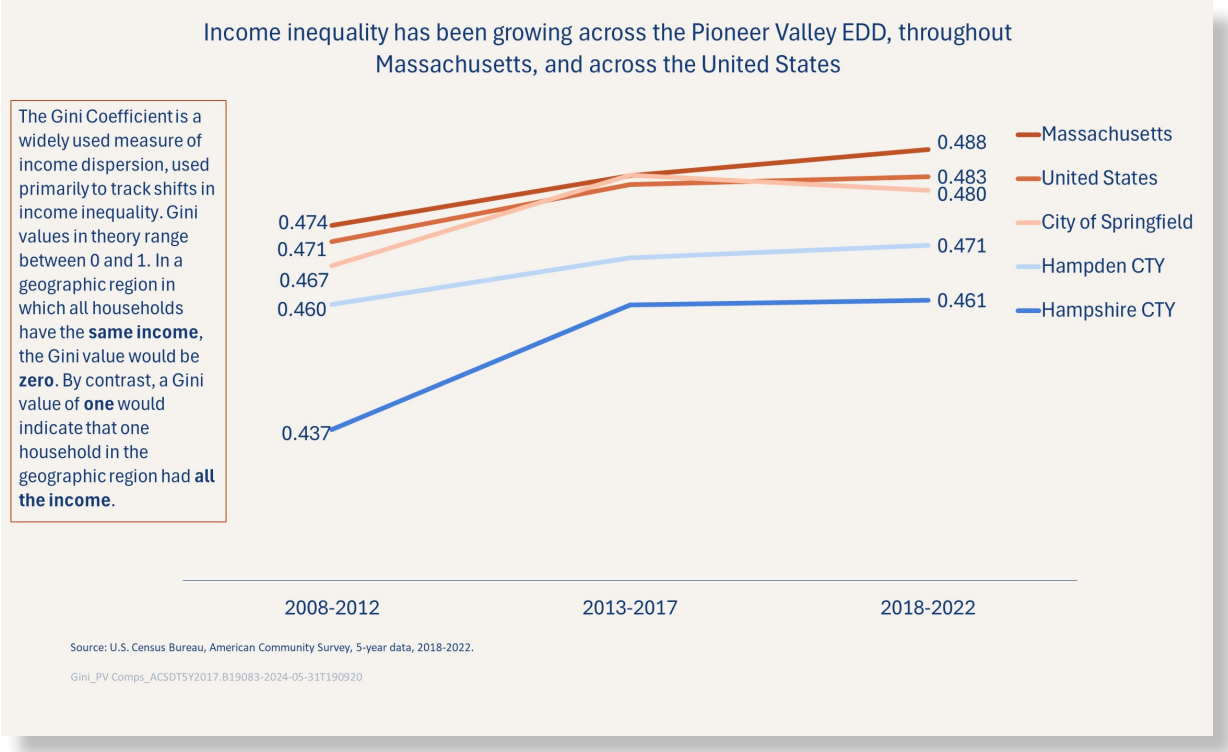


Furthermore, poverty is concentrated in certain areas of those cities; for example, the lowest income census tract in Springfield has 61% poverty. These rates are distinctly higher for Hispanic and Latino residents and lowest for non-Hispanic White residents.

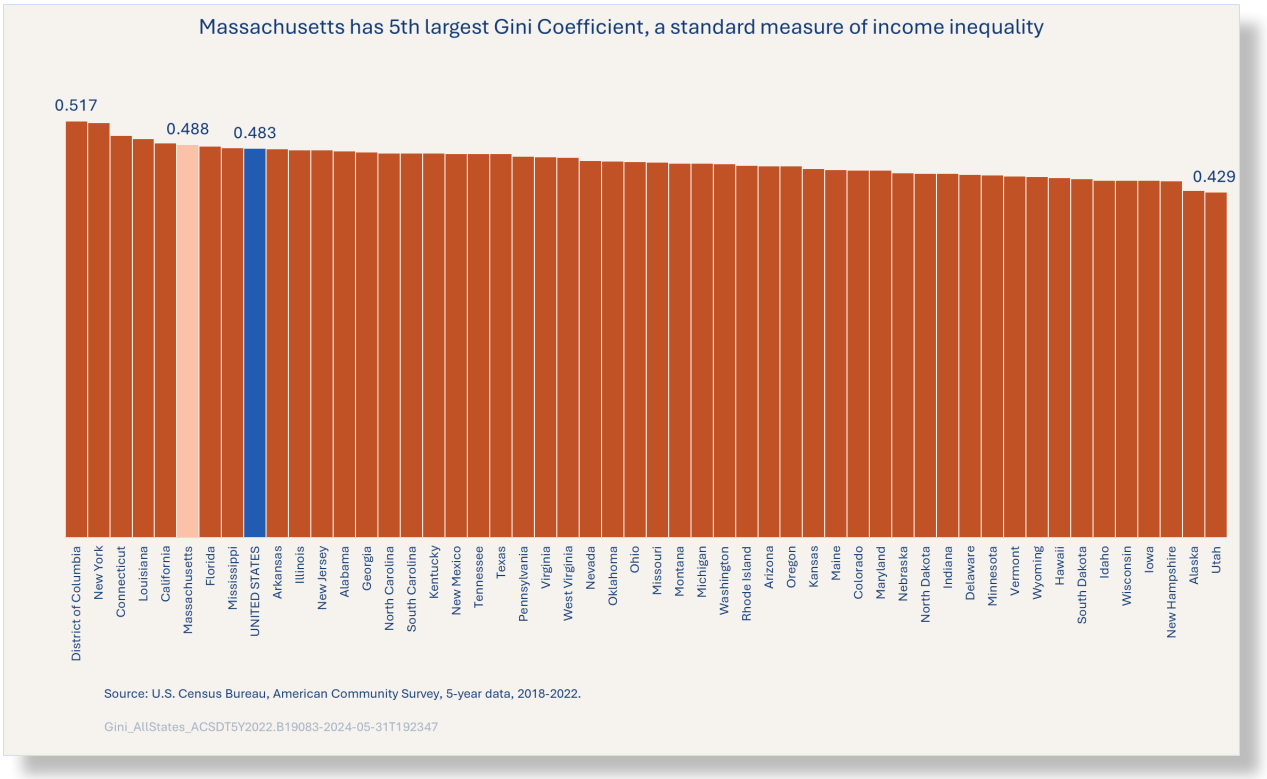




The effects of these disparities in income can be seen in the Gini Coefficient, a measure of income inequality. As the chart shows, income inequality is increasing everywhere, and particularly in Hampshire County, which has generally been an area of higher incomes. Of the indicators shown below, income inequality is worst in Massachusetts as a whole, closely followed by the United States and the City of Springfield. Disparities are not as severe in other parts of the Pioneer Valley EDD.



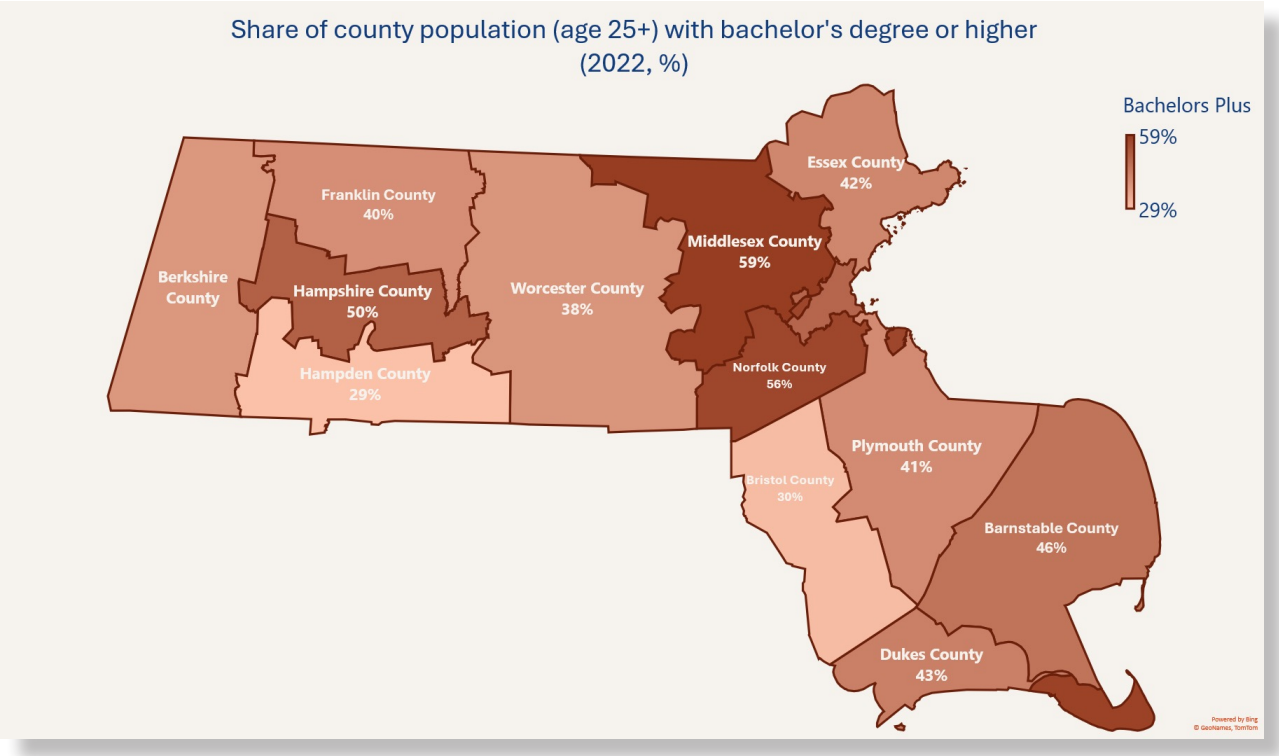
However, overall, Massachusetts has one of the highest levels of income inequality in the country, according to this measure. Thus, Springfield, which is just below Massachusetts (see chart above), at 0.48 also has one of the highest levels in the country.

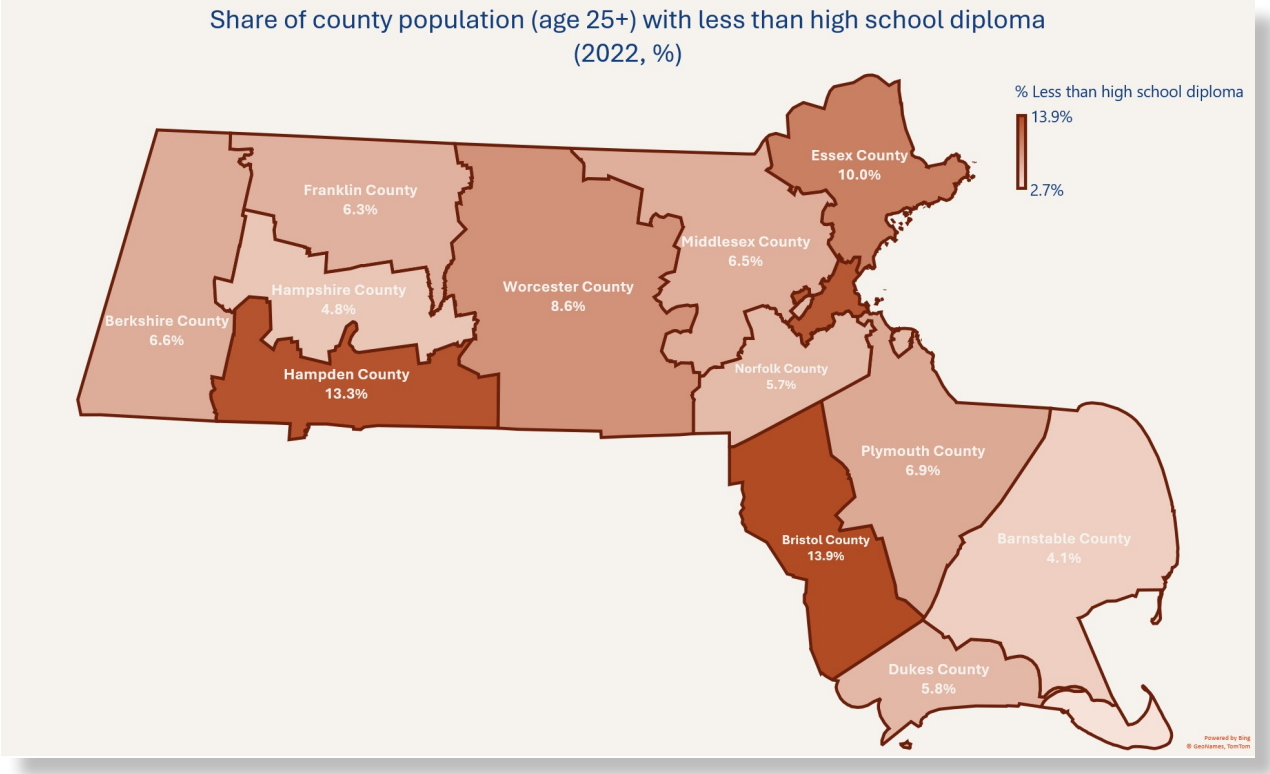


Education

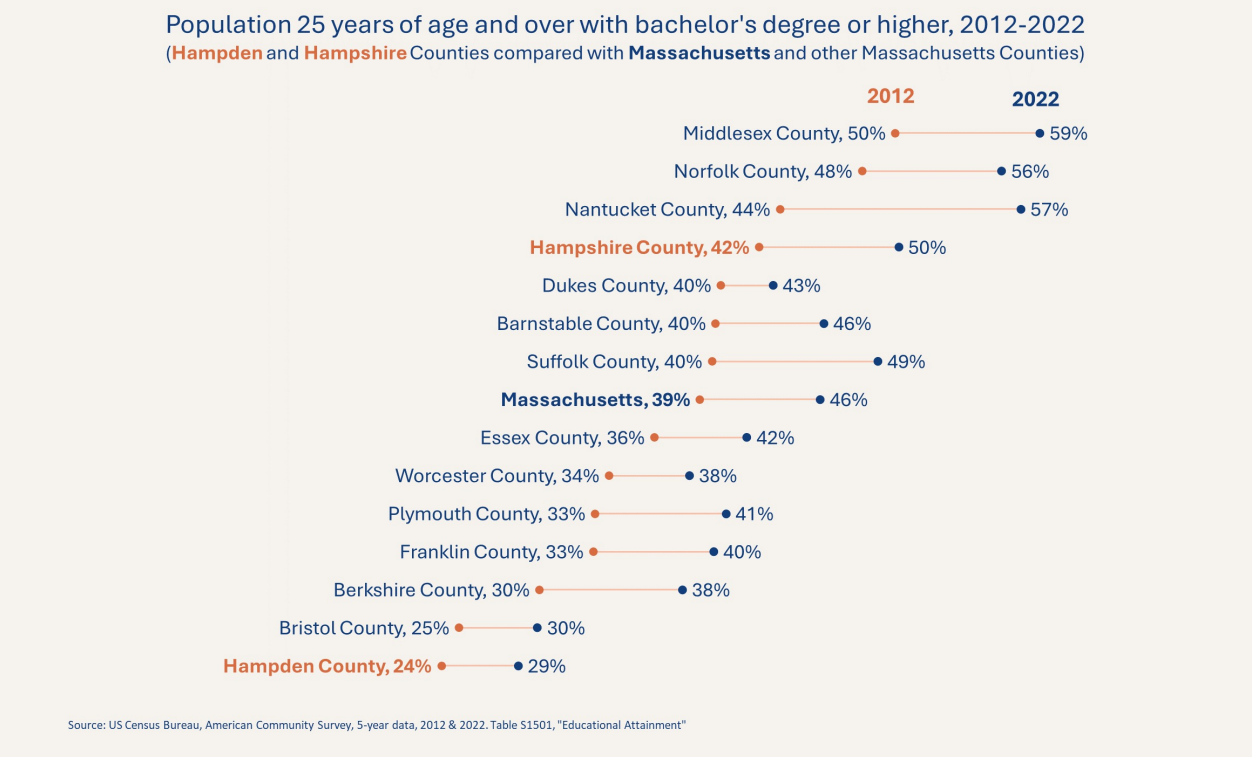
Attaining a solid education is demonstrably a sound strategy for avoiding poverty, as education normally contributes to higher wages and income. In general, Hampshire County residents are quite well educated, while Hampden County residents have lower levels of educational attainment, standing as the county in Massachusetts with lowest share of the adult population with bachelor's degree or higher.
Although there are institutions of higher education in both counties, Hampshire County colleges and the University of Massachusetts are the major employers in the county and make up a larger share of the economy and workforce. In Hampden County, with larger populations overall, a smaller percentage of residents attend the higher education institutions that exist.

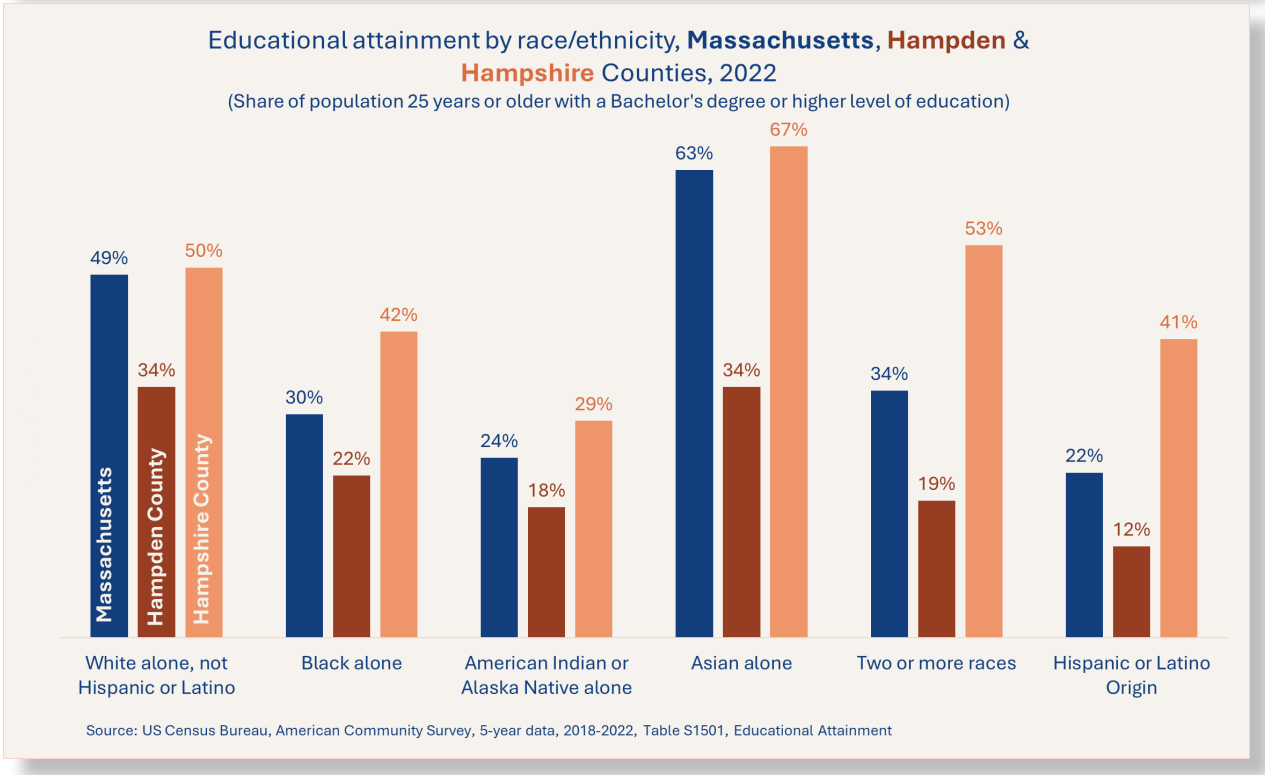
Conversely, Hampden County has one of the highest shares of adults with less than a high school diploma, and Hampshire County has one of the lowest. As we have seen, incomes are higher in Hampshire County, and thus school systems, which are funded through income tax, have more resources. Parents and caretakers also have more resources due to higher incomes and can intervene when a student is struggling.


Share of county population (age 25+) with bachelor's degree or higher (2022, %)
Bachelors Plus
59%
29%
Essex County 42%
Franklin County 40%
Middlesex County 59%
Berkshire County
Hampshire County 50%
Worcester County 38%
Norfolk County 56%
Hampden County 29%
Plymouth County 41%
Bristol County 30%
Barnstable County 46%
Dukes County 43%


Share of county population (age 25+) with less than high school diploma (2022, %)
% Less than high school diploma
13.9%
2.7%
Essex County 10.0%
Franklin County 6.3%
Middlesex County 6.5%
Hampshire County 4.8%
Worcester County 8.6%
Berkshire County 6.6%
Hampden County 13.3%
Norfolk County 5.7%
Plymouth County 6.9%
Bristol County 13.9%
Barnstable County 4.1%
Dukes County 5.8%

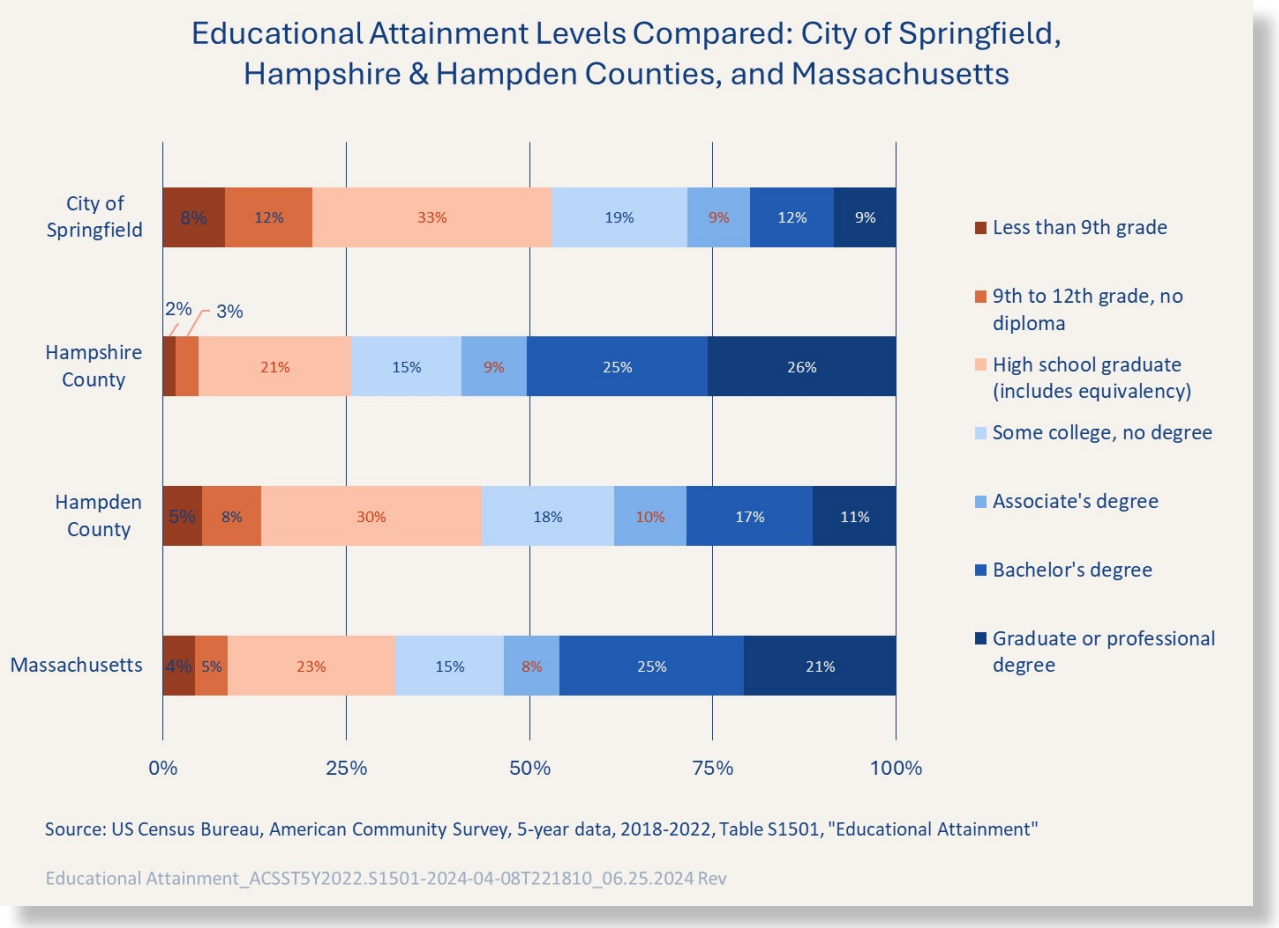
While Hampden County's lowest ranking for those with a bachelor's degree or higher is concerning, it is encouraging to see that Hampden County has joined with the other counties of Massachusetts in improving its share over the ten year period from 2012-2022, from 24% in 2012 to 29% in 2022. Over the same period, Hampshire County increased its share from 42% to 50%.

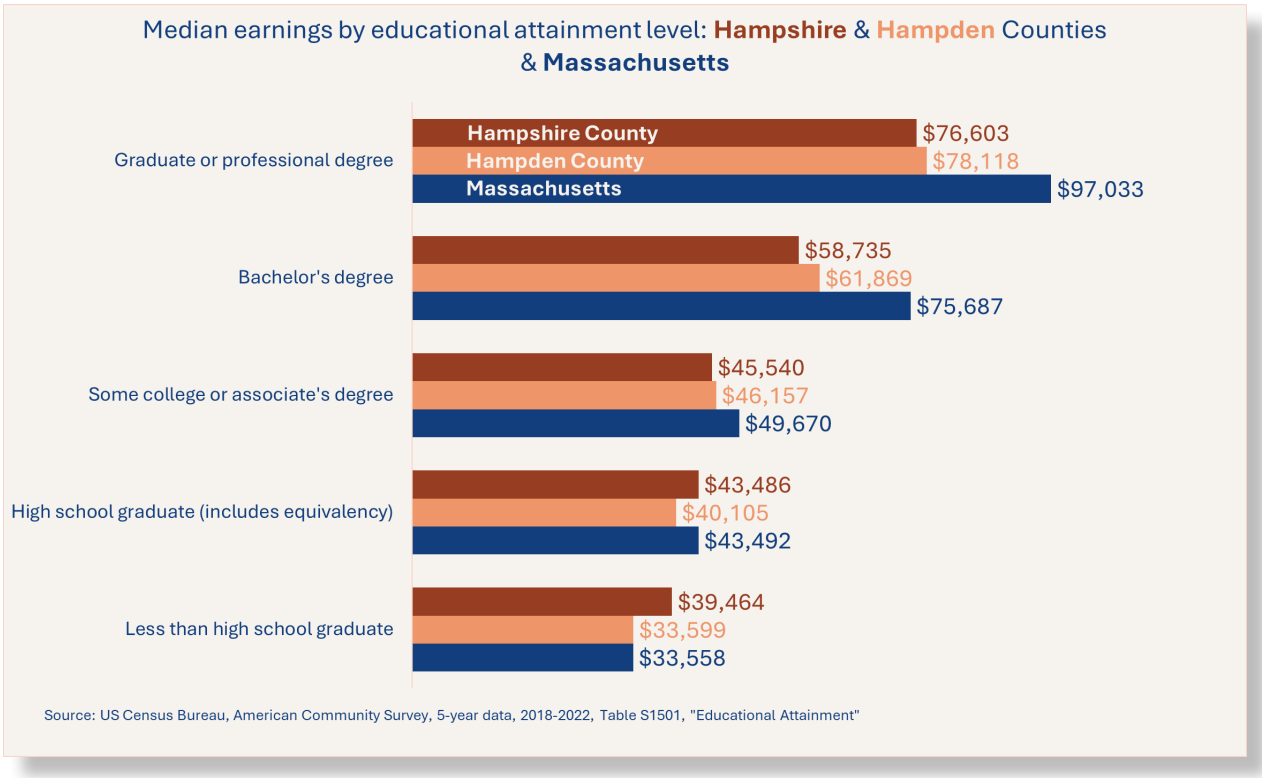




Educational Attainment varies considerably by race and ethnicity, with non-Hispanic white and Asian residents attaining bachelors degrees or higher in larger percentages than residents who are Black, American Indian, Hispanic, or of two or more races.

The educational attainment level of geographies within the PV EDD varies considerably, with Hampshire County's pattern most closely resembling the statewide pattern of educational attainment. While the "bachelor's degree or higher" threshold has been the focus of most discussions of educational attainment, we can learn how to better shape education and workforce supports to ensure that every individual is able to pursue and complete their educational goals. The Census Bureau may also want to consider adding data that identifies when individuals have pursued shorter term certifications, and we all would do well to remember that the lived experiences of workers often prepares them for levels of work previously restricted to those with degrees or diplomas (the so-called "paper ceiling").

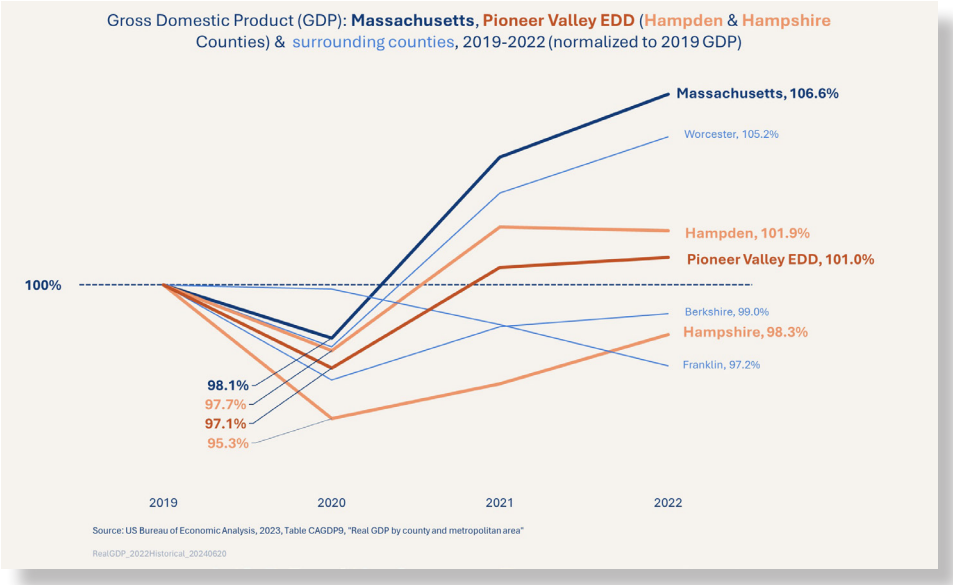




The importance of educational attainment for achieving financial security can be seen throughout the region, as well as statewide, with median earnings growing for each level of educational attainment achieved.

Closer Look at the PV EDD Economy

Tracking the economic output of the region is best achieved by looking at data showing the area's Gross Domestic Product (GDP, sometimes referred to as Gross Regional Product (GRP) when looking at regions smaller than the state level). The Figure below indexes the GDP for Massachusetts, the combined Pioneer Valley Economic Development District (PV EDD), Hampden and Hampshire Counties, and also the neighboring counties of Berkshire and Worcester. All regions experienced a substantial reduction in economic output in 2020, resulting from the COVID-19 pandemic. By 2022, the economies of Massachusetts, Worcester County and Hampden County had achieved economic output surpassing the inflation-adjusted 2019 output, while Berkshire, Hampshire, and Franklin Counties continued to have output less than that achieved prior to the COVID-19 recession. On the relative strength of Hampden County's recovery, the combined PV EDD economy surpassed pre-COVID levels despite Hampshire County's ongoing struggles.



[2] Data comparing GDP across regions and time are using "real" (inflation-adjusted) GDP.

GDP by Sector

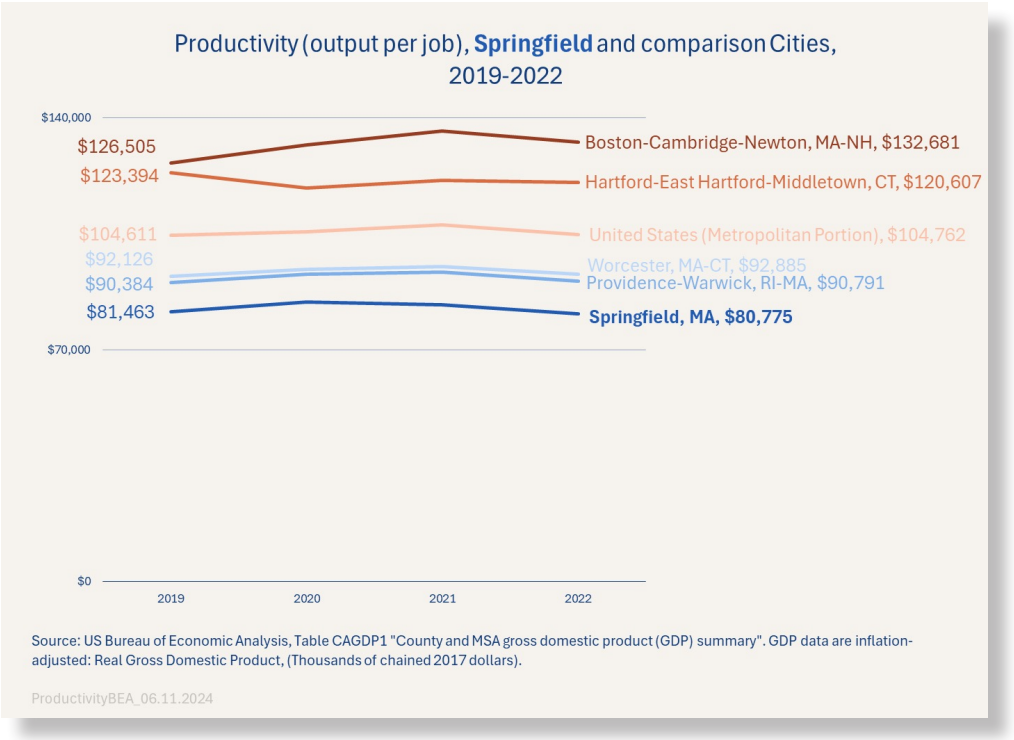
The table below, sorted by the contribution of each industry sector to the overall economy of the PV EDD, shows recent trends, including the impact of the COVID-19 recession on each sector's contribution to GDP, and the relative success at recovering from the pandemic.

Region	Sector	2018	2019	2020	2021	2022	Sparklines (blue marker = lowest value)	▲ 2019 to 2022 ($)	▲ 2019 to 2022 %
PVEDD	**All industry total**	**$ 29,983,056**	**$ 30,622,739**	**$ 29,735,953**	**$ 30,809,436**	**$ 30,916,169**		**$ 293,430**	**1.0%**
PVEDD	Government and government enterprises	$ 5,426,819	$ 5,416,291	$ 5,133,381	$ 5,084,601	$ 5,241,605		$ (174,686)	-3%
PVEDD	Health care and social assistance	$ 4,164,853	$ 4,276,969	$ 4,088,626	$ 4,221,211	$ 4,380,264		$ 103,295	2%
PVEDD	Real estate and rental and leasing	$ 3,742,802	$ 3,950,074	$ 3,909,439	$ 3,960,110	$ 4,072,075		$ 122,001	3%
PVEDD	Wholesale trade	$ 1,930,656	$ 2,014,399	$ 2,252,966	$ 2,705,103	$ 2,581,047		$ 566,648	28%
PVEDD	Professional and business services	$ 2,133,176	$ 2,161,763	$ 2,132,654	$ 2,276,018	$ 2,382,890		$ 221,127	10%
PVEDD	Manufacturing	$ 2,610,256	$ 2,514,749	$ 2,393,960	$ 2,461,027	$ 2,296,753		$ (217,996)	-9%
PVEDD	Finance and insurance	$ 2,072,789	$ 2,126,604	$ 2,312,710	$ 2,290,961	$ 2,202,358		$ 75,754	4%
PVEDD	Retail trade	$ 1,866,106	$ 1,961,164	$ 1,859,086	$ 1,905,658	$ 1,840,796		$ (120,368)	-6%
PVEDD	Construction	$ 1,154,537	$ 1,138,168	$ 1,091,811	$ 1,081,972	$ 993,856		$ (144,312)	-13%
PVEDD	Educational services	$ 1,024,123	$ 1,034,099	$ 922,063	$ 923,467	$ 970,718		$ (63,381)	-6%
PVEDD	Accommodation and food services	$ 910,541	$ 970,463	$ 652,317	$ 804,148	$ 867,983		$ (102,480)	-11%
PVEDD	Information	$ 610,940	$ 694,301	$ 668,326	$ 718,837	$ 766,314		$ 72,013	10%
PVEDD	Other services (except gov't and gov't enterprises)	$ 787,376	$ 795,161	$ 717,579	$ 744,031	$ 742,753		$ (52,408)	-7%
PVEDD	Transportation and warehousing	$ 700,594	$ 724,442	$ 665,764	$ 688,039	$ 687,698		$ (36,744)	-5%
PVEDD	Utilities	$ 525,478	$ 486,403	$ 698,659	$ 647,299	$ 608,485		$ 122,082	25%
PVEDD	Arts, entertainment, and recreation	$ 256,462	$ 258,175	$ 148,874	$ 228,588	$ 274,324		$ 16,149	6%
PVEDD	Agriculture, forestry, fishing and hunting	$ 46,446	$ 75,144	$ 64,113	$ 59,446	$ 57,031		$ (18,113)	-24%
PVEDD	Mining, quarrying, and oil and gas extraction	$ 19,602	$ 30,261	$ 29,732	$ 12,666	$ 10,432		$ (19,829)	-66%

Productivity

In 2022, Springfield ranked 250th out of 384 Metropolitan Statistical Areas (MSAs) in terms of productivity (GDP per job), falling short of other regional MSAs including Boston-Cambridge-Newton, Hartford-East Hartford-Middletown, Worcester, and Providence-Warwick.

Of the top 100 MSAs (by size of local economy, i.e. GDP), Springfield MSA ranked 94th. However, it is significant that it made the top 100 list, where it is above Tulsa, Oklahoma and El Paso, Texas.



Source: US Bureau of Economic Analysis, Table CAGDP1 "County and MSA gross domestic product (GDP) summary". GDP data are inflation-adjusted: Real Gross Domestic Product, (Thousands of chained 2017 dollars).

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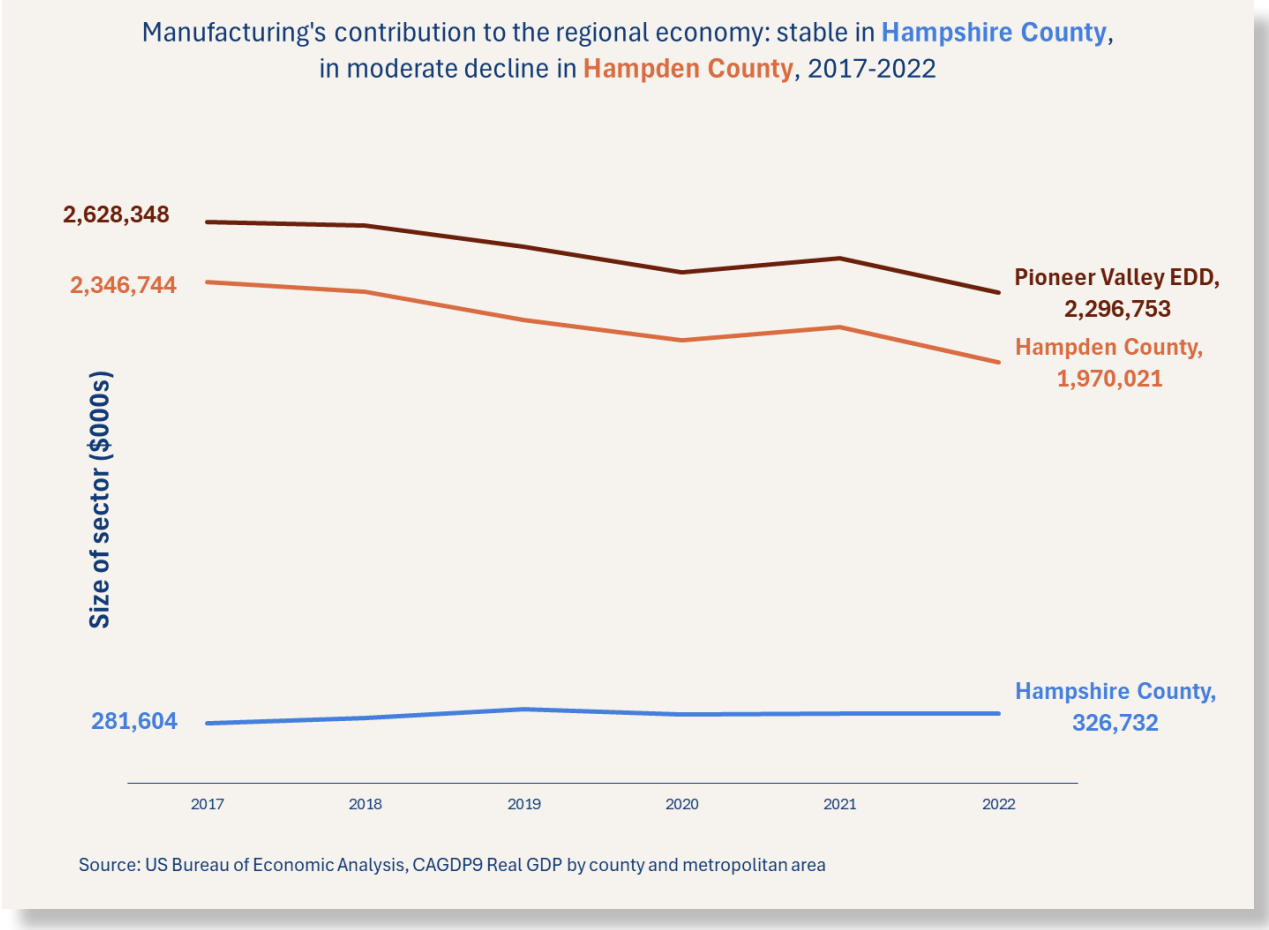
Manufacturing

Manufacturing is a small but steady component of the Hampshire County economy, but its prominence in Hampden County has been decreasing for decades and continues to do so. In recent years, precision-manufacturing in the PV EDD has been a growing sector, offsetting declines in other areas such as machinery, plastics, and wood products. As Artificial Intelligence (AI) and robotics play a growing role within many manufacturing processes, the overall impact on the region's economic output and employment remains uncertain. While it seems unlikely that manufacturing will fully return to its "glory days", when workers—often unionized—could earn family sustaining wages without significant post-secondary education or training, the PV EDD is well positioned to benefit from growth in high-value added manufacturing, and from processes that fully leverage the strengths of the education and training that has sustained the workforce of the Knowledge Corridor.



Employment Concentration

In the tables below, industry sub-sectors are broken down into industry groups, identified by their 4-digit NAICS codes, allowing us to get a more accurate sense of the industries where we have a regional concentration of jobs that exceeds the concentration of jobs at the national level. This measure is known as the location quotient. Hampden County has 46 industry groups with location quotients exceeding 1.25 (where a quotient of 1 would indicate the same concentration as seen at the national level.) Notable in these data is the relatively high concentrations among these 46 industry groups of industry groups in the manufacturing sector and also in health care and social assistance.

In Hampshire County, famously home to five prominent colleges and universities, industry group 6113, Colleges, universities, and professional schools has a location quotient of 10.26, indicating that the concentration of employment in this group in Hampshire County exceeds the national concentration for that industry group by a factor of 10+. Comparing Hampshire and Hampden Counties, the relative lack of concentrated groups of manufacturing employment in Hampshire County is also noteworthy.

Industry group concentration in Hampden County

Industry Group (4 digit NAICS code)	Average Annual Employment	Average Annual Pay	Location Quotient (Employment)
NAICS 4854 School and employee bus transportation	2,169	$30,847	8.92
NAICS 3336 Engine, turbine, and power transmission equipment manufacturing	643	$75,714	5.27
NAICS 3329 Other fabricated metal product manufacturing	1,746	$67,498	4.74
NAICS 3328 Coating, engraving, heat treating, and allied activities	812	$65,235	4.67
NAICS 3327 Machine shops; turned product; and screw, nut, and bolt manufacturing	1,764	$80,981	3.93
NAICS 3252 Resin, synthetic rubber, and artificial and synthetic fibers and filaments manufacturing	473	$109,671	3.73
NAICS 6241 Individual and family services	14,553	$27,722	3.72
NAICS 3115 Dairy product manufacturing	682	$70,411	3.13
NAICS 6232 Residential intellectual and developmental disability, mental health, and substance abuse facilities	2,603	$45,976	3.11
NAICS 6214 Outpatient care centers	4,238	$100,624	2.99
NAICS 6242 Community food and housing, and emergency and other relief services	817	$45,361	2.81
NAICS 4855 Charter bus industry	80	$39,233	2.7
NAICS 3399 Other miscellaneous manufacturing	1,005	$69,197	2.6
NAICS 6222 Psychiatric and substance abuse hospitals	432	$72,323	2.59
NAICS 4453 Beer, wine, and liquor retailers	567	$29,974	2.45
NAICS 5241 Insurance carriers	3,561	$154,785	2.23
NAICS 5161 Radio and television broadcasting stations	345	$73,235	2.16
NAICS 4572 Fuel dealers	192	$57,976	2.04
NAICS 6219 Other ambulatory health care services	935	$63,259	2.03
NAICS 8134 Civic and social organizations	927	$23,381	2.03
NAICS 6243 Vocational rehabilitation services	713	$45,006	1.9
NAICS 3335 Metalworking machinery manufacturing	405	$61,746	1.9
NAICS 6221 General medical and surgical hospitals	11,671	$65,209	1.81
NAICS 6113 Colleges, universities, and professional schools	2,836	$53,897	1.7
NAICS 3261 Plastics product manufacturing	1,340	$61,559	1.69
NAICS 4859 Other transit and ground passenger transportation	232	$28,601	1.69
NAICS 6231 Nursing care facilities (skilled nursing facilities)	3,138	$51,947	1.67
NAICS 3231 Printing and related support activities	816	$61,773	1.67
NAICS 2211 Electric power generation, transmission and distribution	887	$167,139	1.66
NAICS 5629 Remediation and other waste management services	381	$77,245	1.61
NAICS 1114 Greenhouse, nursery, and floriculture production	367	$48,755	1.59
NAICS 3279 Other nonmetallic mineral product manufacturing	167	$75,051	1.57
NAICS 3333 Commercial and service industry machinery manufacturing	182	$83,308	1.54
NAICS 6233 Continuing care retirement communities and assisted living facilities for the elderly	1,845	$36,311	1.48
NAICS 8133 Social advocacy organizations	506	$49,521	1.48
NAICS 6223 Specialty (except psychiatric and substance abuse) hospitals	500	$64,610	1.47
NAICS 4241 Paper and paper product merchant wholesalers	227	$73,812	1.46
NAICS 5131 Newspaper, periodical, book, and directory publishers	548	$69,130	1.44
NAICS 4244 Grocery and related product merchant wholesalers	1,540	$70,881	1.43
NAICS 6116 Other schools and instruction	948	$26,788	1.43
NAICS 6216 Home health care services	2,957	$41,151	1.37
NAICS 6117 Educational support services	370	$44,686	1.37
NAICS 8122 Death care services	241	$42,059	1.34
NAICS 8129 Other personal services	701	$39,609	1.3
NAICS 5615 Travel arrangement and reservation services	311	$56,618	1.27
NAICS 4884 Support activities for road transportation	192	$64,620	1.27

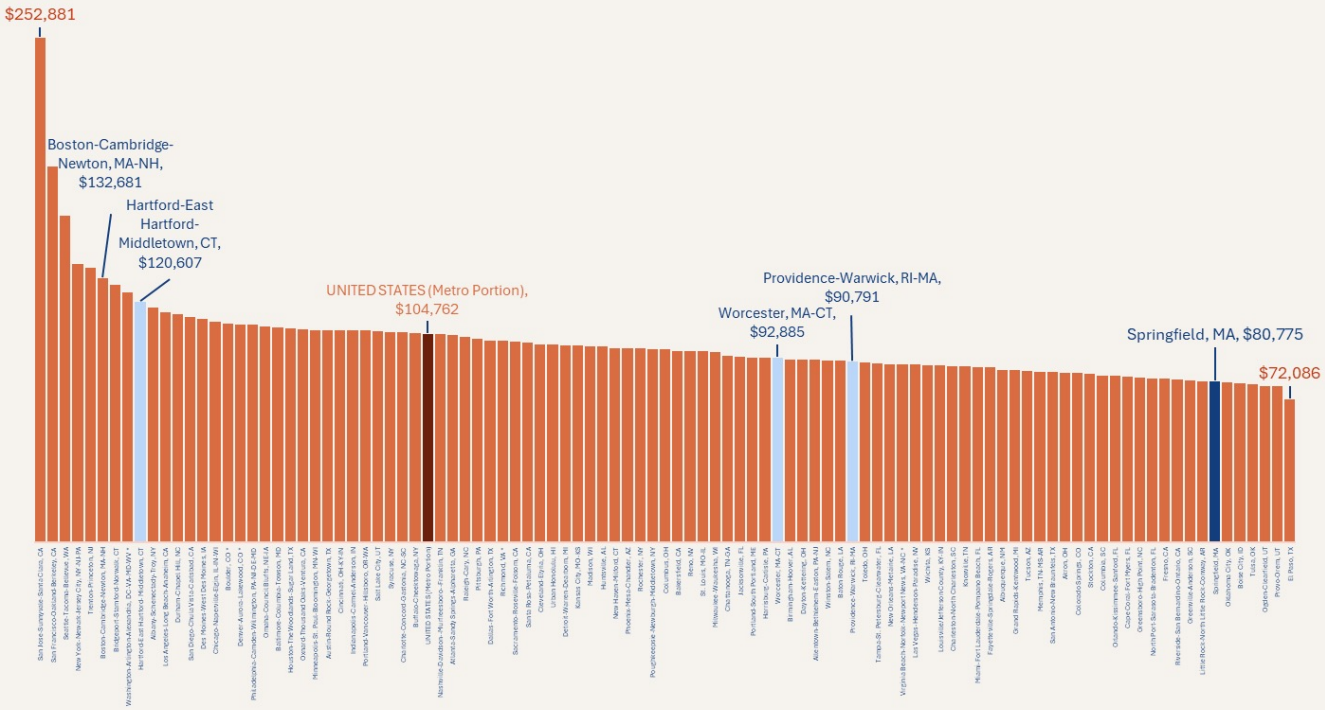
Source: US Bureau of Economic Analysis, Quarterly Census of Employment and Wages, 2023

Industry group concentration in Hampshire County

Industry Group (4 digit NAICS code)	Average Annual Employment	Average Annual Pay	Location Quotient (Employment)
NAICS 6113 Colleges, universities, and professional schools	5,535	$60,254	10.26
NAICS 4572 Fuel dealers	202	$79,584	6.63
NAICS 6117 Educational support services	495	$66,873	5.68
NAICS 1112 Vegetable and melon farming	190	$31,363	5.47
NAICS 8133 Social advocacy organizations	366	$63,086	3.31
NAICS 3222 Converted paper product manufacturing	377	$85,587	3.26
NAICS 6242 Community food and housing, and emergency and other relief services	298	$50,576	3.18
NAICS 4233 Lumber and other construction materials merchant wholesalers	336	$67,948	3.01
NAICS 3121 Beverage manufacturing	395	$79,804	2.84
NAICS 4599 Other miscellaneous retailers	583	$39,157	2.82
NAICS 4592 Book retailers and news dealers	81	$29,666	2.74
NAICS 4453 Beer, wine, and liquor retailers	197	$31,634	2.64
NAICS 4452 Specialty food retailers	268	$26,788	2.61
NAICS 4884 Support activities for road transportation	126	$51,835	2.57
NAICS 6232 Residential intellectual and developmental disability, mental health, and substance abuse facilities	671	$43,355	2.48
NAICS 7213 Rooming and boarding houses, dormitories, and workers' camps	10	$21,247	2.27
NAICS 6116 Other schools and instruction	485	$32,982	2.26
NAICS 3345 Navigational, measuring, electromedical, and control instruments manufacturing	362	$106,727	1.98
NAICS 4551 Department stores	755	$27,369	1.83
NAICS 3327 Machine shops; turned product; and screw, nut, and bolt manufacturing	255	$82,315	1.76
NAICS 8134 Civic and social organizations	255	$22,605	1.73
NAICS 4591 Sporting goods, hobby, and musical instrument retailers	363	$32,290	1.72
NAICS 5621 Waste collection	147	$59,831	1.63
NAICS 4451 Grocery and convenience retailers	1,919	$33,288	1.6
NAICS 3399 Other miscellaneous manufacturing	198	$96,138	1.59
NAICS 5192 Web search portals, libraries, archives, and other information services	122	$109,688	1.55
NAICS 4594 Office supplies, stationery, and gift retailers	131	$24,320	1.49
NAICS 5131 Newspaper, periodical, book, and directory publishers	181	$66,909	1.47
NAICS 4442 Lawn and garden equipment and supplies retailers	113	$36,789	1.42
NAICS 6111 Elementary and secondary schools	556	$52,821	1.39
NAICS 6241 Individual and family services	1,743	$30,432	1.38
NAICS 4249 Miscellaneous nondurable goods merchant wholesalers	186	$73,688	1.33
NAICS 7121 Museums, historical sites, and similar institutions	98	$39,913	1.33
NAICS 6214 Outpatient care centers	596	$55,917	1.3
NAICS 6231 Nursing care facilities (skilled nursing facilities)	785	$56,390	1.29
NAICS 7224 Drinking places (alcoholic beverages)	227	$23,963	1.28
NAICS 2389 Other specialty trade contractors	415	$78,931	1.27

Source: US Bureau of Economic Analysis, Quarterly Census of Employment and Wages, 2023

Productivity (GDP/job) for 100 largest MSA economies, 2022



Source: US Bureau of Economic Analysis, Table CAGDP1 "County and MSA gross domestic product (GDP) summary". GDP data are inflation-adjusted: Real Gross Domestic Product, (Thousands of chained 2017 dollars).

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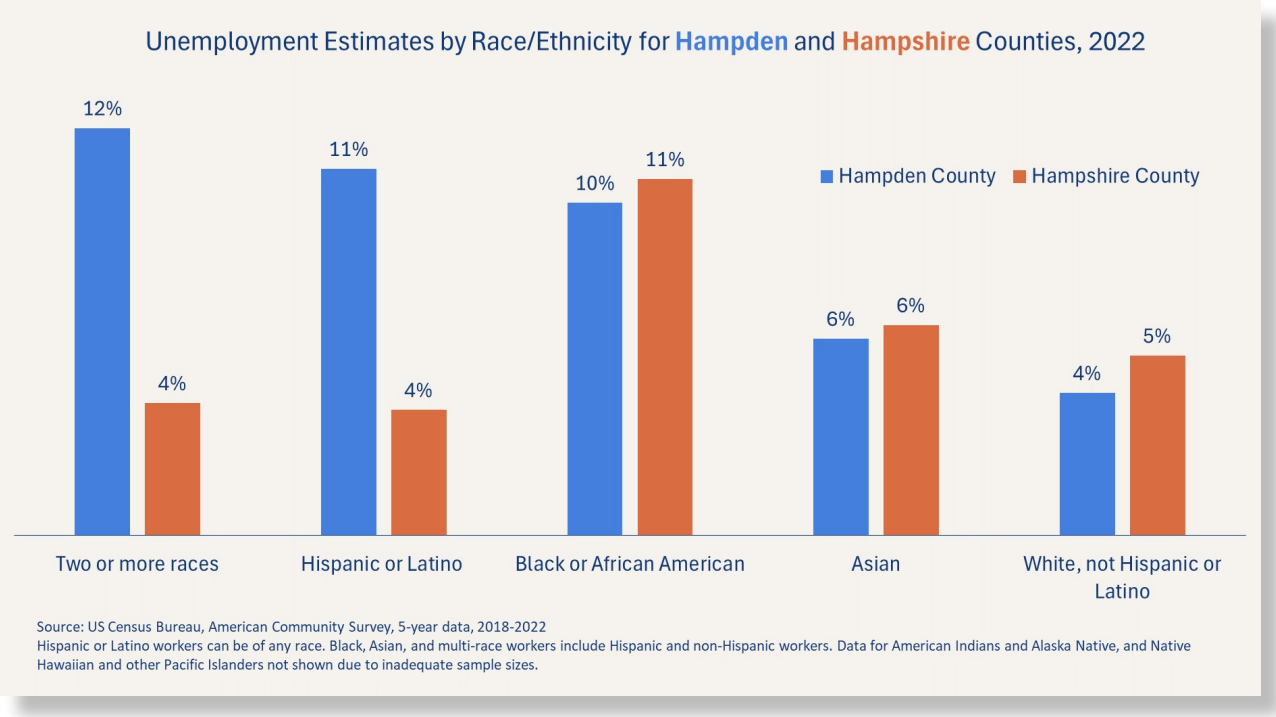
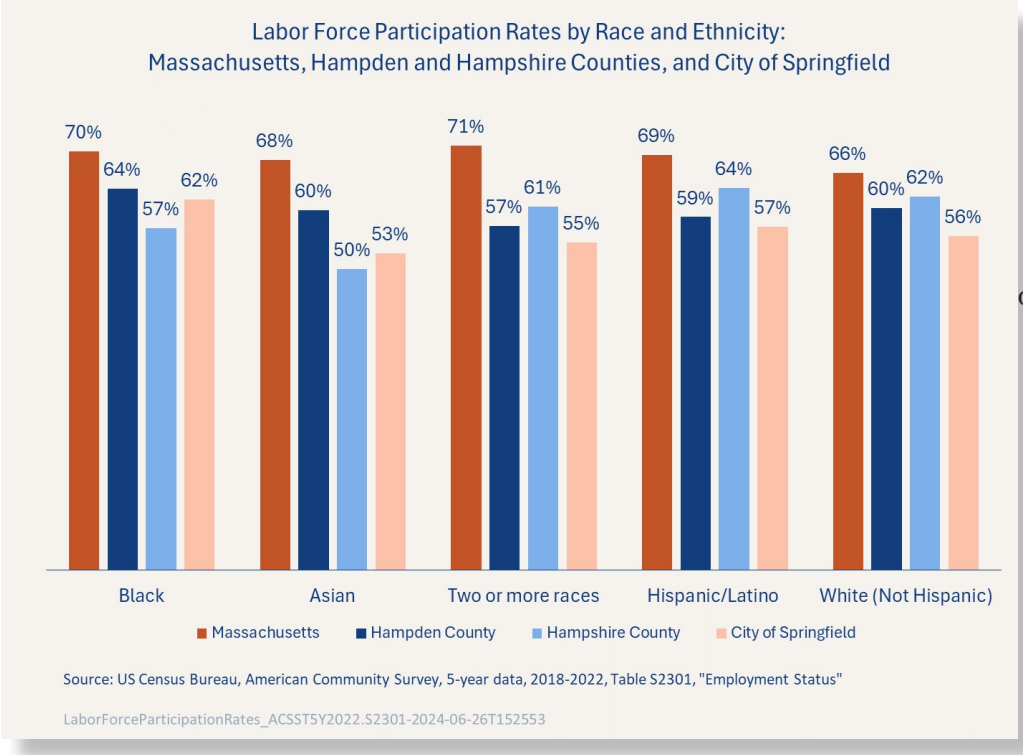
Labor/Workforce

In a previous section we noted the patterns of unemployment across the region leading up to the recession caused by the COVID-19 pandemic. Notably, unemployment rates typically follow fairly consistent patterns, with white non-Hispanic workers enjoying lower levels of unemployment. While this pattern holds true for Hampden County, the unique characteristics of Hampshire County make it less accurate there. Because of much larger population in Hampden County, the region-wide rates run much closer to the Hampden County estimates.

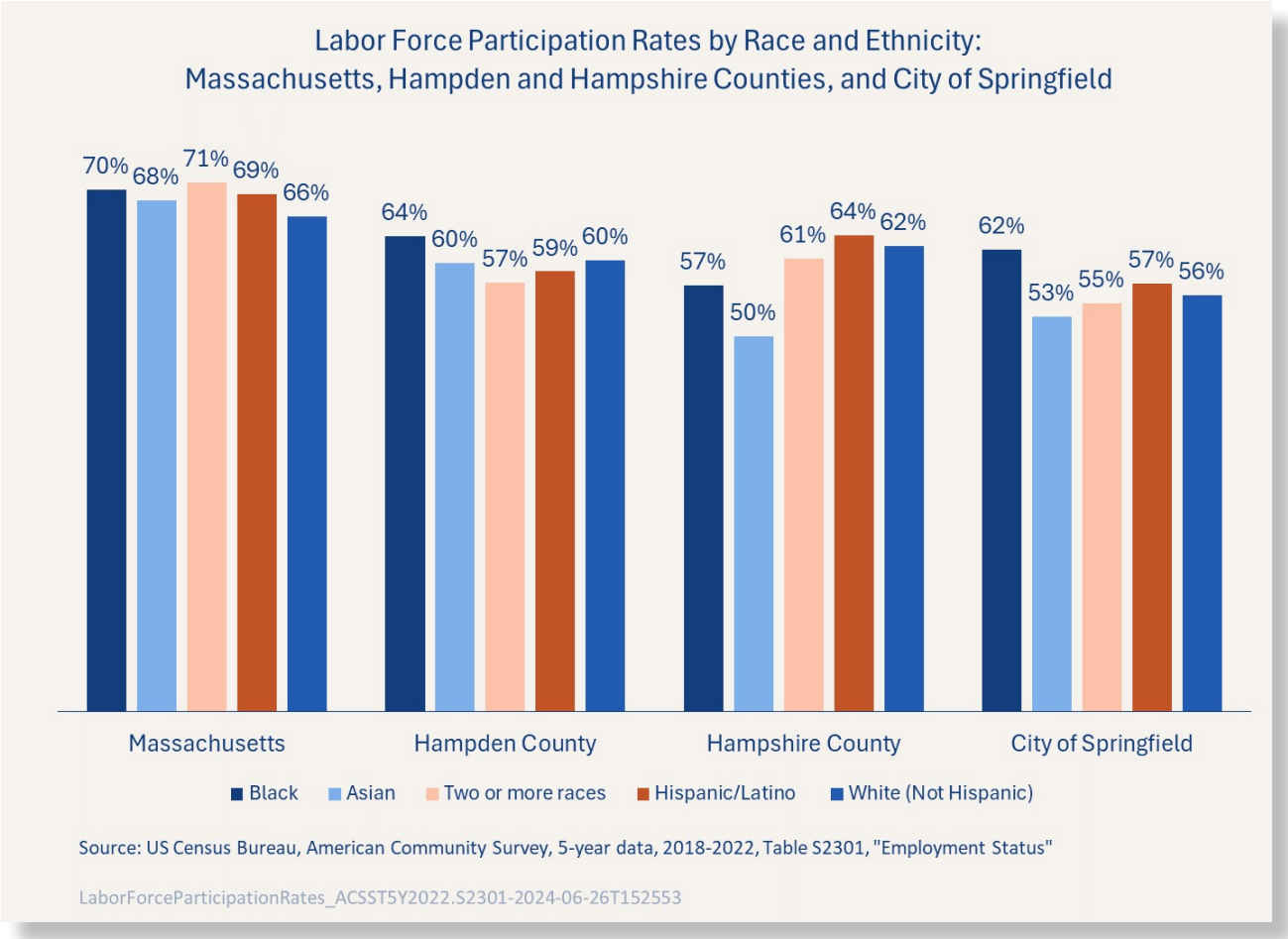


Labor Force Participation Rates

The charts below each present labor force participation rates by race & ethnicity. The first chart clusters different race/ethnic groups by geography, facilitating a comparison participation rates by region. Both Hampden and Hampshire Counties (as well as the City of Springfield) trail statewide participation rates across all race/ethnicity groups.



The second chart facilitates comparison across races and ethnicities. Notably, within each region, labor force participation rates are fairly consistent across race and ethnic groups. In most geographies, participation rates for Black and Latinx workers slightly surpass rates for non-Hispanic white workers."



Average Annual Pay

Payment for jobs throughout Western Massachusetts is about two-thirds the statewide annual average of $90,168. In both Hampshire and Hampden Counties, payment per job was 67% of statewide average ($60,420 and $60,319, respectively). Only neighboring Berkshire and Franklin Counties had lower average annual pay in 2023.

County	State	Average Annual Pay	Avg Pay/MA Avg Pay
Suffolk County	MA	$124,399	138%
Middlesex County	MA	$107,170	119%
Norfolk County	MA	$81,650	91%
Nantucket County/town	MA	$76,061	84%
Essex County	MA	$74,044	82%
Dukes County	MA	$68,733	76%
Worcester County	MA	$68,663	76%
Plymouth County	MA	$67,387	75%
Bristol County	MA	$62,248	69%
Barnstable County	MA	$62,159	69%
Hampshire County	**MA**	**$60,420**	**67%**
Hampden County	**MA**	**$60,319**	**67%**
Berkshire County	MA	$60,174	67%
Franklin County	MA	$53,891	60%
Massachusetts		**90,168**	

Source: US BLS, Quarterly Census of Employment and Wages, 2023

Employment by race/ethnicity and industry sector

In the table below, we see the share of employment by each race/ethnicity group in each industry sector in Hampshire County. Comparing to the Grand Total row, we can see in which industries workers are concentrated (or excluded) by race/ethnicity. For example, we see that Hispanic or Latino workers represent 3.8% of jobs across all sectors but are disproportionately concentrated in Retail Trade (5.1%), Accommodation and Food Services (5.9%), and Information (5.9%), while their share of jobs in the Professional, Scientific and Technical Services super-sector (1.4%), Transportation and Warehousing (1.2%), and Agriculture, Forestry, Fishing and Hunting (1.3%) is disproportionately low.
Similarly, for Black or African American workers, they are 1.7% of the Grand Total, but are more concentrated in Health Care and Social Assistance (3.2%), Wholesale Trade (2.5%), and Agriculture, Forestry, Fishing and Hunting (6.7%). They are also well-represented in Public Administration (3.2%) and Educational Services (2.6%). Conversely, Black workers are under-represented in Manufacturing (0.1%), Professional, Scientific and Technical Services (0.9%), and Management of Companies and Enterprises (0%).

Asian workers make up a high percentage of Management workers (6.6%) compared to their overall representation (3%). Other races are proportionately less represented.

Hampshire County sector employment shares by race/ethnicity	White	Hispanic or Latino	Asian	Black or African American	Two or More Races	American Indian or Alaska Native	Other	Native Hawaiian or Other Pacific Islander
Grand Total	89.8%	3.8%	3%	1.7%	1.6%	0.1%	0%	0%
Educational Services	84.9%	3.5%	6%	2.6%	2.6%	0.1%	0.1%	0.1%
Health Care and Social Assistance	89.3%	4.3%	1.9%	3.2%	1.3%	0.1%	0%	0%
Retail Trade	88.8%	5.1%	3%	1.1%	2.1%	0%	0%	0%
Manufacturing	92.3%	4.2%	1.7%	0.1%	1.7%	0%	0%	0%
Accommodation and Food Services	86.4%	5.9%	5.1%	1.5%	0.9%	0.2%	0%	0%
Construction	96.1%	2.3%	0.2%	0.3%	1.1%	0%	0%	0.1%
Professional, Scientific, and Technical Services	95.8%	1.4%	1.5%	0.9%	0.4%	0.1%	0%	0%
Other Services (except Public Administration)	89.8%	5.2%	3%	0.2%	1.6%	0.3%	0%	0%
Public Administration	91.8%	3.8%	0.5%	3.2%	0.7%	0%	0%	0%
Finance and Insurance	89.6%	2.2%	4.2%	1.4%	2.5%	0%	0%	0%
Transportation and Warehousing	96.1%	1.2%	0.6%	0.6%	1.5%	0%	0%	0%
Admin & Support/Waste Mgmt & Remediation Svs	93.2%	4.9%	0.3%	0.7%	0.8%	0%	0%	0%
Arts, Entertainment, and Recreation	89.9%	2.9%	4.2%	0.6%	2.2%	0.2%	0%	0%
Wholesale Trade	90.9%	0.9%	2.9%	2.5%	2.8%	0%	0%	0%
Information	88.8%	5.9%	1.7%	1.7%	1.2%	0%	0.6%	0%
Real Estate and Rental and Leasing	91.2%	3.3%	4.5%	0.6%	0.3%	0%	0%	0%
Utilities	97.7%	0.2%	0%	0%	2.1%	0%	0%	0%
Agriculture, Forestry, Fishing and Hunting	90.3%	1.3%	0%	6.7%	1%	0%	0.8%	0%
Mining, Quarrying, and Oil and Gas Extraction	100%	0%	0%	0%	0%	0%	0%	0%
Management of Companies and Enterprises	93.4%	0%	6.6%	0%	0%	0%	0%	0%

Source: Massachusetts Executive Office of Labor and Workforce Development, https://public.tableau.com/app/profile/eolwd/viz/IndustryWorkforceDemographicsNew/LocalWorkforceDashboard, "Analysis: Local Workforce Demographics by Industry"

Data are sorted in descending order by size of total sector employment (i.e. number of jobs). To determine whether a race or ethnic group is either concentrated in or excluded from each industry Super Sector, compare share of employment with share in Grand Total row.

Similarly, below is an illustration of the share of employment by race/ethnicity group in each sector for Hampden County. Hispanic or Latino workers represent 16.2% of jobs across all sectors but are disproportionately concentrated in several areas, most significantly in Agriculture, Forestry, Fishing and Hunting (44.6%) due to their essential work on local farms to cultivate local produce and other crops. They are also more concentrated in Health Care and Social Assistance (22.6%), Accommodation and Food Services (26.6%), and Admin and Support/Waste Mgmt & Remediation Services (23.3%). Their share of jobs in Professional, Scientific and Technical Services (6.2%), Finance and Insurance (7.8%), and Management of Companies and Enterprises (0%) is disproportionately low.

Similarly, for Black or African American workers, they are 6.5% of the Grand Total, but are more concentrated in Health Care and Social Assistance (10%) and Public Administration (9.3%). Conversely, Black workers are under-represented in Professional, Scientific and Technical Services (3.9%) and Management of Companies and Enterprises (0%).

In Hampden County, Asian workers are not as strongly represented in Management of Companies and Enterprises (0%) as in Hampshire County (6.6%) compared to their overall representation (2.5%). In both counties, they are more highly represented in Accommodation and Food Services, predominantly in the hotel industry. In Hampden County, they are more highly represented in Finance and Insurance (4.6%).

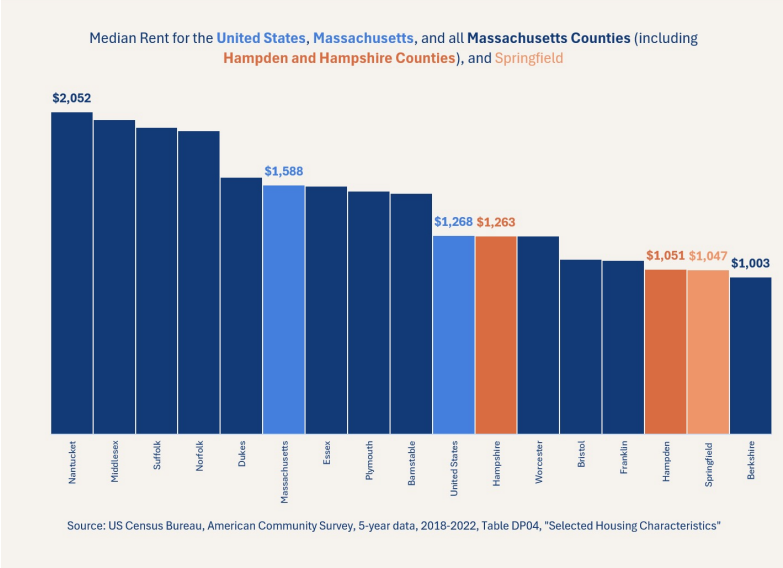
As in Hampshire County, other races are proportionately less represented in all sectors, except for a high percentage of people of Two or More Races in Management of Companies and Enterprises in Hampden County (13.8 % compared to 1.5% Grand Total).

Hampden County sector employment shares by race/ethnicity	White	Hispanic or Latino	Black or African American	Asian	Two or More Races	American Indian or Alaska Native	Other	Native Hawaiian or Other Pacific Islander
Grand Total	73.1%	16.2%	6.5%	2.5%	1.5%	0.2%	0.1%	0%
Health Care and Social Assistance	63.7%	22.6%	10%	2.3%	1.1%	0.1%	0.1%	0%
Educational Services	80.8%	8.8%	5.7%	2.5%	2%	0.1%	0.1%	0%
Retail Trade	73.9%	15.2%	5.9%	3.4%	1.4%	0%	0.3%	0%
Manufacturing	70.1%	20.3%	5.2%	3.2%	1.2%	0%	0.1%	0%
Accommodation and Food Services	62.6%	26.6%	5.3%	4.3%	1.2%	0.1%	0%	0%
Finance and Insurance	80.2%	7.8%	5.3%	4.6%	2%	0%	0%	0.1%
Public Administration	74.3%	14.2%	9.3%	0.6%	1.4%	0.2%	0%	0%
Construction	84.2%	9.5%	4.7%	0.4%	0.9%	0.4%	0%	0%
Professional, Scientific, and Technical Services	86.2%	6.2%	3.9%	2.2%	1.4%	0%	0%	0%
Other Services (except Public Administration)	75.6%	14.8%	5%	2.9%	1.4%	0.4%	0%	0%
Transportation and Warehousing	77.6%	12.6%	6.8%	1.1%	1.7%	0%	0.1%	0%
Admin & Support/Waste Mgmt & Remediation Svs	66.3%	23.3%	7.5%	0.2%	0.7%	2%	0%	0%
Wholesale Trade	78.4%	14.7%	5%	0.8%	1.1%	0%	0%	0%
Arts, Entertainment, and Recreation	78.5%	12.3%	4.8%	0.6%	3.9%	0%	0%	0%
Information	77.8%	12.5%	5.1%	0.2%	4.4%	0%	0%	0%
Real Estate and Rental and Leasing	69.6%	17.6%	7.8%	1.5%	3.6%	0%	0%	0%
Utilities	84.5%	7.3%	3.1%	4.6%	0.5%	0%	0%	0%
Agriculture, Forestry, Fishing and Hunting	51.9%	44.6%	3.1%	0%	0%	0%	0.4%	0%
Management of Companies and Enterprises	86.2%	0%	0%	0%	13.8%	0%	0%	0%
Mining, Quarrying, and Oil and Gas Extraction	100%	0%	0%	0%	0%	0%	0%	0%

Source: Massachusetts Executive Office of Labor and Workforce Development, https://public.tableau.com/app/profile/eolwd/viz/IndustryWorkforceDemographicsNew/LocalWorkforceDashboard, "Analysis: Local Workforce Demographics by Industry"

Data are sorted in descending order by size of total sector employment (i.e. number of jobs). To determine whether a race or ethnic group is either concentrated in or excluded from each industry Super Sector, compare share of employment with share in Grand Total row.

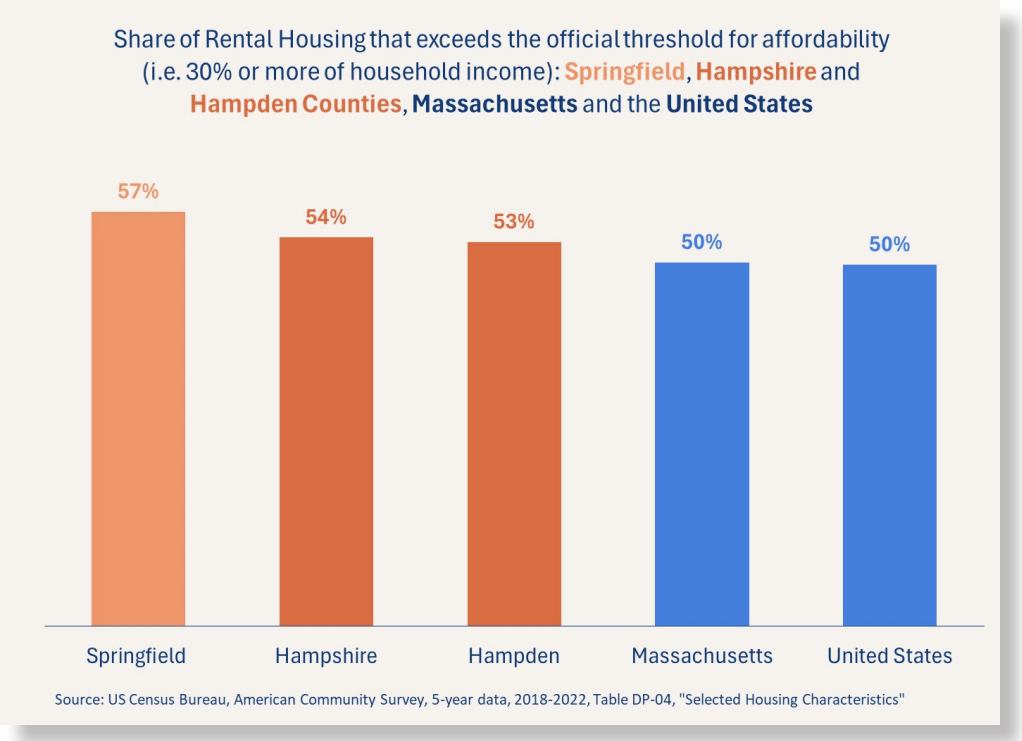
Housing



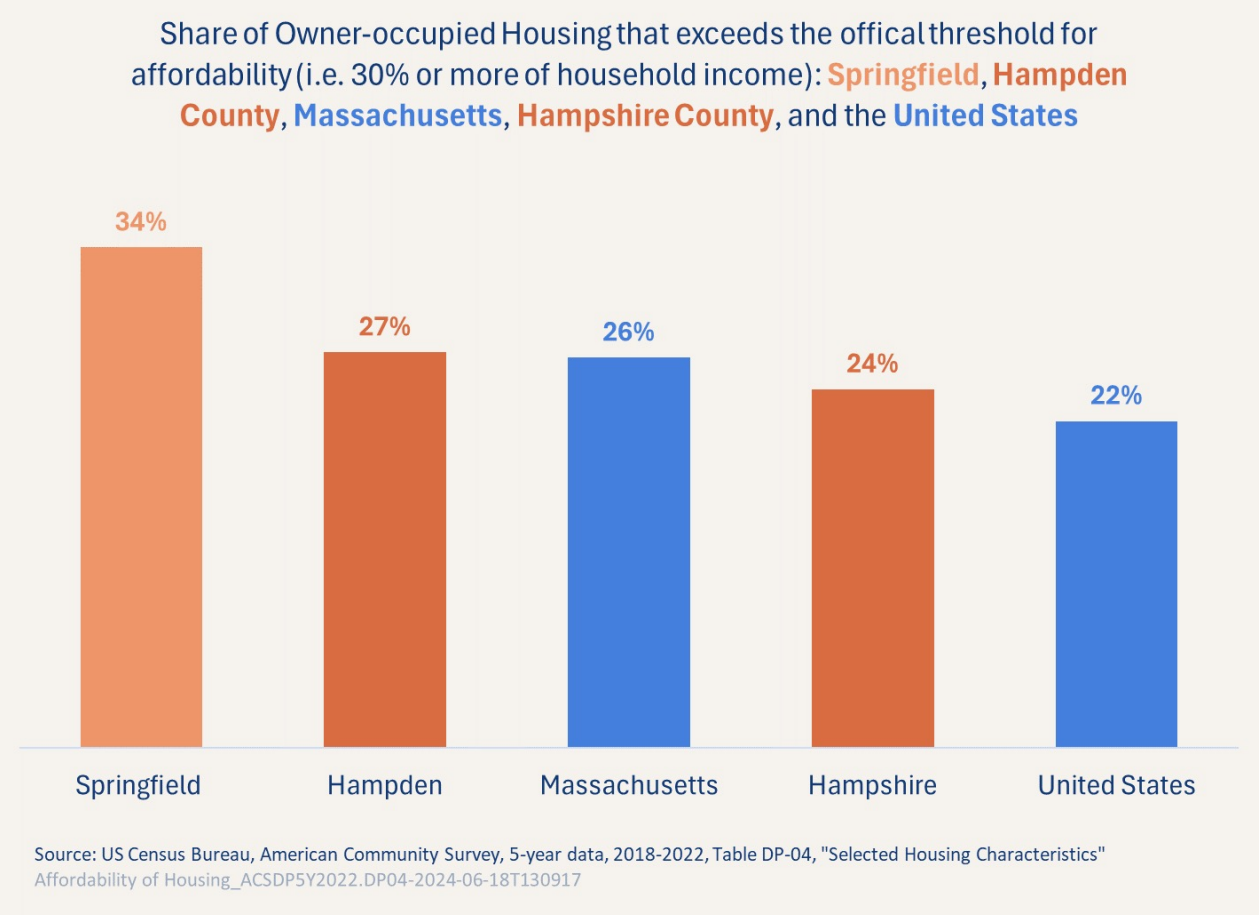
About a tenth of the region's single-family detached housing consists of rental structures, though a few small communities in the region have over three-fifths of their rental housing stock as single-family detached homes, such as Blandford, Middlefield, Montgomery, Tolland, Chesterfield, and Westhampton. Some of these communities have zoning that discourages or prohibits the construction of housing other than single family homes. Most communities in the region restrict multi-family housing, which is typically the most affordable housing choice for low-income people. In the region, at least 13 communities allow multifamily housing by-right or through a limited site-plan review process in one or more zoning districts in the community while at least 11 allow multifamily housing by special permit from the Planning Board or Zoning Board of Appeals in one or more zoning districts in the community. Nineteen communities prohibit multifamily housing.

While many families struggle to afford adequate housing in the Pioneer Valley EDD, rental housing costs in the region are comparatively low. Hampshire and Hampden Counties both have median rents that are lower than the state and national averages, and Hampden County has the second lowest median rent, higher than only Berkshire County.

Despite median rents that are lower than the United States and Massachusetts averages, with lower incomes in our region than in Eastern Massachusetts, a larger share of rental housing exceeds the threshold normally considered for "affordability", which is anything that is 30% or more of household median income.

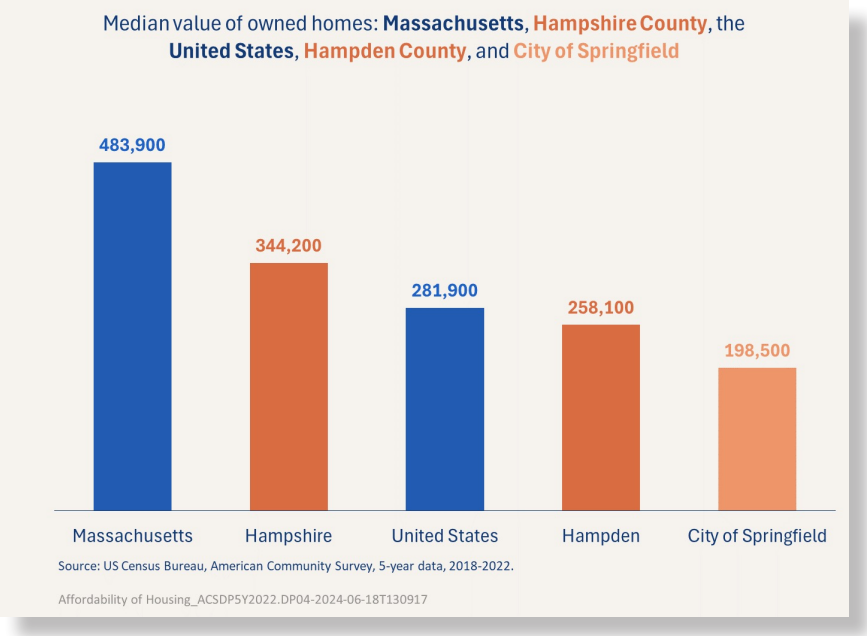


The share of owner-occupied homes that are unaffordable is considerably smaller than rental units, largely due to the higher incomes of those who own their homes. We see that about one in three homeowners in the City of Springfield face housing costs that exceed 30% of their income, while for owners in Hampden County, Massachusetts, and Hampshire Counties, approximately one quarter of owners are housing cost burdened, all at rates exceeding the national average

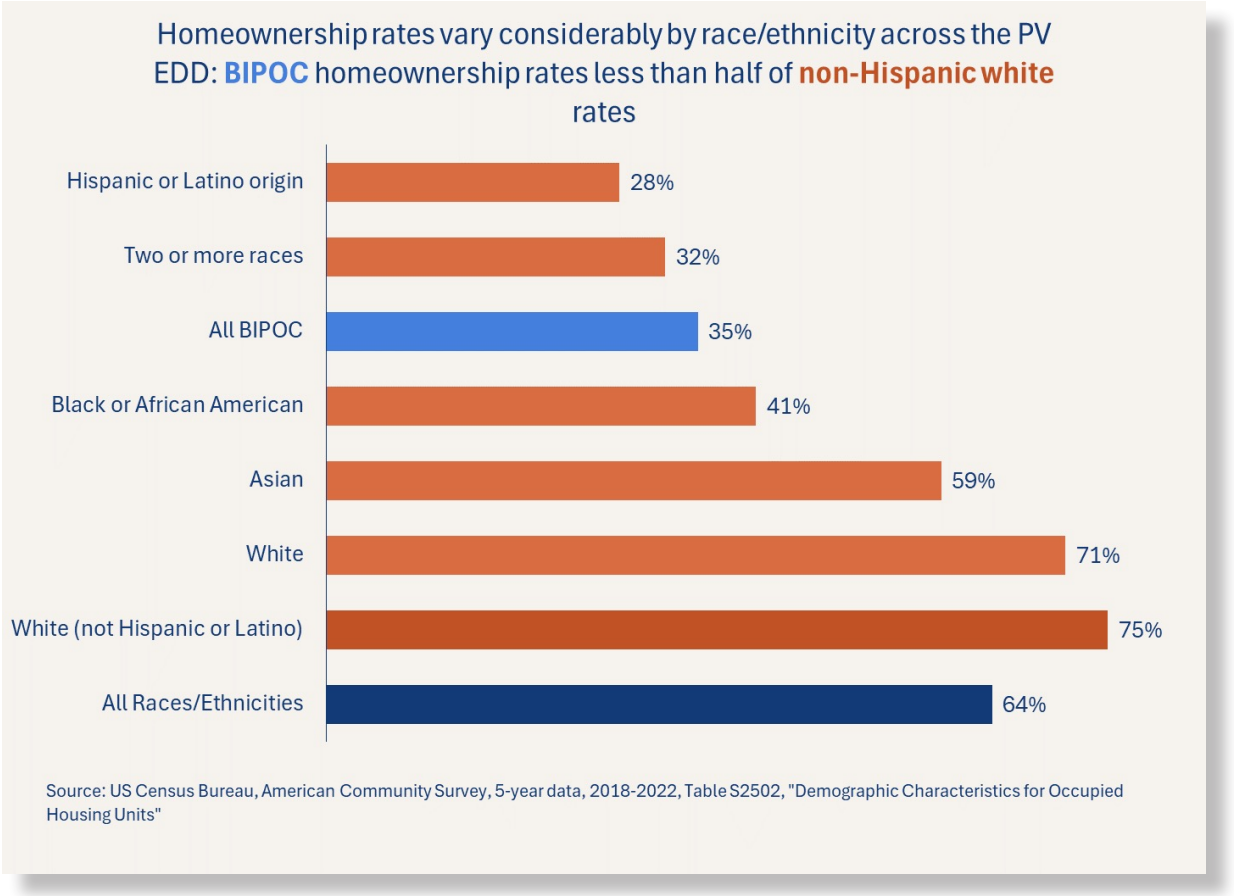


Asset Building via Home Ownership

While the lower prices of homes in Western Massachusetts should make home ownership more affordable, the lower income levels largely offset that advantage. And while homeownership is traditionally one of the main avenues for wealth building, the lower home values in Western Massachusetts greatly limit the capacity for wealth accumulation via homeownership. In the figure below, we see that the median value of owner-occupied homes in Hampden County – at $258,100 – falls below both the national and statewide median values ($281,900 and $483,900). In fact, of the fourteen counties in Massachusetts, the five counties with the lowest median values are the five most Westerly counties – Worcester, Franklin, Hampshire, Hampden, and Berkshire.



Disparities in homeownership by race and ethnicity (see below) across the region make it much harder for BIPOC residents to build assets through that avenue. Indeed, recent history has shown that for people who are BIPOC, predatory lending practices often result in homeownership being a path to asset stripping rather than asset building for those families. And of course, homeownership by BIPOC residents has been structurally impeded over a period of several decades through redlining and its more modern manifestations.



Natural Resources

A clean and healthy environment is vital for everyone's quality of life. This includes the natural diversity of biological species and communities, and the ability of ecosystems to be resilient. The human impact on our environment often creates an imbalance in nature, disrupting ecological integrity and human enjoyment of our landscape. This section of the CEDS discusses the natural environment of the region and the challenges confronting it.

Geology and Soils

Geologic History

The Connecticut River Valley formed primarily through the forces of continental drift, volcanic activity, and glacial scouring. During the Triassic Period (180 to 220 million years ago), two faults formed and then were pulled apart by continental drift. This formed the Triassic basin that comprises the river valley today. Volcanic venting and fissures created rock formations including the Holyoke Range.

The rock formations created in the Triassic Period were then further shaped in the Pleistocene Era, or the "ice age," one million years ago. Contractions and movement of glaciers 10,000 feet thick left deposits and glacial till at the base of the Holyoke Range. Glacial till also contributed to the formation of Lake Hitchcock, a large lake extending from Middlefield, Connecticut to Lyme, New Hampshire. In addition to the meanderings of the Connecticut River over thousands of years, the sediments of Lake Hitchcock's ancient bed form the rich soils along the river valley upon which farmland is now prevalent in the Valley.

Soils and Slopes

The soils in the Valley are considered some of the most fertile in the nation. These prime soils were created by glacial outwash deposits and the deposits of the Connecticut River. These soils are deep (sometimes up to 12 feet in some areas), well drained, and good for both agriculture and tree growth. These areas are some of the most threatened agricultural landscapes in the country, as indicated by the American Farmland Trust, due to their prime soils that are also of ideal quality for development.
Cradling the valley are hills and ridges formed by lava flows and then carved by glacial movements and melting millions of years ago. In particular, the Holyoke Range is covered by glacial ice deposits of thin-to-bedrock soils and forest. The steep slopes and loose soils at the base of the ridges are limitations to development but these hills and valleys offer excellent recreational opportunities.

Water Resources

Rivers

Connecticut River

The defining waterway in the region is the Connecticut River. It is New England's longest river, flowing 410 miles from the Canadian border with New Hampshire, through four states, to the Long Island Sound. The 7.2-million-acre watershed is home to 2.4 million people, 396 municipalities, 51 designated urban areas, many thousands of species of flora and fauna, and more than 1.5 million acres of land in public and private conservation. An additional 4.75 million acres in the watershed remain undeveloped and unprotected, affording opportunity for even greater conservation. Designated an American Heritage River, its watershed is the focus of the Conte National Wildlife Refuge and considered the region's most important natural asset. The river also became the first federally designated National Blueway under the National Park Service in 2012.

The Connecticut River is a natural and environmental resource of great regional and interstate importance, and is a key element in the bi-state area's quality of life and economic prosperity. Unfortunately, the water quality in some sections of the Connecticut River in Massachusetts and Connecticut does not consistently meet Class B Swimmable/Fishable standards due to water pollution discharges in wet weather which include combined sewer overflows and urban stormwater runoff. The high cost of river clean-up creates

financial hardships for the region's three urban core communities. In addition, there are other sections which are suffering from impaired water quality due to streambank erosion and non-point source pollution. Significant federal, state and local resources have been spent on river improvements; however, limitations on access to the river and public information about river recreation are hampering the public's opportunity to enjoy these improvements.

Under Administrative Orders from the U.S. Environmental Protection Agency (EPA) to abate combined sewer overflows (CSOs) to the Connecticut River, communities in Western Massachusetts have been working for more than 20 years, eliminating 99 of the 163 CSO outfalls in the region. As of 2024, over 50% of the CSO problem has been eliminated on the Connecticut River in Massachusetts, with over $200 million expended to date to correct this problem.

Other Major Rivers

The two major sub-basins within the Connecticut River watershed in Hampshire and Hampden counties are the Westfield and Chicopee Rivers. The Westfield River Watershed encompasses a total of 517 square miles in Hampshire, Hampden, and Berkshire Counties of western Massachusetts and is bordered by the Deerfield, Hoosic, Housatonic, Farmington, and Connecticut River Watersheds. The Westfield River is a major tributary to the Connecticut River made up of three branches, the East, Middle and West Branches. The watershed forms a general "L" shape, approximately 48 miles long and 20 miles wide, extending from the Berkshire Mountains in the west to the Connecticut River in the east. The river drops 2,000 feet in elevation before entering the Connecticut River. Thin soils in the hills combined with steep gradients produce extreme and rapid differences in the rate of flow, occasional flooding, and at times low water conditions. Roughly 78 miles in 10 towns of the Westfield River and its 3 branches have been designated as a National Wild and Scenic River, the first in Massachusetts. The watershed has a population density of less than half a person per acre—the second lowest density of all Massachusetts watersheds, likely a contributing factor in making it one of the state's best coldwater fisheries.

The river and other lakes and ponds in the Westfield River watershed are widely used for fishing, swimming, kayaking and canoeing. Sections of the West, Middle and East Branches are noted in the Appalachian Mountain Club's River guide for Massachusetts Connecticut and Rhode Island. The East Branch provides one of the longest whitewater runs in Massachusetts. The winter pool release at the Knightville Dam triggers the annual Westfield River Whitewater Canoe Races, the longest continuing running race in the country, now in its 53rd year. The Appalachian Trail crosses October Mountain State Forest in Becket. The West Branch also contains 10 beautiful stone arch railroad bridges known as the Keystone Arches. Listed in the National Register of Historic Places, the arches are a popular trail destination point.

Chicopee River basin encompasses all or part of 39 cities and towns in 4 counties; it is the largest of the 27 major basins delineated for planning purposes by the state; drainage area of 721 square miles; comprised of 4 major basins: Swift River (215 square miles), Ware River (218 square miles), Quaboag River (212 square miles), and Chicopee River (76 square miles); basin contains 9 wastewater treatment plants, 6 active landfills, and 111 dams.

Pollution

Historical and ongoing pollution of the Connecticut River has had impacts on fish and wildlife populations and on human health. At least four reports and studies identify key issues and findings:

- PCBs are present in fish along the entire length of the river; coal tar is present in the river in Holyoke. (The Health of the Watershed: A Report of the Connecticut River Forum, January 1998, New England Interstate Water Pollution Control Commission)

- EPA-New England has worked with all New England states to substantially reduce regional mercury emissions since the late 1990s. Mercury is mostly deposited in the Connecticut River watershed from the atmosphere. Much of this mercury originates from Midwest power plants and urbanized eastern seaboard emissions. (Connecticut River Fish Tissue Contaminant Study, May 2006, US EPA, New England Regional Lab)

Drinking Water

Most smaller communities in the region have public drinking water supplies from local wells. However, the urban areas and many other towns obtain water from several reservoirs in the region. The largest of these are the Cobble Mountain Reservoir in Blandford and the Quabbin Reservoir in central Massachusetts, owned by the Massachusetts Water Resources Authority. The Quabbin, a 412 billion gallon reservoir covers 39 square miles with 181 miles of shoreline. Recreational activities are regulated and limited to protect 3 million people's drinking water. also supplies water to local water departments in 42 greater Boston and MetroWest areas.

Dams and Culverts

There are 224 dams regulated by the Office of Dam Safety in the Pioneer Valley region. To be regulated, these dams are in excess of 6 feet in height (regardless of storage capacity) and have more than 15-acre feet of storage capacity (regardless of height). There are also many dams in the region that, because they fall below these parameters, are known as non-jurisdictional dams. Of the regulated dams in the region, 42 have a hazard index rating of "high," 90 are rated "significant" hazard, and 92 are rated "low" hazard. Hazard index rating is a level of risk determined by the likelihood that a dam failure (an uncontrolled release of impounded water) would result in loss of life or substantial property damage.

There are 2,885 culverts in the region, many of which are not sized to handle more recent storm events. Dams, culverts, and rapid changes in flow all present challenges to fish passage and are detrimental to the success of many species that must travel up and down stream. Rapid changes in river flow can be difficult for many aquatic species to adjust to, though such flow can be beneficial to power generators and paddlers. There is an ongoing challenge to balance the needs of a "working river" (flood control, recreation, and power generation) with wildlife and environmental protection objectives.

The fragmentation of dams and poorly designed culverts is one of the primary threats to aquatic species in the United States. In the Connecticut River basin in MA and CT, there are 1,422 dams, which translates to densities of one dam per 6.6 km of river. Impacts on aquatic species involve loss of access to quality habitat for one or more life stages of a species, including limiting the ability of anadromous fish species to reach preferred freshwater spawning habitats from the sea, and preventing brook trout populations from reaching thermal refuges. (Northeast Aquatic Connectivity: An Assessment of Dams on Northeastern Rivers, 2011)

Fisheries and Wildlife

A statewide fish consumption advisory for mercury exists. In 2008, the U.S. EPA issued a TMDL (Total Maximum Daily Load) for mercury load reduction to meet federal and state water quality standards. The mercury TMDL coupled with the results of the Connecticut River Fish Tissue Study in 2000 (US EPA) have resulted in expanded fish advisories for the Connecticut River afor additional toxins including PCBs, DDT, and dioxin. At-risk populations are children under 12, women who are pregnant or may become pregnant, women of child-bearing age, or breast-feeding women.

Recreational fishing on the Connecticut River and its tributaries is widespread. It is unknown what percent of the fishing on the river is subsistence fishing. More information needs to be gathered about subsistence fishing levels on the river, and outreach to these communities about fish advisories needs to be conducted. The Connecticut River connects an immense region that is home to nearly 5,000 wildlife and plant species and provides migratory pathways for both aquatic and avian species. This region is also highly

attractive for human settlement and projections based on current development trends indicate that some 505 square miles will be converted from rural to exurban between 2000 and 2020. Significant problems for preservation of streams and wildlife habitat include loss of riparian buffer areas and habitat along streams; introduction of non-native invasive species to riverine areas; and physical barriers that block river connectivity.

Many species are adversely affected by the spread of housing across the landscape. Exurbanization and suburbanization of the landscape will undoubtedly reduce habitat for most native species. These rapid growth rates, combined with poor development practices, could result in significant habitat loss.

There are 10 federally threatened or endangered species in the watershed. Many species have inadequate protected habitat to ensure long-term viability in their natural range. Protection of habitat priorities identified by Natural Heritage and Endangered Species Program (NHESP) must continue. Threats to habitat include extensive habitat fragmentation and loss of connectivity. Residual habitats, both aquatic and terrestrial, are often degraded. Nonnative plant species (e.g., Water Chestnut, Japanese Knotweed, Phragmites, Fanwort and Purple Loosestrife) cover areas formerly occupied by native species.

A 2001 U.S. Fish and Wildlife Service survey provides compelling evidence of the importance of wildlife habitat to economic activity. Wildlife related expenditures (on fishing and hunting, and wildlife watching) in the four watershed states totaled $2.6 billion.

Silvio O. Conte National Fish and Wildlife Refuge was established to conserve the abundance and diversity of native plants and animals and their habitats in the 7.2-million-acre Connecticut River watershed in Connecticut, Massachusetts, New Hampshire and Vermont. A Comprehensive Conservation Plan and Environmental Impact Statement is currently under development that will include management alternatives, proposed vision and management goals.

Open Space and Recreation

The region is in a relatively rural area of the Commonwealth of Massachusetts and is known for its recreational resources. However, accessibility to parks and open space has been evaluated relative to the Environmental Justice areas in the Pioneer Valley and found that only 5.8% of protected open space and parks in Hampshire and Hampden counties are within Environmental Justice areas.

Regional Trails and Greenways

Major regional trail initiatives provide critically important opportunities for recreation and alternative forms of transportation. These initiatives also help to galvanize local and regional land protection efforts toward a common purpose. There are two types of regional trail initiatives: long-distance unpaved trails that pass through scenic protected lands and paved trails located on abandoned railroad beds and utility corridors.

The Metacomet-Monadnock Trail (M&M Trail) is a 114-mile-long (183 km) hiking trail that traverses the Metacomet Ridge of the Pioneer Valley region of Massachusetts and the central uplands of Massachusetts and southern New Hampshire. It is now part of the New England National Scenic Trail covers 235 miles from Long Island Sound across long ridges to scenic mountain summits in Connecticut and Massachusetts. The trail offers panoramic vistas and close-ups of New England's natural and cultural landscape: traprock ridges, historic village centers, farmlands, unfragmented forests, quiet streams, steep river valleys and waterfalls.

The historic Metacomet-Monadnock (M&M) Trail received a tremendous boost in public profile when it was joined with the Mattabesett Trail in Connecticut and officially designated by the National Park Service as The New England National Scenic Trail. Stretching 215 miles now from Long Island Sound in Guilford, Connecticut, to Mount Monadnock in New Hampshire, the trail showcases classic New England landscapes…long distance vistas with rural towns as a backdrop, agrarian lands, un-fragmented forests,

and large river valleys." Since the designation, the Appalachian Mountain Club and Massachusetts DCR have been at work to reroute parts of the trail in Massachusetts from privately owned lands to public lands at the Quabbin Reservoir. Advocates continue to work on land protection and easements to fully connect this trail system and to establish campsites for hikers.

The 47-mile Robert Frost Trail is another important resource for the region. Completed in 2004, the trail winds east from its start near Route 47 at the Hadley/South Hadley town line and then north to the Wendell State Forest. While the trail passes through some 10 towns, the Amherst Conservation Department and the Amherst Area Trails Committee have spearheaded much of the land protection and trial maintenance work to date.

Involving the work of 24 communities, the Mass Central Rail Trail will ultimately stretch from Boston to Northampton and eventually all the way to the New York state line. Locally known as the Norwottuck Rail Trail, the trail occupies the rail route built in 1887 by the Central Massachusetts Railroad Company to connect Boston and Northampton. In the Pioneer Valley Region, the trail is currently in place from Northampton, through Hadley and Amherst, and into Belchertown.

The Connecticut Riverwalk and Bikeway is a series of paved multi-use recreational pathways along the Connecticut River in Agawam, Chicopee, and Springfield.

The New Haven and Northampton Canal Rail Trail is known locally by many names locally—including the Manhan Rail Trail in Northampton and Easthampton, Westfield Columbia Greenway in Westfield, Southwick Rail Trail in Southwick, and Farmington Canal Trail in much of Connecticut—this rail trail will extend 84 miles from New Haven to Northampton when completed.

Threats to Natural Resources

Brownfields

The Pioneer Valley of western Massachusetts is one of America's oldest industrial regions. Bisected by the Connecticut River and crisscrossed by its whitewater tributaries, the Valley provided ideal conditions for early 19th century mills that required water for power, transportation, and waste disposal. In the decades following 1800, factories producing textiles, paper, shoes, machine tools, and firearms – including the famous Springfield rifle – supplanted former farm villages, creating new mill towns and urban neighborhoods. These were often true company towns, where local industrial firms provided and controlled their host communities' housing, shopping, schools, infrastructure and social and civic life. In 1960, employment in the Pioneer Valley's forty-three cities and towns was concentrated strongly in manufacturing, with more than 33% of workers in that sector. The area's household income was higher than the national average. Unfortunately, by the later 1960s, competition from other US regions and overseas combined with technological changes to reduce the area's competitive advantage for industry. The 1970s and '80s saw more than 45% of all regional manufacturers close. Industrial jobs fell to 19.7% of overall employment (1990), then to 11.6% (2008-2010), replaced largely by lower-paying service jobs. Household adjusted income fell to barely two-thirds of the national average in the same timeframe. As these industries closed or relocated outside of the region, their industrial footprint was left behind, significantly impacting the community.

In a bi-state survey of stakeholders along the Connecticut River conducted in Massachusetts and Connecticut in 2011 by PVPC, the top three issues identified relative to public access, recreation and greenways were:

1. Lack of protected open space for contiguous greenways and wildlife corridors;
2. Lack of public access facilities, such as public parks/conservation lands, bikeways and walking paths along the river; and,
3. Overuse of some river sections for water-based recreation. Informed by this feedback, PVPC developed the Pioneer Valley Regional Environment Plan to further analyze these issues in the Connecticut River watershed and identify strategies for addressing them.

The plan focuses on the following four environmental issues:

- Water Quality
- River Continuity and Habitat
- Parks and Open Space
- Vibrant Human-Riverfront Connections

Overview of Key Findings - Natural Resources

The Connecticut River has been cleaned up considerably over the past two decades and is now far more attractive for recreation. In many areas, however, the river has been fenced by highways, railroads and incompatible commercial development, which has reduced opportunities for public access. Some areas of the river are heavily used for recreation, while other areas are neglected. Communities need to reconnect with the river and find ways to bring people back to the riverfront. To reverse the longstanding cycle of riverfront neglect and abandonment, and to bring urban riverfront areas to life, it is critical to invest in riverfronts, and find ways to bring people back to the river. Flood control dikes, highways and railroad tracks along the Connecticut River have been imposing barriers to public access and recreation. However, these barriers have also kept open large sections of riverfront land which otherwise would have been developed.

The river is heavily used for recreational activities. Recreational use on upper Connecticut River in MA (above the Holyoke Dam) was estimated to be 130,000 recreation days in 1996. Most popular uses include motor boating (39%); boat fishing (26%); fish viewing (11%); camping (9%); picnicking and sightseeing (7%); non-motorized boating (1.7%). The majority of recreational use occurs on weekends. (Recreational use of CT River in MA above the Holyoke Dam, 2000, Louis Berger Group, Inc)

In addition to the abundant recreational use of the river, it also provides important habitat for over thirty state or federally listed endangered species including the Dwarf Wedge Mussel and the Puritan Tiger Beetle. The need to balance recreational use with the protection of wildlife and sensitive habitats is critical. High use can result in the introduction of invasive species from improperly cleaned boats. Boat wakes can contribute to streambank erosion as well as have impacts on wildlife, such as rare dragonflies and other insects that emerge from the riverbank. (UMASS, 2002)

Transportation

Roads and Bridges

The Pioneer Valley area is considered the crossroads of transportation in western Massachusetts. Situated at the intersection of the area's major highways, Interstate 90 (Massachusetts Turnpike) traveling east-west and Interstate 91 traveling north-south, the region offers easy access to all markets in the eastern United States and Canada. Major southern New England population centers are accessible within hours.

There are just over 4,402 miles of roadway in the Pioneer Valley region. Roadways are classified based on their design, speed, capacity, and level of access. It is also used to establish funding eligibility. All total, 1,500 miles of regional roads are eligible for federal aid. Local roads, which are not eligible for federal aid comprise approximately 66% of the regional roadway mileage. Cities and towns are responsible for the maintenance of over 82% of regional roadway miles.

The interstate expressways (I-90 and I-91) link most of the major urban centers in the region. The basic highway network, including interstate highways, U.S. numbered routes, state routes, and other traffic arteries, provides access to all municipalities in the region, both urban and rural. The pattern of principal arterial highways in the region is radial, extending outwards from each of the region's major centers, a consequence of development and topographic influences.

Regional Highway Statistics

- 4,402 Roadway Miles
- 1,500 Federal Aid Eligible Roadway Miles
- 14,171,000 Estimated Daily Vehicle Miles Travelled in 2020.
- 688 Bridges - 61 (9%) are Structurally Deficient

Of the existing transportation facilities in the Pioneer Valley region, major bridge crossings remain a focal point of regional transportation concerns, as many streets and highways converge into a limited number of crossings over the Connecticut, Westfield, and Chicopee rivers.

Driving Distances and Times from Springfield to Select Urban Centers

Destination	Distance in Miles	Estimated Driving Time
Albany	85	1.5 hours
Boston	91	1.5 hours
Montreal	301	5.5 hours
New York City	140	3.0 hours
Philadelphia	260	5.0 hours
Washington, DC	400	8.0 hours

Source: PVPC, Regional Transportation Plan for the Pioneer Valley - 2024 Update

Major Interstate Highways Serving the Pioneer Valley Region

Interstate Highway	Principal Orientation	Number of Interchanges in the Region	Road Mileage in the Region	Toll Road?
I-90	East/West	6	46.08	Yes
I-91	North/South	22	31.17	No
I-291	Connector (Springfield to I-90)	6	5.44	No
I-391	Connector (I-91 to Chicopee/Holyoke	6	3.82	No

Source: PVPC, Regional Transportation Plan for the Pioneer Valley - 2024 Update

The 2020 COVID-19 Pandemic resulted in large decreases in regional daily traffic volumes. Initially, very few people were driving. As people returned to work, many continued to do so from home, resulting in changes to traditional morning and afternoon peak hours. Daily traffic volumes increased in 2021 and in 2022 are closer to pre-pandemic levels.

In general, traffic on the region's roadways has been increasing. Between 1999 and 2009 the estimated number of daily vehicle miles traveled (DVMT) in the Pioneer Valley region rose nearly half a million miles per day, from about 14.76 million to about 15.23 million. The magnitude of increase is shared in the region's rural areas. The following table presents the commute times for each of the Pioneer Valley communities in 2000 and 2017. The 4.6% increase in commuter times can be attributed to several major trends including a rise in vehicle ownership and the onset of several major roadway improvement projects, such as the Great River Bridge in Westfield.

Passenger Rail and Other Transit Routes

The Pioneer Valley has a well-developed public transit system that includes local bus service, ADA and senior paratransit van service, intercity bus service, and passenger rail. In addition, there are formal and informal park-and-ride lots, as well as ridesharing and car rental services that offer more options for accessing and leveraging transit services. Train service was expanded to Northampton and Holyoke in 2015, and additional passenger rail services and facilities are expected began operating in the fall of 2019. All of these elements are vital contributors to mobility options for the region's residents.

The Pioneer Valley Transit Authority (PVTA), established in 1974, is the largest of the Commonwealth's 14 regional transit authorities. A total of 24 municipalities are members of the PVTA service area. PVTA oversees the operation of 189 buses and 142 vans throughout Hampden and Hampshire Counties, as well as two municipalities in Franklin County. The PVTA system has 42 scheduled bus routes that provide service in urban centers, as well as outlying suburban and rural areas.

Fourteen towns in the PVPC region (which are not members of PVTA) contract with the Franklin Regional Transit Authority (FRTA) based in Greenfield, for senior paratransit service. These towns are Blandford, Chester, Chesterfield, Cummington, Goshen, Huntington, Middlefield, Montgomery, Plainfield, Russell, Southampton, Southwick, Westhampton, and Worthington.

Intercity bus service in the region is provided by Peter Pan Bus Lines, Greyhound Lines and Megabus. These companies operate a mix of routes to destinations within the region, as well as connections throughout New England and the country. Other private bus carriers provide charters and package tours.

The regional transit system includes the following bus terminals and hubs:

- Springfield Union Station, an intermodal transportation center, is the major bus station in western Massachusetts, serving as the hub for 20 PVTA Springfield-area routes, Peter Pan regional service, and Greyhound regional routes.
- Holyoke Transportation Center is the hub for 8 PVTA routes, as well as limited service by Peter Pan.
- Northampton Bus Terminal is served by Peter Pan and Greyhound, with connections to 10 PVTA and FRTA routes at the nearby Academy of Music stop.
- Olver Transit Pavilion in Westfield, with PVTA service and a ValleyBike sharing station.

Passenger rail stations for Amtrak service are located at Springfield's Union Station (Lyman Street), Northampton Station (Pleasant Street), and Holyoke Station (Main Street). Amtrak's most frequent service is at Union Station, where 18 trains per day are available to and from Springfield that provide extensive service within the Northeast. Passenger rail service is provided on east-west (Lake Shore Limited) north-south (Vermonter) and regional (Northeast Corridor) routes through the region.

The Massachusetts Department of Transportation recently realigned Amtrak Vermonter service north of Springfield to restore passenger rail service to the Connecticut River line through Holyoke, Northampton and Greenfield. The success of this service has spurred interest in additional north/south passenger rail service. In the fall of 2019, MassDOT is expected to begin a multi-year pilot service between Springfield and Greenfield.

In addition, the Connecticut Department of Transportation's New Haven-Hartford-Springfield (NHHS) commuter rail project began operating service on November 12, 2018. The new service includes six additional trips per day (3 northbound and 3 southbound) between Springfield and New Haven.

The Springfield Union Station is currently served by 28 trains daily providing service in the northeastern U.S. and connections nationwide. Passenger rail service is provided on both East-West routes and North-South routes in the region. Most trains in Springfield operate south to New Haven as either Amtrak or

CTRail trains. Amtrak provides daily through service on the Vermonter between St. Albans Vermont and Washington D.C., with major stops at Springfield, Hartford, New York City and Philadelphia. The highest ridership origin-destination pair along the Vermonter route is Northampton, MA to New York City, NY. Valley Flyer service on the Connecticut River Line between Greenfield, MA and New Haven, CT is very successful and MassDOT has committed to permanently operating the route.

A long-distance train, the Lake Shore Limited serves Springfield by providing daily service between Chicago and Boston. PVPC has been actively engaged in advocating for additional passenger rail service to Boston. Efforts include a MassDOT initiated study of East/West rail that recommended additional daily trips and more recently the Massachusetts State Legislature's Western Mass Passenger Rail Commission.

North/South Rail Service

- Amtrak and CTRail
- 13 arrivals/13 departures
    - 5 CTRail
    - 7 Amtrak
    - 1 Vermonter
- 28,000 riders in 2017

East/West Rail Service

- Lake Shore Limited
    - Chicago to Boston
- Western Mass Passenger Rail Commission findings on expansion expected in late 2023.

Passenger Rail Terminals

- Springfield Union Station
- Holyoke
- Northampton

Commercial van shuttles serve an important segment of the region's transit market. Many operators focus on service to and from airports and rail stations in New England. Service to Bradley International is provided hourly from most locations in the Pioneer Valley. Service to Boston, Providence, and New York is also provided, though not on a scheduled basis. Non-profit organizations also operate shuttles, typically for their clients. Examples include municipal councils on aging, day care providers and social service agencies.

There are more than 20 taxi companies operating in the region. Taxi companies provide a vital link in the transportation system by offering mobility during times and at locations when public transportation is not available. Ride-sharing services have also become more widespread in the Pioneer Valley in the last several years.

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) utilizes technology in traffic control, communications, computer hardware and software to improve the performance of an existing transportation system. The dissemination of real-time travel information improves safety and efficiency while reducing congestion.

The ITS infrastructure is continually expanding in the region. Interstates 90, 91 and 291 have a network of cameras and variable message signs to assist in incident management. PVTA vehicles are equipped with technology to allow real time tracking of the fleet. The Massachusetts Turnpike converted to all electronic tolling in October of 2018. Massachusetts is a member of the E-ZPass Program, and its transponders are recognized by toll agencies/companies in 19 states.

Aviation

The Pioneer Valley is well served by air transportation facilities located within or adjacent to the region. Most air travel from the region goes through Bradley International Airport in Windsor Locks, Connecticut situated 15 miles south of the City of Springfield. The largest airport the Pioneer Valley region is the Westover Air Reserve Base and Metropolitan Airport facility in Chicopee and Ludlow. The Westfield-Barnes Airport is located in the City of Westfield and is a general aviation facility that also houses the Air National Guard 104th Tactical Fighter Group. Northampton Airport is a small privately owned airport serving both business and recreational uses.

Transportation of Goods

Interstates and rail lines in the Pioneer Valley enable the quick delivery of goods to some of the nation's largest cities. The proximity of the region to major and middle-sized cities allows goods from the Pioneer Valley to be quickly transported. Freight is moved in and out of the Pioneer Valley primarily by truck with rail, air and pipeline carrying the remaining goods.

Completed in 2020, the Pioneer Valley Regional Freight Plan identifies freight needs, reviews existing conditions of the current freight network, and assesses future potential for improvement and expansion of freight in coordination with the Massachusetts Freight Plan. MassDOT has started the process to update this plan.

Non-Motorized Transportation

Bicycling and walking are popular transportation options in the Pioneer Valley. Historic town centers, vibrant central business districts and a variety of destinations are within easy walking or bicycling distance from many residential areas. An expanding network of bikeways, sidewalks, and accommodating roadways provide residents with a variety of transportation alternatives. Many of the region's city centers offer easy accessibility for pedestrians and are supported by a strong transit network.

Currently seventeen communities provide over 90 miles of bicycle lanes, multi-use paths or "rail trails" in the region. Twelve communities provide nearly 50 miles of designated on-road bicycle facilities. Existing and proposed bicycle facilities can be viewed on this interactive map.
The Pioneer Valley Transit Authority supports a popular "Rack and Roll" bikes-on-buses program for the entire region. All fixed route buses are equipped with bicycle racks.

Pedestrian access and circulation are typically better in town or city centers due to the physical design of such places. Shops, offices, restaurants, and other amenities are generally clustered together and connected by a pedestrian network which is often more accessible and efficient than the vehicle network. Sidewalks are the most common infrastructure feature devoted to pedestrian circulation. The provision of sidewalks in the region varies with respect to location, quality, and function.

The Massachusetts Safe Routes to School program promotes healthy alternatives for children and parents in their travel to and from school. A total of 79 schools in the Pioneer Valley region actively participate in the program. Benefits include education on the value of walking and bicycling and funding for sidewalks, crosswalks, and traffic calming measures.

Valley Bike, a docked bicycle sharing system operated from 2018 - 2022 in Amherst (including UMass), Chicopee, Easthampton, Holyoke, Northampton, South Hadley, Springfield, and West Springfield. The fleet consists of electric-assist bicycles deployed at 71 stations. An interactive dashboard of ValleyBike data through 2021 is available here. ValleyBike is currently not in operation (2023) while the communities search for a new vendor. On average, 383 bicycles were available for use in 2022. The average distance travelled for each ride was 2 miles with most rides lasting 30 minutes or less.[3]

[3] Source: Pioneer Valley 2024 Regional Transportation Plan.

Land Use and Development Patterns

Land use trends in the Pioneer Valley over the past 50 years include the phenomena of suburban and rural sprawl, population growth and the net effect of immigration, growth in housing, and the pace of conversion of agricultural land to other uses. Urban sprawl over the past 40 years in the Connecticut River Valley has resulted in the loss of significant amounts of farmland, forestland, and riverine habitat, while commercial and residential land uses have expanded dramatically. The region is positioned for increased growth in the future due to its prime location at the crossroads of New England and its highly developable land base. Affordability and accessibility of the Connecticut River valley give it a high potential for economic development and rapid growth. In their 2006 report Conserving the Heart of New England: The CT River Watershed, The Trust for Public Land projected under current trends, 323,000 acres will be converted from rural to exurban between 2000 and 2020.

The Pioneer Valley region continues to experience a development trend that is unique in regions outside Boston and major urban areas of the Northeast: suburban sprawl without population growth. While the Valley's population has been relatively stable since 1990, the continued conversion of farms, forests and other undeveloped areas to low-density suburban single-family residential use is consuming land at a per capita rate that far exceeds that of regions where population is actually growing, such as the Southwest and California. This has several adverse impacts, summarized below.

- Loss of farmland and natural resources.
- Increased vehicle miles traveled and traffic.
- Increased greenhouse gas emissions and other air pollution from motorized vehicles.
- Increased impervious surfaces and stormwater runoff.
- Loss of community character.

Only 11% of prime farmed soils and 16% of other farmland is currently protected. More than a quarter of the farmland in the Connecticut River watershed was lost between 1982 and 2002. Although only 11% of the landscape is developed for commercial or residential purposes, this number increased by 31 percent from 1982 to 1997. Nearly 80% of the Connecticut River watershed is forested, with roughly 31% permanently protected from development. The U.S. Forest Service ranked portions of the watershed among the top 20 areas in nation with high development threats.

The region's farmland acreage has stabilized over the past decade, after several decades of steep declines. Farmland acreage in the Pioneer Valley substantially declined from the late 1950's to the 1990's, with most of the losses occurring by the late 1960's, according to the USDA Agricultural Census. During the past twenty years, Hampden County has held steady between 36-37, 000 acres of farmland, while Hampshire County has held steady at around 52,000 acres. Between 2002 and 2007, Hampshire County experienced modest gains in farmland. SOURCE: USDA Agricultural Census

The region's population trends and migration patterns have had significant implications for land use trends. Between the years 1971 and 1999, more than 30,000 acres of undeveloped land were converted to residential development, while 4,500 acres were developed for commercial and industrial uses. During this period, the communities of Westfield and Agawam experienced the greatest loss of cropland in the entire Pioneer Valley, losing nearly 2,400 acres. In that same time period, the communities with the greatest increase in commercial development were Holyoke, Westfield, West Springfield, and Agawam.
T
he upper reaches of the region are still primarily rural communities distinguished by unfragmented forests and scattered with agricultural, seasonal, and home-based businesses. The Greater Springfield area, including Westfield, Agawam, West Springfield, and Holyoke is urbanized, with the greatest job opportunities.

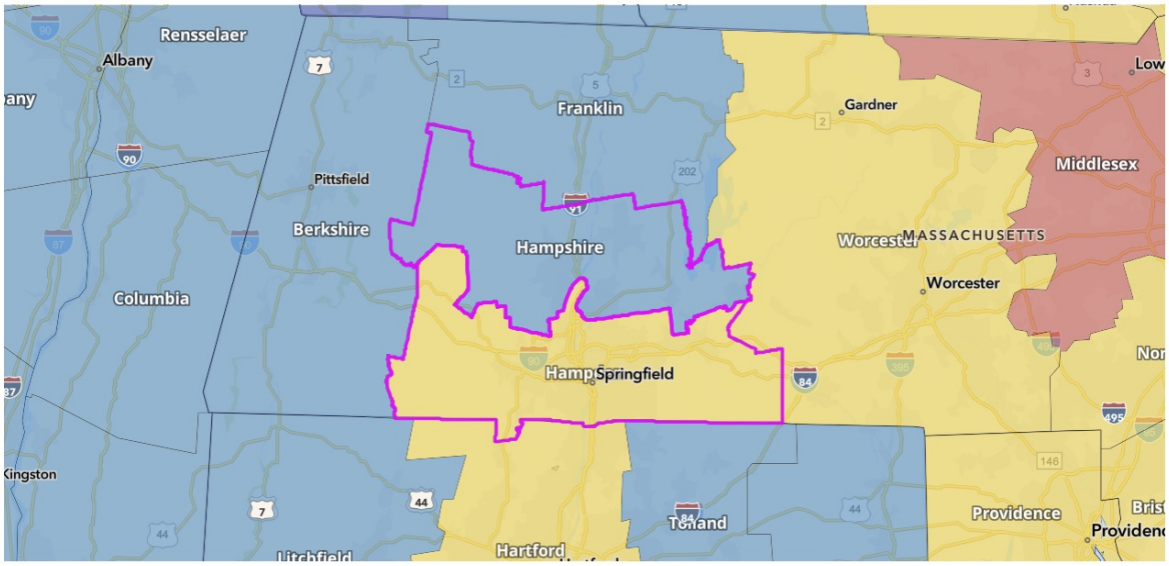
FEMA'S Risk Index for Hampden and Hampshire Counties

Federal Emergency Management Agency (FEMA) has created a **National Risk Index**[4] as a tool for determining the vulnerability of multiple geographies to a range of potential and actual threats to the well-being of the people, infrastructure, and property within a region. The index combines three elements:

- Expected annual loss
- Social Vulnerability
- Community Resilience

Based on these three complex measures, FEMA has determined that Hampden County has a "relatively moderate" risk level, and that Hampshire County has a "relatively low" risk level. Hampden County's higher risk level is largely driven by a "very high" degree of social vulnerability, which is a measure of "the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood."[5] By comparison, Hampshire County has a "relatively low" degree of social vulnerability

Risk Index



Risk Index Legend

Very High | Relatively High | Relatively Moderate | Relatively Low | Very Low

No Rating | Not Applicable | Insufficient Data

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Hampden County	MA	Relatively Moderate	84.03	0 — 100
2	Hampshire County	MA	Relatively Low	63.38	0 — 100

[4] United States Federal Emergency Management Agency, The National Risk Index, https://hazards.fema.gov/nri/.
[5] Ibid., https://hazards.fema.gov/nri/report/viewer?dataLOD=Counties&dataIDs=C25015,C25013#SectionSocialVulnerability.

ATTACHMENT B:
ACTION PLAN MATRIX

FRAMEWORK FOR EVALUATION

How Progress Will Be Measured

Building an Economy That Works for Everyone will use key socio-economic indicators to help gauge the CEDS' performance. Tracking these key indicators will provide PVPC and its collaborating stakeholders with insight into how well the strategies are working and make any mid-course process improvements.

Each key indicator is assigned a rating of positive, negative, or neutral based on the most recent available data. An improvement of at least 1% is considered a positive trend; a decrease of least 1% is considered a negative trend; and trends between 1% positive and 1% negative are considered neutral. The key indicators will use a baseline of the most recent information available in 2024. The indicators will be updated mid-CEDS, in 2027, and at the end of the five-year period of implementation, in 2029. These intervals will be effective in understanding regional changes over time. Rather than evaluating current-year statistics in isolation, this method will look at changes over a broader period, indicating whether trends are increasing or decreasing.

The key indicators in this section, How Progress Will Be Measured, will be used to guide our understanding of the region's economic growth and resiliency. The benchmarks in the second section of the Framework for Evaluation, How Progress Will Be Assessed, will complement the key indicators to provide a comprehensive overview of progress in the CEDS' implementation.

Key Socio-Economic Indicator	Measure	Most Recent Data 2024	2027	Rating	2029	Rating
Gross Regional Product	Value of region's economy					
Population						
Pioneer Valley EDD	Number of people who live in the region	623,629				
Hampden County	Number of people who live in Hampden County	461,041				
Hampshire County	Number of people who live in Hampshire County	162,588				
Race and Ethnicity						
Pioneer Valley EDD	Percent of regional population who identify as BIPOC	34.1%				
Hampden County	Percent of Hampden County population who identify as BIPOC	40%				
Hampshire County	Percent of Hampshire County population who identify as BIPOC	21%				
Homeownership and Cost Burden						
Pioneer Valley EDD	Percentage of residents in the region who own their homes	63.5%				
Hampden County	Percentage of residents in Hampden County who own their homes	61.7%				

Hampshire County	Percentage of residents in Hampshire County who own their homes	68.9%				
BIPOC Homeownership in Pioneer Valley EDD	Percentage of BIPOC residents in the region who own their homes	35.4%				
Hampden County	Percentage of BIPOC residents in Hampden County who own their homes	34.5%				
Hampshire County	Percentage of BIPOC residents in Hampshire County who own their homes	44.5%				
Cost Burdened in Pioneer Valley EDD	Percentage of renters in the region who pay >30% of their income on rent	53.5%				
Hampden County	Percentage of renters in Hampden County who pay >30% of their income on rent	53%				
Hampshire County	Percentage of renters in Hampshire County who pay >30% of their income on rent	54%				
Labor Force						
Size of Labor Force	Number of people in the Pioneer Valley EDD aged 18-64	320,657				
Labor Force Participation Rate	Percentage of labor force that is employed in the Pioneer Valley EDD	60.5%				
BIPOC Labor Force Participation rate	Percentage of BIPOC labor force that is employed in the Pioneer Valley EDD	59.6%				
Unemployment Rate	Percent of labor force that is unemployed in the Pioneer Valley EDD	6.0%				
BIPOC Unemployment Rate	Percent of BIPOC labor force that is unemployed in the Pioneer Valley EDD	9.2%				
Educational Attainment						
High School Graduation	5-year high school graduation rate in the Pioneer Valley EDD	91.9%				
BIPOC High School Graduation	5-year high school graduation rate in the Pioneer Valley EDD for BIPOC students	88.3%				
Community College Graduation	Percent of population graduating with a community college degree or certificate program in the Pioneer Valley EDD	10.0%				
BIPOC Community College Graduation	Percent of BIPOC population with a community college degree or certificate program in the Pioneer Valley EDD	10.3%				
4-Year Degree or Higher	Percent of population with a bachelor's degree or higher in the Pioneer Valley EDD	35.4%				
BIPOC 4-Year Degree or Higher	Percent of BIPOC population with a bachelor's degree or higher in the Pioneer Valley EDD	22.8%				

Income Inequality						
Pioneer Valley EDD	Gini Coefficient for Pioneer Valley EDD	0.466				
Hampden County	Gini Coefficient for Hampden County	0.471				
Hampshire County	Gini Coefficient for Hampshire County	0.461				
Poverty						
Pioneer Valley EDD	Percentage of residents in the Pioneer Valley EDD who are at or below the Federal Poverty Line	15%				
Hampden County	Percentage of residents in Hampden County who are at or below the Federal Poverty Line	16%				
Hampshire County	Percentage of residents in Hampshire County who are at or below the Federal Poverty Line	11%				
BIPOC Community	Percentage of BIPOC residents in the Pioneer Valley EDD who are at or below the Federal Poverty Line	26%				
Hampden County	Percentage of BIPOC residents in Hampden County who are at or below the Federal Poverty Line	27%				
Hampshire County	Percentage of BIPOC residents in Hampshire County who are at or below the Federal Poverty Line	19%				
Disadvantaged Tracts						
Pioneer Valley EDD	Number of disadvantaged tracts in the Pioneer Valley EDD per the Climate and Social Justice Screening Tool	46				
Hampden County	Number of disadvantaged tracts in Hampen County per the Climate and Social Justice Screening Tool	44				
Hampshire County	Number of disadvantaged tracts in Hampshire County per the Climate and Social Justice Screening Tool	2				
Small Business Ecosystem						
Small Businesses	Number of small businesses in the Pioneer Valley EDD	TBD 12/31/24				
Tech-focused	Percentage of small businesses in the Pioneer Valley EDD that are focused on existing or emerging technologies	TBD 12/31/24				
BIPOC-Owned	Percentage of small businesses in the Pioneer Valley EDD that are BIPOC-owned	TBD 12/31/24				
Immigrant-Owned	Percentage of small businesses in the Pioneer Valley EDD that are immigrant- owned	TBD 12/31/24				
Infrastructure and Infrastructure Planning						
Broadband	Percent of Pioneer Valley EDD which has access to high-speed internet	55%				

Roads, Water, and Sewer	Percent of communities in the Pioneer Valley EDD planning for infrastructure improvements	100%				
	Number of highway and transit projects being implemented	39				
Housing	Percent of communities in the Pioneer Valley EDD with housing production plans meeting 10% affordable housing threshold	13.9%				
Public Facilities	Number and condition of public structures (e.g. schools, fire stations) in the Pioneer Valley EDD that need capital improvements	TBD 4/1/25				

How Progress Will Be Assessed

Building an Economy That Works for Everyone will use benchmarks to understand and assess the implementation of the strategic priorities and goals. The implementation will entail committed collaboration among the stakeholder organizations and will require time and effort. Progress will be evaluated by annual updates to the status of the implementation, including the identification of lead entities and partners, revised cost estimates that are determined as the strategy proceeds, and substantive modifications to the descriptions, participating partner organizations, and timelines.

Goal 1: Prioritize equity, acknowledging that poverty and structural racism continue to determine economic opportunities and outcomes for too many of the Pioneer Valley's residents.

Action	Focus	Description	Potential Lead	Potential Partner(s)	Timeline	Estimated Cost	Potential Funding	Status
1.A	Create equitable economy	Establish a learning community around an **equitable economy** and engage with national partners who successfully implement best practices, e.g., Global Detroit	PVPC	PVPC, Global Detroit, Coalition for an Equitable Economy, Federal Reserve Bank of Boston, Western Mass Economic Development Council (EDC), Fund for our Economic Future, Community Foundation of Western Mass, Davis Foundation, UMASS Amherst	2024-2029	~$50,000	Private foundations	Fall 2024
1.B	Increase access to capital	Shift paradigm from lending to investing in creating **access to capital** for marginalized groups through establishing the	To be determined as part of the strategy	Federal Reserve Bank, Boston, PVPC, Common Capital, private foundations,	2024-2029	~$4,000,000	Federal Reserve Bank, private foundations, CDFI	Underway

		Pioneer Valley Equity Fund to support small business development		lending institutions, Latino Economic Development Council (LEDC), E & B Collaborative, Black Economic Council of Massachusetts (BECMA)				
1.C	Create workforce development programs	Create **workforce development programs** that meet the needs of underserved communities	To be determined as part of the strategy	PVPC, Coalition for an Equitable Economy, MassTech Innovation Institute, STCC, E&B Collaborative, nonprofits, HCC, Hampden & Franklin Hampshire County Workforce Boards, Commonwealth Corporation, Tech Foundry, Roca, Inc., Job Corps, public schools	2024-2029	$500,000 for pilot, additional to be determined after completion of pilot $15Million ~$1,823,000 ~$5,000,000	MassTech Collaborative EDA-Recompete Mass Clean Energy Center Cybersecurity Center: Congressional Directed	Fall 2024, ongoing Upon Award Ongoing Underway

							Spending, City of Springfield, Mass Tech Collaborative	
1.D	Ensure workforce programs match needs	Ensure that workforce programs expand to match the needs of underserved communities to living wage jobs and career/skill growth opportunities	To be determined as part of the strategy	PVPC, Coalition for an Equitable Economy, MassTech Innovation Institute, STCC, E&B Collaborative, nonprofits, HCC, Hampden & Hampshire County Workforce Boards, Tech Foundry, Roca, Inc., Job Corps, public schools	2025-2029	To be determined as part of the strategy	U.S. Department of Labor, Commonwealth of Massachusetts, Commonwealth Corporation	To be determined as part of the strategy
1.E	Increase business ownership and homeownership	Develop and implement new mechanisms for direct communication with BIPOC, women, and other marginalized communities to ensure that resources are aligned with needs and will help overcome systemic	Way Finders, Common Capital	PVPC, Coalition for an Equitable Economy, Way Finders, Common Capital, E&B Collaborative, local lending institutions, real estate	2025-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2025

		economic challenges related to **business ownership and homeownership**		professionals, Home City Housing, Commonwealth of Massachusetts, LEDC, BECMA				
1.F	Disaggregate data	Develop a **new regional data management system** that disaggregates data by race and ethnicity.	PVPC	Local foundations, Massachusetts Green High Performance Computing Center	2024-2029	~$100,000	Private foundations	Fall 2024, ongoing
1.G	Increase BIPOC participation	Develop a mentoring program to **increase BIPOC participation** in civic and government leadership roles.	To be determined as part of the strategy	Coalition for an Equitable Economy, PVPC, BECMA, LEDC, nonprofits, CBOs	2025-2029	To be determined as part of the strategy	Private Foundations	Begin 2025

Goal 2: Pursue high-growth and emerging opportunities, adding emerging technologies, e.g., quantum and quantum-adjacent technologies, green and clean technologies, AI, financial technology, food science, and advanced materials to the region's existing strengths in healthcare/social assistance, educational services, and manufacturing.

Action	Focus	Description	Potential Lead	Potential Partner(s)	Timeline	Estimated Cost	Potential Funding	Status
2.A	Support opportunities in emerging applied technologies	Support **opportunities in emerging applied-technology industries**, including but not limited to financial technology; AI; biotech; life sciences; quantum and quantum-adjacent technology; food science; cybersecurity; and	UMass, WNEU, MTC	Private sector employers, STCC, HCC, Mass Clean Energy Center, Mass Tech Collaborative, Local Legislative Delegation	2024-2029	~$16,000,000	Commonwealth of Massachusetts NSF Grant	Underway Upon Award

		specialized engineering, e.g., aeronautics.						
2.B	Encourage new businesses	Undertake a regional industrial lands analysis to identify turnkey opportunities that will facilitate **economic investment** by developing an array of shovel-ready locations to site **new businesses.**	PVPC	Economic Development Council of Western Mass, MassDev, municipalities	2025-2027	~$125,000	Private Foundations, State or Federal Grants	Begin 2025
2.C	Strengthen collaborations	Strengthen connections between educational institutions and the communities that they are in or near by increasing collaboration.	UMASS Amherst, WNEU	STCC, HCC, local governments, PVPC, nonprofits, CBOs	2025-2029	To be determined as part of the strategy	To be determined as part of the strategy	Fall 2024
2.D	Coordinate Workforce Development	Coordinate **workforce development** efforts with expanding and emerging industrial opportunities by collaborating with institutions of higher education and others.	Workforce boards	STCC, HCC, WNEU, PVPC, Mass Tech Collaborative, Mass Clean Energy Center, private sector employers, nonprofits, CBOs	2026-2029	To be determined as part of the strategy	U.S. Department of Labor	Begin 2026
2.E	Support Economic Investment	Support the **economic investment** recommendations of the WMEDC, which include food science; non-pharmaceutical biomanufacturing and food ecosystem; the clean energy transition; and advanced materials and R&D manufacturing.	WMEDC	Commonwealth of Massachusetts, private sector, higher education, public schools, private sector employers	2024-2029	~$500,000,000	Commonwealth of Massachusetts	Underway

Goal 3: Recognize that rural communities need different and complementary economic development strategies tailored to their needs. As a region, the economic vitality of our urban centers impacts rural communities, which need their own set of strategies.

Action	Focus	Description	Potential Lead	Potential Partner(s)	Timeline	Estimated Cost	Potential Funding	Status
3.A	Increase Rural Collaboration	Convene regularly scheduled regional round tables that focus on **economic development opportunities**, innovations, and ways to optimize interlocal cooperation.	PVPC	Small and rural communities in the Pioneer Valley	2024-2029	$50,000	Commonwealth of Massachusetts, District Local Technical Assistance (DLTA) program	Underway
3.B	Increase Efficiencies	Collaborate with smaller communities to expand shared-services models to meet local service needs and **improve efficiencies**.	PVPC	Communities in Pioneer Valley with <10,000 population	2024-2029	$100,000	Commonwealth of Massachusetts, DLTA Program	Underway
3.C	Increase Rural Revenues	Pursue travel and tourism opportunities for regional marketing and **small-town revitalization**, especially heritage, recreational, and/or eco-tourism.	Greater Springfield Convention and Visitors Authority	To be determined as part of the strategy	2026-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2026
3.D	Increase Housing	Develop a regional housing plan that incorporates twenty-first century zoning, including a locally focused needs assessment and market analysis for each town.	Way Finders, PVPC	Small and rural communities in the Pioneer Valley, Way Finders, Home City Housing,	2026-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2026
3.E	Increase Business Development	Develop basic permitting guides for each town that clarify and facilitate business and commercial development	PVPC	Small and rural communities in the Pioneer Valley	2026-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2026

Goal 4: Support small and mid-sized enterprises (SMEs) and entrepreneurs.

Action	Focus	Description	Potential Lead	Potential Partner(s)	Timeline	Estimated Cost	Potential Funding	Status
4.A	Understand Small Business Ecosystem	Map the existing micro- and small business, and entrepreneurial ecosystem	To be determined as part of the strategy	PVPC, Coalition for an Equitable Economy, Massachusetts Gaming Commission, EDC, Mass Development, LEDC, BECMA, business service providers	2024-2027	$98,400	Mass Gaming Commission	Recently Awarded
4.B	Assist SMEs	Work with SMEs and their associations to identify their needs and explore creative strategies to meet those needs, e.g., hiring and retention, to help them open, stay open, and establish sustainable business practices. Recognize BIPOC- and women-owned SMEs may face different challenges	To be determined as part of the strategy	Coalition for an Equitable Economy, PVPC, Center for Women's Enterprise, LEDC, BECMA, E for All, business service providers	2024-2029	To be determined as part of the strategy	To be determined as part of the strategy	Underway
4.C	Increase Immigrant Participation	Harness the energy and skills of immigrants in small business development using the Community Connectors model	To be determined as part of the strategy	Global Detroit, PVPC, Coalition for an Equitable Economy, Center for Women's Enterprise, LEDC, BECMA	2025-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2025
4.D	Support Entrepreneurs	Identify spaces for young entrepreneurs to work and connect with peers	To be determined as part of the strategy	Local governments, including City of Springfield, City of Holyoke, City of Chicopee, EDC, LEDC, BECMA,	2025-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2026

				Coalition for an Equitable Economy				

Goal 5: Reverse long-standing stagnant population growth to increase the regional workforce capacity.

Action	Focus	Description	Potential Lead	Potential Partner(s)	Timeline	Estimated Cost	Potential Funding	Status
5.A	Increase Good-Paying Jobs	Provide jobs and professional opportunities for all, including residents and graduates from the region's institutions of higher education and training programs	Workforce boards	Private sector employers, institutions of higher education, nonprofits, CBOs	2024-2029	To be determined as part of the strategy	To be determined as part of the strategy	Underway
5.B	Attract Residents and Businesses	Embrace the region's ethnic, racial, and cultural diversity and recognize its positive contributions to the quality of life in the Pioneer Valley	To be determined as part of the strategy	Municipalities, New England Knowledge Corridor, Commonwealth of Massachusetts	2026-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2026
5.B.1	Collaborate with State Agencies Highlight Cost of Living Highlight Access	Collaborate with state agencies and other organizations that are working to make Massachusetts more competitive and attractive Showcase the region's relatively lower cost of living compared to other parts of the Commonwealth Showcase the region's geographic centrality to major metropolitan areas, including Boston, Hartford, and New York, with proximity to major interstate highways	To be determined as part of the strategy	Municipalities, New England Knowledge Corridor, EDC municipalities, Greater Springfield Convention and Visitors Authority, Commonwealth of Massachusetts	2026-2029	To be determined as part of the strategy	To be determined as part of the strategy	Begin 2026

5.C	Revitalize downtowns	Revitalize downtown environments to attract people with jobs, entertainment, and housing opportunities	City of Springfield, City of Holyoke, City of Chicopee	PVPC, MassDev, MA Executive Office of Economic Development, MA Executive Office of Housing and Livable Communities	2024-2029	To be determined as part of the strategy	To be determined as part of the strategy	Underway

Goal 6: Strengthen the region's infrastructure to enable communities small and large, urban, suburban, and rural alike, to pursue development opportunities and related investment, attract newcomers, and promote equity. We are defining two types of infrastructure: "hard" (e.g., water systems, rail, broadband) and "soft" (e.g., services, programs). This goal recognizes that deferred maintenance and lack of investment in these forms of infrastructure are threats that will continue to inhibit the region's growth if not addressed.

Action	Focus	Description	Potential Lead	Potential Partners(s)	Timeline	Estimated Cost	Potential Funding	Status
6.A	Improvements for Road, Water and Sewer Systems	Continue planning and coordination with units of local government, the Commonwealth, and the federal government	PVPC	Municipalities, Commonwealth of Massachusetts, U.S. Department of Transportation, Water & Sewer utilities	2024-2029	Part of existing tasks and grant budgets for PVPC	State and Federal Grants, Private Foundations	Underway
6.B	Climate Change and Sustainability	Continue regional planning efforts that address pre-disaster mitigation, climate resiliency, sustainability, and environmental vulnerability mitigation	PVPC	Local governments, Commonwealth of Massachusetts	2024-2029	Part of existing tasks for PVPC, additional grant resources needed	State and Federal Grants, Private Foundations	Underway
6.C	Compass Rail	Support the plan to increase connectivity	Massachusetts Department of Transportation	PVPC, FRCOG, CRCOG, BRPC, Trains in the Valley	2024-2044	Part of existing tasks and grant budgets for PVPC	State and Federal Grants, Private Foundations	Underway
6.D	Drinking Water	Complete the regional Drinking Water Plan	PVPC	Water & Sewer utilities	2026-2028	~$125,000	State and Federal Grants, Private Foundations	Begin 2026

6.E	Broadband	Continue supporting Massachusetts Broadband Institute's rollout	Massachusetts Broadband Institute	PVPC, Baystate Health Systems	2024-2028	Cost Dependent on size of each Community	Massachusetts Broadband Institute	Underway
6.F	Service Delivery	Assist with regional coordination of integrated service delivery through workforce development pilot to improve workforce participation rates	PVPC	Valley Opportunity Council, New North Citizens' Council, STCC, Way Finders, Springfield Empowerment Zone Partnership, E & B Collaborative	2024	$500,000	Mass Tech Collaborative Innovation Institute	2024
6.G	Childcare	Advocate for increased access	Massachusetts Head Start Association	Public Schools, Head Start, Square One, Private childcare providers	2024-2029	To be determined as part of the strategy, building upon data work at PVPC	State and Federal Grants, Private Foundations	Underway
6.H	Transit	Continue to coordinate transit schedules with local need/demand	PVPC	Pioneer Valley Transit Authority	2024-2029	Part of existing tasks and grant budgets for PVPC	To be determined as part of the strategy	Underway

Goal 7: Develop a strong, effective regional voice to advocate for the Pioneer Valley in order to communicate regional priorities and increase economic investment from the Commonwealth, the federal government, and the private sector.

Action	Focus	Description	Potential Lead	Potential Partner(s)	Timeline	Estimated Cost	Potential Funding	Status
7.A	Regional Priorities	Collaborate on the identification and communication of regional priorities for equitable economic investment	PVPC	CEDS Strategy Committee, others to be determined as part of the strategy	2024-2025	$12,500 to start the process	Private and Community Foundations	2024-2025

7.B	Investments	Coordinate the development of a single, strong regional voice to advocate for and secure increased investments in the regional priorities from state, federal and private sources	PVPC	CEDS Strategy Committee, others to be determined as part of the strategy	2025-2026	To be determined as part of the strategy	Federal Reserve Bank of Boston, Mass Gaming Commission, other sources	2025-2026
7.C	Emerging Opportunities	Develop mechanism for cross-sector early identification and planning for emerging opportunities	PVPC	CEDS Strategy Committee, others to be determined as part of the strategy	2025-2029	To be determined as part of the strategy	State and Federal Grants, Private Foundations	2025-2029
7.D	New England Knowledge Corridor	Continue collaboration on bi-state New England Knowledge Corridor initiative	PVPC, CRCOG, Massachusetts Competitive Partnership	Others to be determined as part of strategy	2024-2029	Part of existing tasks for PVPC	State and Federal Grants, Private Sector	Underway

ATTACHMENT C:
STAKEHOLDER ENGAGEMENT

STAKEHOLDER ENGAGEMENT

The following individuals contributed to the Pioneer Valley CEDS during Spring 2024. They are listed below in alphabetical order.

Strategy Committee Members

- Megan Burke, Executive Director, Community Foundation of Western Nevada
- John Cook, President, Springfield Technical Community College
- Keith Fairey, President and CEO, Way Finders
- Mike Knapik, Vice President, Baystate Health Systems
- Tony Maroulis, Executive Director of Community and Strategic Initiatives, University of Massachusetts, Amherst
- Javier Reyes, Chancellor, University of Massachusetts, Amherst
- Kimberly H. Robinson, Executive Director, Pioneer Valley Planning Commission
- Christina Royal, Chair, Economic Development Council of Western Massachusetts
- Patricia Samra, Chair, MassHire Hampden County Workforce Board
- Mallory Sullivan, Rural Programs Manager, Massachusetts Executive Office of Economic Development
- Rick Sullivan, President and CEO, Economic Development Council of Western Massachusetts
- Trayce Whitfield, Executive Director, Coalition for an Equitable Economy and Councilor-at-Large, City of Springfield City Council

Focus Group Participants

- Doug Albertson, Town Administrator, Belchertown
- Paul Belsito, Executive Director, Davis Foundation
- Margaret Boyle, Asst VP for Government Affairs/Chief of Staff, Western New England University
- Nick Breault, Town Administrator, Wilbraham
- Mike Burkart, Commissioner, Amherst Housing Authority
- Megan Burke, Executive Director, Community Foundation of Western Massachusetts
- Ward Caswell, Executive Director, The Beveridge Family Foundation
- Lori Chavez, Director of Clinical and Family Services, HCS Headstart
- Adam Couturier, Director of Manufacturing Education, Massachusetts Technology Collaborative, Innovation Institute
- John Fisher, Fair Housing Manager, Way Finders
- Ben Forman, Research Director, MassInc
- Kiyota Garcia, Assistant VP of Student Affairs and Interim Equity Office, Springfield Technical Community College
- Donna Haghighat, Executive Director, Women's Fund of Western Massachusetts
- Don Humasson, Town Administrator, Chester
- Denise Jordan, Executive Director, Springfield Housing Authority
- Anne Kandilis, Executive Director, Springfield Works
- Mike Knapik, VP, Baystate Health Systems
- Mike Malone, Interim Provost, University of Massachusetts, Amherst
- Amanda Mankowsky, Director of Youth Programs, Hampshire Workforce Board
- Alison Mathias, Executive Director, Mass Mutual Foundation
- Joel McAuliffe, Dean, Holyoke Technical High School
- Tom Moran, Director of Partnership and Ecosystem Development, Massachusetts Technology Collaborative, Innovation Institute

- Nicole Parker, Town Administrator, Southwick
- Peter Reinhart, Founding Director, Institute for Applied Life Sciences, University of Massachusetts, Amherst
- Carl Rust, Asst Vice Chancellor for Corporate Engagement, University of Massachusetts, Amherst
- Patricia Samra, VP Human Resources, Baystate Health Systems
- Kristen Smidy, Director, Gateway Regional School District
- Linda Thompson, President, Westfield State University
- Alexis Washburn, Regional Director, Northeast, Emerald Cities
- Lisa Wong, Town Administrator, South Hadley

Interviews

Local Government

- Mayor Garcia, City of Holyoke
- Mayor La Chapelle, City of Easthampton
- Gerry McCafferty, Director, Office of Housing, City of Springfield
- Tim Sheehan, Chief Development Officer, City of Springfield
- Diane Syznal, Interim Town Administrator, City of Hatfield
- Alan Wolf, Chief of Staff, City of Northampton

State Government

- Ann Gobi, Director of Rural Affairs, Executive Office of Economic Development, Commonwealth of Massachusetts
- Lauren Jones, Secretary of Labor/Workforce Development, Commonwealth of Massachusetts
- Galen Nelson, Chief Program Officer, Massachusetts Clean Energy Center

Higher Education

- Gladys Franco, Asst VP of Workforce Development, Springfield Technical Community College
- Dean Hickey, VP for University Advancement, Western New England University
- Tony Maroulis, Executive Director of Community and Strategic Initiatives, University of Massachusetts, Amherst
- Peter Reinhart, Founding Director, Institute for Applied Life Sciences, University of Massachusetts, Amherst
- Javier Reyes, Chancellor, University of Massachusetts, Amherst
- George Timmons, President, Holyoke Community College

Regional Leadership

- Jay Ash, President & CEO, Massachusetts Competitive Partnership
- Ron Brantley-Molina, Executive Director, E&B Collaborative
- Jeff Daly, President, Western Mass Area Development Corporation (Develop Springfield)
- Will Fuqua, Program Manager and Research Analyst, Massachusetts Technology Collaborative, Innovation Institute
- Rich Griffin, Black Economic Council of Massachusetts
- Mark A. Keroack, M.D. CEO, Baystate Health System
- Patrick Larkin, Deputy Director, Massachusetts Technology Collaborative and Director, Innovation Institute
- Col. Karen Magnus, Commander, Westover Air Force Base
- Andrew Melendez, Latin Economic Development Corporation
- Tom Moran, Director of Partnership and Ecosystem Development, Massachusetts Technology
- Mike Moriarty, President and Executive Director, OneHolyoke Community Development Corporation
- Christine Roddy, VP of Operations, Clean Crop Technologies
- Mary Kay Wydra, President, Greater Springfield Convention and Visitors Authority

ATTACHMENT D:
PVPC CARES ACT REPORTS

Storytelling: Community Connectors provide Narrative Change to Economic Road Map

Vanessa Otero, Executive Director, Healing Racism Institute
& Eric Weiss, Director of Economic & Municipal Collaboration,
Pioneer Valley Planning Commission

Introduction

It has been widely reported that COVID 19 shined a light on inequities in all sectors. In response, communities are organizing efforts that initiate systemic change while planning for a more equitable future. This planning includes traditional ways of data collection and analysis but also the use of storytelling. Pioneer Valley Planning Commission (PVPC) in partnership with the Healing Racism Institute (HRI) sought to engage in data collection from Community Connectors through interviews primarily in Springfield, MA to enhance our scenario-based planning. These interviews led to insight into the development of more comprehensive yet specific strategies towards a more equitable economy. The stories we captured share knowledge and experiences through narrative and anecdotes that communicated lessons, ideas, concepts, and casual relationships (Praseyto, 2017). We believe this transfer of knowledge coupled with quantitative data and its analysis will make for a more impactful exercise towards societal change.

The following outlines our process, findings, and proposed strategies. We synthesized this work with three of the four key areas of the road map: Workforce, Black, Indigenous, People of Color (BIPOC) home ownership, and small/micro business.

Method:

Our working definition of Community Connector is an individual, that by virtue of their personal and professional networks, or the *rooms they inhabit*, have access to information and resources that a large percentage of their racial or ethnic community members are not aware of or have difficulty obtaining. The Connector becomes the intermediary between community and institutions. The Connector facilitates the exchange of information and translation of systems employed by the institutions for the benefit of their racial or ethnic communities. Our Connectors list included public officials, economic development practitioners, small business owners and civil servants.

Our 10 interviews were held on Zoom. Each Connector was open, honest, and detailed in their storytelling. While at times terms such as anti-racism, diversity, equity, equality, and inclusion were used interchangeably, the conveying of unfair results for communities of color in the areas of housing, workforce, small/micro business development, and sociopolitical power was clear. The stories range from personal accounts to recurring themes articulated throughout their interactions with community members. For example, one connector related, "…there's the put your hand over your heart when the national anthem is being played. So, standing up and taking your hat off is not enough. Some veteran took offense at the fact that my brother and I did not have our arm over. So, he comes over and starts telling us to go back to our country." Another offered, "A lot of us just don't know and just don't know where to go. And it's time for that to change. We have to start letting people know where to go." The overt examples of discrimination seem easier to articulate. Articulation of how seemingly benign policies and procedures result in adverse effects in communities of color proved to be more difficult.

Each connector was asked a series of open-ended questions designed to elicit comprehensive responses. Smith College students with experience in analyzing qualitative data assisted with that process. Each transcription was reviewed and coded to extract themes embedded in each response and story.

Storytelling that addresses Structural Racism for Systemic Change

Even though storytelling is a traditional means of delivering knowledge, wisdom, and culture, it has a central role in social movements because it constructs agency, shapes identity, and motivates action (Praseyto, 2017). The articulation of experiences provide insight into the starts and stops between communities and institutions. It creates a *movie* that once dissected reveals the gaps in information dissemination, relationship building, technical assistance, mentorship, and organizational attitude and culture as it plays out in individual and collective experiences. Numerous community development initiatives worldwide aspire to contribute to transformative change by using transfer of knowledge. The transformative social change itself can be defined as 'narratives of change,' or storylines about change and innovation (Praseyto, 2017). The narrative change we hope to inspire is one that results in a more equitable economy.

It is important to interject here the persistence of racism and discrimination within our interviews with Community Connectors. Despite the use of DEI and anti-racism terms interchangeably, the sentiment was one which directly corelated lack of access, knowledge, opportunity, and social capital to race and ethnicity. The stories describe interpersonal and collective experiences of maltreatment or exclusion. Yet, the strategies they offered were grounded in systemic change. That is, stories also relate an interconnected web of *forces* that together result in what was described as discrimination. Extracting the context and complexity of these intersections was keenly important.

> "The various forms of discrimination are not separable in real life. Employers' hiring and promotion practices; resource allocation in city schools; the structure of transportation systems; residential segregation and housing quality; availability of decent health care; behavior of policemen and judges; foremen's prejudices; images of Blacks presented in the media; ….and other forms and economic discrimination interact strongly with each other in determining the occupational status and annual income, and welfare of Black people" (Reich, 1971).

Our focus on context and complexity led us to literature on structural racism. We borrowed from the health care sector to inform our understanding of structural racism. There is body of work related to corelating health disparities to forms of racism including structural.

> "Structural racism refers to the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice. These patterns and practices in turn reinforce discriminatory beliefs, values, and distribution of resources" (Bailey et al., 2017).

It is well documented that, professionals have been reluctant to believe that their own behaviors, those of their peers, and the policies of their institutions may often go against their professional oaths and principles (Griffith, 2007). Like many of the stories conveyed by the Connectors, it is common to believe that bias is an interpersonal issue. That with employee or practitioner training or other opportunities to learn, outcomes for BIPOC communities will improve considerably. We agree this is an important first step but more importantly, "…. systems change approach is necessary to reduce and eventually eliminate healthcare disparities by illustrating how healthcare disparities are rooted in structural racism" (Griffith, 2007). Our interviews provided strategies rooted in collaboration and comprehensive service delivery that cut across sectors in systemic ways. The literature review and insight from a member of our Task Force provided for vetted models for moving forward.

Work Towards Economic Equity

Operationalizing Equity:

"Poverty is the cancer of our community. And if we are not going to address poverty, we are missing the boat, we are going back to 50 years of what was intended to happen, that never has. We've done Policy, Programs, pilots, and poverty continues to be the cancer of our community. If we are going to address poverty, we have to address it through meaningful wealth building strategies, and that is direct homeownership, taking our housing complexes and turning them into wealth building opportunities, as well as building a micro business strategy" (Community Connector).

1. "Fundamentally, poverty is a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family, not having a school or clinic to go to, not having the land on which to grow one's food or a job to earn one's living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households, and communities. It means susceptibility to violence, and it often implies living on marginal or fragile environments, without access to clean water or sanitation" (United Nations, 2022).

   The high concentration of poverty among communities of color in our region requires our efforts to include conversations about the effects of living poverty on human beings. Learning about its conditioning and racism as its root cause will assist in creating spaces that preserve human dignity.

2. Much of the data provided details of adverse, interpersonal interactions. Those interactions perpetuate miscommunication and disengagement of marginalized groups. Any employee interacting with the public would benefit from engaging in a conversation about how their privilege or lack of privilege plays out in their day-to-day lives. These should be opportunities for growth and reflection. It will help set the stage of institutional or organizational change.

3. Institutions develop their processes with the 'prepared' customer or participants in mind. Operationalizing equity means to institutionalize processes that provide access and opportunities for those less prepared. That is, a racial equity lens considers the context in which a potential customer arrives. The result is sector, specific interventions that educate and mentor community members towards successful engagement.

   Example:

   Financial literacy provided to applicants who do not qualify for loans becomes standard practice in all banking institutions. The intent is to help the applicant reach their goal and establish a long-term customer.

Community Connector Strategies:

Workforce Development

"…my brother moved to Maryland, and he has a million-dollar IT company out there. But he would never feel like he had those opportunities here…the equity piece has to include hiring minorities, so that they don't believe there's a glass ceiling there" (Community Connector).

1. Connectors suggested a **skillset development outlook and a corresponding assessment** as part of the job training and workforce development efforts.

2. Designing and scaling **short-term, employer specific programing** that will build the skillset necessary for immediate employment or higher wage opportunities.

3. Establishment of **apprenticeship programs** in housing development and other high earning potential industries.

4. Development of **pathways into unions.**

5. **Intentional recruitment and succession planning** at the executive level.

BIPOC Homeownership

"So, more money has to be made available for people of color to be able to buy a home and for investors of color to be able to compete in the market, because real estate and owning a business [are] the two biggest ways in order to build wealth…" (Community Connector).

1. All our conversations around homeownership began with the need for **financial literacy** assistance. It was suggested that this intervention begin in high school or sooner. The idea is to normalize money management by introducing it early and consistently.

2. Connectors described **housing initiatives** that created equity or income for first-time homeowners. This included scaling the North End Housing Initiative ran by New North Citizens' Council whereby the building of the home is subsidized by CDBG funds from the City of Springfield. Another idea was the development of duplexes that allows the purchaser to earn income by renting the second unit. To sustain these initiatives, **advocacy for funding and policy** that make these attractive opportunities for developers at the State and local level is necessary.

3. Revising first-time homeowner lending programs so they **consider rental history** as part of the criteria for lending. There are renters who pay more in rent than they would if they qualified for a mortgage.

BIPOC Micro/Small Business Development

"They can't get good paying jobs. We have people who have skills who should have their own business. But they can't do it because their education attainment level prohibits them from getting bank loans and other things like that that they need to have a successful business." (Community Connector).

1. **Micro Business** specific initiatives and funding opportunities.

2. The provision of **Technical Assistance** including legal and financial expertise to assist with completing municipal RFPs for contracts.

3. **Advocacy** for specific policy changes that provide BIPOC micro and small businesses entry into the market.

4. **Enforcement of legislation** regarding participation of minority/woman/veteran owned businesses at the State and local level.

5. A more **comprehensive dissemination of information** regarding funding and other opportunities.

6. Networking opportunities to assist with building **social capital**.

7. Create opportunities to engage investors or other avenues for **capital**.

Relevant Models of Collaborative Partnerships:

"Equity to me means that…we are not just symbolic contributions to social progress, but active involvement in the process. And just, again, the ability to have a voice in what's happening and how it's going to impact our lives. It also means making sure that resources are distributed equitably" (Community Connector).

The intersectoral nature of structural racism requires an integrated response. "Multisector, place-based partnerships focusing on equity can be an effective means of placing pressure on systems of structural racism operating in a specific geographical region" (Bailey et al., 2017). These efforts include resident input in meaningful ways because their success depends on it. Successful examples of such partnerships also include, K-12, municipalities, federal funders, nonprofits, higher education, housing authorities, business leaders, health and mental health providers, banks and other financial institutions, private philanthropy, development professionals, law enforcement, and any other service provider who can help meet the needs of the community.

Examples of place-based, multisector initiatives

Purpose Built Communities - We serve as a bridge, connecting community leaders with resources and partner organizations that share a vision to make holistic, at-scale investments in defined neighborhoods to achieve excellent and equitable outcomes for the people who live there.

Our collaboration with innovative thinkers is driven by a collective desire to advance communities, improve the lives of residents of neighborhoods made vulnerable, end a cycle of intergenerational poverty, and set a new course for cities across the country.

Promise Neighborhoods - The vision of the program is that all children and youth growing up in Promise Neighborhoods have access to great schools and strong systems of family and community support that will prepare them to attain an excellent education and successfully transition to college and a career. The purpose of Promise Neighborhoods is to significantly improve the educational and developmental outcomes of children and youth in our most distressed communities, and to transform those communities by—

1. Identifying and increasing the capacity of eligible entities that are focused on achieving results for children and youth throughout an entire neighborhood.
2. Building a complete continuum of cradle-to-career solutions of both educational programs and family and community supports, with great schools at the center.
3. Integrating programs and breaking down agency "silos" so that solutions are implemented effectively and efficiently across agencies.
4. Developing the local infrastructure of systems and resources needed to sustain and scale up proven, effective solutions across the broader region beyond the initial neighborhood; and

5. Learning about the overall impact of the Promise Neighborhoods program and about the relationship between strategies in Promise Neighborhoods and student outcomes, including through a rigorous evaluation of the program.

Blue Meridian Partners' collaborative model unlocks substantial philanthropic capital and invests it in social sector leaders so they can expand the impact, influence, and reach of their strategies. Across our five portfolios, we make flexible, right-sized investments in both national and place-based solutions to amplify impact across the country while addressing problems specific to targeted communities. Core to our work is tackling systemic inequities that both hinder opportunity for Black, Indigenous, Latinx, and other communities of color and limit the flow of capital to social sector leaders of color.

SPARCC is investing in multidisciplinary groups that are bringing together community residents, the public and private sectors, and local government to make sure that new infrastructure investments help make their communities places where everyone thrives. There is growing recognition that issues of poverty, health risks, and climate impacts are inextricably linked and must be addressed holistically instead of through piecemeal approaches.

Choice Neighborhood program leverages significant public and private dollars to support locally driven strategies that address struggling neighborhoods with distressed public or HUD-assisted housing through a comprehensive approach to neighborhood transformation. Local leaders, residents, and stakeholders, such as public housing authorities, cities, schools, police, business owners, nonprofits, and private developers, come together to create and implement a plan that revitalizes distressed HUD housing and addresses the challenges in the surrounding neighborhood. The program helps communities transform neighborhoods by revitalizing severely distressed public and/or assisted housing and catalyzing critical improvements in the neighborhood, including vacant property, housing, businesses, services, and schools.

Summary

Storytelling enhances scenario-based planning. It provides insight into specific strategies for success. PVPC and HRI's attempt to include stories resulted in 10 interviews with local stakeholders. Our findings require that we make room for difficult conversations and equitable strategies for improving the quality of life and generating wealth among BIPOC communities. The work calls for stronger, persistent, intersectoral partnerships. This will provide organizations and institutions with ways to operationalize equity. This type of work shifts dominant narratives of communities living in poverty and its root cause, racism.

Our sincerest Thank You to our Community Connectors for engaging and trusting our process. Thank you for your honesty and at times, vulnerability. We are grateful for your continued support and partnership.

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Pioneer Valley Planning Commission

Pioneer Valley Economic Recovery Scenario Planning and Strategic Roadmap

Draft Final Report

July 2022

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In addition, this project was guided by the Pioneer Valley Economic Recovery Task Force which was established for this planning effort with commitments to continue the work into future.

The research, analysis, strategic planning and writing of this report were led by Dan Hodge and Alex Frost of Cambridge Econometrics, with support from Jeff Brancato at Brancato Solutions.

Contents

1 Introduction

1.1 Background and Purpose

As part of the Pioneer Valley Planning Commission's economic recovery planning project, funded by the US EDA CARES Act, Cambridge Econometrics (CE) have been responsible for the development and execution of a regional economic scenario planning exercise focused on helping to identify strategic initiatives for the region's economy. A critical under-pinning to this effort was the realization that economic inequities in the Pioneer Valley that pre-dated the Covid-19 pandemic, were further exacerbated with the region's black, indigenous and people of color (BIPOC) communities.

With widening gaps in terms of unemployment and poverty rates, homeownership, income levels and other critical metrics, the overarching focus of this project from the start has been to work towards creating a more equitable and inclusive economy. And the scenarios and strategic initiatives detailed here are largely geared towards that aim – what specific areas of work can boost sustainable job and small business opportunities, increase homeownership rates and build wealth for the region's BIPOC and long-underserved populations?

Supporting PVPC's economic recovery planning, the objectives of the scenario planning exercise have been to: a) help anticipate potential future trends and opportunities in the region; b) examine what 'economic success' looks like for the Pioneer Valley; and c) test and better understand how various strategic initiatives (policies, investments, programs) can help the region achieve 'success.' The ultimate purpose of this work has been to identify and articulate strategic initiatives for the Pioneer Valley to create: 1) a more equitable and inclusive economy; and 2) a more resilient and diversified economy.

It is worth noting that this economic recovery planning project was one part of PVPC's broader CARES Act grant-funded work, which also included:

- Economic data performance dashboards and tracking which helped illuminate the economic costs and implications of the Covid-19 pandemic, with emphasis on how it has worsened the region's pre-existing equity concerns.
- A new and substantive outreach effort to BIPOC communities, leaders, and 'connectors' to help better understand the issues and opportunities from groups that are often not as well-represented in economic planning initiatives. The work of that team, including the Healing Racism Institute of the Pioneer Valley, directly influenced the strategic priorities and recommended actions in this report.
- A separate but related rural economic development study focused on better understanding the issues and opportunities in the region's many rural communities, which are often over-looked at the regional level.

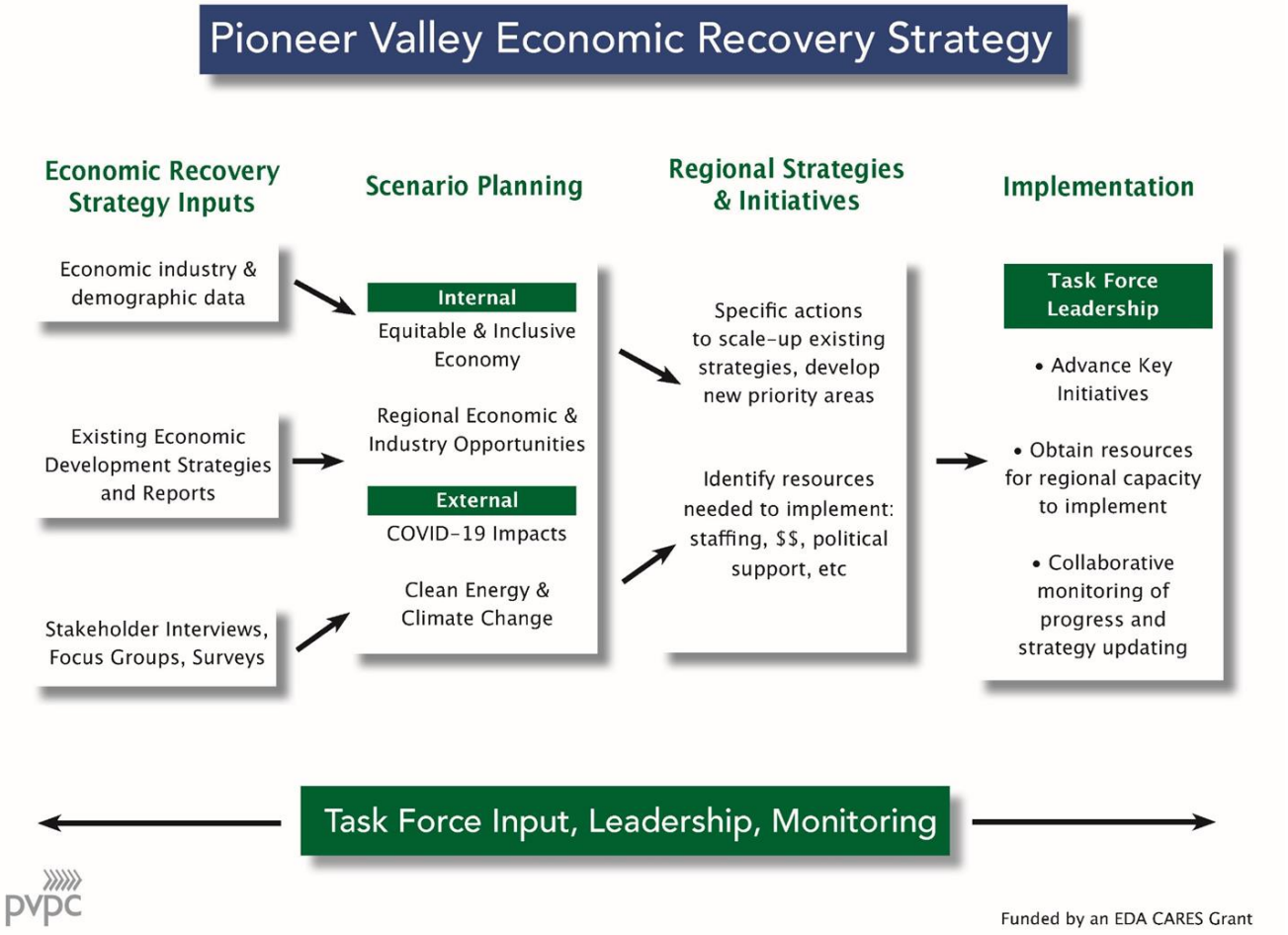
Together, PVPC is compiling a comprehensive economic recovery planning roadmap summary report which consolidates the findings of these efforts and helps to articulate pathways forward with its many partners.

1.2 Overview of Approach

Based on extensive research and discussions with local experts in regional economic planning, we developed an overall framework for the scenario analysis and strategic recovery planning. There are multiple options for approaching economic scenario planning, from more qualitative and descriptive approaches all the way to highly sophisticated integrated regional modeling of land use, transportation, housing and the economy.

Reflecting an extensive stakeholder feedback process and guidance from PVPC, our approach sought to focus on applying a regional economic forecasting and simulation model customized to the region to evaluate various future scenarios on the Pioneer Valley economy of Hampden and Hampshire counties in Massachusetts. This broadly took place in four categories (or steps), as summarized in the graphic below:

1. **Economic Recovery Strategy Inputs**: a critical step to this project was the wide-range of inputs collected and reviewed, from past/recent economic development-related strategies and plans to key economic and industry data along with input provided by a large number of stakeholders across economic development, workforce, small business support, universities and community colleges, etc.
2. **Scenario Planning**: the scenario planning was originally envisioned as encompassing both internal and external (to the region) perspectives to reflect both regional strengths and opportunities, while being attuned to broader trends related climate change, Covid-19, and other factors. The final set of scenarios identified for detailed analysis reflect both of these perspectives but were grouped into regional priorities organized by the dual goals of a more equitable/inclusive economy and a more resilient and diversified economy.
3. **Regional Strategies and Initiatives**: based on the identification of scenarios of significance for the region's economy, a broad set of stakeholders participated in task force meetings and strategy workshops to develop actions, policies, investments and resources to move from hypothetical scenarios to tangible strategies the region can work towards.
4. **Implementation**: this part of the process was focused on helping the region build support around identifying a select number of strategic initiatives, with a clearer understanding of their potential to create positive change, leading the way to further discussion of implementation and the resources/capacity needed to sustain each strategy. Next steps will include continuation of the Pioneer Valley Economic Recovery Task Force, facilitated by PVPC.



Moving forward, it is intended that the results and priorities identified through this economic scenario planning will help to set the foundations for:

- More detailed strategic planning initiatives and action steps;
- Identification of possible obstacles or challenges for implementation; and
- Honest assessment of the resources, organizational capacity and funding needed to start and sustain new or enhanced regional strategies.

1.3 This Report

The remainder of this report is organized around our approach to the regional economic scenario planning:

1. We start by providing an overview of our approach to the economic scenario planning, including:
    - a background assessment of the Pioneer Valley economy
    - a scoping of the scenario modeling options
    - outlining our final approach to defining and modeling the scenarios
2. This is followed by presentation and analysis of the economic scenario modeling, including modeling definitions, assumptions, and results

3. We then propose and consider the regional economic strategic initiatives required to implement some of the ambitions outlined in the scenarios
4. Before reflecting on the transition to implementation, and the funding and resources required for the capacity to implement

2 Economic Scenario Planning: Background, Methodology and Approach

2.1 Introduction

This section of the report provides the core analytical foundation of this project with details on the Pioneer Valley economy (recent trends and existing conditions) that inform the scenario analysis, along with the chosen approach and economic models applied to identified scenarios and strategic priorities for the regional economy. Scenario planning can mean different things to different people and here, we attempt to articulate some of the approaches considered and why PVPC and the broader team chose the regional economy approach to evaluate future scenarios and understand the scale of economic opportunity if success is realized in strategic areas.

2.2 Background Profile of the Pioneer Valley Economy

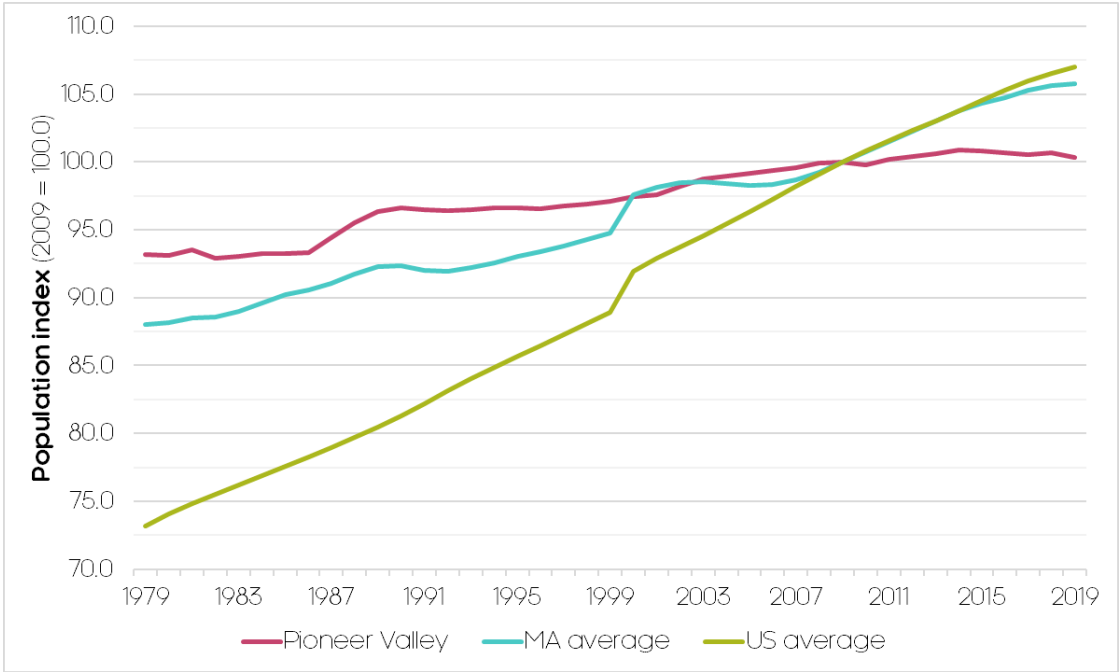
Pre-pandemic trends and performance

Pre-pandemic (2019), the Pioneer Valley region had a resident population of 627,300, generated $32.1 billion of Gross Domestic Product (GDP), and accounted for an estimated 372,000 jobs and 23,600 employer establishments.

The economic performance of the Pioneer Valley region (defined as Hampden and Hampshire counties) in the years preceding the Covid-19 pandemic had generally been slower than its historical performance, and trailed behind benchmarks such as the Massachusetts (MA) average, and the nationwide (US) average.

As Figure 2-1 shows, in the decade leading up to the pandemic the Pioneer Valley's resident population had grown by only 0.4%, lagging benchmarks (MA

Figure 2-1: Population index (all ages) relative to benchmarks, 1979-2019 (2009 = 100.0)



Source: Population Estimates Program, USCB

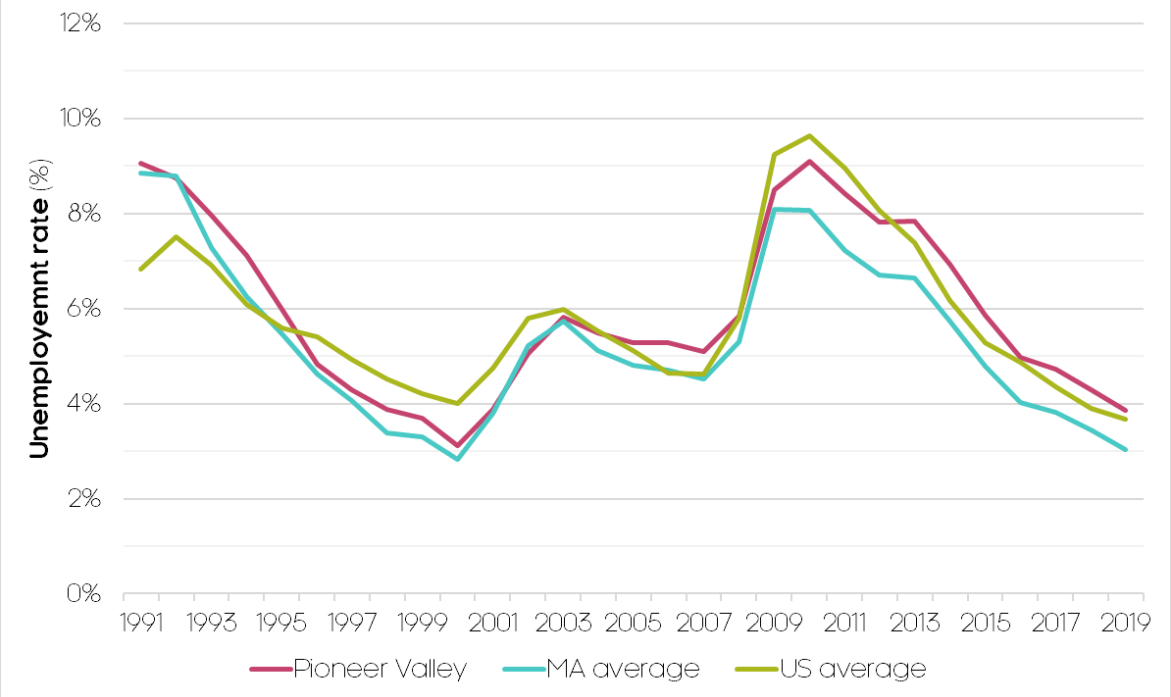
average 5.8%, US average 7.0%) and longer-term trends (the preceding 30-year average was 0.4% *per year*).

Accompanying this slower growth has been the aging profile of the Pioneer Valley population; the number of residents of retirement age (65+) increased by 25.6% over the decade, and accounted for almost one fifth (18%) of the population in 2019.

Against this backdrop, the Pioneer Valley labor market has still performed relatively strongly; some 44,900 additional jobs were created between 2009 and 2019. This saw the region recover the job losses from the Great Recession one year earlier than the US average, with job creation averaging 1.1% per year (the preceding 20-year average was 0.4% per year).

This stronger rate of job creation helped reduce unemployment and increase economic participation. As Figure 2-2 shows, after peaking in 2010, unemployment in the region more than halved, reaching its lowest rate (3.8%) in almost 20 years by 2019. Labor force participation also increased, and in 2019 there were 19,100 more residents in employment than in 2009.

Figure 2-2: Unemployment rate relative to benchmarks (1991-2019)

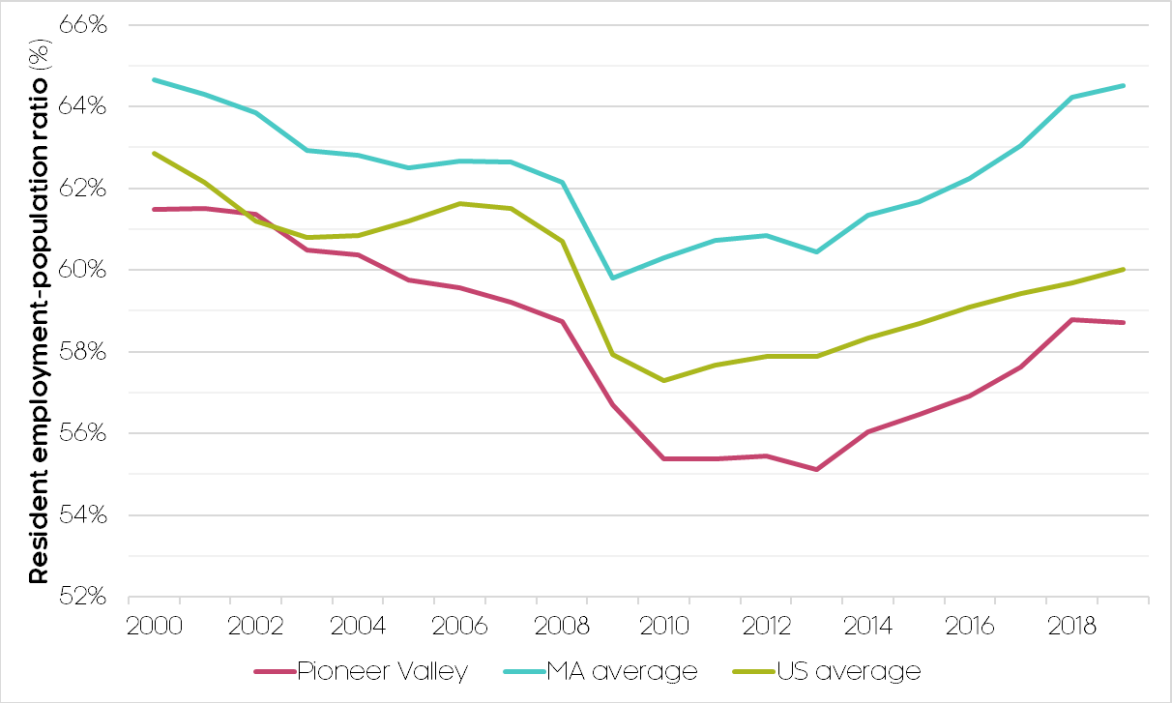


Source: Current Population Survey, BLS

As Figure 2-3 shows, this almost saw the region close the longstanding gap in its resident employment-population ratio relative to the US average; in 2018, with 59% of Pioneer Valley adults in employment, the gap was at its smallest since 2004 (though still well below the MA average over 64%).

Generally though, across key labor market indicators, the Pioneer Valley underperforms relative to benchmarks. And these aggregate measures disguise labor market inequalities and gaps, especially for different socio-economic groups (which we explore further below).

Figure 2-3: Resident employment-population ratio relative to benchmarks (2000-2019)



Source: Current Population Survey, BLS

Despite improvements to the labor market, the growth of the Pioneer Valley economy has been subdued; in real terms (adjusted for inflation), GDP growth averaged 1.2% per year over 2009-2019, well behind relative benchmarks (MA average 2.4% per year, US average 2.2%).

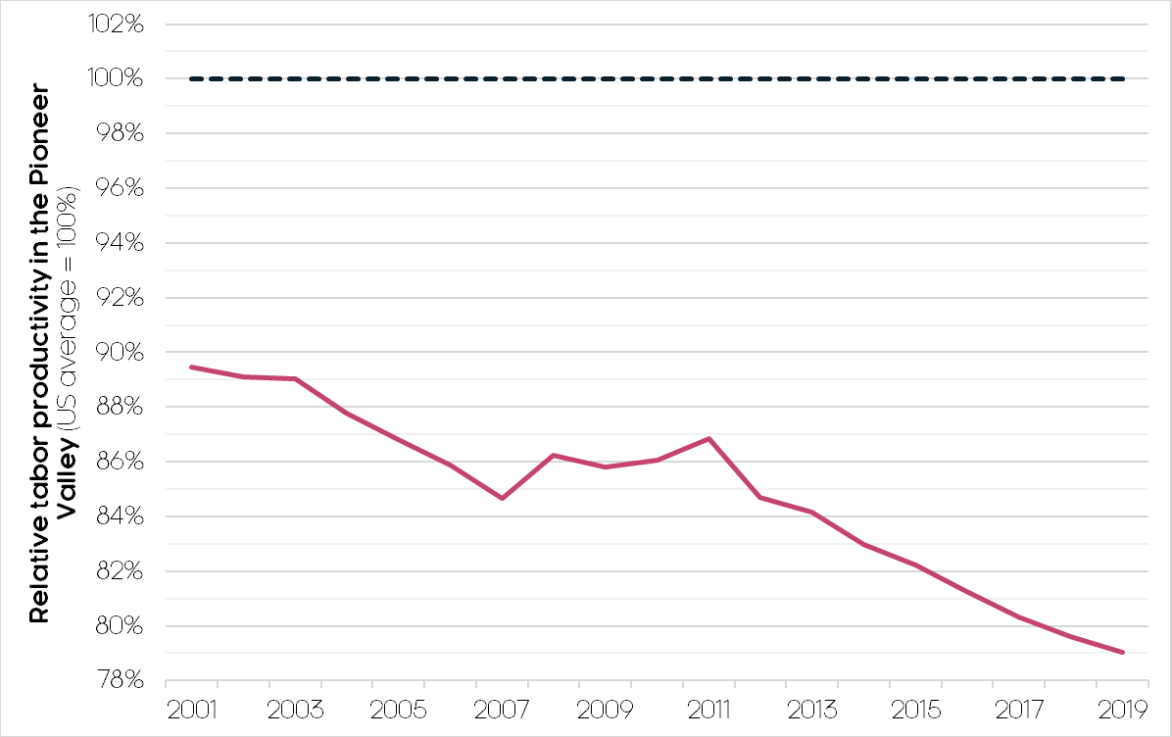
This slowdown is largely attributable to subdued labor productivity improvements in the Pioneer Valley region; between 2009-2019, labor productivity growth averaged -0.1%, lagging benchmarks (MA and US both 0.7%) and its historic trend (0.8% per year).

This has exacerbated a longstanding shortfall in the Pioneer Valley, as Figure 2-4 shows, with labor productivity 21% below the US average in the region, double the 10% shortfall in 2001, which is severely harming the competitiveness and growth potential of the region's economy.

Some of this shortfall could be attributable to shifting industry mix (i.e., towards lower productivity, service-based industries), as the Pioneer Valley has not experienced growth in high-tech/high-wage sectors like the rest of the state (e.g., bio-tech, software, professional/technical services).

However, it is likely that much of this trend is attributable to local economic factors (e.g., investment intensity, skill levels, infrastructure coverage, business attitudes etc.)

Figure 2-4: Labor productivity in the Pioneer Valley relative to the US average (US average = 100%, 2001-2019)



Source: GDP and Personal Income, US BEA

This trend has contributed to lower and slower growing wages in the region; in 2019, the average annual wage paid by employers was $50,600, some $11,700 (17%) below the US average and $31,800 (37%) below the MA average. When adjusted for the cost of living, employer wages in the Pioneer Valley have seen no significant increase since 2009.

Industry trends and specialisms

Figure 2-5 provides a high-level overview of the Pioneer Valley's pre-Covid industrial structure, showing how the $32.1 billion of GDP and 372,000 jobs in the region were allocated across key industries.

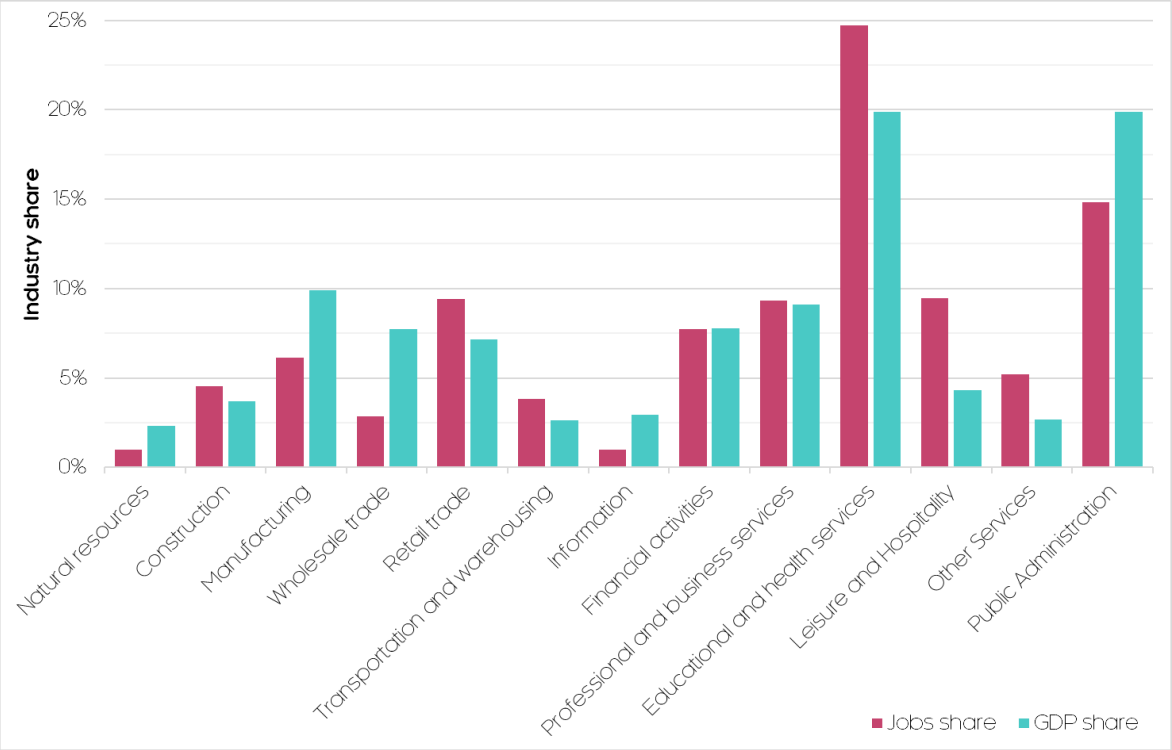
Educational and health services is clearly the largest industry sector for the Pioneer Valley in terms of jobs, providing one fourth (25%) of all jobs in the region, including part-time and temporary positions.

This is followed by public administration (including federal, state and local government), which accounts for 15% of all jobs. Retail trade, professional and business services, and leisure and hospitality are the next largest, all accounting for approximately 1 in 10 jobs.

In terms of GDP, the industry mix is more evenly distributed. Educational and health services and public administration each generate one fifth of GDP in the Pioneer Valley region. Manufacturing is the third largest industry in terms of GDP, with a 10% share, almost double its 6% jobs share.

This discrepancy (compared to jobs) is indicative of the relatively higher GDP generated per worker (labor productivity) in manufacturing, as average GDP per worker is $105,300 for manufacturing compared to $74,600 across all industries.

Figure 2-5: Industry share of total jobs and GDP in the Pioneer Valley (2019)



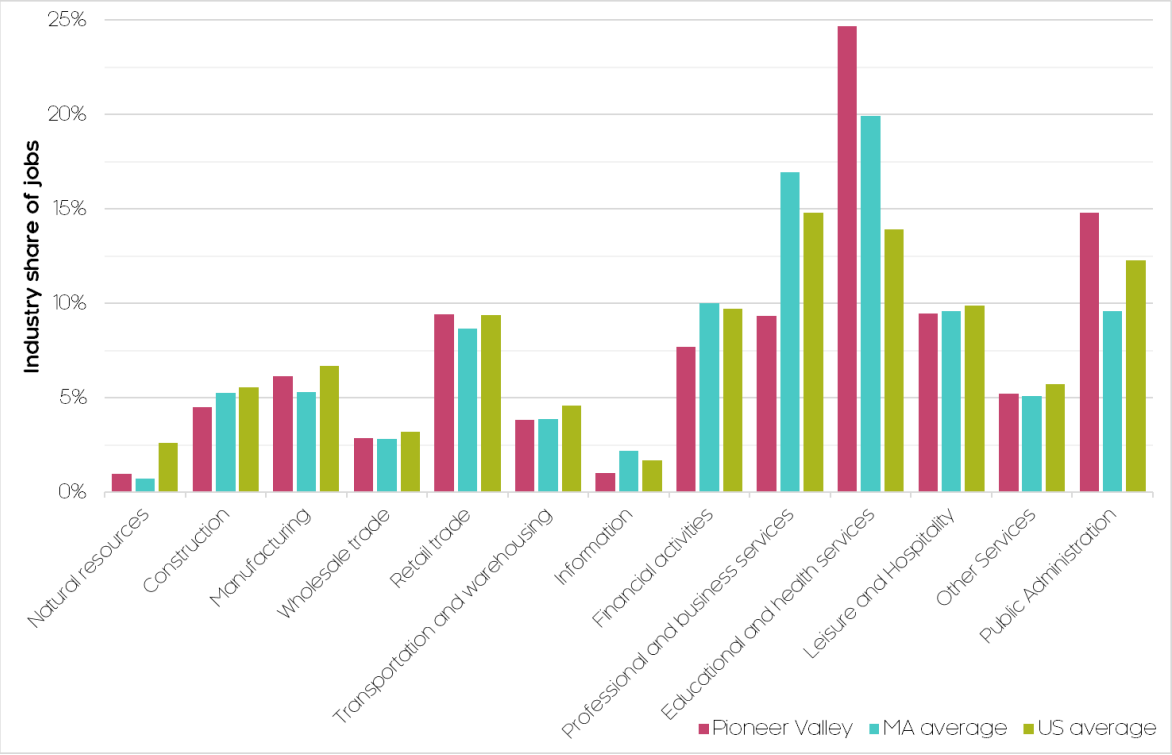
Source: GDP and Personal Income, US BEA

Therefore, higher labor productivity industries such as manufacturing, wholesale trade, and information display a higher GDP share than job share, whilst the opposite is true for lower labor productivity industries, such as retail trade, transportation and warehousing, and leisure and hospitality.

Another useful way of assessing the Pioneer Valley's industry mix is to compare its industry share (in terms of jobs) to the MA and US averages (see Figure 2-6). Consistent with the previous graph, educational and health services jobs share is remarkably large, almost double the US average (14%) and above the MA average (20%, although it is also the largest industry statewide). This reflects the region's long-standing economic foundations of hospitals and health care along with numerous higher education colleges and universities in both Hampden and Hampshire counties.

Public administration is the second largest industry in the Pioneer Valley, with a notably higher job share than the MA average (10%) but closer to the US average (12%). Other industry strengths in the Pioneer Valley (where there is a relatively high share of total jobs) include retail trade and manufacturing.

Figure 2-6: Industry share of total jobs relative to benchmarks (2019)



Source: GDP and Personal Income, BEA

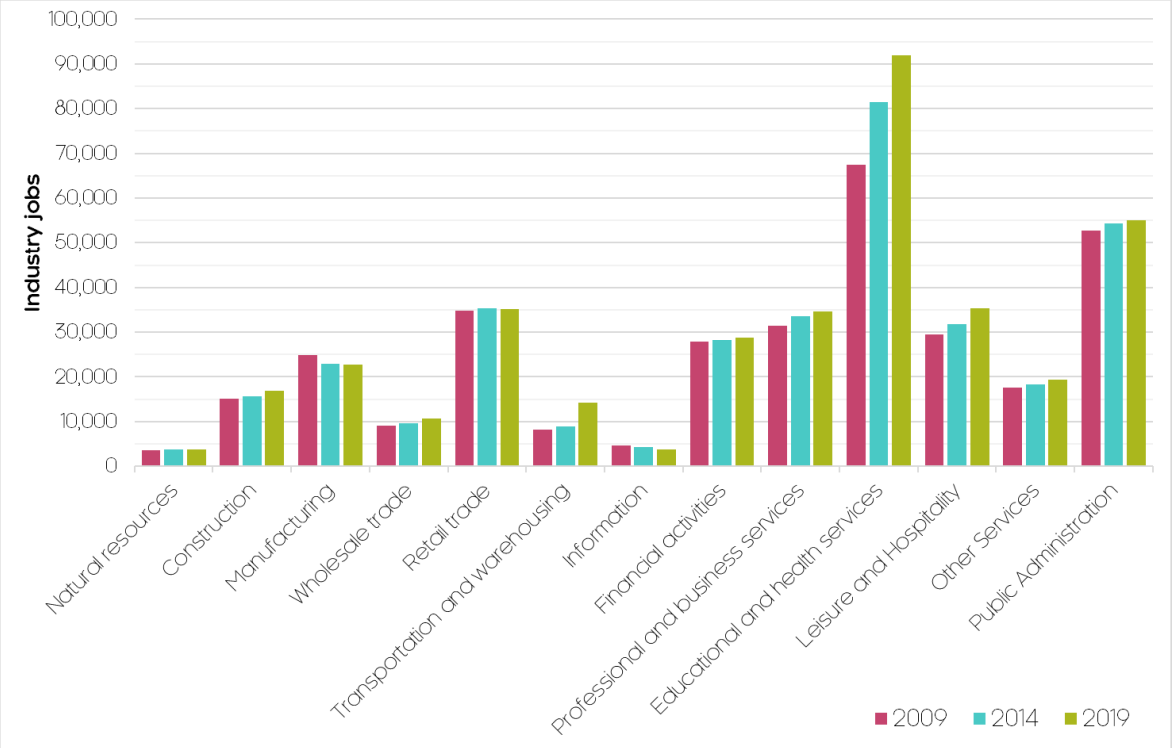
Industries underrepresented in the Pioneer Valley are largely related to business services, including information (only 1% of jobs, which is half the MA average), financial activities (8% of jobs, below the US and MA average of 10%), and professional services (9% of jobs, about half the MA average).

As earlier analysis showed, jobs growth in the Pioneer Valley was strong in the decade preceding the Covid-19 pandemic, with the creation of 44,900 additional jobs in the region. Of course, these changes over time were felt differently across industry sectors.

Figure 2-7 depicts the number of jobs by major industry in 2009 (the depth of the Great Recession), 2015 and 2019. Only a handful of industries experienced a fall in employment over this time; manufacturing, which shed 2,100 jobs (largely between 2009-2014) and information, which experienced 1,000 job losses.

The largest growth in the region, by some distance, was in the educational and health services sector (the Pioneer Valley's largest employer), which created a substantial 24,300 additional jobs between 2009-2019 – more than half of all additional jobs in the region over this time.

Figure 2-7: Industry jobs overtime in the Pioneer Valley (2009-2019)



Source: GDP and Personal Income, BEA

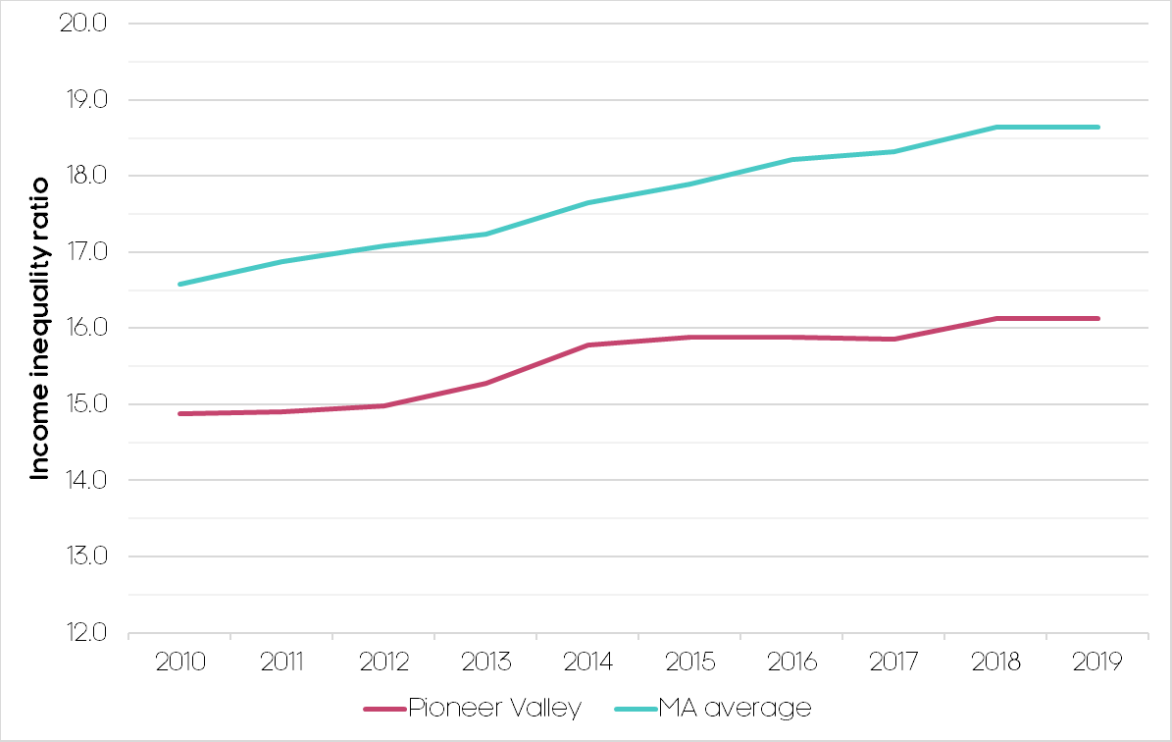
Other industries that experienced strong growth in the region include transportation and warehousing (+6,000 additional jobs), leisure and hospitality (+5,700), and professional and business services (+3,300). Steadier growth was observed in other industries, with construction, wholesale, other services and public administration seeing gains of between 1,500-2,500 jobs over this period.

Equitable and inclusive economy

Our analysis so far has only considered the higher-level performance of the Pioneer Valley economy, which does not always capture some of the significant and stubborn inequalities and inclusivity gaps in the region.

We have already shown how incomes are lower and slower growing in the Pioneer Valley, but as Figure 2-8 shows, they have also become more unevenly distributed, with the incomes of the highest earners 16 times that of its lowest earners in 2019, up from 15 times a decade ago.

Figure 2-8: Income inequality ratio relative to benchmarks (2010-2019)



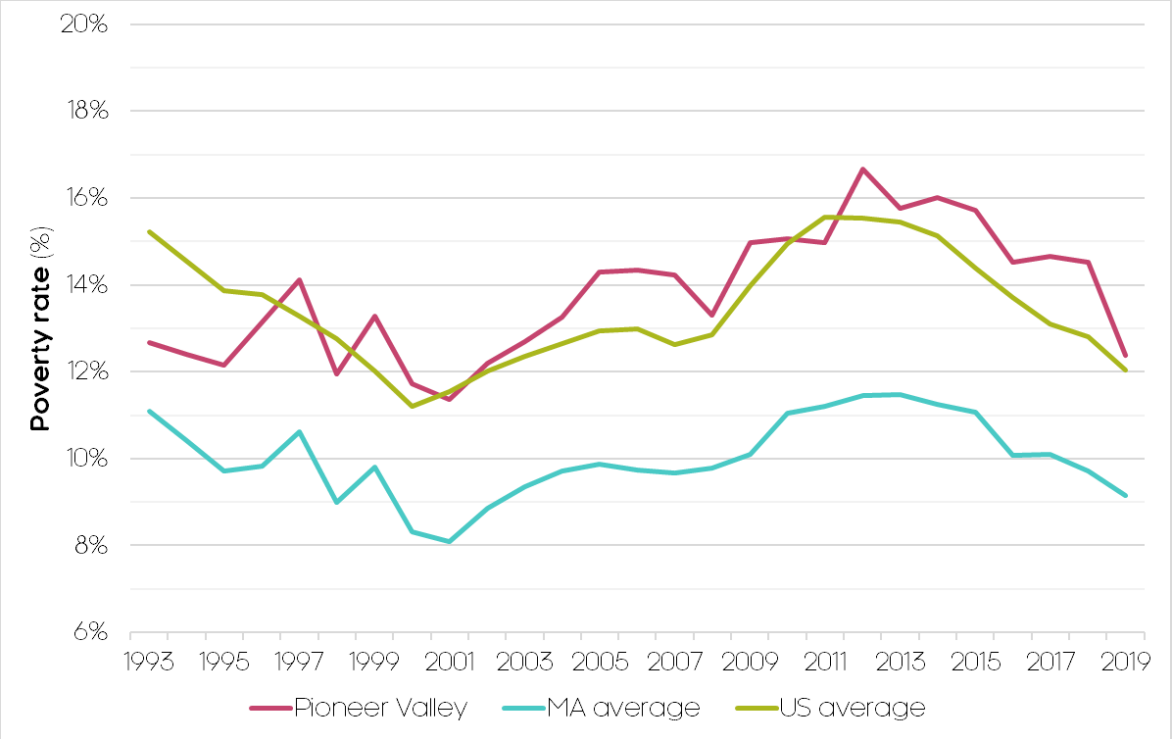
Source: Small Area Income & Poverty Estimates, USCB. Note: data represents the ratio of the mean income for the highest quintile of earners divided by the mean income of the lowest quintile of earners

And despite per capita incomes 28% below the MA average, income inequality in the Pioneer Valley is only 13% below the statewide average (with MA itself often ranked one of the most unequal states), and over the past decade, income inequality has been increasing at a faster rate than the statewide average.

As Figure 2-9 shows, poverty rates are also above average in the Pioneer Valley, with 12% of residents (of all ages) classified as being in poverty in 2019. In recent years progress has been made in driving this rate down, with 27,100 residents moving out of poverty since its peak in 2012.

Despite this, significant variations and stubborn gaps still exist; for instance, 31% of BIPOC residents were classified as being in poverty in 2019, in contrast to only 9% of White residents. Likewise, child poverty rates were above the rate for adults, at 18%, with 21,900 children living in poverty.

Figure 2-9: Poverty rate (all ages) relative to benchmarks (1993-2019)



Source: Small Area Income & Poverty Estimates, USCB

Certain groups are also often disadvantaged in their access to the labor market; BIPOC residents in the Pioneer Valley, despite accounting for only 26% of the population in the region, represented more than half (53%) of all continued UI claims at the start of 2020.

Likewise, only 1 in 21 BIPOC residents are business owners, in contrast to 1 in 10 White residents, while across the US, 1 in 11 BIPOC residents are business owners. This entrepreneurial gap can limit the economic growth and job creation potential of BIPOC communities.

An additional obstacle to income and wealth generation in BIPOC communities are the lower relative rates of home ownership; in 2017, only 31% of BIPOC households were homeowners, in contrast to 71% of White households, and 47% of BIPOC households across the US.

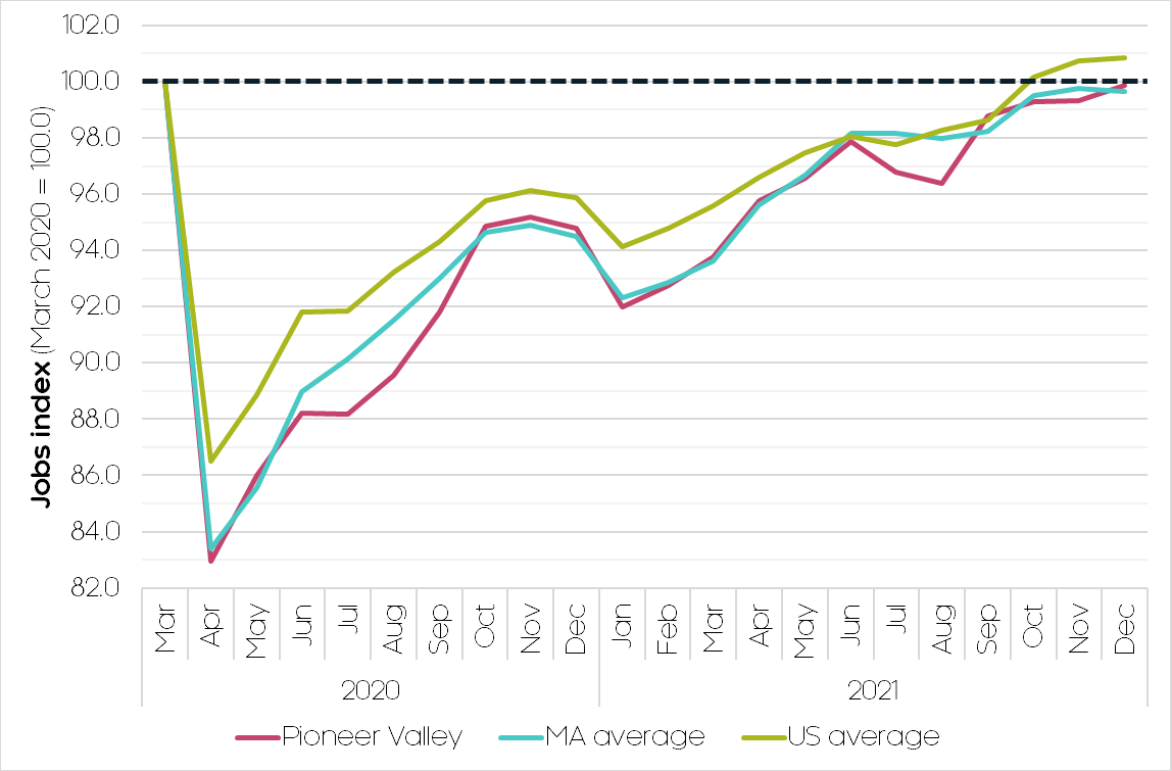
Covid-19 impacts and recovery

The Covid-19 pandemic caused a significant shock to the Pioneer Valley economy throughout 2020 and into 2021 and 2022, the latest data shows.

During the first few months of the pandemic, local employers shed some 46,500 jobs, more than four times that incurred at the height of the Great Recession. Equating to a reduction of -17%, this was larger than the US average (-13%), but in line with the MA average.

As Figure 2-10 shows however, after this sharp contraction and the early uncertainties of the pandemic, the labor market recovered strongly, and by the end of 2021 job totals had all but returned to pre-pandemic levels, with the Pioneer Valley recovering in line with the MA average.

Figure 2-10: Monthly jobs index relative to benchmarks (2020-2021)



Source: Quarterly Census of Employment and Wages, BLS. Note: data provisional and subject to change

Of course, the impact of the pandemic on industries in the Pioneer Valley has been highly uneven. Initial job losses were concentrated in those most vulnerable to 'stay-at-home' and social distancing restrictions including:[1]

- Leisure and hospitality, which experienced the sharpest reduction in jobs (-58%) with an initial 14,600 job losses, although by the end of 2021 the industry had returned to pre-pandemic levels of employment.
- The education and health services industry, the largest employer in the Pioneer Valley, experienced 10,200 initial job losses (-13%), but had all but recovered to pre-pandemic levels of employment by the end of 2021.
- Trade, transportation, and utilities – including wholesale and retail - saw 8,600 initial job losses (-19%), but by the end of 2021 had exceeded pre-pandemic levels of employment.
- Other services (excluding government) also underwent a sharp contraction (-35%) with an initial 3,100 job losses, and by the end of 2021 employment was still some 6% below pre-pandemic levels.

These job losses resulted in a sharp and sudden increase in unemployment in the Pioneer Valley. As Figure 2-11 shows, the unemployment rate peaked at 17% in the early months of the pandemic, well above the 11% recorded during the Great Recession.

This rate also exceeded the US average (14%) but was in line with the MA average. The recovery of the labor market saw this rate halve by the end of

[1] Note that the following analysis covers private sector jobs only

2020, and by the start of 2022, it had all but returned to pre-pandemic levels, though retained a persistent gap relative to benchmarks.

Figure 2-11: Monthly unemployment rate relative to benchmarks (2020-2022)

Source: Current Population Survey, BLS. Note: data provisional and subject to change

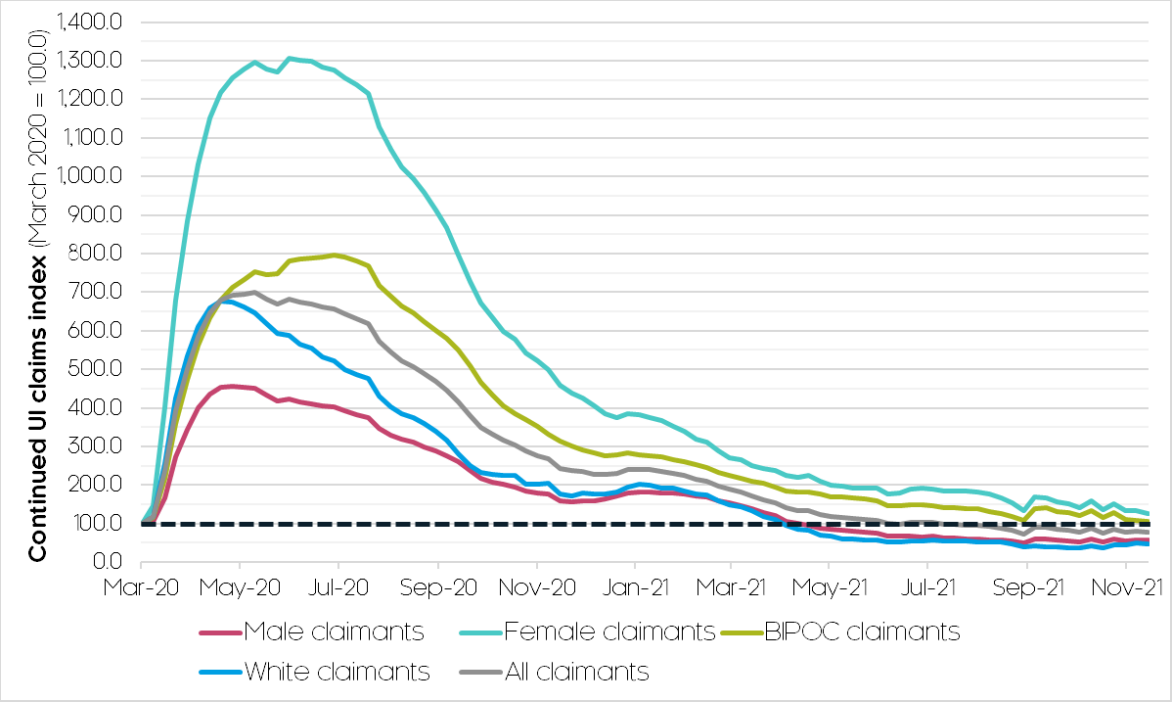
In GDP terms, the pandemic has cost the Pioneer Valley economy an initial $1.5 billion (in real terms). This equates to a real term contraction of -5.4%, double the -2.6% experienced during the Great Recession, and larger than the US (-3.4%) and MA (-3.7%) contractions over the same period.

The pandemic has also accelerated the decline of the Pioneer Valley population, with provisional data for 2021 showing 3,100 less residents in the region relative to 2019 – a fall of -0.7% (meanwhile, the statewide average saw an increase of 1.3%).

The inequality dimension of the pandemic has also been significant. The decline in the Pioneer Valley's poverty rate ground to a halt in 2020, while income inequality increased, as higher earners avoided the worse impacts of the pandemic.

And critically, as Figure 2-12 shows, the labor market impacts were highly uneven, with both female and BIPOC residents in the Pioneer Valley disproportionately impacted by job losses and unemployment during the pandemic.

Figure 2-12: Continued UI claimants index in the Pioneer Valley (2020-2021)



Source: MA Department of Unemployment Assistance. Note: data provisional and subject to change

At its peak during the summer of 2020, there were nearly eight times as many BIPOC claimants than before the pandemic, whilst the number of female claimants increased thirteen times over. Both groups have also seen a slower decline in claims, and by the end of 2021 were still above pre-pandemic levels.

Summary

This background data profile of the Pioneer Valley economy, especially the lingering economic challenges faced by BIPOC populations and communities, is a foundation for the economic scenario planning work in two ways.

First, it provides the baseline information and gaps in performance that are carried forward in terms of how we can envision future success and improvement at key metrics such as workforce participation, BIPOC homeownership, and slower economic productivity growth in key sectors.

Second, it reinforces stakeholder and regional leaders imperatives to focus on the top priority of working towards a more equitable and inclusive economy.

2.3 Economic Scenario Planning Options

To help ensure the most suitable economic scenario planning options and methods for this project, we identified and scrutinized three categories from low to medium to high in terms of cost, complexity, and sophistication of analytical tools and workshop engagements.

This was informed by extensive research and discussions with experts in regional economic planning, including consideration of state and nationwide ‘best practice’ examples. These options were presented to and scrutinized by the project team, with Option 2 identified as the most practical, cost-effective and relevant method for this project focused on economic recovery.

Option 1: Low / More Qualitative

This option would be the lowest level of effort in terms of analytics and data, relying more on qualitative / descriptive scenarios. This approach might use some existing data trends and forecasts from publicly available sources, including from PVPC. For example, the UMass Donahue Institute produced population projections for all Massachusetts municipalities and counties in 2018 (forecasts to 2040 in five-year increments).

The majority of the work for this kind of scenario planning process would be formulating possible future scenarios in descriptive terms (e.g., continuation of remote work, transition to clean energy economy), and then discussing the pros and cons (benefits and costs) of strategic priorities to help the region anticipate change and position for success. While more qualitative, this kind of discipline, including explicit consideration of the likelihood of various opportunities and risks, can be a very effective way of conceptualizing future scenarios to gain a clearer understanding of potential future pathways.

Option 2: Medium / Regional Economic Modeling of Scenarios

This medium level option would focus on applying a regional economic forecasting and simulation model customized to the Pioneer Valley region to evaluate various future scenarios. This would broadly take place in four categories (or steps):

1. Baseline forecast – establish a mostly likely 'baseline' forecast for the region based on existing trends, and the MA and US economy forecasts. The baseline could be adjusted based on 'known' (committed) investments or projects that the model would not otherwise know about (e.g., a major redevelopment project or industry expansion opportunity). The baseline would then be compared to alternative future scenarios.
2. Explore internal and external drivers and uncertainties – this is an opportunity to think through possible future scenarios and strategic regional initiatives related to remote work and commuting, policy goals to develop a more equitable economy, clean energy transitions, how we enable growth in the region (e.g., downtowns and village centers), or a major infusion of federal transportation / infrastructure investment. This step requires significant input from stakeholders to shape the bounds of what is most important for the region, and what areas require the most attention to improve local and regional conditions.
3. Define economic success for the region based on identified scenarios – where do we need to improve on our baseline forecast to achieve success? This could be factors such as median income, poverty rates, industry employment, population growth, wages, housing affordability, etc. Within and outside the model, we can create a new scenario of where we would like to be as a regional economy within 10 to 20 years, and quantitatively create the metrics that matter for each scenario.
4. Test and quantify strategies to achieve regional success – as we develop strategic priorities for the Pioneer Valley, we can assess how various initiatives could help lead to regional economic impacts and a more inclusive economy. These could be in areas such as workforce training and skills, broadband connectivity and digital literacy, R&D and innovation, small business and entrepreneurship, inclusivity and equality programs, infrastructure and target industry strategies. For

each scenario to test, we could workshop more specifics about what is needed (or would make an impact) in different areas and then quantify that within a regional economic model.

This process is intended to always be focused on helping the region build support around identifying a select number of strategic initiatives, with a clearer understanding of their potential to create positive change, leading the way to further discussion of implementation and the resources/capacity needed to sustain each strategy. Each scenario area for quantitative analysis should include at least one stakeholder workshop to vet the scenario assumptions and discuss the kinds of actions needed to realize the potential improvement.

Option 3: High / Complex integrated regional modeling

Some regions have undertaken dedicated and extensive scenario planning efforts that are usually focused on imagining the next 20-30 years of demographic and economic growth. These efforts are usually conducted in regions that are grappling with growth and sprawl, and where to locate future housing and jobs, and how that interacts with transportation and other geo-spatial planning and infrastructure considerations.

The most well-known example is Envision Utah, which was a multi-year visioning and scenario planning and stakeholder engagement project for greater Salt Lake City, and that effort led to similar efforts as part of HUD's sustainable planning initiative and paved the way for scenario planning tools like Envision Tomorrow and Urban Footprint. But, these models generally do not include economic modeling capabilities to assess jobs, income, and other regional economy metrics.

In some cases, this type of scenario planning process (which includes substantial stakeholder engagement and workshops), can also be linked to regional economic models to better understand: the broader economic implications of growth scenarios (macro-view), or how and where jobs and businesses can be allocated geographically in a region (micro-view).

2.4 Approach to Economic Scenario Planning

Working from the Option 2 regional economic modeling approach for scenario planning, we have implemented a highly iterative process, with a strong emphasis on ensuring scenario options and associated inputs are thoroughly tested and worked through with both the client and wider stakeholder teams.

In short, it required a strong and sustained collaborative effort to craft the scenarios in ways that can be analyzed and assessed as part of the wider strategy development. Generally, our approach to the economic scenario planning entailed the following:

1. First, the client and/or stakeholder teams would help to identify and scrutinize some early conceptual scenario ideas. Some of these were suggested by the consultant team, based on existing and emerging research, literature, strategies, and plans.
2. The consultant team would then conduct research to define the relevant literature and data metrics, and calculate possible data inputs to model and quantify the impacts of each scenario.

3. This modeling approach, outlining the data inputs, definitions, and sources, is then brought back to the client and/or stakeholder team to review and refine, etc. Critical to this step was the assessment of 'aspirational' and 'transformational' future goals related to increasing the labor force participation rate, BIPOC homeownership and small business success, population growth and target industry sector growth.
4. Using these signed off inputs, the consultant team would then proceed to undertake the economic scenario modeling, using CE's Local Economy Futures Model (LEFM).
5. The Model (LEFM) quantifies the economic impacts and implications of what the scenario would mean in terms of regional jobs, output, and household income, and overall regional economic impacts.

This process resulted in the identification and consideration of a wide range of scenario planning options, which were discussed and refined with the project Task Force and other key stakeholders. Explored in further detail below, these could generally be distinguished between the following thematic areas:

- **Strategic initiatives** driven by regional leaders such as developing a more equitable economy, and identifying specific private industry opportunities for future economic vitality and resiliency.
- **External trends** that will impact the regional economy such as climate change and the transition to clean energy; COVID-19 accelerated impacts to remote work, online shopping, etc.; and future economic disruptions from as-yet unknown causes.

Regional Strategic Initiatives for Scenario Analysis

Scenario planning options considered included:

1. More equitable/inclusive economy

- Increase workforce participation for disconnected workers, with appropriate supports (childcare, transportation, mental health, etc.)
- Increased home ownership of BIPOC communities and increasing housing production
- Increased small business ownership for BIPOC populations and success/sustainability of businesses
- Increased spending by regional anchor institutions/employers to local / BIPOC suppliers (building from the Western Mass EDC's Anchor Collaborative)

2. New or enhanced regional economic/industry opportunities

- Growth in tech/digital sector companies – cybersecurity, big data
- Clean energy economy
- Food system, ag products, farm-to-table, suppliers to anchor institutions
- Critical infrastructure upgrades – broadband, east-west rail, etc.
- Supporting other critical employment sectors in the region such as health care, education, manufacturing, outdoor recreation/tourism, and cannabis cultivation.

Based on our initial research and data findings, we determined data-driven targets for regional improvement (e.g., increase employment rate to the state average) which were presented to the Task Force and key stakeholders.

This resulted in the identification of three core equitable/inclusive economy scenarios, based around:

- Improving workforce participation, especially for BIPOC populations which tend to have higher unemployment and face more obstacles to employment
- Increase in home ownership rates for BIPOC populations (and associated increase in regional housing delivery)
- Increased small business ownership and expansion of BIPOC populations

And two regional industry opportunity scenarios, focused on:

- Growth of the clean energy sector
- Growth of the cybersecurity and tech sector

External Trends

Other scenario planning options that were considered and discussed by the Task Force included:

1. Covid-19 implications to working, commuting, shopping, tourism

- Increase in remote work, and decrease in demand for office space
- Increased viability to live/work outside major cities, could lead to more opportunities for lower-cost Western Mass
- Online shopping and challenges for downtowns and retail
- Increased demand for outdoor adventure / recreation

2. Clean energy transition and climate change

- Accelerate transition to clean/renewable energy, de-emphasis on fossil fuels (coal, oil, gas)
- Local economic opportunities for installation (solar panels), energy efficiency, etc.
- R&D opportunities tied to UMass and innovative local utilities
- Climate adaptation

While these are all critical trends, given the complexity of some of these scenario themes, and relatively limited supporting data and evidence, we were only able to identify a limited range of data-driven targets for the scenario analysis. These were presented to the Task Force and key stakeholders.

This resulted in the identification of two external trends-based scenario, relating to:

- A reversal and increase in population growth (assisted by the improved viability to live/work outside major cities as a result of the pandemic)
- Growth of the clean energy sector (shared with the regional industry opportunity above)

The Local Economy Futures Model (LEFM)

Using our Local Economy Futures Model (LEFM), we were able to consider and model the impacts of a wide range of scenario planning options.

The LEFM is a forecasting and economic impact tool developed specifically for the US market to help decision-makers and strategic investors estimate the potential impact of future economic trends, policies and investments on their local economies.

The model has a strong theoretical underpinning, incorporating the latest thinking on factors determining local and regional economic competitiveness, yet at the same time is grounded in 'real world' empirical evidence.

The LEFM can be configured for local areas (cities and counties), regions and metro areas, as well as states or multi-state areas to address a wide-range of policy topics including infrastructure and transportation, workforce and skills, climate change and clean energy, taxes and public finance, or local economic development projects.

Unlike other local economy models, the LEFM acknowledges local competitiveness is determined by more than just costs of production. In the LEFM, agglomeration, sectoral clustering, and the knowledge economy – both through the skills of the workforce and the 'knowledge' content within products – all have a role in determining long-term economic competitiveness and performance. Their relative importance varies between sectors and across places.

In the LEFM, these forces and other behavioral responses emerge from the data – through past experiences – rather than being heavily reliant on theoretical assumptions.

From a scenario planning perspective, key features of the model include:

- ability to focus on the medium and long-term: annual time series results for all indicators to 2050
- a baseline projection consistent with underlying macroeconomic trends against which alternative scenarios can be compared
- a high degree of sectoral and other detail (64 industries, 23 occupations), with a wide-range of economic and demographic variables across employment, wages, output, productivity, etc.
- innovative treatment of the supply-side competitiveness grounding the intellectual rigor of evolutionary economic geography in 'real world' experience

More detail on the LEFM can be found in the technical appendix of this report. The particular version of the LEFM used for this project had a data baseline of 2020 (with projections over 2021-2050, based on our assumptions during Spring 2022).

3 Economic Scenario Planning: Results and Analysis

3.1 Introduction

Following the economic scenario analysis approach and background data presented in the previous chapter, Chapter 3 provides the economic impact scenario results for six strategic initiatives aimed at creating a more equitable and resilient Pioneer Valley economy, including:

1. Improving Workforce Participation and Sustainable Employment Opportunities;
2. Supporting BIPOC Business Ownership and Expansion Opportunities;
3. Expand Regional Housing Options and Increase BIPOC Homeownership Rates;
4. Reversing Stagnant Population Trends;
5. Expanding the Clean Energy Industry Cluster; and
6. Leveraging New Opportunities in Cybersecurity and Related Tech Sectors

Each scenario and corresponding strategic initiative has been analyzed using CE's Local Economy Futures Model (LEFM) based on the identification of aspirational and transformative visions of the potential economic opportunity for the Pioneer Valley.

3.2 Improving Workforce Participation and Sustainable Employment Opportunities

Background

Workforce participation and employment rates in the Pioneer Valley have been stubbornly below Massachusetts and US averages, leading to a smaller share of working-age population in productive employment, and a greater share unemployed and economically inactive. And we know this trend disproportionately affects lower income, less educated populations especially in urban areas with larger concentrations of BIPOC populations.

Metrics and ambitions

Our LEFM model covers a range of metrics related to this ambition. We identified the resident **employment-population ratio** (i.e., the employment rate) as the best fitting scenario metric, as in contrast to the participation rate this metric does not include retirees, students and trainees (who do not provide an accurate portrayal of workforce participation).

Using the LEFM's baseline projections, we observed the metric's historic trend and longer-term outlook, and then worked closely with the Task Force group to scrutinize and agree two ambitious scenarios for the region. The metric definition and sources, recent performance, and proposed scenario assumptions are summarized in Table 3-1.

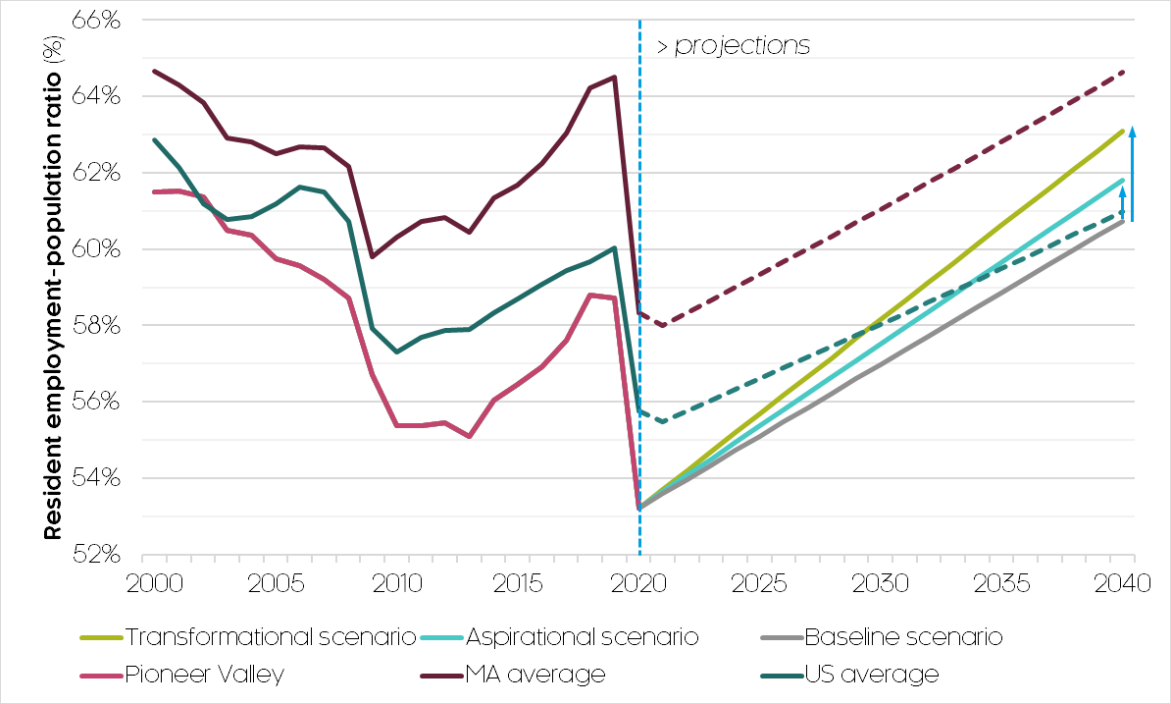
Table 3-1: Overview of the proposed workforce participation metric and scenarios

Proposed metric	Recent Pioneer Valley performance	Proposed scenarios	Impacts to be entered into model
• **Employment-population ratio** o Proportion working age population (aged 16+) in active, paid employment o Source: Current Population Survey, BLS	• Historically tracked US avg. • Stubborn gap relative to MA avg. • Significant drop 2020-onwards, as a result of Covid-19 pandemic	• **Baseline:** ratio improves in line with recent PV performance • **Aspirational:** ratio improves to early-2000's levels • **Transformational:** ratio exceeds US avg. and closes gap with MA avg.	• Additional residents in employment • Apply LEFM to estimate impacts in terms of jobs, output. incomes, commuting etc.

As presented in Figure 3-1, we proposed two ambitious scenarios relative to the baseline expectation of 342,700 total residents in employment by 2040:

- An *aspirational scenario* where the region sees its employment-population ratio return to levels last experienced in the early 2000s. This would result in 6,000 additional residents in employment by 2040 (a 2% increase on baseline).
- A *transformational scenario* where the region is able to exceed the US average, as it did in the early 2000's, and close the gap with the MA average. This would result in 13,200 additional residents in employment by 2040 (a 4% increase).

Figure 3-1: Proposed workforce participation scenarios



Source: Cambridge Econometrics (based on USCB data). Note: data 2021-onwards strictly projections

Logic and modeling

We developed the following logic model for this scenario, which illustratively demonstrates the basic modeling assumptions for this metric, and the relevant economic relationships and dependencies within the model.

- Removing obstacles to sustainable workforce participation, particularly for disconnected workers leads to
- An increase in the number of people productively engaged in work, which leads to
- More total jobs and reduced job vacancies for employers, and increased earnings and reduced public welfare subsidies, which leads to
- Wider regional economic impacts of increased workforce participation

The associated resident workforce expansion for each scenario directly enters the model, which then calculates the wider regional economic impacts (results presented below).

A key consideration for this scenario is that not all new employed residents are expected to work in the Pioneer Valley; currently 15% of employed residents commute out of region for work, and the LEFM assumes a continuation of this.

Results

Table 3-2 presents the key modeling results for this scenario.

Table 3-2: Workforce participation scenario results

Economic impact scenario results relative to baseline					
		By 2025	By 2030	By 2035	By 2040
Aspirational scenario: *employment-population ratio improves to early-2000's levels*	**Jobs**	1,000	2,800	4,600	7,000
	Output ($m)	$140	$370	$680	$1,170
	Household income ($m)	$80	$210	$380	$650
Transformational scenario: *employment-population ratio exceeds US average, closes gap with MA*	**Jobs**	2,200	5,900	9,700	14,800
	Output ($m)	$300	$780	$1,420	$2,450
	Household income ($m)	$170	$440	$800	$1,380

Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

Relative to the baseline, by 2040 the *aspirational scenario* could support:

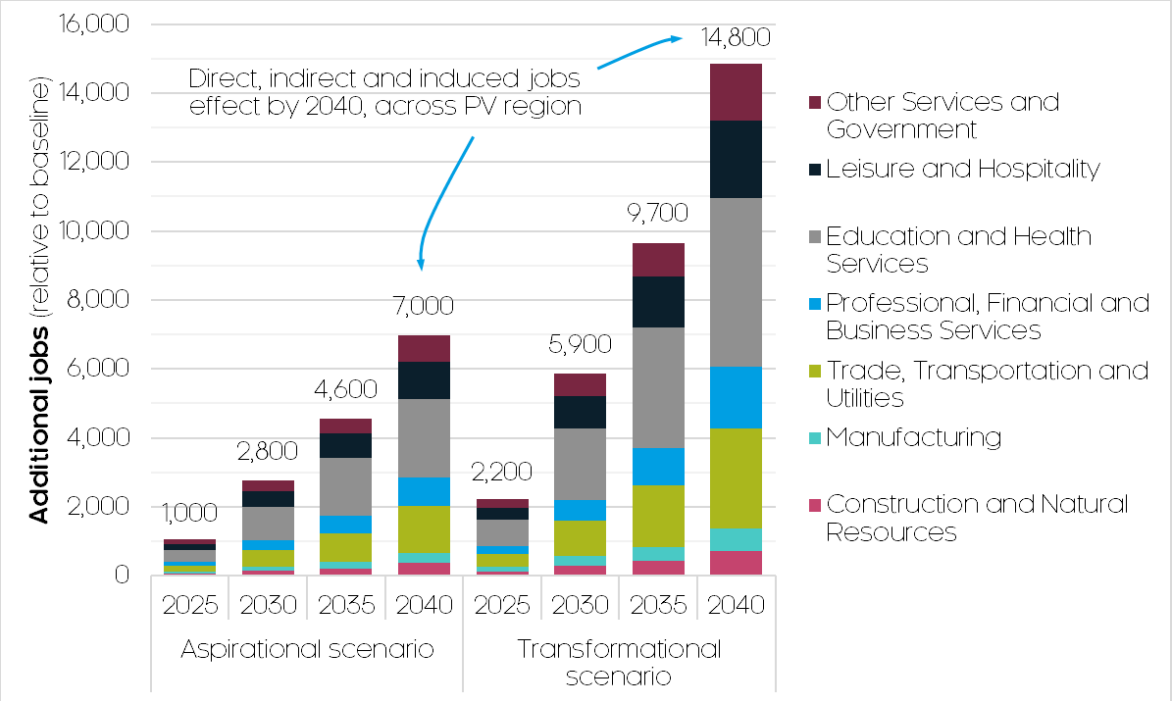
- The creation of an additional 7,000 direct, indirect, and induced jobs, 2% above the baseline
- $1.2 billion of additional output for regional firms
- A $650 million boost to household incomes

Relative to the baseline, by 2040 the *transformational scenario* could support:

- The creation of an additional 14,800 direct, indirect, and induced jobs, 4% above the baseline
- $2.5 billion of additional output for regional firms
- A $1.4 billion boost to household incomes

Looking specifically at jobs, Figure 3-2 profiles the industry breakdown of potential impacts. Impacts are concentrated in industries with high rates of entry for unemployed and inactive workers, such as education and health, trade and transportation, and leisure and hospitality.

Figure 3-2: Workforce participation scenario results by industry (job impacts only)



Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

3.3 Supporting BIPOC Business Ownership and Expansion Opportunities

Background

Increasing the number and growth of BIPOC-owned businesses is a central goal to build a more equitable and inclusive Pioneer Valley economy. Based on the most current data, minority-owned businesses (14%) lag far behind their share of the population (26%). Nationally, this relationship is much closer with about 34% of the population in minority population categories and just 30% of businesses.

Metrics and ambitions

We identified the **BIPOC business ownership share** as the most relevant scenario metric for this ambition. Using data on past performance and our own qualitative assessment (drawing on stakeholder evidence), we worked closely with the Task Force group to scrutinize and agree two ambitious scenarios for the region. The metric definition and sources, recent performance, and proposed scenario assumptions are summarized in Table 3-3.

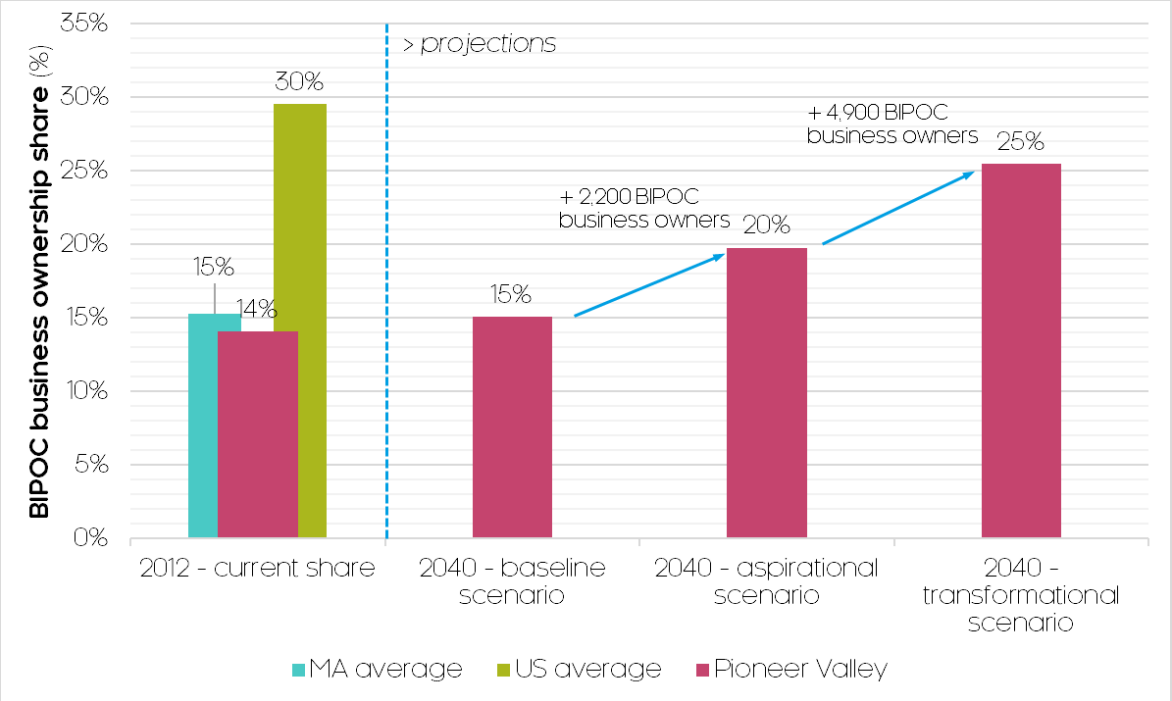
Table 3-3: Overview of the proposed BIPOC business ownership metric and scenarios

Proposed metric	Recent Pioneer Valley performance	Proposed scenarios	Impacts to be entered into model
• **BIPOC business ownership share** o Proportion of businesses owned by BIPOC o Source: Survey of Business Owners and Self-Employed Persons, USCB	• Underperforms MA and US average • 26% population share, only 14% business ownership share • Data predates Covid-19, but impacts could be positive	• **Baseline:** ownership share maintained at a similar rate to current PV avg. • **Aspirational:** ownership share halves the gap relative to population share • **Transformational:** ownership share equals BIPOC population share	• Higher levels of BIPOC-owned businesses, sales, and jobs • Additional employment and spending/sales (from increased business activity)

As presented in Figure 3-3, we proposed two ambitious scenarios relative to the baseline expectation of 7,000 total BIPOC business owners by 2040:

- An *aspirational scenario* where the BIPOC business ownership share halves the gap relative to the BIPOC population share. This would result in 2,200 additional BIPOC business owners by 2040 (a 28% increase on baseline)
- A *transformational scenario* where the BIPOC business ownership share equals the BIPOC population share. This would result in 4,900 additional BIPOC business owners by 2040 (a 70% increase)

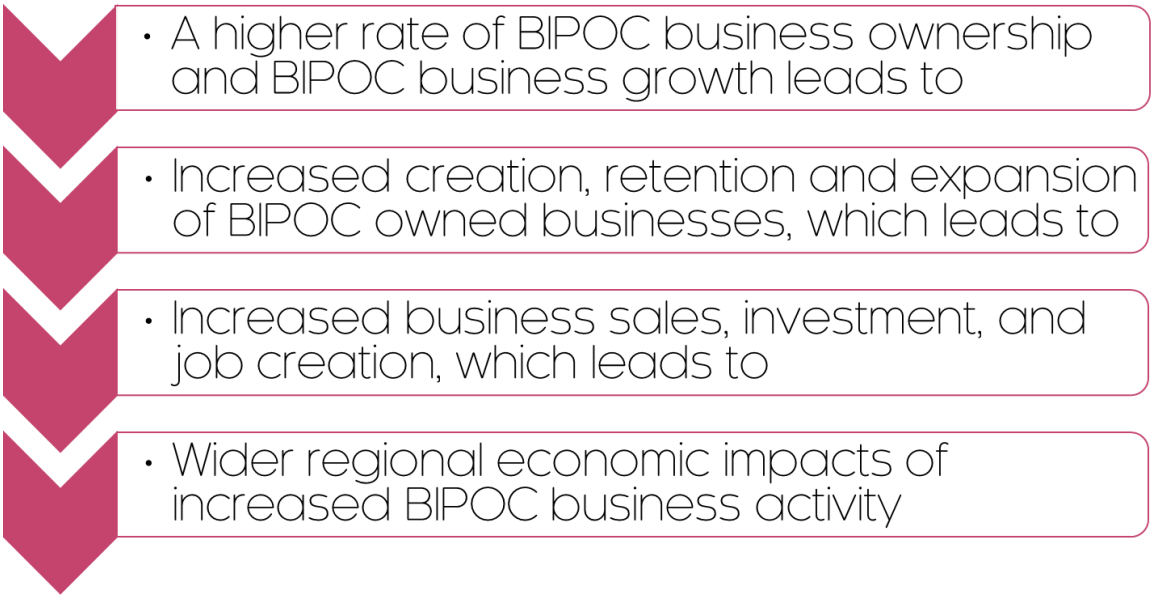
Figure 3-3: Proposed BIPOC business ownership scenarios



Source: Cambridge Econometrics (based on USCB data). Note: data 2012-onwards strictly projections

Logic and modeling

We developed the following logic model for this scenario, which illustratively demonstrates the basic modeling assumptions for this metric, and the relevant economic relationships and dependencies within the model.



Because the LEFM does not directly account for this metric in its modeling framework, we had to apply some additional steps and assumptions to accurately capture the scenarios in the model.

This was achieved by estimating an associated jobs expansion for the increase in business ownership. This was informed by existing research and evidence on the economic impacts of BIPOC business ownership[2], using data from the Survey of Business Owners and Self-Employed Persons (produced by the USCB).

These impacts were estimated as 3,400 direct jobs by 2040 for the aspirational scenario, and 7,900 direct jobs for the transformational scenario. These were then allocated to relevant industries (including construction, retail, business services, health care) and directly entered into the model, which calculates the wider regional economic impacts (results presented below).

Results

Table 3-4 presents the key modeling results for this scenario.

Table 3-4: BIPOC business ownership scenario results

Economic impact scenario results relative to baseline					
		By 2025	By 2030	By 2035	By 2040
Aspirational scenario: *ownership share halves the gap relative to BIPOC population share*	Jobs	1,000	2,500	4,300	6,000
	Output ($m)	$140	$370	$700	$1,080
	Household income ($m)	$80	$210	$390	$610
Transformational scenario: *ownership share equals BIPOC population share*	Jobs	2,300	5,800	9,600	13,500
	Output ($m)	$330	$850	$1,540	$2,400
	Household income ($m)	$190	$480	$870	$1,350

Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

[2] See for instance research by McKinsey here and here, and by Brookings here and here

Relative to the baseline, by 2040 the *aspirational scenario* could support:

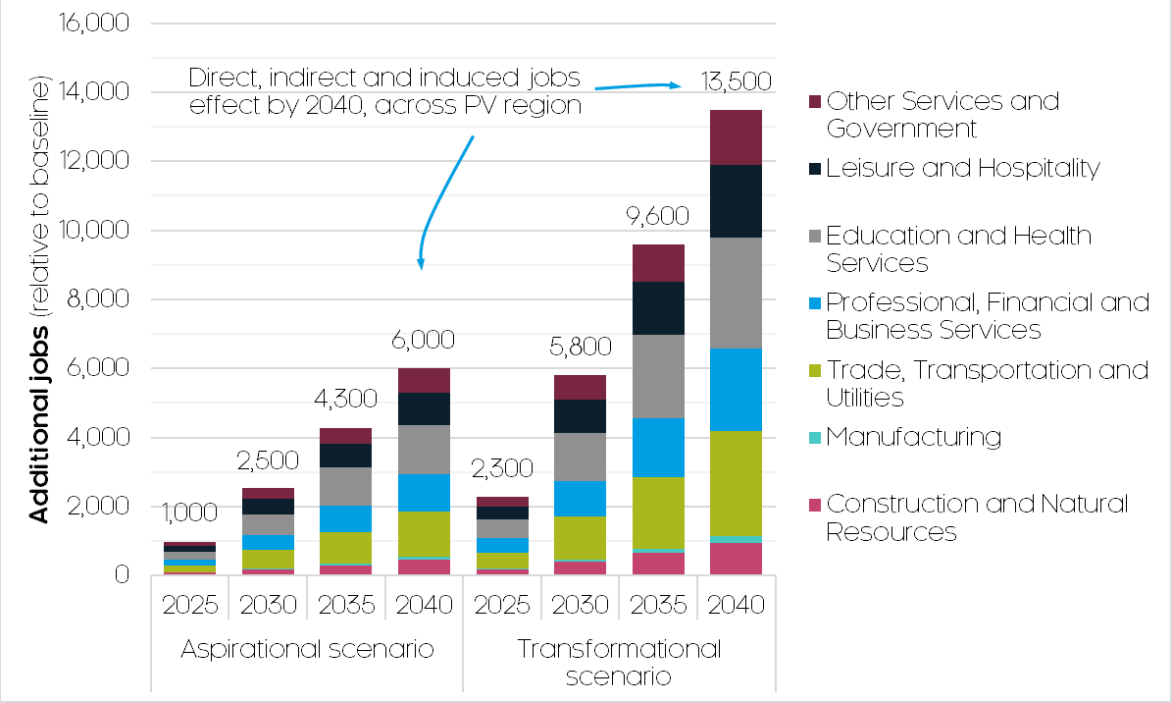
- The creation of an additional 6,000 direct, indirect, and induced jobs, 2% above the baseline
- $1.1 billion of additional output for regional firms
- A $610 million boost to household incomes

Relative to the baseline, by 2040 the *transformational scenario* could support:

- The creation of an additional 13,500 direct, indirect, and induced jobs, 3% above the baseline
- $2.4 billion of additional output for regional firms
- A $1.4 billion boost to household incomes

Looking specifically at jobs, Figure 3-4 profiles the industry breakdown of potential impacts. Impacts are concentrated in industries with high shares of BIPOC business ownership, including trade and transportation, education and health, leisure and hospitality, and professional, financial and business services.

Figure 3-4: BIPOC business ownership scenario results by industry (job impacts only)



Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

3.4 Expand Regional Housing Options and Increase BIPOC Homeownership Rates

Background

It increasingly recognized that housing is closely interlinked with economic development and population growth. In the Pioneer Valley, BIPOC households only own 31% of their housing units compared to an average of 47% nationwide, with a homeownership rate over 70% among white populations in the region. And we know from multiple research studies that homeownership is one of the strongest pathways to build wealth.

Metrics and ambitions

We identified the **BIPOC home ownership rate** as the most relevant scenario metric for this ambition. Using data on past performance and our own qualitative assessment (drawing on stakeholder evidence), we worked closely with the Task Force group to scrutinize and agree two ambitious scenarios for the region. The metric definition and sources, recent performance, and proposed scenario assumptions are summarized in Table 3-5.

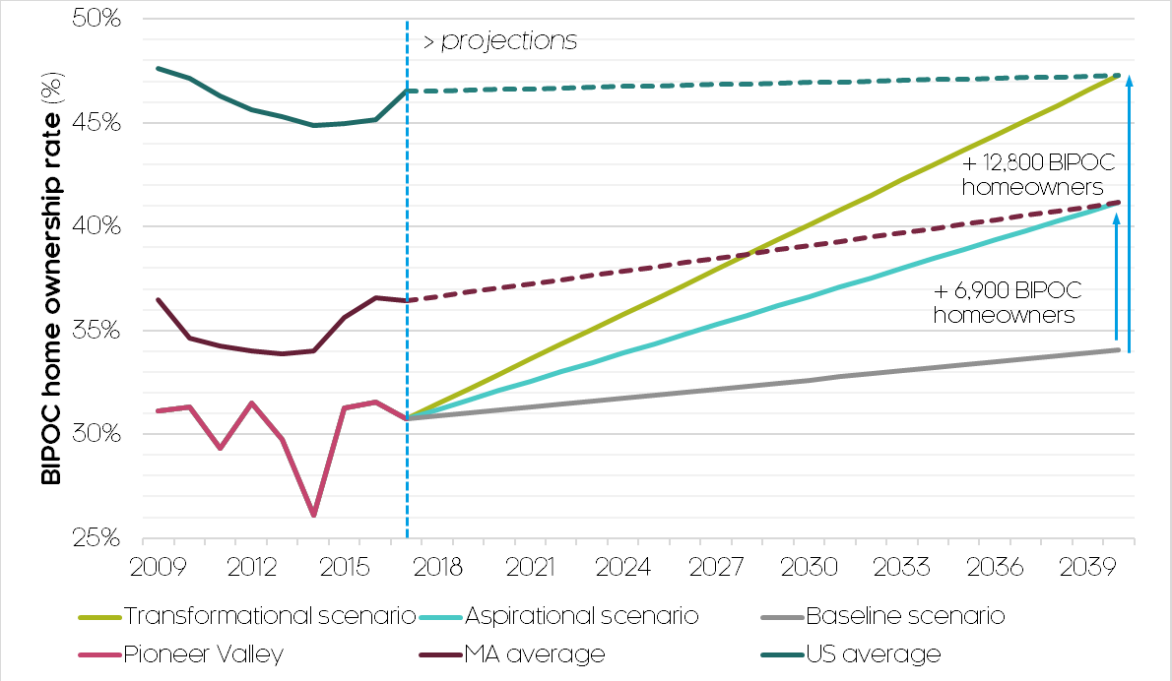
Table 3-5: Overview of the proposed BIPOC home ownership metric and scenarios

Proposed metric	Recent Pioneer Valley performance	Proposed scenarios	Impacts to be entered into model
• **BIPOC home ownership rate** o BIPOC-occupied housing units that are owner-occupied o Source: American Community Survey, USCB	• Underperforms MA and US avg. • Some improvement 2015-onwards • Data predates Covid-19, but impacts have likely been negative	• **Baseline:** ownership rate improves in line with recent PV performance • **Aspirational:** ownership rate improves to match MA avg. • **Transformational:** ownership rate improves to match US avg.	• Additional wealth of BIPOC homeowners leads to increased spending/sales in the region • Required expansion of housebuilding also provides temporary construction sales/jobs

As presented in Figure 3-5, we proposed two ambitious scenarios relative to the baseline expectation of 33,000 total BIPOC homeowners by 2040:

- An *aspirational scenario* where the BIPOC home ownership rate improves to match the statewide average. This would result in 6,900 additional BIPOC homeowners by 2040 (a 17% increase on baseline)
- A *transformational scenario* where the BIPOC home ownership rate improves to match the US average. This would result in 12,800 additional BIPOC homeowners by 2040 (a 32% increase)

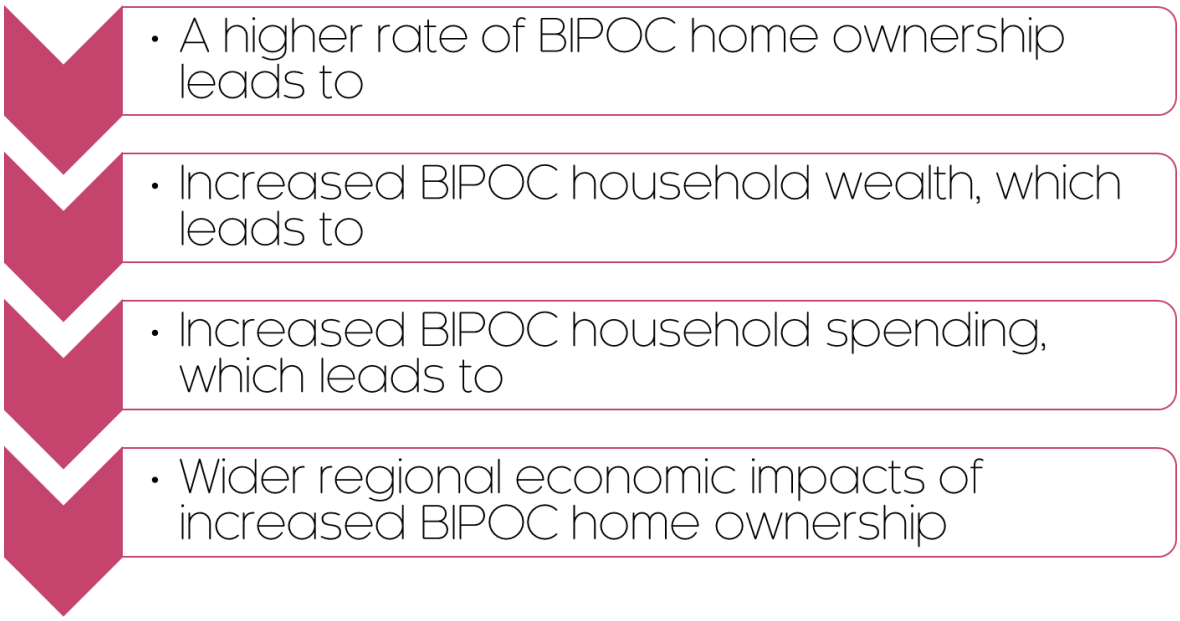
Figure 3-5: Proposed BIPOC home ownership scenarios



Source: Cambridge Econometrics (based on USCB data). Note: data 2017-onwards strictly projections

Logic and modeling

We developed the following logic model for this scenario, which illustratively demonstrates the basic modeling assumptions for this metric, and the relevant economic relationships and dependencies within the model.



Because the LEFM does not directly account for this metric in its modeling framework, we had to apply some additional steps and assumptions to accurately capture the scenarios in the model. This was achieved by estimating an associated household spending expansion for the increase in home ownership. This was informed by existing research and evidence on household wealth, income, and spending impacts of home ownership[3], using data from the Consumer Expenditure Survey.

These impacts were estimated as an additional $1.2 billion household spending by 2040 for the aspirational scenario, and $2.4 billion for the transformational scenario. These increases in household spending were directly entered into the model, which calculates the wider regional economic impacts (results presented below).

Separately, a recent UMass study[4] found that the region has a deficit of about 20,000 housing units and that the Pioneer Valley is one of the most segregated regions in the US. Consequently, given their relatedness and interdependence, it was agreed that this scenario should also focus on expanding housing production and options throughout the region.

As a result, we additionally modeled the associated impacts from the higher rate of required housebuilding. We estimated a requirement of 15,000 additional (mostly multi-family) housing units built by 2040 to assist the transformational ambition, and 9,000 for aspirational.

To calculate these housebuilding impacts in the model, we estimated the increased sales opportunities (and multipliers) for the local construction sector. This included up to $136m of additional construction revenues per year. Unlike household spending, these revenues do not accrue overtime.

[3] See for instance research by the Urban Institute here, by Habitat for Humanity here, and by LISC here

[4] "Springfield and Pioneer Valley Housing Phase II" by the UMass Donahue Institute for Wayfinders, January 2022.

Results

Table 3-6 presents the key modeling results for this scenario.

Table 3-6: BIPOC home ownership scenario results

Economic impact scenario results relative to baseline					
		By 2025	By 2030	By 2035	By 2040
Aspirational scenario: *BIPOC home ownership rate improves to match MA average*	Jobs	3,200	6,200	7,500	9,100
	Output ($m)	$440	$880	$1,210	$1,650
	Household income ($m)	$250	$490	$680	$930
Transformational scenario: *BIPOC home ownership rate improves to match US average*	Jobs	6,700	12,900	16,500	18,500
	Output ($m)	$920	$1,860	$2,700	$3,450
	Household income ($m)	$520	$1,040	$1,520	$1,940

Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

Relative to the baseline, by 2040 the *aspirational scenario* could support:

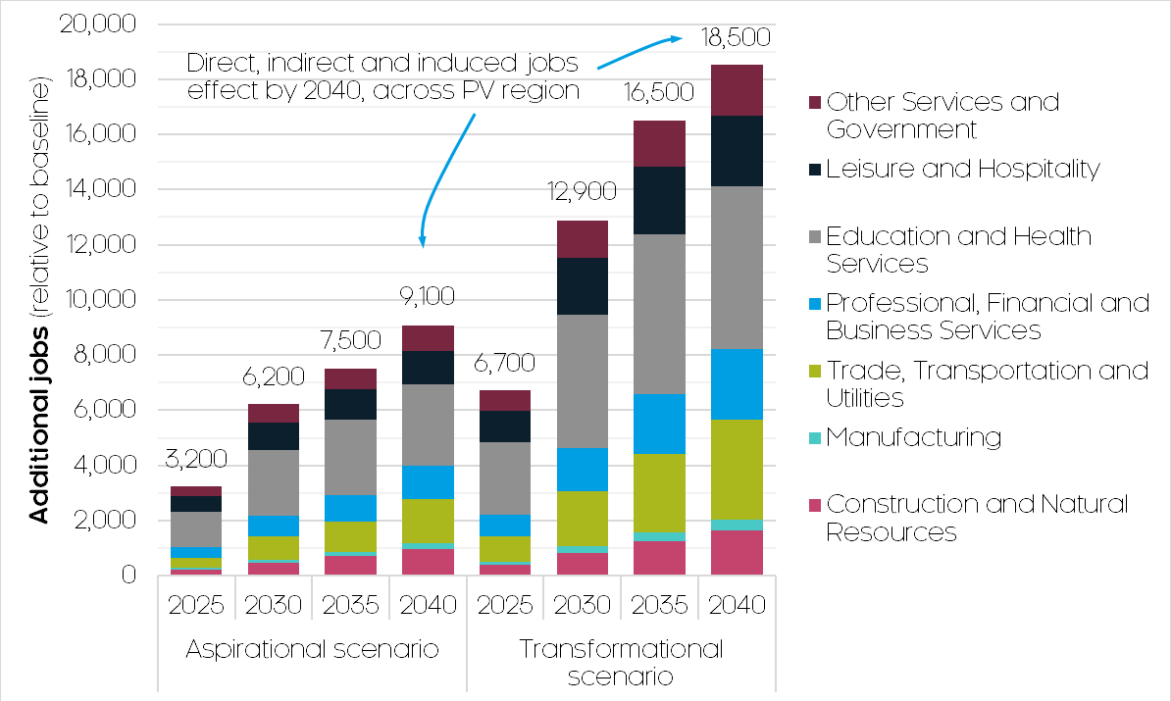
- The creation of an additional 9,100 direct, indirect, and induced jobs, 2% above the baseline
- $1.7 billion of additional output for regional firms
- A $930 million boost to household incomes

Relative to the baseline, by 2040 the *transformational scenario* could support:

- The creation of an additional 18,500 direct, indirect, and induced jobs, 5% above the baseline
- $3.5 billion of additional output for regional firms
- A $1.9 billion boost to household incomes

Looking specifically at jobs, Figure 3-6 profiles the industry breakdown of potential impacts. Impacts are concentrated in industries that are expected to benefit from an increase in household spending, notably trade and transportation, leisure and hospitality, and education and health.

Figure 3-6: BIPOC home ownership scenario results by industry (job impacts only)



Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

3.5 Reversing Stagnant Population Trends

Background

The Pioneer Valley has long experienced relatively flat population growth, with some instances of declining population such as in traditional cities and more rural areas. For example, over the 30-year period from 1990 to 2020, the Pioneer Valley's population only grew by 3.6% compared to growth of almost 17% for the statewide MA average and 33% at the US level. This slowdown in population growth can impact on the growth potential and competitiveness of the Pioneer Valley economy.

Metrics and ambitions

The total resident population, the required scenario metric, is directly available in the LEFM. Using the LEFM's baseline projections, we observed the metric's historic trend and longer-term outlook, and then worked closely with the Task Force group to scrutinize and agree two ambitious scenarios for the region. The metric definition and sources, recent performance, and proposed scenario assumptions are summarized in Table 3-7.

Table 3-7: Overview of the proposed population trends metric and scenarios

Proposed metric	Recent Pioneer Valley performance	Proposed scenarios	Impacts to be entered into model
• **Resident population** o The total number of people, of all ages, resident in an area o Source: Population Estimates Program, USCB	• Industrial decline led to slow pop growth • Since then, averaged 1/3 of MA avg. population growth and a 1/10 of US avg. • Growth averaged zero 2010-20	• **Baseline:** population grows in line with recent PV performance • **Aspirational:** population grows at a rate similar to pre-Covid UMass projections • **Transformational:** population grows at same rate as recent MA avg.	• Additional resident population • Apply LEFM to estimate impacts in terms of jobs, GDP, wages etc.

As presented in Figure 3-7, we proposed two ambitious scenarios relative to the baseline expectation of a total resident population of 632,900 by 2040:

- An *aspirational scenario* where the region sees its population grow more strongly, at a rate similar to pre-Covid UMass projections. This would result in 24,900 additional residents by 2040 (a 4% increase on baseline)
- A *transformational scenario* where the region is able grow its population at a similar rate to the recent 10-year MA average. This would result in 50,700 additional residents by 2040 (an 8% increase)

Figure 3-7: Proposed population trends scenarios

Source: Cambridge Econometrics (based on USCB data). Note: data 2020-onwards strictly projections

Logic and modeling

We developed the following logic model for this scenario, which illustratively demonstrates the basic modeling assumptions for this metric, and the relevant economic relationships and dependencies within the model.

- Attracting and retaining residents to the region supports higher population growth, which leads to
- An increase in the number of people engaged or looking for work, and higher household spending, which leads to
- More total jobs and reduced job vacancies for employers, and increased worker and business earnings, which leads to
- Wider regional economic impacts of higher population growth

The associated resident population expansion for each scenario directly enters the model, which then calculates the wider regional economic impacts (results presented below).

A key consideration for this scenario is that not all residents are expected to be economically active or of working age (which the model has based on recent and projected migration and population growth trends).

Results

Table 3-8 presents the key modeling results for this scenario.

Table 3-8: Population trends scenario results

Economic impact scenario results relative to baseline					
		By 2025	By 2030	By 2035	By 2040
Aspirational scenario: *population grows at a rate similar to pre-Covid UMass projections*	Jobs	1,500	3,700	6,000	9,400
	Output ($m)	$180	$480	$910	$1,610
	Household income ($m)	$100	$270	$510	$900
Transformational scenario: *population grows at same rate as recent MA average*	Jobs	3,000	7,600	12,600	19,600
	Output ($m)	$370	$990	$1,890	$3,350
	Household income ($m)	$210	$560	$1,060	$1,890

Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

Relative to the baseline, by 2040 the *aspirational scenario* could support:

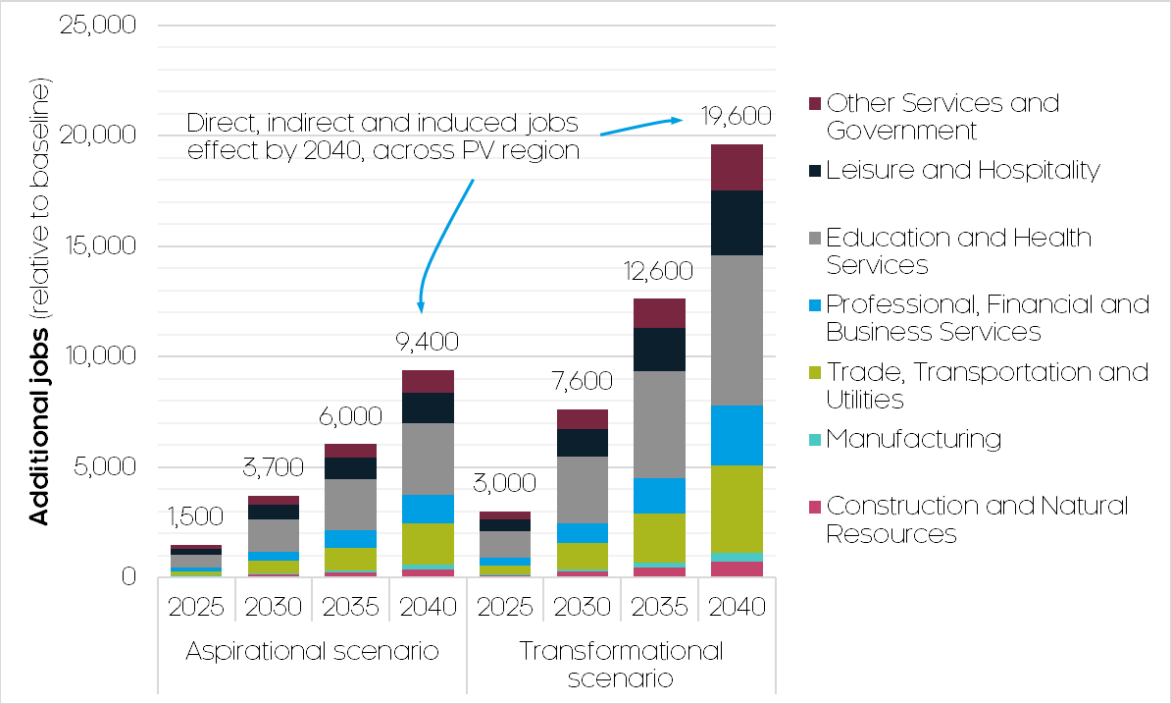
- The creation of an additional 9,400 direct, indirect, and induced jobs, 2% above the baseline
- $1.6 billion of additional output for regional firms
- A $900 million boost to household incomes

Relative to the baseline, by 2040 the *transformational scenario* could support:

- The creation of an additional 19,600 direct, indirect, and induced jobs, 4% above the baseline
- $3.4 billion of additional output for regional firms
- A $1.9 billion boost to household incomes

Looking specifically at jobs, Figure 3-8 profiles the industry breakdown of potential impacts. Impacts are concentrated in industries that are expected to have a strong presence in the region as its population grows, notably education and health and trade and transportation.

Figure 3-8: Population trends scenario results by industry (job impacts only)



Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

3.6 Expanding the Clean Energy Industry Cluster

Background

The Pioneer Valley was an early leader in developing its clean energy economy. While the clean energy sector has grown more rapidly in recent years in other parts of the Commonwealth, the Pioneer Valley's share of clean energy jobs remains well above the state-wide average, and opportunities continue to exist for the cluster to drive regional economic growth as state and federal policy accelerate the clean energy transition.

Metrics and ambitions

The number of clean energy jobs, the required scenario metric, can be directly captured by the LEFM. By drawing on Massachusetts Clean Energy Center (MassCEC) evidence and research, we observed the metric's historic trend and longer-term outlook, and then worked closely with the Task Force group to scrutinize and agree two ambitious scenarios for the region. The metric definition and sources, recent performance, and proposed scenario assumptions are summarized in Table 3-9Table 3-1.

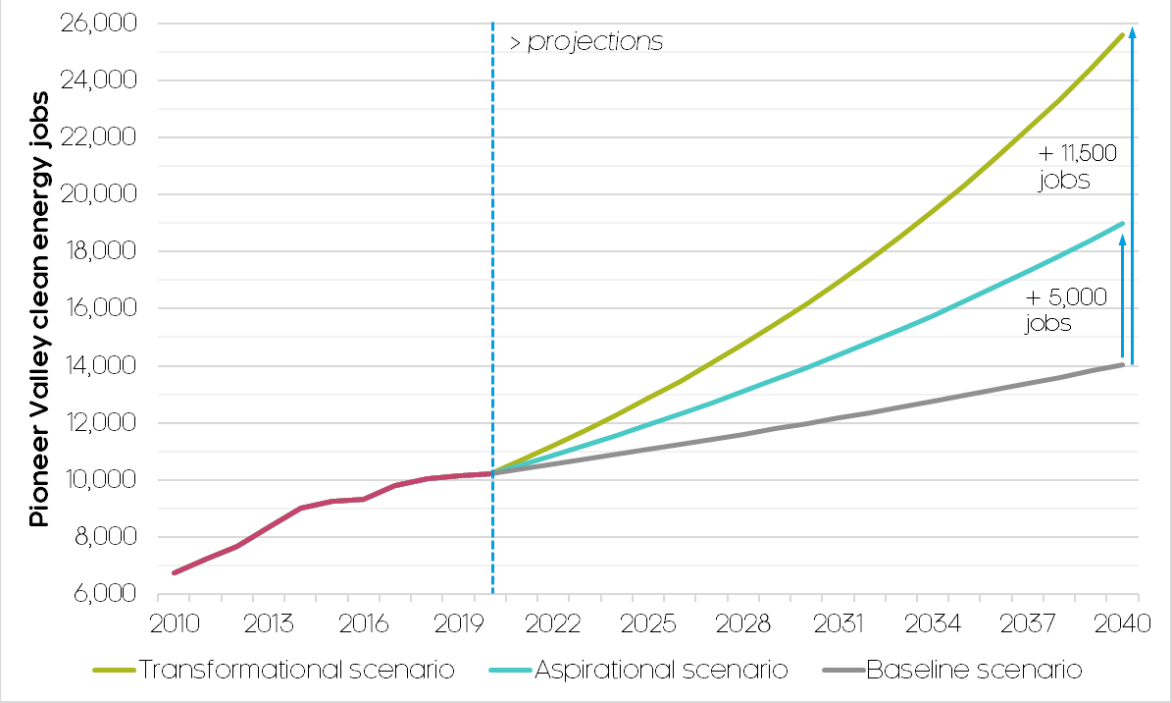
Table 3-9: Overview of the proposed clean energy metric and scenarios

Proposed metric	Recent Pioneer Valley performance	Proposed scenarios	Impacts to be entered into model
• **Clean energy jobs** o The total number of jobs, across all industries, that are in clean energy o Source: MassCEC	• Clean energy jobs more prevalent in PV (3.7% of all jobs, MA avg. 3.2%) • But have grown slower than the MA avg. (almost by half) • Data predates Covid-19, but impacts appear limited	• **Baseline:** clean energy jobs grow in line with recent PV performance • **Aspirational:** clean energy jobs grow at a faster rate than recent PV performance • **Transformational:** clean energy jobs grow in line with recent MA performance	• Additional jobs in clean-energy related industries and occupations • Installations and construction, manufacturing, tech services, R&D, utilities, etc.

As presented in Figure 3-9, we proposed two ambitious scenarios relative to the baseline expectation of 14,000 total clean energy jobs by 2040:

- An *aspirational scenario* where the clean energy sector in the region grows at a faster rate than recent performance. This would result in 5,000 additional clean energy jobs by 2040 (a 4% increase on baseline)
- A *transformational scenario* where the clean energy sector in the region grows at a similar rate to the recent 10-year MA average. This would result in 11,500 additional clean energy jobs by 2040 (an 8% increase)

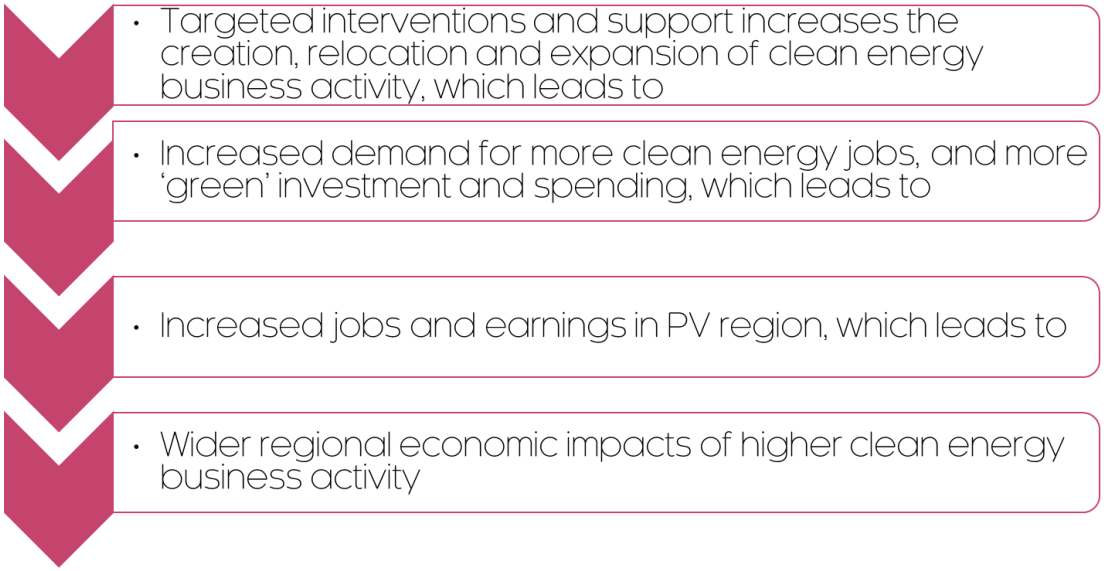
Figure 3-9: Proposed clean energy scenarios



Source: Cambridge Econometrics (based on USCB data). Note: data 2020-onwards strictly projections

Logic and modeling

We developed the following logic model for this scenario, which illustratively demonstrates the basic modeling assumptions for this metric, and the relevant economic relationships and dependencies within the model.



A key consideration for this scenario was allocating the clean energy jobs expansion to relevant NAICS-derived sectors within the LEFM. To achieve this, we profiled the specialisms of the Pioneer Valley clean energy sector (using MassCEC data), and allocated the jobs expansion to the following LEFM sectors:

- Utilities: 10% of all additional clean energy jobs
- Construction (including installation): 35%
- Machinery: 8%
- Computer and electronic products: 8%
- Electrical equipment, appliances, and components: 8%
- Miscellaneous manufacturing: 8%
- Professional, scientific, and technical services: 25%

The associated clean energy jobs expansion for each scenario then directly enters the model, which calculates the wider regional economic impacts (results presented below).

Results

Table 3-10 presents the key modeling results for this scenario.

Table 3-10: Clean energy scenario results

Economic impact scenario results relative to baseline					
		By 2025	By 2030	By 2035	By 2040
Aspirational scenario: *clean energy jobs grow at a faster rate than recent PV region performance*	Jobs	1,700	4,200	7,100	11,000
	Output ($m)	$370	$880	$1,550	$2,510
	Household income ($m)	$210	$490	$870	$1,410
Transformational scenario: *clean energy jobs grow in line with recent MA performance*	Jobs	3,900	9,500	16,200	25,300
	Output ($m)	$860	$2,000	$3,550	$5,790
	Household income ($m)	$490	$1,120	$2,000	$3,250

Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

Relative to the baseline, by 2040 the *aspirational scenario* could support:

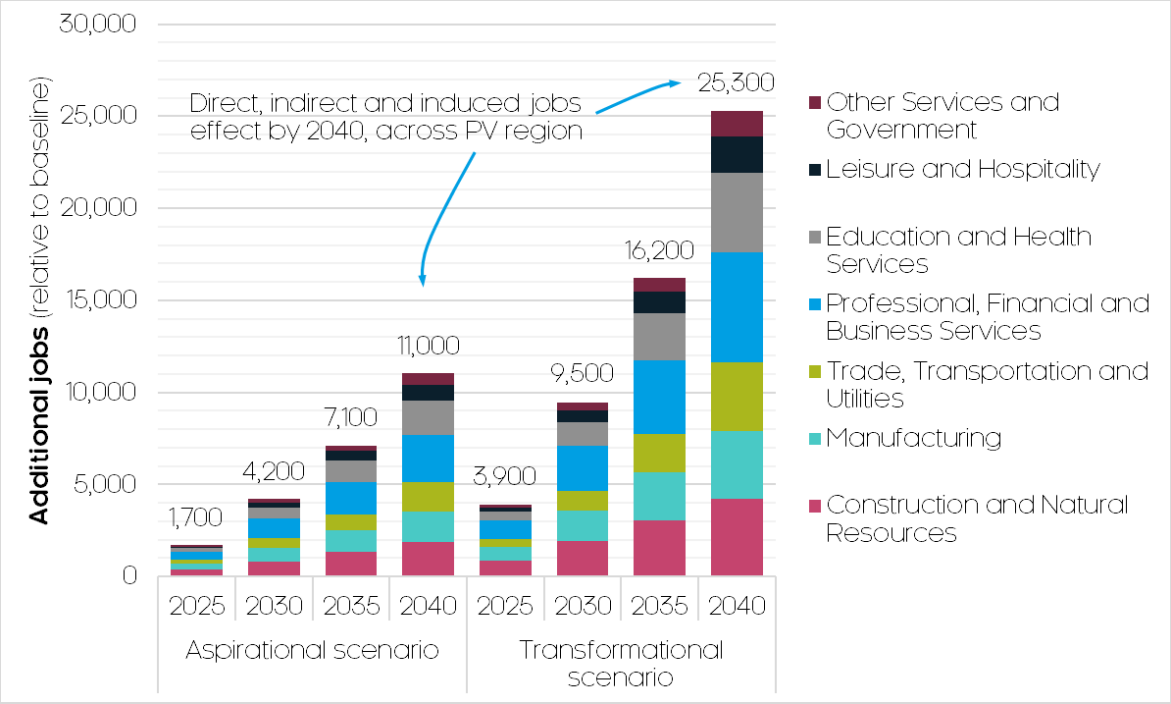
- The creation of an additional 11,000 direct, indirect, and induced jobs, 3% above the baseline
- $2.5 billion of additional output for regional firms
- A $1.4 billion boost to household incomes

Relative to the baseline, by 2040 the *transformational scenario* could support:

- The creation of an additional 25,300 direct, indirect, and induced jobs, 6% above the baseline
- $5.8 billion of additional output for regional firms
- A $3.3 billion boost to household incomes

Looking specifically at jobs, Figure 3-10 profiles the industry breakdown of potential impacts. Impacts are concentrated in industries highly related to the clean energy sector in the region, including construction and natural resources, manufacturing, and professional, financial and business services.

Figure 3-10: Clean energy scenario results by industry (job impacts only)



Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

3.7 Leveraging New Opportunities in Cybersecurity and Related Tech Sectors

Background

Cybersecurity represents an emerging opportunity for industry growth and job creation in the Pioneer Valley. Larger employers (including those in the region) do not have sufficient supplies of talent to meet their workforce needs, and remote workers are being utilized increasingly across the country to meet demand. Assets in the Pioneer Valley include a large research university with

nationally-ranked programs in computer science and cybersecurity, numerous additional higher education institutions investing in degree programs in cybersecurity and related fields, and additional investments which support cybersecurity talent production and entrepreneurship.

Metrics and ambitions

Given the difficulty of capturing the cybersecurity and related tech sector using conventional NACIS codes, we used a slightly broader but still related scenario metric for this ambition. Specifically, we looked at the **information and professional/tech sectors job share**, which is also readily available in the LEFM.

Using the LEFM's baseline projections, we observed the metric's historic trend and longer-term outlook, and then worked closely with the Task Force group to scrutinize and agree two ambitious scenarios for the region. The metric definition and sources, recent performance, and proposed scenario assumptions are summarized in Table 3-11.

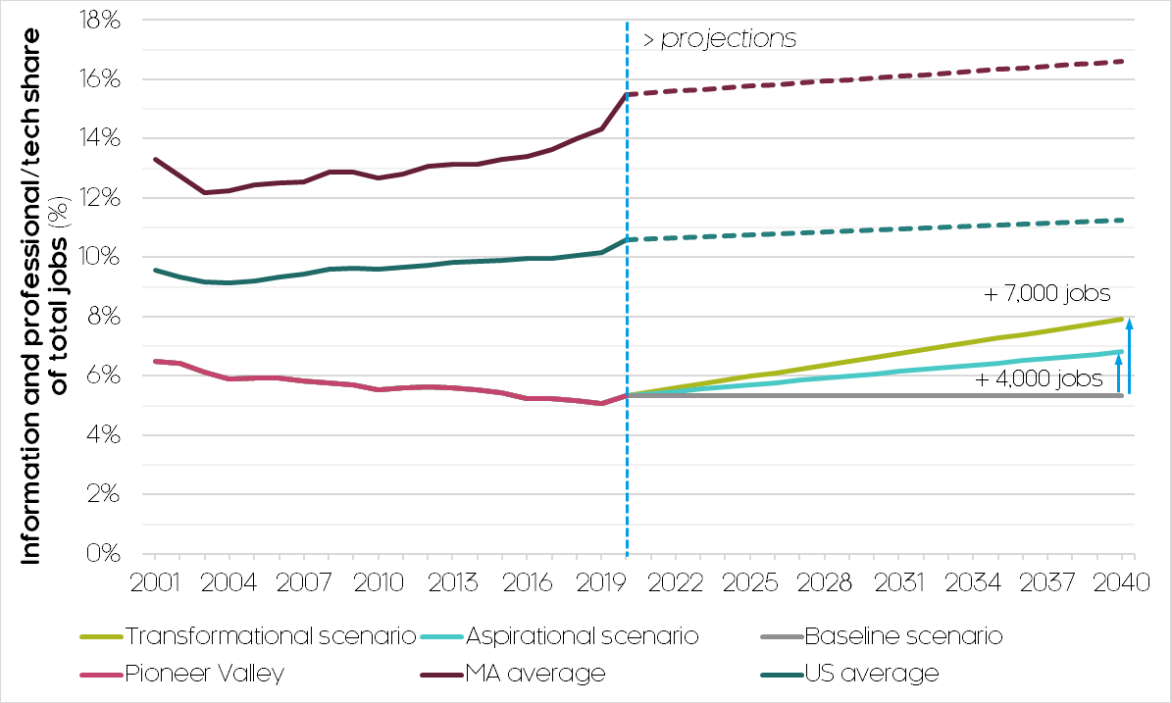
Table 3-11: Overview of the proposed cybersecurity and tech metric and scenarios

Proposed metric	Recent Pioneer Valley performance	Proposed scenarios	Impacts to be entered into model
• **Information and professional/tech sectors job share** o Proportion of total jobs in information and professional industries o Source: Quarterly Census of Employment and Wages, BLS	• Underperforms MA and US avg. • Gap has widened over the past 20 years • Covid-19 impacts limited	• **Baseline:** industry share remains stable in line with recent PV performance • **Aspirational:** industry share improves to early-2000's levels (when gap was smallest) • **Transformational:** industry share closes gap with US avg.	• Additional jobs in information and professional/tech sectors • Apply LEFM to estimate wider impacts – the industry is one of the highest paying (thus higher incomes, consumption etc.)

As presented in Figure 3-11, we proposed two ambitious scenarios relative to the baseline expectation of 14,500 information and professional/tech sector jobs by 2040:

- An *aspirational scenario* where the information and professional/tech sector job share in the region increases to early 2000's levels. This would result in 4,000 additional information and professional/tech sector job jobs by 2040 (a 28% increase on baseline)
- A *transformational scenario* where the information and professional/tech sector job share in the region closes the gap with the US average. This would result in 7,000 additional information and professional/tech sector job jobs by 2040 (a 48% increase)

Figure 3-11: Proposed cybersecurity and tech scenarios



Source: Cambridge Econometrics (based on BLS data). Note: data 2020-onwards strictly projections

Logic and modeling

We developed the following logic model for this scenario, which illustratively demonstrates the basic modeling assumptions for this metric, and the relevant economic relationships and dependencies within the model.

- Targeted interventions and support increases the creation, relocation and expansion of IT/tech/professional business activity, which leads to
- Increased demand for more IT/tech/professional jobs, and higher IT/tech/professional investment and spending, which leads to
- Increased jobs and earnings in PV region, which leads to
- Wider regional economic impacts of higher IT/tech/professional business activity

The associated information and professional/tech sector jobs expansion for each scenario then directly enters the model, which calculates the wider regional economic impacts (results presented below).

The larger economic impacts for this scenario reflect the relatively high wages of this industry sector and the corresponding large multiplier effects to estimate potential economic gains.

Results

Table 3-12 presents the key modeling results for this scenario.

Table 3-12: Cybersecurity and tech scenario results

Economic impact scenario results relative to baseline					
		By 2025	By 2030	By 2035	By 2040
Aspirational scenario: *tech/IT, big data, prof/tech services share improves to early-2000's levels*	Jobs	1,500	4,300	7,600	12,400
	Output ($m)	$290	$770	$1,470	$2,570
	Household income ($m)	$160	$430	$830	$1,440
Transformational scenario: *tech/IT, big data, prof/tech services share closes the gap with US average*	Jobs	2,600	7,300	13,300	21,200
	Output ($m)	$500	$1,330	$2,580	$4,440
	Household income ($m)	$280	$750	$1,450	$2,500

Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

Relative to the baseline, by 2040 the *aspirational scenario* could support:

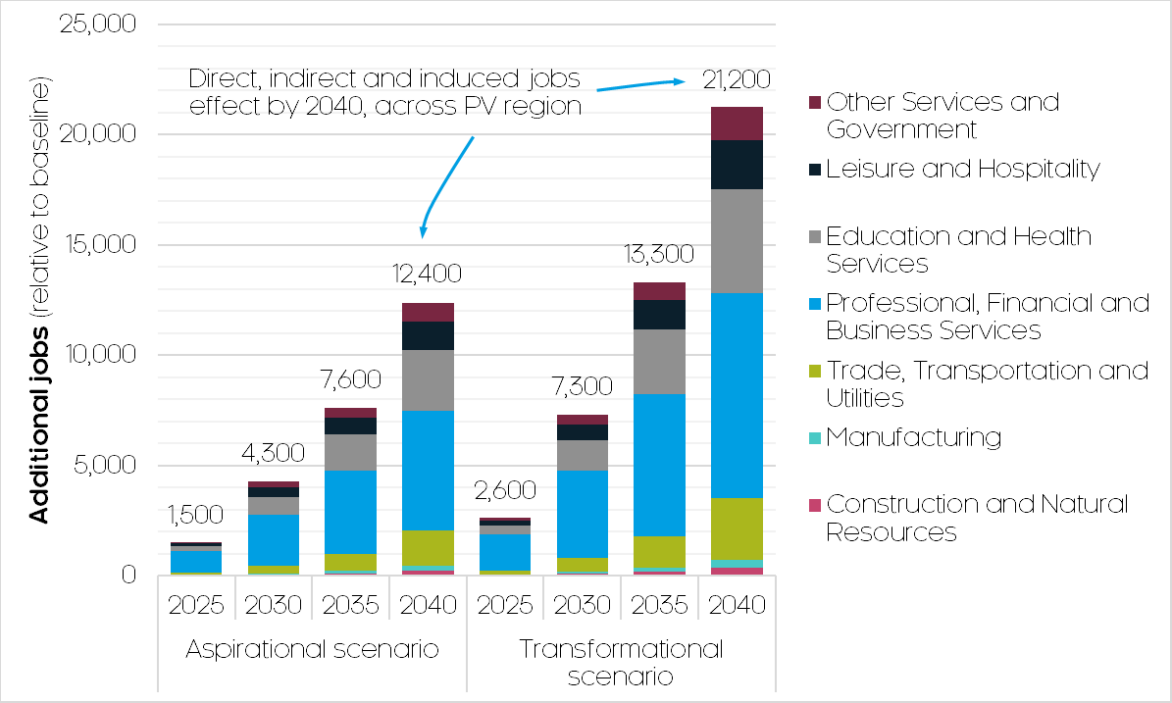
- The creation of an additional 12,400 direct, indirect, and induced jobs, 3% above the baseline
- $2.6 billion of additional output for regional firms
- A $1.4 billion boost to household incomes

Relative to the baseline, by 2040 the *transformational scenario* could support:

- The creation of an additional 21,200 direct, indirect, and induced jobs, 5% above the baseline
- $4.4 billion of additional output for regional firms
- A $2.5 billion boost to household incomes

Looking specifically at jobs, Figure 3-12 profiles the industry breakdown of potential impacts. Impacts are concentrated in industries highly related to the cybersecurity and tech sector in the region, most notably professional, financial and business services

Figure 3-12: Cybersecurity and tech scenario results by industry (job impacts only)



Source: Local Economy Futures Model, Cambridge Econometrics. Note: Results are relative to baseline, and include direct, indirect and induced economic effects across Pioneer Valley region

4 Regional Economic Strategic Initiatives

4.1 Introduction

Building from the results of the economic scenario analysis, this section provides greater detail on specific actions and partners that will lead on the identified regional strategies. As shown in the graphic below, the strategic priorities are organized around two key themes: 1) creating a more equitable and inclusive economy; and 2) supporting a more resilient and diversified economy.

The first three rows of strategies (six in total) are a direct link to the detailed scenario analysis presented in prior section. These six strategic areas were explored in significant detail with stakeholders and the task force to develop the ideas on actions, next steps, resources needed that are presented below.

Actively Create a More Equitable and Inclusive Economy	Support a More Resilient and Diversified Economy
Improve workforce participation and remove obstacles to sustainable employment	Reverse stagnant population trends with regional housing, east-west rail, and vibrant downtowns and town centers
Expand regional housing options and BIPOC homeownership rates	Cybersecurity and other tech/big data industry opportunities
Grow the number of BIPOC-owned businesses and support their growth	Expand the region's clean energy industry
Address the 'digital divide' and expand affordable broadband access	Understand Covid-19 impacts on hybrid work and transition real estate for new uses
Implement the Anchor Institution Initiative to expand BIPOC and local hiring and supplier opportunities	Support other key industry sectors – manufacturing, health care, education, farms and food, outdoor recreation

In two instances (addressing the digital divide/expanding broadband access, and implementing the anchor institution initiative), those strategic ideas are embedded within strategies to improve population trends and support growth of BIPOC small businesses.

Other strategic areas identified through this project, such as Covid-19 impacts on hybrid work and real estate as well as the need to support other key regional industries, are critical ongoing and evolving economic strategy areas for the region. So, while this report does not present details on those two items, they are worth highlighting here as they tie directly to ongoing workforce training, business support and other active regional efforts.

4.2 Improving Workforce Participation and Sustainable Employment Opportunities

Objective

Workforce participation and employment rates in the Pioneer Valley have been stubbornly below Massachusetts and US averages, leading to a smaller share of working-age population in productive employment. And we know this trend disproportionately affects lower income, less educated populations especially in urban areas with larger concentrations of BIPOC populations. One reason for this underemployment challenge is the wide-range of obstacles that individuals face to be sustainably employed from child care and transportation to mental health and housing, with these issues exacerbated by Covid-19. The objective of this strategic initiative is to increase the number of adults productively engaged in work which would mean thousands of additional jobs in the region, increasing income levels and spending, alleviating job vacancies, and reducing public subsidies.

Regional Economic Opportunity

Increasing the share and number of working age adults in the workforce would lead to thousands of additional jobs and broader regional economy benefits. We evaluate two forward-looking scenarios to 2040: 1) returning employment rates to levels seen in the 2000s and above 60% which would add 6,000 workers; and 2) an even more transformational scenario where the region would exceed the US average and close the gap with Massachusetts statewide resulting in roughly 13,000 additional workers.

To estimate the total regional economic impacts of removing obstacles to employment and increasing the number of adults actively engaged in the workforce, we applied the Local Economy Futures Model (LEFM) for the Pioneer Valley. This analysis revealed that increasing the number of residents in employment, could generate 7,000 to 15,00 total regional jobs at businesses and organizations in the Pioneer Valley by 2040 (depending on scenario). This is an understatement of total impacts as workers living in Hampden and Hampshire counties would also commute to jobs in nearby areas such as Hartford to the south and Franklin County to the north. These job gains represent an increase of 2 to 4% above the baseline, and would lead to household income gains of $650 million to $1.4 billion by 2040.

Key Stakeholders

Hampden and Franklin/Hampshire MassHire Workforce Boards, community colleges (STCC, HCC, GCC), Western Mass EDC/Springfield Works, vocational schools, Pioneer Valley regional workforce group (already established), community-based organizations (CBOs), and training providers (e.g., Tech Foundry), and higher ed institutions.

Action Steps

Priority actions to support this strategic initiative include:

- Enhance and regionalize efforts to remove obstacles to employment – Springfield Works and STCC are two examples of recent workforce development programs that emphasize targeted engagement with hard-to-reach individuals in lower income/BIPOC communities. They include efforts to meet potential workers in their community, determine

options to mitigate obstacles to employment, and help match individuals with hiring employers. Programs like this, which are labor intensive and require 'hand holding' over multiple meetings, are promising efforts to help more people become sustainably employed and address the 'cliff effect' that can occur if new wages threaten public subsidies (e.g., food stamps). These efforts should be coordinated, with dedicated/committed funding and extended throughout the region (building from efforts thus far in Springfield).

- Increase funding to community-based organizations (CBOs) – a critical aspect of delivering a program to remove obstacles to employment is partnering with CBOs who are best positioned to engage individuals in their communities. CBOs are also accustomed to working across the multiple categories of obstacles faced such as child care, transportation, mental health, English as a second language, etc.
- Work towards sustained and meaningful employer engagement – successful workforce development initiatives require meaningful engagement with private sector and non-profit employers. While community college and vocational schools typically include industry representatives to help craft occupational and technical curriculum, more engagement, input and funding is needed from employers to raise the magnitude and quality of training matched to specific job/industry opportunities.
- Engage our youth and high school students earlier – best practice suggests that there are opportunities to engage high school students (and younger) in career awareness, internships, and college prep. For example, increased communications should be explore around the kinds of successful and lucrative careers that can be had in trades (electricians, carpenters, plumbers) and manufacturing (where local employers are constantly looking for new workers).
- Continue the Pioneer Valley Labor Market Blueprint – led by a state initiative about five years ago to increase partnerships between education, workforce and economic development, the Pioneer Valley has a well-established group of partners who have identified priority industries (e.g., health care, education, manufacturing) and occupations (including IT/tech services). Slowed by the pandemic, this partnership work should continue, evolve as needed, and expand their reach and influence in terms of workforce training.

Resources needed for implementation

Successful implementation of this regional initiative will likely require:

- Increased funding and staff to support programs to address / mitigate obstacles to work, such as Springfield Works, STCC
- Increased funding towards community-based organizations (CBOs) with emphasis on CBOs active in lower income / BIPOC communities
- Recommend a dedicated staff position to be the liaison between employers and workforce training providers, focused on meaningful and sustained employer engagement

- Increased advocacy for funding to community colleges, child care, mental health and addressing other obstacles to work

4.3 Supporting BIPOC Business Ownership and Expansion Opportunities

Objective

Increasing the number and growth of BIPOC-owned businesses is a central goal to build a more equitable and inclusive Pioneer Valley economy. Based on the most current data, minority-owned businesses (14%) lag far behind their share of the population (26%). Nationally, this relationship is much closer with about 34% of the population in minority population categories and just 30% of businesses owned by minorities so there is much work to do in the Pioneer Valley. Further, the recently established Anchor Collaborative led by the Western Mass EDC is trying to help increase procurement opportunities for BIPOC-owned businesses but initial work reveals challenges in both identifying these businesses and their capacity to grow and become supplier to major anchor institutions like Baystate, UMass, etc.

Regional Economic Opportunity

Increasing the number of BIPOC-owned businesses as well as their capacity to grow and add jobs, could produce substantial economic gains for the Pioneer Valley while helping to address the decades' of inequity in our broader economy. To quantify this potential impact, we model two scenarios of BIPOC-owned businesses and expansion: 1) halving the gap compared to the regional population share (2,000 new or expanded businesses); and 2) a more transformational scenario that would see BIPOC-owned businesses proportional to population share. These scenarios would represent 2,000 to 5,000 new or expanded businesses over the next 20 years.

To estimate the total regional economic impacts of a significant expansion of BIPOC-owned business growth, we allocated business opportunities to industries (e.g., retail, construction, food services, etc.) and applied the Local Economy Futures Model (LEFM) for the Pioneer Valley. This analysis revealed 3,400 to 7,900 direct jobs at BIPOC-owned small businesses by 2040. The projected total regional economic impacts grow over time to 6,000 to 13,500 jobs depending on the growth scenario, along with $600 million to $1.3 billion in additional household income by 2040.

Key Stakeholders

Common Capital, Western Mass Small Business Development Center, Valley Venture Mentors, Western Mass EDC, Mass Latino Chamber of Commerce, Healing Racism Institute of the Pioneer Valley, Urban League of Springfield, local banks, local economic development officials, community development corporations (CDCs), Black Economic Council of MA, Mass Coalition for an Equitable Economy, PVPC, Holyoke EforAll.

Action Steps

Priority actions to support this strategic initiative include:

- Continue and Expand *Community Connector* Outreach – PVPC and the Healing Racism Institute initiated an effort at working with Community Connectors to identify BIPOC community leaders who

could help connect with a broader set of businesses and residents. This effort, including outreach to BIPOC business owners and entrepreneurs, should be expanded to help link them to the wide variety of small business support programs.

- Increase awareness, participants and effectiveness of Western Mass Means Business – the Pioneer Valley has a great start at coordination on small business and start-up support programs, resources, and communications with a strong set of organizations involved. This effort can be further expanded to include organizations that focus on supporting minority-business growth (e.g., Mass Latino Chamber, Urban League) and to further raise the profile of this initiative to provide a coordinated ecosystem of small business/start-up resources.
- Expand and fund the staffing for small business support – implementing effective small business support programs requires staff. Covid-19 exacerbated a long-known reality that there are not sufficient staff at organizations like the Small Business Development Center to handle all of the small business inquiries and opportunities, which often require direct technical assistance to individual businesses and start-ups.
- Advance the Anchor Collaborative – this initiative led by the Western Mass EDC is off to a promising start with commitments from major institutions like Baystate, UMass, and the city of Holyoke to better understand the baseline of BIPOC and local hiring and supplier spending. This work has a chance to become a national model, leveraging our historical strengths in 'eds and meds', and partnering with the business community to facilitate more local procurement spending captured in the region and supporting BIPOC-owned businesses.
- Tap into statewide initiatives to support a more equitable economy – ARPA and other funding resources, as well as state-level organizations like the Coalition for a More Equitable Economy, provide momentum, resources and policy advocacy that can be leveraged to help grow the Pioneer Valley's BIPOC businesses.

Resources needed for implementation

Successful implementation of this regional initiative will likely require:

- Leveraging ARPA and state funding specifically-aimed at helping Latino and Black businesses
- Sustained funding to support more staff positions at small business support programs
- Partner with local banks and Common Capital to increase access to capital
- Funding programs to help mitigate the start-up and expansion costs for small businesses

4.4 Expand Regional Housing Options and Increase BIPOC Homeownership Rates

Objective

It increasingly recognized that housing in closely interlinked with economic development and population growth. In the Pioneer Valley, BIPOC households only own 31% of their housing units compared to an average of 47% nationwide, with a homeownership rate over 70% among white populations in the region. And we know from multiple research studies that homeownership is one of the strongest pathways to build wealth. Separately, a recent UMass study found that the region has a deficit of about 20,000 housing units and that the Pioneer Valley is one of the most segregated regions in the US. Consequently, this strategic initiative recognizes the dual objectives of (1) expanding housing production and options throughout the region and (2) increasing the rate of homeownership for BIPOC communities.

Regional Economic Opportunity

These two housing-related priorities could have strong and lasting economic impacts for the region, and is a critical element of facilitating stronger population growth. To assess an increase in BIPOC homeownership rates, we examined increases of 7,000 to 13,000 additional homeowners (either renters converting to owners or new residents) which can lead to increased wealth and future household spending up to $169 million by 2040. Examining increased housing production, we modeled an additional 9,000 to 15,000 housing units (above the baseline) which could result in up to $2.7 billion in increase housing construction over the next twenty years.

To estimate the total regional economic impacts of higher BIPOC homeownership and expanded housing production and construction, we applied the Local Economy Futures Model (LEFM) for the Pioneer Valley. This analysis revealed that higher levels of wealth and spending power, combined with the stimulus of increased housing production, could generate 9,000 to 18,500 total regional jobs by 2040 (depending on scenario). The projected total regional economic impacts grow over time as larger numbers of BIPOC-residents own homes, build equity and increase wealth and spending. Business output (sales) are projected to increase by $1.6 to $3.4 billion by 2040, with household income gains up to $1.9 billion by 2040.

Key Stakeholders

Way Finders, Pioneer Valley Planning Commission, Franklin Regional Council of Governments, community development corporations (CDCs) such as OneHolyoke, Valley CDC, Springfield Neighborhood Housing Services, and Hilltown CDC; Community Connectors to BIPOC communities; local housing authorities and organizations; Western Mass EDC; local banks.

Action Steps

Priority actions to support this strategic initiative include:

- Leverage ARPA and other state/federal funding for the Pioneer Valley – ARPA has led to unprecedented funding levels and programs to support housing, and Massachusetts continues to set statewide policies that prioritize increasing housing options. Now is the time for the Pioneer Valley to work regionally to ensure we get our fair share of

the funding and that we focus on our housing priorities, such as stronger first-time home buyer programs for BIPOC communities, and increasing housing production at all levels throughout the region.

- Increase awareness and success of first-time home buyer educational programs – first-time home buyer programs can be a critical pathway for low to middle income families to start building equity and wealth through homeownership. And while these programs are largely paid for by banks and their Community Reinvestment Act (CRA) funds, efforts should be focused on increasing awareness of these programs and their importance, along with hand-holding to help people completing that program convert into homeowners.
- Pilot and expand homebuyer programs – the Springfield City of Homes pilot project is a new effort aimed at identifying blighted homes that can be rehabbed and sold to first-time home buyers thereby improving the aging housing stock and matching these homes with first-time home buyers to increase homeownership rates. The region should learn from this pilot and seek to expand this idea to other cities and towns throughout the region.
- Partner with banks and local realtors – growing homeownership rates is a multi-pronged issue that requires educated and helpful realtors that can properly guide prospective homeowners through realistic financing options. And it also takes local banks willing to make loans and ideally modernize how they deploy CRA funds to meet the region's challenges and opportunities.
- Advocate for more financing and housing options – it has long been recognized that costs of constructing new housing in Western Mass are similar to greater Boston but with significantly lower market rates and sales prices. Consequently, the region needs more creative financing support and enticing options for private residential developers to build more housing. The recently proposed expansion of the Housing Development Incentive Program (HDIP) is a great start as it specifically affects the region's Gateway Cities, but more options are needed to help spread housing opportunities in our rural areas and towns.

Resources needed for implementation

Successful implementation of this regional initiative will likely require:

- Leverage ARPA and state funding for housing production and ownership opportunities
- Funding to sustain and replicate the Springfield City of Homes pilot project
- Create a Regional Housing Collaborative (with at least one FTE) to lead track and facilitate funding opportunities, first-time home buyer program success, and partnerships with local banks and realtors
- Increased advocacy for housing solutions and funding that work for Western Mass

4.5 Reversing Stagnant Population Trends

Objective

The Pioneer Valley has long experienced relatively flat population growth, with some instances of declining population such as in traditional cities and more rural areas. For example, over the 30-year period from 1990 to 2020, the Pioneer Valley's population only grew by 3.6% compared to growth of almost 17% for Massachusetts statewide and 33% at the US level. Consequently, the objective of this strategic initiative is to reverse these trends and ensure that the Pioneer Valley is attracting new residents and provides the workforce to support a vibrant economy. Along with other strategic initiatives identified in this Roadmap, we've identified multiple actions and priorities that can help provide the kinds of infrastructure, housing, and amenities to support stronger future population growth.

Regional Economic Opportunity

Reversing these trends could have a significant regional economic impact with more residents, households, workers, and local spending power. To quantify this opportunity, we investigated two growth scenarios over the next 20 years: 1) increasing regional population by about 25,000 over baseline projections; and 2) expanding population at a rate equal to recent Massachusetts growth, which would result in approximately 51,000 more residents.

To estimate the total regional economic impacts of reversing recent population trends and attracting more residents, we applied the Local Economy Futures Model (LEFM) for the Pioneer Valley. This analysis revealed modest job increases over the next 10 years with up to 9,400 to 19,600 additional jobs by 2040. The projected total regional economic impacts reflect stronger regional income and spending power with $900 million to $1.9 billion in additional household income by 2040.

Key Stakeholders

Pioneer Valley Planning Commission, Franklin Regional Council of Governments (FRCOG), Capitol Region Council of Governments (CRCOG), Western Mass EDC, regional tourism councils (RTCs), Wayfinders and housing partners.

Action Steps

Priority actions to support this strategic initiative include:

- Broadband infrastructure, accessibility and the digital divide – to support our existing population and help attract new residents, the region must be able to provide fast, reliable and affordable broadband internet access to all areas. Priorities in this area include: a) completing infrastructure upgrades to support broadband access in all areas, including our more rural towns; b) new programs and funding to increase the affordability of internet access, especially for lower-income residents in cities and rural areas; and c) expanding digital literacy to support effective use of the internet for education, work, etc.
- Support the advancement of intercity passenger rail projects and services – the Pioneer Valley is building momentum on passenger rail connections with the Valley Flyer providing access to Connecticut, New

York City, and beyond. And with expanded Federal rail investment funding, there is an opportunity to advance east-west rail to vastly improve rail connections to Boston, Worcester, and Pittsfield. Current plans are to establish a Western Mass Passenger Rail Authority to help implement and grow these rail services.

- Regional marketing – in addition to the efforts to grow regional tourism, there's an opportunity to do a better job highlighting the Pioneer Valley as a great place to live, work and play. A marketing effort could be tailored to help attract remote (or hybrid) workers seeking lower cost of living with easier access to outdoor recreation assets (compared to larger cities), but still with relatively easy access to Boston and New York.
- Cultivate a diverse mix of inviting downtowns and town centers – the Pioneer Valley is blessed with a wide variety and scale of walkable town centers and downtowns. And most of these locations recently completed "Rapid Recovery Plans" to identify priority projects to help these places recover from the Covid-19 downturn and be positioned for future success. Implementing these projects, and leveraging expanded ARPA funds to support small businesses and residential opportunities, should be a pivotal aspect of this regional initiative.

Resources needed for implementation

Successful implementation of this regional initiative will likely require:

- Dedicated funding, potentially via ARPA funds, to boost lower-income broadband internet access
- New funding to support a regional marketing campaign geared towards live, work, play
- PVPC and FRCOG staff time supporting the establishment of a Western Mass Passenger Rail Authority
- A staff position to help coordinate and pursue funding to support town center and downtown projects and priorities

4.6 Expanding the Clean Energy Industry Cluster

Objective

The Pioneer Valley was an early leader in developing its clean energy economy – specifically solar, hydroelectric, and energy efficiency – by leveraging both research strengths at UMass Amherst and prioritization in both the public and private sectors of environmental protection and climate change response. While the clean energy sector has grown more rapidly in recent years in other parts of the Commonwealth, the Pioneer Valley's share of clean energy jobs remains well above the state-wide average, and opportunities continue to exist for the cluster to drive regional economic growth as state and federal policy accelerate the clean energy transition.

Regional Economic Opportunity

Clean energy (defined to include water technologies as well as energy efficiency) remains an area of strength for the region, with significant potential for growth. We identified targets to increase the level of employment in the

region in clean energy by 5,000 and 11,500 jobs by 2040. The lower estimate reflects a rate of growth higher than what the region has seen since 2014. The higher estimate is on par with the rate of growth state-wide in recent years.

To estimate the total regional economic impacts of stronger clean energy sector economic growth, we allocated employment opportunities to industries (e.g., manufacturing, technical services, construction) and applied the Local Economy Futures Model (LEFM) for the Pioneer Valley. This analysis revealed 11,000 to 25,000 total regional jobs by 2040 (depending on scenario). The projected total regional economic impacts grow over time with business output (sales) expanding from about $500 million in the near future to potentially over $3 billion by 2040, with household income gains of $1.4 billion to $3.2 billion by 2040.

Key Stakeholders

Western Mass EDC, UMass Clean Energy Extension (and other UMass departments), Massachusetts Clean Energy Extension, Pioneer Valley Planning Commission, municipal utilities, Eversource, FirstLight, National Grid

Action Steps

Priority actions to support this strategic initiative include:

- Support Investment in UMass Water Technologies Testbed – The proposed water technologies testbed at UMass provides a unique asset for deployment and testing of innovations in wastewater management, water treatment and other areas. These innovations, led by nationally recognized researchers at UMass, have significant commercial potential and will also benefit municipalities by lowering operating costs.
- Develop Models for and Implement Local Acquisition of Clean Energy Assets – Community shared solar continues to be a success story for consumers and municipalities across the Commonwealth. A next step to generate significantly greater value is development of financing mechanisms that enable public investment and ownership of solar generation capacity at the local or regional level, thereby capturing a larger share of the benefit in the region. The UMass Clean Energy Extension has researched these financial models and can be a strong partner to help with implementation.
- Increase Focus on Energy Efficiency Programs for the Built Environment – While significant progress has been made on energy efficiency of the region's building stock, the pace of transition needs to accelerate. This includes programs to promote adding insulation and energy loss reduction activities, as well as promoting the transition to "clean heat" systems such as heat pumps and thermal energy. The Massachusetts Clean Heat Commission will be helping to accelerate this transition statewide, and there's an opportunity or existing contractors and workers in the Pioneer Valley to participate in this wide-range of building efficiency and electrification.
- Market Clean Energy Deployment – Greater awareness is needed regarding options for adoption and use of clean energy technologies by local businesses. The Western Mass EDC can work with chambers of

commerce throughout the region to help communicate the opportunities for business to adopt and use clean energy technologies.

- Invest in Pilot- and Demonstration-scale Advanced Manufacturing Capabilities for Energy Storage – Access to start-ups and established companies in the battery innovation and energy storage cluster provides opportunities for the region's manufacturers to play a significant role in production for early-stage deployment. With the continued transition to a clean energy economy, this represents a significant market opportunity, especially for our small to mid-size precision manufacturers.

Resources needed for implementation

Successful implementation of this regional initiative will likely require:

- WMEDC and local chambers staff time to market clean energy deployment opportunities for local businesses, and support supply chain opportunities for manufacturers
- Mass Clean Energy Center funding and grant opportunities, along with federal funding via the Bipartisan Infrastructure Law (including electric vehicle charging stations)
- Staff resources to help communicate and implement a community investment and ownership program for solar facilities
- Staff resources to help gather and track better information on regional clean energy economy activities (businesses, employees, clean energy generation)

4.7 Leveraging New Opportunities in Cybersecurity and Related Tech Sectors

Objective

Cybersecurity represents an emerging opportunity for industry growth and job creation in the Pioneer Valley. Larger employers (including those in the region) do not have sufficient supplies of talent to meet their workforce needs, and remote workers are being utilized increasingly across the country to meet demand. Per CyberSeek, there are 1,000,000 workers in the cybersecurity workforce in the US and an additional 600,000 unfilled positions (totals for the Commonwealth are 26,000 workers and 17,000 unfilled positions). For companies which do not have cybersecurity professionals on staff, cybersecurity services is a growing share of IT procurement. Small and mid-sized companies in all sectors have an increasing need for these and related tech and big data services. Assets in the Pioneer Valley include a large research university with nationally-ranked programs in computer science and cybersecurity, numerous additional higher education institutions investing in degree programs in cybersecurity and related fields, and additional investments which support cybersecurity talent production and entrepreneurship.

Regional Economic Opportunity

The demand for workers with cybersecurity skills shows no signs of abating, and increased acceptance of remote employment provides new opportunities

for Pioneer Valley residents. Over time, a growing share of employers will hire staff into these roles, and more companies of all sizes will similarly invest in procurement of cybersecurity services. We identified targets to increase the level of employment in the region in information and professional/ technology jobs by 5,900 and 11,800 jobs by 2040 (the latter target closes the gap between the Pioneer Valley and national averages).

To estimate the total regional economic impacts of new opportunities in cyber, tech and big data, we allocated employment opportunities to industries (e.g., software and data processing, technical services) and applied the Local Economy Futures Model (LEFM) for the Pioneer Valley. This analysis revealed 12,000 to 21,000 total regional jobs by 2040 (depending on scenario), with the strongest multiplier effects of any scenario driven by the relatively high wages of these sectors and the resulting spending impacts. The projected total regional economic impacts grow over time with business output (sales) expanding from about $400 million in the near future to potentially over $4 billion by 2040, with household income gains of $1.4 billion to $2.5 billion by 2040.

Key Stakeholders

Western Mass Cyber Center of Excellence, Western Mass EDC, Pioneer Valley Planning Commission, Springfield Technical Community College (STCC), Bay Path University, UMass Amherst, Western New England University, Elms College, Springfield College, The Tech Foundry, City of Springfield, Mass Tech Collaborative / MassCyberCenter, Massachusetts Small Business Development Center Network, MassMEP.

Action Steps

Priority actions to support this strategic initiative include:

- Complete Build-out and launch of Western Mass Cyber Center of Excellence – To be located at Union Station (Springfield) with expected federal and state funding to support initial build-out and operations (small staff). Focus areas should include: 1) development of programming for its Cyber Range for professional development, preparation of entry-level cybersecurity professionals, and K-12 education and outreach; 2) promotion of its Security Operations Center services to potential government and private sector clients in the Pioneer Valley; and 3) outreach and awareness programs for small businesses.
- Build Academic Programs to Train the Next Generation of Cybersecurity Professionals – All higher education institutions with cybersecurity programs should prioritize efforts to secure recognition and funding from premier federal agency programs supporting talent development in cybersecurity (e.g., NSA's National Centers for Academic Excellence, NSF's Cybersecurity Innovation for CyberInfrastructure, CyberCorps Scholarships for Service, etc.).
- Support Business Start-up and Other Capacity-building to Address Needs of Small and Mid-sized Companies – Targeted training and entrepreneurial support should be provided to create start-up companies to provide cybersecurity services to small and mid-sized companies in the Pioneer Valley. Work within the region's burgeoning

entrepreneurial eco-system (e.g., Valley Venture Mentors, EforAll, UMass, small business support organizations) to encourage and nurture new business start-ups in these fields.

- Develop and Promote Efforts to Increase Cybersecurity and Resilience of Municipalities and Other Local Public Entities – An inventory of resources (both free and fee-based) available to public sector entities should be developed, along with an infrastructure and systems that enable consistent information sharing and access to expertise on improving cyberdefense capabilities, including the Western Mass Cyber Center of Excellence. Advocacy efforts for increased Commonwealth and federal investments in local government cybersecurity should be prioritized.

Resources needed for implementation

successful implementation of this regional initiative will likely require:

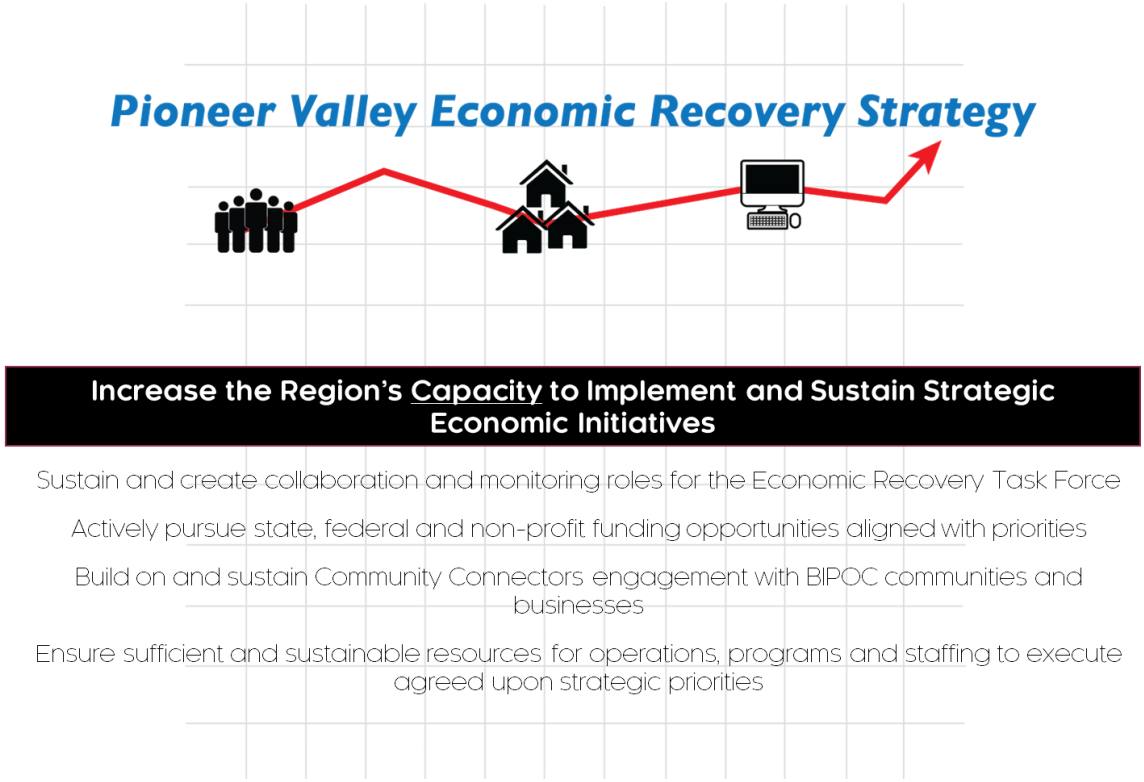
- Final approvals of state and federal investment for establishment of Western Mass Cyber Center of Excellence.
- Continued coordination among Western Mass Cyber Center of Excellence partners and engagement with leading employers and potential clients.
- WMEDC and local chambers staff time to support outreach to small business owners in all sectors to provide access to relevant services that will make their enterprises more secure and resilient.
- Partnership and networking with higher education institutions (and their computer science / cyber programs), entrepreneurship support organizations, and existing tech / big data / cyber firms in the Pioneer Valley.

5 Actions and Next Steps

As discussed in great detail, this report makes the case that the Pioneer Valley economic recovery plan should focus on strategies to:

1. Create a more equitable and inclusive economy
2. Support a more resilient and diversified economy

The section above outlines fairly specific actions, partners/collaborators, next steps and resources needed to implement and achieve success for the strategic initiatives identified in this EDA-funded project led by PVPC. All of the identified strategies require resources (of some kind) for implementation, and this is where many economic plans fall short – a lack of follow-through to obtain resources (staffing, program dollars, investments). Hence, underlying this project and the core economic goals is a recognition that to be successful the region must increase its capacity to implement and sustain strategic economic initiatives (see graphic below).



In the immediate future, PVPC plans to continue the Pioneer Valley Economic Recovery Task Force, and will continue to evolve that group's role to best support collaboration, implementation, and monitoring of progress towards the stated economic priorities. PVPC also plans to continue the work with Community Connectors to BIPOC communities and leaders. This effort, aligned with the Healing Racism Institute of the Pioneer Valley, has already proven useful at reaching people and perspectives on topics like homeownership, small business growth, and workforce.

As noted in the specific strategies, there are a number of federal and state funding resources currently available, many of which were amplified by the

American Rescue Plan Act (ARPA) of 2021 or the 2022 Bipartisan Infrastructure Law (BIL). In short, it means that there are more funding opportunities than typically available across areas like housing, workforce, and small business support. Finding ways to ensure the Pioneer Valley gets 'its share' of those funding programs, along with dollars for operations and staffing, will be critical to near-term implementation.

In sum, the Pioneer Valley region is an economic area with strong anchor institutions and higher education, a high-quality workforce, enviable outdoor recreation assets, innovative and competitive business sectors, and a diverse mix of urban, downtown, rural and town center areas. But it also faces challenges regarding economic segregation, pockets of poverty and disconnected workers. Focusing on specific mechanisms to improve economic equity, while also positioning the region for broader economic success and attracting workers and residents, should lead to a more prosperous, equitable and inclusive Pioneer Valley economy.

Technical Appendix – Local Economy Futures Model (LEFM)

Provided here is a technical summary of Cambridge Econometrics' proprietary Local Economy Futures Model (LEFM), which was used during the economic scenario planning phase of this project.

Background

The LEFM is a demand-led economic impact and forecasting model that models the relationships between firms, households, government and the rest of the world in a highly disaggregated framework (e.g. 64 sectors), which enables the impact on the economy (employment and value added) of demand-side factors (such as an increase in demand due to stronger world growth) to be analyzed.

This latest iteration of LEFM is a successor to the previous version, known as the Local Economy *Forecasting* Model, that was developed by Cambridge Econometrics (CE) in collaboration with the Institute for Employment Research at the University of Warwick. This was a software package tailored to model regional and local economies, commercially available since the early 1990s (since when it has been continually developed) and designed to empower organizations to undertake detailed economic analysis in-house. Different iterations of LEFM have been used extensively by national, regional and local agencies, and by CE for more specialized analysis often commissioned by local authorities, for the past three decades.

Over the lifetime of LEFM, substantial research has been undertaken within the academia as to the drivers of economic growth and development at the local and regional level. We include here fields such as Regional Science, New Economic Geography and Evolutionary Economics, and their insights into the role of the knowledge economy, specialization and related variety, and, in particular, agglomeration and clustering, in shaping economic growth patterns. The latest version of LEFM differs from previous iterations in that it explicitly attempts to augment its existing functionality by utilizing these now-widely accepted insights and capture these effects within the model.

It does this by explicitly utilizing a *complex systems* approach. This is to say, it does not assume the presence of these effects, or any other macro-level effects such as crowding out, by explicitly coding in system-level causal relationships, but instead provides sufficient detail in the nature of the relationships between economic actors, that allow the possibility that these effects may emerge spontaneously, as they would in any real-world economic system.

Overview of Model Design

LEFM has been designed to project economic indicators for a defined sub-national geography, usually a local area (county) or a contiguous group of local areas, by explaining the output of local sectors through an explicit representation of expenditure flows in the area and their links with the world outside the local area. In this it differs from other methods of local economy modeling which typically link local output or employment (by sector) directly to

national or regional output or employment. Such methods include shift-share or econometrically estimated equations. While these methods allow a user to derive projections for local output or employment growth from national or regional projections, they offer little scope for introducing an explanation of local performance relative to these higher levels, and they are typically not suitable for analyzing the indirect effects on the local economy arising from the opening of a new enterprise or the closure of an existing one.

LEFM is also distinguished from other approaches by its sectoral detail. It identifies 64 sectors (defined on NAICS codes), allowing (for example) electronics to be distinguished from electrical equipment, and IT services from other business support services. Detailed disaggregation by sector is usually valuable because different sectors have different prospects (e.g., technological change is driving much faster growth in electronics and computing than in the other sectors with which they are commonly combined), because they have different employment characteristics, and also because it allows local knowledge about specific firms to be more easily incorporated in the forecast. LEFM also includes explicit representation of the local workforce and population, disaggregating by both employment status (employed, unemployed, inactive working age, and non-working age) and 25 occupations (defined on SOC2010). Net commuting patterns are also accounted for. The local sectoral base and local population/labor market are not treated independently but rather as interacting subsystems.

As the model moves through multiple timesteps (the forecast time period), it deals with both demand and supply effects in different ways. As an input/output based model, the primary driver of short term changes in variables within the model is demand-driven. Examples of short-run demand-driven mechanisms include: the flow of demand up a value chain between sectors, the flow of investment demand for investment goods producing sectors, the flow of labor demand from local sectors to the labor market, and the flow of demand from the local population to local service providing sectors.

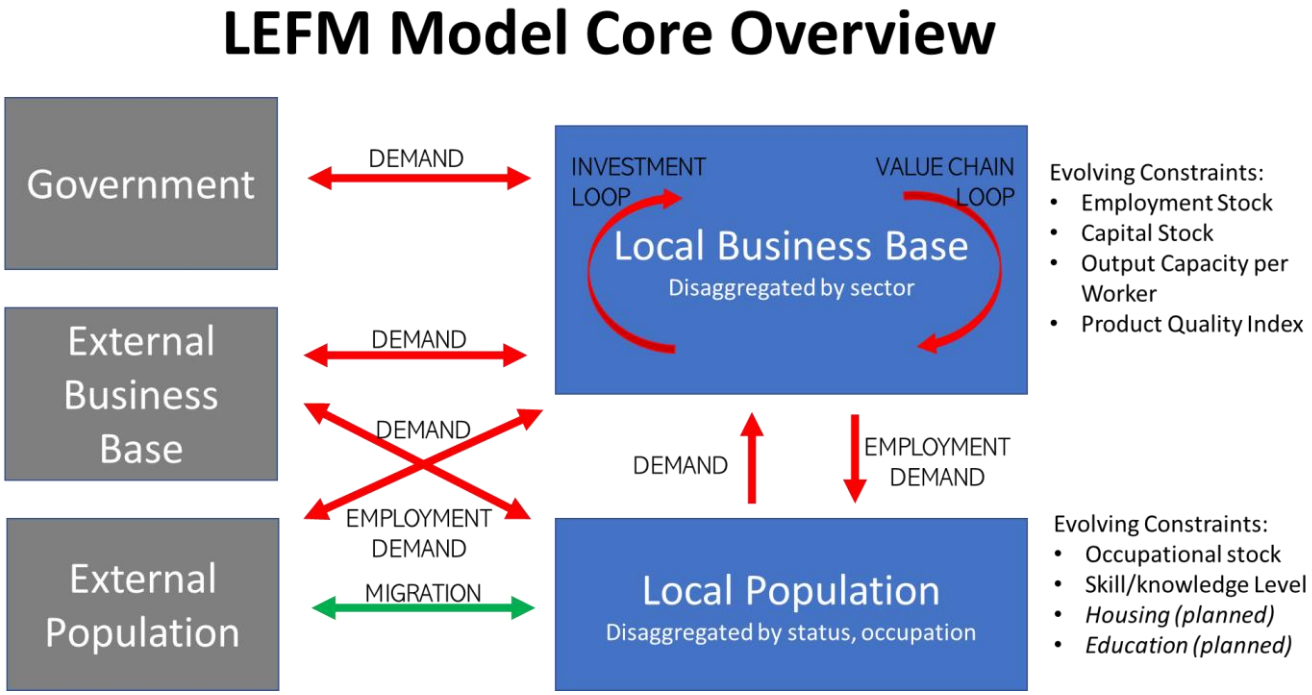
However, demand is not assumed to be unconstrained. Both local sectors and local labor markets have “supply-side” constraints that dictate the extent to which changes in demand lead to changes in real outputs and activity vs price or wage responses. These constraints are fixed in the short-term, but allowed to adjust over the longer run, in response to extended changes in levels of demand. It is the way in which these constraints slowly adjust over time that are the new feature of the modeling, and where we have relied on insights from the past two decades of academic evidence. This includes explicit consideration of a wide variety of variables, including sectoral investment, sectoral output capacity, sectoral product quality, sectoral product price, sectoral market share, occupational demand, occupational supply, and occupational wages.

It is by allowing these supply-side variables to evolve over time according to a simple set of heuristics, that allow some of the features of agglomeration economies, for example the mutually beneficial coevolution of related sectors, or the gradually improved matching of local sectoral base and labor market, to emerge spontaneously.

LEFM's Main Relationships

Accounting structure

The graphic below summarizes the model's structure: the three broad groups of actors are: local business base (disaggregated by sector), local population (disaggregated by status and occupation), and external entities, including government, external firms, and external population.



How the main variables are determined

Employment in the local area generates incomes. Assumptions are made for net commuting, which determines the extent to which incomes from local employment accrue to non-residents. Similarly, some incomes in the local area are derived from employment outside the area, or from non-employment sources (e.g., dividends, interest, rent). Aggregate household expenditure by residents in the local area is determined by current and previous real household disposable incomes at local and regional/state level (deflated by the national household expenditure deflator). Household expenditure is then allocated across consumption categories in the same proportions forecast for the region.

Government final expenditure (disaggregated by five functions, 3 federal and 2 state/local) in the local economy is projected based on existing spending levels and changes in the local area's share of the state's population.

Investment by sector is determined by existing investment levels and real production, at local and regional/state level.

Intermediate expenditure by sector and commodity is determined by applying the national input-output coefficients to local economy gross output by sector.

Exports by sector have a base level which is a share of regional/state output. The share is determined by the ratios of local to regional/state levels of employment and output. This base level of exports changes in response to prices and quality of products.

Imports by sector to the local economy depend on the final and intermediate demand for commodities in the local economy and on assumptions for import shares.

Employment by sector is determined by previous employment by sector, changes in regional/state level employment, and changes in both local and regional/state level output.

Employment by gender and type is determined by employment by sector and national data on the shares of genders in employment in each sector. A similar procedure is followed for employment by occupation.

Projections for the resident workforce are derived from assumptions for the population that is of working age (by gender) and projected participation rates, which are in turn a function of the unemployment rate. 'Net commuting' (non-local workers travelling in to fill local jobs minus local workers travelling outside the area for work) is a residual, constrained by assumptions about how able the local workforce is to grow in response to employment opportunities.

Unemployment is the difference between the workforce, local employment and 'net commuting' of non-resident workers filling local jobs. This circular calculation between participation rate and unemployment is an example of the non-linear, systems approach used in calculating the model's outputs.

The baseline LEFM projections are economic projections based on historical growth in the local area relative to the regional/ state level or national level (depending on which area it has the strongest relationship with), on a sector-by-sector basis. They assume that those relationships continue into the future. Thus, if a sector in the local area outperformed (or underperformed) the sector in the region or nation as a whole in the past, then it is assumed that it will outperform (or underperform) in the future.

US LEFM: Forecast Assumptions and Main Outputs

The main input assumptions used in LEFM are:

- Forecasts for the US and state in which the local economy lies for selected variables, including:
    - value-added and employment by 64 sectors
    - components of personal incomes
- Outputs for the local economy include:
    - value-added and employment by 64 sectors
    - employment by gender and status (full-time, part-time, self-employed)
    - employment by 25 occupations (SOC2010)
    - disposable income and consumer spending
    - population and labor force by age (7 age bands) and gender
    - net commuting
    - implications for qualifications

The table below shows the 64 sectors for which data are available for in the LEFM.

Sector
Farms
Forestry, fishing, and related activities
Oil and gas extraction
Mining, except oil and gas
Support activities for mining
Utilities
Construction
Food and beverage and tobacco products
Textile mills and textile product mills
Apparel and leather and allied products
Wood products
Paper products
Printing and related support activities
Petroleum and coal products
Chemical products
Plastics and rubber products
Nonmetallic mineral products
Primary metals
Fabricated metal products
Machinery
Computer and electronic products
Electrical equipment, appliances, and components
Motor vehicles, bodies and trailers, and parts
Other transportation equipment
Furniture and related products
Miscellaneous manufacturing
Wholesale trade
Retail trade
Air transportation
Rail transportation
Water transportation
Truck transportation

Transit and ground passenger transportation
Pipeline transportation
Other transportation and support activities
Warehousing and storage
Publishing industries, except internet (includes software)
Motion picture and sound recording industries
Broadcasting and telecommunications
Data processing, internet publishing, and other information services
Federal Reserve banks, credit intermediation, and related activities
Securities, commodity contracts, and investments
Insurance carriers and related activities
Funds, trusts, and other financial vehicles
Real estate
Rental and leasing services and lessors of intangible assets
Professional, scientific, and technical services
Management of companies and enterprises
Administrative and support services
Waste management and remediation services
Educational services
Ambulatory health care services
Nursing and residential care facilities
Social assistance
Performing arts, spectator sports, museums, and related activities
Amusements, gambling, and recreation industries
Accommodation
Food services and drinking places
Other services, except government
Federal general government (defense)
Federal general government (nondefense)
Federal government enterprises
State and local general government
State and local government enterprises

Moving Beyond the Pandemic:
Economic Development Assessment of Small Towns and Rural Communities Pioneer Valley

Prepared for Pioneer Valley Planning Commission
July 2022

Prepared by:
Barrett Planning Group LLC

Catalyst for Regional Progress
PVPC

BARRETT
PLANNING GROUP LLC

Moving Beyond the Pandemic: Economic Development Assessment
Small Towns and Rural Communities in Pioneer Valley

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This project would not have been possible without assistance and participation from the following communities and regional organizations:

Town Administrators, Planning Directors, and Elected Officials

Belchertown
Blandford
Brimfield
Chester
Chesterfield
Cummington
East Longmeadow
Easthampton
Goshen
Granby
Granville
Hadley
Hampden
Hatfield
Holland
Huntington
Longmeadow
Ludlow
Middlefield
Monson
Montgomery
Palmer
Pelham
Plainfield
Russell
South Hadley
Southampton
Southwick
Tolland
Wales
Ware
Westhampton
Wilbraham
Williamsburg
Worthington

Regional Organizations

Quaboag Chamber of Commerce
Hilltown Community Development Corporation
Quaboag Community Development Corporation
Western Massachusetts Economic Development Council
South Hadley Chamber of Commerce
Valley Community Development Corporation

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Chapter 1. Introduction

In February 2022, the Pioneer Valley Planning Commission (PVPC) engaged Barrett Planning Group to review and assess economic conditions in thirty-five small towns and rural communities in Hampden County and Hampshire County (Table 1.1). The purpose of the project was to explore the impact of the COVID-19 pandemic on the Pioneer Valley's rural economy and the region's readiness and capacity for economic development moving forward from post-COVID recovery to the future. Toward these ends, the consultants mined, analyzed, and mapped data from a variety of sources, interviewed many local officials and business leaders, and visited and photographed conditions throughout the study area. This report presents the results of the study and identifies opportunities to support and enhance the varied economic development interests of the participating communities.

Study Area Overview

The study area covers 920.21 square miles of land in the Connecticut River Valley. While there are distinctive qualities in each town, it is generally so that the communities east of the river are more developed and, in many cases, more affluent, and their counterparts to the west. There is more arable land east of the river, though not as much farming takes place today as 30 years ago. Due to the size of the study area and the amount of data gathered for this project, the area was divided into four subregions:

first by the river, and second, by county lines. Maps 1-4 illustrate the land use patterns that exist today in each subregion.

The environment for employment in these communities is challenging for several reasons. The population is small, household formation rates are low, and much of the land is difficult to develop. These conditions, coupled with lack of infrastructure and restrictive zoning, have much to do with the small size and make-up of the economic base. Still, there are lots of thriving businesses and entrepreneurs in this part of the Commonwealth, and the insistence of residents to protect what they value – the large expanses of open and forested land, small town centers, and low-density residential development – is remarkably similar to the sentiments of residents around Greater Boston and other cities in New England.

Local Relationships and Knowledge

An important (though unsurprising) discovery during the research for this report is that in most cases, community leaders have little knowledge about the well-being of the businesses operating in their towns. Many of them participate in one or more regional associations with an interest in the health of the Pioneer Valley's economy. However, regional conversations about economic development tend to be dominated by what is happening in the cities and large employment centers – Springfield, Holyoke, Northampton Chicopee, Westfield, West Springfield, Agawam, and Amherst – and much less on the economic development assets and needs of the smaller communities. As a result, a study that focuses on those communities can be (and was in this case) hampered by the limited economic development networks, affiliations, and personal or professional contacts that exist. Even in communities with professionally staffed town halls, the officials and employees have so much on their plate that tracking the health and well-being of business establishments is rarely part of anyone's job. None of the communities in the study area have an economic development director or coordinator. Their operating budgets are too small, which is why the regional organizations that do exist really matter in the Pioneer Valley.

Table 1.1. Study Area Towns and Subregions

Town	Census 2020 Population	Population Density	County	Study Area Subregion
Belchertown	15,098	291.8	Hampshire	East Hampshire
Blandford	1,252	23.6	Hampden	West Hampden
Brimfield	3,680	106.2	Hampden	East Hampden
Chester	1,249	33.6	Hampden	West Hampden
Chesterfield	1,369	38.5	Hampshire	West Hampden
Cummington	874	36.1	Hampshire	West Hampshire
East Longmeadow	16,192	1,270.1	Hampden	East Hampden
Easthampton	15,829	1,216.9	Hampshire	West Hampshire
Goshen	1,059	55.5	Hampshire	West Hampshire
Granby	6,291	219.7	Hampshire	East Hampshire
Granville	1,611	36.4	Hampden	West Hampden
Hadley	5,342	230.7	Hampshire	East Hampshire
Hampden	5,177	253.2	Hampden	East Hampden
Hatfield	3,251	210.9	Hampshire	West Hampshire
Holland	2,482	211.9	Hampden	East Hampden
Huntington	2,169	79.6	Hampshire	West Hampshire
Longmeadow	15,705	1,744.1	Hampden	East Hampden
Ludlow	21,233	772.3	Hampden	East Hampden
Middlefield	534	16.0	Hampshire	West Hampshire
Monson	8,787	184.3	Hampden	East Hampden
Montgomery	866	54.8	Hampden	West Hampden
Palmer	12,232	394.3	Hampden	East Hampden
Pelham	1,313	51.0	Hampshire	East Hampshire
Plainfield	661	30.0	Hampshire	West Hampshire
Russell	1,792	94.0	Hampden	West Hampden
South Hadley	17,625	221.1	Hampshire	East Hampshire
Southampton	6,171	1,024.4	Hampshire	West Hampshire
Southwick	9,740	299.6	Hampden	West Hampden
Tolland	508	14.9	Hampden	West Hampden
Wales	1,874	116.3	Hampden	East Hampden
Ware	9,711	292.8	Hampshire	East Hampshire
Westhampton	1,637	59.7	Hampshire	West Hampshire
Wilbraham	14,689	662.9	Hampden	East Hampden
Williamsburg	2,466	98.1	Hampshire	West Hampshire
Worthington	1,175	37.3	Hampshire	West Hampshire

Many of the economic development impediments in this region echo the challenges heard in other parts of Massachusetts, but some are more pressing and tougher to solve in the Connecticut River Valley. Employers and regional organizations such as Chambers of Commerce and the community development corporations cited these kinds of challenges:

- The post-COVID labor shortage, with more jobs available and businesses needing to hire than the number of people looking for work or willing to work for the wages employers have to offer
- Supply chain disruptions
- Limited access to childcare for working parents, especially childcare centers that accept vouchers for low-income families
- Housing is too expensive, especially for working people hoping to buy a home
- The region's limited public transportation service restricts the ability of employers to schedule work hours and shifts outside of normal workday hours
- Limited public water and sewer infrastructure
- Limited access to high-speed internet
- English as a Second Language, especially for lower-wage or entry positions in food services or maintenance
- High rate of retirements among older workers and not enough qualified people to replace them
- Regulatory barriers to development, e.g., excessive reliance on discretionary approvals, and restrictive or outdated land use regulations

Scope of Work

The consulting team's assignment included the following tasks:

- Gather and review existing economic development plans and strategies that have been prepared for communities in the study area, and determine the status of implementation, if known.

- Prepare a pre-2020 and current demographic and economic profile of communities in the study area, to the extent that requisite data are available.

- Create region-wide land use maps for rural and mid-size towns to analyze changes in agriculture, mining, forestry, commercial-industrial, uses and evaluate spatial distribution of those uses

- Develop short profile spreads by town, with data displayed in GIS maps. Infographics, and text

- Prepare an overview of common assets, priorities, common impediments or barriers, that the study area's communities face in addressing limitations to economic prosperity.
- Conduct small-group meetings with local officials and local businesses with representatives from each town, and representatives of non-profit community and economic development organizations in the region
- Survey a sample of employer establishments about workforce needs, including workforce development and training
- Gather additional input from representatives of regional economic development agencies and organizations; seek supplemental input
- Evaluate trends that could affect rural and small-to-midsized communities in Hampden and Hampshire counties' economic prosperity, e.g., changes in demographics, target industry opportunities, workforce readiness.
- Develop preliminary recommendations for creating a more permanent cooperative communication and implementation roadmap for the benefit of communities in Hampden and Hampshire Counties.

The hoped-for survey in the scope of work proved impossible due to the lack of contact information for business owners and self-employed people. Interviews with selected businesses have helped to shed light on conditions for which survey metrics would be even more helpful.

Sources and Limitations of Data

The limited amount of housing data from **Census 2020** means this report depends on the **American Community Survey** both for housing estimates and developing a social and economic portrait of the region. Since the differences between the 2020 five-year estimates and 2020 decennial census counts of population, households, and housing are so close (generally a 2 percent difference or less), the ACS has been used throughout this report except where specifically noted.

For employment, the planning team obtained and analyzed employment, wage, and industry data from the **Executive Office of Labor and Workforce Development's ES-202** Series. Other sources helped, notably the **YE Program** at the University of Wisconsin, which provides data nationally at multiple geographic levels, and licensed data products such as **ESRI Business Analyst** and **Claritas**. While helpful, these sources provide an incomplete picture of the employment base in very small towns, where the

number of jobs by industry is often suppressed for confidentiality reasons. Selected data from the Census Bureau's **U.S. County Business Patterns** and **Quarterly Workforce Indicators** offer a window into the region's economy.

Related data have been incorporated from other sources, notably:

- **MassGIS.** The assessor's databases for all 35 communities were exported from ArcGIS Pro to Excel for analysis. The data supported an analysis of selected characteristics of residential and nonresidential property, including the region's vast acres of tax-exempt land.

- **Massachusetts Department of Agricultural Resources (MDAR).** Though probably not a complete list of all farms operating in the region, the MDAR statistics library provides a useful picture of commercial agriculture in the study area.

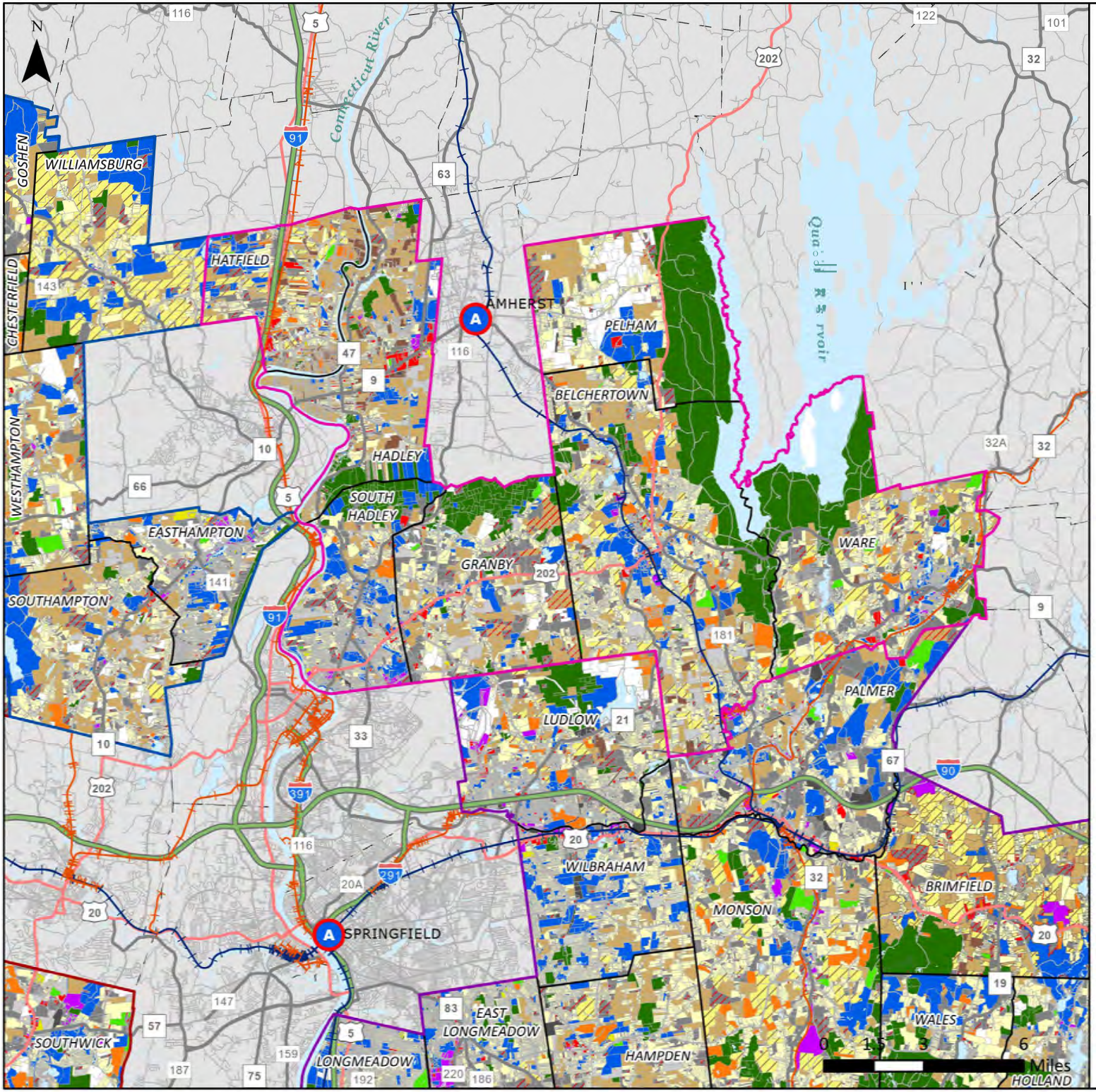
- **Massachusetts Department of Elementary and Secondary Education (DESE).** The quality, condition, and breadth of offerings at local and area schools have an undeniable impact on quality of life, the housing market, and a community's economic competitiveness. This report draws on long-term enrollment trends, class sizes, and school expansions and consolidations cleaned from DESE's school profile series and other DESE data.

- **Massachusetts Department of Early Education and Care (DEEC)** maintains the roster of licensed childcare services in Massachusetts.

- **Massachusetts Department of Revenue (DOR), Municipal Data Bank** is the best source for comparative municipal finance data. Tax base and growth in property values, government expenditures, revenue sources, and general financial condition all serve as important indicators of the local economy.

For any of these sources, there are limitations on the amount of information about the smallest of towns, often stemming from the limited capacity of those communities to track and report data. Offsetting the data gaps, the researchers benefited from the many hours spent in interviews with local officials and staff, businesses, and regional organizations.

PVPC staff also provided access to many regional publications and plans, and those sources have helped to contextualize information the consultants gathered for this study.



Regional Economic Development Assessment of Small Towns and Rural Communities in Pioneer Valley

Map 1. East Hampshire County

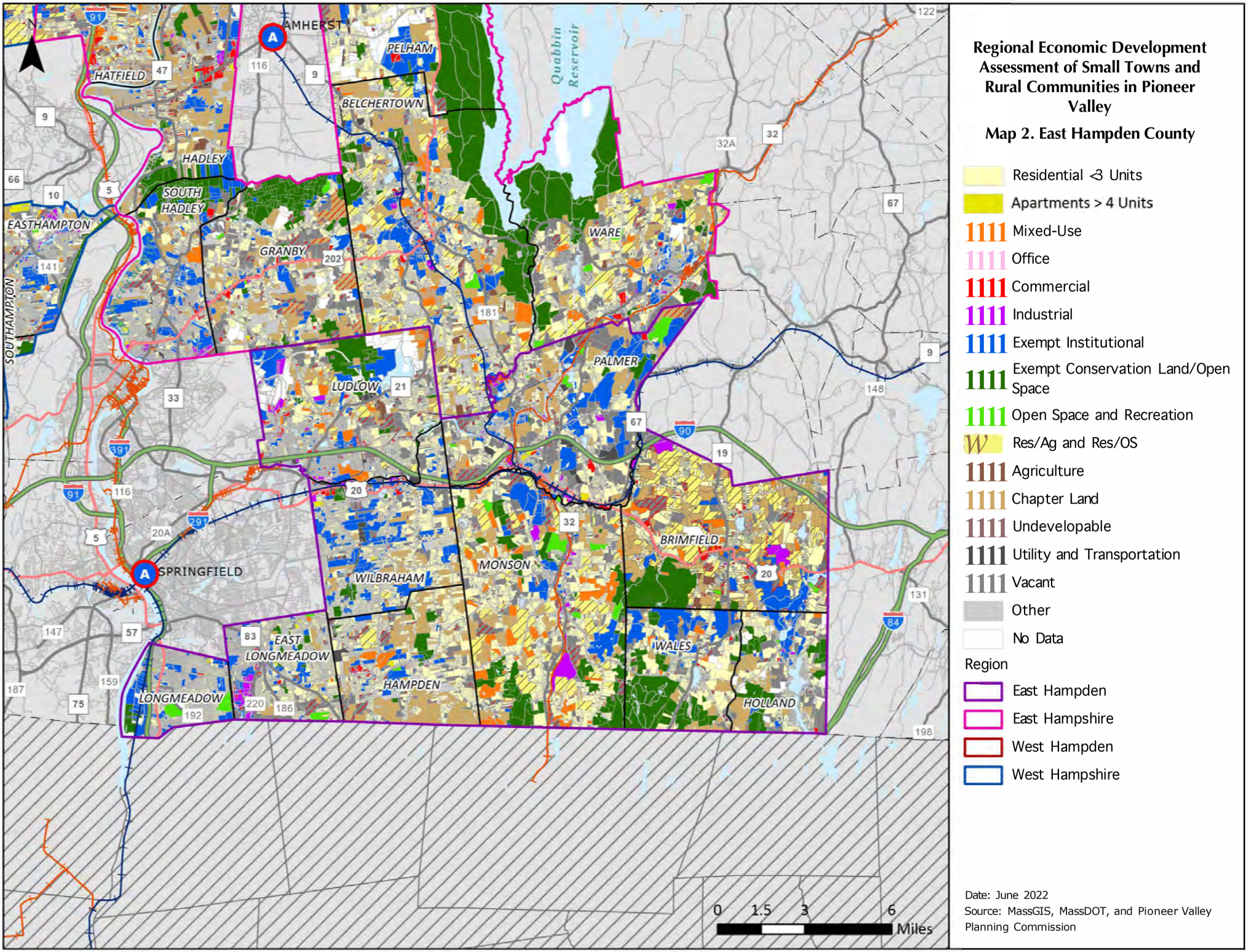
- Residential <3 Units
- Apartments> 4 Units
- Mixed-Use
- Office
- Commercial
- Industrial
- Exempt Institutional
- Exempt Conservation Land/Open Space
- Open Space and Recreation
- Res/Ag and Res/OS
- Agriculture
- Chapter Land
- Undevelopable
- Utility and Transportation
- Vacant
- Other
- No Data

Region

- East Hampden
- East Hampshire
- West Hampden
- West Hampshire

Date: June 2022

Source: MassGIS, MassDOT, and Pioneer Valley Planning Commission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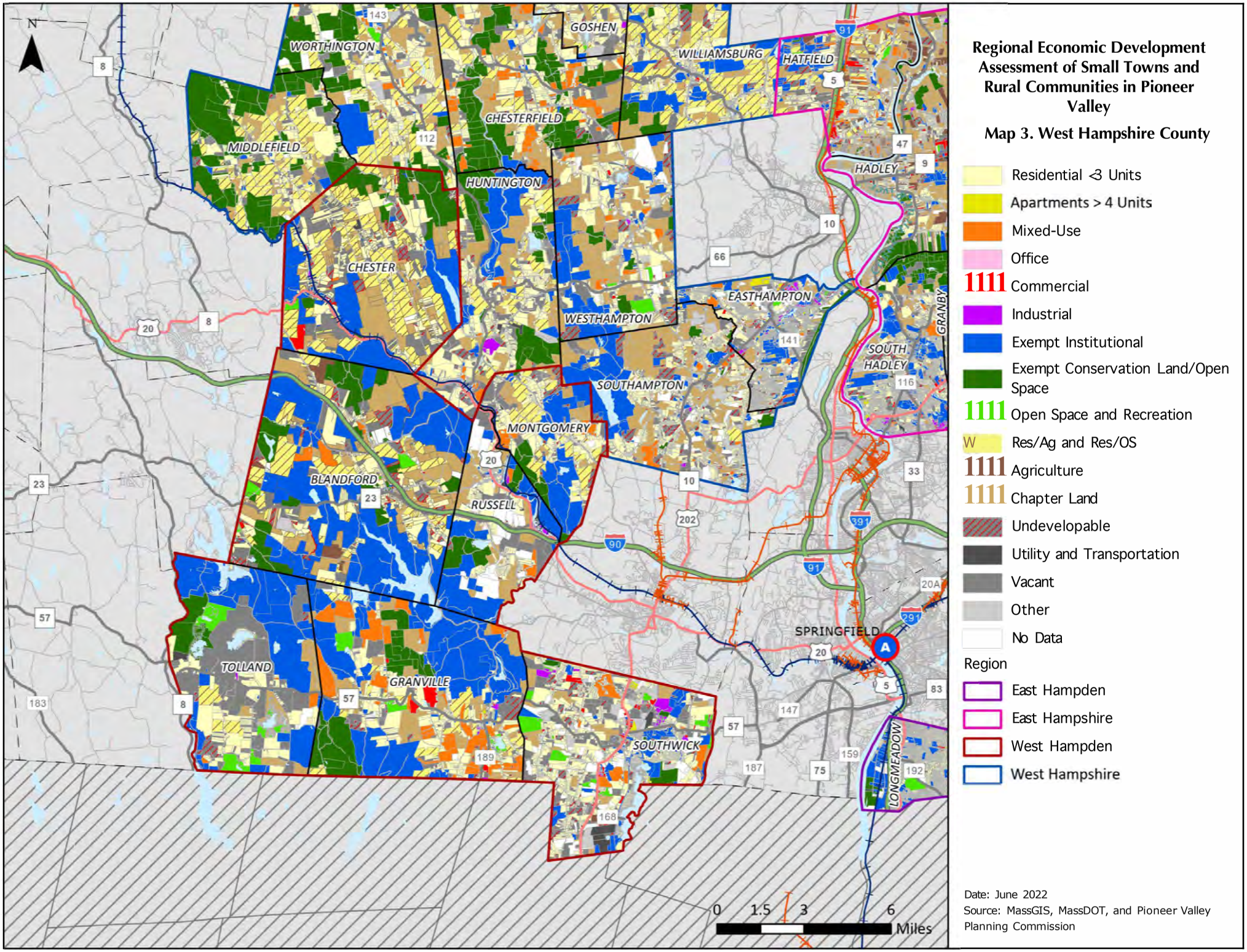
Map 2. East Hampden County
Residential <3 Units
Apartments > 4 Units
Mixed-Use
Office
Commercial
Industrial
Exempt Institutional
Exempt Conservation Land/Open Space
Open Space and Recreation
Res/Ag and Res/OS
Agriculture
Chapter Land
Undevelopable
Utility and Transportation
Vacant
Other
No Data
Region
East Hampden
East Hampshire
West Hampden
West Hampshire
Date: June 2022
Source: MassGIS, MassDOT, and Pioneer Valley Planning Commission
0 1.5 3 6
Miles
AMHERST
PELHAM
BELCHERTOWN
Quabbin Reservoir
HATFIELD
HADLEY
SOUTH HADLEY
EASTHAMPTON
SOUTHAMPTON
GRANBY
WARE
PALMER
LUDLOW
SPRINGFIELD
WILBRAHAM
MONSON
BRIMFIELD
EAST LONGMEADOW
LONGMEADOW
HAMPDEN
WALES
HOLLAND



Regional Economic Development Assessment of Small Towns and Rural Communities in Pioneer Valley

Map 3. West Hampshire County

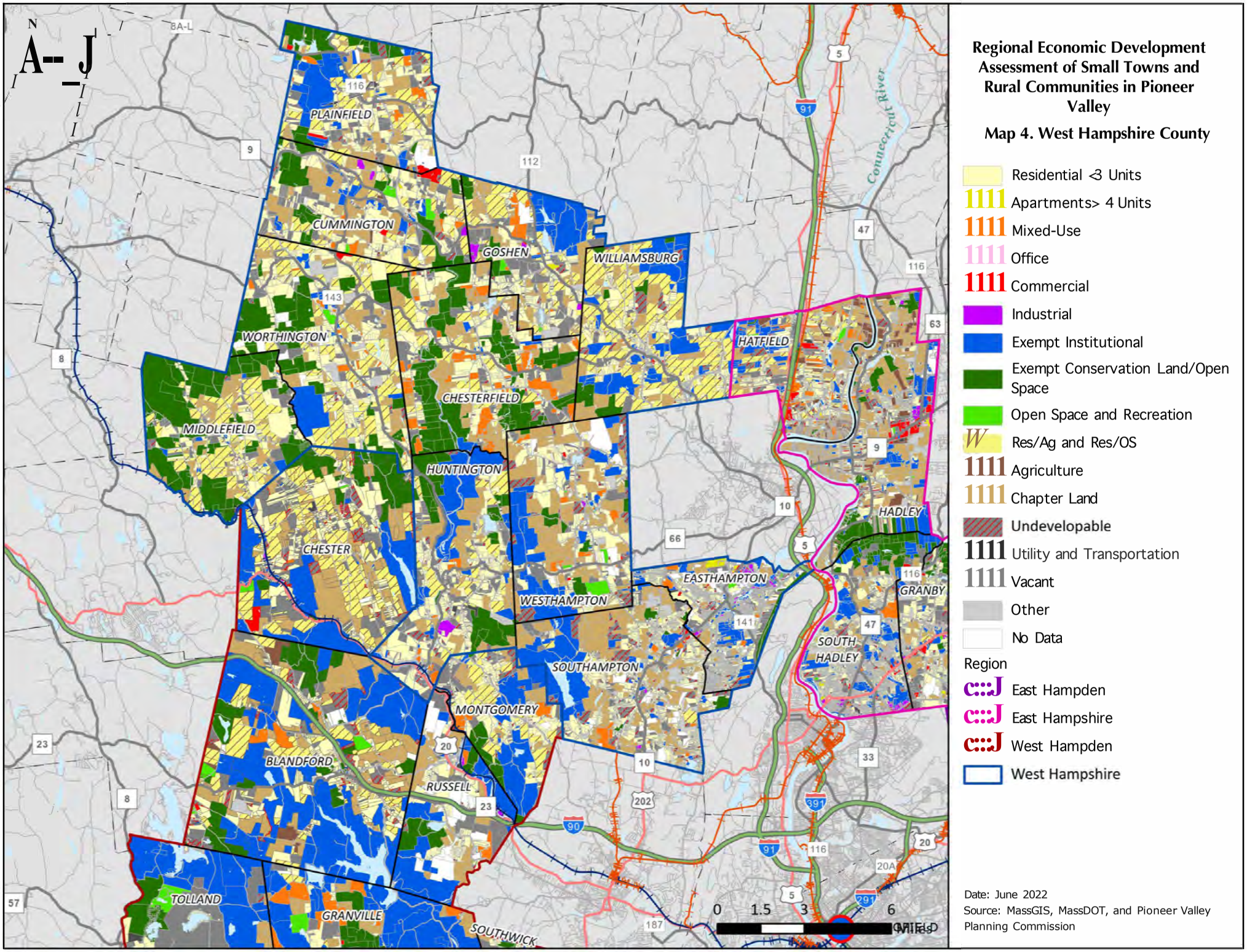
- Residential <3 Units
- Apartments > 4 Units
- Mixed-Use
- Office
- 1111 Commercial
- Industrial
- Exempt Institutional
- Exempt Conservation Land/Open Space
- 1111 Open Space and Recreation
- W Res/Ag and Res/OS
- 1111 Agriculture
- 1111 Chapter Land
- Undevelopable
- Utility and Transportation
- Vacant
- Other
- No Data

Region

- East Hampden
- East Hampshire
- West Hampden
- West Hampshire

Date: June 2022

Source: MassGIS, MassDOT, and Pioneer Valley Planning Commission



Regional Economic Development Assessment of Small Towns and Rural Communities in Pioneer Valley

Map 4. West Hampshire County

- Residential <3 Units
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Date: June 2022
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Chapter 2. Subregional Assessments

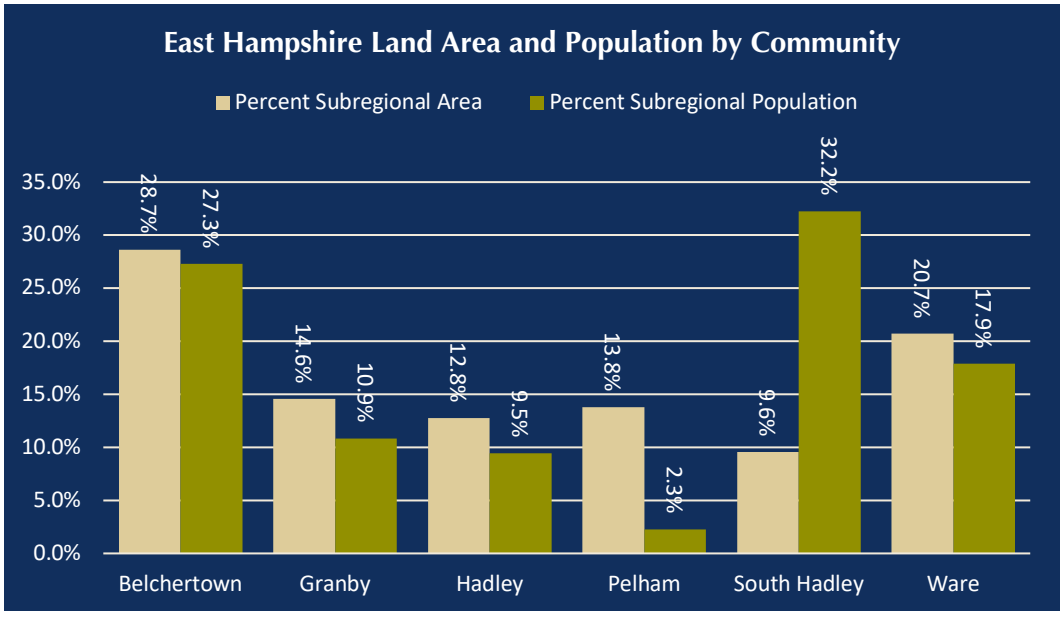
Pioneer Valley's small towns and rural communities form a ring around the cities that developed along the Connecticut River. It is unwise to generalize about these towns based on their location along or near the river because the geography is so different, the road networks are different, the capacity at town halls is different, and in some ways, the hopes and expectations of the residents are different, too. The river itself acts as a powerful divide, for the economic base on the east is more complex and it supports more jobs, and often those jobs provide somewhat higher wages. The communities to the east tend to be more populated, the households tend to be a little wealthier, and they also have somewhat better access to the employment centers outside the immediate region. Still, even these are risky generalizations, as will be seen later in this chapter.

All of the tables in this chapter are presented by subregion, clockwise beginning with East Hampshire County.

Population

Hampden County and Hampshire County have experienced very slow rates of growth for several decades. Together, they comprise 14 percent of the state's land area but just 8 percent of the total population. Both the region's cities and the small towns in the study area grew at about the same rate, 1 percent overall, though some towns gained population much faster and a few lost population even as they gained households. Almost universally, the Pioneer Valley's cities and towns are witnessing a gradual shift from working-age people to empty-nester and retirees, a situation that presents challenges for employers, consumers, public and private service delivery,

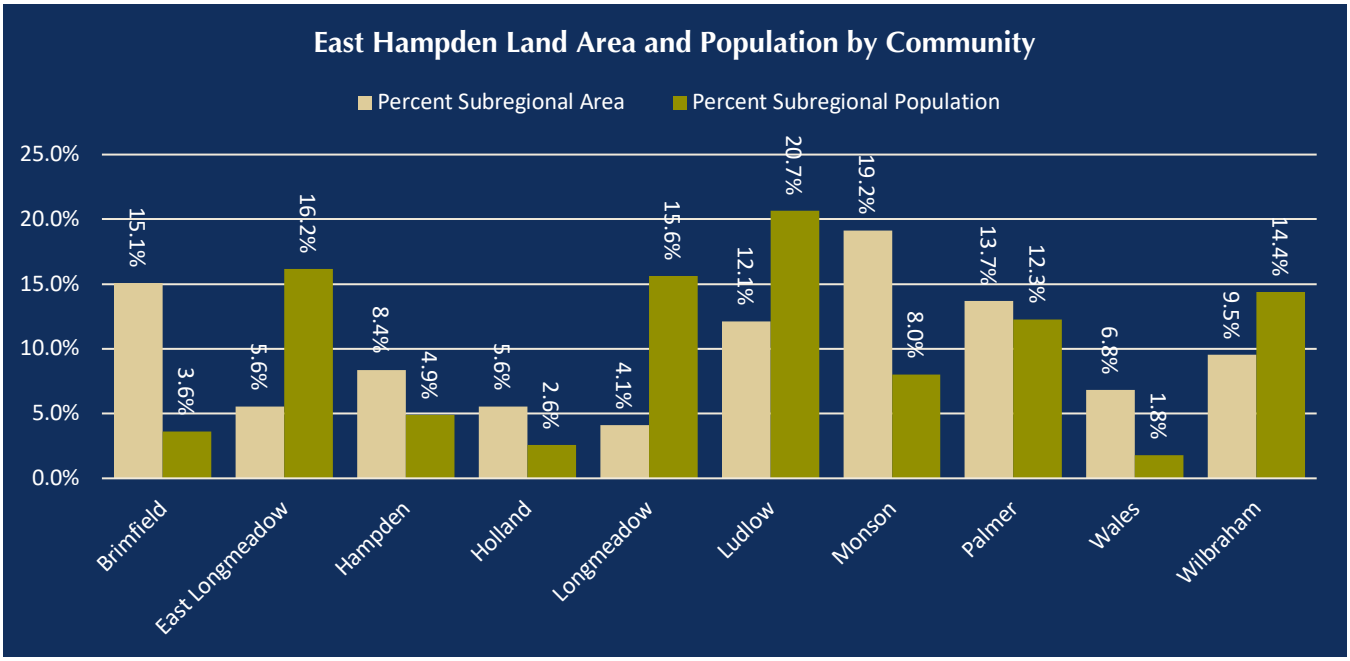
Hampshire County East. The Hampshire County-East subregion includes the towns of Belchertown, Granby, Hadley, Pelham, South Hadley, and Ware. For three of these communities – Pelham, Belchertown, and Ware – their history and sense of regional identity is shaped not only by the Connecticut River, but in a very direct way, the Quabbin Reservoir, the construction of which permanently changed Ware's boundaries. According to Census 2020, their combined total population is 56,281. South Hadley accounts for about one-third of the total (18,150), yet at 18.4 sq. mi., it is the smallest of the six towns in total area and as a result, far more densely settled. Two of these communities experienced small population declines between 2010-2020 (Granby and Pelham). In all cases, however, these six towns gained population a little faster than was expected based on intercensal estimates from the American Community Survey. Household growth occurred in all but one town (Pelham).



Source for this chart series: Census 2020.

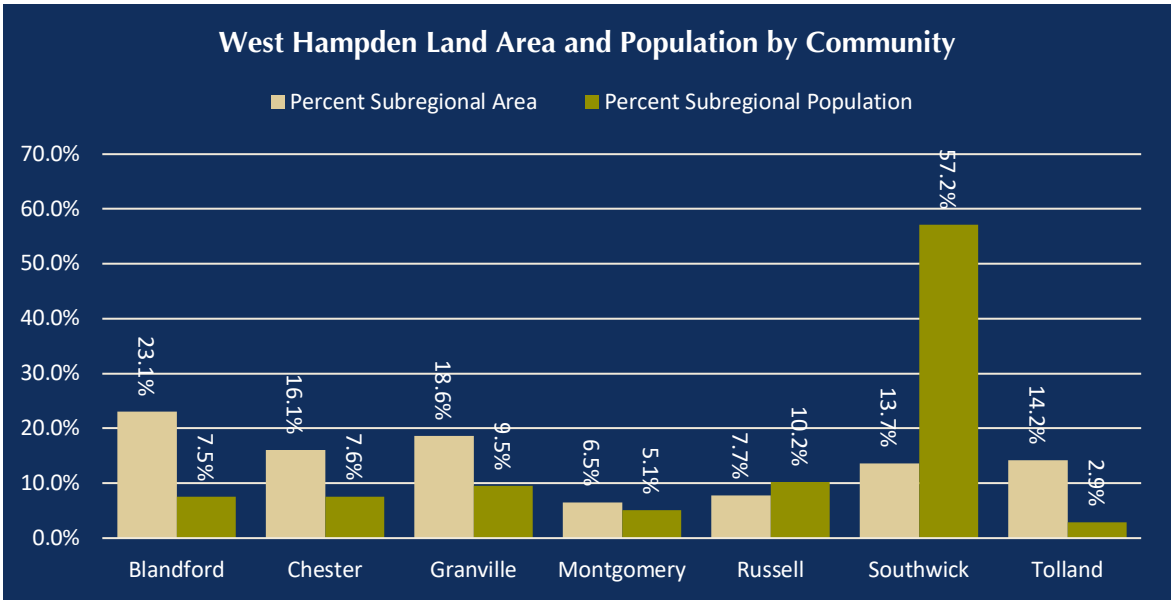
Population growth has progressed slowly in the East Hampshire County towns over the last 50 years. Like most places in Massachusetts, they gained population rapidly after World War II, especially Granby, where the population more than doubled in one decade (1950-60).

Hampden County East. The Hampden County-East subregion includes ten communities generally located between Interstate Route 90 and the Connecticut border. Their combined 2020 population is 101,591, with Ludlow being the most populous (21,002) and Wales, the least (1,832). East Longmeadow, Brimfield, and Holland experienced the highest 2010-2020 population growth rates, while Holland and Palmer lead the subregion for total household growth. Population declines occurred in four of these communities, mainly Hampden (-3.4 percent) and Monson (-4.9 percent). Longmeadow and East Longmeadow are the most densely settled, and they, along with Ludlow, are more suburban in character than the rest of the subregion.



Hampden County West. Across the Connecticut River, the communities tend to be larger in area and much smaller in population. The development pattern is low-density, and this makes sense because the land is more constrained. Municipal services are limited, and in some cases, there is either no public drinking water supply or one that serves only a limited area. The Hampden County-West communities of Blandford, Chester, Granville, Montgomery, Russell, Southwick, and Tolland have a total area of 225.9, about the same as the east side of Hampden County, yet their combined total population is just 16,146 people – roughly the same as the entire population of East

Longmeadow. The most populous town, Southwick, is home to over half the subregion's entire population. And, despite a slight drop in population between 2010 and 2020, both Blandford and Southwick have gained in total households.



Hampshire County West. The Hampshire County West subregion is the largest both in area (285.8 sq. mi.) and number of communities (12). It is often referred to as the Northern Hilltowns, or the collection of very small towns that extend northwest from the cities along the Connecticut River to the Berkshires. At 16,211 people, Easthampton is by far the largest and most densely populated (1,208.3 per sq. mi.), and the only one in the entire 35-town study area with a mayor-council form of government. Southampton and Westhampton have grown in the past decade, roughly at a rate commensurate with other higher-growth towns in the study area such as East Longmeadow and Belchertown.

Population decline is occurring in half the towns, led by tiny Middlefield, with a 25 population drop from 2010-2020, along with Goshen, Cummington, Huntington, and Chesterfield. However, the reason is declining household sizes because most of these communities have still absorbed household growth. The shifting size and make-up of the subregion's households will become apparent again in the section on households and families.

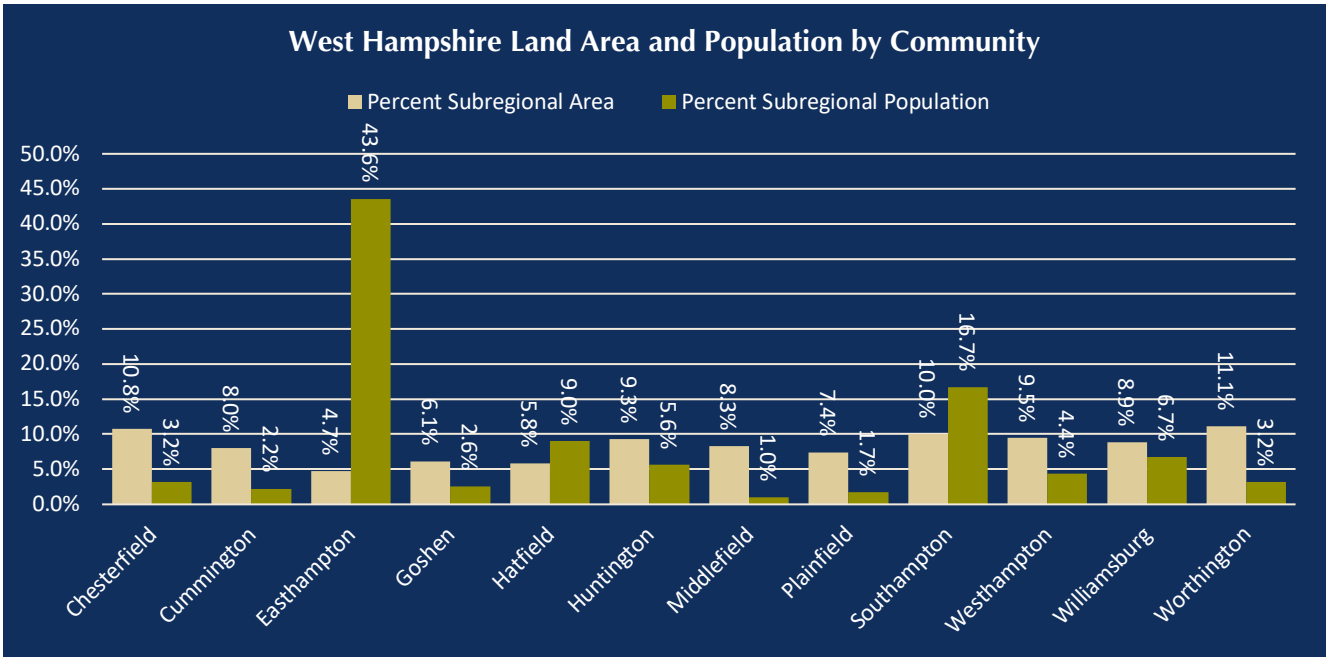

West Hampshire Land Area and Population by Community
Percent Subregional Area
Percent Subregional Population
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
10.8%
3.2%
8.0%
2.2%
4.7%
43.6%
6.1%
2.6%
5.8%
9.0%
9.3%
5.6%
8.3%
1.0%
7.4%
1.7%
10.0%
16.7%
9.5%
4.4%
8.9%
6.7%
11.1%
3.2%
Chesterfield
Cummington
Easthampton
Goshen
Hatfield
Huntington
Middlefield
Plainfield
Southampton
Westhampton
Williamsburg
Worthington

Table 2.1. Change in Population and Households, 2010-2020.[1]

East Hampshire County

	Geographic Area (Sq. Mi.)		2020 Population		2010-2020 Change	
Town	Total	% Subregion	Total Population	% Subregion	Population	Households
Belchertown	55.3	28.7%	15,350	27.3%	4.8%	9.1%
Granby	28.1	14.6%	6,110	10.9%	-1.8%	1.4%
Hadley	24.6	12.8%	5,325	9.5%	1.4%	5.0%
Pelham	26.6	13.8%	1,280	2.3%	-3.1%	-0.9%
South Hadley	18.4	9.6%	18,150	32.2%	3.5%	4.1%
Ware	40.0	20.7%	10,066	17.9%	2.0%	4.9%
Total	192.9	100.0%	56,281	100.0%		

East Hampden County

	Geographic Area (Sq. Mi.)		2020 Population		2010-20 Change	
Town	Total	% Subregion	Population	% Subregion	Population	Households
Brimfield	35.3	15.1%	3,694	3.6%	2.4%	4.7%
East Longmeadow	13	5.6%	16,430	16.2%	4.5%	4.8%
Hampden	19.6	8.4%	4,966	4.9%	-3.4%	2.5%
Holland	13	5.6%	2,603	2.6%	5.0%	10.2%
Longmeadow	9.6	4.1%	15,853	15.6%	0.4%	0.2%
Ludlow	28.3	12.1%	21,002	20.7%	-0.5%	4.0%
Monson	44.8	19.2%	8,150	8.0%	-4.9%	2.6%
Palmer	32	13.7%	12,448	12.3%	2.6%	6.9%
Wales	16	6.8%	1,832	1.8%	-0.4%	2.9%
Wilbraham	22.3	9.5%	14,613	14.4%	2.8%	3.8%
Total	233.9	100.0%	101,591	100.0%		

[1] Census 2020, P.L. 94 Redistricting Data, and Barrett Planning Group.

West Hampden County

	Geographic Area (Sq. Mi.)		2020 Population		2010-20 Change	
Town	Total	% Subregion	Population	% Subregion	Population	Households
Blandford	53.4	23.1%	1,215	7.5%	-1.5%	3.9%
Chester	37.2	16.1%	1,228	7.6%	-8.2%	-1.5%
Granville	43.1	18.6%	1,538	9.5%	-1.8%	-0.3%
Montgomery	15.1	6.5%	819	5.1%	-2.3%	2.1%
Russell	17.9	7.7%	1,643	10.2%	-7.4%	-1.4%
Southwick	31.6	13.7%	9,232	57.2%	-2.8%	3.1%
Tolland	32.8	14.2%	471	2.9%	-2.9%	12.2%
Total	231.1	100.0%	16,146	100.0%		

West Hampshire County

	Geographic Area (Sq. Mi.)		2020 Population		2010-20 Change	
Town	Total	% Subregion	Population	% Subregion	Population	Households
Chesterfield	31.2	10.8%	1,186	3.2%	-2.9%	4.9%
Cummington	23.1	8.0%	829	2.2%	-5.0%	-1.5%
Easthampton	13.6	4.7%	16,211	43.6%	1.0%	4.1%
Goshen	17.7	6.1%	960	2.6%	-8.9%	3.6%
Hatfield	16.8	5.8%	3,352	9.0%	2.2%	5.1%
Huntington	26.8	9.3%	2,094	5.6%	-3.9%	0.1%
Middlefield	24.1	8.3%	385	1.0%	-26.1%	-20.2%
Plainfield	21.4	7.4%	633	1.7%	-2.2%	5.9%
Southampton	28.9	10.0%	6,224	16.7%	7.5%	8.8%
Westhampton	27.4	9.5%	1,622	4.4%	0.9%	6.3%
Williamsburg	25.7	8.9%	2,504	6.7%	0.9%	-0.8%
Worthington	32.1	11.1%	1,193	3.2%	3.2%	5.2%
Total	288.8	100.0%	37,193	100.0%		

Race, Ethnicity, Culture

There is very little population diversity in the study area in terms of race or ethnicity, place of birth, or languages spoken at home. In all 35 communities, the population is predominantly White. The chart to the right show that racial and ethnic diversity exists east of the river, where the populations are higher and where there has been more population and household growth over the past decade. Overall, the White population decreased by almost 12,000 people from 2010-2020, and the White population percentage dropped throughout the 35-town study area except in Holland and Southampton.

According to Census 2020, the Black populations in the study area increased in all but the smallest towns, mainly west of the river but also in Pelham. At the same time, all four subregions and most of the individual towns gained Asian residents, again with a few exceptions. By contrast, population gains among people reporting their race as "Other" or "Two or More Races" also occurred across the board, as did the region's Hispanic or Latino population. While Census 2020 has yet to release Latino by Race population counts, the most recent American Community Survey (ACS 2020) estimates indicate that much of this growth has occurred with White Latino in-migration.

While immigration accounts for 17 percent of the Commonwealth's population, the Connecticut River towns are strikingly different. Foreign-born populations make up 10-12 percent of the residents of Longmeadow and Ludlow, both of which function as urban periphery towns, but in most of the study area, the percentages fall at or below 6 percent.

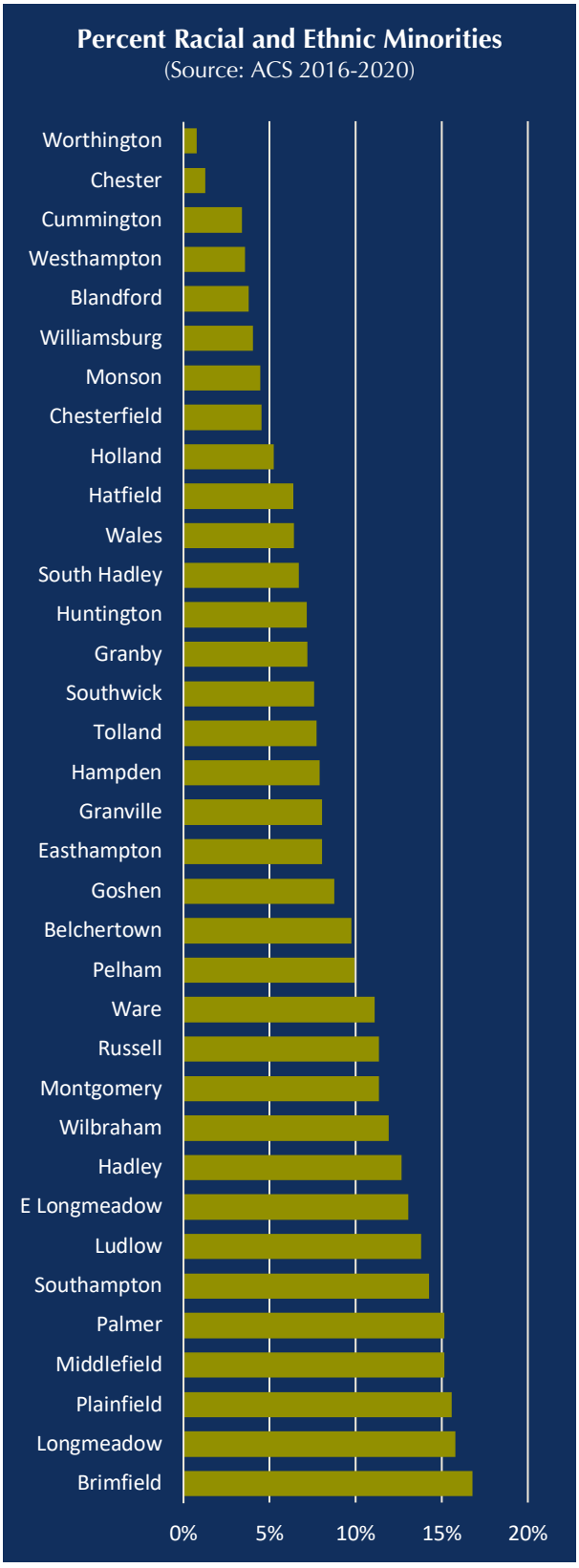


Table 2.2. Race and Ethnicity[2]

East Hampshire

Community	Population	Minority Populations by Race			
			Latino and Non-Latino		
		White, Latino	Black, African American	Asian	All Other
Belchertown	15,350	1.6%	1.9%	2.4%	6.3%
Granby	6,110	0.7%	1.4%	3.1%	5.0%
Hadley	5,325	0.0%	1.5%	6.6%	6.4%
Pelham	1,280	3.5%	2.5%	1.7%	7.5%
South Hadley	18,150	0.0%	2.6%	5.2%	6.3%
Ware	10,066	1.1%	1.4%	0.7%	8.1%
Total	56,281	2.7%	2.1%	4.1%	6.2%

East Hampden

Community	Population	Minority Populations by Race			
			Latino and Non-Latino		
		White, Latino	Black, African American	Asian	All Other
Brimfield	3,663	1.3%	5.5%	0.4%	9.6%
East Longmeadow	16,215	3.8%	2.2%	3.3%	3.8%
Hampden	5,174	2.0%	0.2%	0.3%	5.4%
Holland	2,492	3.3%	0.7%	0.0%	1.3%
Longmeadow	15,736	3.9%	1.3%	7.3%	3.3%
Ludlow	21,223	6.3%	1.7%	0.8%	5.0%
Monson	8,775	0.6%	1.2%	1.3%	1.3%
Palmer	12,236	4.2%	3.2%	1.7%	6.0%
Wales	2,087	3.4%	0.4%	0.0%	2.6%
Wilbraham	14,656	4.6%	3.5%	0.8%	3.1%
Total	102,257	4.0%	2.1%	2.3%	8.2%

[2] Census Bureau, American Community Survey (ACS) Five-Year Estimates 2016-2020, Retrieved from Social Explorer, Table SE:A04001. Hispanic or Latino by Race, and Barrett Planning Group LLC.

West Hampden

Community	Population	Minority Populations by Race			
			Latino and Non-Latino		
		White, Latino	Black, African American	Asian	All Other
Blandford	1,061	1.7%	0.0%	0.0%	2.1%
Chester	1,525	0.2%	0.3%	0.0%	0.8%
Granville	1,703	3.0%	1.1%	0.6%	3.3%
Montgomery	907	0.8%	0.4%	6.8%	3.3%
Russell	1,524	4.8%	3.0%	0.1%	3.4%
Southwick	9,722	2.4%	0.1%	1.6%	3.5%
Tolland	467	1.5%	0.0%	0.0%	6.2%
Total	16,909	2.3%	0.5%	1.4%	3.0%

West Hampshire

Community	Population	Minority Populations by Race			
			Latino and Non-Latino		
		White, Latino	Black or African American	Asian	All Other
Chesterfield	1,189	0.8%	0.0%	0.0%	0.8%
Cummington	1,003	1.6%	0.0%	0.3%	1.5%
Easthampton	15,930	1.3%	0.5%	1.1%	2.1%
Goshen	880	7.7%	0.0%	0.0%	0.6%
Hatfield	5,328	0.0%	5.6%	2.1%	2.9%
Huntington	3,271	1.1%	0.0%	0.3%	2.6%
Middlefield	2,170	0.3%	1.3%	0.0%	3.2%
Plainfield	363	0.0%	0.0%	0.3%	5.5%
Southampton	6,169	0.0%	0.6%	0.8%	3.6%
Westhampton	1,711	2.2%	0.0%	0.4%	1.1%
Williamsburg	2,638	1.3%	0.8%	0.0%	1.3%
Worthington	1,200	0.0%	0.0%	0.0%	0.8%
Total	41,852	1.0%	1.1%	0.8%	4.3%

Population Age

Pioneer Valley's small towns are similar both to the Commonwealth as a whole and the two counties in terms of population age, but there are noteworthy differences. For example, larger percentages of school-age children in Belchertown, Hadley, Ware, Longmeadow, and Wilbraham, and much larger percentages of older adults (65 and over) in Cummington, Easthampton, East Longmeadow, Hadley, Pelham, and South Hadley, Hamden, Palmer, and Worthington. Over 13 percent of all people living in the 35 towns are 75 and over. While this part of the state is not "graying" as rapidly as Barnstable County or Berkshire County, the towns in the study area tend to top state averages for **age-dependent populations**, i.e., people who do not work and rely on the productivity of the labor force for access to services. Area-wide, the relatively low percentage of people in the labor force (next section) bookends these statistics. In most cases, it is older adults, not youth, who account for high dependency ratios. The exception is the very small towns west of the river, where the school-age populations are so small that some places do not have a local elementary school.

It is important to add that Hampshire County proper has much larger percentages of people 18-24 and 35-34 years – statistics influenced by the presence of the Five College Consortium: the University of Massachusetts, Amherst College, Smith College, Mount Holyoke College, and the pioneering Hampshire College, as well as Westfield State University. Higher concentrations of young adults can also be found in the region's cities, where the housing is generally more affordable than the towns on the urban periphery.

Table 2.3. Population Age Cohorts[3]

East Hampshire

Community	Total	Under 5	5 to 17	18 to 24	25 o 34	35 to 44	45 to 54	55 to 64	65 and over
Belchertown	15,350	5.4%	15.7%	8.6%	9.8%	14.2%	14.8%	15.3%	16.1%
Granby	6,110	3.1%	10.7%	10.3%	15.2%	6.9%	17.6%	17.6%	18.6%
Hadley	5,325	2.1%	16.3%	6.5%	10.4%	7.4%	15.6%	15.8%	25.9%
Pelham	1,280	4.7%	14.2%	5.3%	13.1%	12.1%	11.4%	12.9%	26.3%
South Hadley	18,150	3.9%	9.2%	19.5%	10.0%	9.7%	11.7%	14.5%	21.5%
Ware	10,066	3.6%	18.2%	7.5%	14.6%	10.9%	12.4%	16.4%	16.4%
Total	56,281	4.0%	13.5%	11.8%	11.5%	10.7%	13.7%	15.5%	19.3%

East Hampden

Community	Total	Under 5	5 to 17	18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 and over
Brimfield	3,663	4.8%	17.2%	2.6%	10.6%	13.5%	13.6%	17.2%	20.6%
East Longmeadow	16,215	6.6%	17.9%	7.6%	10.0%	9.4%	16.1%	11.5%	20.8%
Hampden	5,174	3.2%	10.1%	6.2%	9.8%	8.4%	11.9%	23.2%	27.3%
Holland	2,492	5.0%	16.4%	6.7%	10.2%	9.3%	15.3%	18.7%	18.5%
Longmeadow	15,736	5.5%	18.4%	6.7%	8.8%	9.8%	14.1%	13.5%	23.3%
Ludlow	21,223	3.9%	12.1%	8.1%	13.2%	12.3%	13.5%	16.4%	20.4%
Monson	8,775	4.7%	12.5%	7.4%	9.4%	8.5%	15.6%	20.2%	21.7%
Palmer	12,236	5.1%	13.5%	8.6%	11.8%	10.1%	11.0%	21.4%	18.5%
Wales	2,087	6.8%	17.6%	4.4%	11.8%	15.0%	13.9%	15.8%	14.7%
Wilbraham	14,656	2.8%	19.0%	6.4%	9.5%	11.7%	12.4%	15.2%	23.0%
Total	102,257	4.7%	15.5%	7.1%	10.6%	10.6%	13.7%	16.4%	21.4%

[3] American Community Survey Five-Year Estimates 2016-2020, Retrieved from Social Explorer, American Community Survey 2020 Five-Year Estimates, ACS20_5yr:B01001. Sex by Age, and Barrett Planning Group.

West Hampden

Community	Total	Under 5	5 to 17	18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 and over
Blandford	1,061	6.1%	7.2%	8.4%	10.7%	7.4%	13.3%	24.7%	22.2%
Chester	1,525	3.5%	22.0%	5.8%	10.9%	8.3%	14.9%	18.4%	16.3%
Granville	1,703	4.7%	14.7%	6.5%	11.9%	8.9%	23.0%	14.2%	16.1%
Montgomery	907	3.6%	14.3%	3.4%	12.5%	9.8%	11.1%	25.1%	20.1%
Russell	1,524	5.1%	15.2%	11.2%	10.1%	9.4%	15.0%	19.4%	14.6%
Southwick	9,722	4.5%	13.4%	6.6%	8.9%	12.7%	15.4%	16.2%	22.3%
Tolland	467	1.7%	10.1%	3.6%	10.1%	9.2%	12.2%	26.3%	26.8%
Total	16,909	4.5%	14.0%	6.8%	9.8%	11.0%	15.7%	17.8%	20.4%

West Hampshire

Community	Total	Under 5	5 to 17	18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 and over
Chesterfield	1,189	2.0%	11.7%	8.7%	10.4%	9.7%	15.1%	19.4%	23.0%
Cummington	1,003	2.6%	13.7%	13.7%	7.3%	8.0%	11.9%	16.4%	26.6%
Easthampton	15,930	4.1%	9.6%	8.1%	13.7%	12.5%	12.6%	16.6%	22.7%
Goshen	880	2.8%	12.8%	5.7%	10.6%	6.4%	18.1%	26.9%	16.7%
Hatfield	3,271	4.7%	11.9%	10.1%	14.9%	8.6%	9.0%	18.3%	22.5%
Huntington	2,170	4.0%	12.4%	9.0%	11.9%	11.9%	16.3%	18.0%	16.4%
Middlefield	363	0.6%	5.0%	5.8%	6.6%	6.3%	9.9%	42.7%	23.1%
Plainfield	688	3.9%	16.4%	7.3%	5.7%	9.6%	13.4%	15.1%	28.6%
Southampton	6,169	3.7%	12.1%	12.3%	8.0%	9.9%	14.6%	17.4%	22.0%
Westhampton	1,711	3.8%	15.6%	7.3%	9.1%	12.6%	14.0%	17.7%	20.0%
Williamsburg	2,638	2.7%	11.4%	3.6%	10.1%	9.9%	21.5%	16.9%	23.9%
Worthington	1,200	3.0%	8.0%	7.4%	6.8%	8.4%	11.5%	23.6%	31.3%
Total	37,212	3.8%	11.1%	8.7%	11.5%	10.9%	13.7%	17.8%	22.5%

Labor Force Characteristics

A community's **labor force** includes all residents 16 and over who either have a job or are looking for work. The **labor force participation rate** is the percentage of residents 16-and-over included in the labor force. It is important to distinguish labor force and employment base statistics. Labor force characteristics make up an important part of a community's demographic profile, whereas employment base characteristics reflect the kinds of industries, employers, and jobs found in the community. Labor force characteristics include people living in the community, regardless of where they work; employment base characteristics describe employers and jobs held by people who work in the community, regardless of where they live.

Labor force participation rates estimated for the study area towns are somewhat lower than county-wide averages, and they in turn are lower than the labor force participation rate for Massachusetts (67.2 percent). The labor force participation rate for Hampden County is 60.8 percent and for Hampshire County, 63.1 percent. The difference reflects, in part, the presence of so many older adults living in Pioneer Valley cities and towns, but it is important to remember that the labor force participation rate has fallen nationally and within the Commonwealth over the past decade. This is consistent with the increase in senior households and gradual decline in the population percentage of working-age people, especially those 35 to 64 years.

There are obvious outliers in the study area, such as very high labor force participation rates in Belchertown, Granby, Wales, Montgomery, Williamsburg, and Worthington, and very low rates in Hadley, Longmeadow, and Cummington.

Labor force characteristics make up an important part of a community's demographic profile, whereas employment base characteristics reflect the kinds of employers and jobs found in the community.

Labor force characteristics include people living in community, regardless of where they work; employment base characteristics describe employers and jobs held by people who work in the community, regardless of where they live.

Table 2.4. Labor Force and Employment[4]

East Hampshire

Community	Population 16 Years and Over	% Population	In Labor Force	Labor Force Participation Rate	Employed	Not in Labor Force
Belchertown	12,259	81.3%	8,796	71.8%	8,796	3,463
Granby	5,540	87.8%	4,239	76.5%	4,045	1,301
Hadley	4,449	83.5%	2,650	59.6%	2,650	1,799
Pelham	1,145	84.9%	738	64.5%	738	407
South Hadley	15,712	88.7%	9,795	62.3%	9,740	5,917
Ware	8,054	82.0%	5,145	63.9%	5,116	2,909
Total	47,159	84.8%	31,363	66.5%	31,085	15,796

East Hampden

Community	Population 16 Years and Over	% Population	In Labor Force	Labor Force Participation Rate	Employed	Not in Labor Force
Brimfield	2,960	80.1%	1,873	63.3%	1,761	1,087
East Longmeadow	12,702	77.3%	7,789	61.3%	7,548	4,913
Hampden	4,594	92.5%	2,993	65.2%	2,739	1,601
Holland	2,078	79.8%	1,394	67.1%	1,308	684
Longmeadow	12,470	78.7%	7,259	58.2%	6,910	5,211
Ludlow	18,262	87.0%	11,532	63.1%	11,092	6,730
Monson	7,494	92.0%	5,033	67.2%	4,705	2,461
Palmer	10,305	82.8%	6,568	63.7%	6,151	3,737
Wales	1,616	88.2%	1,229	76.1%	1,172	387
Wilbraham	12,103	82.8%	7,694	63.6%	7,630	4,409
Total	84,584	83.3%	53,364	63.1%	51,016	31,220

West Hampden

Community	Population 16 Years and Over	% Population	In Labor Force	Labor Force Participation Rate	Employed	Not in Labor Force
Blandford	926	76.2%	563	60.8%	554	363
Chester	1,161	94.5%	770	66.3%	748	391
Granville	1,420	92.3%	952	67.0%	888	468
Montgomery	773	94.4%	561	72.6%	553	212
Russell	1,267	77.1%	760	60.0%	747	507
Southwick	8,222	89.1%	5,449	66.3%	5,279	2,773
Tolland	412	87.5%	247	60.0%	233	165
Total	14,181	87.8%	9,302	65.6%	9,002	4,879

[4] American Community Survey Five-Year Estimates 2016-2020, Retrieved from Social Explorer, SE:A17002. Employment Status for Total Population 16 Years and Over, and Barrett Planning Group.

West Hampshire

Community	16 Years and Over	Percent Total Population 16 and Over	In Labor Force	Labor Force Participation Rate	Employed	Not in Labor Force
Chesterfield	1,067	89.7%	721	67.6%	694	346
Cummington	853	85.0%	428	50.2%	413	425
Easthampton	13,963	87.7%	9,174	65.7%	8,739	4,789
Goshen	771	87.6%	563	73.0%	559	208
Hatfield	2,804	85.7%	1,900	67.8%	1,834	904
Huntington	1,859	85.7%	1,325	71.3%	1,279	534
Middlefield	350	96.4%	223	63.7%	223	127
Plainfield	562	81.7%	365	64.9%	352	197
Southampton	5,304	86.0%	3,502	66.0%	3,374	1,802
Westhampton	1,404	82.1%	982	69.9%	908	422
Williamsburg	2,305	87.4%	1,739	75.4%	1,717	566
Worthington	1,071	89.3%	754	70.4%	724	317
Total	32,313	86.8%	21,676	67.1%	20,816	10,637

PLACE OF EMPLOYMENT

Almost 80 percent of the employed residents in these 35 communities work outside their own town, primarily in Amherst, Springfield, and Holyoke. Non-local employment is far more pronounced west of the Connecticut River, and this is because there are so few local jobs, as discussed in a later section of this report. While non-local commutes have gradually changed the way most Massachusetts residents work, the limited number of people who live and work in their own community represents a much smaller percentage of all employed residents in all four of the subregions studied for this report. Hadley (30 percent) and South Hadley (28.4 percent) in East Hampshire County and the very small towns of Williamsburg (30.1 percent), Worthington (36.2 percent), and Middlefield (34.1 percent) in West Hampshire County are the only towns close to the state (33 percent) and county (36 percent) averages.

As shown in Table 2.5, in many cases these are the same towns with high percentages of people who work at home. While the statewide average for employed people working at home is about 8 percent, it is very common for a larger share of the employed labor force to operate a business at home. Blandford, Granville, Worthington, Williamsburg, Middlefield, Plainfield, and Pelham all have many home-based workers. And, with so few estimates available that reflect pandemic-era conditions, it would not be at all surprising to find that home-based work has increased significantly in some of these communities.

Given that limited public transportation service exists outside the region's cities and the urban periphery, most workers who commute to a job outside the home drive to work each day, mainly alone. Bus ridership is slightly more common east of the river.

Table 2.5. Working Locally[5]

East Hampshire

Community	Employed Labor Force	Works Locally	Percent	Works Elsewhere	Percent	Work at Home
Belchertown	8,380	1,544	18.4%	6,836	81.6%	4.7%
Granby	3,952	438	11.1%	3,514	88.9%	4.5%
Hadley	2,516	756	30.0%	1,760	70.0%	9.1%
Pelham	723	139	19.2%	584	80.8%	14.4%
South Hadley	9,189	2,610	28.4%	6,579	71.6%	9.5%
Ware	4,553	936	20.6%	3,617	79.4%	2.0%
Total	29,313	6,423	21.9%	22,890	78.1%	4.7%

East Hampden

Community	Employed Labor Force	Works Locally	Percent	Works Elsewhere	Percent	Work at Home
Brimfield	1,755	252	14.4%	1,503	85.6%	10.8%
East Longmeadow	7,315	1,810	24.7%	5,505	75.3%	6.2%
Hampden	2,710	405	14.9%	2,305	85.1%	2.4%
Holland	1,273	132	10.4%	1,141	89.6%	3.3%
Longmeadow	6,845	1,328	19.4%	5,517	80.6%	10.6%
Ludlow	10,929	2,256	20.6%	8,673	79.4%	3.4%
Monson	4,598	1,059	23.0%	3,539	77.0%	9.0%
Palmer	6,019	1,602	26.6%	4,417	73.4%	5.6%
Wales	1,127	136	12.1%	991	87.9%	4.4%
Wilbraham	7,423	1,345	18.1%	6,078	81.9%	3.9%
Total	49,994	10,325	20.7%	39,669	79.3%	5.9%

[5] American Community Survey Five-Year Estimates 2016-2020, Retrieved from Social Explorer, ACS20_5yr: B08009. Sex of Workers by Place of Work--Minor Civil Division, B08006. Sex Of Workers by Means of Transportation to Work, and Barrett Planning Group.

West Hampden

Community	Employed Labor Force	Works Locally	Percent	Works Elsewhere	Percent	Work at Home
Blandford	552	84	15.2%	468	84.8%	12.7%
Chester	734	73	9.9%	661	90.1%	2.6%
Granville	883	201	22.8%	682	77.2%	12.7%
Montgomery	544	76	14.0%	468	86.0%	11.6%
Russell	738	84	11.4%	654	88.6%	5.1%
Southwick	5,215	1,180	22.6%	4,035	77.4%	9.4%
Tolland	225	32	14.2%	193	85.8%	3.6%
Total	8,891	1,730	19.5%	7,161	80.5%	9.0%

West Hampshire

Community	Employed Labor Force	Works Locally	Percent	Works Elsewhere	Percent	Work at Home
Chesterfield	693	107	15.4%	586	84.6%	7.7%
Cummington	398	111	27.9%	287	72.1%	17.1%
Easthampton	8,638	2,231	25.8%	6,407	74.2%	7.6%
Goshen	554	129	23.3%	425	76.7%	7.9%
Hatfield	1,818	373	20.5%	1,445	79.5%	6.5%
Huntington	1,283	134	10.4%	1,149	89.6%	4.4%
Middlefield	223	76	34.1%	147	65.9%	21.5%
Plainfield	352	102	29.0%	250	71.0%	15.1%
Southampton	3,292	599	18.2%	2,693	81.8%	7.5%
Westhampton	900	156	17.3%	744	82.7%	8.1%
Williamsburg	1,687	507	30.1%	1,180	69.9%	17.9%
Worthington	724	262	36.2%	462	63.8%	23.5%
Total	20,562	4,787	23.3%	15,775	76.7%	9.2%

THE INDUSTRIES THAT EMPLOY PIONEER VALLEY'S SMALL-TOWN RESIDENTS

People often associate "rural" with bucolic images of barns and livestock grazing in the pasture. However, while the Pioneer Valley's towns are blessed with an abundance of agricultural landscapes, farming and forestry play a relatively limited role in the livelihood of most area residents. According to the Massachusetts Department of Agriculture, the region has at least 148 operating farms,[6] and most of them are small operations. Where agriculture supports jobs and self-employment here, it is more common east of the Connecticut River. Also more common east of the river is employment in arts, recreation, and hospitality, but these industries tend to be stronger in Pioneer Valley towns generally than across the state.

Education, health care, and professional services tend to be a significant source of employment for residents just about everywhere in the study area, for the Pioneer Valley's colleges provide significant job opportunities and often, relatively high wages: Mount Holyoke within the 35-town study area, and the University of Massachusetts Amherst, Amherst College, Hampshire College, Smith College, and Westfield State University, all close by in the region's larger towns and cities. In addition, the local school districts are among the largest employers in the region's very small towns.

Retail jobs keep many people employed in places like Hadley, which hosts the Hampshire Mall. Manufacturing also provides jobs for Pioneer Valley's small-town residents, especially in Hampden County, and often as a more substantial player than in many parts of Massachusetts.

Personal or protective services are substantially underrepresented in the industries that employ the labor force in these communities.

[6] Massachusetts Department of Agriculture, Agricultural Resources Facts and Statistics.

Table 2.6. Labor Force and Industry (Employed Workers 16 and Over)[7]

East Hampshire

Industry	Belchertown	Granby	Hadley	Pelham	South Hadley	Ware
Total	8,480	4,045	2,603	730	9,346	4,614
Agriculture, Forestry, Mining	0.0%	1.4%	3.8%	0.0%	0.3%	0.7%
Construction	5.9%	7.1%	6.5%	9.7%	4.5%	9.6%
Manufacturing	7.9%	11.1%	5.1%	4.9%	8.8%	17.3%
Wholesale Trade	2.1%	1.9%	1.0%	0.4%	1.9%	1.1%
Retail Trade	11.6%	8.4%	1.2%	9.6%	9.5%	13.4%
Transportation, Utilities	3.9%	7.6%	3.0%	1.0%	2.5%	5.3%
Information	0.3%	0.4%	2.2%	0.8%	1.0%	1.8%
Finance, Insurance, Real Estate	5.7%	4.4%	6.3%	2.1%	8.2%	4.7%
Professional Services	5.0%	6.5%	16.6%	13.7%	9.2%	3.4%
Educational and Health Care	40.6%	34.7%	43.3%	42.9%	36.2%	26.0%
Arts, Recreation, Hospitality, Food	6.0%	7.6%	6.7%	9.2%	10.0%	10.0%
Personal or Protective Services	4.3%	2.7%	3.9%	2.5%	2.7%	3.0%
Public Administration	6.8%	6.1%	0.5%	3.3%	5.3%	3.7%

East Hampden

Industry	Brimfield	East Longmeadow	Hampden	Holland	Longmeadow
Total	1,761	7,548	2,739	1,308	6,910
Agriculture, Forestry, Mining	0.0%	0.1%	0.3%	0.5%	0.0%
Construction	3.6%	4.9%	10.2%	10.2%	4.5%
Manufacturing	9.5%	5.4%	9.0%	10.7%	7.0%
Wholesale Trade	1.6%	3.3%	2.8%	4.7%	4.0%
Retail Trade	7.4%	8.6%	13.0%	5.7%	8.9%
Transportation, Utilities	5.5%	4.5%	3.4%	6.8%	4.8%
Information	1.2%	1.6%	0.0%	1.4%	0.6%
Finance, Insurance, Real Estate	14.5%	12.0%	6.9%	4.4%	11.6%
Professional Services	17.8%	8.0%	4.8%	8.8%	10.9%
Educational and Health Care	22.8%	28.6%	35.1%	25.0%	33.9%
Arts, Recreation, Hospitality	6.6%	11.6%	4.1%	9.3%	5.9%
Personal/Protective Services	5.8%	4.6%	4.4%	5.2%	2.6%
Public Administration	3.6%	7.0%	6.0%	7.3%	5.4%

[7] American Community Survey Five-Year Estimates 2016-2020, Retrieved from Social Explorer, C24030. Sex By Industry for The Civilian Employed Population 16 Years And Over.

East Hampden, Cont'd

Industry	Ludlow	Monson	Palmer	Wales	Wilbraham
Total	11,092	4,705	6,151	1,172	7,630
Agriculture, Forestry, Mining	0.1%	0.6%	1.1%	0.6%	1.0%
Construction	7.4%	7.6%	5.9%	10.9%	4.6%
Manufacturing	11.1%	15.4%	17.1%	11.2%	6.5%
Wholesale Trade	1.3%	3.8%	3.2%	2.5%	3.8%
Retail Trade	13.0%	11.6%	9.6%	8.2%	10.5%
Transportation, Warehousing	5.9%	4.9%	7.2%	6.5%	8.5%
Information	0.7%	0.2%	1.1%	0.0%	1.4%
Finance, Insurance, Real Estate	11.8%	5.0%	4.9%	7.1%	10.0%
Professional Services	7.8%	8.1%	11.1%	9.0%	5.2%
Educational and Health Care	23.3%	21.6%	22.2%	26.9%	31.0%
Arts, Recreation, Hospitality	6.9%	6.5%	6.0%	5.6%	6.8%
Personal/Protective Services	5.6%	7.0%	4.1%	6.9%	5.0%
Public Administration	5.2%	7.8%	6.5%	4.7%	5.8%

West Hampden

Industry	Blandford	Chester	Granville	Montgomery	Russell	Southwick	Tolland
Total	554	748	888	553	747	5,279	233
Agriculture, Forestry, Mining	2.0%	0.9%	1.6%	1.4%	0.0%	2.1%	0.4%
Construction	10.1%	5.3%	10.0%	8.0%	6.3%	7.3%	3.9%
Manufacturing	19.3%	15.8%	12.4%	15.9%	15.3%	16.7%	18.0%
Wholesale Trade	0.0%	6.7%	3.4%	1.3%	1.7%	4.5%	1.3%
Retail Trade	13.9%	13.4%	6.4%	13.4%	7.5%	16.1%	6.9%
Transportation, Utilities	3.6%	9.1%	2.4%	6.3%	8.7%	4.5%	14.6%
Information	0.9%	1.9%	3.6%	1.3%	3.1%	0.9%	0.4%
Finance, Insurance, Real Est.	7.2%	0.8%	9.5%	7.2%	2.4%	7.7%	9.0%
Professional Services	7.6%	10.7%	7.9%	11.8%	5.8%	6.2%	9.9%
Educational and Health Care	21.1%	16.3%	25.2%	26.2%	31.9%	20.1%	16.7%
Arts, Recreation, Hospitality	8.8%	6.7%	8.9%	1.6%	6.2%	6.1%	6.4%
Personal/Protective Services	1.1%	7.9%	4.5%	1.1%	3.3%	4.1%	4.7%
Public Administration	4.3%	4.5%	4.3%	4.5%	7.9%	3.6%	7.7%

West Hampshire

Industry	Chesterfield	Cummington	Easthampton	Goshen	Hatfield	Huntington
Total	694	413	8,739	559	1,834	1,279
Agriculture, Forestry, Mining	1.0%	2.9%	0.5%	4.3%	3.7%	2.4%
Construction	16.4%	8.7%	4.1%	10.0%	6.5%	10.1%
Manufacturing	15.0%	12.8%	9.6%	12.9%	3.9%	11.6%
Wholesale Trade	0.7%	2.4%	1.6%	0.0%	2.1%	4.5%
Retail Trade	9.7%	7.3%	11.7%	15.0%	19.5%	9.9%
Transportation, Warehousing	3.9%	3.1%	2.5%	2.7%	3.3%	2.7%
Information	2.6%	1.0%	2.2%	0.9%	1.5%	1.9%
Finance, Insurance, Real Est.	3.2%	2.2%	6.5%	0.7%	2.7%	0.9%
Professional Services	4.8%	11.9%	12.4%	5.2%	11.6%	6.6%
Educational and Health Care	30.0%	30.0%	33.7%	33.1%	30.7%	32.8%
Arts, Recreation, Hospitality	7.2%	11.4%	7.2%	4.8%	3.6%	7.3%
Personal or Protective Services	3.5%	4.4%	6.0%	0.5%	2.8%	4.1%
Public Administration	2.2%	1.9%	1.8%	9.8%	8.1%	5.2%

Industry	Middlefield	Plainfield	Southampton	Westhampton	Williamsburg	Worthington
Total	223	352	3,374	908	1,717	724
Agriculture, Forestry, Mining	3.1%	0.9%	1.3%	1.9%	0.3%	3.3%
Construction	6.7%	4.5%	9.5%	10.2%	3.4%	11.5%
Manufacturing	14.8%	11.4%	5.4%	11.5%	10.4%	14.1%
Wholesale Trade	2.2%	0.9%	7.7%	0.8%	3.6%	1.1%
Retail Trade	3.1%	3.4%	8.6%	6.7%	10.1%	10.6%
Transportation, Warehousing	4.0%	6.5%	2.8%	4.2%	1.2%	2.6%
Information	0.0%	2.0%	1.5%	0.1%	0.2%	0.6%
Finance, Insurance, Real Est.	6.7%	1.1%	4.6%	2.6%	4.8%	2.5%
Professional Services	25.1%	7.7%	11.0%	8.0%	12.8%	9.7%
Educational and Health Care	16.6%	36.4%	31.7%	38.1%	33.2%	22.1%
Arts, Recreation, Hospitality	2.7%	12.8%	7.9%	8.0%	9.3%	5.1%
Personal or Protective Services	6.3%	8.8%	2.7%	4.5%	7.5%	8.8%
Public Administration	8.5%	3.7%	5.4%	3.3%	3.3%	8.0%

EDUCATION

The East Hampshire communities vary quite a bit in terms of **educational attainment**, i.e., the highest level of education completed by a community's population. For adults with advanced degrees – a master's or doctorate – Pelham tops the list at 36 percent, not only for this subregion but also the entire 35-town study area. Hadley, Cummington, Williamsburg, and Longmeadow are also home to significant percentages of people with high educational attainment.

By contrast, close to half of Ware's over-25 population has a high school diploma or less. Region-wide, Blandford, Ludlow, and Palmer have a large share of adults who lack a high school diploma, i.e., 12 percent or more. The national average is 10 percent.

The effects of educational attainment can be seen in the kinds of work a community's population can compete for and their earnings capacity. For example, residents of Pelham and Hadley – examples of towns with highly educated populations – are more likely than others to work in education, health care, and professional services. Residents of Ware or Chester, where almost half the adult population has no formal education beyond high school, residents are more likely to work in retail, transportation, or semi-technical jobs in health care.

At least since the 1970s, researchers have been documenting the close connection between educational attainment and labor market outcomes.

In general, people with more education do better in today's high-tech economy than those with less education. More specifically, people with at least a bachelor's degree are among the highest paid workers in the labor force and are less likely to be unemployed than people with less education.

-U.S. Bureau of Labor Statistics

Table 2.7. Educational Attainment[8]

East Hampshire

Community	25 Year and Over	Less than High School	High School Diploma	Some College	Bachelor's Degree	Master's Degree	Doctorate or Professional
Belchertown	10,584	3.5%	23.7%	26.3%	23.4%	16.7%	6.4%
Granby	4,792	4.8%	28.6%	25.7%	25.4%	11.7%	3.8%
Hadley	4,002	3.9%	20.5%	20.1%	32.1%	13.6%	9.8%
Pelham	1,023	1.8%	14.7%	19.6%	27.9%	18.9%	17.2%
South Hadley	11,936	5.0%	26.3%	25.5%	23.3%	14.5%	5.4%
Ware	6,944	8.2%	39.0%	29.4%	16.4%	4.8%	2.2%
Total	39,281	4.9%	27.2%	25.7%	23.4%	13.0%	5.7%

East Hampden

Community	25 Years and Over	Less than High School	High School Diploma	Some College	Bachelor's Degree	Master's Degree	Doctorate or Professional
Brimfield	2,765	2.5%	26.4%	30.6%	28.5%	9.6%	2.0%
East Longmeadow	10,997	6.4%	21.4%	29.0%	26.2%	13.4%	2.2%
Hampden	4,166	5.2%	26.3%	32.2%	17.8%	15.2%	3.0%
Holland	1,793	6.0%	25.5%	35.4%	22.1%	9.4%	0.5%
Longmeadow	10,926	4.1%	11.2%	23.9%	31.6%	18.0%	7.7%
Ludlow	16,108	15.3%	34.9%	27.6%	16.5%	4.7%	0.4%
Monson	6,618	9.3%	32.7%	31.7%	15.6%	9.4%	0.8%
Palmer	8,911	11.3%	32.3%	30.1%	19.5%	4.2%	2.2%
Wales	1,487	6.2%	33.9%	32.4%	15.9%	5.6%	4.7%
Wilbraham	10,523	4.7%	22.2%	25.3%	25.3%	18.0%	3.4%
Total	74,294	8.4%	26.1%	28.3%	22.3%	11.1%	3.9%

[8] American Community Survey Five-Year Estimates 2016-2020, SE:A12001. Educational Attainment for Population 25 Years and Over, and Barrett Planning Group.

West Hampden

Community	25 Years and Over	Less than High School	High School Diploma	Some College	Bachelor's Degree	Master's Degree	Doctorate or Professional
Blandford	831	12.0%	31.2%	21.8%	21.9%	10.0%	2.9%
Chester	1,048	9.2%	44.8%	27.4%	8.5%	7.2%	2.0%
Granville	1,263	4.4%	31.4%	27.9%	23.8%	6.7%	1.6%
Montgomery	713	2.4%	29.3%	25.8%	24.7%	12.1%	3.1%
Russell	1,044	3.4%	42.9%	28.4%	16.7%	6.0%	1.6%
Southwick	7,343	6.5%	25.7%	30.9%	20.0%	14.0%	1.0%
Tolland	395	5.3%	28.4%	28.4%	20.0%	16.5%	1.0%
Total	12,637	6.4%	29.9%	29.1%	19.5%	11.7%	3.3%

West Hampshire

Community	25 Years and Over	Less than High School	High School Diploma	Some College	Bachelor's Degree	Master's Degree	Doctorate or Professional
Chesterfield	922	7.2%	37.1%	25.3%	16.3%	7.0%	7.2%
Cummington	703	1.4%	17.1%	24.0%	28.6%	16.4%	12.5%
Easthampton	12,439	4.5%	27.8%	30.1%	23.5%	11.3%	2.8%
Goshen	692	1.3%	28.9%	25.3%	24.3%	16.3%	3.9%
Hatfield	2,398	4.6%	25.3%	28.6%	25.1%	10.9%	5.4%
Huntington	1,617	7.2%	28.7%	32.3%	25.0%	6.1%	0.7%
Middlefield	322	5.6%	30.4%	34.2%	18.3%	6.2%	5.3%
Plainfield	498	3.6%	26.1%	24.3%	18.1%	20.7%	7.2%
Southampton	4,433	4.8%	25.4%	30.3%	20.8%	14.8%	4.0%
Westhampton	1,254	3.5%	24.4%	27.7%	22.0%	16.5%	5.9%
Williamsburg	2,171	2.3%	17.2%	23.9%	28.1%	23.5%	5.1%
Worthington	979	5.2%	34.2%	23.9%	19.6%	13.7%	3.4%
Total	28,428	4.5%	26.6%	28.8%	23.2%	13.0%	3.9%

EARNINGS

Differences in educational attainment often have an impact on earnings potential, but the correlation is hardly exact. There are also differences by gender. Granby residents have the largest **gender wage gap**, with men earning about 15 percent more than women, based on full-time, year-round employment. The opposite is true in Pelham and South Hadley, where women earn about 5 percent more than men.

The most telling feature of the chart to the right and Table 2.8 on the following pages is the very low labor force earnings in communities shown in Table 2.7 as having low levels of educational attainment. In some communities, the median earnings for people with a doctorate or professional degree is more than twice that of people without a high school diploma. These conditions all have a bearing on the economic well-being and prosperity of communities and their ability to attract and support business.

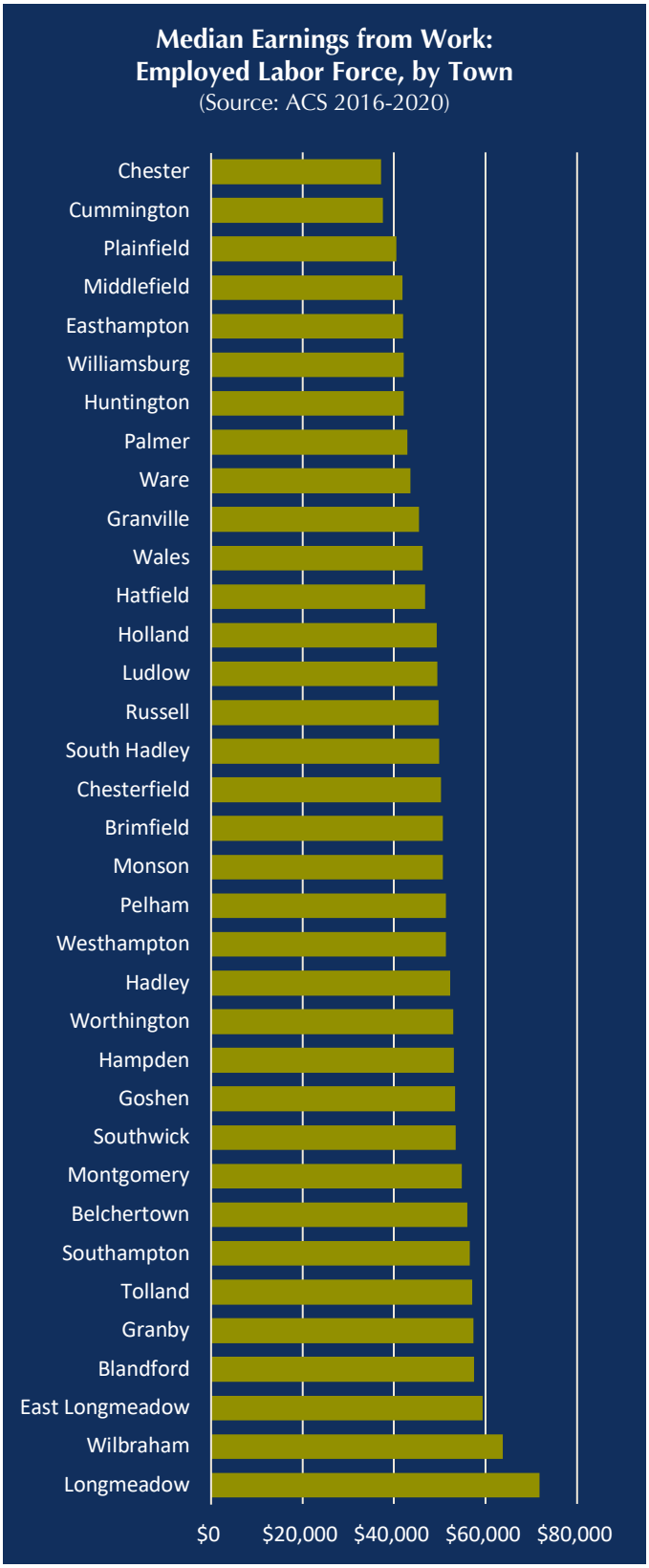


Table 2.8. Median Earnings and Educational Attainment: Employed Workers[9]

East Hampshire

		By Educational Attainment				
Community	Overall Median Earnings	Less Than High School Graduate	High School Graduate	Some College or Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Belchertown	$55,969	$30,903	$42,769	$52,792	$63,472	$72,087
Granby	$57,285	$35,781	$57,007	$35,809	$52,500	$82,950
Hadley	$52,179		$26,906	$34,236	$62,193	$70,375
Pelham	$51,302		$36,964	$49,917	$51,458	$72,813
South Hadley	$49,780	$20,278	$39,145	$43,420	$59,737	$76,224
Ware	$43,599	$23,375	$38,179	$42,466	$49,881	$68,516

East Hampden

		By Educational Attainment				
Community	Overall Median Earnings	Less Than High School Graduate	High School Graduate	Some College or Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Brimfield	$50,608		$39,911	$40,438	$61,971	$81,480
East Longmeadow	$59,307		$46,307	$46,991	$69,897	$73,047
Hampden	$53,072	$30,865	$36,031	$52,188	$68,011	$65,347
Holland	$49,338	$51,250	$41,538	$42,601	$52,054	$66,500
Longmeadow	$71,720		$43,846	$50,305	$70,096	$92,853
Ludlow	$49,462	$34,107	$34,358	$55,598	$63,548	$73,125
Monson	$50,625		$37,351	$54,583	$53,450	$82,895
Palmer	$42,901	$75,339	$42,255	$38,671	$39,035	$70,254
Wales	$46,278	$53,906	$41,680	$39,609	$54,286	$70,134
Wilbraham	$63,683	$30,551	$56,089	$54,676	$63,287	$78,465

[9] ACS20_5yr: B20004. Median Earnings In The Past 12 Months (In 2020 Inflation-Adjusted Dollars) By Sex By Educational Attainment For The Population 25 Years and Over. Note: (a) "High school graduate" includes a high school equivalency certificate. (b) Median earnings include full-time and part-time employed workers.

West Hampden

		By Educational Attainment				
Community	Overall Median Earnings	Less Than High School Graduate	High School Graduate	Some College or Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Blandford	$57,500	$43,542	$52,143	$56,750	$66,591	$90,625
Chester	$37,122		$35,958	$50,882	$51,667	$77,989
Granville	$45,375	$21,442	$37,917	$41,500	$67,708	$91,250
Montgomery	$54,743		$33,875	$48,393	$92,083	$93,424
Russell	$49,688		$44,063	$52,969	$51,875	$57,969
Southwick	$53,419	$44,479	$45,313	$41,815	$54,367	$73,269
Tolland	$57,019		$56,125	$53,542	$77,500	$67,000

West Hampshire

Community	Overall Median Earnings	Less Than High School Graduate	High School Graduate	Some College or Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Chesterfield	$50,240	$57,813	$51,429	$41,705	$29,091	$84,107
Cummington	$37,500		$33,750	$39,000	$55,455	$36,250
Easthampton	$41,899	$53,750	$38,502	$39,227	$43,039	$56,466
Goshen	$53,361		$42,857	$42,321	$59,107	$60,104
Hatfield	$46,702		$45,592	$36,250	$61,950	$63,194
Huntington	$42,070	$80,758	$43,472	$32,917	$51,042	$75,714
Middlefield	$41,765		$28,750	$33,333	$50,536	
Plainfield	$40,469	$25,938	$40,595	$23,654	$45,469	$55,250
Southampton	$56,560	$41,591	$58,646	$31,654	$63,485	$85,848
Westhampton	$51,324	$70,096	$44,808	$48,182	$49,583	$73,750
Williamsburg	$42,048	$55,750	$33,938	$43,750	$37,417	$67,727
Worthington	$52,865	$35,156	$56,250	$52,596	$44,688	$63,125

Households

Over 22,000 **households** live in the six Hampshire County towns east of the river. Household demographics are not the same as population demographics. By federal census definition, as **household** is a single person or two or more people occupying a home as a single housekeeping unit. The subregion's households are strikingly different from the rest of Hampshire County, for they have a much smaller proportion of young (15 to 24) households. This is largely because Amherst and Northampton are the main drivers of county-wide demographics. It is easy to see how a picture of Pioneer Valley based on the region's largest communities can eclipse the qualities of the smaller towns.

The chart on the right and Table 2.9 also show that many of these communities have large percentages of elder householders, i.e., people 75 years and over. They represent regionally significant percentages in South Hadley, Southwick, Wilbraham, and Cummington. These estimates normally tend to run high in communities with large retirement villages or assisted living facilities.

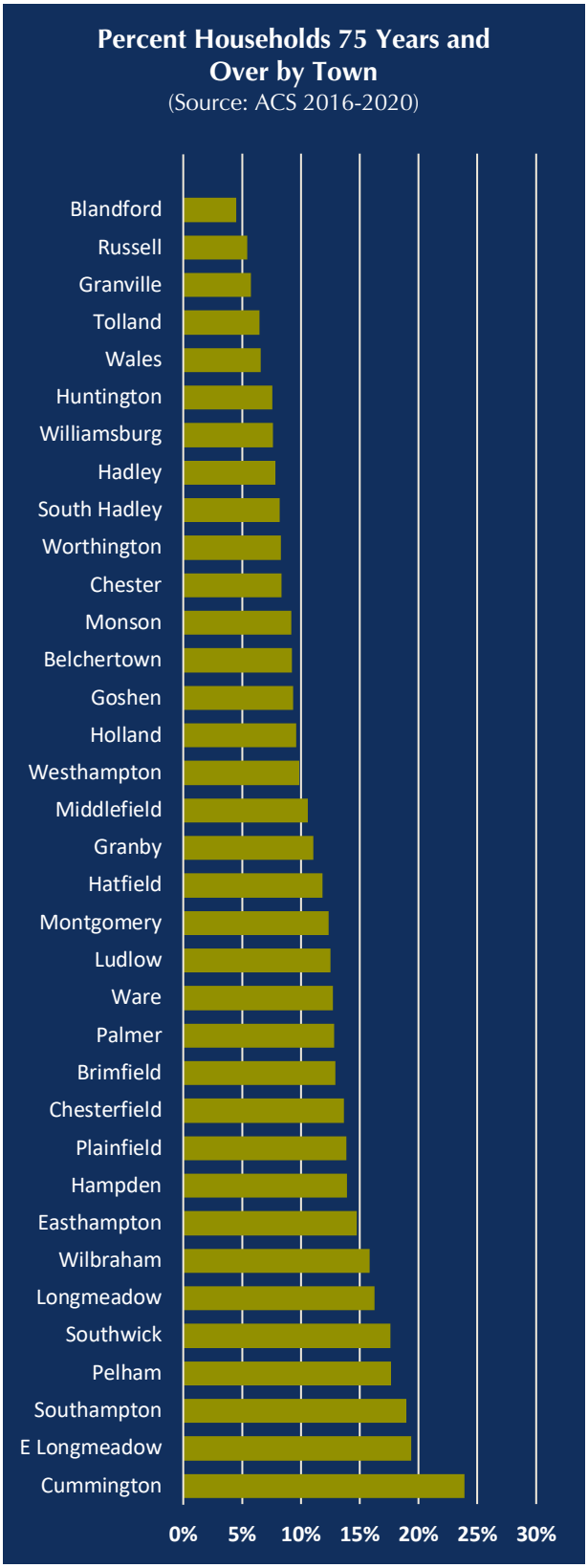


Table 2.9. Households by Age of Householder[10]

East Hampshire

Community	Total Households	15 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 to 74 Years	75 and Over
Belchertown	5,667	1.2%	11.3%	16.7%	22.9%	20.6%	18.0%	9.2%
Granby	2,584	2.2%	18.8%	7.9%	23.4%	18.6%	18.0%	11.1%
Hadley	2,256	0.0%	11.4%	10.5%	17.6%	21.1%	31.5%	7.8%
Pelham	589	1.2%	11.4%	14.3%	13.6%	15.3%	26.7%	17.7%
South Hadley	6,993	1.5%	11.3%	13.2%	15.7%	22.5%	16.8%	18.9%
Ware	4,289	2.8%	17.1%	13.7%	20.5%	21.8%	11.5%	12.7%
Total	22,378	1.6%	13.3%	13.3%	19.5%	21.1%	18.0%	13.2%

East Hampden

Community	Total Households	15 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 to 74 Years	75 and Over
Brimfield	1,494	0.0%	14.1%	12.7%	17.9%	23.1%	19.3%	12.9%
East Longmeadow	5,762	0.2%	9.6%	14.1%	25.5%	15.3%	16.0%	19.4%
Hampden	2,025	0.0%	4.6%	9.5%	15.6%	30.6%	25.8%	13.9%
Holland	1,041	0.0%	11.9%	12.5%	19.7%	30.4%	15.9%	9.6%
Longmeadow	5,723	0.0%	9.3%	11.2%	21.1%	20.2%	22.0%	16.3%
Ludlow	8,310	1.2%	12.8%	13.1%	19.5%	21.4%	19.4%	12.5%
Monson	3,559	1.4%	8.3%	9.8%	23.1%	23.4%	24.8%	9.2%
Palmer	4,904	2.2%	12.9%	12.0%	16.1%	28.0%	16.0%	12.8%
Wales	839	3.3%	10.3%	19.3%	21.9%	23.5%	15.1%	6.6%
Wilbraham	5,268	0.4%	8.1%	15.1%	17.6%	22.2%	20.7%	15.8%
Total	38,925	0.8%	10.3%	12.7%	20.1%	22.3%	19.7%	14.1%

West Hampden

Community	Total Households	15 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 to 74 Years	75 and Over
Blandford	443	0.5%	8.1%	11.7%	15.8%	31.8%	27.5%	4.5%
Chester	539	0.6%	11.5%	12.4%	18.6%	30.6%	18.0%	8.3%
Granville	644	0.9%	12.0%	9.8%	30.3%	20.5%	20.8%	5.7%
Montgomery	365	0.5%	9.6%	14.2%	14.5%	35.3%	13.4%	12.3%
Russell	607	0.7%	12.7%	13.7%	24.9%	26.9%	15.8%	5.4%
Southwick	3,869	0.7%	4.7%	17.9%	22.7%	20.3%	16.2%	17.6%
Tolland	216	0.0%	8.8%	14.8%	8.3%	31.0%	30.6%	6.5%
Total	6,683	0.7%	7.3%	15.6%	21.9%	23.7%	17.8%	13.1%

[10] American Community Survey Five-Year Estimates 2016-2020, SE:A10020. Occupied Housing Units by Age of Householder.

West Hampshire

Community	Total Households	15 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 to 74 Years	75 and Over
Chesterfield	513	0.8%	8.0%	8.6%	20.7%	28.7%	19.7%	13.6%
Cummington	431	1.2%	3.0%	10.2%	19.7%	22.0%	20.0%	23.9%
Easthampton	7,511	3.4%	13.2%	13.3%	15.0%	22.7%	17.7%	14.7%
Goshen	374	1.3%	7.5%	7.5%	20.3%	40.4%	13.6%	9.4%
Hatfield	1,419	2.2%	16.4%	8.9%	12.5%	24.5%	23.6%	11.8%
Huntington	900	4.4%	8.9%	10.4%	23.4%	23.1%	22.1%	7.6%
Middlefield	170	0.0%	0.6%	5.3%	5.9%	55.9%	21.8%	10.6%
Plainfield	289	1.0%	4.5%	13.5%	18.0%	20.4%	28.7%	13.8%
Southampton	2,336	0.0%	4.2%	13.9%	20.5%	27.8%	25.4%	8.2%
Westhampton	669	1.8%	8.5%	15.5%	16.6%	28.6%	19.1%	9.9%
Williamsburg	1,198	2.3%	8.2%	9.2%	27.0%	23.0%	22.9%	7.6%
Worthington	579	1.7%	6.4%	8.5%	15.2%	28.0%	32.0%	8.3%
Total	16,389	2.4%	10.3%	12.0%	17.4%	24.9%	20.7%	12.2%

HOUSEHOLD TYPES

Understanding the housing, income, and goods and services needs of a region's households is a critical part of any economic development assessment. Householder ages and the types and composition of households influence demand for jobs, wages, health care, mobility, and opportunities for educational, cultural, and recreational pursuits. Most important is that **households, *not* population per se, drive housing demand** – and that drives everything from land values and housing costs to employment, property taxes, and tensions about growth and change.

East Hampshire County's households are somewhat different from their counterparts county-wide. For example, Belchertown and Granby have a much larger percentage of family households compared with Hampshire County (64 percent), while Pelham and South Hadley have larger percentages of non-family households, especially single people living alone. Women raising dependent children alone are more prevalent in Ware than all the other towns. These differences are inextricably connected to housing types and prices, and clearly, household incomes.

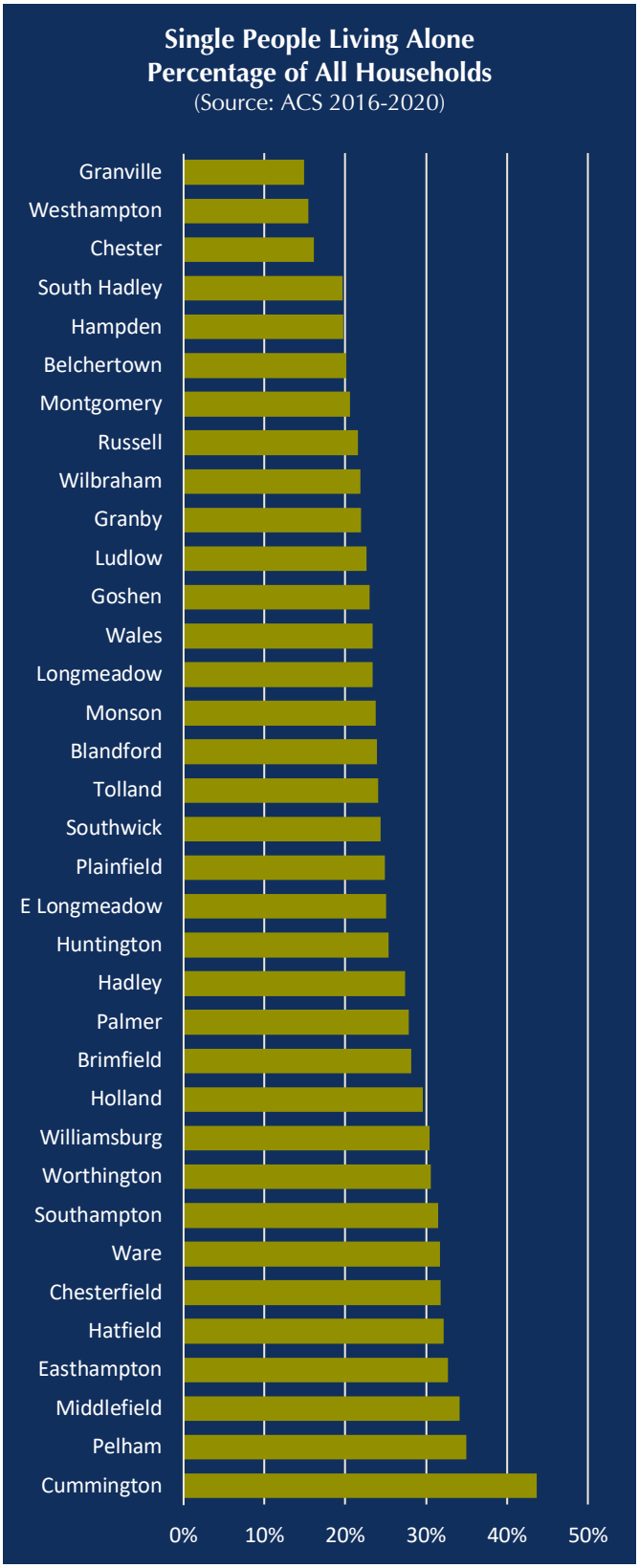


Table 2.10. Types of Households[11]

East Hampshire

Community	Belchertown	Granby	Hadley	Pelham	South Hadley	Ware
Total:	5,667	2,584	2,256	589	6,693	4,289
Families:	73.0%	75.0%	63.4%	55.9%	59.6%	65.1%
Married Couples	58.1%	58.0%	49.4%	49.6%	43.7%	44.2%
Other Family:	14.9%	17.0%	14.0%	6.3%	15.9%	20.9%
Single-Parent Men	3.4%	3.4%	5.1%	1.5%	4.6%	5.2%
Single-Parent Women	11.5%	13.6%	9.0%	4.8%	11.3%	15.7%
Nonfamily Households:	27.0%	25.0%	36.6%	44.1%	40.4%	34.9%
One-Person Household	20.1%	21.9%	27.4%	35.0%	31.4%	31.7%
Not Living Alone	6.9%	3.1%	9.3%	9.2%	8.9%	3.2%

East Hampden

Community	Brimfield	East Longmeadow	Hampden	Holland	Longmeadow
Total:	1,494	5,762	2,025	1,041	5,723
Families:	69.1%	71.2%	73.3%	63.5%	74.3%
Married Couples	57.4%	56.7%	63.5%	45.7%	64.4%
Other Family:	11.7%	14.5%	9.8%	17.8%	9.9%
Single-Parent Men	3.4%	3.8%	2.3%	3.5%	2.4%
Single-Parent Women	8.4%	10.7%	7.5%	14.3%	7.5%
Nonfamily Households:	30.9%	28.8%	26.7%	36.5%	25.7%
One-Person Household	28.1%	25.0%	19.8%	29.6%	23.4%
Not Living Alone	2.8%	3.8%	7.0%	6.9%	2.3%
Community	Ludlow	Monson	Palmer	Wales	Wilbraham
Total:	8,310	3,559	4,904	839	5,268
Families:	71.2%	69.3%	61.8%	67.7%	74.5%
Married Couples	54.6%	57.5%	44.3%	57.1%	60.0%
Other Family:	16.6%	11.8%	17.5%	10.6%	14.5%
Single-Parent Men	3.9%	4.1%	6.1%	4.3%	4.0%
Single-Parent Women	12.7%	7.7%	11.5%	6.3%	10.6%
Nonfamily Households:	28.8%	30.7%	38.2%	32.3%	25.5%
One-Person Household	22.6%	23.7%	27.9%	23.4%	21.9%
Not Living Alone	6.2%	7.0%	10.4%	8.9%	3.6%

[11] American Community Survey Five-Year Estimates 2016-2020, ACS20_5yr:B11001. Household Type (Including Living Alone), and Barrett Planning Group.

West Hampden

Community	Blandford	Chester	Granville	Montgomery	Russell	Southwick	Tolland
Total:	443	539	644	365	607	3,869	216
Families:	68.0%	75.0%	71.7%	73.2%	74.8%	72.2%	66.2%
Married Couples	55.5%	57.7%	62.0%	69.9%	57.8%	59.9%	59.3%
Other Family:	12.4%	17.3%	9.8%	3.3%	17.0%	12.2%	6.9%
Single-Parent Men	1.8%	3.5%	4.4%	2.2%	5.9%	4.1%	1.9%
Single-Parent Women	10.6%	13.7%	5.4%	1.1%	11.0%	8.1%	5.1%
Nonfamily Households:	32.1%	25.1%	28.3%	26.9%	25.2%	27.8%	33.8%
One-Person Household	23.9%	16.1%	14.9%	20.6%	21.6%	24.4%	24.1%
Not Living Alone	8.1%	8.9%	13.4%	6.3%	3.6%	3.5%	9.7%

West Hampshire

Community	Chesterfield	Cummington	Easthampton	Goshen	Hatfield	Huntington
Total:	513	431	7,511	374	1,419	900
Families:	66.5%	52.2%	56.4%	66.6%	61.3%	65.2%
Married Couples	55.8%	38.1%	39.8%	57.5%	44.1%	49.3%
Other Family:	10.7%	14.2%	16.6%	9.1%	17.3%	15.9%
Single-Parent Men	6.4%	5.1%	6.7%	2.7%	3.2%	7.2%
Single-Parent Women	4.3%	9.1%	9.9%	6.4%	14.1%	8.7%
Nonfamily Households:	33.5%	47.8%	43.6%	33.4%	38.7%	34.8%
One-Person Household	31.8%	43.6%	32.7%	23.0%	32.1%	25.3%
Not Living Alone	1.8%	4.2%	10.9%	10.4%	6.6%	9.4%

Community	Middlefield	Plainfield	Southampton	Westhampton	Williamsburg	Worthington
Total:	170	289	2,336	669	1,198	579
Families:	65.9%	64.0%	77.8%	78.2%	60.4%	60.5%
Married Couples	55.9%	49.8%	69.2%	64.9%	48.1%	48.2%
Other Family:	10.0%	14.2%	8.6%	13.3%	12.3%	12.3%
Single-Parent Men	8.8%	5.9%	6.4%	5.4%	2.5%	2.9%
Single-Parent Women	1.2%	8.3%	2.2%	7.9%	9.8%	9.3%
Nonfamily Households:	34.1%	36.0%	22.2%	21.8%	39.7%	39.6%
One-Person Household	34.1%	24.9%	19.7%	15.4%	30.4%	30.6%
Not Living Alone	0.0%	11.1%	2.6%	6.4%	9.3%	9.0%

HOUSEHOLD AND FAMILY INCOMES

Table 2.11 offers a snapshot of household incomes in the East Hampshire communities. It sheds light on some correlations between household types, householder ages, education, and labor force competitiveness, but the correlations are imperfect. South Hadley and Ware have lower median incomes for all types of households, and they also offer more housing affordability and a wider range of housing types. By contrast, Granby, Hadley, and Pelham households are generally wealthier, yet this cannot be said for nonfamily households in Granby.

The chart to the right displays the percentage of low- or moderate-income households by town, based on a special tabulation set prepared every few years for the U.S. Department of Housing and Urban Development (HUD). These low-income household income estimates indicate that access to housing choices is not equitably distributed throughout the study area.

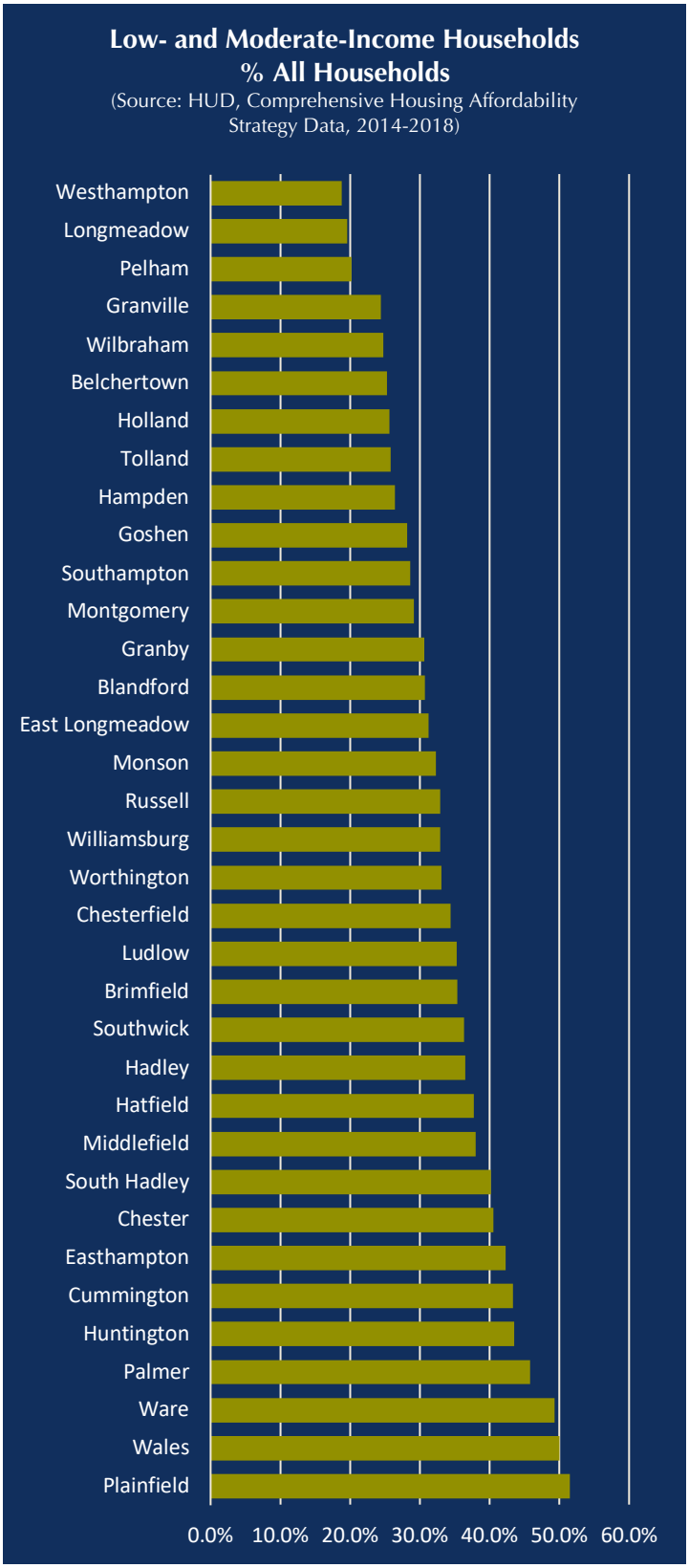


Table 2.11. Household Income by Household Type[12]

East Hampshire

Community	Total Households	Median Household Income	Median Family Income	Median Nonfamily Income	Households with Incomes >$200,000	Low- or Moderate-Income
Belchertown	5,667	$94,812	110,360	51,458	8.4%	25.3%
Granby	2,584	$101,886	116,602	39,519	12.8%	30.7%
Hadley	2,256	$86,690	112,656	51,541	11.7%	36.5%
Pelham	589	$90,313	115,313	46,667	14.8%	20.2%
South Hadley	6,993	$73,601	94,236	52,313	10.4%	40.2%
Ware	4,289	$56,598	69,096	38,780	0.8%	49.2%

East Hampden

Community	Total Households	Median Household Income	Median Family Income	Median Nonfamily Income	Households with Incomes >$200,000	Low- or Moderate-Income
Brimfield	1,494	$75,577	$108,750	$29,444	10.6%	35.3%
East Longmeadow	5,762	$90,579	$112,600	$38,068	13.4%	31.2%
Hampden	2,025	$94,393	$104,896	$50,313	11.0%	26.4%
Holland	1,041	$77,054	$91,151	$54,615	5.1%	25.7%
Longmeadow	5,723	$124,410	$151,484	$46,289	26.6%	19.6%
Ludlow	8,310	$73,516	$88,480	$37,245	8.4%	35.3%
Monson	3,559	$76,612	$100,970	$41,528	8.9%	32.3%
Palmer	4,904	$68,694	$81,525	$50,054	4.4%	45.8%
Wales	839	$74,851	$85,000	$52,574	6.1%	50.0%
Wilbraham	5,268	$111,616	$128,459	$38,359	19.2%	24.7%

West Hampden

Community	Total Households	Median Household Income	Median Family Income	Median Nonfamily Income	Households with Incomes >$200,000	Low- or Moderate-Income
Blandford	443	$78,393	$95,417	$72,813	7.7%	30.7%
Chester	539	$73,523	$72,283	$57,250	3.5%	40.5%
Granville	644	$91,071	$106,111	$52,105	6.7%	24.4%
Montgomery	365	$104,107	$127,946	$59,375	19.7%	29.1%
Russell	607	$77,578	$89,342	$50,288	3.0%	32.9%
Southwick	3,869	$84,896	$106,852	$38,706	10.6%	36.3%
Tolland	216	$90,000	$108,194	$57,917	9.3%	25.8%

[12] American Community Survey Five-Year Estimates 2016-2020, Retrieved from Social Explorer, B19001; HUD Comprehensive Housing Affordability Strategy (CHAS) Data, 2014-2018; and Barrett Planning Group LLC.

West Hampshire

Community	Total Households	Median Household Income	Median Family Income	Median Nonfamily Income	Households with Incomes >$200,000	Low- or Moderate-Income
Chesterfield	513	$75,880	$82,411	$33,571	4.5%	34.4%
Cummington	431	$72,250	$101,250	$55,833	2.1%	43.3%
Easthampton	7,511	$63,657	$81,842	$41,203	2.6%	42.2%
Goshen	374	$91,250	$107,708	$36,625	6.1%	28.1%
Hatfield	1,419	$66,975	$95,663	$43,950	9.5%	37.7%
Huntington	900	$70,000	$87,218	$45,662	1.1%	43.5%
Middlefield	170	$63,750	$97,857	$28,214	4.7%	37.9%
Plainfield	289	$65,417	$73,542	$47,500	9.0%	51.5%
Southampton	2,336	$104,052	$121,354	$31,815	13.6%	28.6%
Westhampton	669	$87,708	$94,375	$58,750	6.6%	18.8%
Williamsburg	1,198	$83,750	$94,673	$48,092	8.6%	32.9%
Worthington	579	$81,458	$89,605	$50,774	6.2%	33.0%

Housing Characteristics

The study area has approximately 89,000 homes. Between 2010 and 2020, the entire housing inventory increased just 3.7 percent – about 3,150 units – slightly below the total household growth rate of 4 percent. While these 35 communities represent just under 15 percent of the entire housing inventory in Hampden County and Hampshire County, their combined housing growth over the past decade accounts for almost half the entire regional increase. The housing growth pattern of Pioneer Valley, while smaller in scale, is similar to conditions in Eastern Massachusetts, where housing growth has accelerated faster in the suburbs than Boston and the region's smaller cities. And, according to local officials and planning staff in Pioneer Valley's small towns, public unhappiness about growth and change is very similar. Housing demand may not be as intense in the Connecticut River Valley as it is to the east, but the available supply is limited. The most recent estimates available place the for-sale vacancy rate at just 1.3 percent and the rental vacancy rate, 4.6 percent.

Eighty percent of the study area's occupied homes are owner-occupied. The 17,000 units in the entire renter-occupied inventory tend to be concentrated in Easthampton, Ludlow, East Longmeadow, Palmer, South Hadley, Ware, Southwick, and Belchertown – communities with a history of industrial settlement and utilities to support some density. However, there are other towns in the region with high renter occupancy rates even though the overall number of rented units is fairly small. Examples include Williamsburg, Chester, Pelham, Hatfield, Hadley, and Cummington, all of which have more than 20 percent renter-occupancy rates.

In most cases, the small towns and rural communities of Pioneer Valley do not have the large seasonal fluctuations that exist in the Cape and Islands region or South Berkshire County. Overall, units used for seasonal or vacation purposes account for 2.5 percent of all units and 34 percent of all vacant units in the study area. In some communities, seasonal units do account for a significant percentage of all vacancies, meaning that what does exist in the vacant supply is not available to the general public for year-round rent. As shown in Table 2.12, the seasonal inventory makes up a very large percentage of all vacant units in towns such as Brimfield, Holland, Wales, Blandford, Southwick, and about half the Northern Hilltowns.

Table 2.12. Housing Occupancy, Tenure, and Vacancy[13]

East Hampshire

Community	Housing Units	Occupied Units (Households)	Owner Occupied	Pct. Owner Occupied	Renter Occupied	Vacant Units	Seasonal Pct. Vacant
Belchertown	5,966	5,667	4,685	82.7%	982	299	41.1%
Granby	2,615	2,584	2,256	87.3%	328	31	0.0%
Hadley	2,305	2,256	1,754	77.7%	502	49	0.0%
Pelham	643	589	398	67.6%	191	54	40.7%
South Hadley	7,253	6,993	5,360	76.6%	1,633	260	18.1%
Ware	4,800	4,289	2,806	65.4%	1,483	511	7.2%
Total	23,582	22,378	17,259	77.1%	5,119	1,204	19.0%

East Hampden

Community	Housing Units	Occupied Units (Households)	Owner Occupied	Pct. Owner Occupied	Renter Occupied	Vacant Units	Seasonal Pct. Vacant
Brimfield	1,670	1,494	1,296	86.7%	198	176	50.0%
East Longmeadow	6,010	5,762	4,772	82.8%	990	248	6.9%
Hampden	2,154	2,025	1,878	92.7%	147	129	0.0%
Holland	1,371	1,041	907	87.1%	134	330	79.4%
Longmeadow	5,906	5,723	5,206	91.0%	517	183	27.9%
Ludlow	8,737	8,310	6,252	75.2%	2,058	427	0.0%
Monson	3,794	3,559	3,012	84.6%	547	235	0.0%
Palmer	5,301	4,904	3,710	75.7%	1,194	397	18.9%
Wales	990	839	724	86.3%	115	151	42.4%
Wilbraham	5,485	5,268	4,775	90.6%	493	217	17.1%
Total	41,418	38,925	32,532	83.6%	6,393	2,493	23.8%

West Hampden

Community	Housing Units	Occupied Units (Households)	Owner Occupied	Pct. Owner Occupied	Renter Occupied	Vacant Units	Seasonal Pct. Vacant
Blandford	573	443	419	94.6%	24	130	70.0%
Chester	732	539	411	76.3%	128	193	15.5%
Granville	702	644	622	96.6%	22	58	12.5%
Montgomery	413	365	352	96.4%	13	48	14.8%
Russell	668	607	523	86.2%	84	61	12.4%
Southwick	4,119	3,869	3,124	80.7%	745	250	96.6%
Tolland	511	216	194	89.8%	22	295	0.0%
Total	7,718	6,683	5,645	84.5%	1,038	1,035	53.2%

[13] American Community Survey Five-Year Estimates 2016-2020, Retrieved from Social Explorer, ACS20_5yr:B25001. Housing Units, ACS20_5yr:B25002. Occupancy Status, ACS20_5yr:B25003. Tenure, and ACS20_5yr:B25004. Vacancy Status

West Hampshire

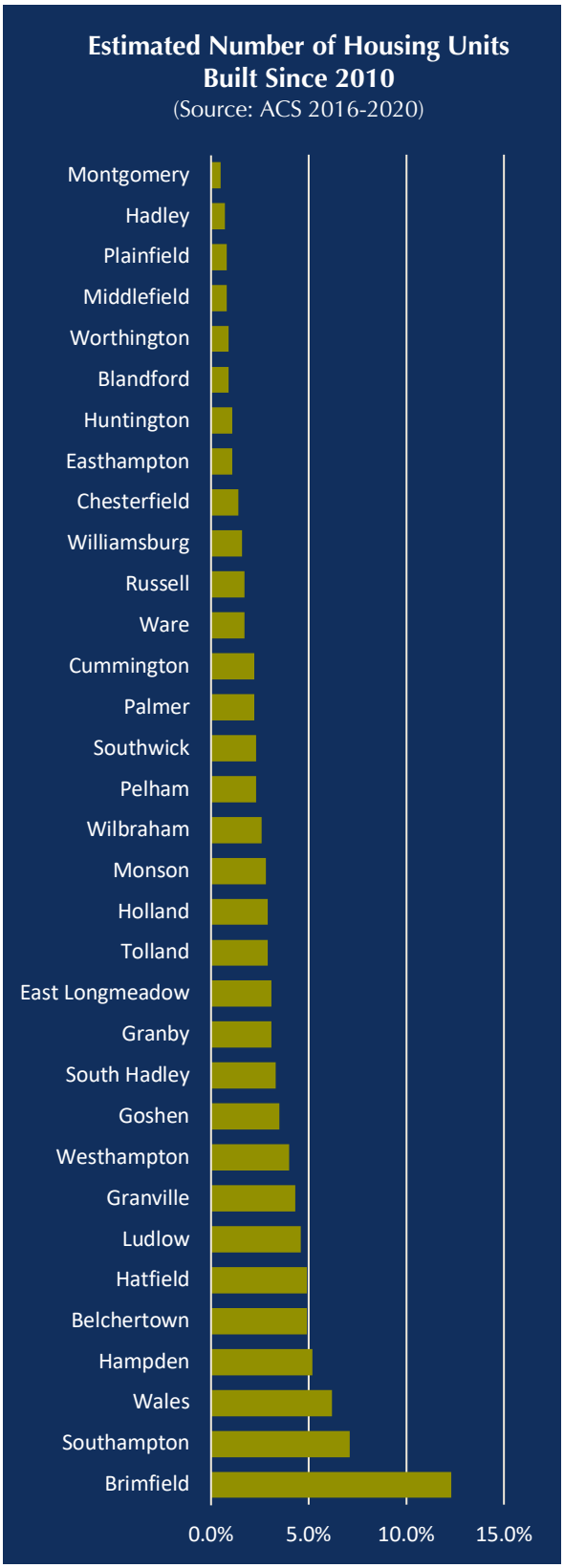
Community	Housing Units	Occupied Units (Households)	Owner Occupied	Pct. Owner Occupied	Renter Occupied	Vacant Units	Seasonal Pct. Vacant
Chesterfield	616	513	449	87.5%	64	103	77.7%
Cummington	519	431	324	75.2%	107	88	63.6%
Easthampton	7,849	7,511	4,662	62.1%	2,849	338	4.1%
Goshen	598	374	316	84.5%	58	224	82.6%
Hatfield	1,535	1,419	983	69.3%	436	116	8.6%
Huntington	1,067	900	736	81.8%	164	167	63.5%
Middlefield	246	170	164	96.5%	6	76	60.5%
Plainfield	362	289	251	86.9%	38	73	58.9%
Southampton	2,374	2,336	2,127	91.1%	209	38	0.0%
Westhampton	761	669	620	92.7%	49	92	88.0%
Williamsburg	1,260	1,198	873	72.9%	325	62	45.2%
Worthington	658	579	530	91.5%	49	79	76.0%
Total	17,845	16,389	12,035	73.4%	4,354	1,456	48.7%

HOUSING TYPES AND AGE OF UNITS

With most households living in a home they own, it is not surprising to find that single-family dwellings make up a large majority of all units in the study area. Just shy of 80 percent of the regional inventory is designed for one-family use, including detached units and attached units such as the row houses or quadruplexes built as worker housing. The detached single-family inventory is by far the largest, providing 76 percent of the total.

Easthampton is the only community in the study area that even comes close to the state average (37 percent) for multi-unit housing, i.e., buildings with three or more units. Its housing inventory is the most diverse, with 29 percent of all units in multifamily buildings, so Easthampton also exceeds the Hampshire County average, 24 percent. Ware and South Hadley are the only other towns that have a sizeable multifamily inventory. These statistics matter not only because they relate to housing affordability and choice, but also the age of the region's housing stock. They are also a surrogate for the influence of zoning policies that each community has adopted to control housing growth.

The subregional tables that follow show that in most towns, very little new housing has been constructed since 2010 or, for that matter, in the previous twenty years. Most of these communities felt the impact of the postwar housing boom, for a considerable amount of housing growth occurred between 1950 and 1969, especially east of the Connecticut River. A wave of growth followed during the 1970s, in part due to regional highway improvements. In most cases, housing construction began to wane after 1980. Towns such as Southwick, Russell, and Belchertown continued to absorb homes, but they are regional exceptions.



Note: Chart does not include Longmeadow and Chester due to insufficient data.

Table 2.13. Housing Age (Year Built)[14]

East Hampshire County

	Total	2010 or Later	1990 to 2009	1970 to 1989	1950 to 1969	Built Prior to 1950
Belchertown	5,966	4.9%	32.7%	38.3%	14.4%	9.7%
Granby	2,615	3.1%	20.6%	23.8%	32.2%	20.4%
Hadley	2,305	0.7%	17.7%	26.9%	20.1%	34.5%
Pelham	643	2.3%	13.1%	36.4%	14.4%	33.8%
South Hadley	7,253	3.3%	17.9%	18.6%	33.6%	26.7%
Ware	4,800	1.7%	17.0%	28.0%	21.3%	32.1%
Total	23,582	721	5,099	6,448	5,714	5,600

East Hampden County

	Total	2010 or Later	1990 to 2009	1970 to 1989	1950 to 1969	Built Prior to 1950
Brimfield	1,670	12.3%	27.9%	28.5%	17.0%	14.4%
East Longmeadow	6,010	3.1%	21.8%	22.2%	37.9%	15.1%
Hampden	2,154	5.2%	12.3%	25.4%	38.4%	18.8%
Holland	1,371	2.9%	21.1%	34.7%	33.8%	7.6%
Longmeadow	5,906	0.0%	4.4%	17.4%	42.4%	35.7%
Ludlow	8,737	4.6%	12.8%	28.7%	26.3%	27.6%
Monson	3,794	2.8%	19.5%	26.1%	23.0%	28.6%
Palmer	5,301	2.2%	9.6%	28.4%	27.1%	32.8%
Wales	990	6.2%	28.8%	28.5%	14.3%	22.3%
Wilbraham	5,485	2.6%	11.7%	21.3%	47.6%	16.8%
Total	41,418	1,372	5,884	10,304	13,719	10,139

West Hampden County

	Total	2010 or Later	1990 to 2009	1970 to 1989	1950 to 1969	Built Prior to 1950
Blandford	573	0.9%	13.6%	24.8%	15.7%	45.0%
Chester	732	0.0%	18.9%	18.8%	12.6%	49.8%
Granville	702	4.3%	17.5%	33.9%	7.7%	36.6%
Montgomery	413	0.5%	18.0%	44.1%	23.5%	14.0%
Russell	668	1.7%	26.4%	19.3%	24.0%	28.7%
Southwick	4,119	2.3%	36.8%	26.1%	18.8%	16.0%
Tolland	511	2.9%	24.5%	50.3%	10.4%	12.0%
Total	7,718	158	2,228	2,159	1,322	1,851

[14] ACS20_5yr:B25034. Year Structure Built, and Barrett Planning Group LLC.

West Hampshire County

	Total	2010 or Later	1990 to 2009	1970 to 1989	1950 to 1969	Built Prior to 1950
Chesterfield	616	1.4%	16.2%	27.3%	24.7%	30.5%
Cummington	519	2.2%	11.0%	26.2%	12.0%	48.7%
Easthampton	7,849	1.1%	17.8%	22.7%	23.5%	35.0%
Goshen	598	3.5%	14.1%	21.2%	23.9%	37.3%
Hatfield	1,535	4.9%	10.1%	25.0%	21.7%	38.3%
Huntington	1,067	1.1%	15.6%	21.1%	15.3%	47.0%
Middlefield	246	0.8%	23.2%	32.9%	6.5%	36.6%
Plainfield	362	0.8%	10.5%	45.6%	17.4%	25.7%
Southampton	2,374	7.1%	23.7%	28.8%	21.0%	19.5%
Westhampton	761	4.0%	21.1%	19.9%	22.1%	33.0%
Williamsburg	1,260	1.6%	15.8%	25.1%	14.1%	43.5%
Worthington	658	0.9%	17.5%	22.2%	18.3%	41.2%
Total	17,845	440	3,088	4,359	3,741	6,217

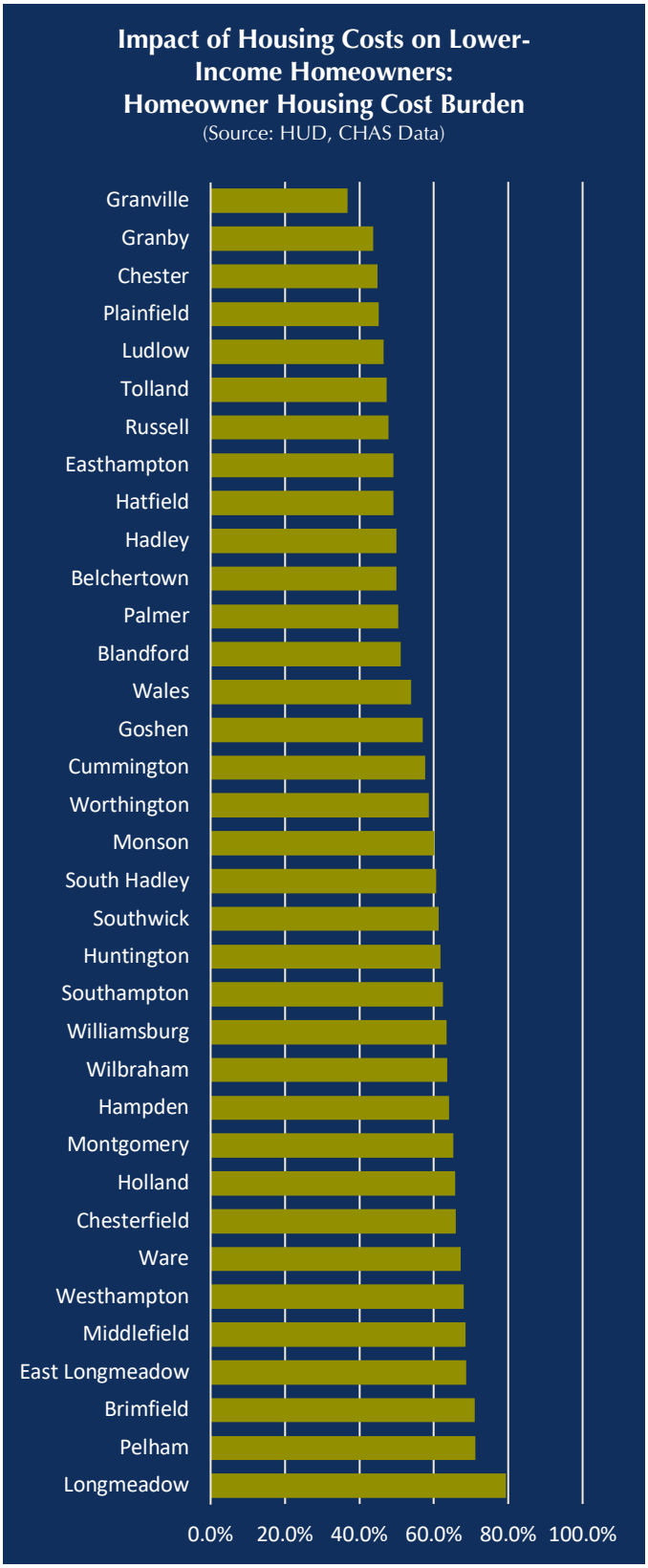
HOUSING VALUES, SALE PRICES, AND AFFORDABITY

Regional demand for a home to buy is met by a combination of new construction and turnover of existing units. Equitable access to homeownership matters for the economy, community development, and wealth building. Within the study area, 29 percent of all homeowners moved into their current home since 2010. The vast majority of home purchases involved housing resales, for none of these communities produced very many new units over the past decade.

What homeowners are accustomed to paying for housing as a share of their income is a reasonable indicator of the market in a given town. The rule of thumb is that housing is "affordable" when people spend less of their monthly income on housing. Table 2.14 shows that in almost all the towns, homeowners spend less than that. Overall, they spend 20- 23 percent of their income on a mortgage payment, taxes, and insurance.

However, Table 2.14 reports the midpoint of existing homeowner housing costs, considering all households regardless of income. It does not include housing sale prices or the income that might be required to buy a home on the market today. In addition, the range of housing values in Table 2.14 represents existing homes, not the asking price of homes on the market today or the sale prices of recently sold homes. It is simply a snapshot of the existing owner-occupied inventory.

Even as a snapshot, though, what is not obvious in Table 2.14 is the impact of housing costs on current homeowners with low incomes: typically, older homeowners with fixed incomes or households whose incomes may have changed quite a bit since they bought their house, such as single parents with dependent children. As shown in the chart on the right, the region's lower-income homeowners have far greater affordability challenges than can be gleaned from the median monthly housing cost of all homeowners in a community. In



some of these towns, the extent of housing cost burden among lower-income homeowners is far more severe than one sees even in high-cost housing markets around Boston.

Table 2.14. Existing Housing Values, Expenses, and Homeowner Incomes[15]

East Hampshire County

				Monthly Housing Cost % Household Income		
Community	Lower Value	Median Value	Upper Value	With Mortgage	No Mortgage	Median Household Income, Homeowners Only
Belchertown	226,700	277,000	351,300	21.80	10.70	$110,093
Granby	206,100	267,400	353,800	19.50	9.00	$113,544
Hadley	277,500	331,100	410,200	23.60	9.00	$98,989
Pelham	282,500	350,900	434,200	19.70	11.50	$104,688
South Hadley	203,800	261,900	347,100	19.90	13.50	$94,114
Ware	157,800	208,800	274,300	25.60	14.80	$74,556

East Hampden County

				Monthly Housing Cost % Household Income		
Community	Lower Value	Median Value	Upper Value	With Mortgage	No Mortgage	Median Household Income, Homeowners Only
Brimfield	222,600	287,900	370,200	22.80	20.30	$91,591
East Longmeadow	216,300	274,100	391,500	21.20	14.30	$104,122
Hampden	248,100	286,400	363,200	18.60	15.30	$97,000
Holland	173,100	251,000	304,200	20.20	13.00	$82,122
Longmeadow	271,100	347,900	466,100	21.30	13.40	$130,118
Ludlow	178,900	240,000	308,900	19.50	15.80	$86,858
Monson	194,500	253,400	312,000	21.40	12.80	$91,944
Palmer	138,500	201,800	257,000	23.40	11.90	$78,603
Wales	155,400	205,400	280,800	21.50	14.80	$85,526
Wilbraham	239,000	302,300	407,300	19.60	14.50	$123,873

[15] ACS20_5yr:B25119. Median Household Income The Past 12 Months (In 2020 Inflation-Adjusted Dollars) By Tenure, ACS20_5yr:B25076. Lower Value Quartile (Dollars), ACS20_5yr:B25077. Median Value (Dollars), ACS20_5yr:B25078. Upper Value Quartile (Dollars) ACS20_5yr:B25092, Median Selected Monthly Owner Costs As A Percentage Of Household Income In The Past 12 Months, and Barrett Planning Group.

West Hampden County

				Monthly Housing Cost % Household Income		
Community	Lower Value	Median Value	Upper Value	With Mortgage	No Mortgage	Median Household Income, Homeowners Only
Blandford	163,600	228,700	299,500	19.00	16.50	$78,646
Chester	162,400	222,800	312,500	21.20	12.80	$80,865
Granville	202,600	283,800	366,400	22.80	9.00	$91,000
Montgomery	245,700	312,200	403,700	19.00	12.30	$103,929
Russell	164,600	228,800	289,600	24.10	9.00	$88,224
Southwick	217,700	299,500	405,000	21.90	15.50	$91,406
Tolland	194,800	275,900	373,200	18.00	10.70	$91,250

West Hampshire County

				Monthly Housing Cost % Household Income		
Community	Lower Value	Median Value	Upper Value	With Mortgage	No Mortgage	Median Household Income, Homeowners Only
Chesterfield	208,700	244,700	348,700	25.10	17.10	$76,620
Cummington	160,600	224,100	300,000	18.80	10.90	$82,500
Easthampton	216,600	266,100	343,000	24.00	12.10	$81,400
Goshen	210,200	275,700	350,600	20.70	11.10	$103,750
Hatfield	255,800	319,100	420,700	20.70	13.90	$86,440
Huntington	174,100	222,600	281,000	21.50	11.90	$85,726
Middlefield	183,300	230,700	351,500	29.00	16.40	$63,750
Plainfield	171,100	241,200	348,400	23.60	17.50	$66,250
Southampton	255,700	338,400	432,400	18.50	14.10	$106,375
Westhampton	253,700	310,100	406,300	22.60	12.30	$93,182
Williamsburg	207,200	299,000	409,000	24.80	11.60	$94,375
Worthington	192,500	278,500	372,700	23.90	13.40	$84,091

Table 2.15. Sale Prices and Affordability[16]

East Hampshire County

			Affordable Price at Regional Median Income ($269,450)	
	Median Sale Price, 2022	Est. Monthly Mortgage Pmt.	Ratio: Median Sale Price to Affordable Price	Ratio: Median Existing Home Value to Affordable Price
Belchertown	$408,218	$2,451	151.5%	102.8%
Granby	$346,794	$1,769	237.3%	99.2%
Hadley	$472,573	$2,410	272.2%	122.9%
Pelham	$452,797	$2,309	257.4%	130.2%
South Hadley	$338,264	$1,725	286.3%	97.2%
Ware	$298,092	$1,520	361.4%	77.5%

East Hampden County

			Affordable Price at Regional Median Income ($269,450)	
	Median Sale Price, 2022	Est. Monthly Mortgage Pmt.	Ratio: Median Sale Price to Regional Affordable	Ratio: Median Existing Home Value to Regional Affordable
Brimfield	$374,492	$2,767	139.0%	106.8%
East Longmeadow	$368,709	$2,726	136.8%	101.7%
Hampden	$383,901	$2,839	142.5%	106.3%
Holland	$327,618	$2,423	121.6%	93.2%
Longmeadow	$473,504	$3,501	175.7%	129.1%
Ludlow	$315,621	$2,334	117.1%	89.1%
Monson	$343,338	$2,539	127.4%	94.0%
Palmer	$279,903	$2,070	103.9%	74.9%
Wales	$280,361	$2,073	104.0%	76.2%
Wilbraham	$404,607	$2,992	150.2%	112.2%

[16] Sources: Zillow, HUD Income Limits 2022 for Hampden, Hampshire Counties; and Barrett Planning Group LLC.

West Hampden County

			Affordable Price at Regional Median Income ($269,450)	
	Median Sale Price, 2022	Est. Monthly Mortgage Pmt.	Ratio: Median Sale Price to Regional Affordable	Ratio: Median Existing Home Value to Regional Affordable
Blandford	$300,804	$2,224	111.6%	84.9%
Chester	$252,697	$1,869	93.8%	82.7%
Granville	$352,264	$2,605	130.7%	105.3%
Montgomery	$381,696	$2,823	141.7%	115.9%
Russell	$298,177	$2,205	110.7%	84.9%
Southwick	$354,375	$2,621	131.5%	111.2%
Tolland	$382,713	$2,830	142.0%	102.4%

West Hampshire County

			Affordable Price at Regional Median Income ($269,450)	
	Median Sale Price, 2022	Est. Monthly Mortgage Pmt.	Ratio: Median Sale Price to Regional Affordable	Ratio: Median Existing Home Value to Regional Affordable
Chesterfield	$359,904	$2,661	133.6%	90.8%
Cummington	$334,953	$2,477	124.3%	83.2%
Easthampton	$369,142	$2,730	137.0%	98.8%
Goshen	$367,249	$2,716	136.3%	102.3%
Hatfield	$433,868	$3,208	161.0%	118.4%
Huntington	$317,304	$2,346	117.8%	82.6%
Middlefield	$310,780	$2,298	115.3%	85.6%
Plainfield	$295,658	$2,186	109.7%	89.5%
Southampton	$431,220	$3,189	160.0%	125.6%
Westhampton	$434,698	$3,214	161.3%	115.1%
Williamsburg	$400,707	$2,963	148.7%	111.0%
Worthington	$353,929	$2,617	131.4%	103.4%

RENTAL AVAILABILITY AND AFFORDABILITY

Although there are obvious exceptions, a very low-density development pattern exists in most of the 35 small towns and rural communities in the study area. Limited utilities, difficult-to-develop land, historic lack of market demand, and zoning have all contributed to the predominantly single-family, large-lot residential development that exists today. Though not universally true, most of the housing recently developed for rental purposes came about because of efforts by the region's community development corporations and other non-profit housing organizations, the Commonwealth's affordable housing law, Chapter 40B, and a handful of zoning innovations in progressive communities like Easthampton.

The area-wide rental inventory, estimated at 17,718 units, is a little less than 20 percent of all units in the 35 towns and a fraction of rental housing that exists in Massachusetts (1,036,542 units). About 27 percent of the existing renter-occupied units in these towns is comprised of single-family homes, but there is considerable variation in the subregions east and west of the river. East Longmeadow, Ludlow, Palmer, Belchertown, Easthampton, South Hadley, and Ware all have sizeable multifamily inventories, but in a handful of places like Granville and Montgomery, single-family homes provide the only option for renters. The unreliability of single-family homes as a source of rental housing explains why Montgomery, Middlefield, and Blandford are omitted from the accompanying chart of rental housing cost burden: units available for rent one year may become for-sale housing the next year. The chart illustrates the extent of housing cost burdens on lower-income renters. Table 2.16 shows that in about half the communities in the study area, the median gross rent in the market is more than 30 percent of renter household incomes.

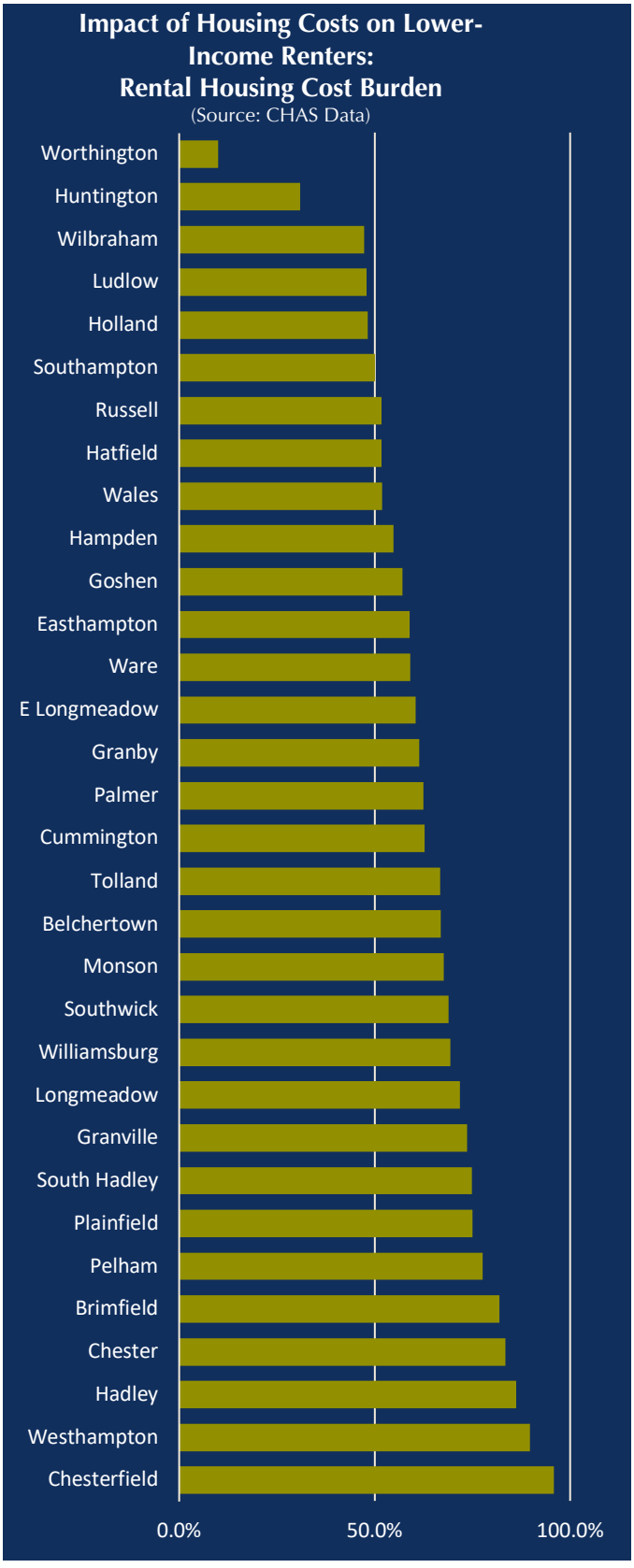


Table 2.16. Rental Housing Costs[17]

East Hampshire County

	Rental Inventory	% Single-Family	Median Gross Rent	Median Gross Rent % Household Income	Median Renter Household Income
Belchertown	1,011	33.3%	$984	27.8%	39,563
Granby	328	43.9%	$915	39.5%	26,423
Hadley	551	37.6%	$1,152	37.6%	50,000
Pelham	191	51.3%	$1,220	33.1%	44,205
South Hadley	1,704	14.9%	$969	27.1%	42,109
Ware	1,544	18.6%	$878	33.6%	25,901

East Hampden County

Community	Rental Inventory	% Single-Family	Median Gross Rent	Median Gross Rent % Household Income	Median Renter Household Income
Brimfield	224	68.2%	$835	33.0%	35,370
East Longmeadow	990	30.5%	$1,045	33.0%	36,611
Hampden	147	64.6%	$1,193	35.3%	56,328
Holland	134	100.0%	$1,270	30.3%	39,375
Longmeadow	575	40.2%	$1,523	31.3%	N/A
Ludlow	2,181	28.2%	$1,026	27.5%	41,250
Monson	547	39.7%	$871	22.2%	46,705
Palmer	1,242	10.6%	$926	28.1%	39,506
Wales	124	51.3%	$782	28.3%	36,875
Wilbraham	545	37.9%	$740	34.1%	22,472

West Hampden County

Community	Rental Inventory	% Single-Family	Median Gross Rent	Median Gross Rent % Household Income	Median Renter Household Income
Blandford	24	62.5%	$0	0.0%	78,056
Chester	128	42.2%	$935	41.4%	34,250
Granville	22	100.0%	$1,525	20.4%	91,250
Montgomery	13	100.0%	$0	0.0%	140,179
Russell	95	7.1%	$970	23.8%	52,500
Southwick	771	31.4%	$1,095	28.4%	39,926
Tolland	22	100.0%	$1,396	27.5%	N/A

[17] "Rental Inventory" includes renter-occupied units regardless of unit type, and vacant units for rent or rented but not yet occupied. Source:

West Hampshire County

Community	Rental Inventory	% Single-Family	Median Gross Rent	Median Gross Rent % Household Income	Median Renter Household Income
Chesterfield	82	54.7%	$1,071	38.9%	N/A
Cummington	107	36.4%	$911	19.9%	N/A
Easthampton	410	11.1%	$1,000	26.6%	42,705
Goshen	58	50.0%	$1,323	24.7%	62,000
Hatfield	478	33.0%	$997	26.1%	42,600
Huntington	177	30.5%	$1,004	23.5%	48,281
Middlefield	6	100.0%	$0	0.0%	N/A
Plainfield	38	68.4%	$871	31.5%	N/A
Southampton	247	9.1%	$863	38.6%	30,625
Westhampton	58	81.6%	$1,500	44.0%	52,578
Williamsburg	353	37.5%	$1,161	31.3%	50,417
Worthington	57	38.8%	$805	27.5%	N/A

The Local Economy and Community Development

EMPLOYMENT BASE

In cities and large suburban employment centers, the industries that employ local residents are often closely aligned with the industries found in the local employment base, thereby allowing many residents to find work close by. Beyond the urban periphery, these similarities can break down because small towns usually have a very limited employment base. In these economies, self-employment and out-of-town commutes largely determine how people live and work. Furthermore, the industries in which they work may differ sharply from the composition of the employment base in their own back yard. This can be seen in some communities in the Pioneer Valley.

Industries such as **Arts, Entertainment, and Recreation** are a small but valued generator of jobs statewide, but they play a very-important part in the Pioneer Valley's job opportunities, self-employment, and sense of regional identity. Other significant industries here include **Accommodations and Food Service**, the **Construction** trades, and small **Manufacturing** establishments. Industries in line with statewide trends include **Health Care and Education**, and **Professional Services**, an industry that often has more flexibility to accommodate remote work. Until recently, however, internet access limitations especially west of the river have made remote work a challenge for many people.

Table 2.17 illustrates the degree of "misfit" between the size of the employment base the number of employed people in the labor force. It is important to note that the employment base data used to develop Table 2.17 may underestimate the total number of employers in a given town, especially the smallest ones. This is because the original source of information – employers subject to federal and state laws for unemployment insurance – exempts some types of employment. Some examples include self-employed individuals and independent contractors, students in work-training programs or college work study, or real estate and insurance agents paid solely on commission. People employed in these kinds of work situations go unreported, as do their employers (in most cases). While the total employment numbers (total payroll jobs) may be close to reality, the reported number of employer establishments is probably low. An added challenge for studies like this one is that sources offering more detailed economic profiles often exclude very small jurisdictions, which means many towns in the Pioneer Valley.

Given these limitations, the best available estimate of average annual jobs in the study area is 59,825, or about half the number of jobs that would be required to give everyone in the communities the option to work in their own town. Most of these communities lack the "critical mass," the infrastructure, and the good construction-ready land to support more employment. There is also a desire heard from local officials just about everywhere that residents resist more business growth (and more housing as well). Many who chose to buy a home here selected their community largely for its small-town feel. For people with the means to live in these communities and work somewhere else in the region, the established town character matters more than the amount of commercial tax revenue the community receives each year. For people with fewer options and more limited means, living in the outlying areas of Hampshire County and Hampshire County presents significant challenges.

A few Pioneer Valley towns provide a relatively large employment base and effectively import labor because the number of local jobs is equal to or exceeds the number of

employed residents in the labor force. Some examples include Hadley, where education, health care, professional services, and hospitality and food services support a regionally large number of jobs; and East Longmeadow, Wilbraham, and Hatfield. At the other extreme, seven of the very small towns in the region have fewer than one job per five employed residents, including Middlefield, Chester, Granville, Russell, Tolland, Holland, and Wales. Over half are in Hampden County west of the river.

SELF-EMPLOYMENT

As noted above, self-employed workers are generally exempt under state unemployment laws and therefore go unreported in local employment and wage statistics. For the 35 towns in this study, the American Community Survey (ACS) estimates that self-employment provides a significant source of employment substantially ahead of the state average, which is about 7.5 percent.

West Hampshire County towns top the study area for total number of self-employed people: 2,954, or 14,2 percent of all employed residents. Cummington, Plainfield, and Williamsburg significantly exceed the study area average of 10.4 percent, for in all three towns, self-employment accounts for more than 20 percent of their residents. Other communities with high self-employment rates include Blandford, Montgomery, and Pelham. For the region as a whole, women are about 1.3 times more likely than men to work for themselves, with or without employees.[18]

American Community Survey Five-Year Estimates, 2016-2020), and Barrett Planning Group LLC.

Table 2.17. Living and Working in Pioneer Valley's Small Towns and Rural Communities[19]

East Hampshire County

	Employment Base (2020)			Employed Residents in Labor Force			Community Capacity	
Community	Average Employment	Average Weekly Wage	Employer Establishments	Total Workers	Self-Employed	Pct. Self-Employed	Jobs to Residents	Jobs to Housing
Belchertown	2,605	$868	356	8,480	660	7.8%	0.307	0.437
Granby	943	$876	151	4,045	327	8.1%	0.233	0.361
Hadley	5,560	$851	381	2,603	375	14.4%	2.136	2.412
Pelham	146	$671	34	730	134	18.4%	0.200	0.227
South Hadley	4,462	$992	424	9,346	614	6.6%	0.477	0.615
Ware	2,442	$908	283	4,614	176	3.8%	0.529	0.509
Total	16,158	$861	1,629	29,818	2,286	7.7%	0.542	0.685

East Hampden County

	Employment Base (2020)			Employed Residents in Labor Force			Community Capacity	
Community	Average Employment	Average Weekly Wage	Employer Establishments	Total Workers	Self-Employed	Pct. Self-Employed	Jobs to Residents	Jobs to Housing
Brimfield	570	$1,184	118	1,761	179	10.2%	0.324	0.341
E. Longmeadow	7,517	$992	652	7,548	854	11.3%	0.996	1.251
Hampden	963	$845	148	2,739	315	11.5%	0.352	0.447
Holland	207	$507	36	1,308	155	11.9%	0.158	0.151
Longmeadow	3,900	$925	411	6,910	877	12.7%	0.564	0.660
Ludlow	6,361	$1,061	560	11,092	890	8.0%	0.573	0.728
Monson	1,554	$1,000	204	4,705	692	14.7%	0.330	0.410
Palmer	4,268	$972	443	6,151	494	8.0%	0.694	0.805
Wales	172	$595	50	1,172	92	7.8%	0.147	0.174
Wilbraham	5,274	$792	407	7,630	685	9.0%	0.691	0.962
Total	30,786	$887	3,029	51,016	5,233	10.3%	0.603	0.743

[19] Sources: Massachusetts Executive Office of Labor and Workforce Development, Employment and Wages (ES-202), Annual Data 2020; American Community Survey Five-Year Estimates, 2016-2020 (previously cited tables), and Barrett Planning Group LLC.

West Hampden County

	Employment Base (2020)			Employed Residents in Labor Force			Community Capacity	
Community	Average Employment	Average Weekly Wage	Employer Establishments	Total Workers	Self-Employed	Pct. Self-Employed	Jobs to Residents	Jobs to Housing
Blandford	166	$584	26	554	100	18.1%	0.300	0.290
Chester	95	$654	21	748	77	10.3%	0.127	0.130
Granville	119	$633	38	888	114	12.8%	0.134	0.170
Montgomery	36	$554	10	553	121	21.9%	0.065	0.087
Russell	134	$980	34	747	56	7.5%	0.179	0.201
Southwick	2,683	$862	303	5279	569	10.8%	0.508	0.651
Tolland	33	$571	6	233	20	8.6%	0.142	0.065
Total	3,266	$691	438	9,002	1,057	11.7%	0.363	0.423

West Hampshire County

	Employment Base (2020)			Employed Residents in Labor Force			Community Capacity	
Community	Average Employment	Average Weekly Wage	Employer Establishments	Total Workers	Self-Employed	Pct. Self-Employed	Jobs to Residents	Jobs to Housing
Chesterfield	159	$603	19	694	91	13.1%	0.229	0.258
Cummington	261	$926	36	413	134	32.4%	0.632	0.503
Easthampton	4533	$892	523	8,739	890	10.2%	0.519	0.578
Goshen	151	$748	34	559	78	14.0%	0.270	0.253
Hatfield	2000	$1,048	129	1,834	238	13.0%	1.091	1.303
Huntington	353	$841	46	1,279	164	12.8%	0.276	0.331
Middlefield	37	$662	7	223	44	19.7%	0.166	0.150
Plainfield	97	$520	25	352	73	20.7%	0.276	0.268
Southampton	1,020	$876	139	3,374	519	15.4%	0.302	0.430
Westhampton	327	$904	45	908	142	15.6%	0.360	0.430
Williamsburg	512	$753	96	1,717	447	26.0%	0.298	0.406
Worthington	165	$628	33	724	134	18.5%	0.228	0.251
Total	9,615	$783	1,132	20,816	2,954	14.2%	0.462	0.539

ACCESS TO RECOVERY RESOURCES

Participation in some small business recovery programs can be gleaned from data published by the Small Business Assistance (SBA) Program, but the picture is woefully incomplete. A partial list of loans to small businesses from the Paycheck Protection Program (PPP) is available, however, including for very small towns. For employers in the study area, approximately 1,315 PPP loans were approved during 2020. A handful of these loans exceeded $1 million, including some of the region's large educational, health care, and manufacturing organizations, but most were so small that the identity of applicants is undisclosed. A significant share of these loans went to small employers in the Northern Hilltowns area.

Paycheck Protection Program Loans in the Study Area (2020; Partial)

Community	Est. Jobs Retained	Loans Approved	Community	Est. Jobs Retained	Loans Approved
Belchertown	984	165	Middlefield	1	1
Chesterfield	22	7	Pelham	44	13
Cummington	48	11	Plainfield	46	10
Easthampton	2,883	291	South Hadley	3,279	222
Granby	620	95	Southampton	860	86
Goshen	5	1	Ware	765	84
Hadley	2,385	196	Westhampton	64	20
Hatfield	451	44	Williamsburg	178	30
Huntington	112	20	Worthington	185	16

There are many more small business resources for COVID recovery operating in the study area, but there is no reported participation data available them. For example, small business assistance was available in several towns participating in a Community Development Block Grant (CDBG) through a regional award obtained by PVPC. Programs known to have been used by area businesses also include the Massachusetts Growth Capital Corporation (MGCC) and the Economic Development Incentive Loan (EDIL) from the SBA, but participant statistics were not available during the research phase of this study. In addition, all of the communities have received or will receive recovery funding under the American Rescue Plan Act (ARPA) and supplemental federal resources administered by the Commonwealth. Many towns plan to put these one-time, non-recurring dollars into long-delayed capital projects – in some cases, projects that will catalyze economic growth.

TAX BASE AND FINANCIAL CAPACITY

The limited amount of commercial and industrial development in the region, outside the cities, plays a major role in the composition of each town's tax base. In most cases, residential values dwarf the value of all other real property, making residential taxes the primary basis for local government spending. As shown in Table 2.19, residential values provide more than 90 percent of the total assessed value in 17 of the 35 towns in the study area. For communities with large shares of nonresidential assessments, the source is often utility-related assets: large ground-mounted solar installations, cell towers, communications infrastructure, and so forth. Blandford is one of the best examples of this in the region.

Nonresidential values also run high in communities like Hadley, which has a large amount of commercial development, mainly along Route 9, extending from the University of Massachusetts campus in Amherst to the Connecticut River, which separates Hadley from Northampton. The tax base in East Longmeadow, Wilbraham, Easthampton, and Hatfield also includes a considerable amount of commercial and industrial real estate value. These communities also support noteworthy shares of regional employment.

Almost all towns have some property that is tax exempt due to ownership by government agencies or non-profit charitable organizations. In some cases, the property value that cannot be taxed is quite substantial, as in communities like Huntington, Hadley, or Cummington. The chart on this page reports the percentage of estimated property value that is unavailable to the host community for tax purposes. In some cases, these properties may provide some funding to the communities through the cherry sheet (for state-owned assets) or a Payment in Lieu of Taxes (PILOT) agreement.

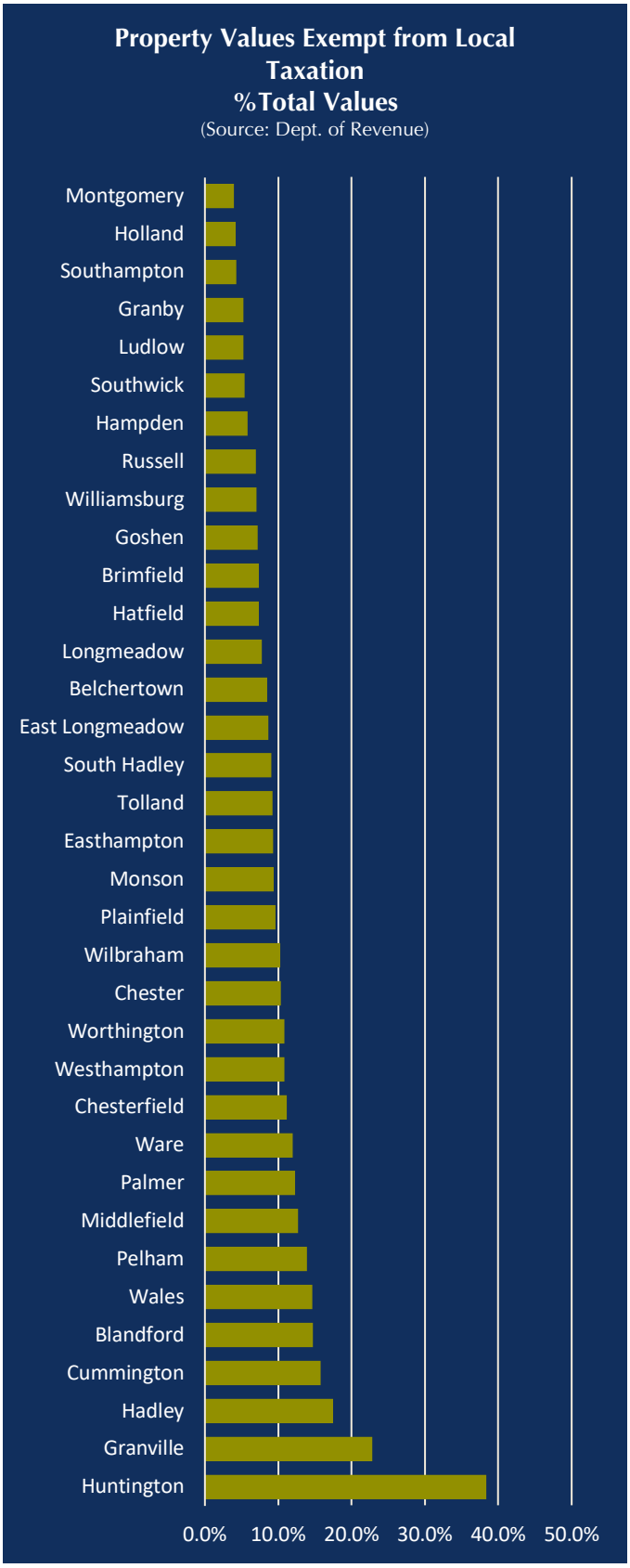


Table 2.18. Tax Base Comparison[20]

East Hampshire County

Community	Residential/Open Space	Commercial	Industrial	Personal Property	Total Assessed Value	Residential Percent
Belchertown	$1,624,561,894	$69,885,232	$12,716,990	$44,647,895	$1,751,812,011	92.7%
Granby	$682,696,163	$29,314,741	$6,824,400	$26,554,957	$745,390,261	91.6%
Hadley	$730,730,500	$260,745,700	$22,179,300	$40,377,989	$1,054,033,489	69.3%
Pelham	$183,391,900	$1,932,500	$906,000	$13,247,100	$199,477,500	91.9%
South Hadley	$1,727,536,544	$69,922,005	$42,714,500	$41,409,202	$1,881,582,251	91.8%
Ware	$721,663,123	$79,522,737	$25,321,800	$24,525,642	$851,033,302	84.8%

East Hampden County

Community	Residential/Open Space	Commercial	Industrial	Personal Property	Total Assessed Value	Residential Percent
Brimfield	$448,599,660	$26,180,183	$12,291,400	$16,991,680	$504,062,923	89.0%
East Longmeadow	$1,854,873,484	$190,201,616	$106,312,400	$85,219,100	$2,236,606,600	82.9%
Hampden	$612,174,400	$33,598,220	$5,892,500	$70,448,492	$722,113,612	84.8%
Holland	$375,967,605	$5,296,695	$728,800	$10,302,201	$392,295,301	95.8%
Longmeadow	$2,217,324,300	$85,230,100	$4,024,000	$67,213,517	$2,373,791,917	93.4%
Ludlow	$1,862,073,973	$179,568,077	$65,291,490	$229,559,030	$2,336,492,570	79.7%
Monson	$796,071,450	$27,814,460	$16,574,040	$45,087,700	$885,547,650	89.9%
Palmer	$900,911,149	$66,654,249	$45,825,500	$69,489,155	$1,082,880,053	83.2%
Wales	$178,926,560	$3,101,840	$1,401,260	$12,937,662	$196,367,322	91.1%
Wilbraham	$1,828,091,807	$145,779,934	$32,728,500	$57,040,000	$2,063,640,241	88.6%

West Hampden County

Community	Residential/Open Space	Commercial	Industrial	Personal Property	Total Assessed Value	Residential Percent
Blandford	$162,862,960	$7,572,226	$3,668,100	$51,298,303	$225,401,589	72.3%
Chester	$132,988,846	$5,696,861	$2,054,714	$5,016,525	$145,756,946	91.2%
Granville	$182,980,451	$8,551,239	$2,084,370	$32,529,770	$226,145,830	80.9%
Montgomery	$111,695,800	$1,624,730	$595,900	$9,067,313	$122,983,743	90.8%
Russell	$151,179,864	$4,779,014	$9,668,700	$15,598,325	$181,225,903	83.4%
Southwick	$1,081,521,106	$60,942,457	$25,279,950	$73,784,362	$1,241,527,875	87.1%
Tolland	$182,147,594	$5,758,732	$2,741,900	$19,342,670	$209,990,896	86.7%

[20] Massachusetts Department of Revenue, Municipal Data Bank; and Barrett Planning Group.

West Hampshire County

Community	Residential/Open Space	Commercial	Industrial	Personal Property	Total Assessed Value	Residential Percent
Chesterfield	$174,628,595	$3,023,175	$952,580	$5,403,880	$184,008,230	94.9%
Cummington	$123,137,294	$10,226,613	$1,608,200	$6,799,280	$141,771,387	86.9%
Easthampton	$1,622,752,362	$111,544,408	$53,956,800	$72,811,142	$1,861,064,712	87.2%
Goshen	$164,071,830	$3,958,673	$3,481,410	$5,603,889	$177,115,802	92.6%
Hatfield	$472,111,589	$97,934,794	$20,145,935	$28,256,670	$618,448,988	76.3%
Huntington	$221,733,109	$5,206,084	$1,341,600	$7,211,393	$235,492,186	94.2%
Middlefield	$65,727,141	$3,132,359	$24,700	$3,663,744	$72,547,944	90.6%
Plainfield	$77,660,483	$8,010,702	$1,503,200	$25,624,479	$112,798,864	68.8%
Southampton	$845,724,270	$28,031,430	$6,492,300	$19,908,278	$900,156,278	94.0%
Westhampton	$236,081,152	$6,586,478	$1,352,233	$5,169,110	$249,188,973	94.7%
Williamsburg	$318,719,551	$18,884,216	$3,044,972	$12,067,507	$352,716,246	90.4%
Worthington	$177,938,591	$5,499,758	$649,140	$7,805,861	$191,893,350	92.7%

OPERATING LOCAL GOVERNMENT

In settings like the small towns in Pioneer Valley, the local governments are small, decentralized, conspicuously understaffed, and under-resourced. Regional capacity plays an important part in filling gaps, especially for economic development planning, technical assistance, and special projects. On a day-to-day basis, however, these towns largely operate on their own. The size of their tax base and the wealth of their households has an enormous impact on what they can accomplish, and when. This is because the tax levy funds well over half the entire operating budget, and as previously shown, the tax base is primarily residential. The chart to the right illustrates the range of single-family tax bills in the 35-town study area, from Tolland (2,901) to Longmeadow (9,682). What these communities have to work with on any given day varies almost as much as the residential tax bills.

Almost all the towns in the study area operate with a Select Board of three to five members and an Open Town Meeting. The exceptions include the City of Easthampton, with a mayor and city council, and the Towns of Palmer and East Longmeadow, which have a city-type government with a town council and town manager. Ludlow has a Representative Town Meeting. Belchertown is currently moving from a town administrator to a Select Board-Town Manager form of government as well. Several towns, including very small ones, have a full- or part-time town administrator, such as Blandford, Chester, Goshen, Holland, or Middlefield (and many others). Others have no chief municipal official, such as Pelham.

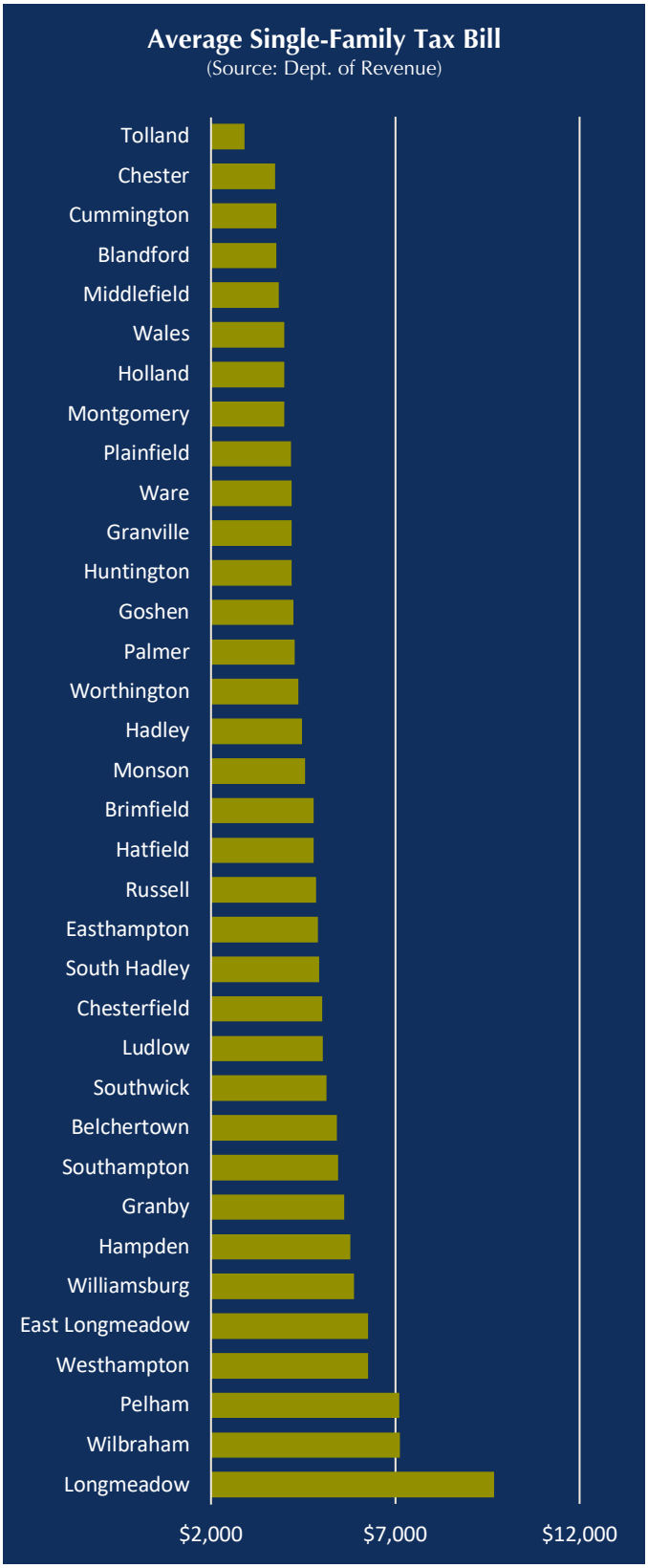


Table 2.19. Operating Budget and Tax Levy

East Hampshire County

Community	Operating Budget	Total Levy	Levy % Budget	Population	Per Capita	Average Single-Family Tax Bill
Belchertown	$55,121,829	$30,937,000	56.1%	15,350	$3,591	$5,412
Granby	$23,690,856	$14,207,138	60.0%	6,110	$3,877	$5,605
Hadley	$20,970,929	$13,248,723	63.2%	5,325	$3,938	$4,468
Pelham	$6,127,050	$4,101,257	66.9%	1,280	$4,787	$7,112
South Hadley	$50,999,876	$30,952,028	60.7%	18,150	$2,810	$4,940
Ware	$34,865,526	$16,458,984	47.2%	10,066	$3,464	$4,182

East Hampden County

Community	Operating Budget	Total Levy	Levy % Budget	Population	Per Capita	Average Single-Family Tax Bill
Brimfield	$11,853,879	$8,281,754	69.9%	3,694	$3,209	$4,786
East Longmeadow	$65,938,501	$45,380,748	68.8%	16,430	$4,013	$6,253
Hampden	$16,159,571	$13,517,967	83.7%	4,966	$3,254	$5,784
Holland	$8,265,714	$6,096,269	73.8%	2,603	$3,175	$3,988
Longmeadow	$76,706,995	$58,490,233	76.3%	15,853	$4,839	$9,682
Ludlow	$75,919,245	$46,706,486	61.5%	21,002	$3,615	$5,031
Monson	$28,920,328	$15,789,315	54.6%	8,150	$3,549	$4,553
Palmer	$43,342,977	$21,473,511	49.5%	12,448	$3,482	$4,269
Wales	$5,659,862	$3,636,723	64.3%	1,832	$3,089	$3,981
Wilbraham	$53,635,371	$42,283,989	78.8%	14,613	$3,670	$7,119

West Hampden County

Community	Operating Budget	Total Levy	Levy % Budget	Population	Per Capita	Average Single-Family Tax Bill
Blandford	$4,898,606	$3,333,690	68.1%	1,215	$4,032	$3,775
Chester	$3,573,973	$2,795,618	78.2%	1,228	$2,910	$3,745
Granville	$4,530,227	$3,455,508	76.3%	1,538	$2,946	$4,186
Montgomery	$2,294,144	$1,715,623	74.8%	819	$2,801	$3,992
Russell	$4,715,864	$3,606,395	76.5%	1,643	$2,870	$4,850
Southwick	$29,554,121	$21,081,143	71.3%	9,232	$3,201	$5,127
Tolland	$2,341,801	$1,889,918	80.7%	471	$4,972	$2,901

West Hampshire County

Community	Operating Budget	Total Levy	Levy % Budget	Population	Per Capita	Average Single-Family Tax Bill
Chesterfield	$4,080,959	$3,358,150	82.3%	1,186	$3,441	$5,015
Cummington	$2,760,411	$2,048,597	74.2%	829	$3,330	$3,772
Easthampton	$49,856,527	$30,763,400	61.7%	16,211	$3,075	$4,906
Goshen	$3,667,519	$2,856,878	77.9%	960	$3,820	$4,238
Hatfield	$12,669,295	$8,454,198	66.7%	3,352	$3,780	$4,789
Huntington	$5,777,073	$4,135,243	71.6%	2,094	$2,759	$4,190
Middlefield	$1,732,195	$1,290,628	74.5%	385	$4,499	$3,839
Plainfield	$2,656,947	$2,250,337	84.7%	633	$4,197	$4,167
Southampton	$19,334,592	$13,565,355	70.2%	6,224	$3,106	$5,447
Westhampton	$6,777,054	$5,105,882	75.3%	1,622	$4,178	$6,256
Williamsburg	$10,404,645	$6,856,804	65.9%	2,504	$4,155	$5,878
Worthington	$5,030,705	$3,077,969	61.2%	1,193	$4,217	$4,374

Chapter 3. Local Experience

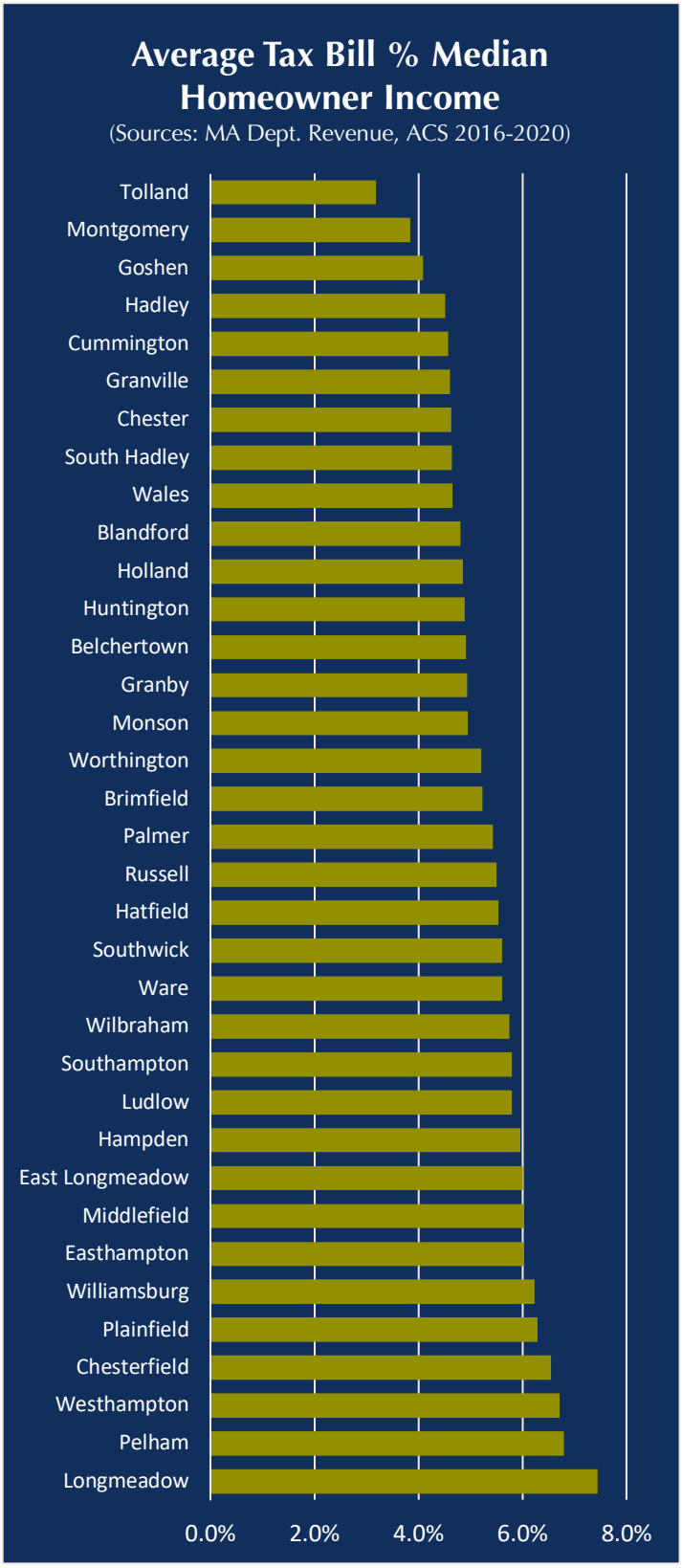
Barrett Planning Group interviewed approximately 70 local government, business, and non-profit representatives to prepare this report. PVPC provided a partial list of contacts for local officials in the 35 towns, and the consultants reached out independently to various economic development and non-profit organizations, along with local businesses. Several town administrators and members of select boards suggested businesses to interview in their communities, but very few had contact information for them. In general, the outreach effort was significantly hampered by limited access to accurate contact information, and this is among the matters addressed in Chapter 4. However, the interviews that did occur helped to identify a range of opportunities and challenges in the study area. These interviews also brought into focus some challenges unique to individual communities and differences that exist at the subregional level.

Town Governments

Most local officials reported that COVID-19 had little impact on their operating revenues. They said payments of property taxes, excise taxes, and various local receipts were largely consistent with pre-pandemic conditions, and this is consistent with what the consultants have heard this from communities elsewhere in New England. According to information received for this study, few residents and businesses in the study area were in arrears. Property tax delinquency was low, and there were few cases in tax title. Most communities in the study area do not have hotels, motels, airports, or ancillary services that would bring in much non-school state aid or other state receipts or reimbursements, but the communities that have adopted hotel room occupancy taxes or local meal taxes said they continued to do well despite the pandemic. A Hadley Planning Board member said her town offered emergency rental assistance through the Affordable Housing Trust Fund and Community Preservation Act (CPA), but the program received only one application.

ARPA Funds. Several towns in the study area reported their intent to invest American Recovery Program Act (ARPA) funds in deferred-but-needed capital improvement projects due to a combination of program spending requirements and long-standing community needs. For example, most interviewees said they will use ARPA funds to upgrade, expand, or construct parks, schools, fire stations, and municipal utilities (water and sewer infrastructure). The Williamsburg Town Administrator said that ARPA funds had reduced the burden on taxpayers for making a number of "wish-list" items possible. Applying ARPA resources to these kinds of projects could help communities protect their “rainy day” funds and continue to build operating reserves. Some officials said they are also exploring options for economic development, such as hiring staff or commissioning special studies or plans.

Government Spending. In the study area’s smallest communities, the school district and local government are often the largest local employers. The employment base is so small that agencies collecting and reporting employment and wage statistics suppress industry-level details for confidentiality or other reasons. Since the employment base is so small, the commercial and industrial tax levy is small, too. The tax base is almost exclusively residential, so the cost of government services falls primarily on residential taxpayers. Local officials reported some animosity about the share of the annual operating budget devoted to public schools. Despite growth in school spending, most Pioneer Valley school districts have seen significant declines in K-12 enrollment – in some cases as much as a 50 percent decrease, The limited state aid to rural areas exacerbates this problem. For example, Chester officials noted that of their $3.9 million annual operating budget, they spend almost half on schools:



$1.65 million to send students to the six-town Gateway Regional School District and another $212,000 for vocational school tuition.

Public Participation. In 2020-2021, COVID-19 had a profound impact on the way local governments operate on a day-to-day basis. This is not unique to the Pioneer Valley area; it was a national phenomenon that enabled an almost unheard of company, Zoom, to jump to the forefront of the videoconference market in the U.S. and abroad. Although some residents in the Pioneer Valley have asked to resume in-person meetings, Zoom and its competitors have improved access to and availability of information for many people, especially younger people. This has led to previously unseen levels of participation, at least in the more populated communities. Local officials reported that meetings of elected boards, especially School Committees, have seen significant attendance online. Still, the smallest rural communities have not seen major participation changes and they continue to struggle with attracting and keeping local volunteers. Town staff say they try to educate the community and encourage participation, but it is "the same handful of people that do everything."

Perceptions of Economic Development

Town officials almost universally talked about "economic development" in terms of business growth and tax base expansion. Many described their communities as "pro-business," but they said the lack of a "critical mass", or population density has impeded their economic development pursuits. Some towns have changed their zoning to ease permitting requirements and update their business district regulations, but businesses still locate to more populated towns elsewhere. Interviewees said they think it is difficult to start a business today due to the cost of living and now, higher financing costs and lower investment returns.

Keep it Small. Especially in the smaller towns with very little business activity, the public reportedly favors redevelopment (such as new uses in vacant or underoccupied buildings) along established corridors like State Route 9 and U.S. Route 20 over new "green space" development. Isolated redevelopment has been a challenge due to property ownership issues, the region's isolation, and the condition of available buildings. Most towns say they have a handful of assets in disrepair that are currently not serving any community needs. There seems to be a willingness to reuse assets like these for economic development. For example, East Longmeadow acquired the Carling Combustion building by eminent domain and is working with a developer to reinvigorate that property for mixed-use. However, there is no community willingness for big-box retail development, especially in the smaller towns with limited

infrastructure and capacity. Residents want small-scale businesses like coffee shops, i.e., businesses that provide a service and of even more importance, a gathering place. Still, very small businesses often provide a needed community service more than noticeable spike in tax revenue.

Controversies. Storage facilities, marijuana manufacturing, and solar fields have become polarizing trends throughout the study area. Marijuana production and large ground-mounted solar installations usually generate significant tax revenue, and in some communities, local officials say they are torn about resisting these kinds of developments. Still, such large-scale operations conflict with what residents say they want or can accept. Solar installations generate considerable tension because on one hand, they generate sustainable energy yet on the other hand, they are large and difficult to hide from the public's eye. Local officials say that people who choose to live in the Pioneer Valley's small towns tend to be older and predominantly White, and often, they are affluent householders and retirees drawn to the region for its natural beauty, open space, and small-town lifestyle. The image of a solar field is not what they had in mind.

"Overall, in 2021, employers ended up adding an unprecedented 3.8 million jobs. But … millions of Americans have left the labor force since before the pandemic. In fact, we have more than three million fewer Americans participating in the labor force today compared to February of 2020. "

U.S. Chamber of Commerce
July 2022

Employment

Employers in the Pioneer Valley's small towns have not escaped the impact of the nation's labor shortage. According to a report just released by the U.S. Chamber of Commerce, several conditions have led to a decline in labor force participation, resulting in the "loss" of 3.25 million workers. These conditions are worth noting because interviewees reported that many of the same constraints affect Pioneer Valley employers today:

- Childcare demands brought about by school closings, limited access to after-school care, and a shortage of licensed day care slots – especially voucher slots – has made it difficult for many women to return to work;
- Many older adults opted for early retirement during the pandemic, often taking advantage of public and private incentives to do so. Their absence plays an important part in the declining labor force participation rate.
- While economic recovery has helped businesses create more jobs, other jobs were lost and have not returned. This has left some workers unable to find work for which they have the requisite skills and training.

Low Wages. The inability to compete in these communities is made more challenging by the difficulty of small businesses to pay the wages workers are looking for. Many employers struggle to afford the minimum wage and have lost employees to companies such as Dunkin Donuts, McDonald's, and Big Y – firms with a little more horsepower to pay somewhat above minimum wage or import workers from Springfield or Holyoke. Communities are also experiencing serious difficulty in hiring professional staff. Operations and municipal budgets are "shoestring to begin with." A salary survey commissioned by the Western MA Economic Development Council found that town employees often earn less than minimum wage when accounting for total hours worked. Entry-level employees are more commonly working second jobs than

professional and technical positions. This trend has not changed significantly due to COVID-19.

Some towns have absorbed household growth, mainly people from out of state, already connected to the Valley, or having lived there previously. Newcomers hope for some distance from urban areas and often want, or already have, have employment flexibility. Town Administrators noted some moves are in-town or in-the-region “buy ups” involving people who already live in the Pioneer Valley area. Nevertheless, a study by UMASS Amherst found it is expensive to move to Western Massachusetts. Zillow's home price index follows the same trend lines as the state and county, and home values are high due to a lack of housing stock, i.e., not enough housing to meet demand. There are also "mega-mansions everywhere" that sell quickly and worsen existing disparities.

Infrastructure and Utilities. There are infrastructure deficiencies, especially limited public water supplies in rural communities. Most places are partially served or have community agreements in place. Of the communities with public water, the systems are often antiquated, water superintendents are near retiring age, and other staff does not have the technical knowledge to operate the system. Chester's water system, for example, suffers from major structural issues. They are part of a District Local Technical Assistance (DLTA) grant for a shared water project with Blandford.

Economic Development Constraints

Transportation. Interviewees from various backgrounds reported that transportation is a glaring need in the study area, especially throughout and within the Hilltowns. The lack of adequate public transportation presents employment and affordability barriers for low and moderate-income workers, loosely defined as people working in entry-level or lower-wage jobs. Often, they are handcuffed by the limited bus schedule and the "last mile" problem. This condition is a sharp contrast to the wealthier households in the region that own at least one vehicle, can work remotely, or are already retired. Government and business representatives report that groups frequently resist efforts to increase access to their community. For example, Blandford recently voted not to increase access to their service plaza. Many hope the East-West Passenger Rail will be an economic driver for the region and fill much-needed transportation gaps.

Broadband. Hilltowns representatives say the needs of their region have not had equitable attention in terms of broadband compared to the remainder of the study area. Interviewees from low-lying towns in the Pioneer Valley and outside the Valley did not report internet access or connection issues, and they reported having good access for long periods. Broadband is critical to understanding how towns can function more efficiently, but there needs to be digital literacy training and other local roll-out programs before that can happen.

Regionally Unique Business Marketing. A comprehensive marketing plan to showcase and promote unique subregional assets would help the region's small businesses. Many look to Berkshire County for marketing inspiration. The Quaboag Valley Chamber of Commerce noted that the Berkshires market as a region and reach wide audiences as a result. The Western Massachusetts Economic Development Council is working on a marketing campaign that capitalizes on events like the Brimfield Fair. The Council is also creating a regional tourism guide. More interaction between communities through a regional lens would allow sharing of "services, voices, and information." The ultimate goal is to get people to come and stay, rather than driving through or going to their one destination and leaving.

Many towns and businesses have outdated public information, and they are understaffed and underfunded, so they rely on the Chambers and Community Development Corporations for assistance, which are also understaffed. Databases remain outdated, and there is no one to update them. That work is necessary but time-consuming. Many suggested better connections with local and regional businesses to assist with this effort, but it takes personnel to make those connections happen.

Dependence on Grants. The area relies on federal and state grants to complete projects, particularly the Community Development Block Grant (CDBG), the Regional Economic Development Organization Grant Program (REDO), and Local Rapid Recovery Plans (LRRP). Some cited issues such as maintaining multi-year funding and unwillingness to pay from other collaborators. Most communities try to "keep their head above water" while reacting to daily issues. Most do not have a professional grant writer or staff to dedicate to that purpose.

Child Care. Daycare is an ongoing issue as it is expensive and generally unavailable in the study area. Many daycares offered by local universities or schools closed during the pandemic and have either not reopened or reopened with reduced hours/staff. The lack of reliable and affordable childcare resources weighs on a family's decision to locate in the area and severely limits the options available for lower-income households with children.

To attract newcomers and families, active groups are trying to capitalize on the area's strengths: agritourism, open space, outdoor recreation, quality of life, and the marketability of rural living. Retailers can no longer be a selling point as online sales activity is making many of them unable to thrive because their walk-in customer base has declined. The study area's population is aging, raising concerns for long-term viability. Still, in many towns the existing residents do not want more families with children because they "cost too much money." According to the Hilltown CDC, this causes tension between hiring staff and supporting schools.

Access to Food. National distribution changes and higher delivery case minimums have posed challenges for stores that serve food and beverages. Stores and food pantries are serving less, and residents have less access to affordable and nutritional food, especially seniors. When coupled with a lack of transportation, participation in free meal programs has skyrocketed. For example, Hilltown CDC offered a free meal service for two years (during the pandemic) because seniors had no access to food. They are also working on expanding the Mobile Market to meet the demand in their service area.

Route 9. Route 9 is a regional economic engine here, just as it is on the eastern side of the state. Its players including Target, Whole Foods, Walmart, Trader Joe's, and Aldi. Most people travel there to do their shopping. However, Route 9 is quite different from the village centers that dot the landscape. There is strong sentiment for small, localized commercial activity and mixed-use development. Pelham is pursuing village center zoning to support the development of a small apartment complex but does not have access to public transportation to attract people to those units.

Owners and Employees of Small Businesses

Zoning. Many businesses in the study area's communities adapted to the challenges presented by the pandemic and stayed in business due to community support and a lack of competition or alternative options. Some felt the impact initially, but major businesses did not. The business community's issues stem more from municipal licensing, permitting, and zoning than COVID-19 recovery. Town staff say they want to make business permitting more efficient and change zoning for economic development, particularly food services and manufacturing. South Hadley and East Longmeadow are two communities that have reworked their regulations to achieve these ends. Ultimately the net effect of the pandemic on the business and self-employed community was marginal.

Agriculture. Farmers are producing mainly hay, vegetables, maple syrup, and meat. Many are leasing portions of their land for marijuana cultivation and other lucrative crops. Others are pursuing agrotourism, opening petting zoos, or adding restaurant (s) to supplement their operation. Potatoes and dairy are no longer major exports. There is no nearby slaughterhouse at this time, but one may be opening in Westhampton that could be a major economic driver for the region's farms.

Chapter 4. Tailoring Economic Development to Pioneer Valley Towns

COMMUNICATION

Communication and information sharing between the towns, regional organizations, and businesses is fractured and ineffective. At times, the communication challenges that exist stem from competing interests, a problem that often happens when multiple groups vie for the same inadequate supply of funding or other resources. Organizations like the Western Massachusetts Economic Development Council help to bring regional groups and local officials together, but more needs to be done to ensure that Pioneer Valley's small towns understand the regional resources available to them and the capacity each regional organization or group has to offer.

Any further analysis of the small towns and rural communities in the Pioneer Valley area should have a comprehensive database of small businesses, current contact information, webpage information, and updates to indicate business still operating vs. businesses that have closed. It would help to know which businesses have left and where they went, as follow-up communication with them could help regional planners

and policy makers refine their understanding of the region's economic development strengths and weaknesses.

PROMOTING LOCAL BUSINESSES

The Hilltown CDC publishes an attractive business guide that is a nice example of online marketing. It could be instituted in other parts of the study area as well, but other opportunities exist that should be pursued, too. For example, the planner/economic development coordinator in a small town in another part of Massachusetts launched a new program on the local cable network with periodic interviews featuring businesses in the community. The interviews remain available "on demand." An advantage the interview format has over a marketing website is that it literally puts a face on a local business, so viewers connect not just with the name of the business but also the person who owns it – and sometimes with the employees, too.

Communities do not have the staff to do this, but great work is already in the pipeline. A Belchertown official stated, "we are a bedroom community with assets such as trails and hiking. If marketed correctly, we could make that work for us." Many communities in the service area are also updating their Master Plans to catalyze these processes and create opportunities for growth in achievable ways.

Several interview participants mentioned they hired an economic development consultant for temporary periods, i.e., sixteen months. In each instance, staff mentioned more time was needed to complete projects that began during their tenure. Common feedback also included the desire to keep the position going but a lack of funds.

HOUSING

Limited housing choices, lack of affordability, and poor or unsuitable housing conditions often go unrecognized as a barrier to economic development, yet housing is as central to economic development as business marketing, tax incentives for new business growth, education and job training, or façade and sign improvement programs. Available data for the study area show that housing costs are unaffordable for many, and that in almost every town, there is a significant shortage of decent rental housing, especially for families. In many cases, town officials interviewed for this report said there is little or no support for housing growth and that housing development often attracts considerable opposition unless the housing is age restricted, i.e., limited to older households without children. People worry about school costs, but there are also concerns about the adequacy of public safety services to accommodate growth in demand. In addition, residents want to preserve the region's rural features.

The Department of Housing and Community Development (DHCD) is the state's housing policy agency. Among DHCD's various programs is the **Housing Production Plan** (HPP) program, which lays out a series of basic requirements for municipal housing plans in Massachusetts. Communities with recent or anticipated affordable housing proposals under Chapter 40B, the comprehensive permit law, have an incentive to prepare the HPP because it could help them manage the number of comprehensive permit applications the Zoning Board of Appeals has to handle at any given time. However, comprehensive permits are only one reason for communities to prepare, adopt, and implement the HPP. The more important reasons are that it helps local officials identify and respond to housing needs that already exist within their borders; to plan for housing at all market levels, including but not limited to affordable housing; and to educate the public about housing as a social and economic ingredient of healthy neighborhoods and communities.

According to DHCD, only two communities in the 35-town study area have a current, state-approved Housing Production Plan. Those communities (together with their plan expiration dates) are Easthampton (2026) and Ludlow (2024). South Hadley has begun to update its recently expired plan (2022). Two towns had plans that expired more than a year ago, notably Hatfield (2021) and Southampton (2015). None of the other towns in the study area are listed as ever having a state-approved HPP at any time since 2003.

PVPC prepared Housing Needs Assessments for Belchertown, Blandford, Granville, Longmeadow, and Southampton, and Pelham hired consultants to prepare a needs assessment in 2014. Due to the age of these documents, plus the absence of plans or any kind of housing analysis for most of the study area, suggests that **a regional housing plan is a critical economic development need for these towns**. The regional plan should have a specific, locally focused needs assessment and market analysis for each town, together with goals for housing preservation and development.

REGIONAL ROUND TABLES

Town leadership would benefit from regional round tables that focus on economic development opportunities, challenges, innovations, and ways to take advantage of inter-local cooperation. Interviewees from one side of the Connecticut River reported minimal communication and interaction with communities on the side. Participants should be polled for their interest in particular topics, too. For example, the Ludlow Town Administrator expressed interest in establishing an economic development commission but did not know where to start. Some towns have reportedly reinvigorated inactive economic development commissions with members of their Planning Boards and Finance Committees, and some are investigating Tax Increment Financing (TIFs) to catalyze investment. The existing Small Town Administrators group might expand its efforts to build local knowledge and capacity. Another suggestion from participants was to consolidate the Chambers of Commerce to broaden their reach.

PERMITTING GUIDES

Every town should have a basic permitting guide for businesses and commercial property owners. Sometimes the act of creating a permitting guide enlightens local officials about how hard it can be to get through an approval process in their community. A guidebook of resources for the rural communities could be tailored to take advantage of information and technical assistance from the Rural Policy Advisory Commission's work and other sources.

TOURISM

Recreational Resources

There is an active group seeking to expand the Central Massachusetts Bike Trail. Their effort should be supported, and it should be coupled with an analysis of options to activate the open spaces that exist in each town. Extending the trail would improve the quality of life, draw people to the area, provide alternative transit options, and offer connections to regional population centers. Interviewees said people are eager to "give

back" to these types of efforts because most living in the area participate in active recreation and support enhancing the natural environment. The bike trail and a well-designed and well-promoted program of activating the study area's open spaces could stimulate recreational tourism as a vital component of the regional economy.

Heritage Tourism

Several years ago, the Massachusetts Department of Conservation and Recreation (DCR) embarked on an exciting but unfortunately short-lived program to document heritage tourism resources in several parts of the Commonwealth. The program did not reach most of the Pioneer Valley area. However, the "how-to" guidebook still exists. It could provide the basis for engaging the public in documenting the unique and special places that matter most to residents in each town. In doing so, it could help to define the basic elements of heritage tourism corridors connecting these communities and their relationship to the region's cities.

> Heritage, or cultural, landscapes is a broad term for the special places created by human interaction with the environment that help define the character of a community and reflect its past.
>
> -DCR, *Reading the Land*

DCR laid out the basic steps for developing a heritage landscape inventory:

- Learn about heritage landscapes and past inventories
- Establish a heritage landscapes committee
- Build support from citizens and elected officials
- Explore possible funding and technical assistance options
- Consider engaging PVPC, another regional organization, or a consultant for the inventory
- Conduct the survey (reconnaissance, followed by intensive inventory)
- Evaluate the significance of the surveyed landscapes
- Establish goals for future inventory work
- Set priorities for preservation planning based on known or anticipated threats
- Share the information in the community and state, and with the region's planning and economic development organizations.

TWENTY-FIRST CENTURY ZONING

Like other regional planning agencies, PVPC hosts training programs offered through the Citizen Planner Training Collaborative. PVPC also offers training and technical assistance to land use boards, as most of the region's small communities do not have a professional planner on staff. Some communities in the PVPC region have used District Local Technical Assistance (DLTA) resources to update their zoning. PVPC could take the lead in organizing a regional forum on recent land use innovations in the small towns, using communities such as Easthampton, Belchertown, or Pelham as examples. The innovations themselves, as well as the process of building support for them, could

be very helpful to communities that are on the fence about moving toward more predictable permitting for business development. A forum like this could be made available afterward "on demand" for anyone to view.

LOCAL ECONOMIC DEVELOPMENT ASSESSMENTS

UMass Amherst conducts detailed municipal economic assessments, building on a program launched years ago by Northeastern University. In the Pioneer Valley area, Williamsburg is reportedly an example of a town that has participated in the UMass program, though the assessment report was unavailable for review by the consultants. It will be far more advantageous and less expensive to engage UMass for a service like the Economic Development Self-Assessment Tool (EDSAT) than for an individual town to hire a private consultant, and there is no need for a regional organization to create a competing program. Communities with an interest in learning more about their economic development strengths, weaknesses and opportunities should be encouraged to seek (for a fee) assistance from UMass and to share the report's findings with neighboring towns. PVPC could provide an important service to these communities by facilitating information sharing and building even stronger inter-local relationships.

Chapter 5. Appendix

SAMPLE INTERVIEW QUESTIONS: LOCAL OFFICIALS

- Based on what you know about the community you serve, how do you think your small businesses and self-employed people are doing today compared with a year ago – i.e., 2021, about a year into the pandemic? Do you have any contact with them?
- What businesses seem to be doing best at this point – again, based on what you know or have recently heard.
- If your community has any non-profit organizations – churches, social service agencies, or others – do you know how they are doing today? Do you have any contact with them?
- Do you know if your community's employers were able to get assistance from programs like the Paycheck Protection Program or Economic Injury Disaster Loan? Did you hear of any problems, such as businesses being on long waiting lists or not getting the information they needed from participating banks or government agencies?
- How, overall, is your community doing today compared with a year ago? Have you experienced any indications of economic stress among residents such as late property tax payments or an uptick in requests for assistance (food pantry or other local relief)? If so, have these types of stress affected day-to-day operations of town government?
- Did you notice differences in public participation in your town as the pandemic wore on? More participation? Less?
- Was your community able to use technology to keep government business running when people could not attend meetings in person?
- Are residents in your community generally supportive of economic development? How about your elected local officials?
- Are you aware of economic development organizations or activities in your community or generally in your area? If so, are you involved with any of them? Do you have time to be involved with them?
- If your community is interested in organizing to support economic growth, what would be helpful to the town to get started or make more progress, given your role as town administrator or town manager?
- Do you have any thoughts about what the Pioneer Valley Planning Commission could do or should do to assist your community with economic development planning or technical assistance?
- How do you think ARPA funds could be most helpful to your community?

SAMPLE INTERVIEW QUESTIONS: EMPLOYER ESTABLISHMENTS

- Have you worked with local towns, planning agencies, etc. in the past on economic development planning? If so, in what capacity?
- Where were you before the pandemic vs. now? What trends have emerged (long-term vs. short term)
- Is the industry growing, holding its own, or shrinking?
- What were the emerging trends in your industry before COVID e.g., changes in demographics, target industry opportunities, workforce readiness? How have they been a benefit/disadvantage?
- What are your greatest challenges as an employer? Pre and post-COVID.
- What are the greatest challenges for your employees? Pre and post-COVID.
- How much help or access to help have you needed? Did you approach the Town seeking help?
- What are common assets, priorities, and impediments or barriers?
- Do most of your employees live in proximity to your business?
- Who are your major competitors?
- What is the transportation situation like for your employees?
- Are people having to supplement their incomes with secondary jobs such as the gig economy?
- How's the internet where you are? If it's not great, how did that impact remote life?
- How in touch are you with other businesses in your industry? Is there any sort of cooperative effort for hiring, sharing information, etc.?

SAMPLE INTERVIEW QUESTIONS: REPRESENTATIVES OF REGIONAL COMMUNITY AND ECONOMIC DEVELOPMENT ORGANIZATIONS

- Do you personally live in the region?
- Who are the major employers in the area?
- How has the pandemic affected the communities you service?
- Do most of your employees live in proximity to the CDC?
- What is the transportation situation like?
- Are you seeing people having to supplement their incomes with secondary jobs such as the gig economy?
- How's the internet? If it's not great, how did that impact remote life?
- How in touch are you with other businesses? Is there any sort of cooperative effort for hiring, sharing information, etc.?
- Which type of these groups have been more successful than others and why do you think that is?
- Where were you before the pandemic vs. now? What trends have emerged (long-term vs. short term).
- Have you worked with local towns, planning agencies, etc. in the past on economic development planning? If so, in what capacity?
- How is your relationship with PVPC? What works well and what should be done differently?
- What are the greatest challenges for employers? Pre and post-COVID.
- What are the greatest challenges for employees? Pre and post-COVID.
- How much help or access to help have you needed? Who did you approach seeking help?
- Do you offer business assistance e.g., grants/loans, technical assistance, etc.?
- What is the most effective/popular program your offer?
- (If offering loans) Are loans getting paid back in a timely manner?

REGIONAL INFOGRAPHICS

BELCHERTOWN: KEY FACTS

POPULATION	**15,350**
% CHANGE 2010-2020	**4.8%** ↗
MEDIAN AGE	**42.6**
POPULATION DENSITY (Persons per square mile)	**291.82**
HOUSEHOLDS	**6,102**
% CHANGE 2010-2020	**9.1%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**7.8%**
UNEMPLOYMENT RATE (2021)	**4.85%**
INCOME PER CAPITA	**$37,377**
% POPULATION IN POVERTY	**4.97%**

92.74%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
25.93%	TAX-EXEMPT % OF TOTAL ACRES
$113,048	EQUALIZED VALUATION PER CAPITA
0.009	ROAD MILES PER CAPITA

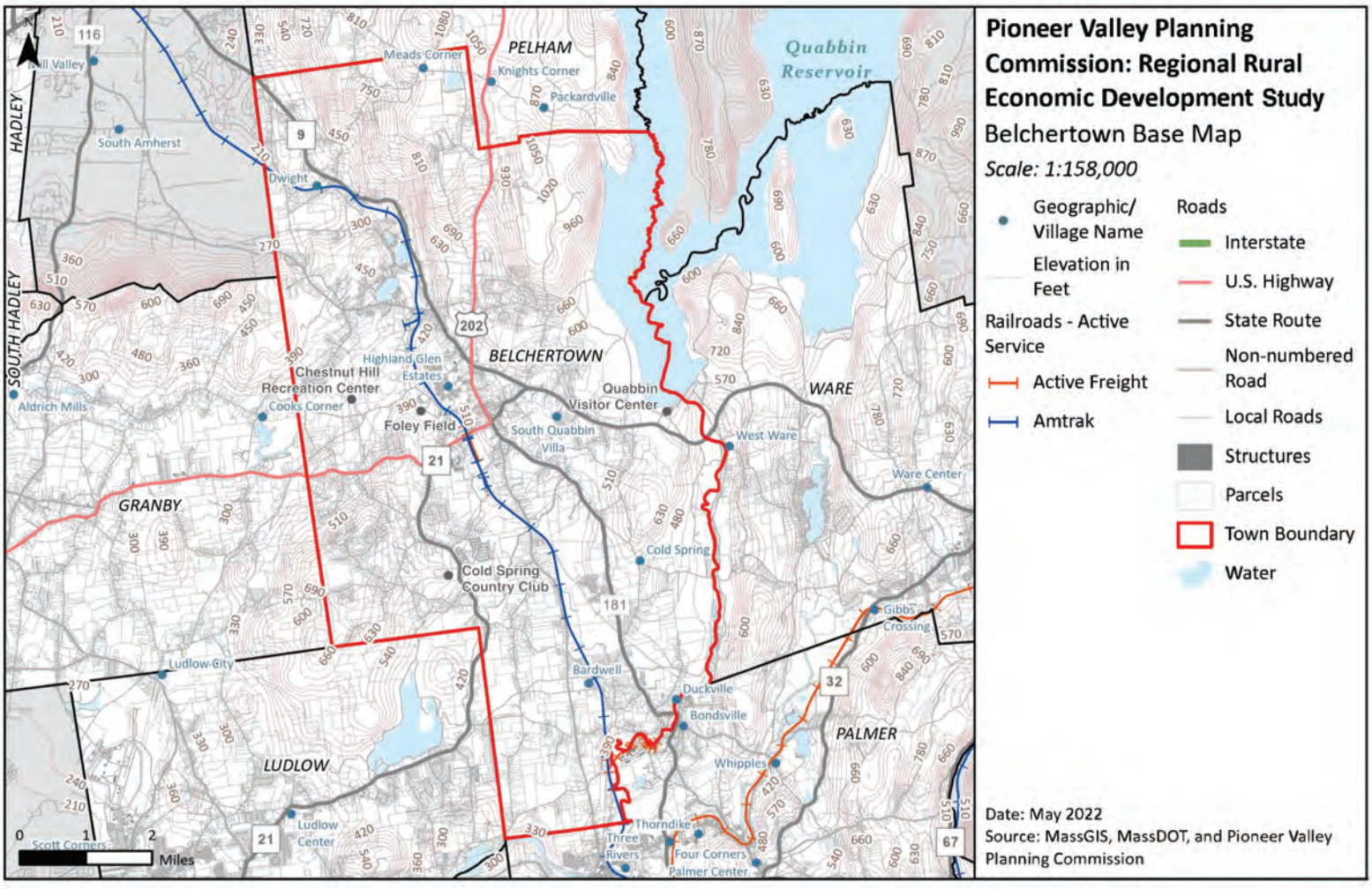
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care & Social Assistance	**18.3%**
Retail Trade	**10.1%**
Transportation & Warehousing	**8.1%**

*Percentages are based upon Belchertown's employment base of **2,605 average weekly jobs** across **356 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



GRANBY: KEY FACTS

POPULATION	6,110
% CHANGE 2010-2020	-1.8% ↘
MEDIAN AGE	47.2
POPULATION DENSITY (Persons per square mile)	219.68
HOUSEHOLDS	2,401
% CHANGE 2010-2020	1.4% ↗
SELF-EMPLOYED RESIDENT WORKERS	8.1%
UNEMPLOYMENT RATE (2021)	4.71%
INCOME PER CAPITA	$34,242
% POPULATION IN POVERTY	4.42%

91.59%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
21.67%	TAX-EXEMPT % OF TOTAL ACRES
$111,002	EQUALIZED VALUATION PER CAPITA
0.009	ROAD MILES PER CAPITA

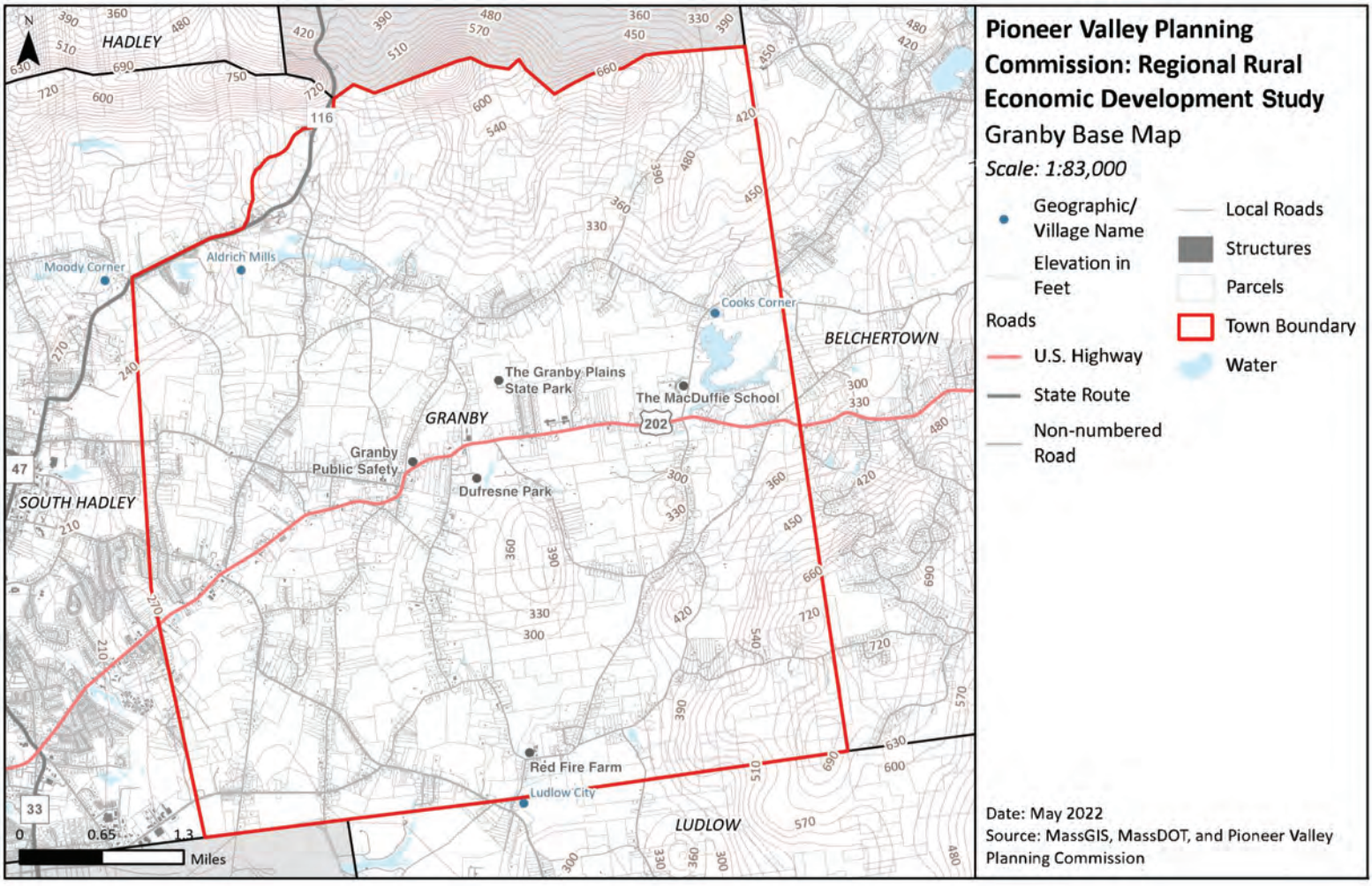
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Educational Services	22.5%
Construction	15.3%
Health Care & Social Assistance	10.1%

*Percentages are based upon Granby's employment base of **943 average weekly jobs** across **151 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



HADLEY: KEY FACTS

POPULATION	5,325
% CHANGE 2010-2020	1.4% ↗
MEDIAN AGE	50.3
POPULATION DENSITY (Persons per square mile)	230.68
HOUSEHOLDS	2,212
% CHANGE 2010-2020	5.0% ↗
SELF-EMPLOYED RESIDENT WORKERS	14.4%
UNEMPLOYMENT RATE (2021)	4.59%
INCOME PER CAPITA	$36,661
% POPULATION IN POVERTY	4.95%

67.18%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
22.10%	TAX-EXEMPT % OF TOTAL ACRES
$207,225	EQUALIZED VALUATION PER CAPITA
0.012	ROAD MILES PER CAPITA

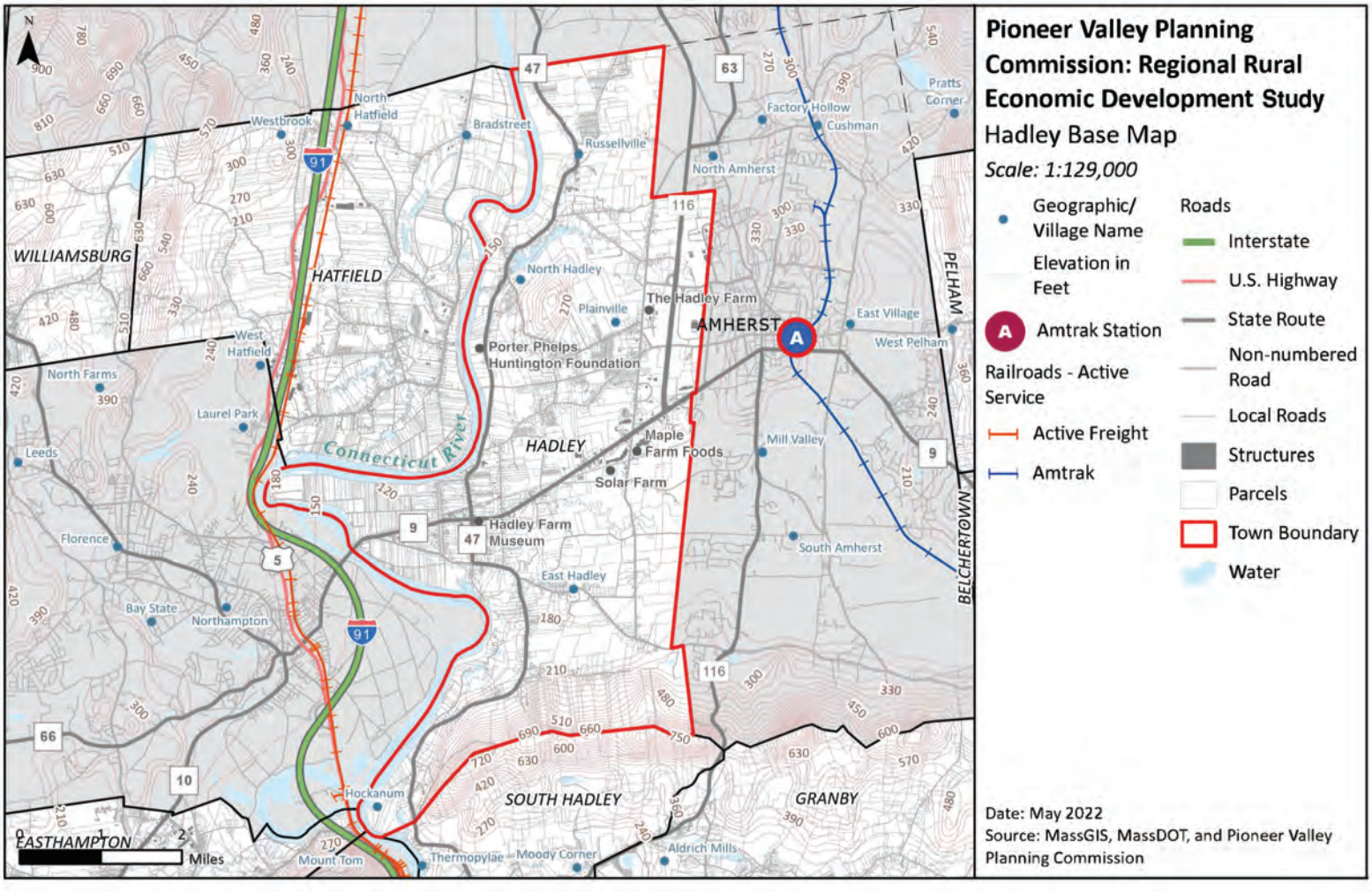
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Wholesale Trade	32.5%
Educational Services	15.1%
Accomodation and Food Services	13.3%

*Percentages are based upon Hadley's employment base of **5,560 average weekly jobs** across **381 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



PELHAM: KEY FACTS

POPULATION	1,280
% CHANGE 2010-2020	-3.1% ↘
MEDIAN AGE	46.0
POPULATION DENSITY (Persons per square mile)	50.99
HOUSEHOLDS	544
% CHANGE 2010-2020	-0.9% ↘
SELF-EMPLOYED RESIDENT WORKERS	18.4%
UNEMPLOYMENT RATE (2021)	4.30%
INCOME PER CAPITA	$38,728
% POPULATION IN POVERTY	6.33%

91.94%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
49.85%	TAX-EXEMPT % OF TOTAL ACRES
$144,435	EQUALIZED VALUATION PER CAPITA
0.017	ROAD MILES PER CAPITA

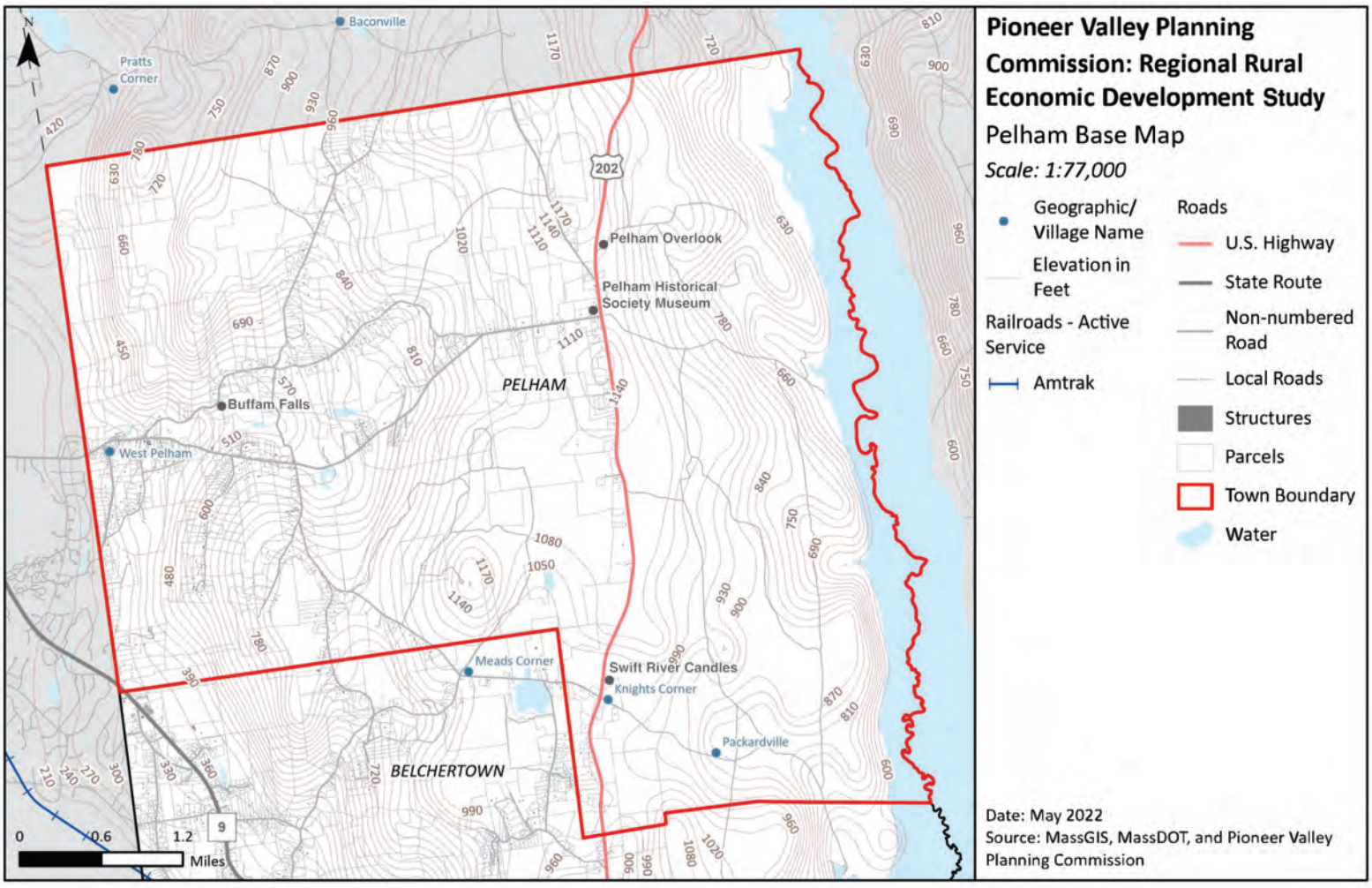
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Professional, Scientific, and Technical Services	16.4%
Construction	7.5%
Health Care and Social Assistance	5.5%

*Percentages are based upon Pelham's employment base of **146 average weekly jobs** across **34 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



SOUTH HADLEY: KEY FACTS

POPULATION	**18,150**
% CHANGE 2010-2020	**3.5%** ↗
MEDIAN AGE	**42.2**
POPULATION DENSITY (Persons per square mile)	**1,024.38**
HOUSEHOLDS	**7,077**
% CHANGE 2010-2020	**4.1%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**6.6%**
UNEMPLOYMENT RATE (2021)	**5.31%**
INCOME PER CAPITA	**$33,087**
% POPULATION IN POVERTY	**7.78%**

91.81%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
34.83%	TAX-EXEMPT % OF TOTAL ACRES
$99,019	EQUALIZED VALUATION PER CAPITA
0.005	ROAD MILES PER CAPITA

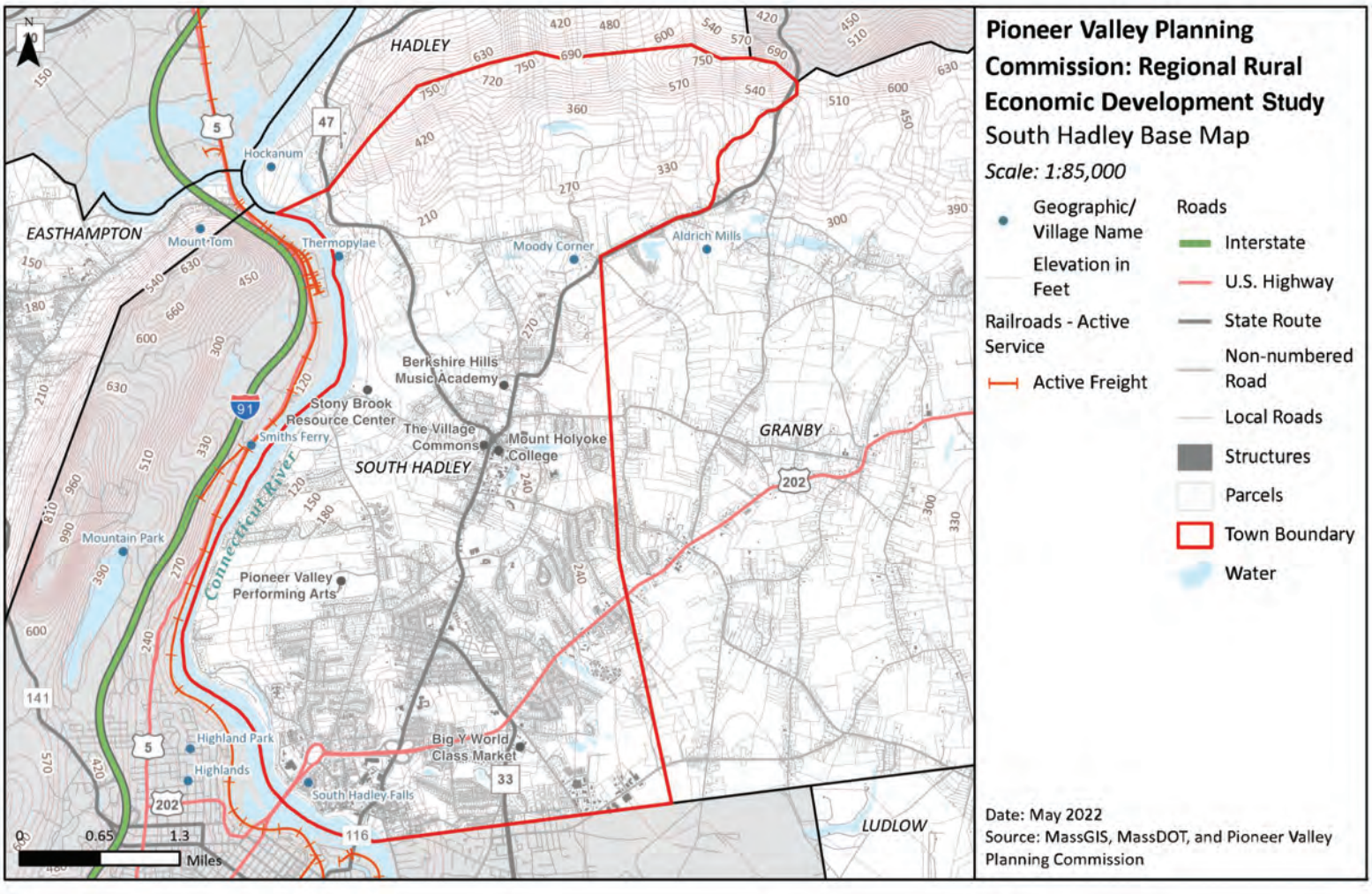
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Educational Services	**36.1%**
Health Care and Social Assistance	**11.3%**
Retail Trade	**7.9%**

*Percentages are based upon South Hadley's employment base of **4,462 average weekly jobs** across **424 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



WARE: KEY FACTS

POPULATION	**10,066**
% CHANGE 2010-2020	**2.0%** ↗
MEDIAN AGE	**40.4**
POPULATION DENSITY (Persons per square mile)	**292.83**
HOUSEHOLDS	**4,321**
% CHANGE 2010-2020	**4.9%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**3.8%**
UNEMPLOYMENT RATE (2021)	**6.44%**
INCOME PER CAPITA	**$24,566**
% POPULATION IN POVERTY	**12.24%**

84.80%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
29.66%	TAX-EXEMPT % OF TOTAL ACRES
$83,620	EQUALIZED VALUATION PER CAPITA
0.009	ROAD MILES PER CAPITA

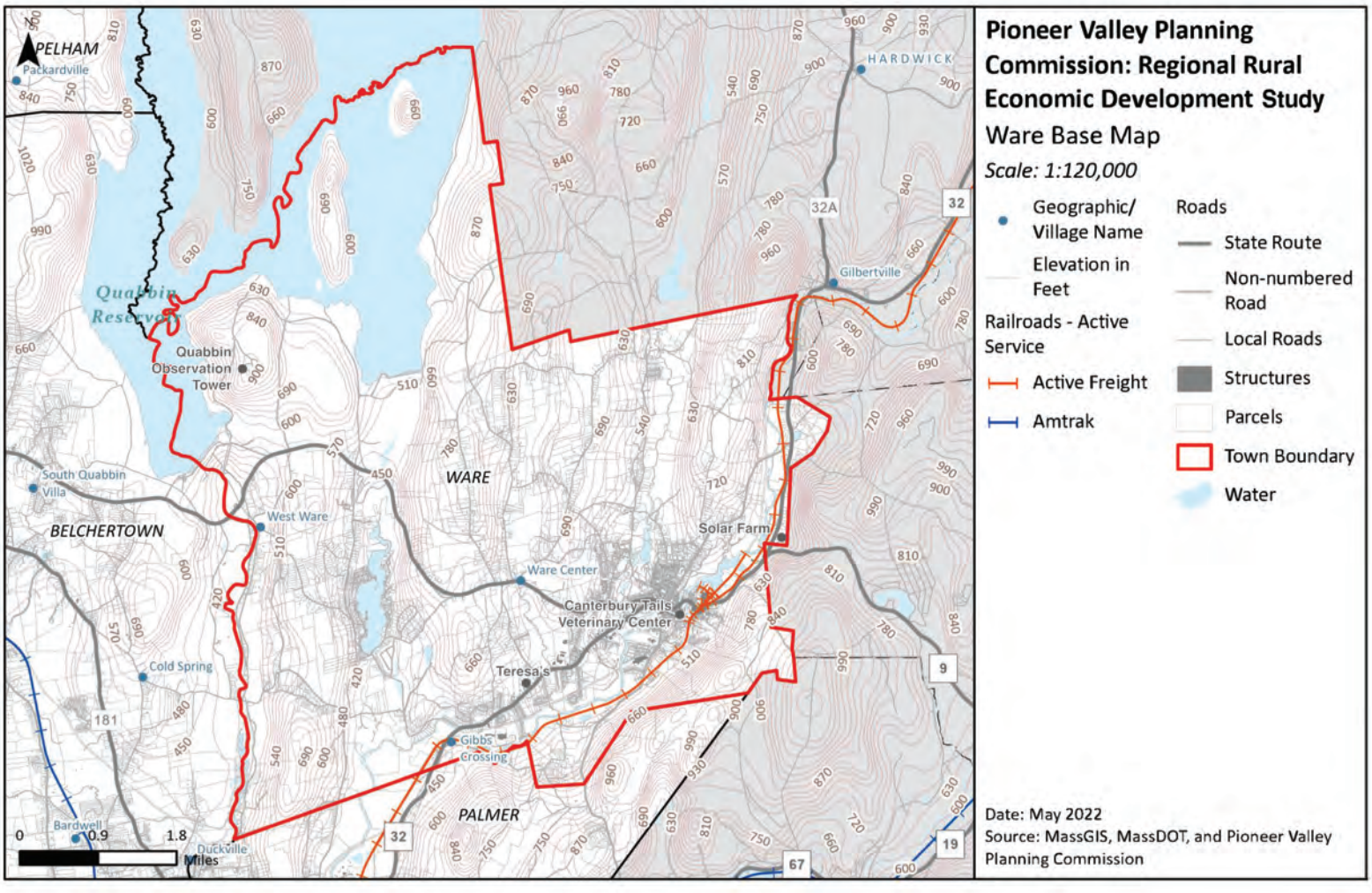
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Retail Trade	**31.2%**
Health Care and Social Assistance	**12.2%**
Manufacturing	**11.6%**

*Percentages are based upon Ware's employment base of **2,442 average weekly jobs** across **283 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



BRIMFIELD: KEY FACTS

POPULATION	3,694
% CHANGE 2010-2020	2.4% ↗
MEDIAN AGE	46.2
POPULATION DENSITY (Persons per square mile)	106.24
HOUSEHOLDS	1,496
% CHANGE 2010-2020	4.7% ↗
SELF-EMPLOYED RESIDENT WORKERS	10.2%
UNEMPLOYMENT RATE (2021)	5.64%
INCOME PER CAPITA	$39,581
% POPULATION IN POVERTY	6.22%

89.00%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
17.19%	TAX-EXEMPT % OF TOTAL ACRES
$126,793	EQUALIZED VALUATION PER CAPITA
0.017	ROAD MILES PER CAPITA

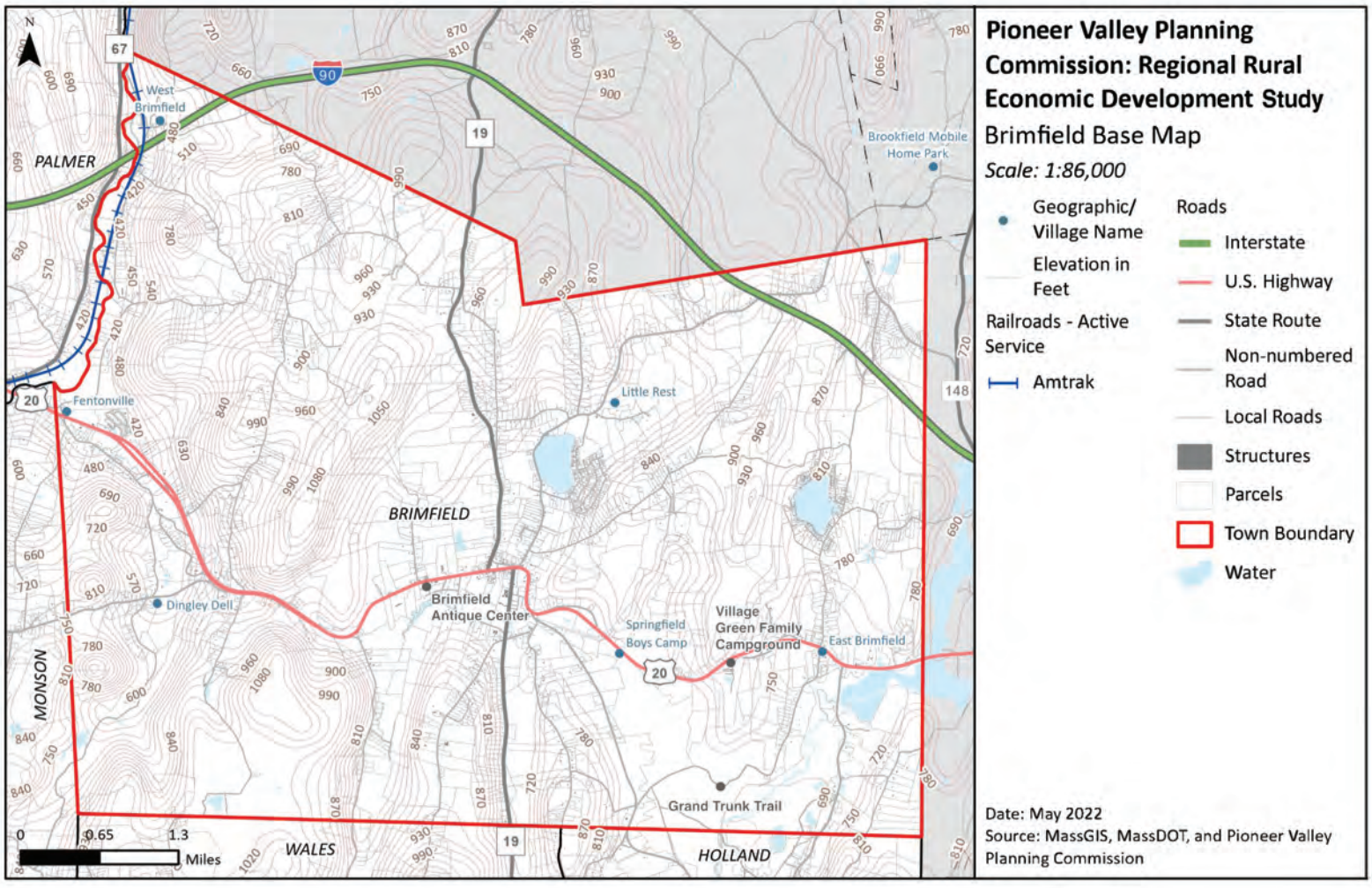
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	14.0%
Administrative and Support and Waste Management and Remediation Services	5.8%
Transportation and Warehousing	4.7%

*Percentages are based upon Brimfield's employment base of **570 average weekly jobs** across **118 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



EAST LONGMEADOW: KEY FACTS

POPULATION	**16,430**
% CHANGE 2010-2020	**4.5%** ↗
MEDIAN AGE	**43.1**
POPULATION DENSITY (Persons per square mile)	**1,270.06**
HOUSEHOLDS	**6,134**
% CHANGE 2010-2020	**4.8%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**11.3%**
UNEMPLOYMENT RATE (2021)	**4.52%**
INCOME PER CAPITA	**$43,755**
% POPULATION IN POVERTY	**3.93%**

82.93%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
15.24%	TAX-EXEMPT % OF TOTAL ACRES
$132,409	EQUALIZED VALUATION PER CAPITA
0.006	ROAD MILES PER CAPITA

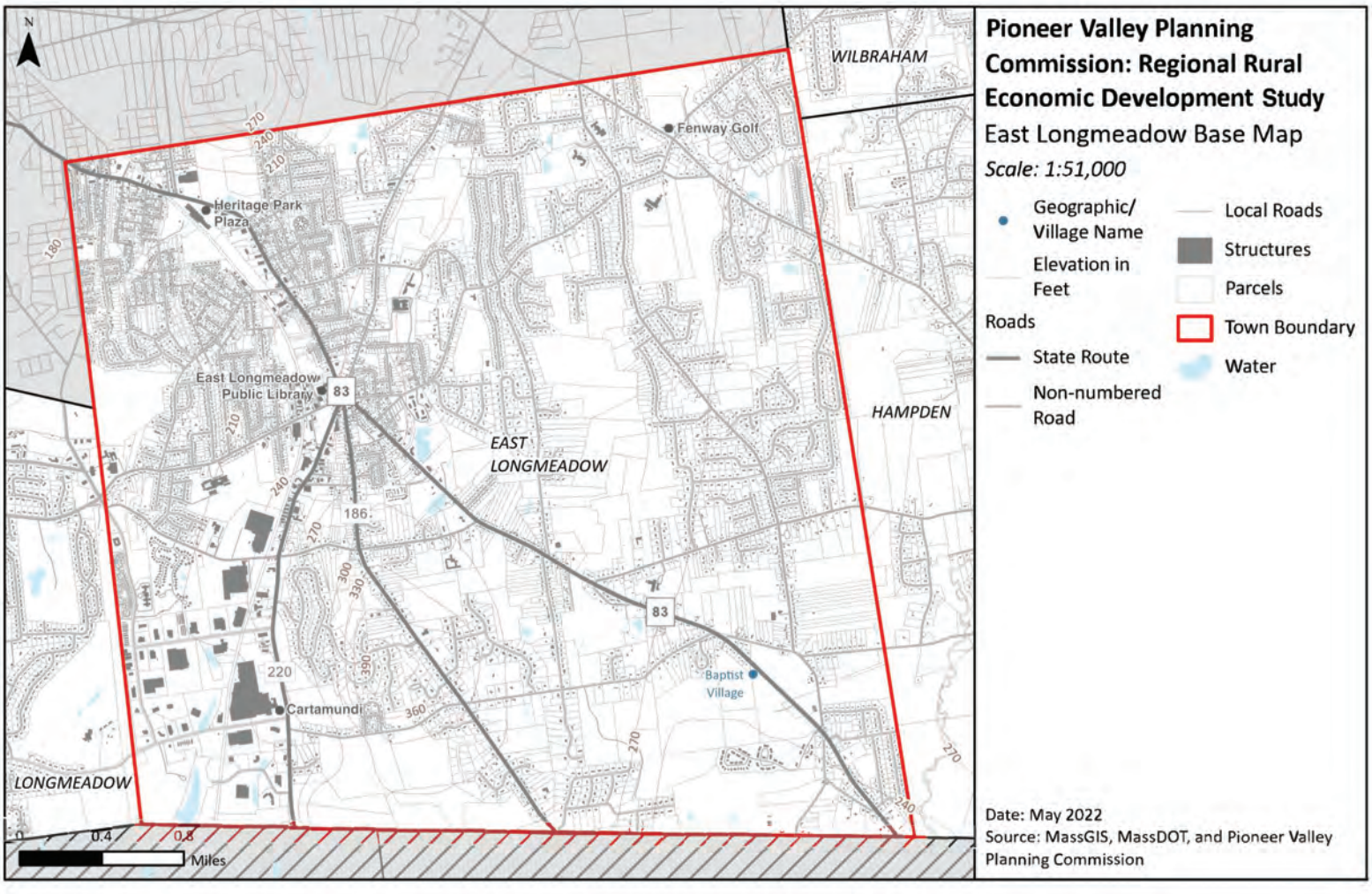
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	**23.4%**
Manufacturing	**22.8%**
Retail Trade	**9.2%**

*Percentages are based upon East Longmeadow's employment base of **7,517 average weekly jobs** across **652 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



HAMPDEN: KEY FACTS

POPULATION	4,966
% CHANGE 2010-2020	-3.4% ↘
MEDIAN AGE	55.3
POPULATION DENSITY (Persons per square mile)	253.23
HOUSEHOLDS	1,945
% CHANGE 2010-2020	2.5% ↗
SELF-EMPLOYED RESIDENT WORKERS	11.5%
UNEMPLOYMENT RATE (2021)	4.73%
INCOME PER CAPITA	$40,946
% POPULATION IN POVERTY	2.20%

84.78%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
9.96%	TAX-EXEMPT % OF TOTAL ACRES
$127,919	EQUALIZED VALUATION PER CAPITA
0.010	ROAD MILES PER CAPITA

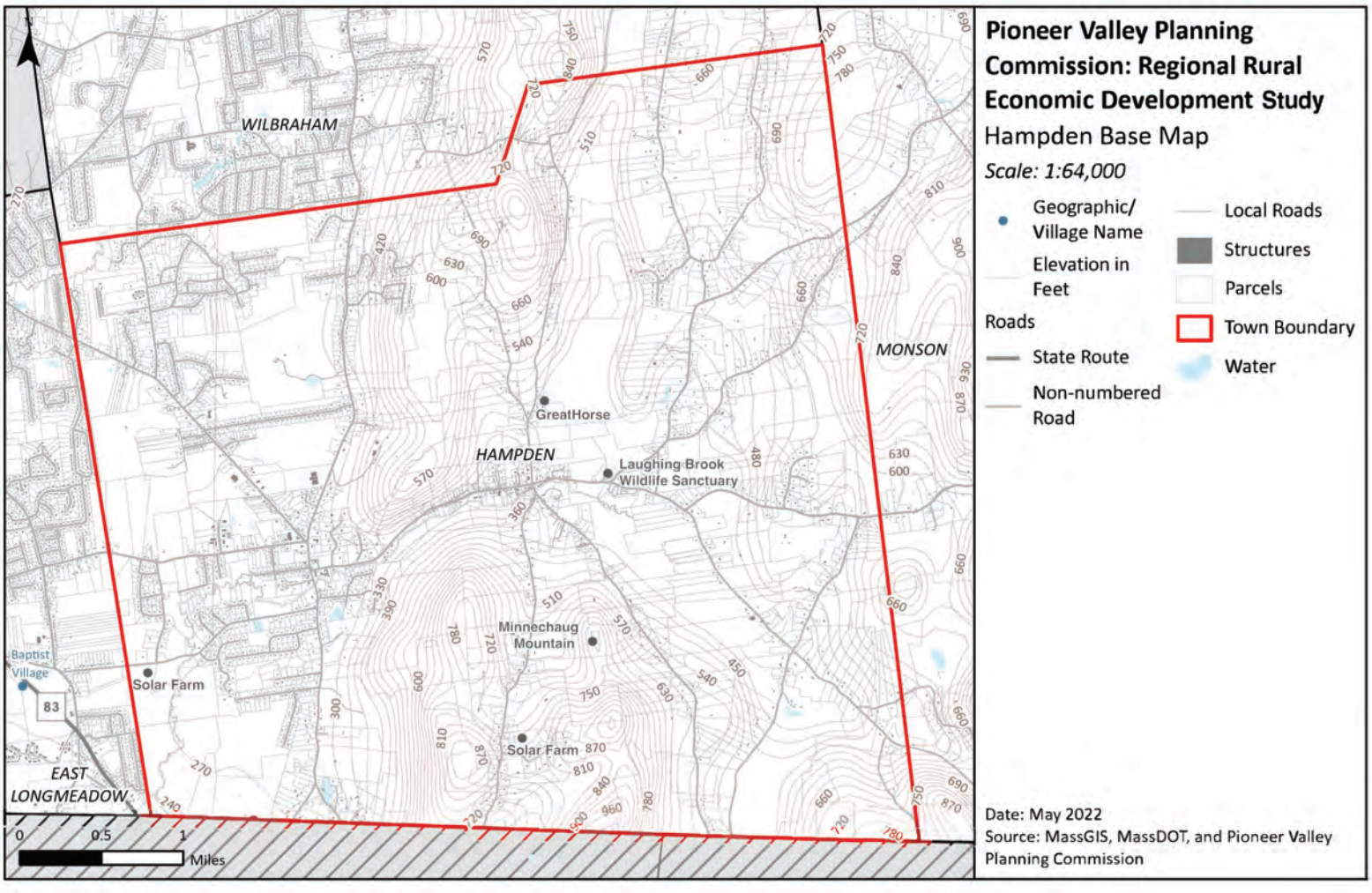
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	15.4%
Accomodation and Food Services	14.0%
Construction	10.0%

*Percentages are based upon Hampden's employment base of **963 average weekly jobs** across **148 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



HOLLAND: KEY FACTS

POPULATION	2,603
% CHANGE 2010-2020	5.0% ↗
MEDIAN AGE	47.7
POPULATION DENSITY (Persons per square mile)	211.93
HOUSEHOLDS	1,095
% CHANGE 2010-2020	10.2% ↗
SELF-EMPLOYED RESIDENT WORKERS	11.9%
UNEMPLOYMENT RATE (2021)	5.08%
INCOME PER CAPITA	$36,145
% POPULATION IN POVERTY	7.06%

95.84%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
30.17%	TAX-EXEMPT % OF TOTAL ACRES
$148,430	EQUALIZED VALUATION PER CAPITA
0.014	ROAD MILES PER CAPITA

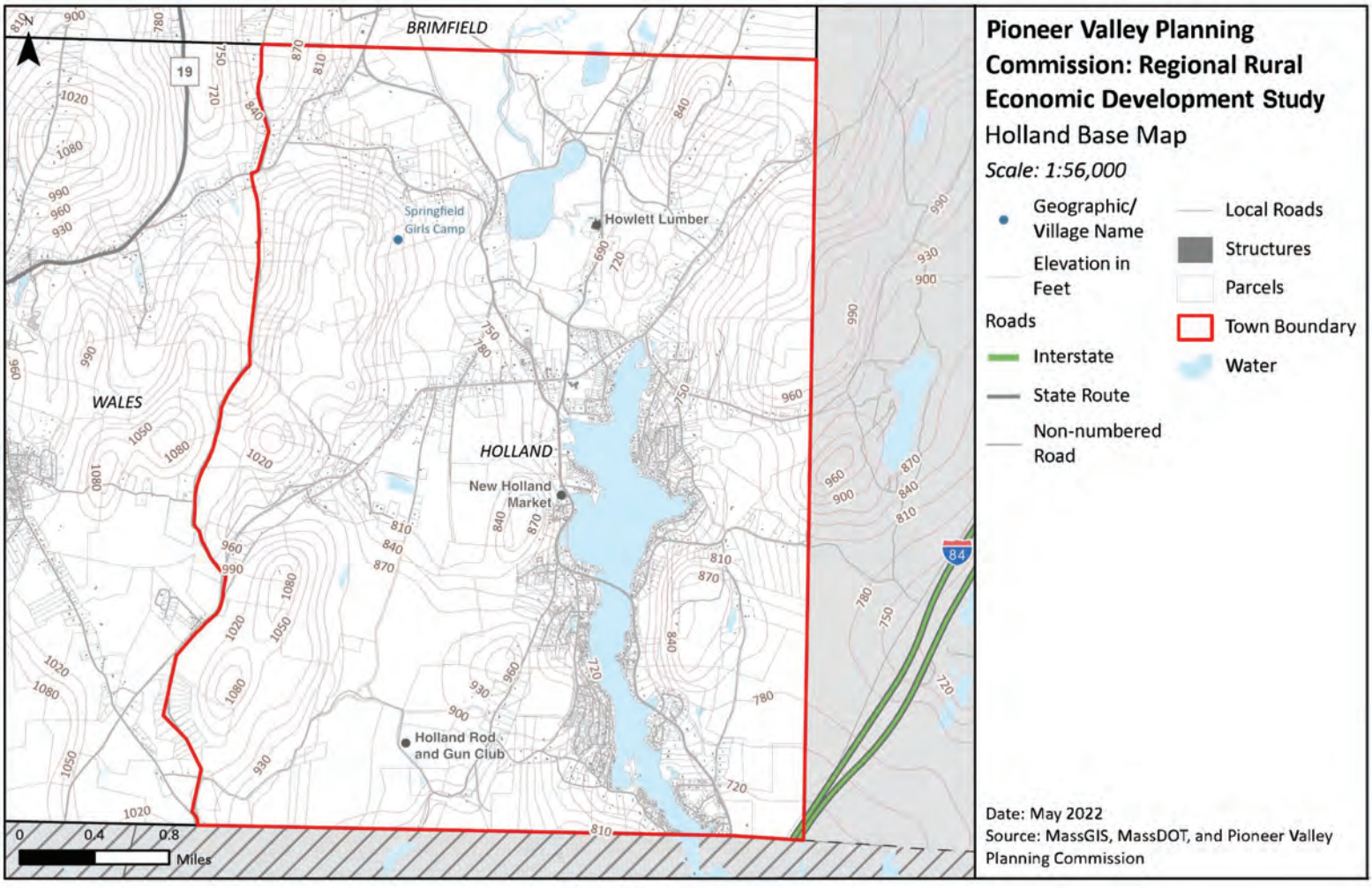
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	6.3%
Retail Trade	5.8%
Construction	5.3%

*Percentages are based upon Holland's employment base of **207 average weekly jobs** across **36 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



LONGMEADOW: KEY FACTS

POPULATION	15,853
% CHANGE 2010-2020	0.4%
MEDIAN AGE	45.7
POPULATION DENSITY (Persons per square mile)	1,744.11
HOUSEHOLDS	5,751
% CHANGE 2010-2020	0.2%
SELF-EMPLOYED RESIDENT WORKERS	12.7%
UNEMPLOYMENT RATE (2021)	4.22%
INCOME PER CAPITA	$77,765
% POPULATION IN POVERTY	2.29%

93.41%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
31.89%	TAX-EXEMPT % OF TOTAL ACRES
$147,031	EQUALIZED VALUATION PER CAPITA
0.005	ROAD MILES PER CAPITA

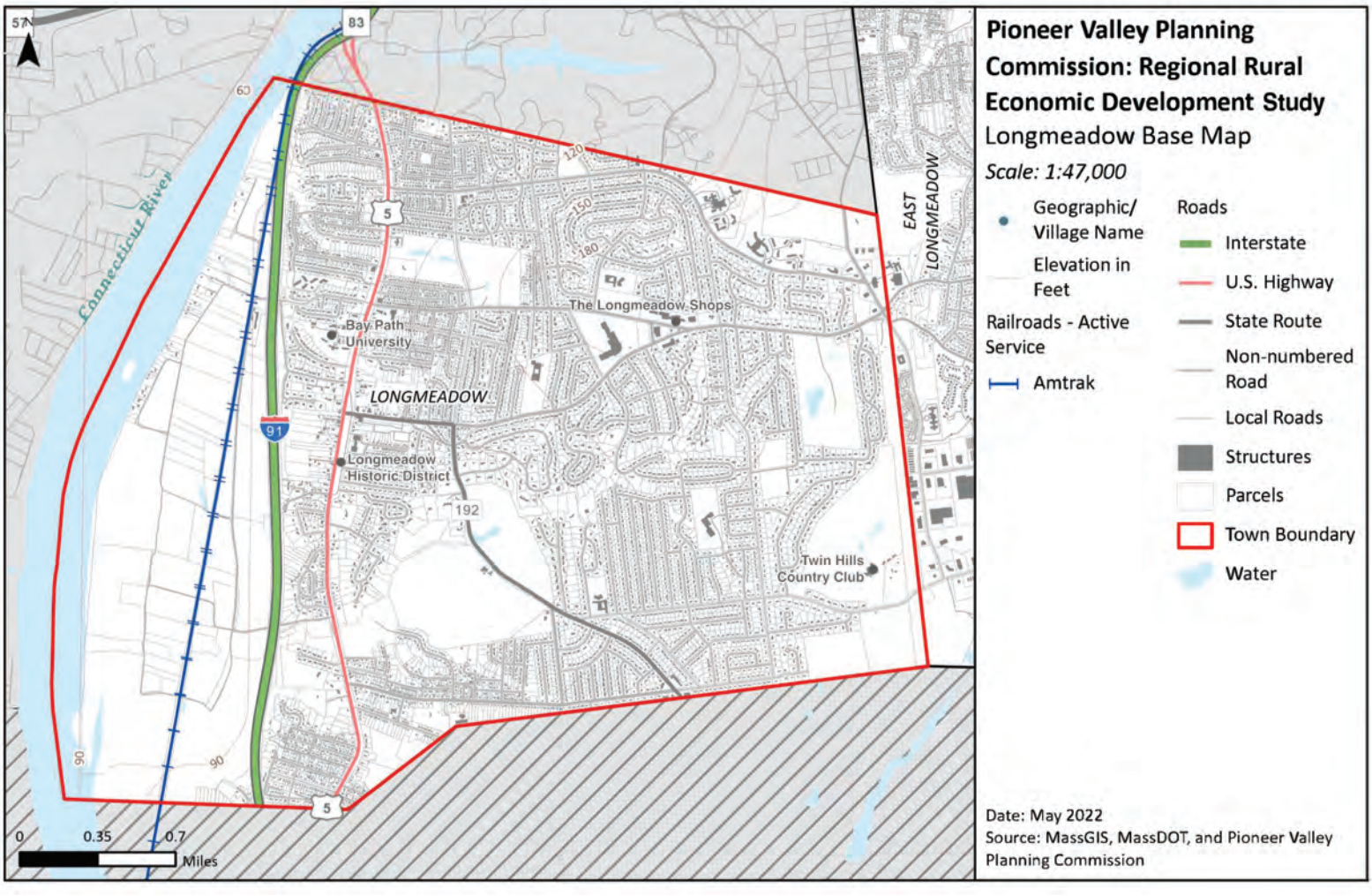
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	30.2%
Educational Services	29.3%
Retail Trade	10.5%

*Percentages are based upon Longmeadow's employment base of **3,900 average weekly jobs** across **411 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



LUDLOW: KEY FACTS

POPULATION	21,002
% CHANGE 2010-2020	-0.5% ↘
MEDIAN AGE	45.6
POPULATION DENSITY (Persons per square mile)	772.26
HOUSEHOLDS	8,404
% CHANGE 2010-2020	4.0% ↗
SELF-EMPLOYED RESIDENT WORKERS	8.0%
UNEMPLOYMENT RATE (2021)	6.58%
INCOME PER CAPITA	$30,357
% POPULATION IN POVERTY	8.28%

79.70%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
23.34%	TAX-EXEMPT % OF TOTAL ACRES
$106,566	EQUALIZED VALUATION PER CAPITA
0.006	ROAD MILES PER CAPITA

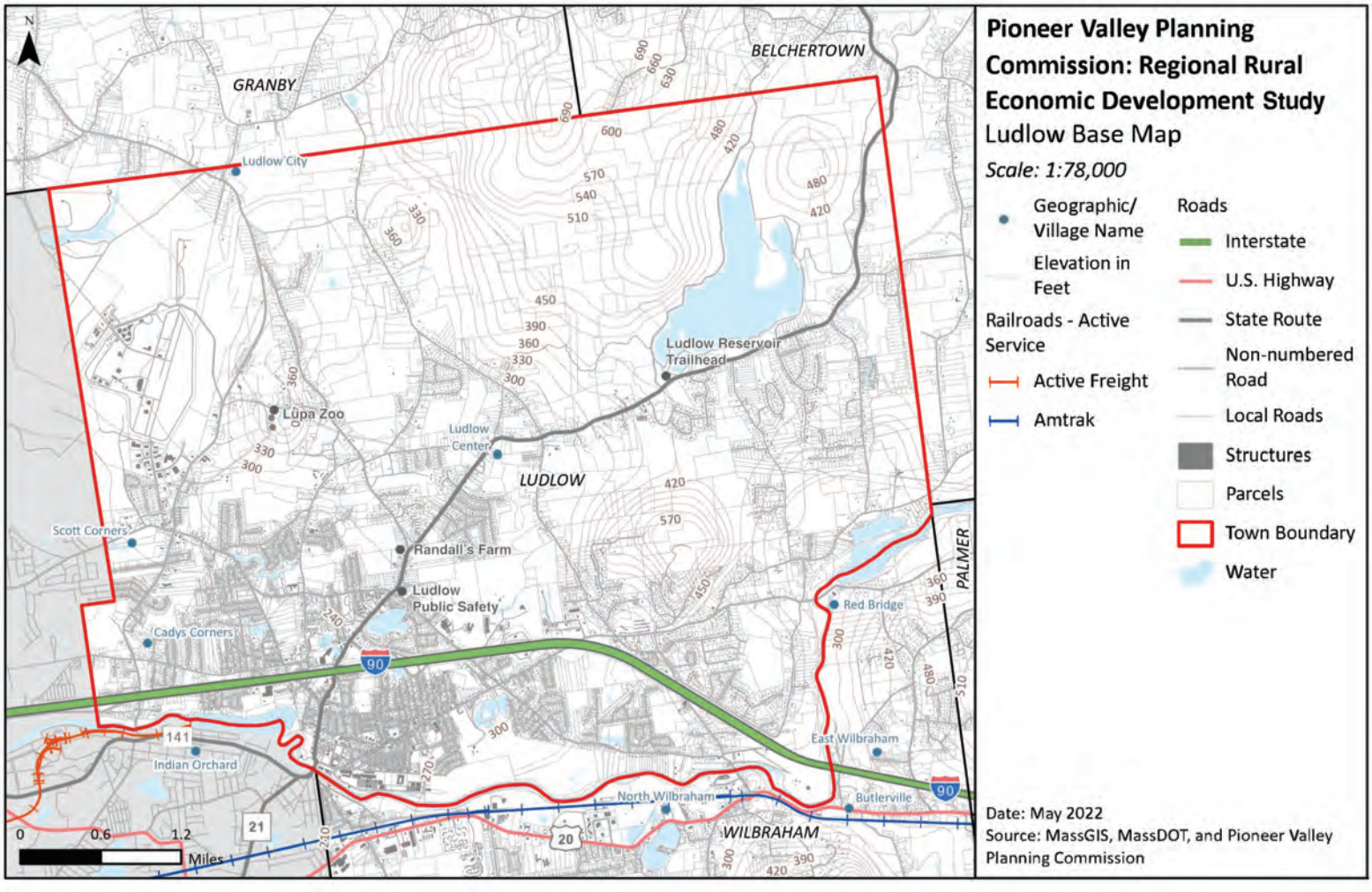
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	13.3%
Construction	11.9%
Manufacturing	9.5%

*Percentages are based upon Ludlow's employment base of **6,361 average weekly jobs** across **560 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



MONSON: KEY FACTS

POPULATION	8,150
% CHANGE 2010-2020	-4.9% ↘
MEDIAN AGE	50.3
POPULATION DENSITY (Persons per square mile)	184.29
HOUSEHOLDS	3,371
% CHANGE 2010-2020	2.6% ↗
SELF-EMPLOYED RESIDENT WORKERS	14.7%
UNEMPLOYMENT RATE (2021)	5.86%
INCOME PER CAPITA	$31,636
% POPULATION IN POVERTY	6.96%

89.90%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
19.09%	TAX-EXEMPT % OF TOTAL ACRES
$97,186	EQUALIZED VALUATION PER CAPITA
0.011	ROAD MILES PER CAPITA

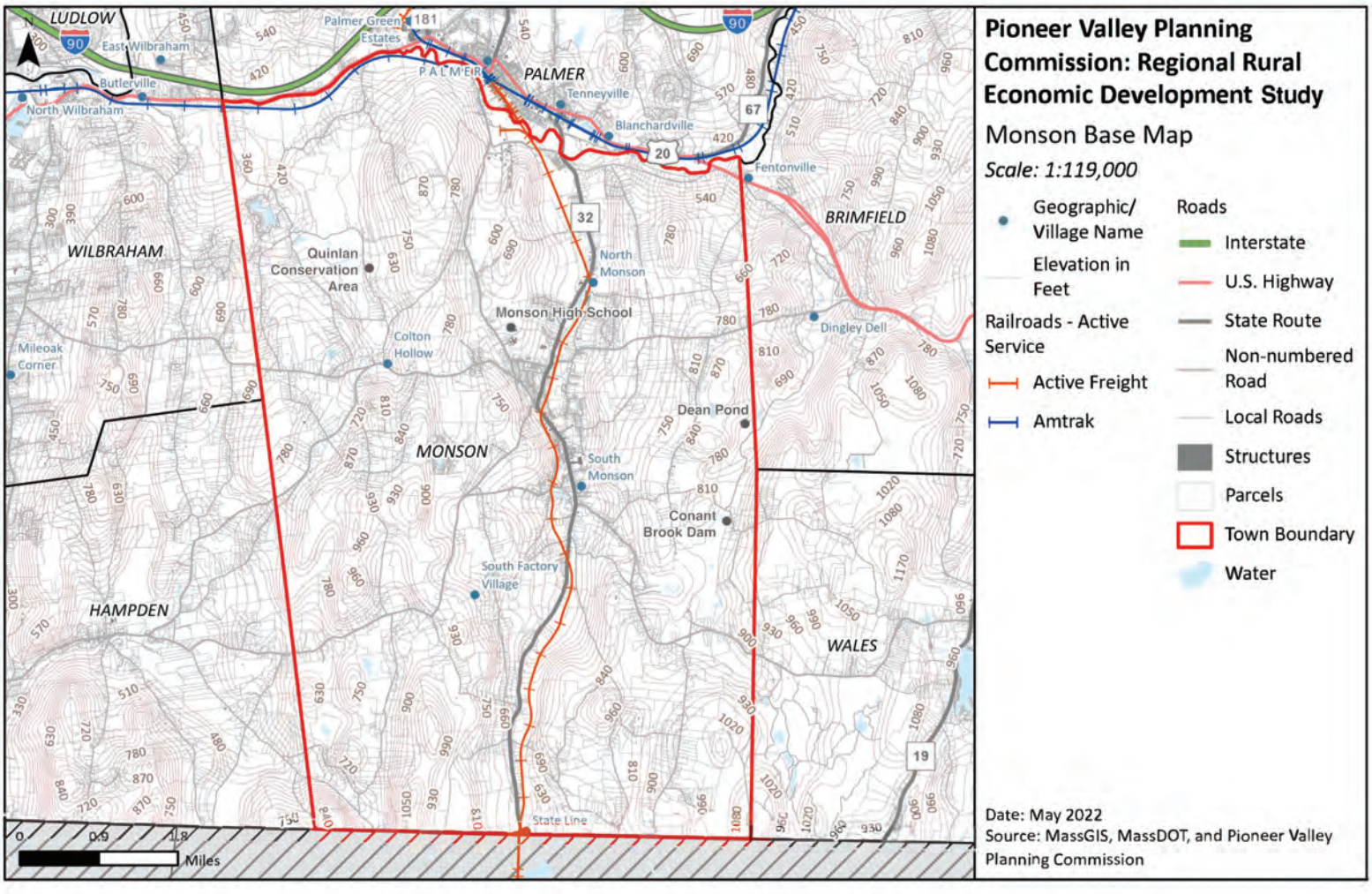
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Manufacturing	16.3%
Retail Trade	12.9%
Health Care and Social Assistance	10.5%

*Percentages are based upon Monson's employment base of **1,554 average weekly jobs** across **204 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



PALMER: KEY FACTS

POPULATION	**12,448**
% CHANGE 2010-2020	**2.6%** ↗
MEDIAN AGE	**45.7**
POPULATION DENSITY (Persons per square mile)	**394.26**
HOUSEHOLDS	**5,448**
% CHANGE 2010-2020	**6.9%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**8.0%**
UNEMPLOYMENT RATE (2021)	**7.74%**
INCOME PER CAPITA	**$29,236**
% POPULATION IN POVERTY	**9.68%**

83.20%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
19.56%	TAX-EXEMPT % OF TOTAL ACRES
$83,161	EQUALIZED VALUATION PER CAPITA
0.007	ROAD MILES PER CAPITA

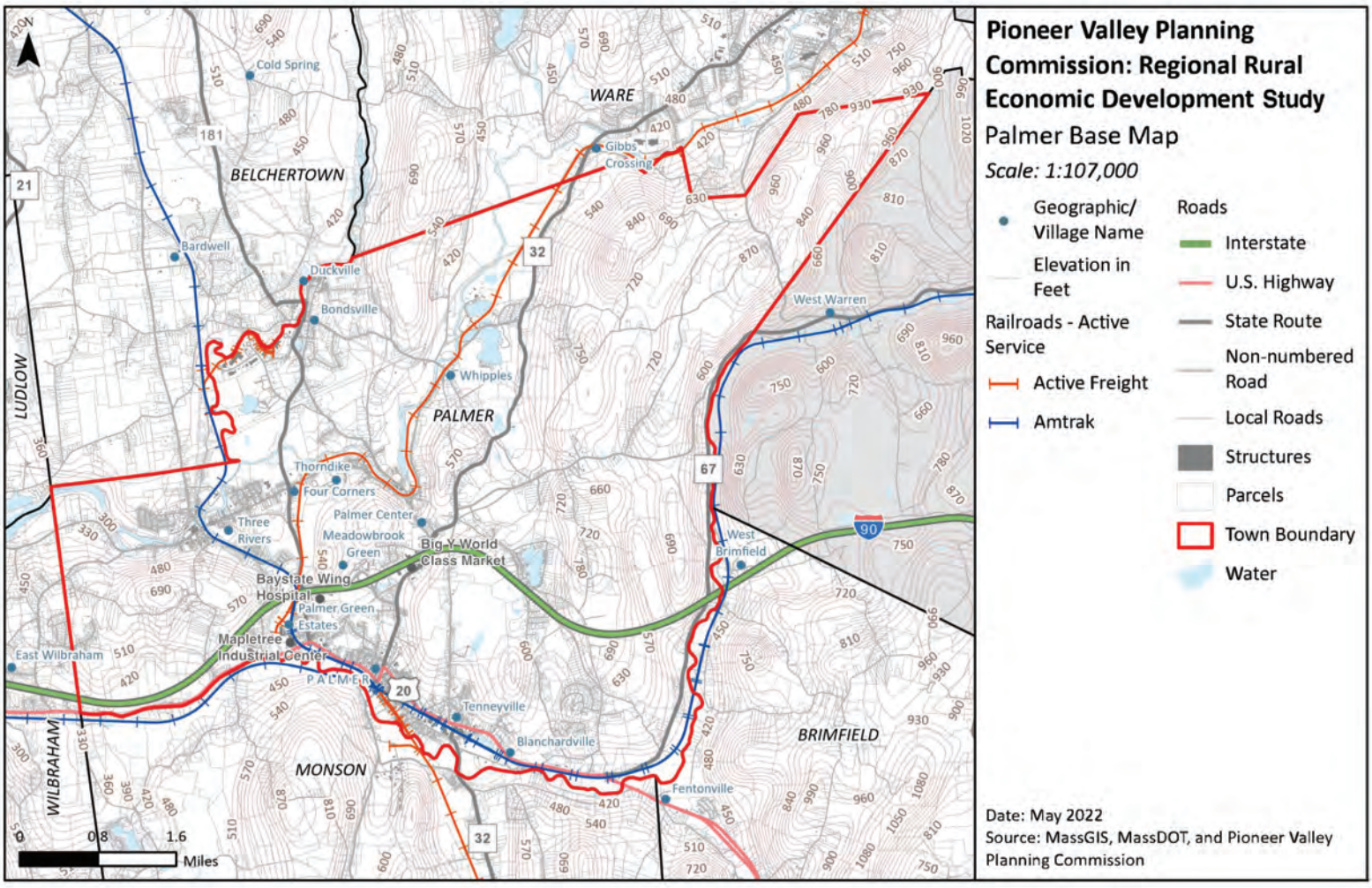
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	**22.0%**
Manufacturing	**14.6%**
Retail Trade	**10.6%**

*Percentages are based upon Palmer's employment base of **4,268 average weekly jobs** across **443 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



WALES: KEY FACTS

POPULATION	1,832
% CHANGE 2010-2020	-0.4%
MEDIAN AGE	41.8
POPULATION DENSITY (Persons per square mile)	116.30
HOUSEHOLDS	757
% CHANGE 2010-2020	2.9%
SELF-EMPLOYED RESIDENT WORKERS	7.8%
UNEMPLOYMENT RATE (2021)	7.06%
INCOME PER CAPITA	$23,995
% POPULATION IN POVERTY	5.85%

91.12%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
47.92%	TAX-EXEMPT % OF TOTAL ACRES
$98,205	EQUALIZED VALUATION PER CAPITA
0.011	ROAD MILES PER CAPITA

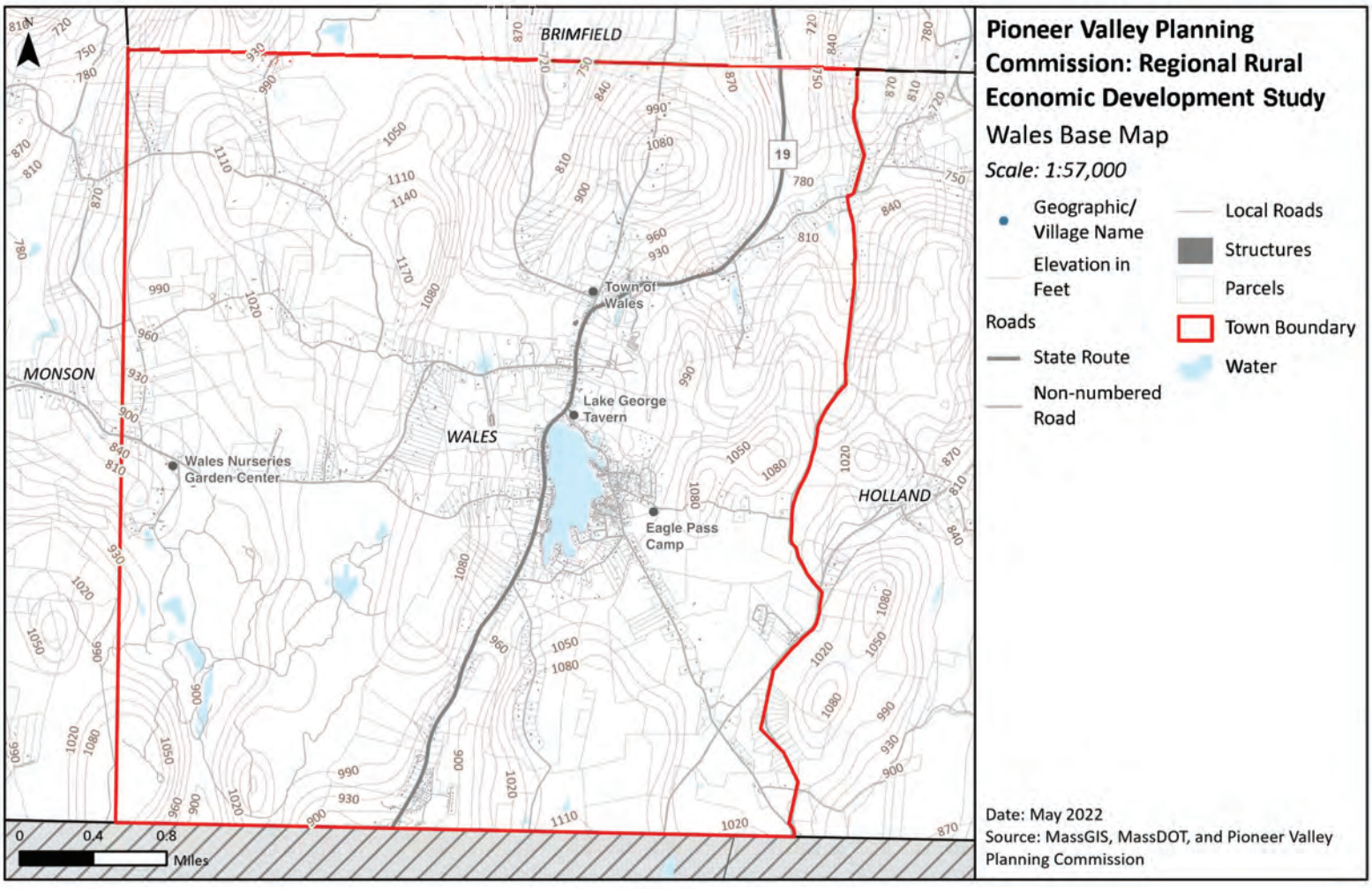
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	8.7%
Professional, Scientific, and Technical Services	4.7%
No Industry Data Available	----

Due to the limited number of jobs in Wales, employment and wage data are only available for two industries. Percentages are based upon Wales' employment base of ***172 average weekly jobs*** *across* ***50 establishments****. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



WILBRAHAM: KEY FACTS

POPULATION	14,613
% CHANGE 2010-2020	2.8%
MEDIAN AGE	46.1
POPULATION DENSITY (Persons per square mile)	662.89
HOUSEHOLDS	5,510
% CHANGE 2010-2020	3.8%
SELF-EMPLOYED RESIDENT WORKERS	9.0%
UNEMPLOYMENT RATE (2021)	5.10%
INCOME PER CAPITA	$50,471
% POPULATION IN POVERTY	4.33%

88.59%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
25.49%	TAX-EXEMPT % OF TOTAL ACRES
$127,639	EQUALIZED VALUATION PER CAPITA
0.007	ROAD MILES PER CAPITA

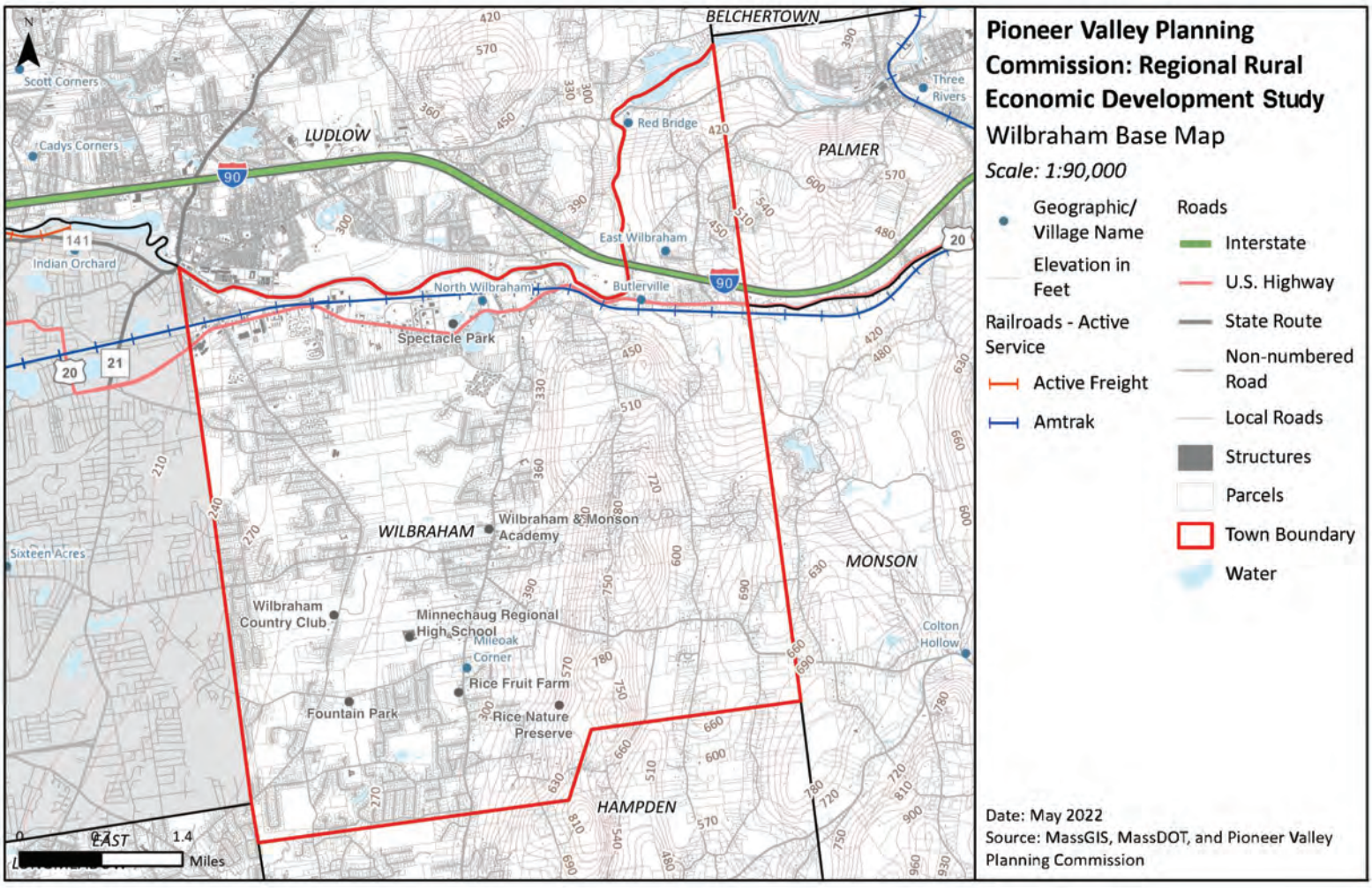
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	14.1%
Educational Services	13.5%
Retail Trade	11.6%

*Percentages are based upon Wilbraham's employment base of **5,274 average weekly jobs** across **407 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



BLANDFORD: KEY FACTS

POPULATION	1,215
% CHANGE 2010-2020	-1.5% ↘
MEDIAN AGE	52.5
POPULATION DENSITY (Persons per square mile)	23.56
HOUSEHOLDS	511
% CHANGE 2010-2020	3.9% ↗
SELF-EMPLOYED RESIDENT WORKERS	18.1%
UNEMPLOYMENT RATE (2021)	5.21%
INCOME PER CAPITA	$31,952
% POPULATION IN POVERTY	4.90%

72.25%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
51.38%	TAX-EXEMPT % OF TOTAL ACRES
$144,377	EQUALIZED VALUATION PER CAPITA
0.060	ROAD MILES PER CAPITA

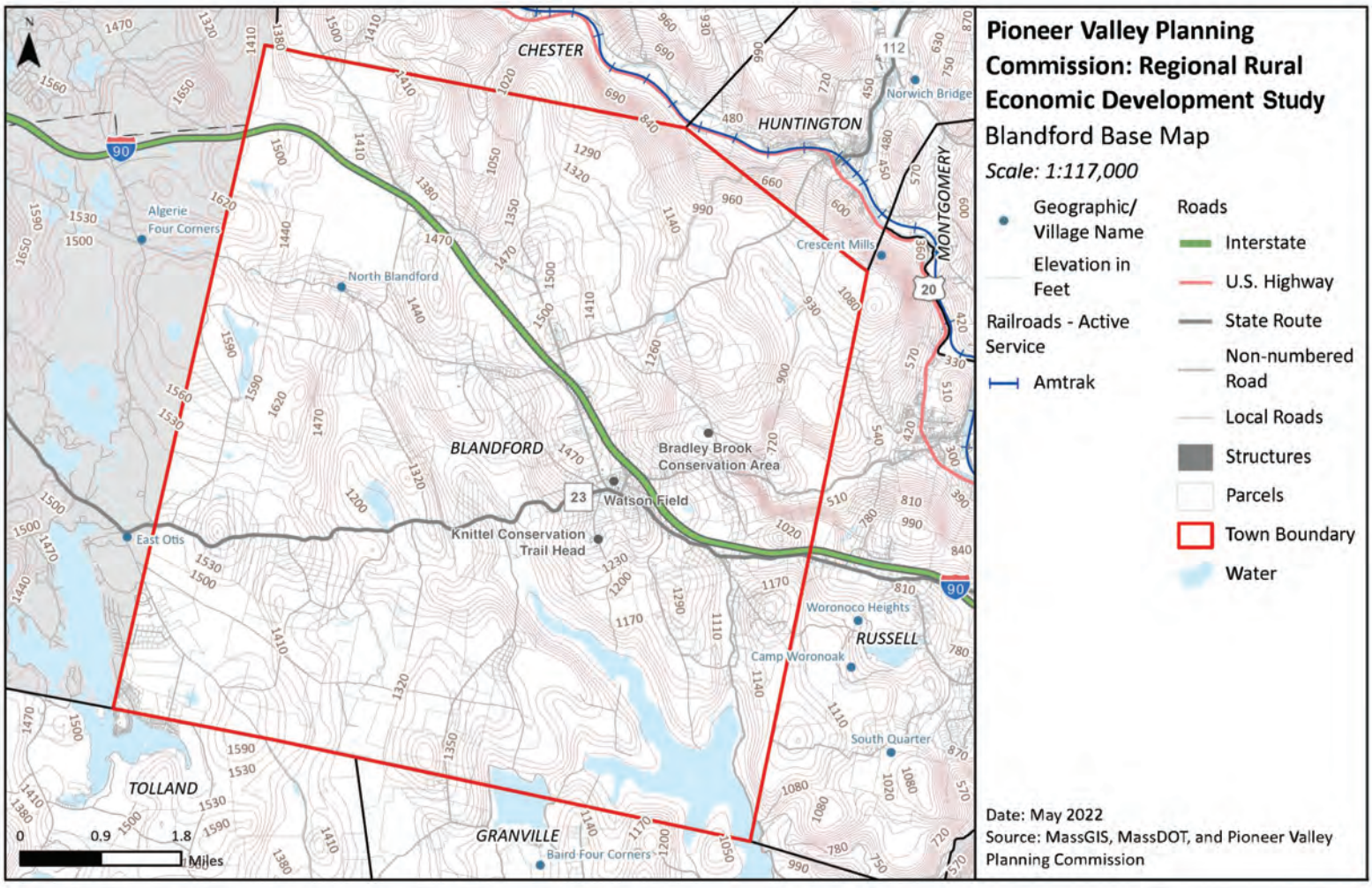
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	7.2%
Professional, Scientific, and Technical Services	6.6%
Transportation and Warehousing	2.4%

*Percentages are based upon Blandford's employment base of **166 average weekly jobs** across **26 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



CHESTER: KEY FACTS

POPULATION	1,228
% CHANGE 2010-2020	-8.2%↘
MEDIAN AGE	44.4
POPULATION DENSITY (Persons per square mile)	33.56
HOUSEHOLDS	535
% CHANGE 2010-2020	-1.5%↘
SELF-EMPLOYED RESIDENT WORKERS	10.3%
UNEMPLOYMENT RATE (2021)	5.35%
INCOME PER CAPITA	$23,972
% POPULATION IN POVERTY	8.69%

91.24%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
30.62%	TAX-EXEMPT % OF TOTAL ACRES
$94,890	EQUALIZED VALUATION PER CAPITA
0.038	ROAD MILES PER CAPITA

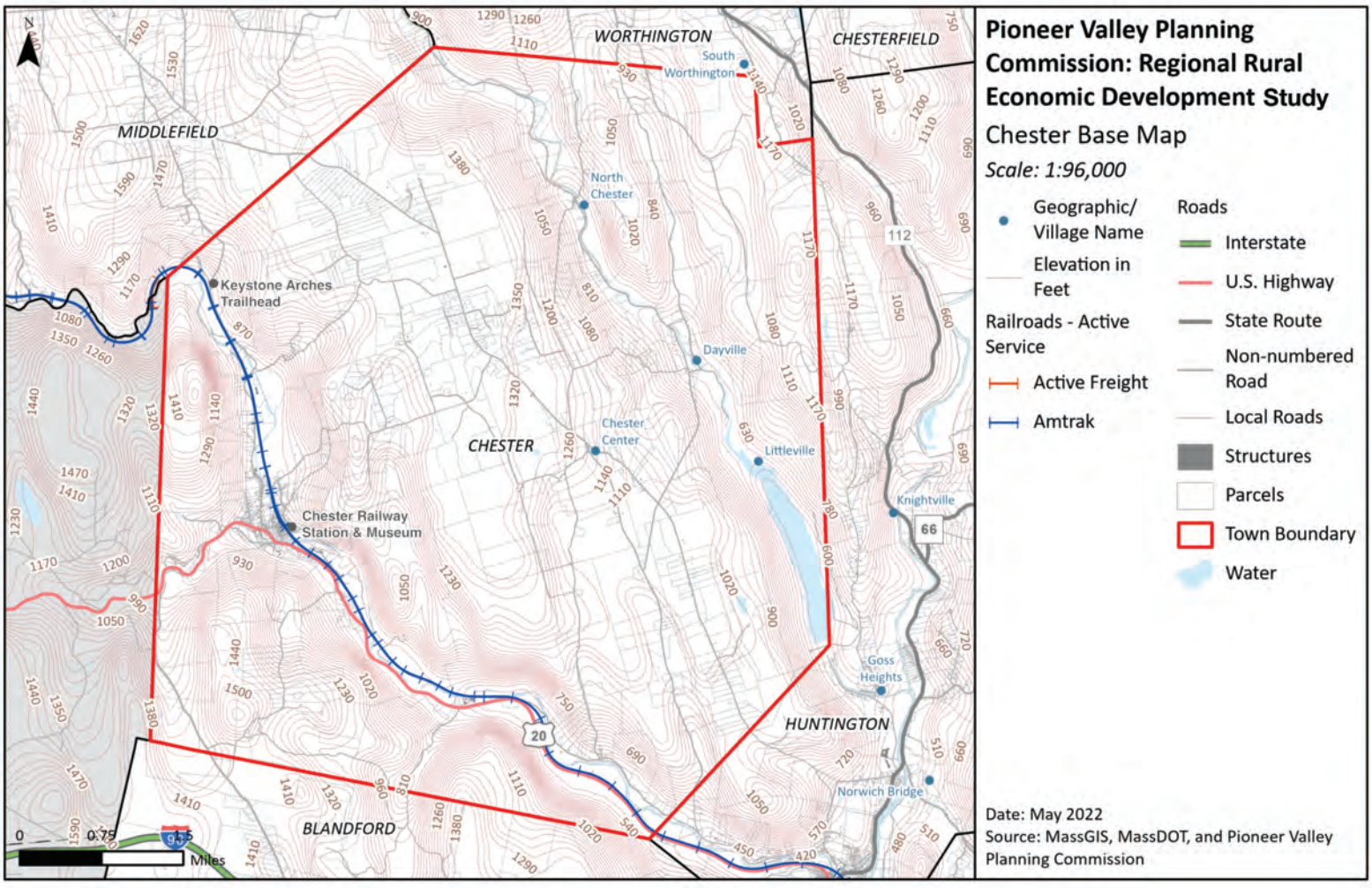
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	5.3%
No Industry Data Available	----
No Industry Data Available	----

Due to the limited number of jobs in Chester, employment and wage data are only available for one industry. Percentage is based upon Chester's employment base of ***95 average weekly jobs*** *across* ***21 establishments****. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



GRANVILLE: KEY FACTS

POPULATION	1,538
% CHANGE 2010-2020	-1.8%↘
MEDIAN AGE	46.2
POPULATION DENSITY (Persons per square mile)	36.35
HOUSEHOLDS	606
% CHANGE 2010-2020	-0.3%↘
SELF-EMPLOYED RESIDENT WORKERS	12.8%
UNEMPLOYMENT RATE (2021)	5.61%
INCOME PER CAPITA	$33,936
% POPULATION IN POVERTY	7.95%

80.91%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
47.17%	TAX-EXEMPT % OF TOTAL ACRES
$130,620	EQUALIZED VALUATION PER CAPITA
0.038	ROAD MILES PER CAPITA

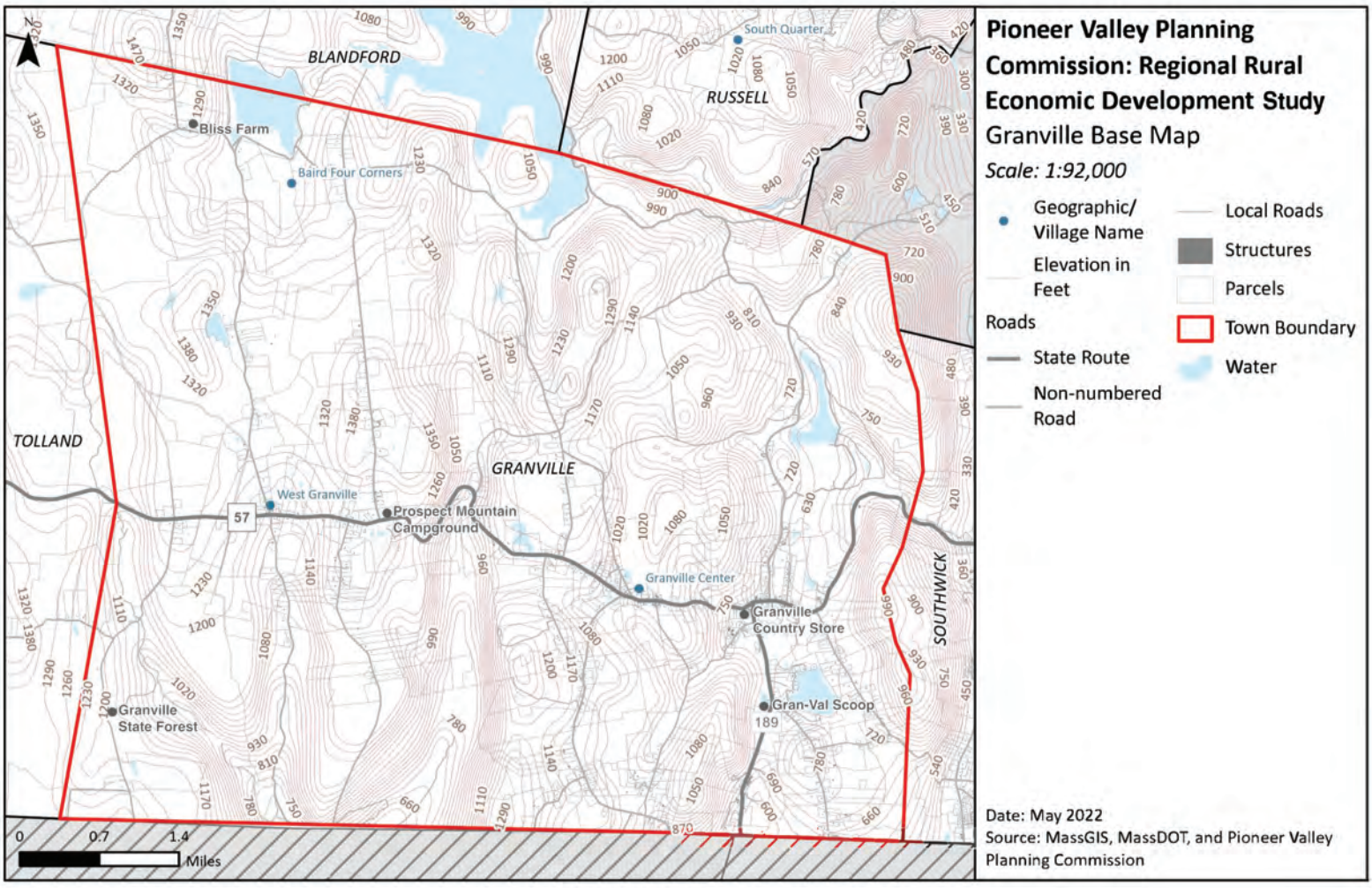
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	8.4%
Transportation and Warehousing	5.9%
Other Services (Except Public Administration)	4.2%

*Percentages are based upon Granville's employment base of **119 average weekly jobs** across **38 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



MONTGOMERY: KEY FACTS

POPULATION	**819**
% CHANGE 2010-2020	**-2.3%** ↘
MEDIAN AGE	**52.0**
POPULATION DENSITY (Persons per square mile)	**54.78**
HOUSEHOLDS	**337**
% CHANGE 2010-2020	**2.1%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**21.9%**
UNEMPLOYMENT RATE (2021)	**4.06%**
INCOME PER CAPITA	**$39,336**
% POPULATION IN POVERTY	**2.43%**

90.82%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
36.05%	TAX-EXEMPT % OF TOTAL ACRES
$131,637	EQUALIZED VALUATION PER CAPITA
0.034	ROAD MILES PER CAPITA

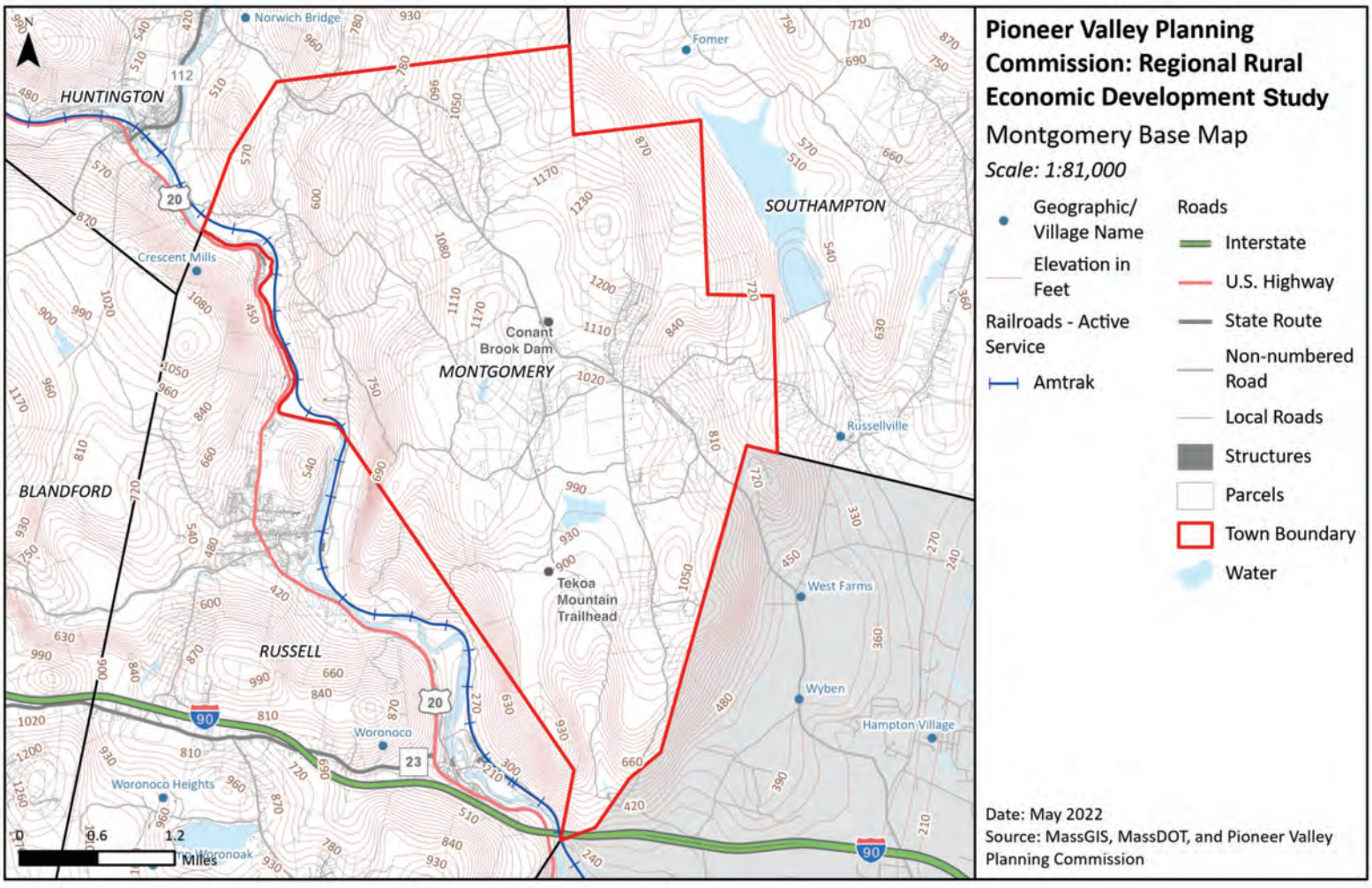
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	**27.8%**
No Industry Data Available	**----**
No Industry Data Available	**----**

*Due to the limited number of jobs in Montgomery, employment and wage data are only available for one industry. Percentage is based upon Montgomery's employment base of **36 average weekly jobs** across **10 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



RUSSELL: KEY FACTS

POPULATION	1,643
% CHANGE 2010-2020	-7.4%↘
MEDIAN AGE	40.8
POPULATION DENSITY (Persons per square mile)	94.03
HOUSEHOLDS	647
% CHANGE 2010-2020	-1.4%↘
SELF-EMPLOYED RESIDENT WORKERS	7.5%
UNEMPLOYMENT RATE (2021)	5.34%
INCOME PER CAPITA	$25,574
% POPULATION IN POVERTY	7.53%

83.42%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
35.88%	TAX-EXEMPT % OF TOTAL ACRES
$88,943	EQUALIZED VALUATION PER CAPITA
0.015	ROAD MILES PER CAPITA

TOP 3 EMPLOYMENT SECTORS

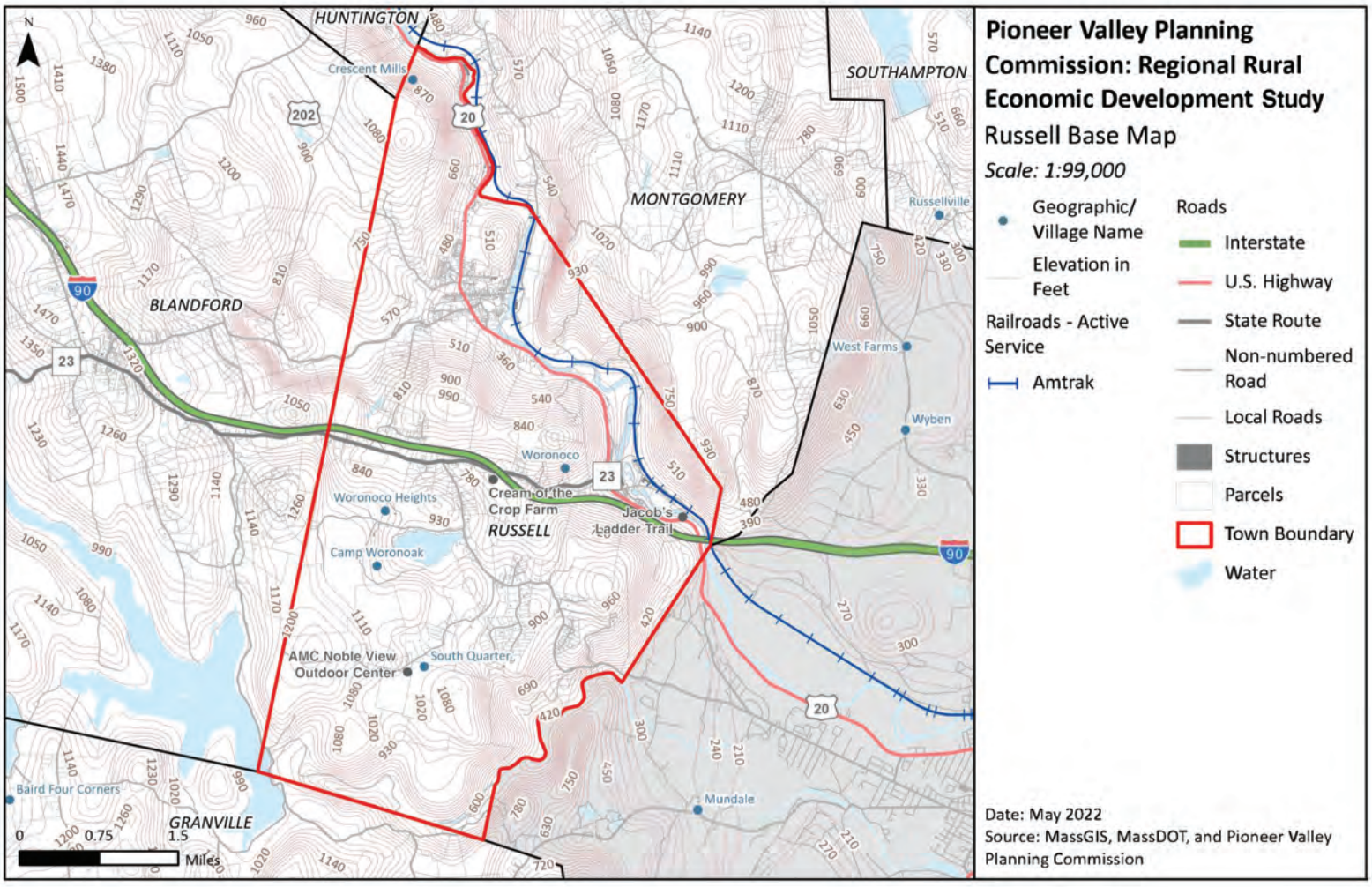
(Does not include self-employed population.)

PERCENT OF LOCAL JOBS

Administrative and Support and Waste Management and Remediation Services	7.5%
Construction	6.7%
Health Care and Social Assistance	5.2%

*Percentages are based upon Russell's employment base of **134 average weekly jobs** across **34 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



SOUTHWICK: KEY FACTS

POPULATION	**9,232**
% CHANGE 2010-2020	**-2.8%** ↘
MEDIAN AGE	**48.8**
POPULATION DENSITY (Persons per square mile)	**299.56**
HOUSEHOLDS	**3,825**
% CHANGE 2010-2020	**3.1%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**10.8%**
UNEMPLOYMENT RATE (2021)	**5.64%**
INCOME PER CAPITA	**$37,604**
% POPULATION IN POVERTY	**5.55%**

87.11%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
11.37%	TAX-EXEMPT % OF TOTAL ACRES
$123,656	EQUALIZED VALUATION PER CAPITA
0.008	ROAD MILES PER CAPITA

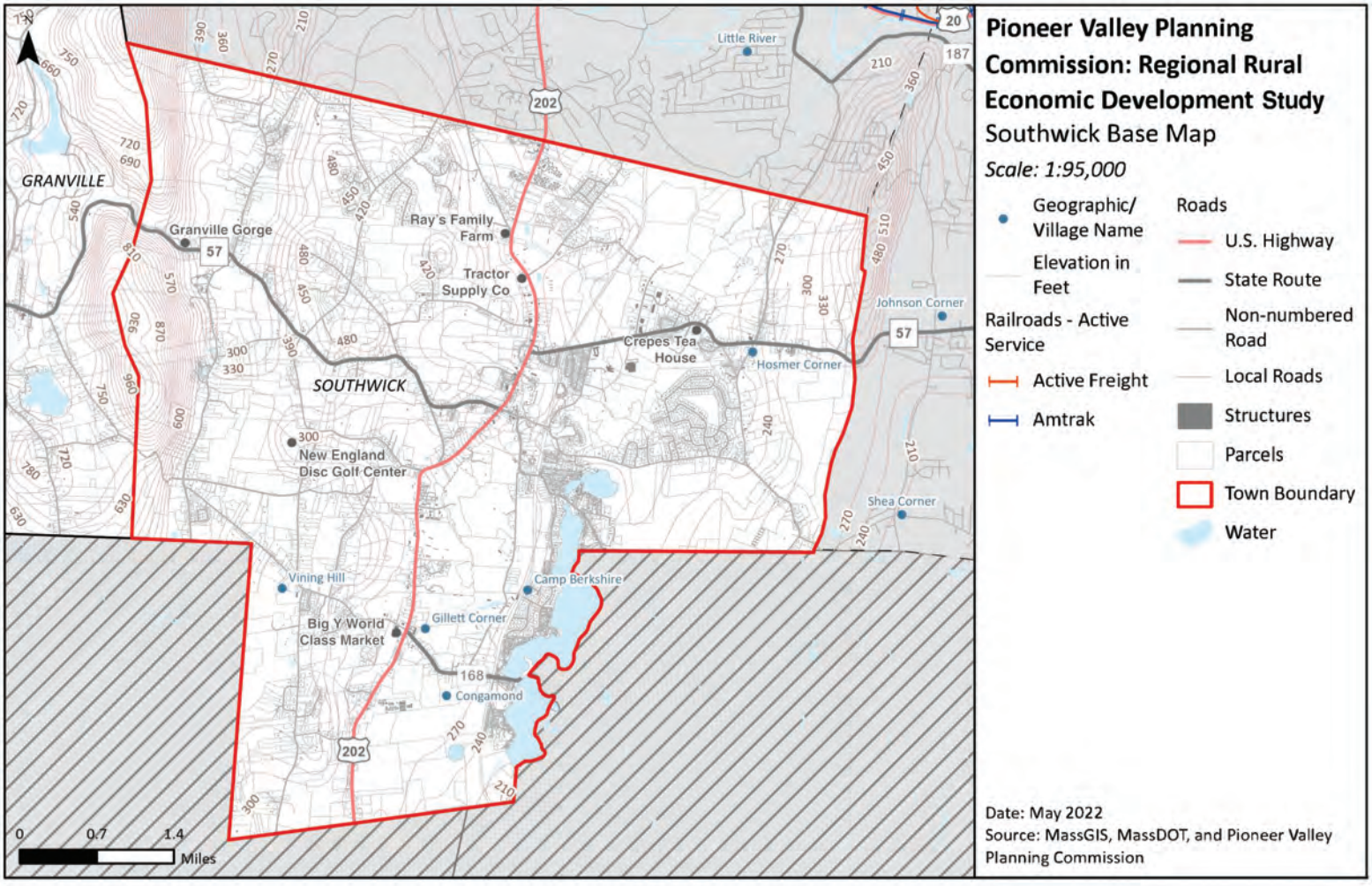
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Retail Trade	**16.6%**
Manufacturing	**14.9%**
Health Care and Social Assistance	**9.2%**

*Percentages are based upon Southwick's employment base of **2,683 average weekly jobs** across **303 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



TOLLAND: KEY FACTS

POPULATION	471
% CHANGE 2010-2020	-2.9% ↘
MEDIAN AGE	57.8
POPULATION DENSITY (Persons per square mile)	14.93
HOUSEHOLDS	221
% CHANGE 2010-2020	12.2% ↗
SELF-EMPLOYED RESIDENT WORKERS	8.6%
UNEMPLOYMENT RATE (2021)	3.07%
INCOME PER CAPITA	$26,270
% POPULATION IN POVERTY	6.64%

86.74%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
40.65%	TAX-EXEMPT % OF TOTAL ACRES
$386,824	EQUALIZED VALUATION PER CAPITA
0.084	ROAD MILES PER CAPITA

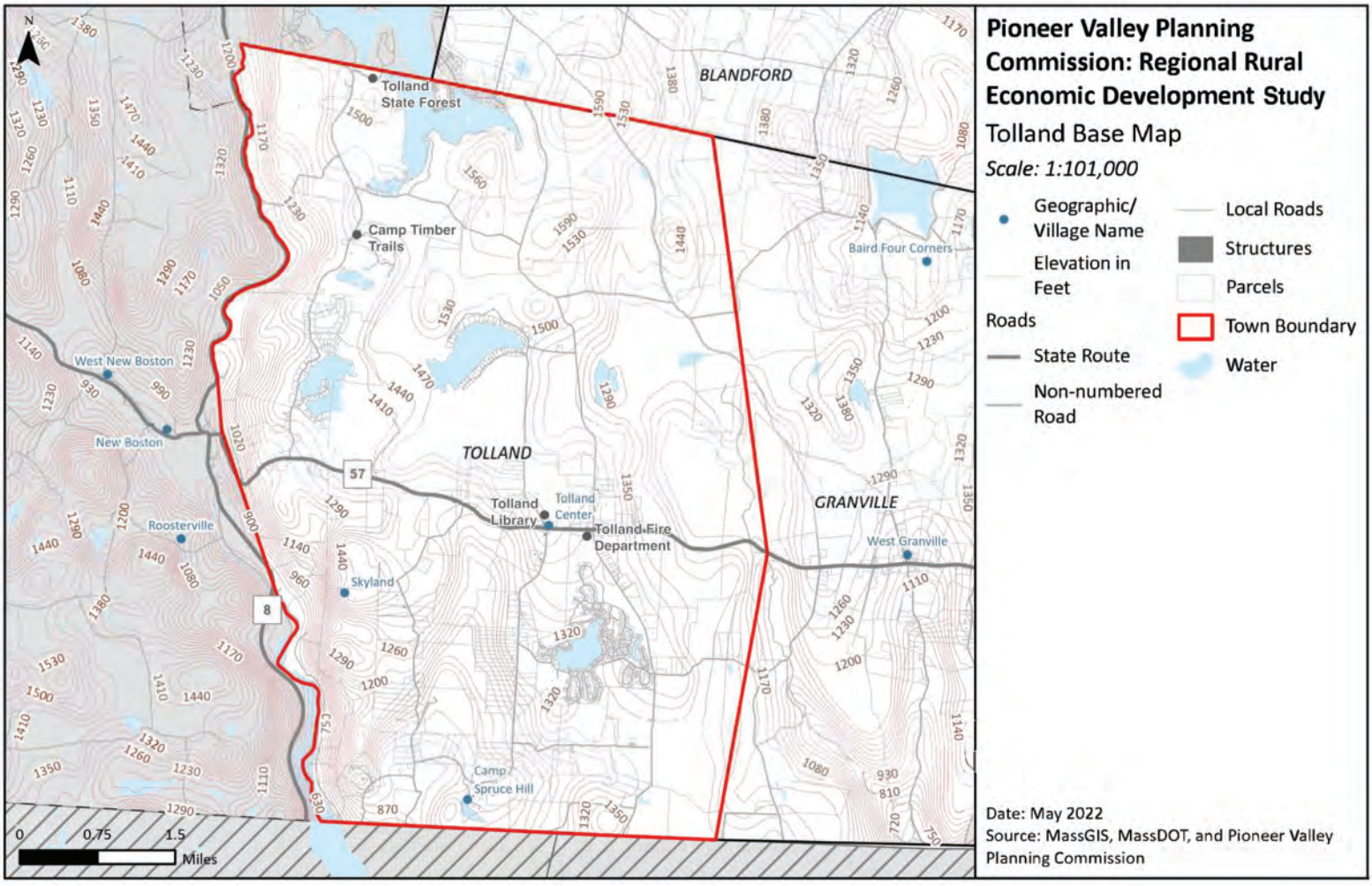
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
No Industry Data Available	----
No Industry Data Available	----
No Industry Data Available	----

*Due to the limited number of jobs in Tolland, employment and wage data are not available for specific industries. Tolland's employment base consists of **33 average weekly jobs** across **6 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



CHESTERFIELD: KEY FACTS

POPULATION	1,186
% CHANGE 2010-2020	-2.9% ↘
MEDIAN AGE	49.5
POPULATION DENSITY (Persons per square mile)	38.45
HOUSEHOLDS	536
% CHANGE 2010-2020	4.9% ↗
SELF-EMPLOYED RESIDENT WORKERS	13.1%
UNEMPLOYMENT RATE (2021)	4.31%
INCOME PER CAPITA	$22,243
% POPULATION IN POVERTY	3.54%

94.90%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
32.11%	TAX-EXEMPT % OF TOTAL ACRES
$132,166	EQUALIZED VALUATION PER CAPITA
0.045	ROAD MILES PER CAPITA

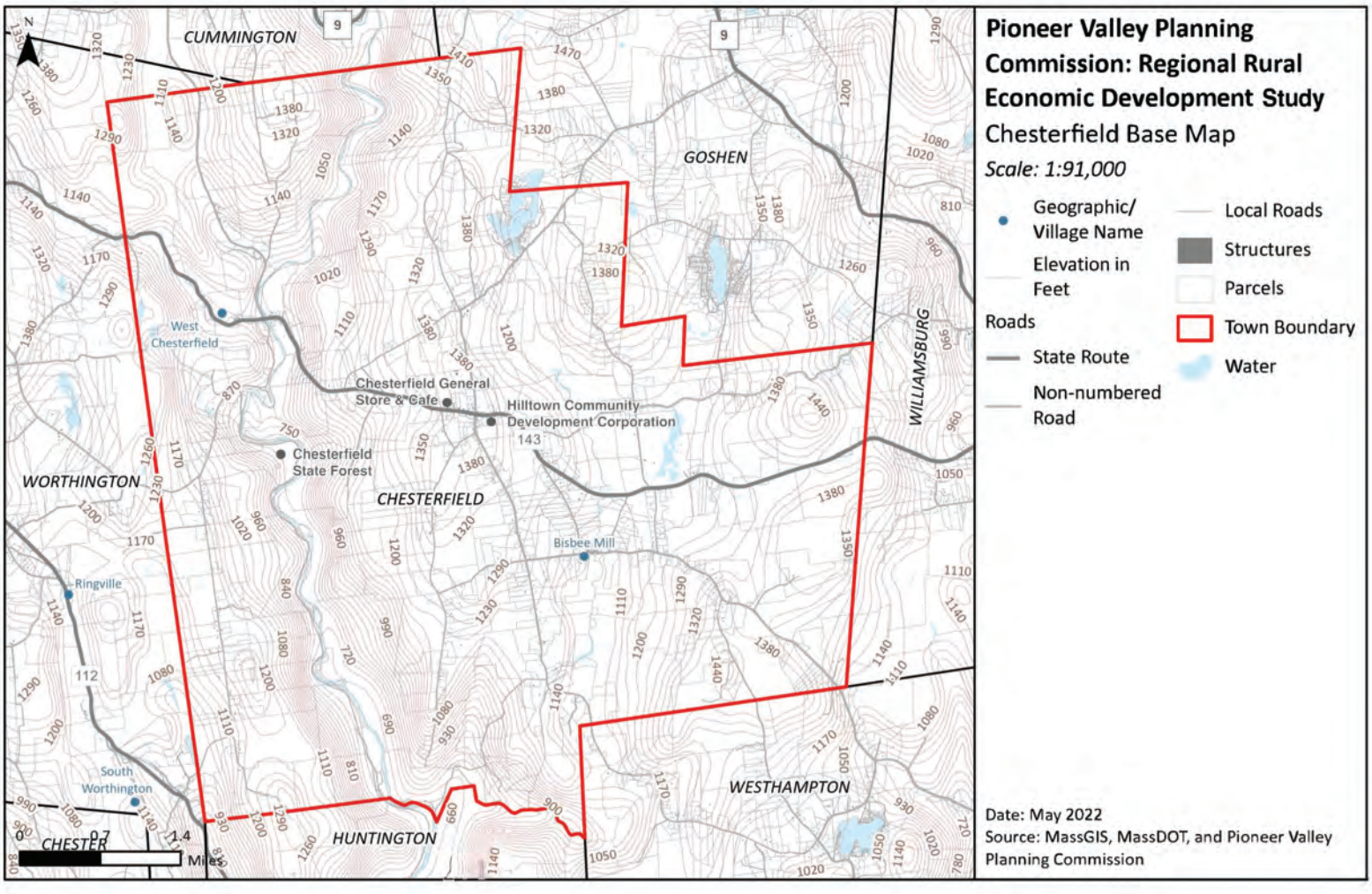
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	26.4%
Healthcare and Social Assistance	13.2%
No Industry Data Available	----

*Due to the limited number of jobs in Chesterfield, employment and wage data are only available for two industries. Percentages are based upon Chesterfield's employment base of **159 average weekly jobs** across **19 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



CUMMINGTON: KEY FACTS

POPULATION	829
% CHANGE 2010-2020	-5.0%↘
MEDIAN AGE	51.5
POPULATION DENSITY (Persons per square mile)	36.14
HOUSEHOLDS	398
% CHANGE 2010-2020	-1.5%↘
SELF-EMPLOYED RESIDENT WORKERS	32.4%
UNEMPLOYMENT RATE (2021)	6.89%
INCOME PER CAPITA	$31,606
% POPULATION IN POVERTY	10.17%

86.86%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
18.48%	TAX-EXEMPT % OF TOTAL ACRES
$156,481	EQUALIZED VALUATION PER CAPITA
0.048	ROAD MILES PER CAPITA

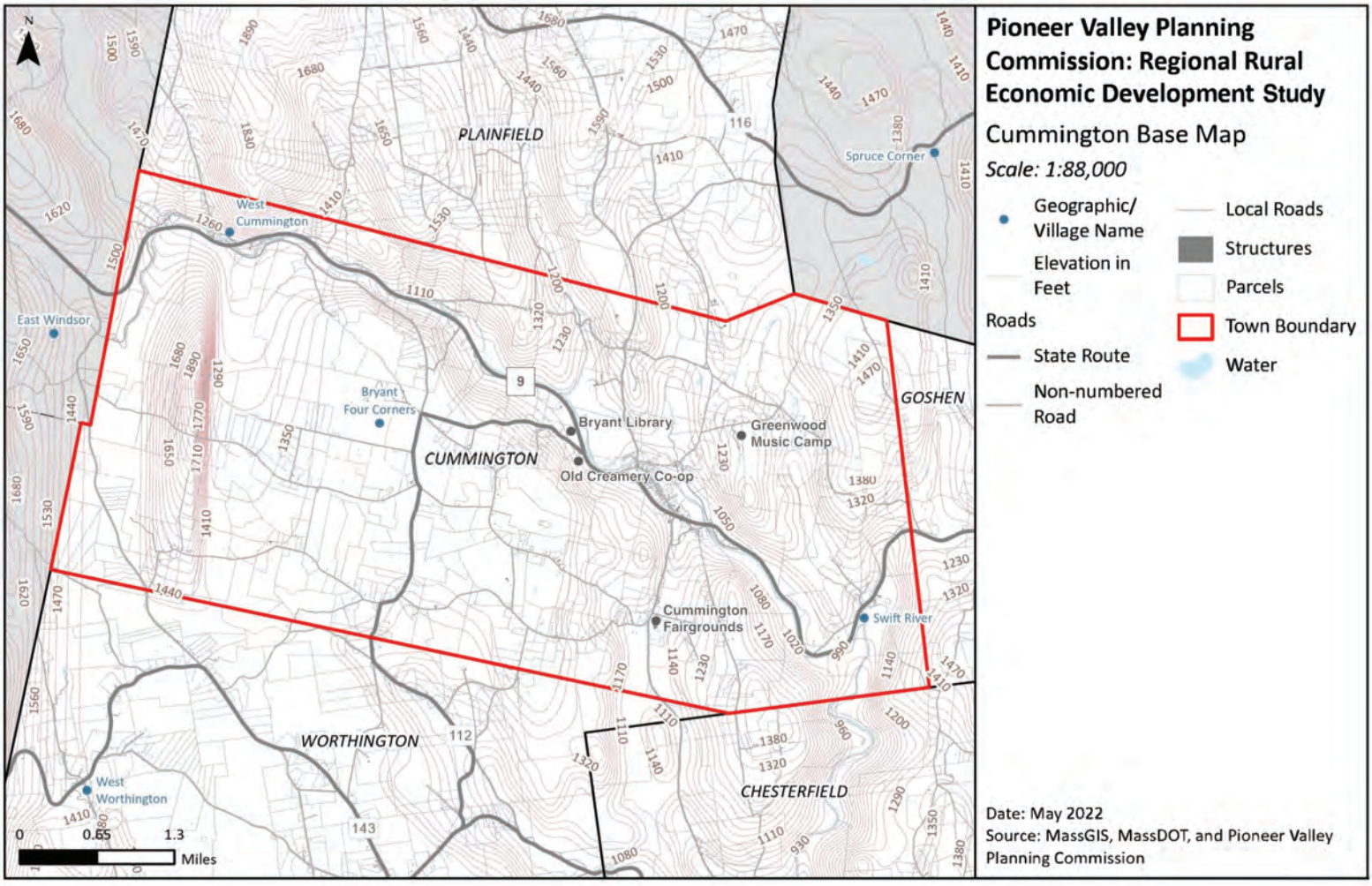
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Retail Trade	13.4%
Transportation and Warehousing	3.1%
No Industrudy Data Available	----

*Due to the limited number of jobs in Cummington, employment and wage data are only available for two industries. Percentages are based upon Cummington's employment base of **261 average weekly jobs** across **36 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



EASTHAMPTON: KEY FACTS

POPULATION	**16,211**
% CHANGE 2010-2020	**1.0%** ↗
MEDIAN AGE	**40.5**
POPULATION DENSITY (Persons per square mile)	**1,216.92**
HOUSEHOLDS	**7,517**
% CHANGE 2010-2020	**4.1%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**10.2%**
UNEMPLOYMENT RATE (2021)	**4.71%**
INCOME PER CAPITA	**$31,498**
% POPULATION IN POVERTY	**7.87%**

87.19%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
22.58%	TAX-EXEMPT % OF TOTAL ACRES
$112,011	EQUALIZED VALUATION PER CAPITA
0.005	ROAD MILES PER CAPITA

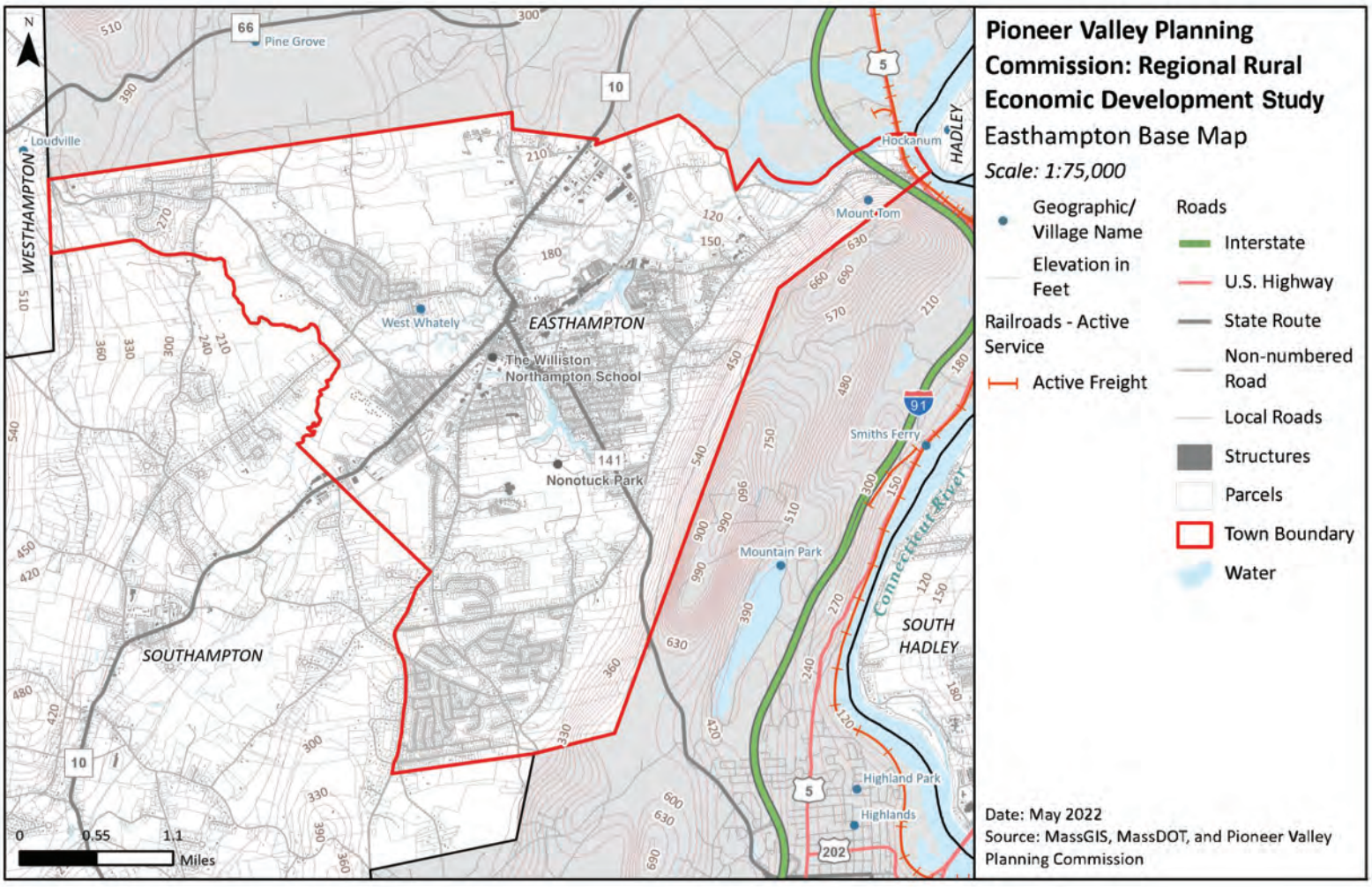
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	**15.6%**
Educational Services	**13.9%**
Manufacturing	**13.9%**

*Percentages are based upon Easthampton's employment base of **4,533 average weekly jobs** across **523 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



GOSHEN: KEY FACTS

POPULATION	**960**
% CHANGE 2010-2020	**-8.9%** ↘
MEDIAN AGE	**48.7**
POPULATION DENSITY (Persons per square mile)	**55.49**
HOUSEHOLDS	**431**
% CHANGE 2010-2020	**3.6%** ↗
SELF-EMPLOYED RESIDENT WORKERS	**14.0%**
UNEMPLOYMENT RATE (2021)	**2.76%**
INCOME PER CAPITA	**$13,831**
% POPULATION IN POVERTY	**3.07%**

92.64%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
21.91%	TAX-EXEMPT % OF TOTAL ACRES
$164,135	EQUALIZED VALUATION PER CAPITA
0.028	ROAD MILES PER CAPITA

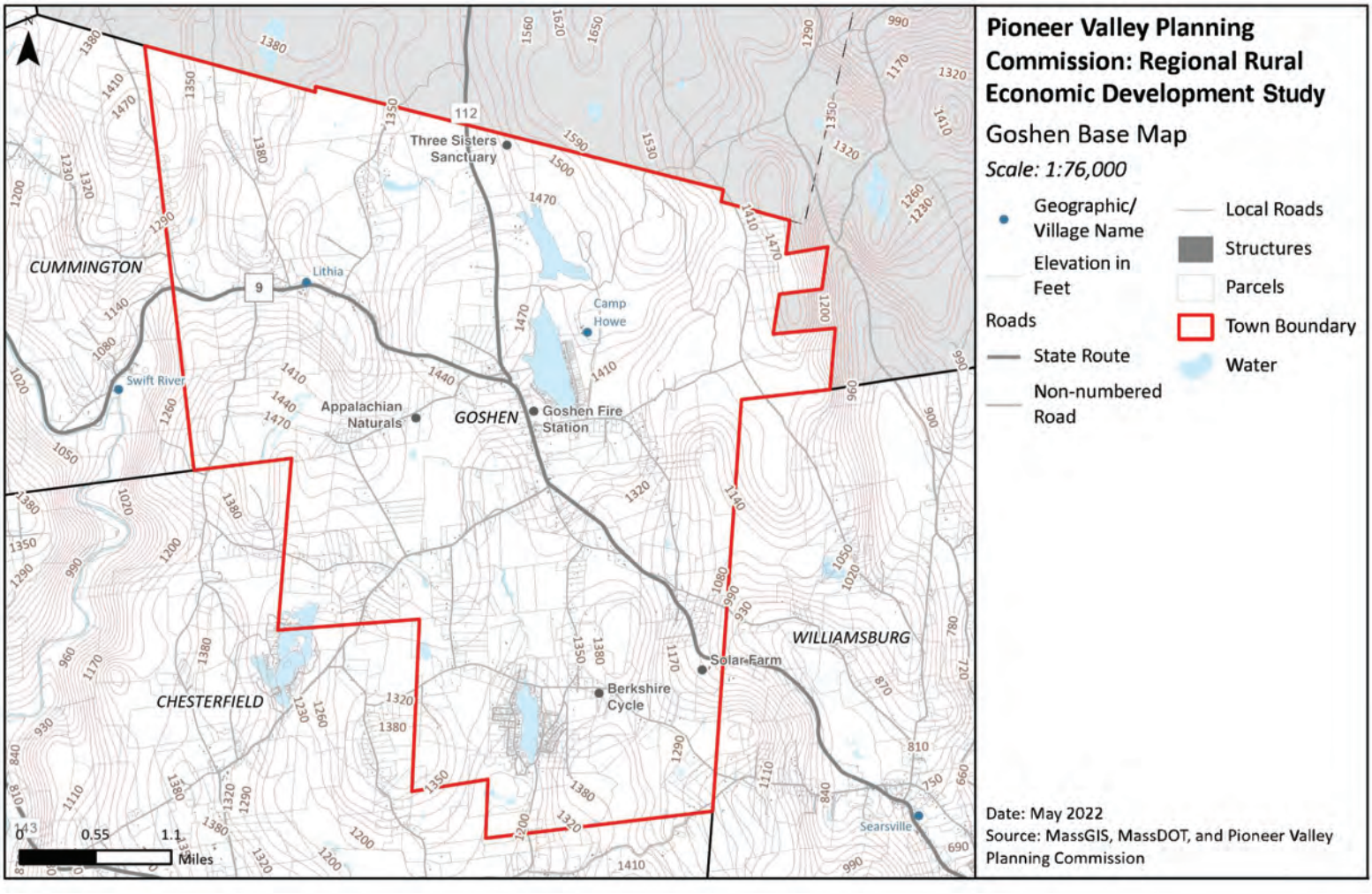
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	**13.9%**
Other Services (Except Public Administration)	**2.0%**
No Industry Data Available	**----**

*Due to the limited number of jobs in Goshen, employment and wage data are only available for two industries. Percentages are based upon Goshen's employment base of **151 average weekly jobs** across **34 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



HATFIELD: KEY FACTS

POPULATION	3,352
% CHANGE 2010-2020	2.2% ↗
MEDIAN AGE	44.8
POPULATION DENSITY (Persons per square mile)	210.85
HOUSEHOLDS	1,558
% CHANGE 2010-2020	5.1% ↗
SELF-EMPLOYED RESIDENT WORKERS	13.0%
UNEMPLOYMENT RATE (2021)	5.10%
INCOME PER CAPITA	$40,016
% POPULATION IN POVERTY	6.94%

76.34%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
13.73%	TAX-EXEMPT % OF TOTAL ACRES
$187,673	EQUALIZED VALUATION PER CAPITA
0.015	ROAD MILES PER CAPITA

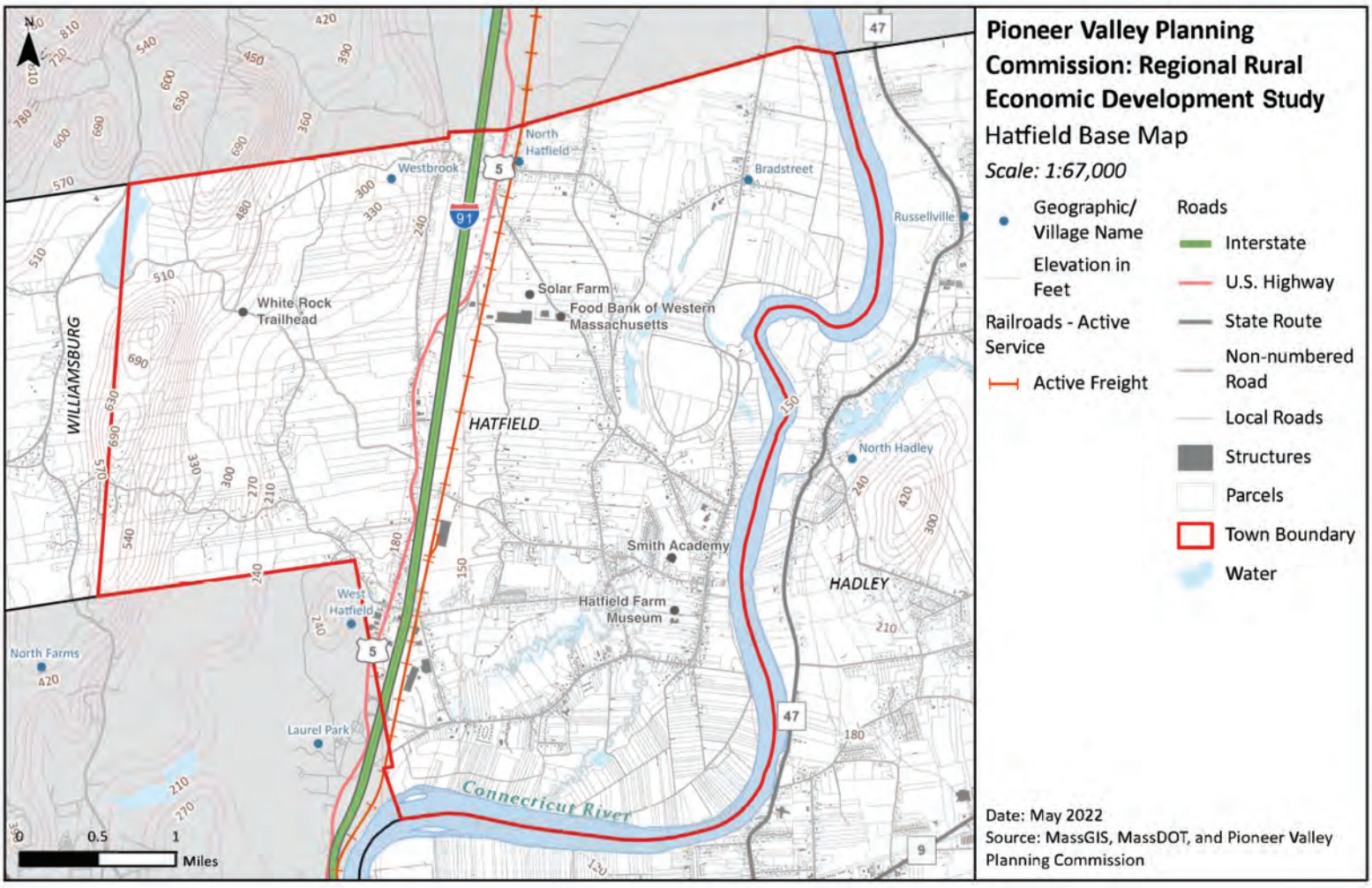
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Wholesale Trade	53.2%
Health Care and Social Assistance	6.6%
Construction	4.3%

*Percentages are based upon Hatfield's employment base of **2,000 average weekly jobs** across **129 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



HUNTINGTON: KEY FACTS

POPULATION	2,094
% CHANGE 2010-2020	-3.9% ↘
MEDIAN AGE	43.8
POPULATION DENSITY (Persons per square mile)	79.58
HOUSEHOLDS	869
% CHANGE 2010-2020	0.1% ↗
SELF-EMPLOYED RESIDENT WORKERS	12.8%
UNEMPLOYMENT RATE (2021)	5.76%
INCOME PER CAPITA	$31,871
% POPULATION IN POVERTY	6.54%

94.16%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
32.64%	TAX-EXEMPT % OF TOTAL ACRES
$93,735	EQUALIZED VALUATION PER CAPITA
0.017	ROAD MILES PER CAPITA

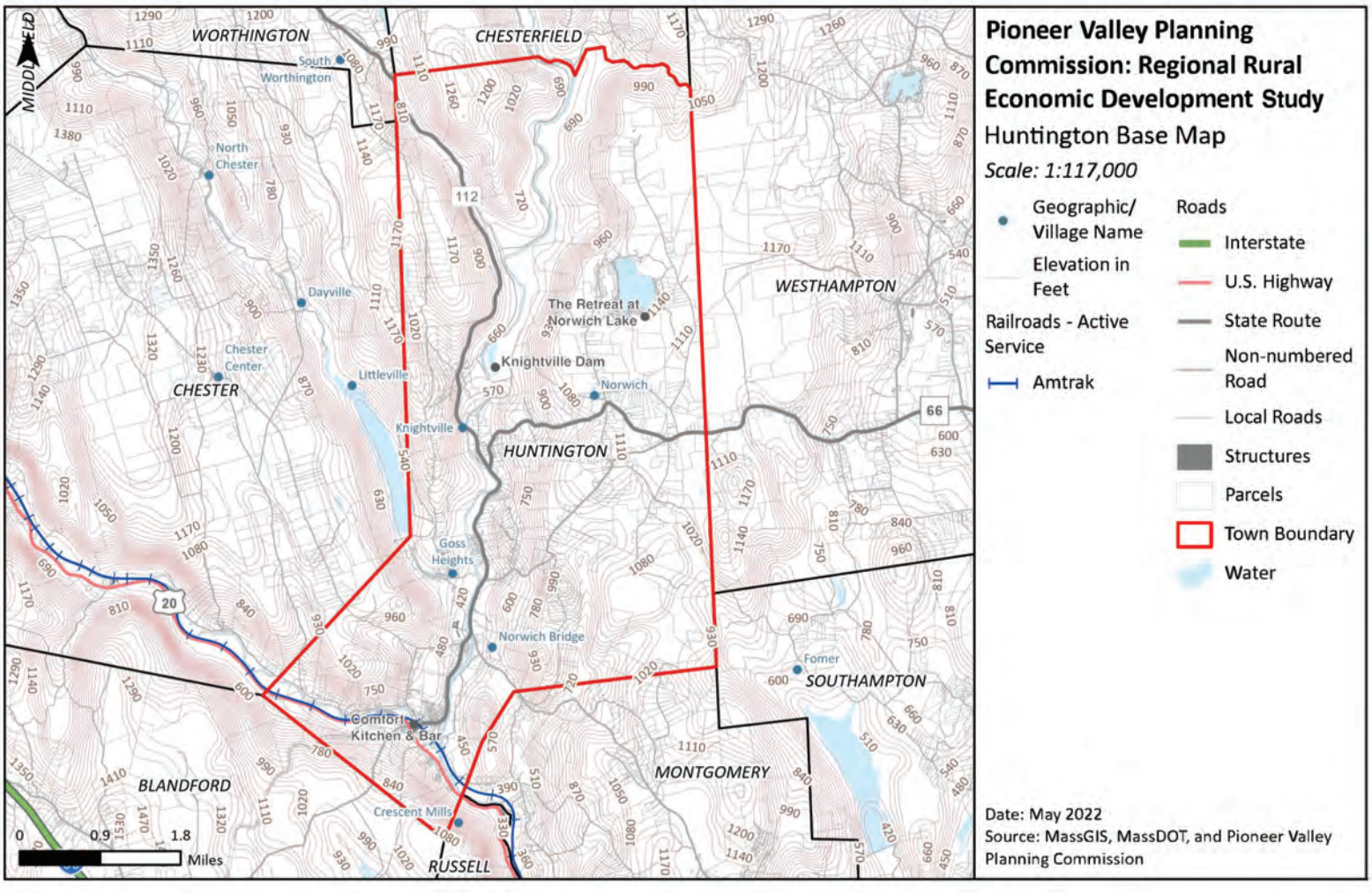
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	24.4%
Construction	4.8%
Retrail Trade	4.2%

*Percentages are based upon Huntington's employment base of **353 average weekly jobs** across **46 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



MIDDLEFIELD: KEY FACTS

POPULATION	385
% CHANGE 2010-2020	-26.1% ↘
MEDIAN AGE	56.1
POPULATION DENSITY (Persons per square mile)	15.98
HOUSEHOLDS	174
% CHANGE 2010-2020	-20.2% ↘
SELF-EMPLOYED RESIDENT WORKERS	19.7%
UNEMPLOYMENT RATE (2021)	3.28%
INCOME PER CAPITA	$17,527
% POPULATION IN POVERTY	6.89%

90.60%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
45.51%	TAX-EXEMPT % OF TOTAL ACRES
$136,798	EQUALIZED VALUATION PER CAPITA
0.106	ROAD MILES PER CAPITA

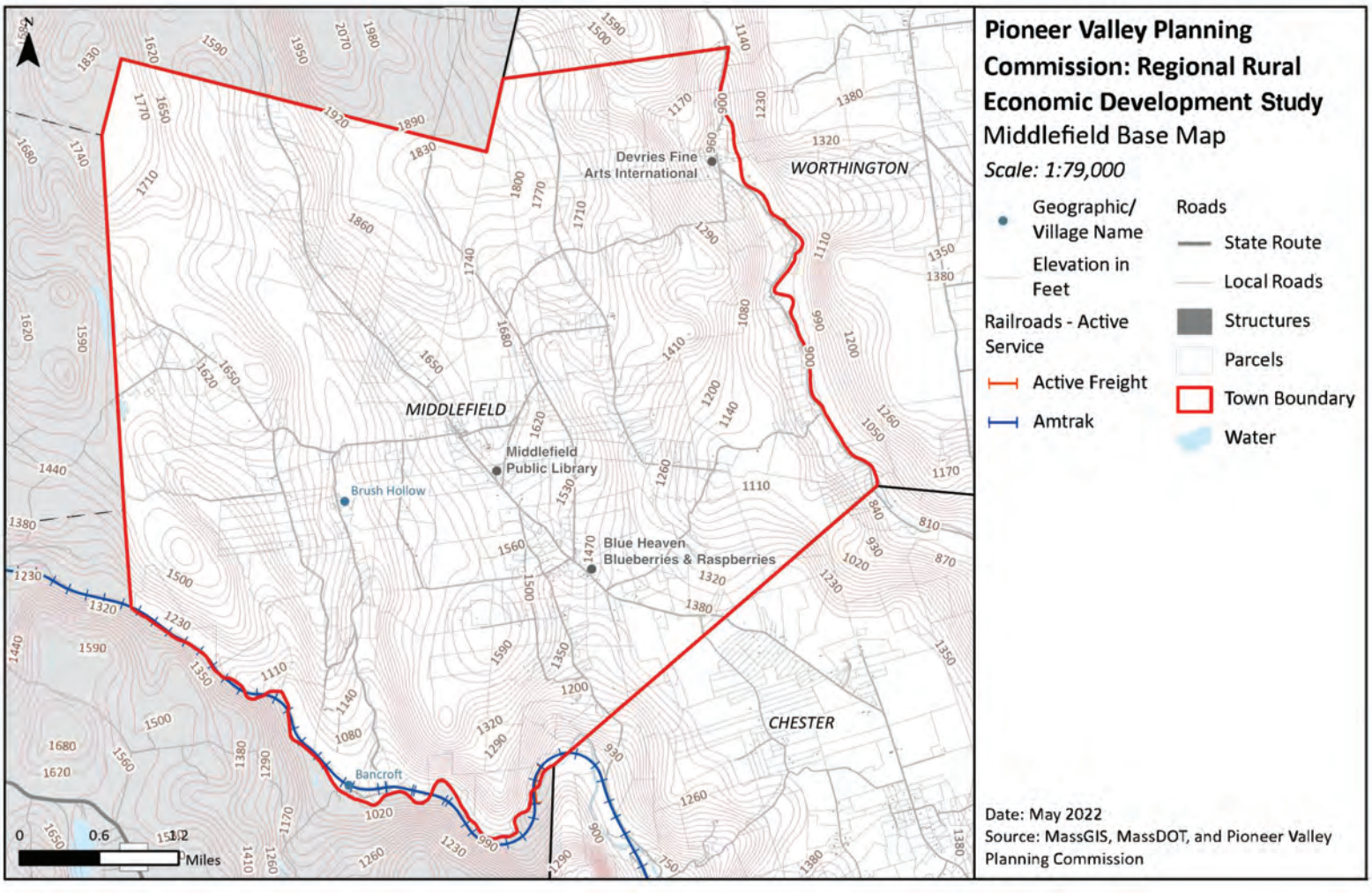
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
No Industry Data Available	----
No Industry Data Available	----
No Industry Data Available	----

*Due to the limited number of jobs in Middlefield, employment and wage data are not available for specific industries. Middlefield's employment base consists of **37 average weekly jobs** across **7 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



PLAINFIELD: KEY FACTS

POPULATION	633
% CHANGE 2010-2020	-2.2% ↘
MEDIAN AGE	47.4
POPULATION DENSITY (Persons per square mile)	29.97
HOUSEHOLDS	285
% CHANGE 2010-2020	5.9% ↗
SELF-EMPLOYED RESIDENT WORKERS	20.7%
UNEMPLOYMENT RATE (2021)	5.08%
INCOME PER CAPITA	$25,949
% POPULATION IN POVERTY	14.83%

68.85%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
28.07%	TAX-EXEMPT % OF TOTAL ACRES
$148,544	EQUALIZED VALUATION PER CAPITA
0.069	ROAD MILES PER CAPITA

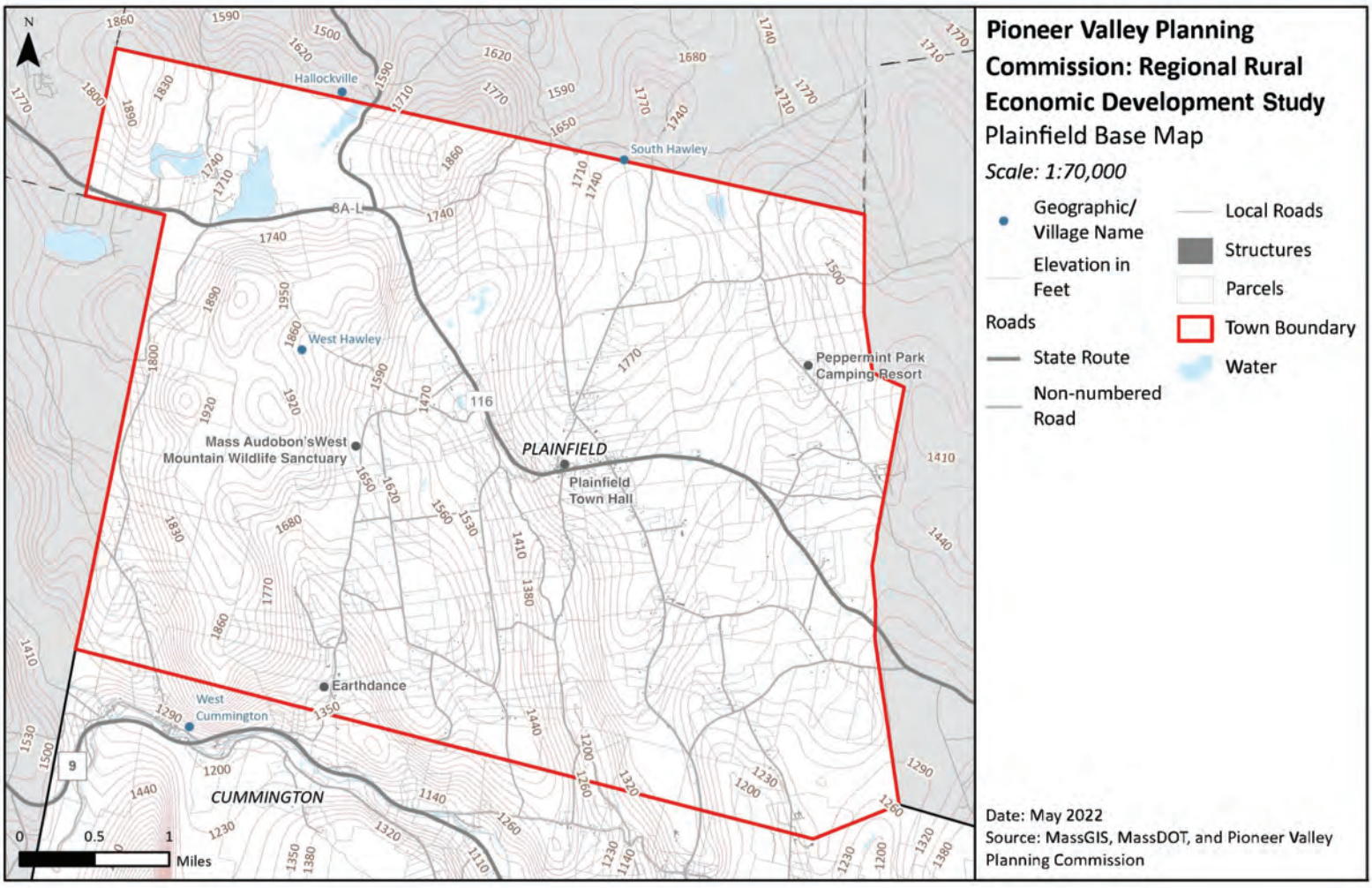
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	8.2%
Transportation and Warehousing	3.1%
No Industry Data Available	----

*Due to the limited number of jobs in Plainfield, employment and wage data are only available for two industries. Percentages are based upon Plainfield's employment base of **97 average weekly jobs** across **25 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



SOUTHAMPTON: KEY FACTS

POPULATION	6,224
% CHANGE 2010-2020	7.5% ↗
MEDIAN AGE	45.1
POPULATION DENSITY (Persons per square mile)	221.07
HOUSEHOLDS	2,446
% CHANGE 2010-2020	8.8% ↗
SELF-EMPLOYED RESIDENT WORKERS	15.4%
UNEMPLOYMENT RATE (2021)	4.41%
INCOME PER CAPITA	$41,806
% POPULATION IN POVERTY	2.14%

93.95%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
19.82%	TAX-EXEMPT % OF TOTAL ACRES
$136,339	EQUALIZED VALUATION PER CAPITA
0.011	ROAD MILES PER CAPITA

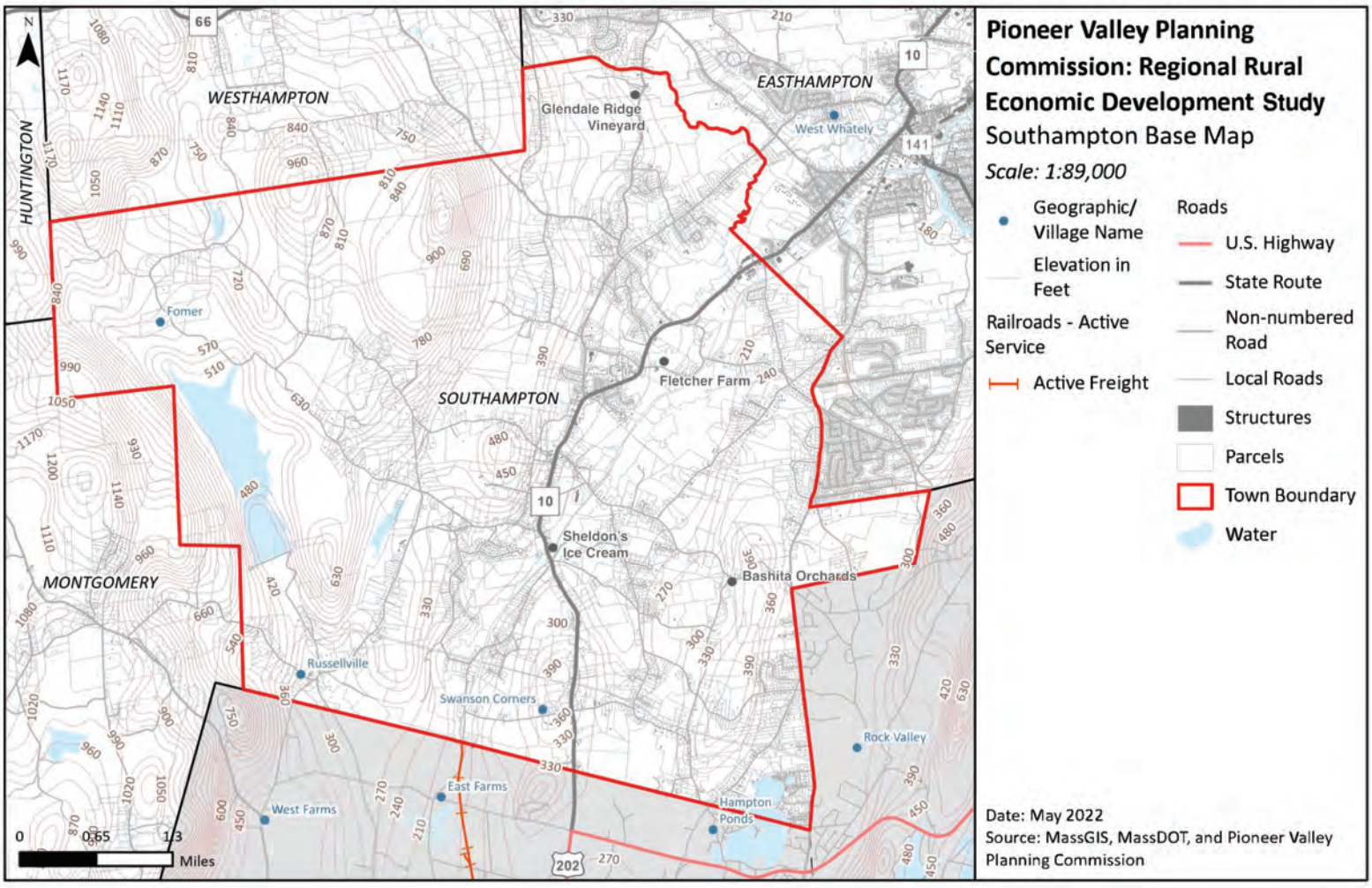
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Retail Trade	25.4%
Construction	18.1%
Health Care and Social Assistance	6.1%

*Percentages are based upon Southampton's employment base of **1,020 average weekly jobs** across **139 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



WESTHAMPTON: KEY FACTS

POPULATION	1,622
% CHANGE 2010-2020	0.9% ↗
MEDIAN AGE	45.5
POPULATION DENSITY (Persons per square mile)	59.68
HOUSEHOLDS	662
% CHANGE 2010-2020	6.3% ↗
SELF-EMPLOYED RESIDENT WORKERS	15.6%
UNEMPLOYMENT RATE (2021)	4.80%
INCOME PER CAPITA	$46,549
% POPULATION IN POVERTY	4.50%

94.74%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
22.02%	TAX-EXEMPT % OF TOTAL ACRES
$153,144	EQUALIZED VALUATION PER CAPITA
0.026	ROAD MILES PER CAPITA

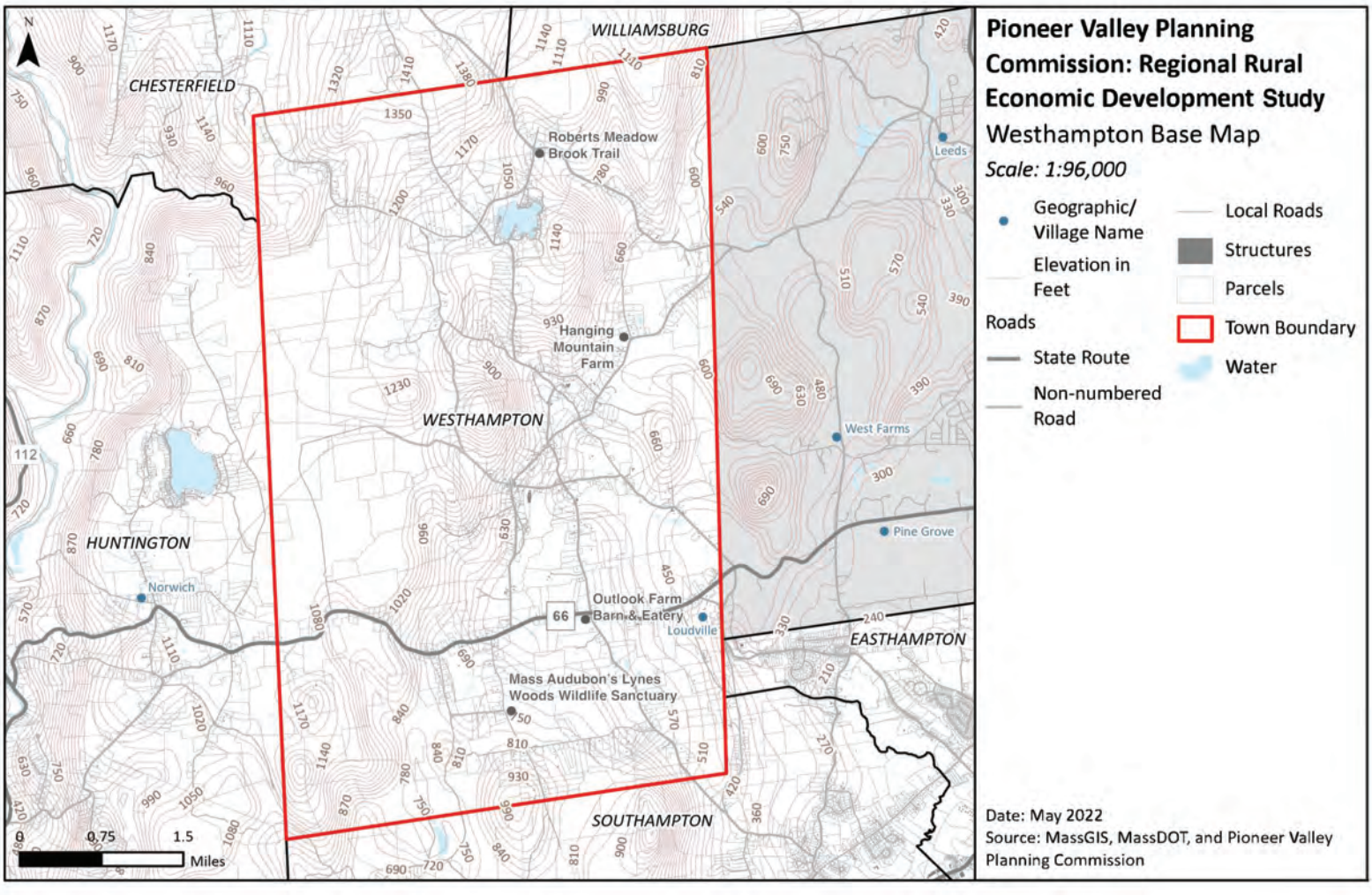
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Educational Services	56.3%
Construction	8.9%
Health Care and Social Services	6.4%

*Percentages are based upon Westhampton's employment base of **327 average weekly jobs** across **45 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



WILLIAMSBURG: KEY FACTS

POPULATION	2,504
% CHANGE 2010-2020	0.9% ↗
MEDIAN AGE	47.9
POPULATION DENSITY (Persons per square mile)	98.06
HOUSEHOLDS	1,109
% CHANGE 2010-2020	-0.8% ↘
SELF-EMPLOYED RESIDENT WORKERS	26.0%
UNEMPLOYMENT RATE (2021)	5.72%
INCOME PER CAPITA	$29,258
% POPULATION IN POVERTY	7.88%

90.36%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
25.16%	TAX-EXEMPT % OF TOTAL ACRES
$134,114	EQUALIZED VALUATION PER CAPITA
0.016	ROAD MILES PER CAPITA

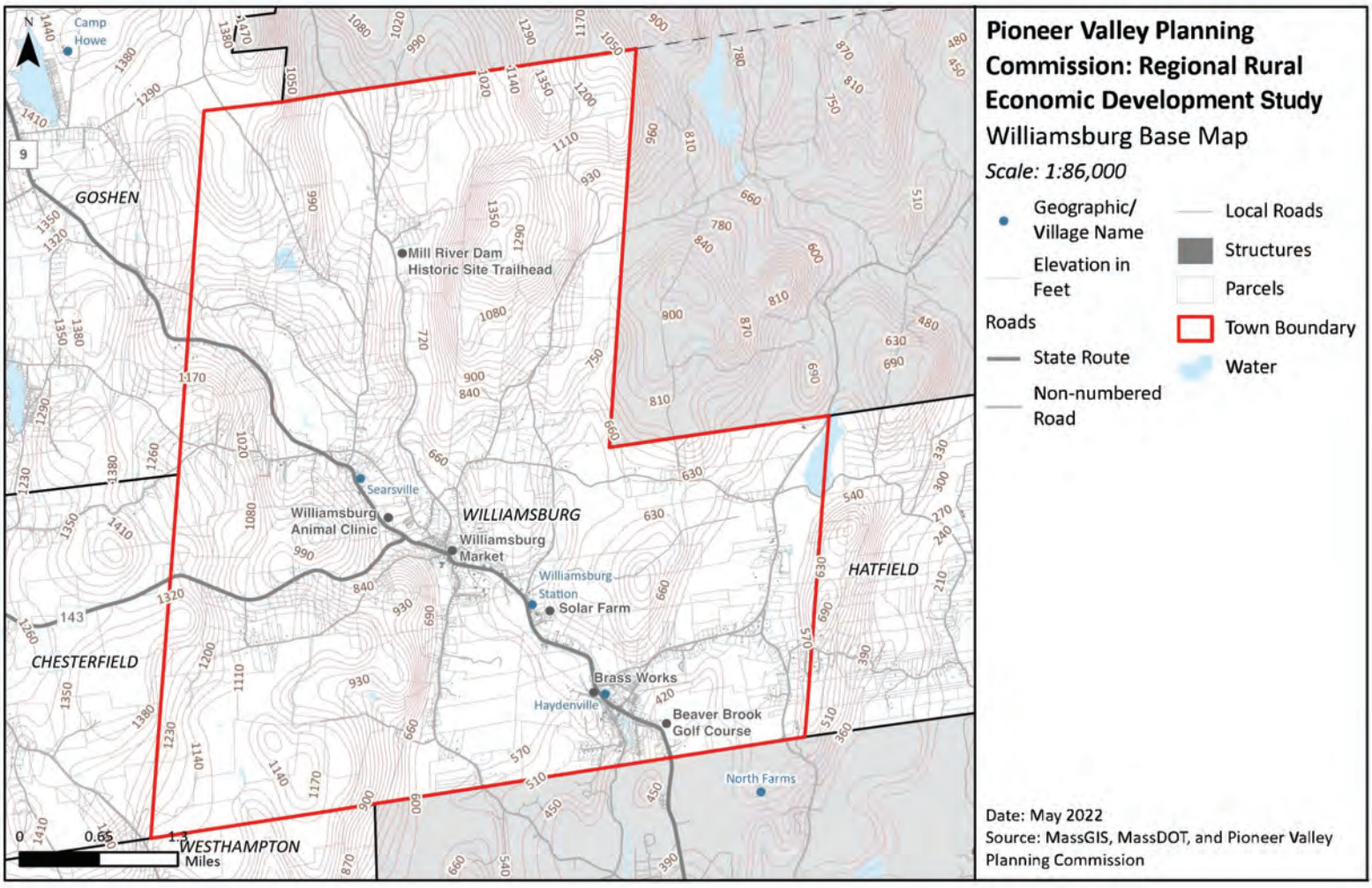
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Construction	16.6%
Retail Trade	15.0%
Manufacturing	10.7%

*Percentages are based upon Williamsburg's employment base of **512 average weekly jobs** across **96 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



WORTHINGTON: KEY FACTS

POPULATION	1,193
% CHANGE 2010-2020	3.2% ↗
MEDIAN AGE	49.9
POPULATION DENSITY (Persons per square mile)	37.33
HOUSEHOLDS	549
% CHANGE 2010-2020	5.2% ↗
SELF-EMPLOYED RESIDENT WORKERS	18.5%
UNEMPLOYMENT RATE (2021)	4.47%
INCOME PER CAPITA	$29,980
% POPULATION IN POVERTY	4.70%

92.73%	RESIDENTIAL/ OPEN SPACE % OF TOTAL LEVY
26.14%	TAX-EXEMPT % OF TOTAL ACRES
$155,702	EQUALIZED VALUATION PER CAPITA
0.048	ROAD MILES PER CAPITA

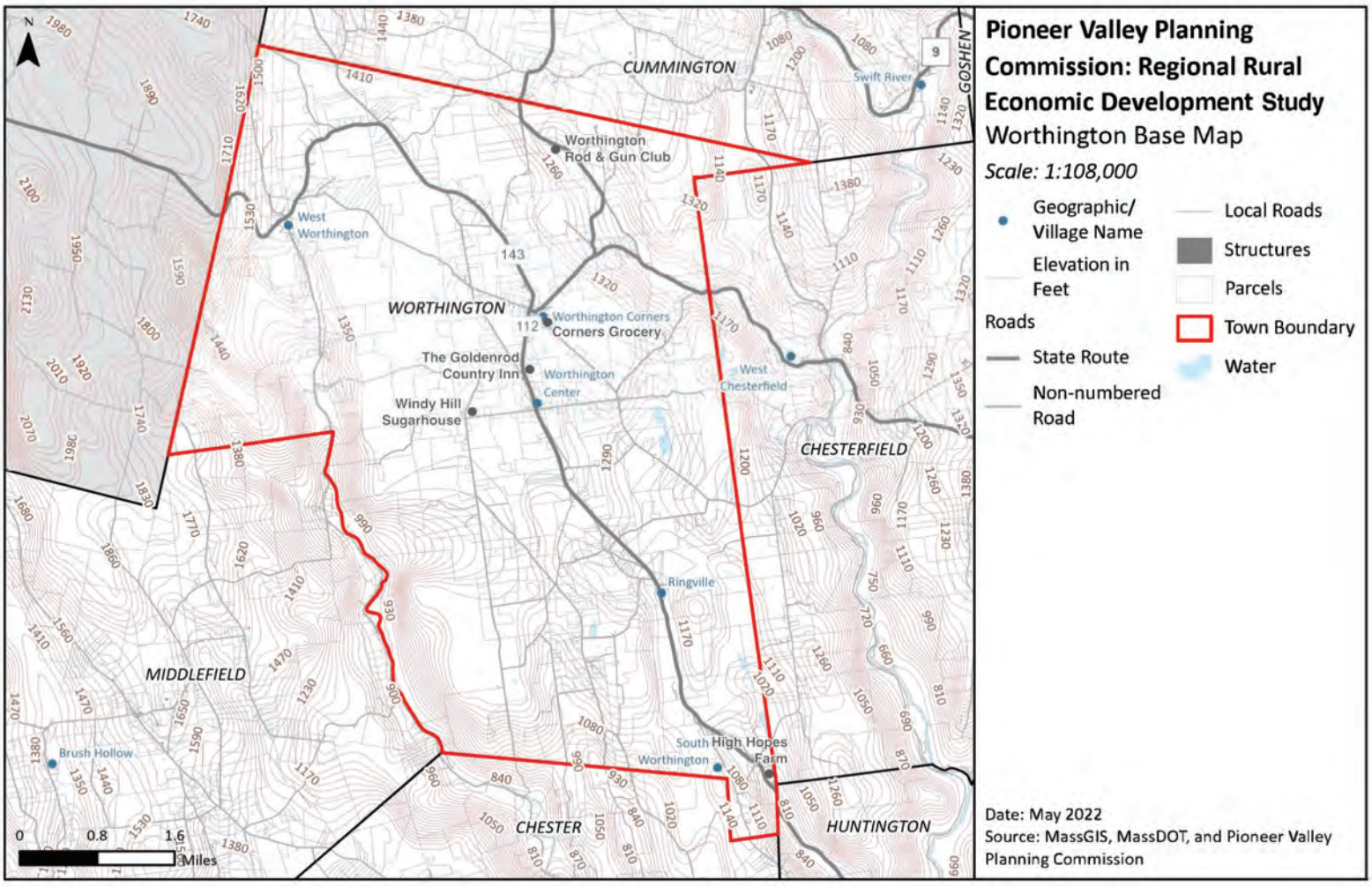
TOP 3 EMPLOYMENT SECTORS

(Does not include self-employed population.)

	PERCENT OF LOCAL JOBS
Health Care and Social Assistance	33.9%
Construction	2.4%
No Industry Data Available	----

*Due to the limited number of jobs in Worthington, employment and wage data are only available for two industries. Percentages are based upon Worthington's employment base of **165 average weekly jobs** across **33 establishments**. Source: ES-202 Data.*

Sources: U.S. Census Bureau, 2010 and 2020 Census; American Community Survey 5-Year Estimates, 2016-2020; Executive Office of Labor and Workforce Development: Labor Market Information, Employment and Wage (ES-202) and Labor Force and Unemployment Data, 2021; MA Department of Revenue,Tax Levies by Town, FY 2022; MassGIS, Property Tax Parcel Data, 2022.



ATTACHMENT E:
OTHER REPORTS AND PLANS

1. Ascendant Global (New Growth Innovation Network): **Next Steps: Pioneer Valley Planning Commission Economic Equity Fund**, 2023
2. Berkshire Regional Planning Commission (2023-2027): 2023-2027 **CEDS Berkshire County, Massachusetts**
3. Boston Indicators and the Boston Foundation in partnership with the Coalition for an Equitable Economy: **The Color of Capital**, 2021
4. Capital Region Council of Governments (2023-2027): **Act Greater Hartford: A Comprehensive Economic Development Strategy for Growth and Equity in the Capitol Region**
5. Franklin Regional Council of Governments (2020-2024): **2020 Comprehensive Economic Development Strategy for Franklin County, MA**
6. Global Detroit, **The Power of Trusted Connectors in Micro-Enterprise Development**, 2024
7. Healey-Driscoll Administration Economic Development Plan: **Team Massachusetts: Leading Future Generations**, 2023
8. Hilltown Collaborative and Mass Development: **Gateway Hilltowns Economic Development Strategy**, 2023
9. Massachusetts Association of Conservation Districts: **Massachusetts Farmland Action Plan 2023-2050**, 2023
10. Massachusetts Broadband Institute: **Strategic Plan, 2022-2027** and **State Digital Equity Plan**, 2023
11. Massachusetts Clean Energy Center: **2023 Massachusetts Clean Energy Industry Report**
12. Massachusetts Commission on Clean Heat: **Final Report**, 2022
13. Massachusetts Office of the State Auditor: **Public Infrastructure in Western Massachusetts: A Critical Need for Regional Investment and Revitalization**, 2021
14. Massachusetts Technology Collaborative: Workforce Roadmap Series: **Preparing the Advanced Manufacturing Workforce**, 2021
15. Massachusetts Workforce Agenda: **Meeting the Moment to Attract, Retain and Develop a Future Workforce**, 2024
16. Massachusetts Workforce Association: **Preparing for the Future of Work in the Commonwealth of Massachusetts**, 2021
17. MassHire Franklin Hampshire Workforce Board: **Strategic Plan, 2020-2025**, 2020
18. MassHire Hampden County Workforce Board: **Strategic Plan, 2023-2026**, 2023
19. MassHire Hampden County Workforce Board: P**ioneer Valley Labor Market Blueprint 2024-2025**, 2024
20. MassInc in partnership with the Coalition for an Equitable Economy: **Unleashing the Potential of Entrepreneurs of Color in Massachusetts: A Blueprint for Economic Growth and Equitable Recovery**, 2021
21. Pioneer Valley Planning Commission: **Redlines, Black Neighborhoods**, 2024
22. Pioneer Valley Planning Commission: **Regional Transportation Plan**, 2024
23. Pioneer Valley Planning Commission CARES Act Reports: **Pioneer Valley Economic Recovery Scenario and Strategic and Strategic Roadmap, BIPOC Community Connectors, and Moving beyond the Pandemic: Economic Development Assessment of Small Towns and Rural Communities**
24. Pioneer Valley Planning Commission, (2019-2024): **The Pioneer Valley's Comprehensive Development Strategy (CEDS) 2019-2024 ("Plan for Progress")**

25. Public Health Institute of Western Massachusetts: **2022 Community Health Needs Assessment**, 2022
26. Rural Policy Advisory Commission: **Rural Policy Plan for the Commonwealth of Massachusetts**, 2019
27. Wayfinders: **Springfield and Pioneer Valley Housing Phase II**, 2022
28. Western Massachusetts Economic Development Council Report: **Accelerating Inclusive Growth in the Pioneer Valley: A Prospectus for Transformative Economic Investment**, 2024