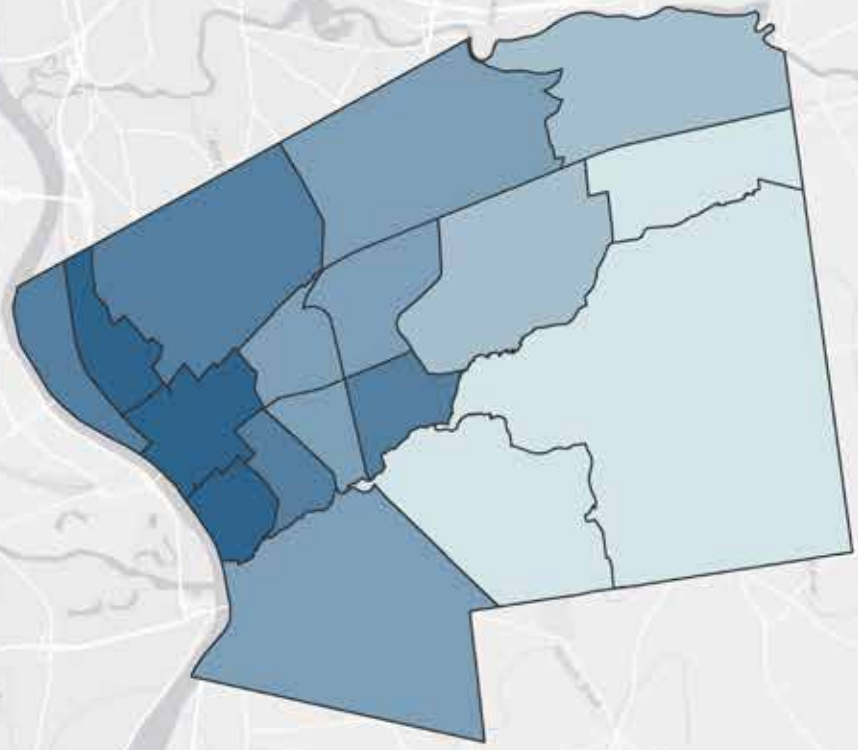
Data Atlas by Neighborhood

City of Springfield, MA



Prepared by
Pioneer Valley
Planning Commission
for LiveWell
with funding support from the CDC

CDC cooperative award #:
1H75DP004641-01

This publication (journal article, etc.) was supported by the Cooperative Agreement Number above from The Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

DATA ATLAS BY NEIGHBORHOOD

FOR THE CITY OF

SPRINGFIELD, MA

September 2014

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A Product of:

LiveWell Springfield
www.livewellspringfield.org

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AN INTRODUCTION TO THE DATA ATLAS

ABOUT THE REPORT

In 2012, the Pioneer Valley Planning Commission secured funding from the Centers for Disease Control and Prevention (CDC) to significantly expand the work of LiveWell Springfield, a community based coalition that includes over 20 organizations working in Springfield (www.livewellspringfield.org). The coalition supports a grassroots movement towards health equity through improving access to healthy eating and active living opportunities. Great strides have been made in this effort and ongoing action is essential to continue the momentum.

The current work of LiveWell Springfield includes the Go Fresh Mobile Farmer's Market, catalyzing efforts to bring a grocery store to the Mason Square area of the city, expanding and publicizing rowing and biking opportunities on the Connecticut Riverwalk and Bikeway and at North Riverfront Park, and the development of a Complete Streets—Pedestrian and Bicycle plan for a more walkable/bikeable Springfield.

As part of PVPC's work on the LiveWell Springfield initiative, we have produced this Data Atlas in order to provide community based advocacy and service delivery organizations, residents, and city government with health, economic, and educational information on each of the city's 17 neighborhoods. Collectively, we seek to answer the question: how is Springfield doing?

As illustrated throughout the report, the city faces extreme challenges, with wide variations in measures of health and well-being between neighborhoods. In some neighborhoods, notable gains are evident. Yet other neighborhoods fall far below expectations for the city, region, and state, reminding us and invigorating us in our efforts to improve health outcomes, economic security and quality of life. We provide this data atlas as a foundation for strategic decision-making by local organizations, city government and the public. Our hope is that the findings presented within these pages foster ongoing informed dialogue and action dedicated to shaping the city's future, building on the momentum of LiveWell Springfield.

ABOUT THE INDICATORS

The task of selecting and examining factors that determine health, wellness, and quality of life can be approached with many methods. The indicators found in these pages were selected by the representatives of the organizations that form LiveWell Springfield because they most accurately reflect LiveWell's mission and programming and because they were readily available. During the selection process, past indicators used by the PVPC were reviewed, along with others that were relevant to the context of LiveWell Springfield's work. For this report, the indicators were categorized into the following sections:

Children & Youth: measures phenomenon and resources related to children, childcare, and births

Education: explores educational opportunities, phenomenon, and outcomes across different academic levels, from preschool to college

Health & Safety: illustrates issues of mental and physical well-being, as well as safety

Economic Security: presents basic economic and financial issues affecting Springfield residents

Housing: investigates the cost, availability, and stock of housing in Springfield

Environment: analyzes transportation options, recreational opportunities, and pollution reduction in the built environment

Indicators are presented in three formats. Visually, city data is compiled in charts and graphs along with figures for the Pioneer Valley region and state of Massachusetts, to allow for the comparative analysis of historical trends. Spatially, the neighborhood-level data is visualized on corresponding maps that depict the current variations amongst neighborhoods in order to highlight outliers, inequities, and the extent that phenomenon are geographically clustered. Narratively, the body of information is analyzed to uncover trends, outliers, disparities, and clustering. Additionally, a table with the neighborhood-level data is provided so readers can seamlessly incorporate it into their future work. Whenever possible, all three formats are presented for each indicator. However, in a few cases the data was not have been available at the neighborhood level. In these cases, narrative descriptions and historical trend graphs are still provided to show the important comparisons between Springfield, the Pioneer Valley region, and the state.

ABOUT THE DATA

U.S. Census Bureau: The data utilized in this report was derived from a multitude of sources. Primarily and unless otherwise noted, data was obtained from the U.S. Census Bureau's 2012 American Community Survey 5-Year and 1-Year estimates. For city, regional, and state data trends, 1-year-estimates are used as it allows for data to be examined father into the past. For neighborhood data, 5-year-estimates are used as those are the only data sets that allow for such small geographic analysis.

Margin of Error: To acquire this, the U.S. Census randomly surveys a sample of the population for each geographic area. The results, as with any survey, possess a margin of error that can be found on the U.S. Census Bureau's website. Despite this imperfection, we believe this is the best available data at the time of the creation of this report.

5-Year –Estimates: Any neighborhood level data provided by the U.S. Census Bureau are 5-year estimates. What this means is that at a small geographic scale, it may take up to five years for enough respondents to participate for to develop a valid and accurate estimate for that geographic area. Accordingly, these estimates are not averages of the five year period. They are an estimate developed based on data that was collected over a five year period.

Other Data Sources: Other data sources, state and federal, are noted if used. Certain datasets are recent, yet others are from a year or two ago. As entities which provide the data do not maintain a uniform schedule for dissemination, the most recent release may be older than other datasets in the report. We have used the most recently released data in this report. Moreover, the scope of historical data is also different amongst these sources, resulting in a smaller time-series for certain datasets compared to others.

ABOUT NEIGHBORHOOD CALCULATIONS

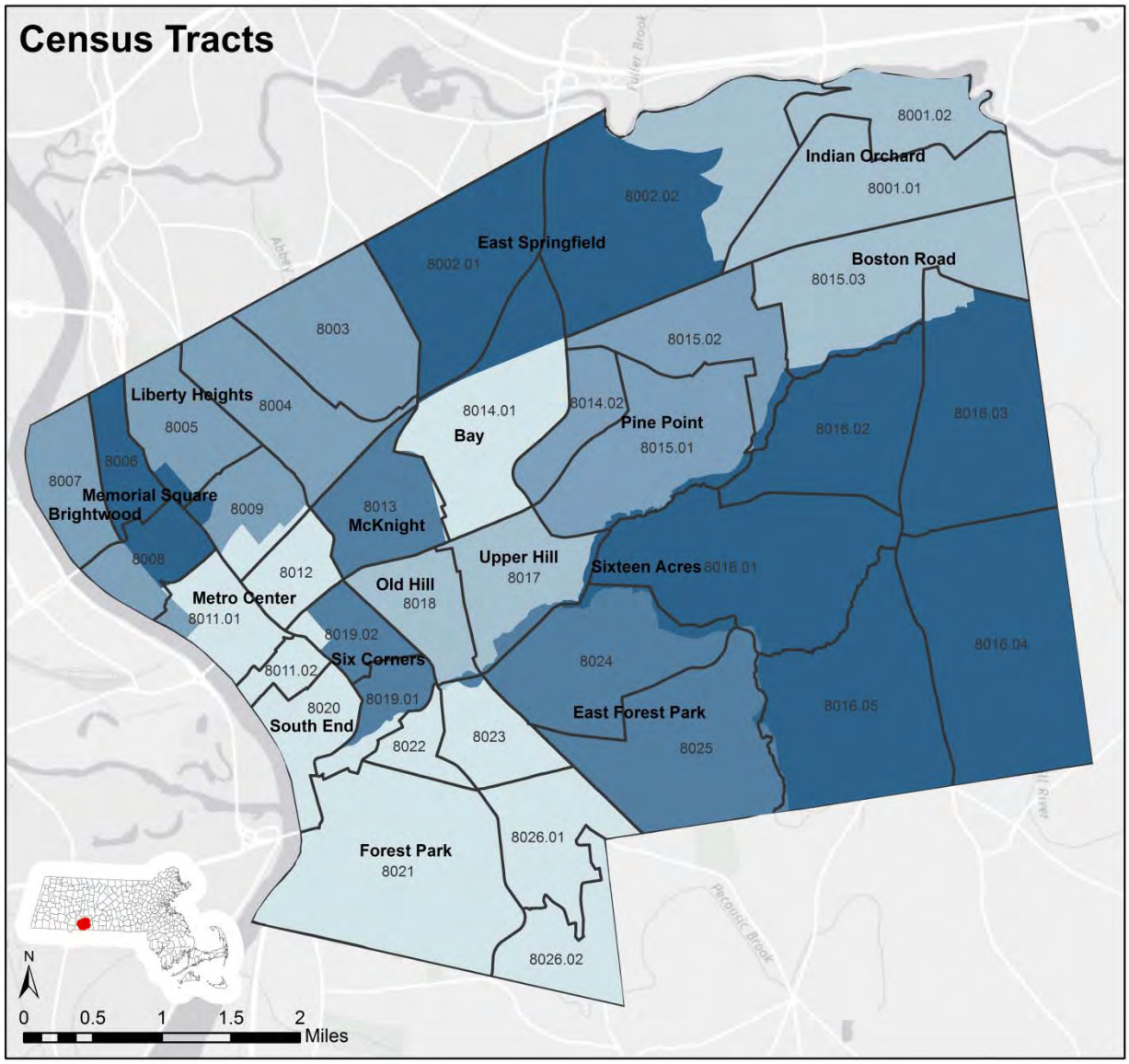
The majority of the data from the American Community Survey is available for individual census tracts. In densely populated urban areas, multiple census tracts often comprise one neighborhood. For this report, we examined a list of census tracts by neighborhood provided by the City of Springfield. In most cases, census tract boundaries are fairly close to neighborhood boundaries, but on occasion, census tracts do not follow the boundaries of a neighborhood, spilling into the adjacent neighborhood and resulting in a margin of error. Despite this imperfection, combining census tracts is the most accurate method available for deriving much of this neighborhood-level information. Illustrated in the following table and map are the Springfield neighborhoods and their corresponding census tracts.

When available, raw numbers were used and combined to determine neighborhood values. In other instances, data is only available as percentages of the tract population. Subsequently, each census tract was weighted

according to the proportion of its population to the neighborhood's total population in order to accurately determine the neighborhood's rate. For example, unemployment rates are presented as a percentage for a neighborhood's multiple tracts. Combining these as is would inaccurately produce a rate that ignores the population differences of each tract. A weighted value, based on the populations, is used in calculations to derive the neighborhood rate.

In other cases, indicators are extracted as rates of a certain population. For example, the rate of premature mortality is calculated as a number per 1,000 people. In one neighborhood, there may be 20 cases, yet in another, 10 cases. Both, though, have a different number of residents. When reduced to a number per 1,000 people, it allows one to clearly compare indicators across spatial scales with varying populations.

NEIGHBORHOOD NAME	CENSUS TRACT NUMBER(S)
Indian Orchard	8001.01, 8001.02
East Springfield	8002.01, 8002.02
Liberty Heights	8003, 8004, 8005, 8009
Memorial Square	8006, 8008
Brightwood	8007
Metro Center	8010, 8011.01, 8011.02, 8012
McKnight	8013
Bay	8014.01
Pine Point	8014.02, 8015.01, 8015.02
Boston Road	8015.03
Sixteen Acres	8016.01, 8016.02, 8016.03, 8016.04, 8016.05
Upper Hill	8017
Old Hill	8018
Six Corners	8019, 8019.01, 8019.02
South End	8020
Forest Park	8021, 8022, 8023, 8026.01, 8026.02
East Forest Park	8024, 8025



TELL US WHAT YOU THINK

We encourage you to write or call us with comments, questions, suggestions, and responses. Reactions from the public inform our work and are fundamental in analyzing the social, economic, environmental, and health data that affect the city's residents.

AN INTRODUCTION TO SPRINGFIELD, MA

The City of Springfield is the largest city in the Pioneer Valley Region. It is the third largest community in the Commonwealth of Massachusetts. Together with the City of Holyoke and Chicopee and their neighboring communities, Springfield comprises the fourth largest metropolitan area in New England.

A largely developed and urbanized city comprised of 33 square miles (approximately 21,147 acres), Springfield is located on the eastern bank of the Connecticut River in Western Massachusetts, just north of the Connecticut state line.

Settled in 1636, Springfield has several historic and distinct neighborhoods in addition to a newly revitalized Central Business District. These neighborhoods earned the city its nickname of the "City of Homes." Springfield is also known as the "City of Firsts" paying homage to its history as the birthplace of the first gasoline-powered automobile and motorcycle, and the game of basketball.

Springfield is home to eight of the region's twenty largest employers, including Mass Mutual Life Insurance, Solutia (a Division of Monsanto Chemical Co.), and Smith & Wesson. Major cultural institutions include the Springfield Symphony, City Stage, Springfield Civic Center, and the Springfield Library and Museums Association – all of which are located in a historic downtown campus setting. Springfield is also home to four colleges and four hospitals.

Even with vibrant, historic neighborhoods, a newly reinvigorated downtown and an active cultural base, Springfield, like many urban areas in the Northeast, has seen a decrease in population in recent years. Since 1990, the City's population declined an estimated 2.1% to 153,703 residents in 2013.

CHILDREN AND YOUTH

The importance of children and youth to Springfield—to any city—cannot be overstated. Efforts aimed at capturing the current state of the city's children is an effective method of assessing the health, vitality, and future direction of the city. Children's health, family situations, and economic circumstances are indicators that are valuable for what they state is occurring presently and what they predict for the future. If children are not healthy today, we cannot anticipate that the city's life expectancy will continually increase. Children who grow up in families with major stress factors or challenging economic situations are less likely to be socially and economically successful in adulthood. Moreover, they risk perpetuating the same obstacles they once faced in their families. For this cycle to cease and reveal a positive future for Springfield, indicators in the following areas have been crafted to allow for a comprehensive understanding of the current phenomenon affecting children: prenatal care, low birth weight babies, infant mortality, school prevalence of asthma, births to teenage mothers, and rates of free and reduced-price lunch enrollment.

Increases in the rate mothers receive prenatal care, coupled with a decline in cases of asthma in school, are encouraging and illustrate the progress accomplished by the city. However, sharp fluctuations and a recent increase in infant mortality, along with recent growth in low birth weight babies, depict unsteadily negative trends. Moreover, these overall trends for the city dilute the health and quality of life inequities that resonate through certain neighborhoods in the city.

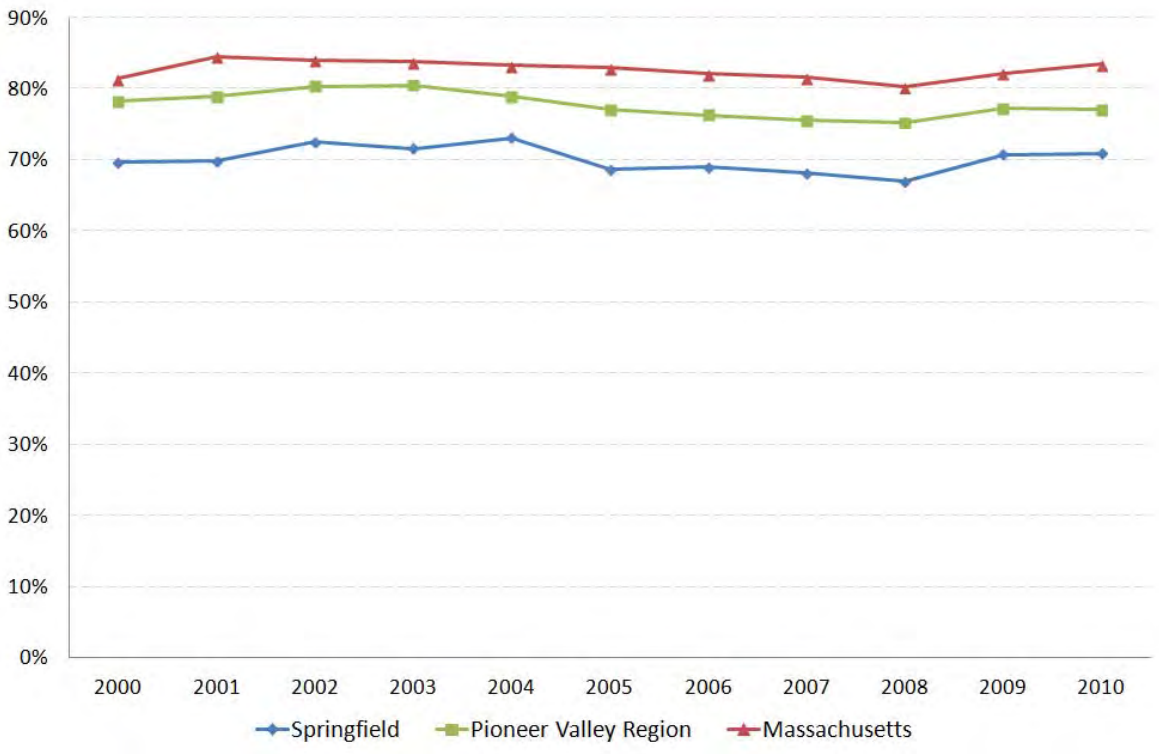
PRENATAL CARE

The use of prenatal care is a crucial indicator because it relates directly to the outcomes of pregnancy such as birth weight, labor complications, and overall infant health. In turn, these factors can have significant lifelong impacts for the baby. For example, preterm births and low birth weight, which are sometimes preventable, are correlated with prenatal care. Inadequate prenatal care can result in premature delivery and low birth weight. Broadly, the presence of care relates to the absence or presence of birth issues. Based upon when a mother had her first prenatal care visit and how many visits she has during her pregnancy, the adequacy of prenatal care is rated in relation to the public health community's recommended schedule for prenatal care. The percent of pregnancies for which there was adequate prenatal care based on the Kotelchuck index is measured in this indicator.

Massachusetts reported a rate of prenatal care of 83.4% in 2010. The Pioneer Valley region[1] had a significantly lower rate of 77.1%, while Springfield, at 70.9%, had prenatal care rates far below the state or the region. While the state's rate of prenatal care remains almost identical in 2010 as it was in 2003, when it was 83.7%, Springfield's has historically declined, falling from 73.1% in 2004 to 66% in 2008. Although rates improved city-wide in subsequent years, residents of the city receive rates of prenatal care that are approximately 13% lower than the typical Massachusetts' resident.

There are disparities in care between neighborhoods in Springfield. More than a third, and in some cases nearly half, of pregnant women in McKnight (54.5%), Bay (62.5%), and Upper Hill (65.82) neighborhoods of Springfield do not receive adequate levels of prenatal care. In Springfield, only the neighborhoods of East Forest Park (83.5%) and Sixteen Acres (80.1%) maintain Kotelchuck ratings that hover near that of Massachusetts as a whole.

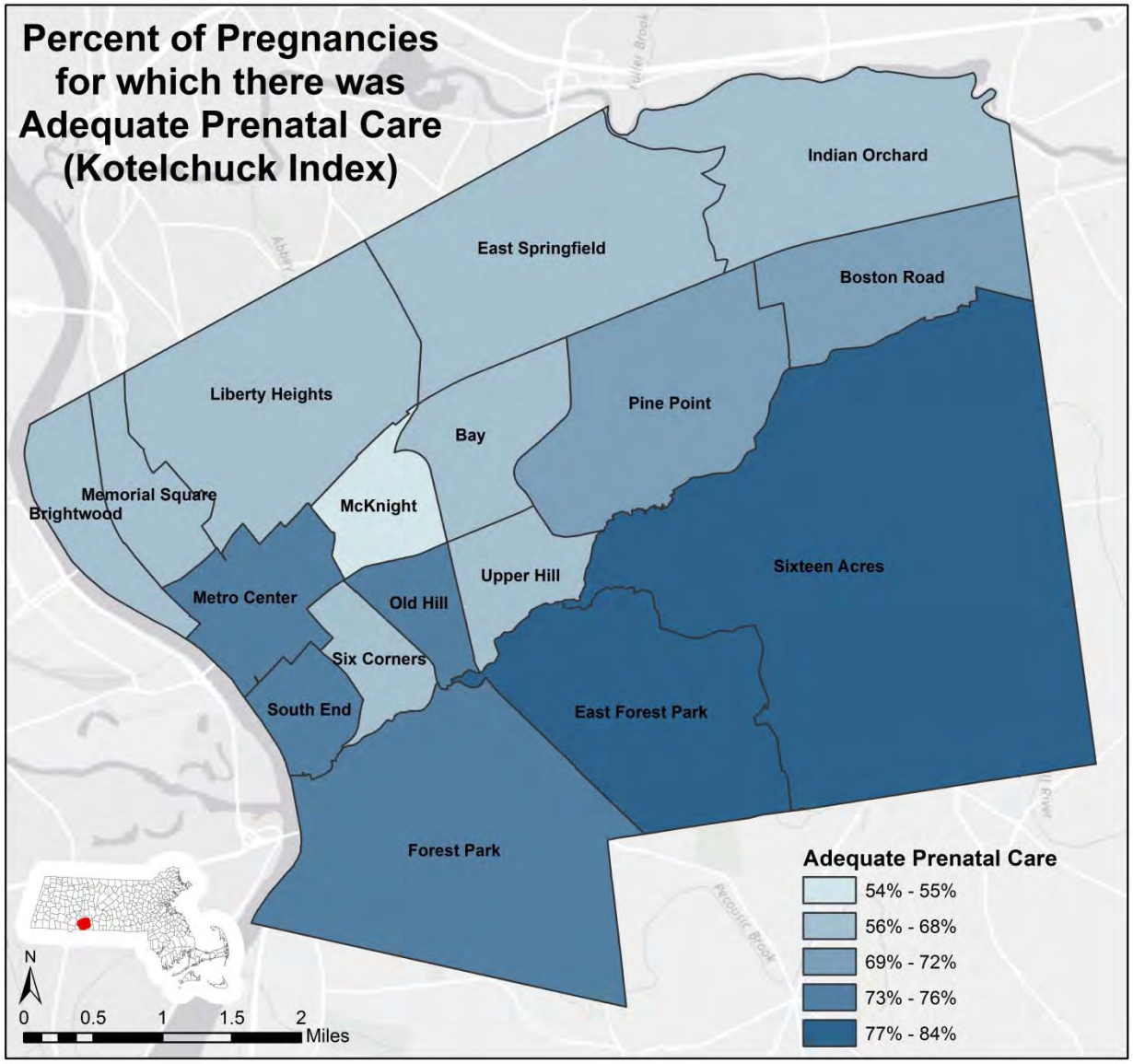
LONG TERM TRENDS: CITY, REGION[1], STATE



Source: MA Department of Public Health

[1] Pioneer Valley Region values were calculated by using total births to weight data for Hampden and Hampshire counties.

PRENATAL CARE – NEIGHBORHOOD COMPARISONS - 2010



DATA BY NEIGHBORHOOD

NAME	2010
Mcknight	*54.6%*
Bay	*62.5%*
Upper Hill	*65.8%*
Six Corners	*66.9%*
Indian Orchard	*66.9%*
East Springfield	*67.5%*
Liberty Heights / Atwater	*67.6%*
Brightwood / Memorial Square	*67.7%*
Springfield	***71.0%***

NAME	2010
Belmont And Allen	*71.1%*
Pine Point / Boston Road	*72.0%*
Old Hill	*73.8%*
Metro Center	*74.1%*
South End	*75.6%*
Forest Park	*75.9%*
Pioneer Valley Region	77.1%
Sixteen Acres	*80.1%*
Massachusetts	***83.5%***
East Forest Park	*83.5%*

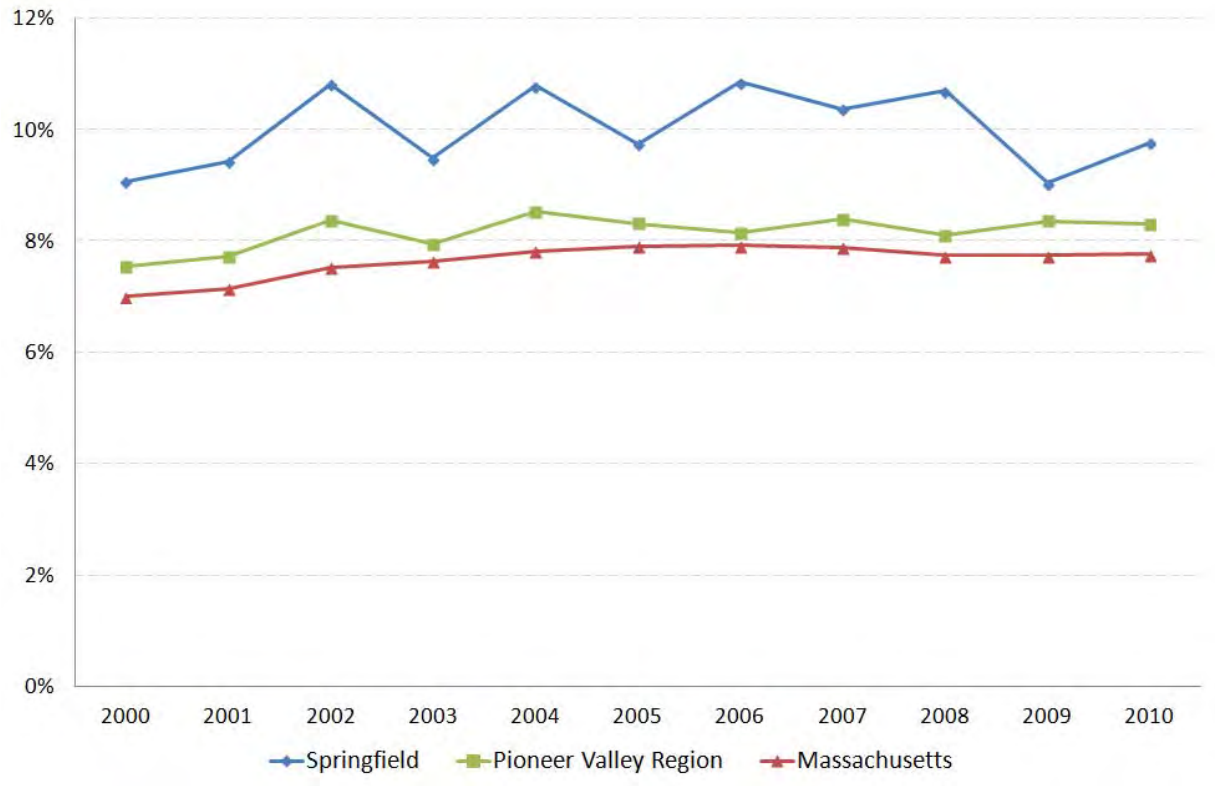
LOW BIRTH WEIGHT BABIES

Low birth weight is a complicated but significant public health indicator that often reflects a difficult pregnancy that ended prematurely. Causes include poor nutrition, substance abuse, or inadequate prenatal care. Low birth weight potentially leads to serious physical or mental health complications for a baby. Therefore, it reflects both the present and future health of Springfield's population. However, an increase in the percentage of all births that are deemed "low birth weight" is not always negative, as an increase in low birth weight babies can mean that more premature babies are surviving than in the past. As the birth weight indicator does not account for premature babies that did not survive, one should also factor in the probability of survival experienced by these children. A newborn weighing less than 2,500 grams is considered to have "low birth weight." The percentage of all births that fall into this category is represented in this indicator. The percent of babies of low birth weight is determined by dividing the number of low (includes "very low") birth weight newborns by the total number of newborns. Data is based on mother's residence.

As of 2010, 7.7% of all newborns in Massachusetts were considered low birth weight. Although this is down from previous years, the percentage has historically hovered around this level. In the Pioneer Valley, this rate is slightly higher, with 8.3% of babies born in 2010 reported as having low birth weights. Rates in Springfield were much worse however, typically ranging from 2-3% higher than state rates for an entire decade, remaining just under 10% (9.7%) in 2010.

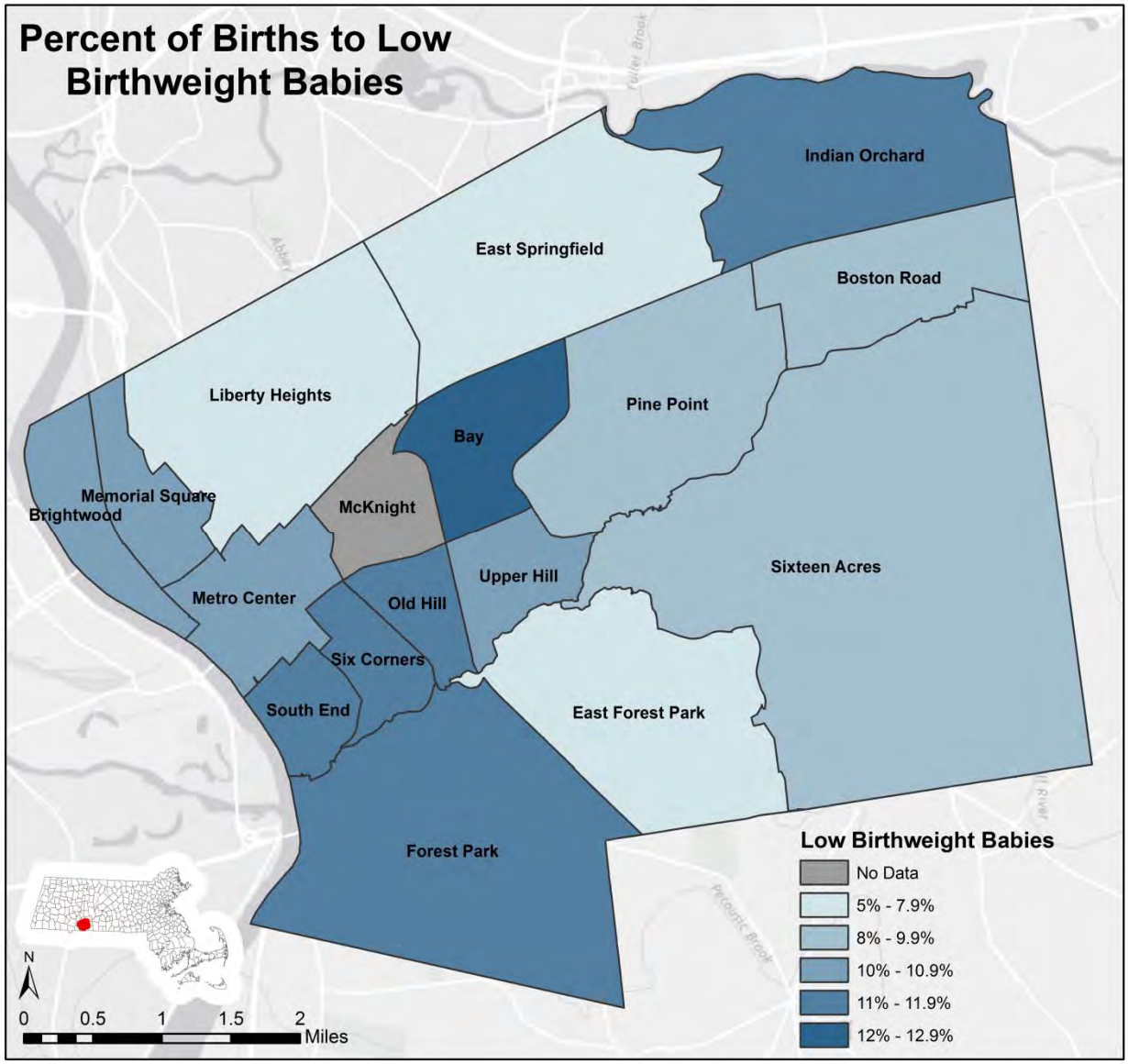
Certain neighborhoods in Springfield envelop an inordinate percentage of newborns that are below a healthy weight. While a few neighborhoods in Springfield, such as East Forest Park, East Springfield, and Liberty Heights/Atwater had relatively low rates of low birth weight newborns, with East Forest Park having the lowest rate just over 5 percent, a majority of neighborhoods (11 out of 16) had rates over 10 percent. McKnight (12.5%), Bay (12.5%) and Six Corners (11.7%) Indian Orchard (11.29%), Old Hill (11.25%), and Forest Park (11.23%), experience a disconcertingly high number of low birth weight newborns who may face fragile health.

LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Public Health

LOW BIRTH WEIGHT BABIES – NEIGHBORHOOD COMPARISONS



DATA BY NEIGHBORHOOD

NAME	2010
East Forest Park	*5.2%*
East Springfield	*6.8%*
Liberty Heights / Atwater	*7.5%*
Massachusetts	***7.8%***
Pioneer Valley Region	***8.3%***
Sixteen Acres	*8.8%*
Pine Point / Boston Road	*8.9%*
Springfield	***9.8%***
Upper Hill	*10.1%*

NAME	2010
Metro Center	*10.3%*
Brightwood / Memorial Square	*10.4%*
Belmont And Allen	*10.5%*
South End	*10.9%*
Forest Park	*11.2%*
Old Hill	*11.3%*
Indian Orchard	*11.3%*
Six Corners	*11.7%*
Bay	*12.5%*
McKnight	*12.5%*

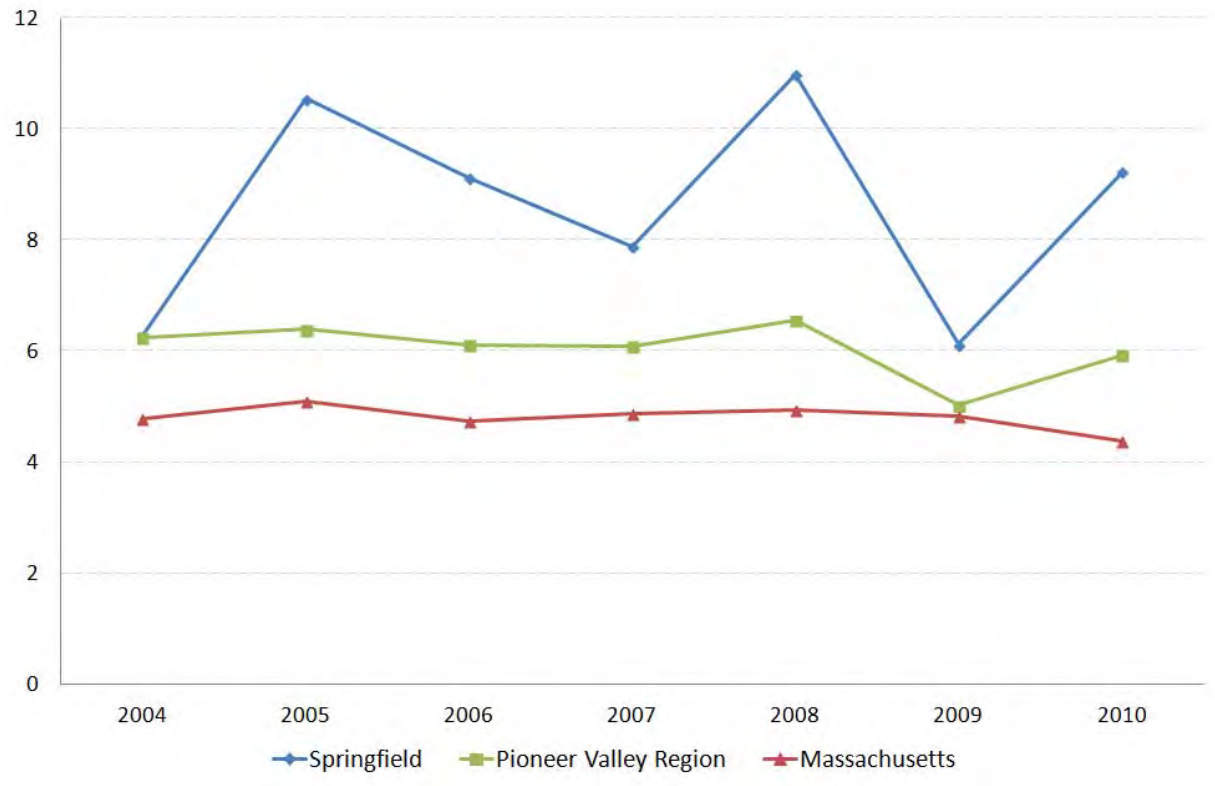
INFANT MORTALITY

Infant mortality measures the percentage of babies who do not survive past their first birthday. It is calculated as the total number of births divided by the total number of infant deaths. According to the CDC, "Mortality statistics are frequently used to [quantify] the extent of public health problems and to determine the relative importance of the various causes of death."[2] This indicator measures infant mortality, or number of infant deaths, per 1000 births. Comprehensive health care, including prenatal care and nutrition, can combat infant mortality. Still, it is necessary for one to examine the specific causes in order to identify what public health policy and resources would be most effective.

In Massachusetts, infant mortality is quite rare, due to the presence of numerous health care institutions. In 2010, the state reported 4.38 deaths per 1,000 births. This number was slightly higher in the Pioneer Valley region, which had 5.92 deaths per 1,000 births. Springfield, though, reported a concerning 9.24 deaths per 1,000 births. The city, which had been experiencing a decline in infant mortality between 2005 and 2009, reported an increase in deaths in 2010 when compared with the previous year.

Certain Springfield neighborhoods reported remarkably high instances of infant mortality in 2010. Upper Hill (37.97), Indian Orchard (24.19), and McKnight (22.72) had exceptional numbers of infant deaths per 1,000 newborns, ranging from 5-8 times higher than rates state-wide. Compounded by public health factors, birth defects, low birth weights, and maternal pregnancy complications often lead to these deaths. In Springfield, only Liberty Heights/Atwater, which reported 3.55 deaths per 1,000 births in 2010, fell below the state figure.

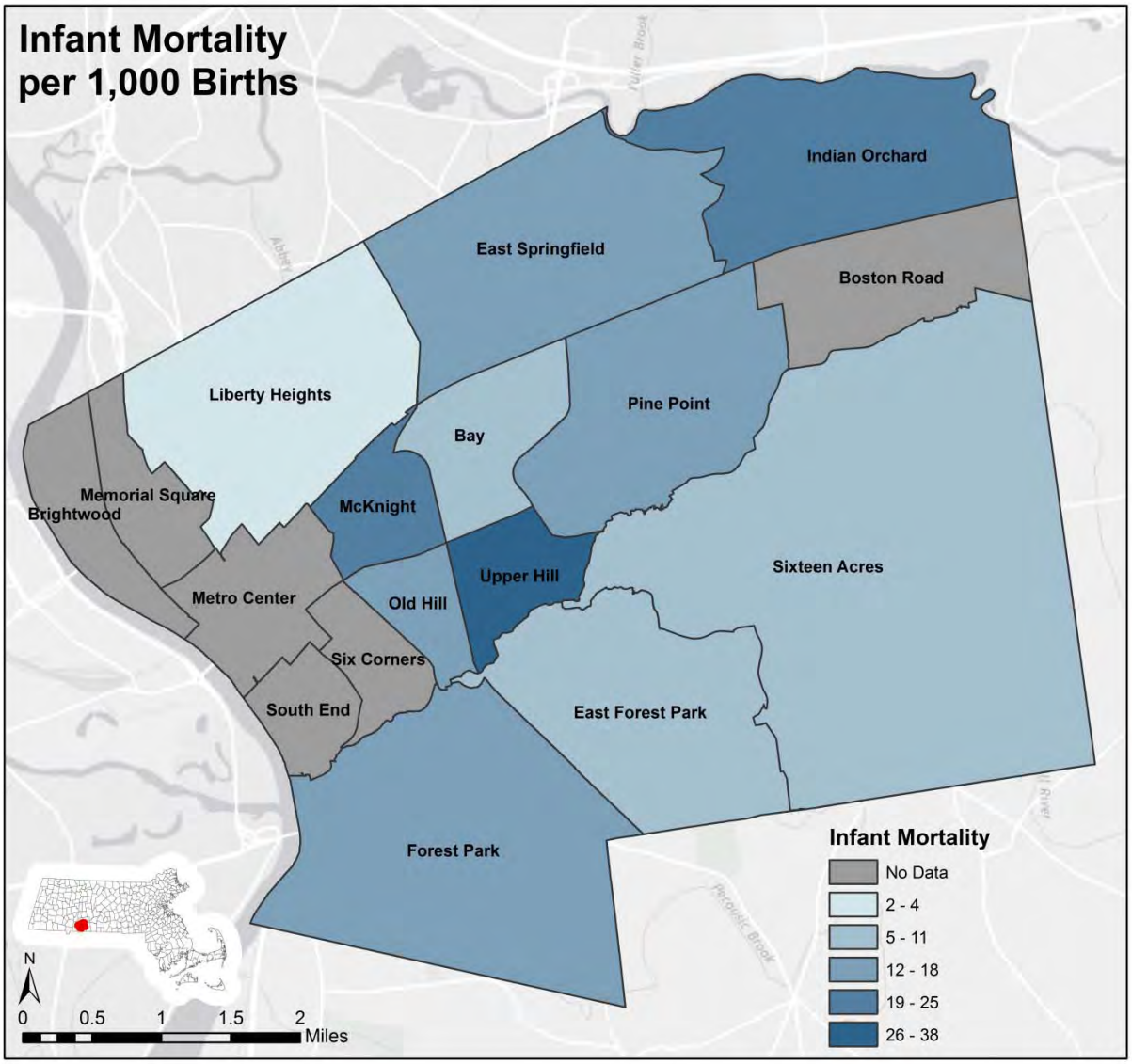
LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Public Health

[2] Center for Disease Control (CDC) and Prevention

INFANT MORTALITY – NEIGHBORHOOD COMPARISONS- 2010



DATA BY NEIGHBORHOOD

NAME	2010	NAME	2010
Liberty Heights / Atwater	*3.6*	*Old Hill*	*12.5*
Massachusetts	***4.4***	*Pine Point / Boston Road*	*12.7*
Pioneer Valley Region	***5.9***	*Forest Park*	*16.0*
Sixteen Acres	*8.9*	*East Springfield*	*17.1*
Springfield	***9.2***	*Mcknight*	*22.7*
Bay	*9.6*	*Indian Orchard*	*24.2*
East Forest Park	*10.4*	*Upper Hill*	*37.9*

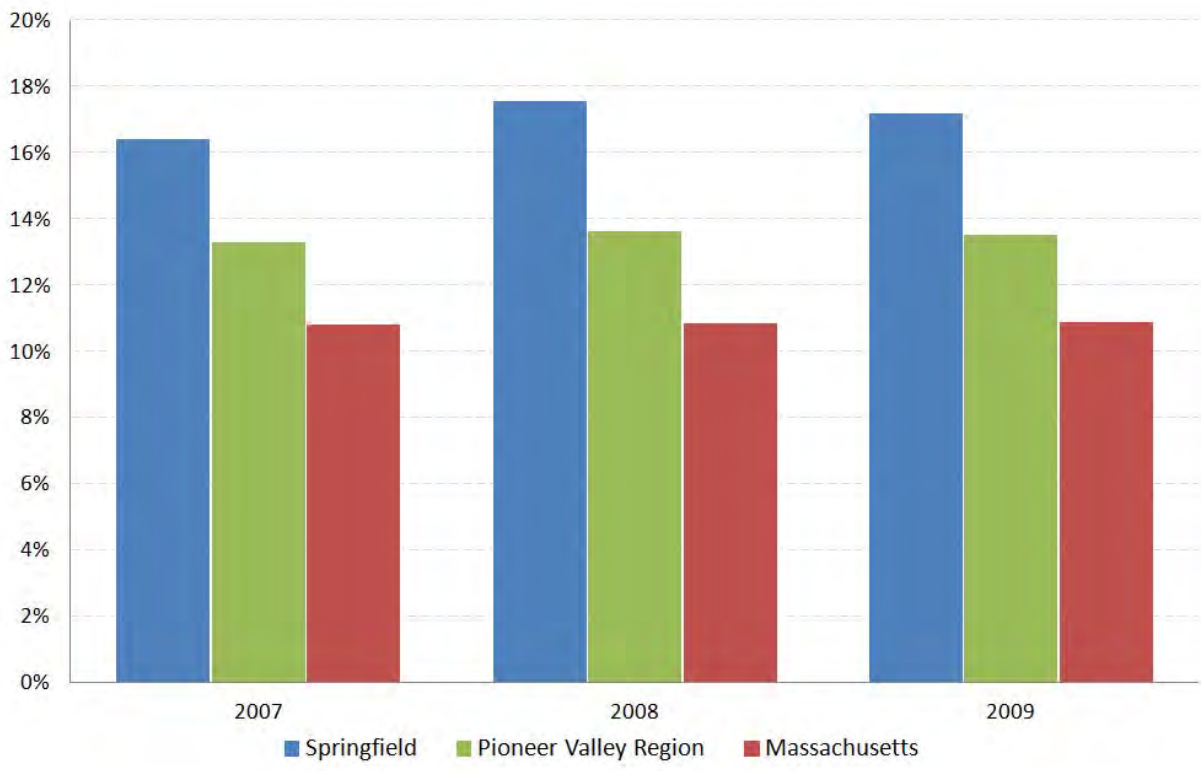
CHILDHOOD ASTHMA; SCHOOL PREVALENCE

According to the Massachusetts Bureau of Environmental Health, "acute asthma attacks can be triggered by indoor and outdoor air pollutants and allergens. Twenty percent of the U.S. population, or nearly 55 million people, spend their days in elementary and secondary schools. In the mid-1990s, studies showed that 1 in 5 of the nation's 110,000 schools reported unsatisfactory indoor air quality, and 1 in 4 schools reported unsatisfactory ventilation, which has an impact on indoor air quality." This indicator reflects the prevalence of asthma, an ailment commonly caused by negative environmental factors, in the children who attend schools in Springfield, the Pioneer Valley Region and the state. It reflects the living environments of the region and may also capture trends about the status of school facilities and school policy, such as buildings with unhealthy air qualities. The percentage of all students enrolled in school who have asthma is measured in this indicator.

Springfield's students have asthma rates exponentially higher than that of the state. As of 2009, 10.9% of all enrolled students in Massachusetts were diagnosed with asthma. Comparatively, 13.5% of Pioneer Valley[3] students and 17.2% of Springfield students suffered from asthma during the same year. Since 2007, these rates, and their corresponding inequities, have been remained stable.

Concentrations of asthma cases in Springfield are located in Mary M. Walsh School (29.2%), Kensington Avenue (26.3%), STEM Middle Academy (26%) and the Lincoln School (25.2%), all of which possess higher rates of asthma that are statistically significant when benchmarked against the state. Indeed, in these schools more than a quarter of all students experience the negative effects of asthma. Conversely, the Homer Street School (3.0%), Our Lady of Hope (3.9%), and Holy Cross (4.1%) reported asthma rates far below those of both the state and the region.

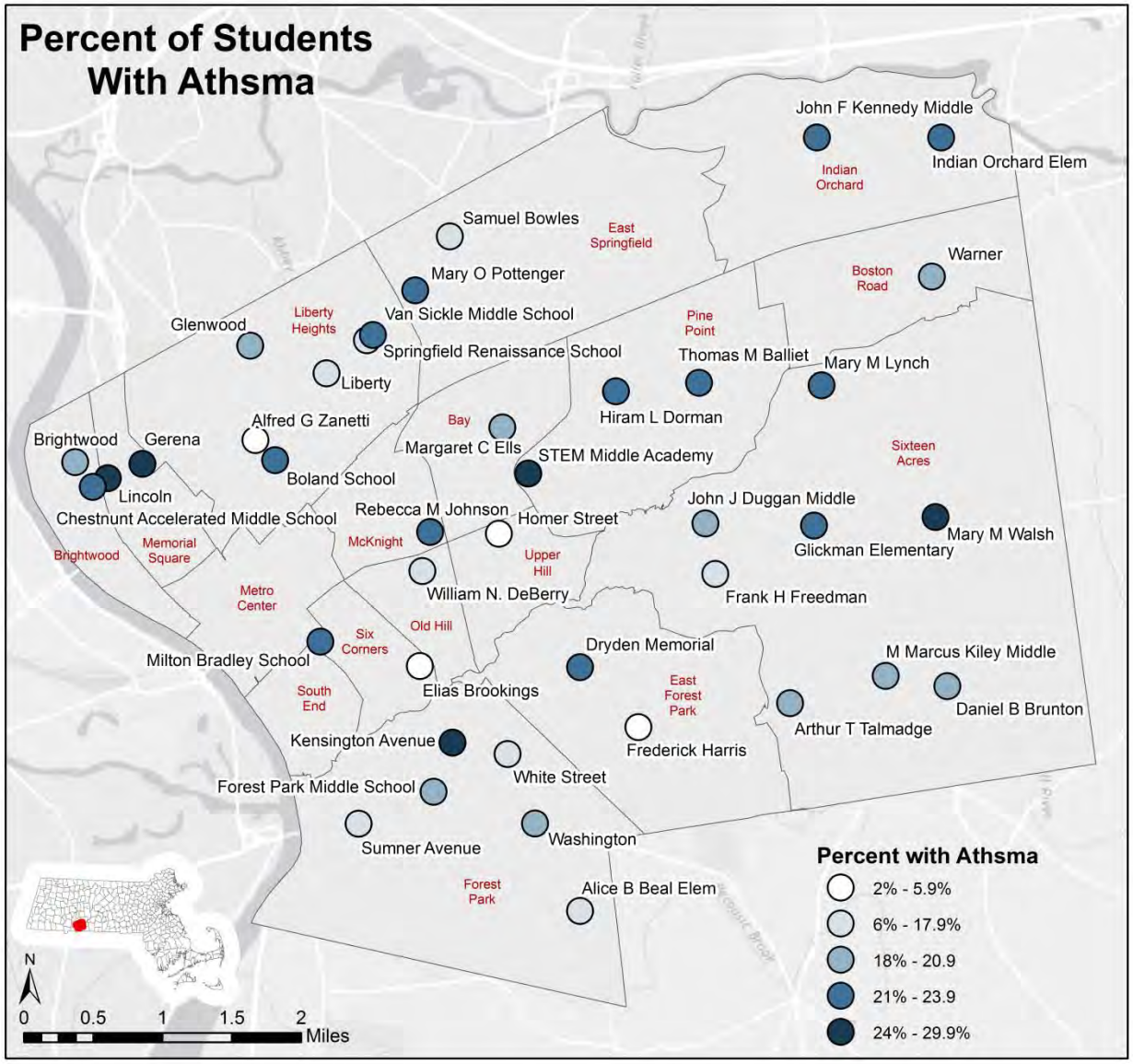
LONG TERM TRENDS: CITY, REGION, STATE



Source: Massachusetts Department of Public Health, Pediatric Asthma Rate Reports

[3] Note: Pioneer Valley Region figures were calculated by weighting data using 2005-2009 American Community Survey (ACS) 5-year estimates for ALL YEARS of county data. ACS 5-Year estimates were not available before 2009.

ASTHMA; SCHOOL PREVALENCE – SCHOOL COMPARISONS - 2009



DATA BY SCHOOL

See full list of data by school on the following page.

ASTHMA; SCHOOL PREVALENCE – SCHOOL COMPARISON DATA – 2009

NAME	2009
Springfield Academy	*0.0%*
Homer Street	*3.0%*
Elias Brookings	*3.8%*
Alfred G Zanetti	*4.1%*
Frederick Harris	*4.5%*
Massachusetts	***10.8%***
Pioneer Valley	***13.2%***
Renaissance	*15.2%*
Kathleen Thornton	*15.4%*
Samuel Bowles	*15.9%*
Sumner Avenue	*16.3%*
Alice B Beal Elem	*16.4%*
Springfield	***16.4%***
William N. DeBerry	*16.9%*
Liberty	*17.0%*
Frank H Freedman	*17.1%*
White Street	*17.9%*
Arthur T Talmadge	*18.3%*
Daniel B Brunton	*18.8%*
M Marcus Kiley	*19.0%*
Brightside	*19.0%*
Glenwood	*19.3%*

NAME	2009
John J Duggan	*19.4%*
Margaret C Ells	*20.0%*
Washington	*20.0%*
Forest Park	*20.4%*
Warner	*20.7%*
Van Sickle	*21.1%*
John F Kennedy	*21.2%*
Hiram L Dorman	*21.3%*
Indian Orchard Elem	*21.7%*
Mary O Pottenger	*21.8%*
Rebecca M Johnson	*22.3%*
Chestnunt	*22.6%*
Dryden Memorial	*22.6%*
Milton Bradley	*22.8%*
Thomas M Balliet	*22.8%*
Mary M Lynch	*23.1%*
Glickman	*23.2%*
Boland School	*23.8%*
Gerena	*24.7%*
Lincoln	*25.2%*
STEM	*26.0%*
Kensington Avenue	*26.3%*
Mary M Walsh	*29.2%*

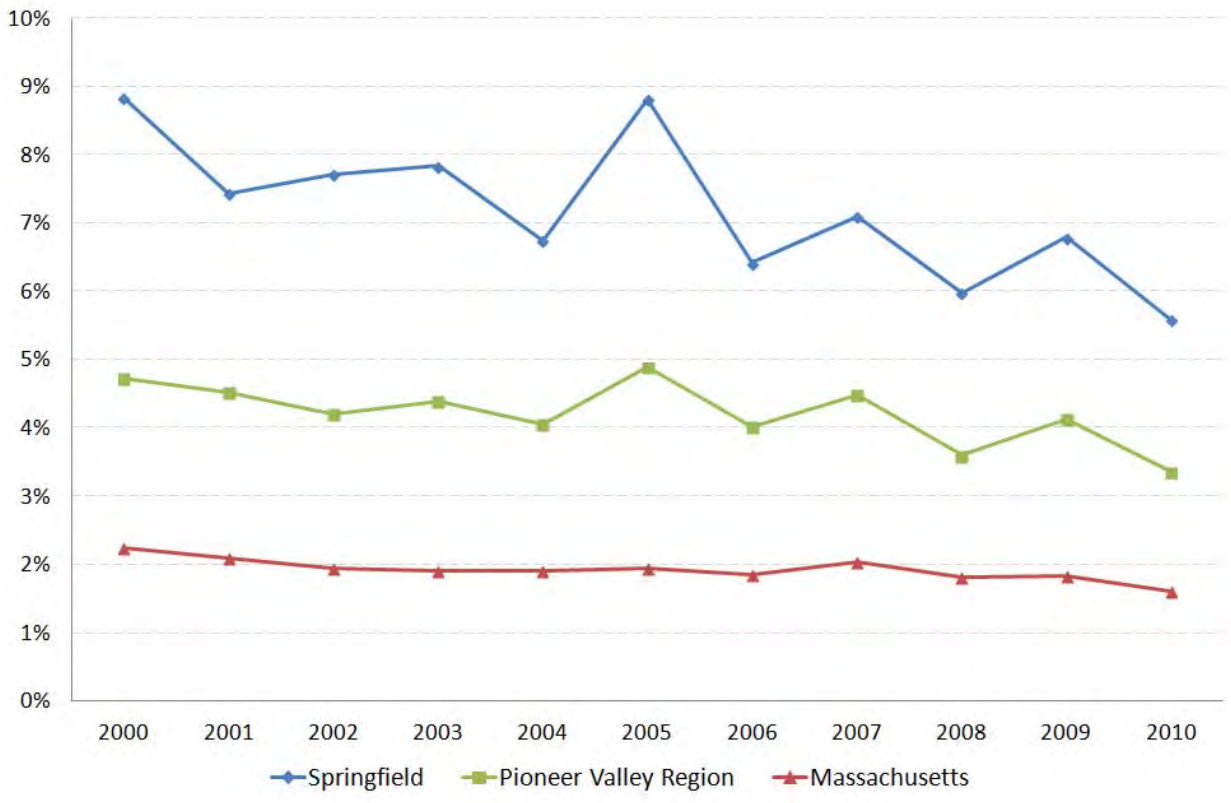
TEENAGE MOTHERS

Though there are undoubtedly exceptions, teenage mothers are more likely to face socioeconomic hardship. Often, this leads to a decreased likelihood that they complete a college degree than non-teenage mothers, subsequently leading them to face poverty. Statistically, children of teenage mothers are more likely to grow up in impoverished condition, a dire challenge to them completing high school or college. For this indicator, teenage mothers are defined as a birth to a mother under 18 years old. This indicator is calculated as the number of births to young mothers as a percentage of total births.

As of 2010, 1.6% of all births in Massachusetts were attributed to teenage mothers. Regionally, the Pioneer Valley reported that children to mothers under 18 accounted for 3.3% of total births. In Springfield, which reported a rate of 5.5%, contrasts with the region and the state. The city, which has seen a historical decline in births to teenage mothers, has experienced sudden spikes in the past, most notably 2005-2006. While rates in Springfield remain disproportionately high, a drop of 37% in 10 years is certainly encouraging.

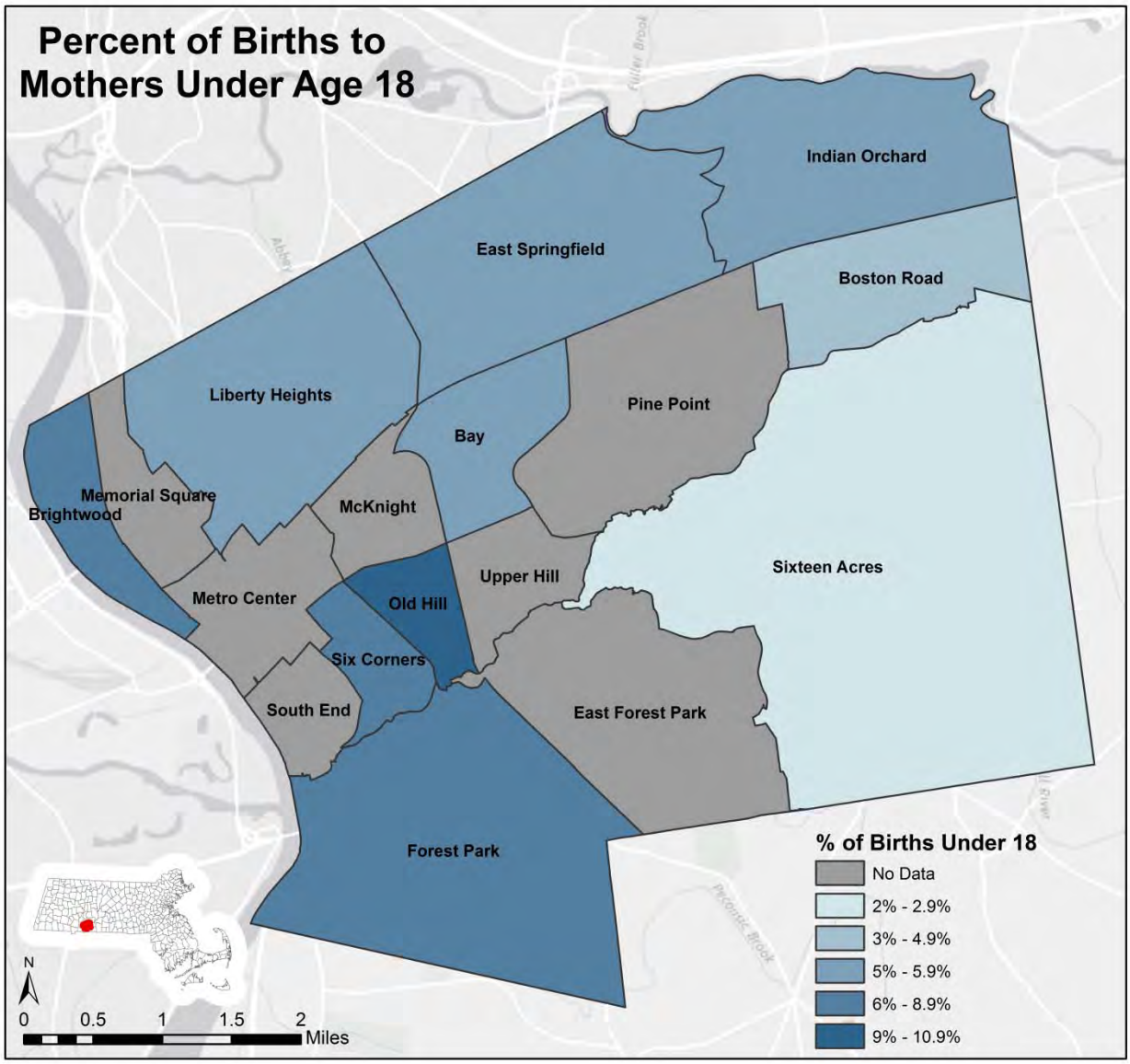
When examined closely, neighborhoods such as Old hill, where one out of every 10 births is to a mother under the age of 18, , as well as Belmont and Allen (8.96%), Six Corners (7.98), Brightwood and Memorial Square (7.93%) grapple with exceedingly high rates of teen pregnancy. Figures for these neighborhoods also illustrate the persistence of socioeconomic challenges faced by mothers who reside there. In contrast, Sixteen Acres (2.21%) and Pine Point/Boston Road (3.8%), while still above state figures, are the lowest in the city. Ideally, the broad trend will continue to drive these figures, collectively, downward.

LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Public Health

TEENAGE MOTHERS – NEIGHBORHOOD COMPARISONS - 2010



DATA BY NEIGHBORHOOD

NAME	2010	NAME	2010
Massachusetts	***1.6%***	*Indian Orchard*	*5.7%*
Sixteen Acres	*2.2%*	*Liberty Heights / Atwater*	*5.7%*
Pioneer Valley	***3.4%***	*Forest Park*	*6.9%*
Pine Point / Boston Road	*3.8%*	*Brightwood / Memorial Square*	*7.9%*
East Springfield	*5.1%*	*Six Corners*	*7.9%*
Springfield	***5.6%***	*Belmont And Allen*	*8.9%*
Bay	*5.7%*	*Old Hill*	*10.0%*

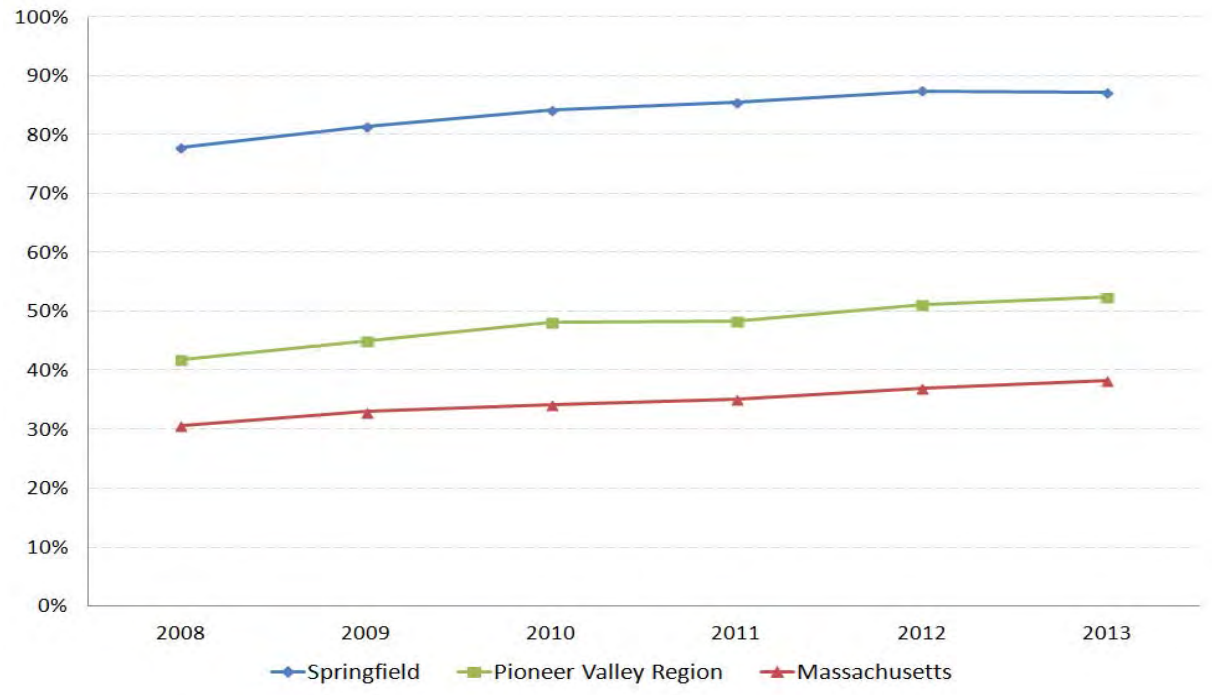
FREE AND REDUCED-PRICE LUNCH

The income level of students in public schools can vary significantly from that of the total child population, as a portion of children are enrolled in private or parochial schools. Therefore, the percent of enrolled students receiving free or reduced-price lunch is a more precise indicator than others, such as child poverty rate, of the socioeconomic realities facing public school districts. Because children from low-income backgrounds are less likely to have parents with high levels of education, time, or other resources, schools and districts with high percentages of students from low-income backgrounds face a far greater challenge providing equivalent educational opportunities. The percentage of public school students from kindergarten through the twelfth grade who qualify for free or reduced-price lunch is based on the students' family income. A child qualifies for this program if their family is at or below 130% of the poverty level, which was $22,850 annually for a family of four in 2014. A student qualifies for reduced price meals if their family is between 130 and 185 percent of the poverty level. It should be noted that this data is derived from school district geographies which, in many cases, pull children from multiple neighborhoods.

The percentage of students receiving free and reduced-price lunch in the Springfield (87.3%) public school system is strikingly higher than the region (52.4%) and state (38.3%) in 2013. An upward trend has occurred between 2008 and 2013, reflecting the economic instability faced by many of the city's students. Still, the city reported rates over two times higher than state and approximately 35% above the region

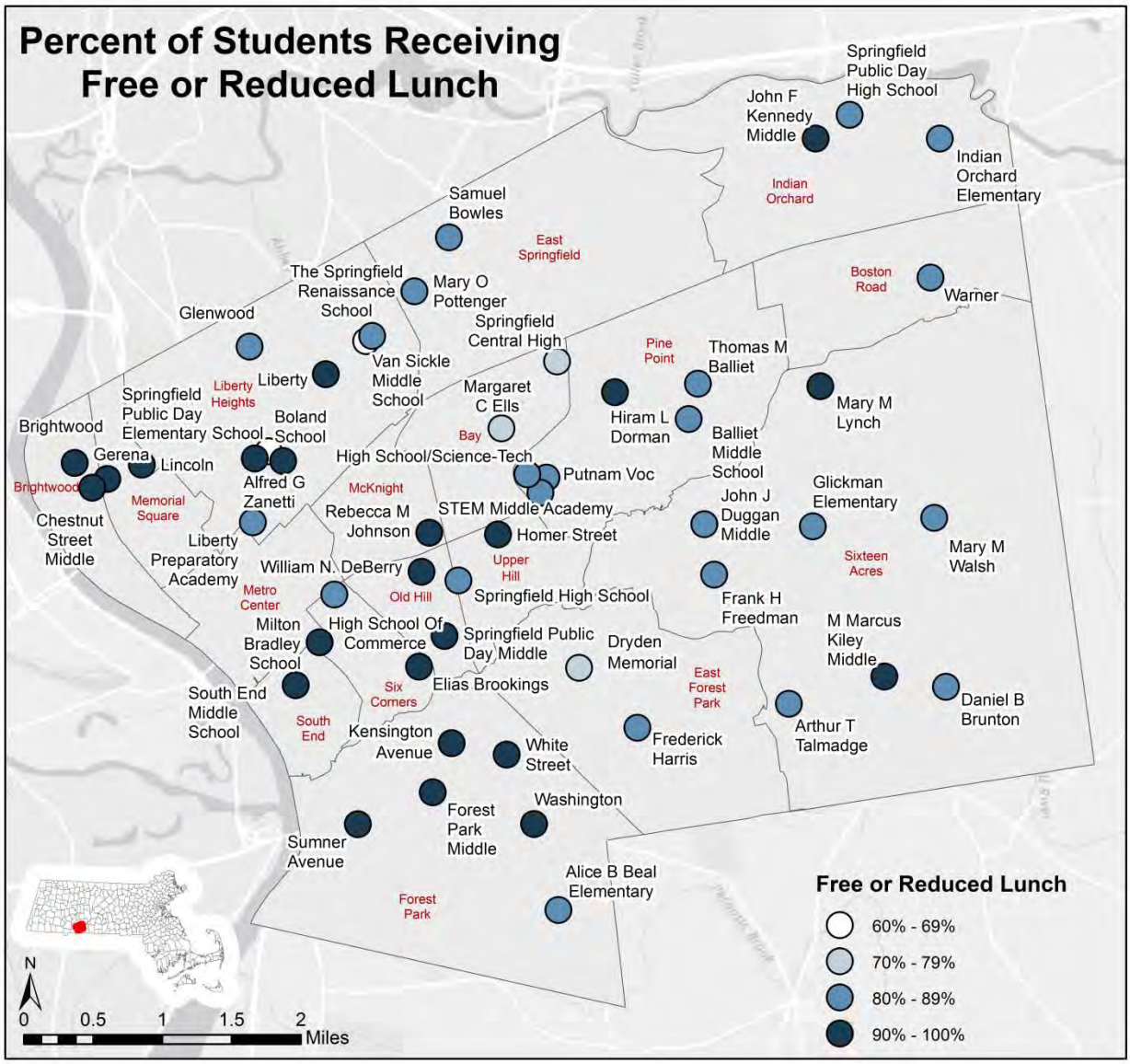
The rates across schools within Springfield are simply startling and reflect the unusually high poverty rates throughout the city. While the rates were just over 38% statewide in 2013, in Springfield, 48 out of 54 schools had rates of 80% or more. Schools such as Springfield Public Day Middle School (100%) and High School (97.8%), along with Brightwood (99.4%) and William N. Deberry (98.1%), served the most disadvantaged student bodies in the city. Schools that experienced comparatively low rates within the City, the Alfred G. Zanetti School (65.4%) and the Springfield Renaissance School (65.7%), continued to hover far above the figures reported for the Pioneer Valley region or Massachusetts as a whole.

LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

FREE AND REDUCED-PRICE LUNCH – SCHOOL COMPARISONS -2010



DATA BY SCHOOL

See full list of data by school on the following page.

FREE AND REDUCED-PRICE LUNCH – SCHOOL DATA COMPARISON -2010

NAME	2013	NAME	2013
Massachusetts	***38.3%***	*Public Day High*	*87.4%*
Pioneer Valley	***52.4%***	*Glenwood*	*87.7%*
Alfred G Zanetti	*65.4%*	*Indian Orchard*	*88.3%*
Renaissance School	*65.7%*	*Mary O Pottenger*	*88.5%*
Central High	*77.2%*	*Van Sickle*	*89.5%*
Dryden Memorial	*77.9%*	*M Marcus Kiley Middle*	*90.6%*
Margaret C Ells	*79.1%*	*Hiram L Dorman*	*91.6%*
High School Of Commerce	*80.5%*	*Forest Park Middle*	*92.0%*
Alice B Beal	*80.6%*	*Mary M Lynch*	*92.7%*
Early College High School	*80.7%*	*Gerena*	*92.9%*
Liberty Preparatory	*81.2%*	*John F Kennedy*	*93.1%*
Springfield High	*81.6%*	*Boland*	*93.1%*
Gateway to College at STCC	*81.8%*	*Liberty*	*93.4%*
Science-Tech	*81.9%*	*Sumner Avenue*	*93.9%*
Balliet	*83.1%*	*Milton Bradley*	*94.5%*
Daniel B Brunton	*84.1%*	*Kensington Avenue*	*95.1%*
Frank H Freedman	*84.2%*	*Chestnut Street*	*95.2%*
John J Duggan	*85.2%*	*Homer Street*	*95.4%*
Samuel Bowles	*85.2%*	*Rebecca M Johnson*	*95.6%*
Frederick Harris	*85.3%*	*Washington*	*96.2%*
STEM	*85.5%*	*Lincoln*	*96.9%*
Thomas M Balliet	*86.1%*	*White Street*	*96.9%*
Glickman	*86.3%*	*South End*	*96.9%*
Mary M Walsh	*86.8%*	*Elias Brookings*	*97.2%*
Putnam Vocational Technical	*86.8%*	*Public Day Elementary*	*97.8%*
Arthur T Talmadge	*86.8%*	*William N. DeBerry*	*98.1%*
Warner	*86.8%*	*Brightwood*	*99.4%*
Springfield	***87.3%***	*Public Day Middle*	*100.0%*

EDUCATION

Education is increasingly important to the present and future of all demographics in Springfield. Ensuring that educational opportunities are provided from an early age and extend into adulthood, from "cradle to career," along with maintaining the highest quality for all education, are essential for sustainable economic and social progress. Accordingly, this section exposes the city's current state as it pertains to early education enrollment, educational attainment, high school graduation rates, and ninth grade retention rates. Moreover, we have used scores from the Massachusetts Comprehensive Assessment System (MCAS), one of the most common metrics to quantitatively measure educational achievement from elementary school to the tenth grade. Third grade scores are used to estimate reading proficiency, eighth grade scores to estimate math proficiency, and comprehensive tenth grade scores to estimate overall achievement in both subjects. Finally, student mobility, or the measure of how many students enter and leave a school district within a given year, indicates the degree of stability our classrooms provide for educational, as well as possible challenges that may be faced by a student population sometime in the future.

Within Springfield, mixed progress in MCAS scores is evident, with 10th grade English proficiency improving, but a stagnant trend in 8th grade math scores. Levels of graduation have also improved slightly and ninth grade retention, which fell in recent years, is recovering encouragingly. However, the number of students enrolled in early education, or preschool, programming has declined, although there are wide variations between neighborhoods.

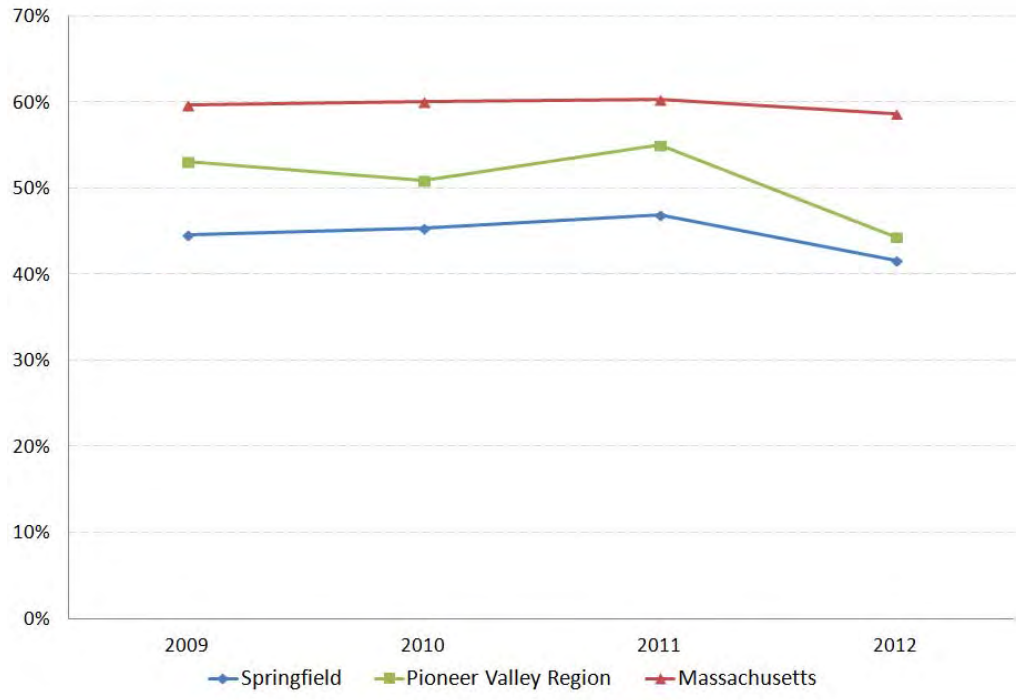
EARLY EDUCATION ENROLLMENT

Early childhood education provides an essential opportunity for positive development for young children. It is now supported by extensive research that a high-quality early childhood educational program has significant long-term effects on a person's life outcomes. From a child's achievement in K-12 school to the probability that they will be involved in the juvenile justice system, quality preschool education is fundamental to their long-term prosperity. Moreover, early childhood education introduces students to positive development patterns in all domains: social, emotional, cognitive and physical. Assessing the percentage of young children enrolled in early education programs is key to evaluating the supply, demand, and accessibility of early education and care services, as well as highlighting visible gaps in these services. The percent of all children between the ages of 3 and 4 years old that are enrolled in any type of formal early education program (public, private, family child care, center-based preschool) are examined in this indicator.

Statewide, percentage of young children enrolled in preschool remained steady until 2010, when a gradual decline to 58.7% occurred. Regionally, the trend in the Pioneer Valley has deviated slightly from the state, notably falling 10% to 40.0% in 2012. Enrollment in Springfield, which peaked in 2011, has consistently been approximately 15% lower than the state since 2009. In 2012, only 41.7% of children attended early childhood programs, mimicking the region's declining rates, although hovering slightly above them.

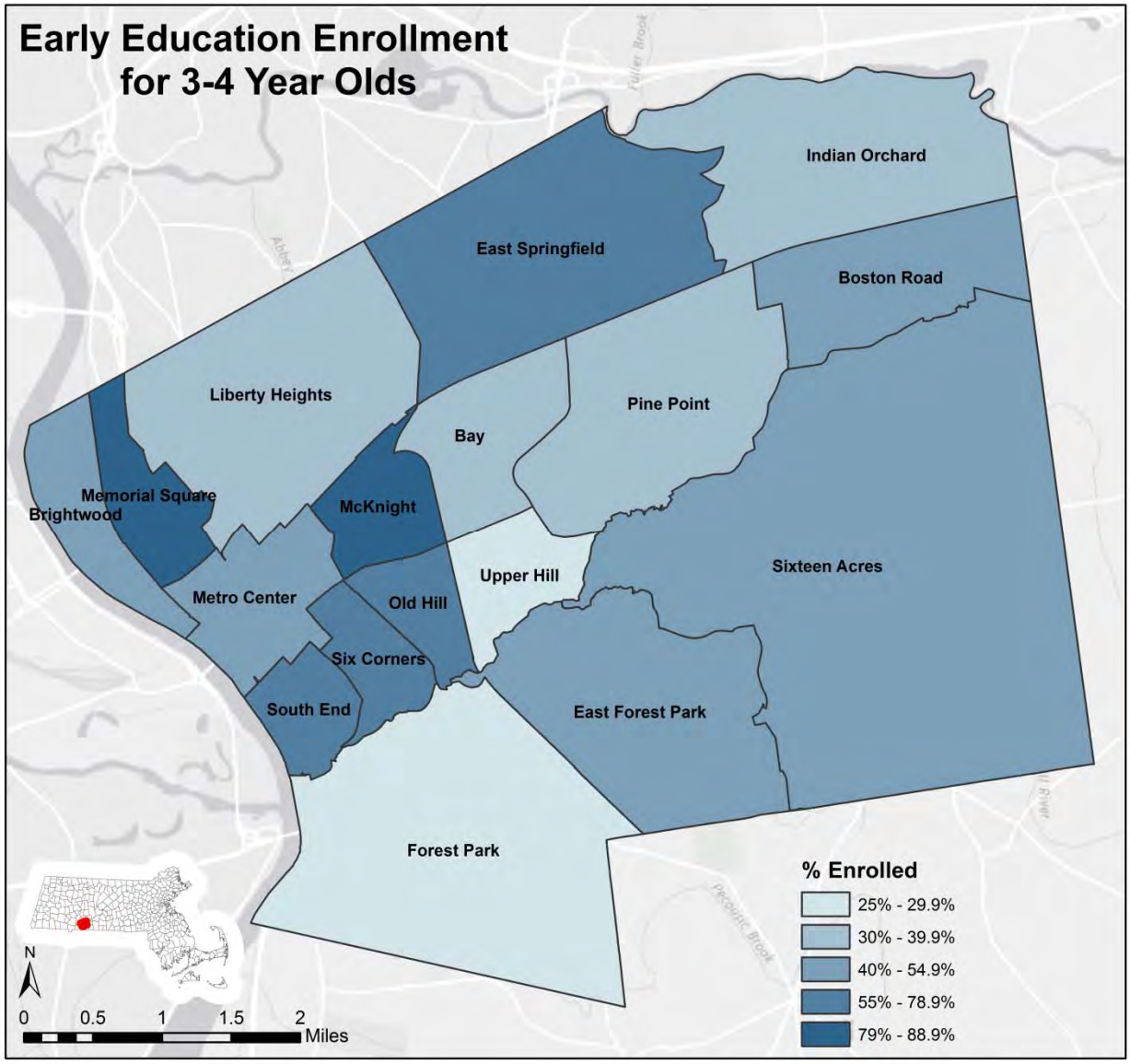
In Springfield, the number of children enrolled in these programs varies widely by neighborhood. As of 2012, Brightwood (88.8%), McKnight (88.0%), and Six Corners (80.1%a) enrolled the highest percentages of children in early education programs. Other neighborhoods, such as Forest Park (28.8%), Upper Hill (26.0%), and Bay (32.2%) fall far below the city's average with less than a third of three- and four-year-olds enrolled in early education. The low figures in these neighborhoods, which maintain moderate levels of income, present a predicament. It is possible that income levels exceed the federal poverty threshold, $23,850 for a family of four[1], for eligibility for programs such as Head Start. While these moderate income levels may disqualify children from Head Start programs, it may not be adequate to access other private programs.

LONG TERM TRENDS: CITY, REGION[1], STATE



Source: U.S. Census Bureau
Note: Regional data was calculated by weighting county data by the total # of children under 5-years-old.

EARLY EDUCATION ENROLLMENT – NEIGHBORHOOD COMPARISONS - 2012



DATA BY NEIGHBORHOOD

NAME	2012	NAME	2012
Upper Hill	*26.0%*	*Sixteen Acres*	*49.2%*
Forest Park	*28.8%*	*East Forest Park*	*52.2%*
Bay	*32.2%*	*Metro Center*	*53.1%*
Pine Point	*33.6%*	***Massachusetts***	***58.7%***
Indian Orchard	*38.5%*	*East Springfield*	*63.9%*
Liberty Heights	*38.8%*	*South End*	*75.5%*
Springfield	***41.7%***	*Old Hill*	*78.4%*
Boston Road	*43.8%*	*Six Corners*	*80.1%*
Memorial Square	*44.0%*	*McKnight*	*88.0%*
Pioneer Valley	***44.4%***	*Brightwood*	*88.8%*

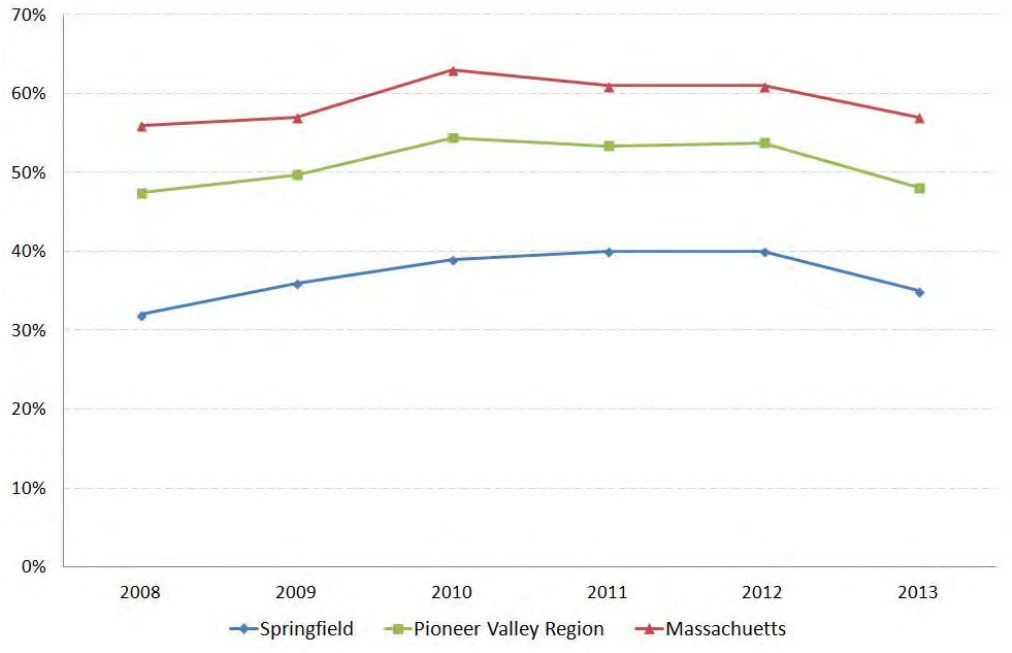
READING PROFICIENCY (THIRD GRADE MCAS)

In an educational environment increasingly requiring quantitative measures of achievement and accountability, the scores from the standardized MCAS test are used to "identify the strengths and weaknesses in curriculum and instruction[4]" at the local level. This state oversight seeks to hold schools and school districts accountable with respect to "established standards for performance for districts that improve or fail to improve student academic performance.[1]" Educational development standards indicate that students should be able to read proficiently by the end of third grade, maintain a wide vocabulary, write logically, speak coherently, and understand different types of texts. In fourth grade and beyond, these skills are necessary for academic progression. The percentage of third grade children who received a score of "proficient" or higher on the MCAS English language arts test in part reflects the level of academic readiness. Often, the early literacy skills required to achieve this milestone are obtained in a formal early childhood education experience.

Trends in Springfield have followed those similar to the region and state-wide, however the actual rates have consistently been much lower within the City. From 2008 to 2010, schools in Springfield have experienced improved proficiency rates by 21.8 percent. Despite this, the city-wide rates (35%) remain extremely low, far below the Pioneer Valley Region (48%) and Massachusetts (57%) as of 2013, compounded by a decrease of 12.5% during the 2012-2013 school years.

When examined closely certain schools' proficiency rates cause grave concern. The Rebecca M. Johnson School (8%), Frank H. Freedman (9%), Gerena (12%), Brightwood (13%), and Indian Orchard (18%) reported strikingly low proficiency rates, all producing less than one in every five children scoring proficient. These schools, as well as numerous others, serve an extensive population of students who come from families in which English is a second language. Other underlying causes, such as socioeconomic instability and low attendance rates, leave students academically precarious. Conversely, a few schools, such as the Arthur T. Talmadge School (83%) reported excellent proficiency scores.

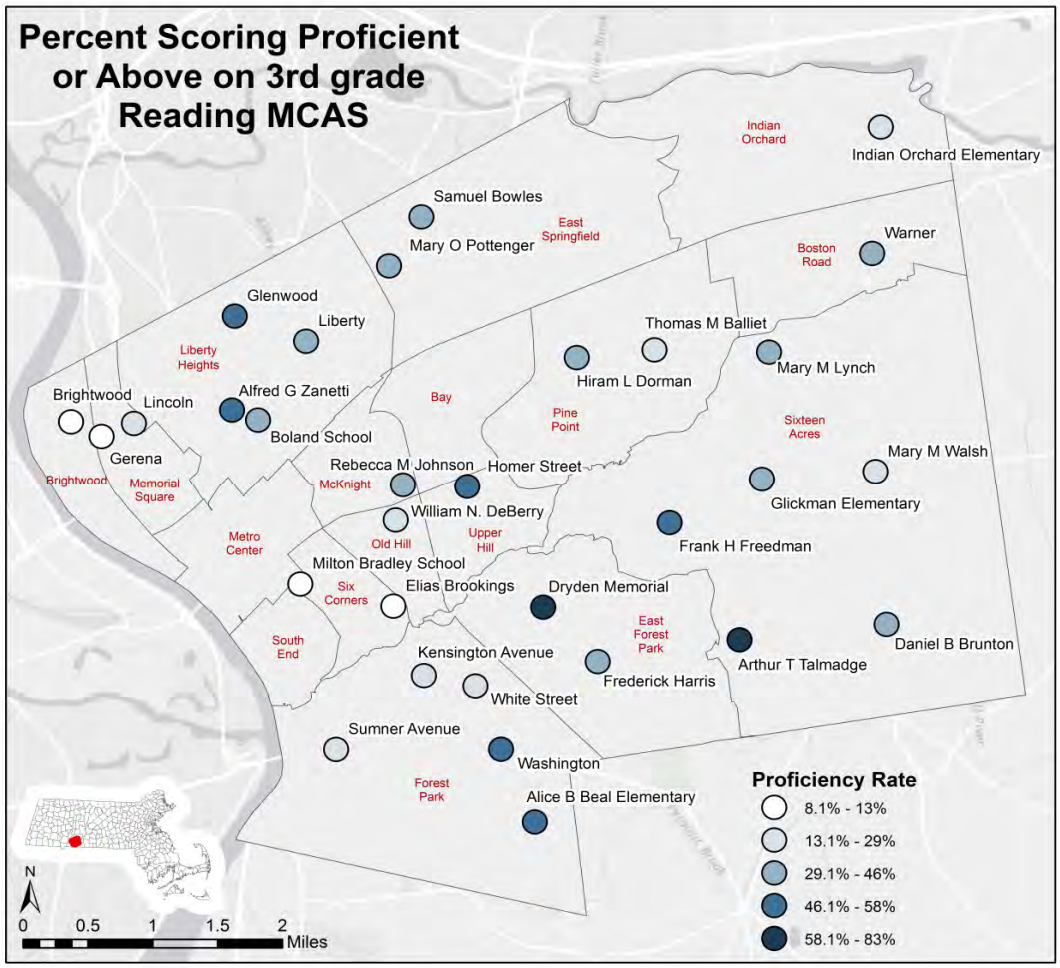
LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

[4] Massachusetts Department of Elementary and Secondary Education

3RD GRADE MCAS READING – NEIGHBORHOOD COMPARISONS - 2013



DATA BY SCHOOL

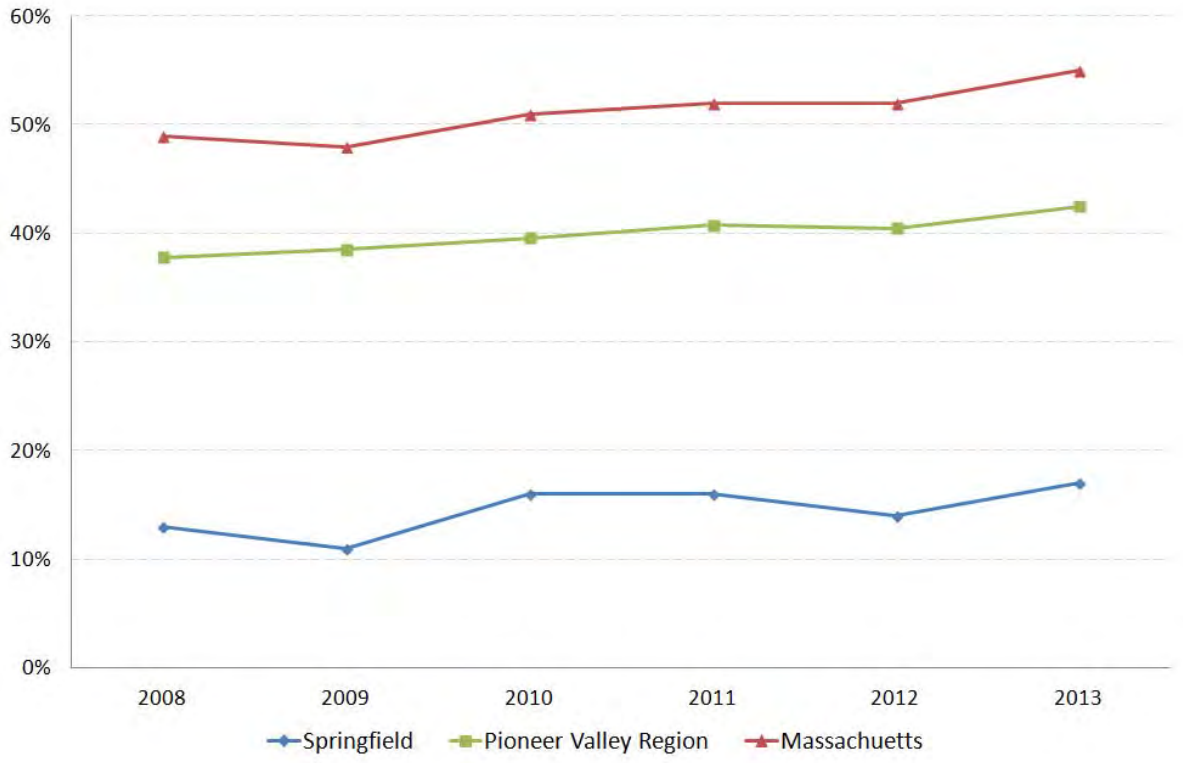
NAME	2013	NAME	2013
Milton Bradley School	*8.0%*	*Daniel B Brunton*	*39.0%*
Elias Brookings	*9.0%*	*Liberty*	*41.0%*
Gerena	*12.0%*	*Mary M Lynch*	*41.0%*
Brightwood	*13.0%*	*Frederick Harris*	*42.0%*
Indian Orchard	*18.0%*	*Warner*	*42.0%*
Kensington Avenue	*20.0%*	*Rebecca M Johnson*	*44.0%*
White Street	*21.0%*	*Mary O Pottenger*	*46.0%*
Thomas M Balliet	*22.0%*	***Pioneer Valley***	***48.1%***
William N. DeBerry	*22.0%*	*Alfred G Zanetti*	*51.0%*
Sumner Avenue	*27.0%*	*Glenwood*	*51.0%*
Mary M Walsh	*28.0%*	*Alice B Beal*	*53.0%*
Lincoln	*29.0%*	*Frank H Freedman*	*56.0%*
Samuel Bowles	*32.0%*	*Washington*	*57.0%*
Boland	*33.0%*	***Massachusetts***	***57.0%***
Glickman	*35.0%*	*Homer Street*	*58.0%*
Hiram L Dorman	*35.0%*	*Dryden Memorial*	*79.0%*
Springfield	***35.0%***	*Arthur T Talmadge*	*83.0%*

EIGHTH GRADE MATH PROFICIENCY (MCAS)

The MCAS is additionally administered to eighth grade students attending public school in Massachusetts. Uniformly, it measures students' basic skills in mathematics. Additionally, MCAS scores are used as a proxy to quantitatively value the quality of a public school or district in Massachusetts.[5] Although the merits of the MCAS exam are entangled in debate, the scores are now an important measure of the success of our educational institutions. Many studies have shown that success in obtaining skills in Algebra, typically studied in 8th grade, has a positive correlation to a student's future success, both academic and professional. This indicator represents the percent of all eighth grade students testing at the "proficient" level or above on the standardized MCAS math exams.

Proficiency in mathematics is low for schools in Springfield. The city, with a proficiency rate of only 17% in 2013, is far below the Pioneer Valley (43%) and the state (55%). While the city's scores have fluctuated since 2008, they have not risen above 20%. The John F. Kennedy Middle School (7%), South End Middle School (15%), and Springfield Public Day School (15%) fall 48-40% lower than the state's 55% proficiency rate. It is imperative that curriculum, attendance, and student-teacher ratios are comprehensively evaluated to assess the underlying reasons for these disparaging figures.

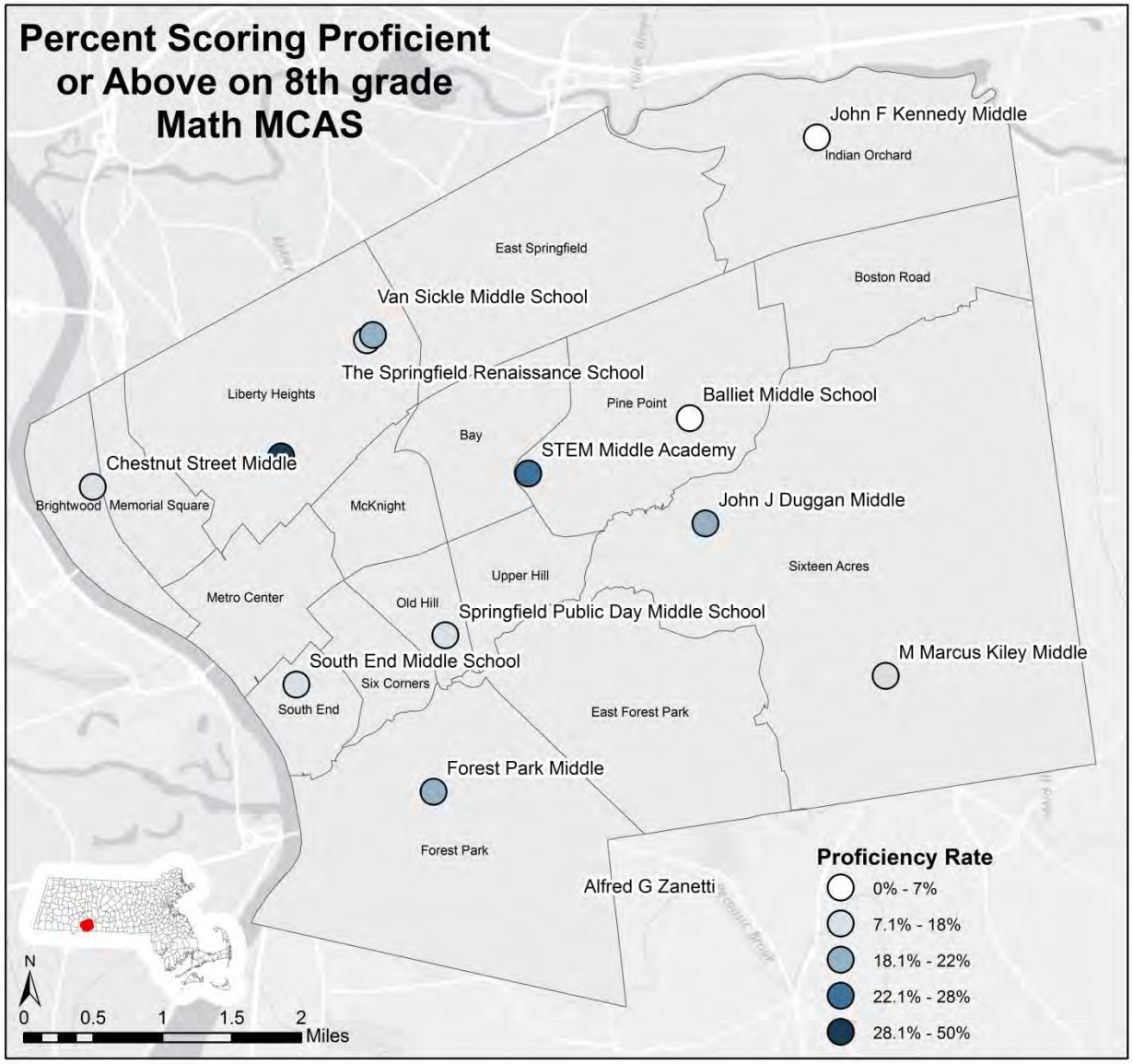
LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

[5] The 2002 Federal No Child Left Behind law requires monitoring of every school to determine if they are making "adequate yearly progress" (AYP). AYP in Massachusetts is determined, in part, by the percent of students passing the MCAS exam.

8TH GRADE MATH – NEIGHBORHOOD COMPARISONS - 2012



DATA BY SCHOOL

NAME	2013
Balliet	*0.0%*
John F Kennedy	*7.0%*
South End	*15.0%*
Public Day	*15.0%*
Renaissance School	*16.0%*
Chestnut Street	*17.0%*
Springfield	***17.0%***

NAME	2013
M Marcus Kiley	*18.0%*
Forest Park	*19.0%*
John J Duggan	*20.0%*
Van Sickle	*22.0%*
STEM Academy	*28.0%*
Pioneer Valley	***42.5%***
Alfred G Zanetti	*50.0%*
Massachusetts	***55.0%***

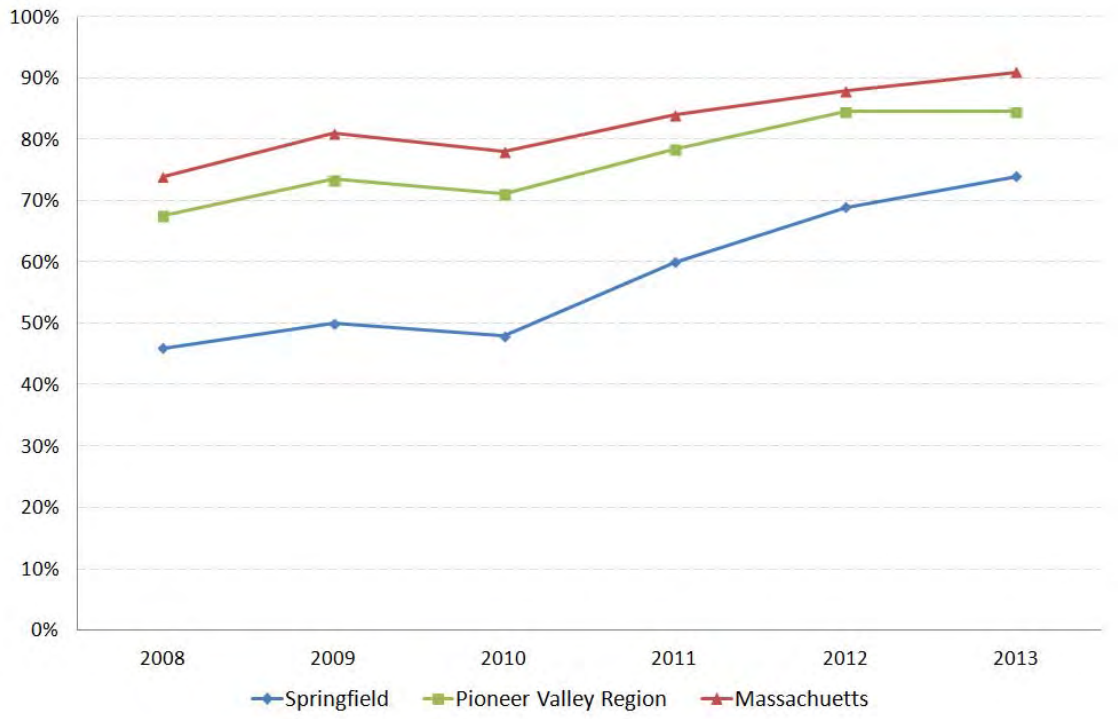
TENTH GRADE ENGLISH PROFICIENCY (MCAS)

Following the eighth grade exam, tenth grade students attending public school in Massachusetts are tested. In addition, these scores are used as a proxy to quantitatively value the quality of public high schools and districts in Massachusetts.[6] As of 2003, students must achieve advanced, proficient, or needs improvement (a scaled score above 220) in both English and math in order to receive a high school diploma. This indicator represents the percent of all tenth grade students testing at the "advanced" or "proficient" level on the standardized MCAS English exams.

Although the city's proficiency rate (74%) is below that of the region (85%) and state (91%) in 2013, there is not as drastic of a disparity as is present in the scores of the third and eighth grades. Springfield has conspicuously improved since 2008, when the tenth grade proficiency rate was approximately 46%. While this increase is remarkable, there are still deviations caused by underperforming schools. The Springfield Public Day School (29%), Springfield High School of Commerce (65%), and Springfield Science-Tech High School (65%) remain disquietly low.

Other schools in Springfield, though, perform quite exceptionally. Most notably, the Springfield Renaissance School (98%) and Putnam Vocational Technical High School (84%) exceed the city's overall proficiency rate, with the Springfield Renaissance School overshadowing the state's rate, as well. Further analysis of these schools is warranted, as they may serve as both a benchmark and model for the city. As evident, an upward trend has allowed for momentum to be built, with the city climbing 26% since 2010, which is necessary to continue.

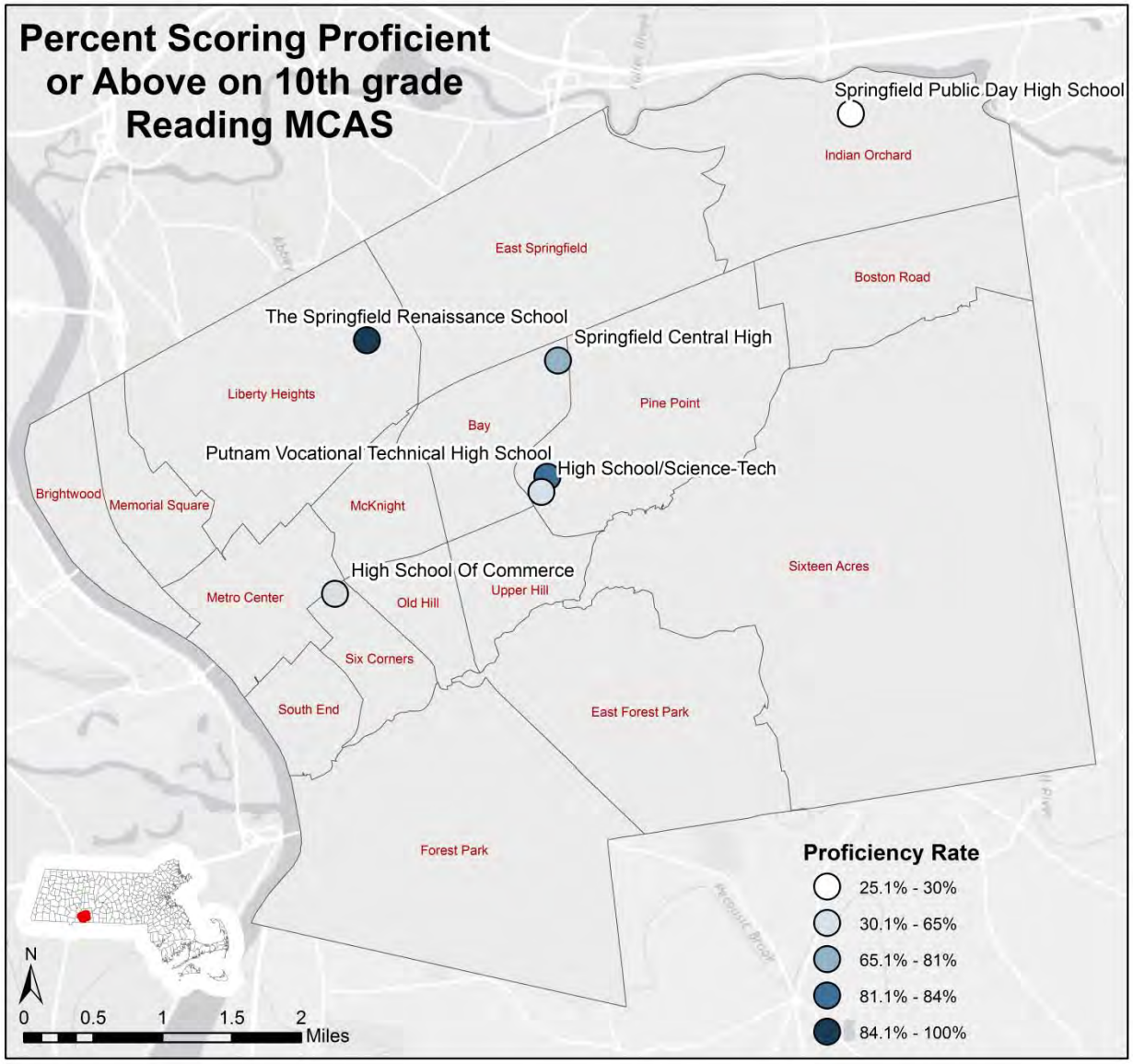
LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

[6] The 2002 Federal No Child Left Behind law requires monitoring of every school to determine if they are making "adequate yearly progress" (AYP). AYP in Massachusetts is determined, in part, by the percent of students passing the MCAS exam.

TENTH GRADE ENGLISH – NEIGHBORHOOD COMPARISONS - 2013



DATA BY SCHOOL

NAME	2013
Public Day High School	*29.0%*
High School Of Commerce	*65.0%*
Science-Tech	*65.0%*
Springfield	***74.0%***
Central High	*81.0%*
Putnam Vocational Technical	*84.0%*
Pioneer Valley	***84.6%***
Massachusetts	***91.0%***
Renaissance School	*98.0%*

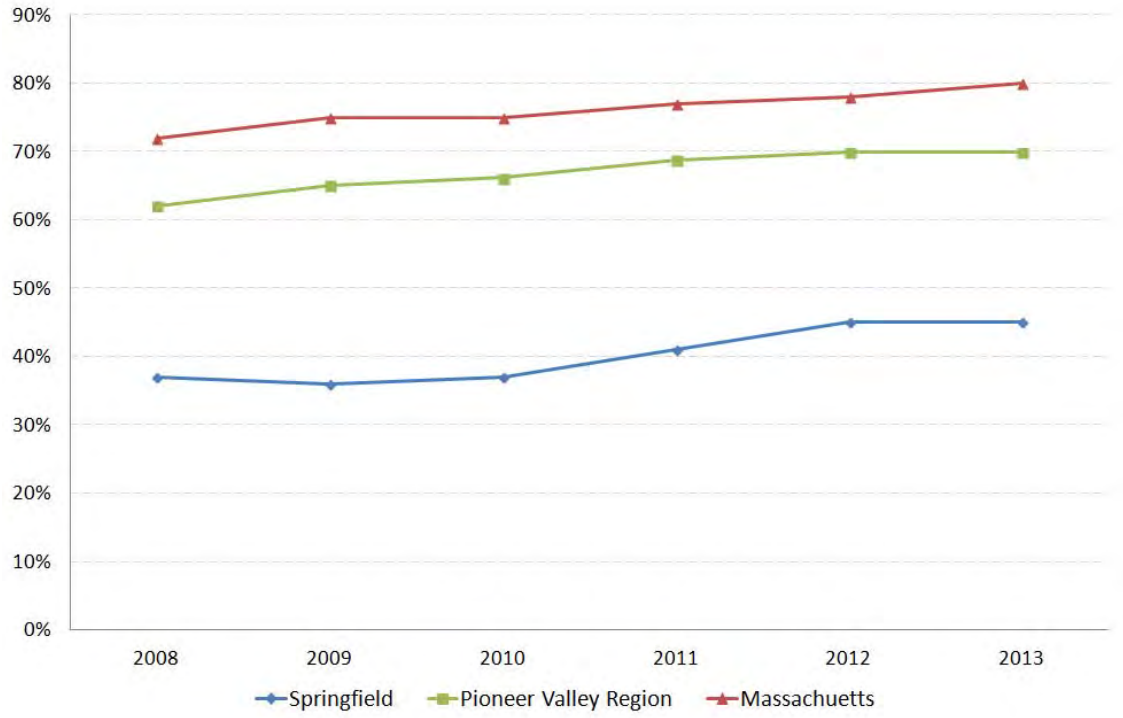
TENTH GRADE MATH PROFICIENCY (MCAS)

Along with English, a math proficiency exam is administered as part of the tenth grade MCAS to uniformly measure the basic academic skills possessed by students. These scores, which also determine if a student is eligible for graduation, are used as a proxy to quantitatively evaluate the quality of a public school or district in Massachusetts.[7] As of 2003, students must achieve advanced, proficient, or needs improvement (a scaled score above 220) in both English and math in order to receive a high school diploma. This indicator represents the percent of all tenth grade students testing at the "advanced" or "proficient" level on the standardized MCAS math exam.

Although the city of Springfield has incrementally improved since 2008, the overall proficiency rate stands at only 45% for 2013. Comparatively, the Pioneer Valley and state of Massachusetts had rates of 69.9% and 80% respectively. This divergence will continue unless the city's school districts embark on policies that improve the ability of students to learn mathematics in high school. Such low rates are often due to disproportionate student-teacher ratios, absence of early childhood education, and lack of resources necessary to revise curriculum.

At the school level, discrepancies amongst high schools exist. The tenth grade math proficiency for Springfield Public Day High School (17%), Springfield High School (20%), Springfield Science-Tech High School (24%), and Springfield High School of Commerce (29%) remained alarmingly low in 2013. Even the schools with relatively better performance, Springfield Central High School (59%), and Putnam Vocational Technical High School (56%), exhibit tenth grade math proficiency scores that falter against those of the state, though the Springfield Renaissance School (77%) did come close.

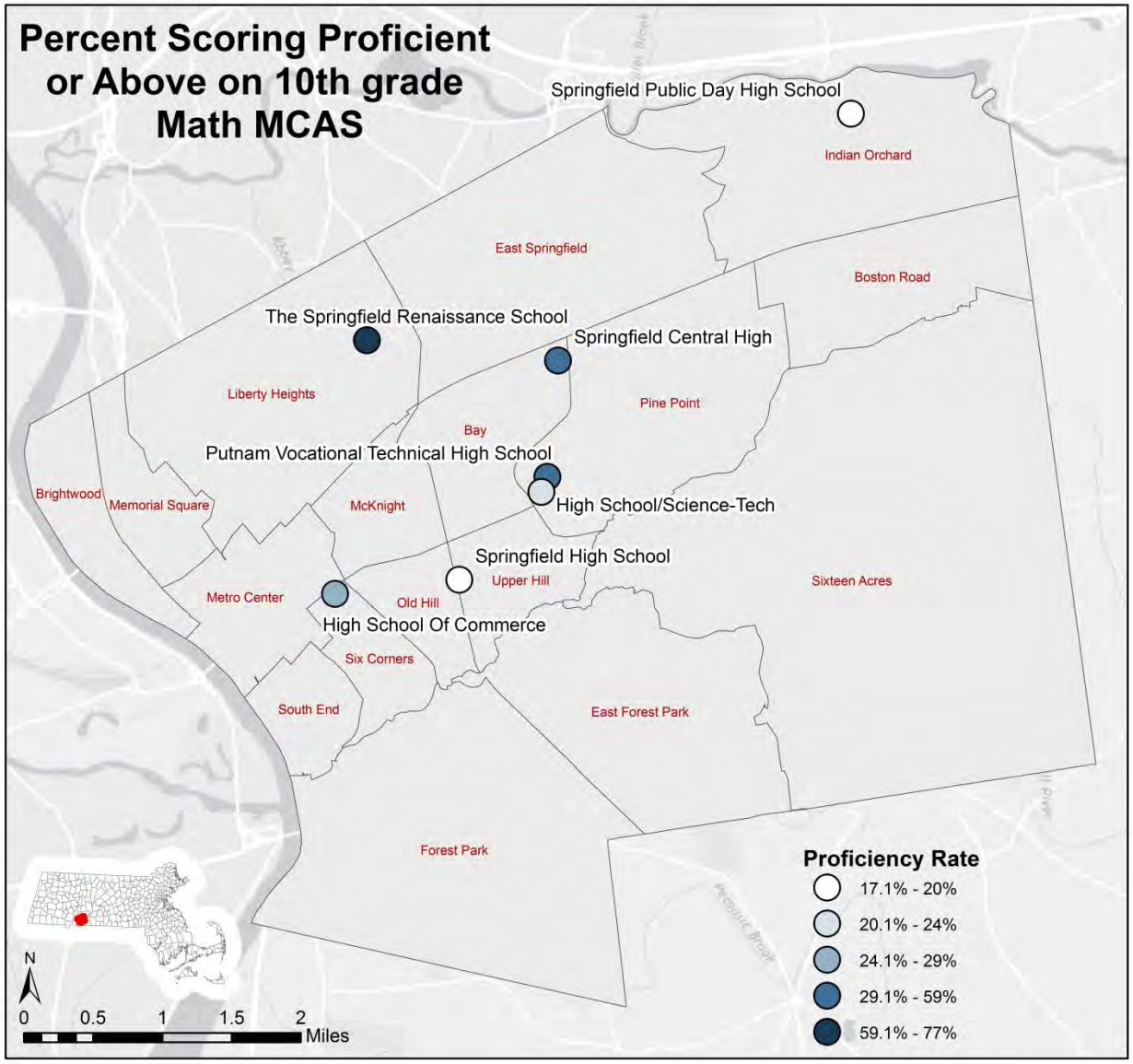
LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

[7] The 2002 Federal No Child Left Behind law requires monitoring of every school to determine if they are making "adequate yearly progress" (AYP). AYP in Massachusetts is determined, in part, by the percent of students passing the MCAS exam.

TENTH GRADE MATH – NEIGHBORHOOD COMPARISONS - 2013



DATA BY SCHOOL

NAME	2013
Public Day	*17.0%*
Springfield High School	*20.0%*
Science-Tech	*24.0%*
High School Of Commerce	*29.0%*
Springfield	***45.0%***
Putnam Vocational Technical	*56.0%*
Central High	*59.0%*
Pioneer Valley	***69.9%***
Renaissance School	*77.0%*
Massachusetts	***80.0%***

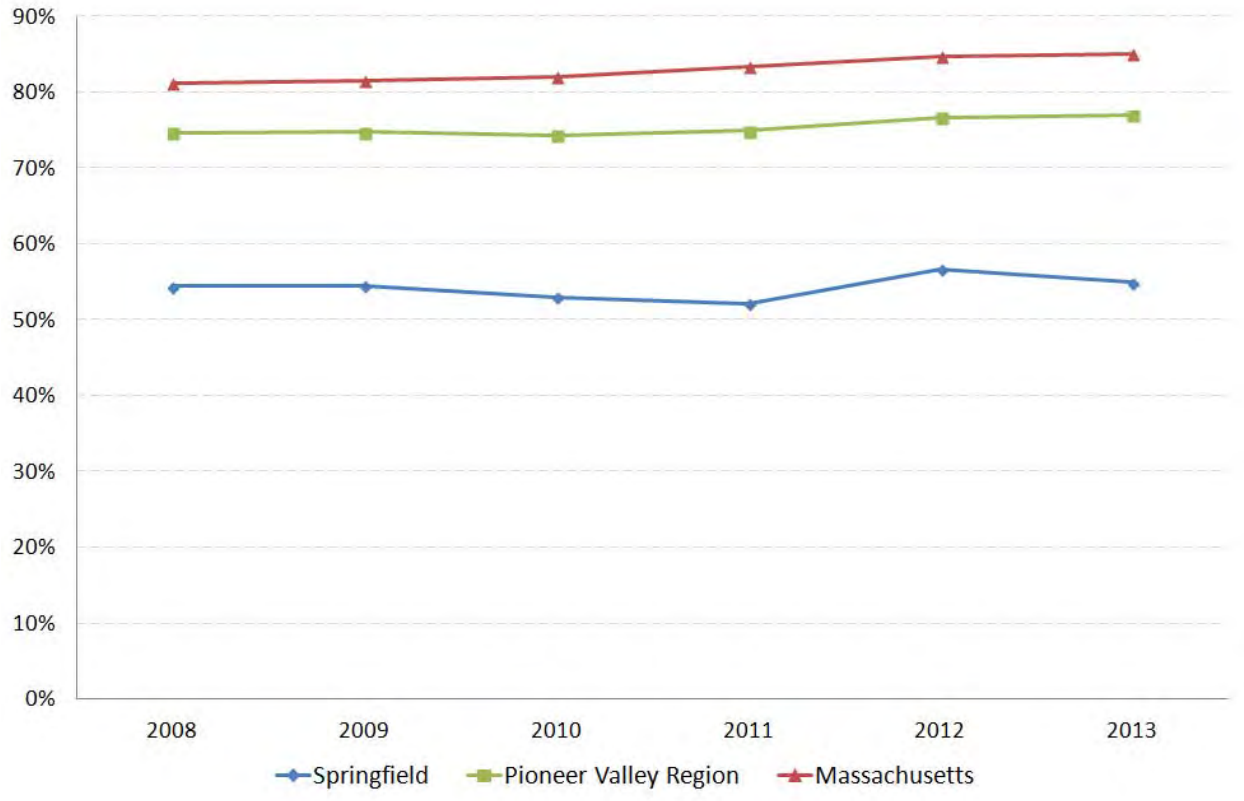
HIGH SCHOOL GRADUATION RATE

High school graduation rates are a vital component in assessing the status of individuals and communities. High school graduation has become the minimum threshold for participation in most of our nation's economy. The percentage of all students enrolled in grades nine through twelve who graduate within four years or less is measured in this indicator.

Springfield's graduation rate has remained relatively stagnant since 2008. As of 2013, 54.9% of enrolled students graduated high school in the usual timeframe. This is overshadowed by the graduation rates of the Pioneer Valley region and Massachusetts, which were 76.9% and 85% respectively as of 2013. Overall, there has been minimal fluctuation in these rates at the regional and state level.

Within Springfield, there is noticeable variation of graduation rates between schools. Certain schools, such as Putnam Vocational Technical High School (77.1%) and Springfield Central High School (69.5%), exhibited modest graduation rates in 2013. Other schools possess alarmingly low graduation rates. Springfield's Gateway to College[8] (21.7%), Springfield Public Day High School (26.8%), and Springfield High School (31.7%) were the lowest performing schools in this category for 2013. Only the Springfield Renaissance School, where 94.8% of students attained a diploma within four years, bypassed the state's graduation rate. These low figures are indicative of the retention issues facing the city. Crafting educational programs that are tailored to the diverse backgrounds and needs of Springfield's high school population may remedy this issue, but only if they address the myriad of underlying issues that currently lead to large segments of the student body dropping out.

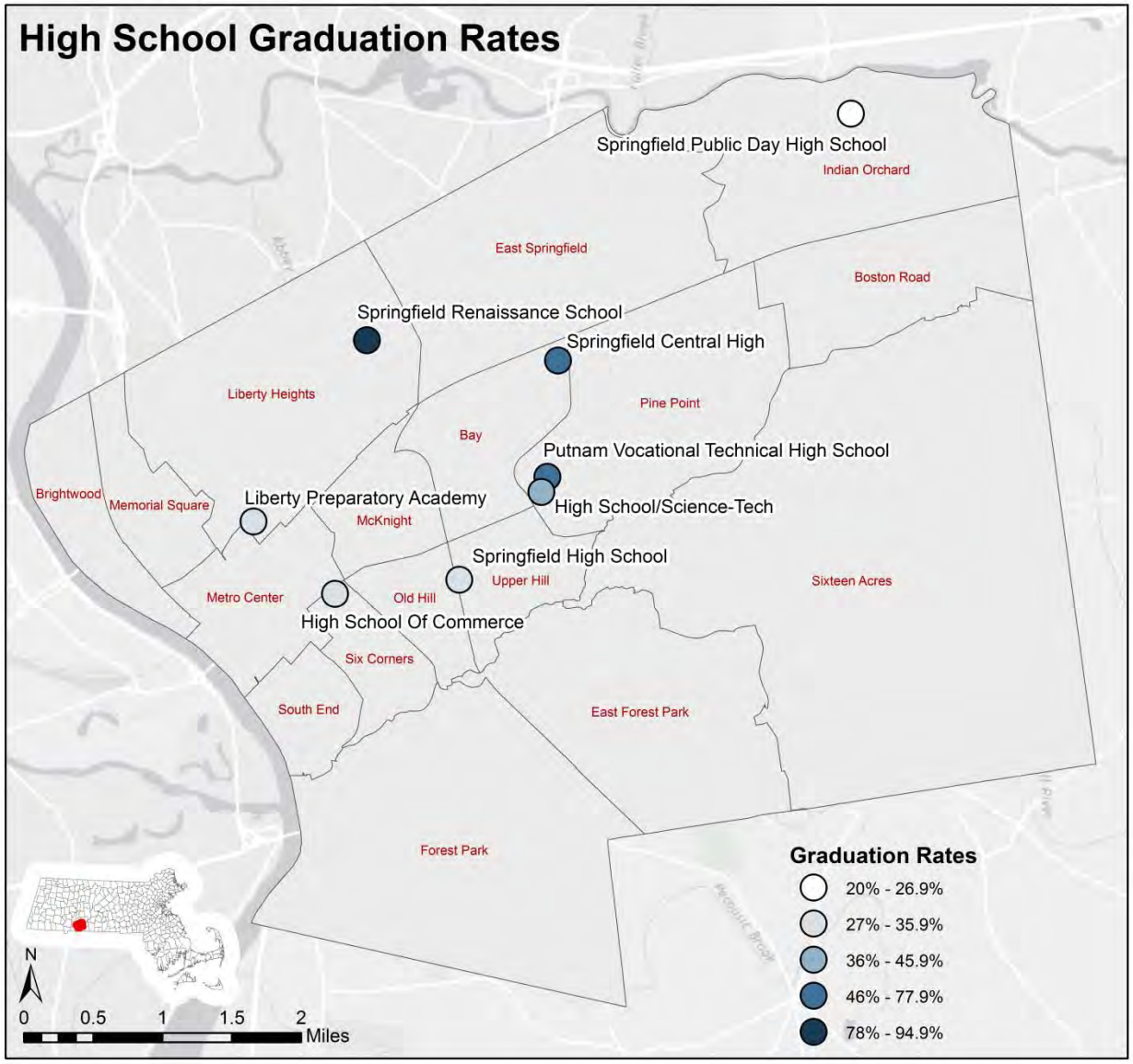
LONG TERM TREND: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

[8] Of note, Gateway to College is a program specifically for youth who have already dropped out of school at some point, so low graduation rates are perhaps less surprising.

HIGH SCHOOL GRADUATION RATE – NEIGHBORHOOD COMPARISONS – 2013



DATA BY SCHOOL

NAME	2013
Gateway to College	*21.7%*
Public Day High School	*26.8%*
Springfield High School	*31.7%*
Liberty Preparatory Academy	*33.3%*
High School Of Commerce	*35.8%*
Science-Tech	*45.0%*

NAME	2013
Springfield	***54.9%***
Early College High School	*60.6%*
Central High	*69.5%*
Pioneer Valley	***76.9%***
Putnam Vocational Technical	*77.1%*
Massachusetts	***85.0%***
Renaissance School	*94.8%*

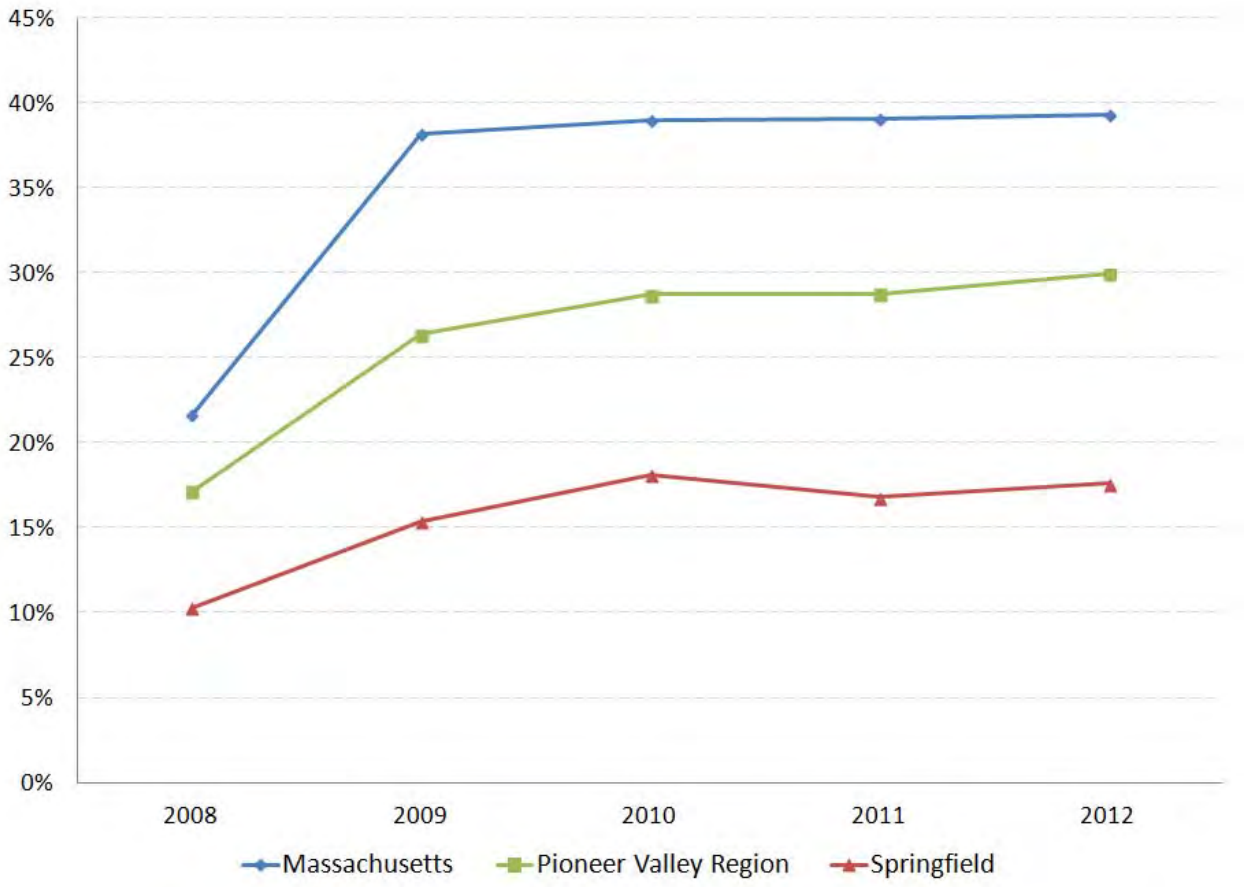
ATTAINMENT OF HIGHER EDUCATION

Higher education is increasingly necessary for long-term access to well-paying jobs. The extent of educational attainment is indicative of a population's ability to function and excel economically, thus leading to economic and social opportunities in life. While two-year associate's degrees meet the needs of certain positions, a bachelor's degree is rapidly emerging as a requirement for entry-level positions in many industries. Because a solid educational background, typically achieved during high school, is a prerequisite for getting a bachelor's degree, this indicator also measures a community's ability to prepare their children for college. Educational attainment is calculated by measuring the percent of the population that is over age 25 with a Bachelor's degree or higher.

Massachusetts is internationally renowned for being the home of a variety of excellent college institutions. In 2012, 39.30% of state residents possessed a bachelors degree or higher. Statewide, this figure has remained relatively stable in recent years. Regionally, 29.96% of residents in the Pioneer Valley, an area that encompasses a cluster of colleges, reported holding a bachelors degree or higher during the same year. In Springfield, only 17.6% of residents had education of that level.

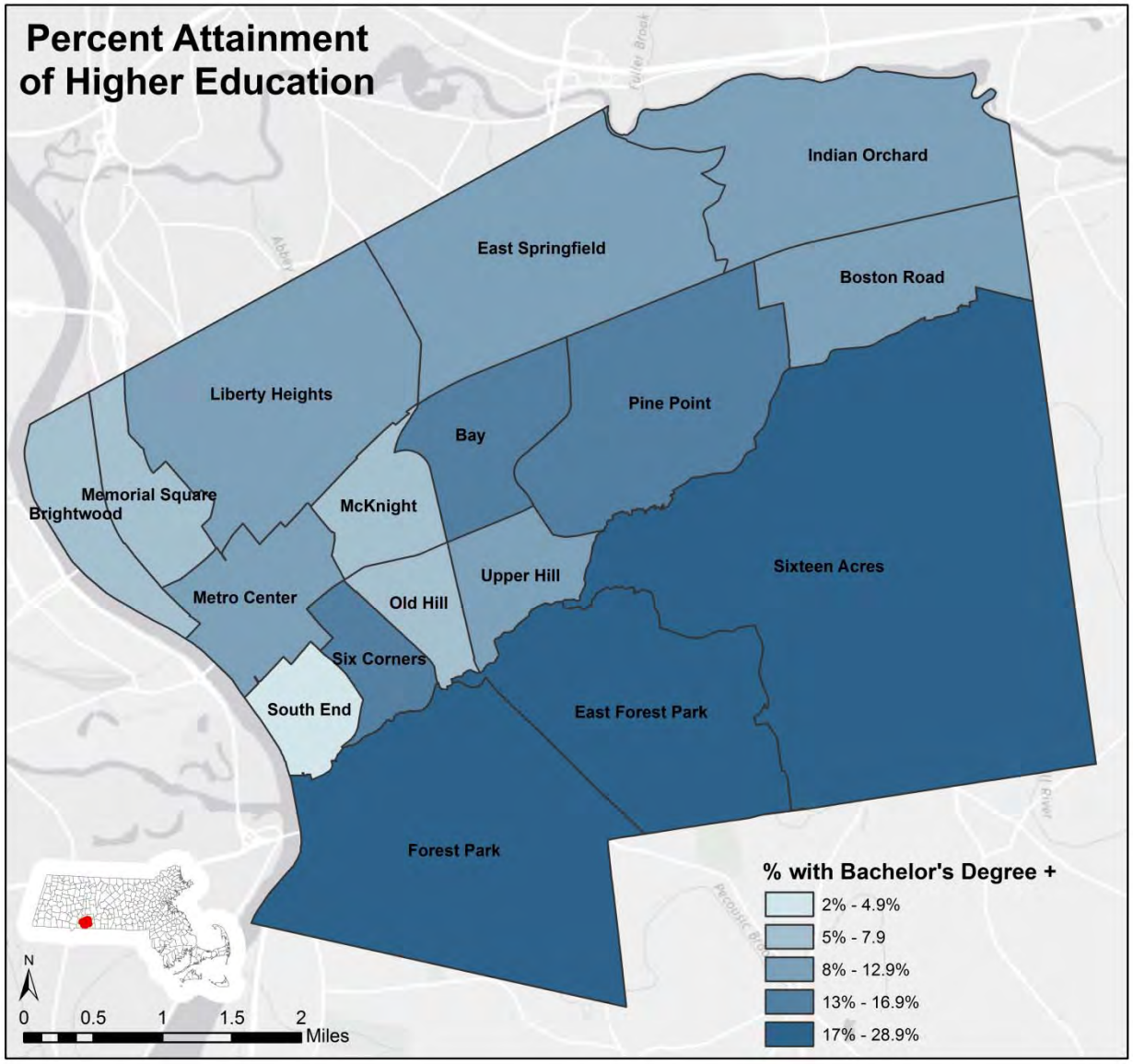
Rates vary widely by neighborhood. Less than one in ten residents hold a bachelor's degree in five neighborhoods of the city, including the South End (4%), Brightwood (6%), Bay (6.8%), and Old Hill (6.9%). East Forest Park (28.22%), Forest Park (22.6%), and Sixteen Acres (23.2%) are the city's most highly educated neighborhoods. Undoubtedly, there is a correlation between household income and educational attainment. Although the city's rate has increased by 7.4% since 2008, the overall trend remains flat.

LONG TERM TREND: CITY, REGION, STATE



Source: U.S. Census Bureau

ATTAINMENT OF HIGHER EDUCATION – NEIGHBORHOOD COMPARISONS - 2012



DATA BY NEIGHBORHOOD

NAME	2012	NAME	2012
South End	*4.0%*	*Metro Center*	*12.7%*
Brightwood	*6.0%*	*Six Corners*	*14.3%*
Bay	*6.8%*	*Pine Point*	*14.4%*
Old Hill	*6.9%*	*McKnight*	*16.2%*
Memorial Sq.	*6.9%*	***Springfield***	***17.6%***
Boston Road	*10.0%*	*Forest Park*	*22.6%*
Upper Hill	*10.7%*	*Sixteen Acres*	*23.2%*
Indian Orchard	*11.4%*	*E. Forest Park*	*28.2%*
East Springfield	*12.3%*	***Pioneer Valley***	***30.0%***
Liberty Heights	*12.7%*	***Massachusetts***	***39.3%***

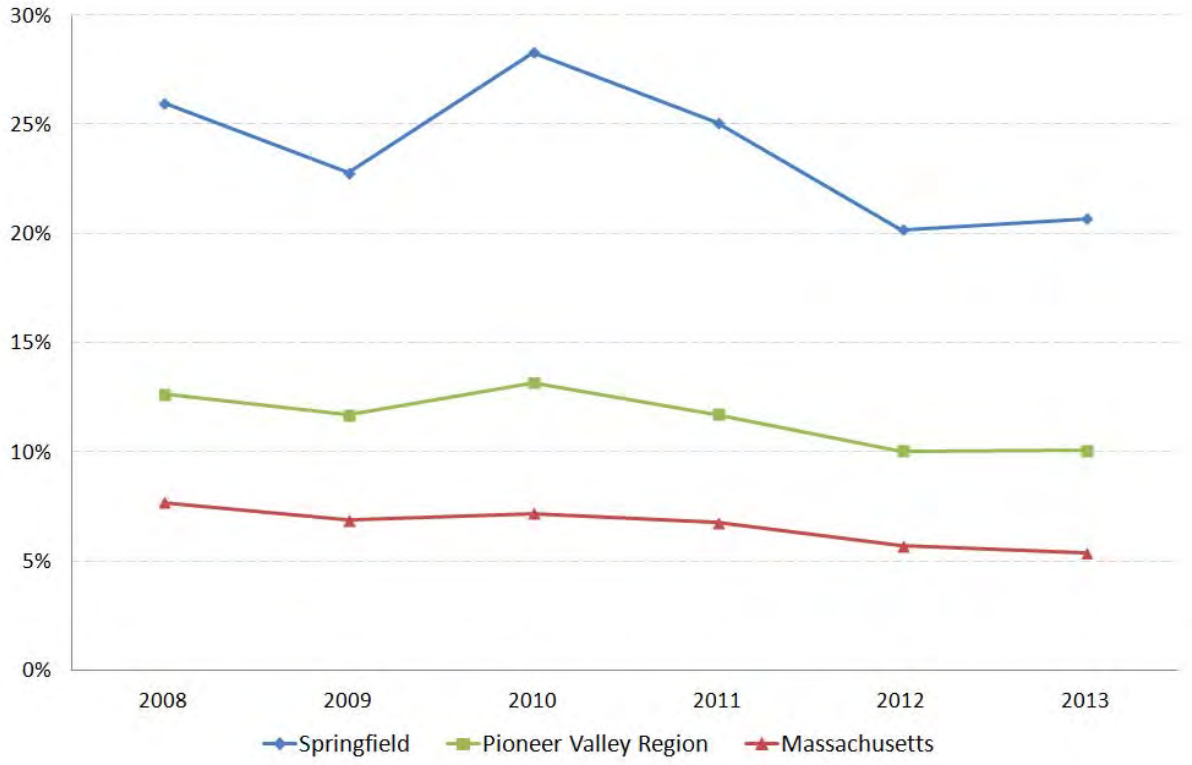
NINTH GRADE RETENTION

When it is determined that a student needs to repeat 9th grade, it can be indicative of a lack of preparation for the academic rigors of high school and can also point to problems around transition between middle school and high school. Students repeating 9th grade are at a higher risk for dropping out of high school. Knowing the percent of students that meet this criterion can serve as a method gauge the efficacy of our education system, likelihood of student success, and community values. The percentage of students that repeat the ninth grade is reflected in this indicator.

Positively, the percentage of Springfield's ninth grade students who repeat the academic year has declined recently. In 2010, 28.3% of students in this cohort were held back, compared to 20.7% in 2013. Although the state (5.4%) and region (10.1%) have performed better in this category in 2013, the overall trend present in Springfield's data is cautiously optimistic. When the state, region, and city are approached broadly, it is evident that retention is improving, albeit incrementally.

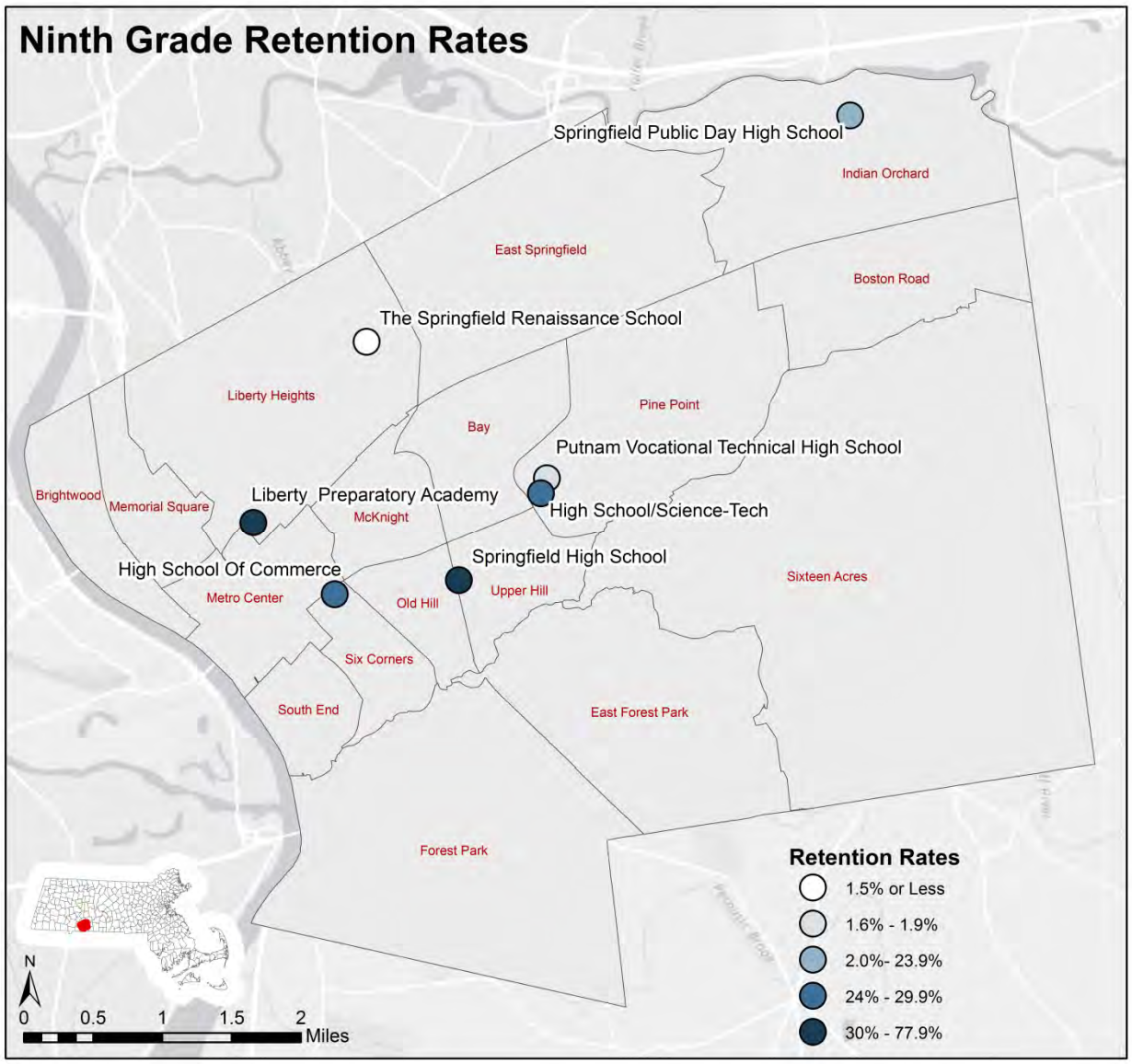
Within the city, the Springfield Renaissance School (1.1%), Putnam Vocational Technical High School (1.9%), and Springfield Central High School (13.6%) encompass the lowest occurrences of ninth grade students needing to repeat the curriculum. This, though, is offset by the Liberty Preparatory Academy (77.8%), Springfield High School (57.1%), and the Springfield Science-Tech High School. The challenges faced by students in this cohort at these schools require additional attention. Overall, many of the city's schools exhibit rates that fall in the middle of the distribution, below those of the state.

LONG TERM TREND: CITY, REGION, STATE



Source: MA Department of Elementary and Secondary Education

NINTH GRADE RETENTION - NEIGHBORHOOD COMPARISONS – 2013



DATA BY SCHOOL

NAME	2013	NAME	2013
Renaissance School	*1.1%*	*Public Day High School*	*23.8%*
Putnam Vocational Technical	*1.9%*	*High School Of Commerce*	*28.7%*
Pioneer Valley	***5.4%***	*High School/Science-Tech*	*29.3%*
Massachusetts	***10.1%***	*Springfield High School*	*57.1%*
Central High	*13.6%*	*Liberty Preparatory Academy*	*77.8%*
Springfield	***20.7%***		

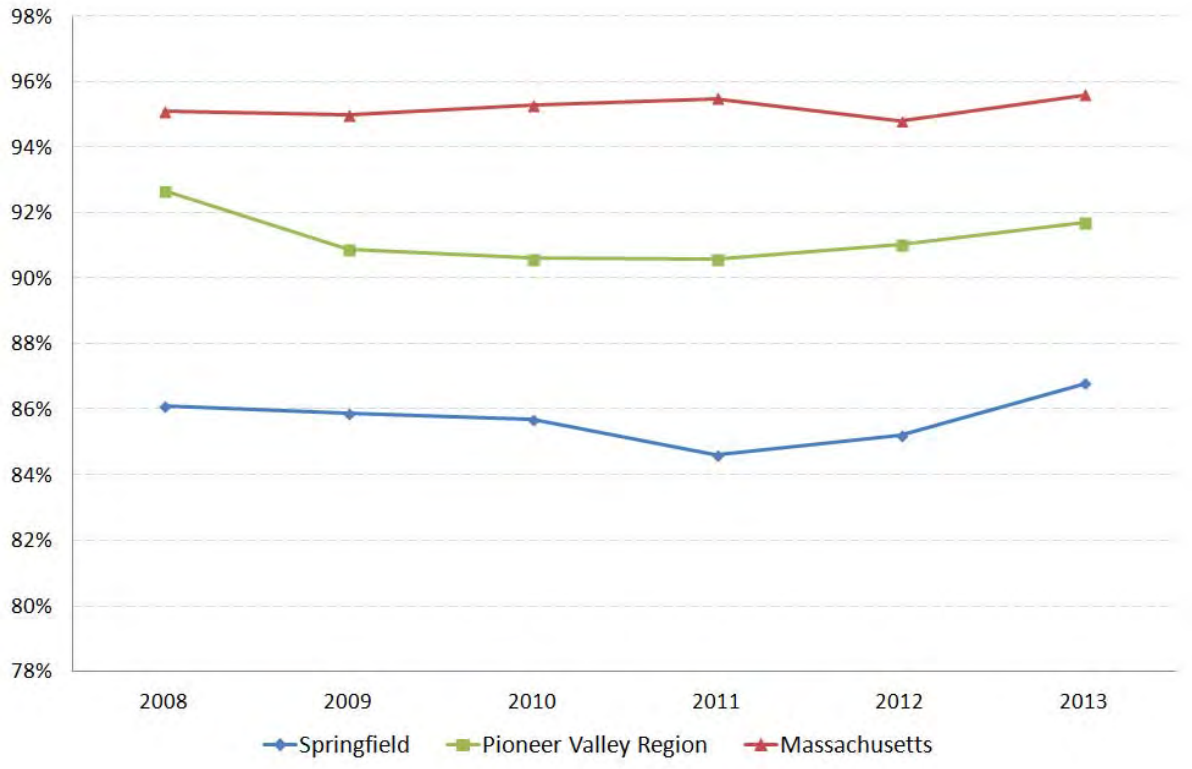
STUDENT MOBILITY (STABILITY RATE)

When a student moves between school districts during a school year or from one grade to another, it causes disruption in the child's education and in the classroom as schools often do not teach the same information simultaneously. A teacher must adapt curriculum to the background of a student transferring from a new district based on what that student has already been exposed to. This forces a student to commence where the new class is in their lessons, regardless of whether it is repetitive or unfamiliar. Knowing how many students enter and exit a school system can help understand the degree of instability present, both in the educational and community setting. The degree to which students remain in the same classroom is called the student stability rate. The stability rate measured here, defined by the Massachusetts Department of Elementary and Secondary Education, is the percentage of students who remain in a district or school throughout the school year.

The City of Springfield, which has a 2013 stability rate of 86.8%, falls below that of the state and the Pioneer Valley, which have rates of 95.6% and 91.7% respectively. Springfield's rate has remained unwavering, only slightly higher in 2013 than in 2008, when the city exhibited a rate of 86.1%. This stagnation, too, is true for the historical trend in Massachusetts. The Pioneer Valley's rate, however, declined from its 2008 rate of 92.6%.

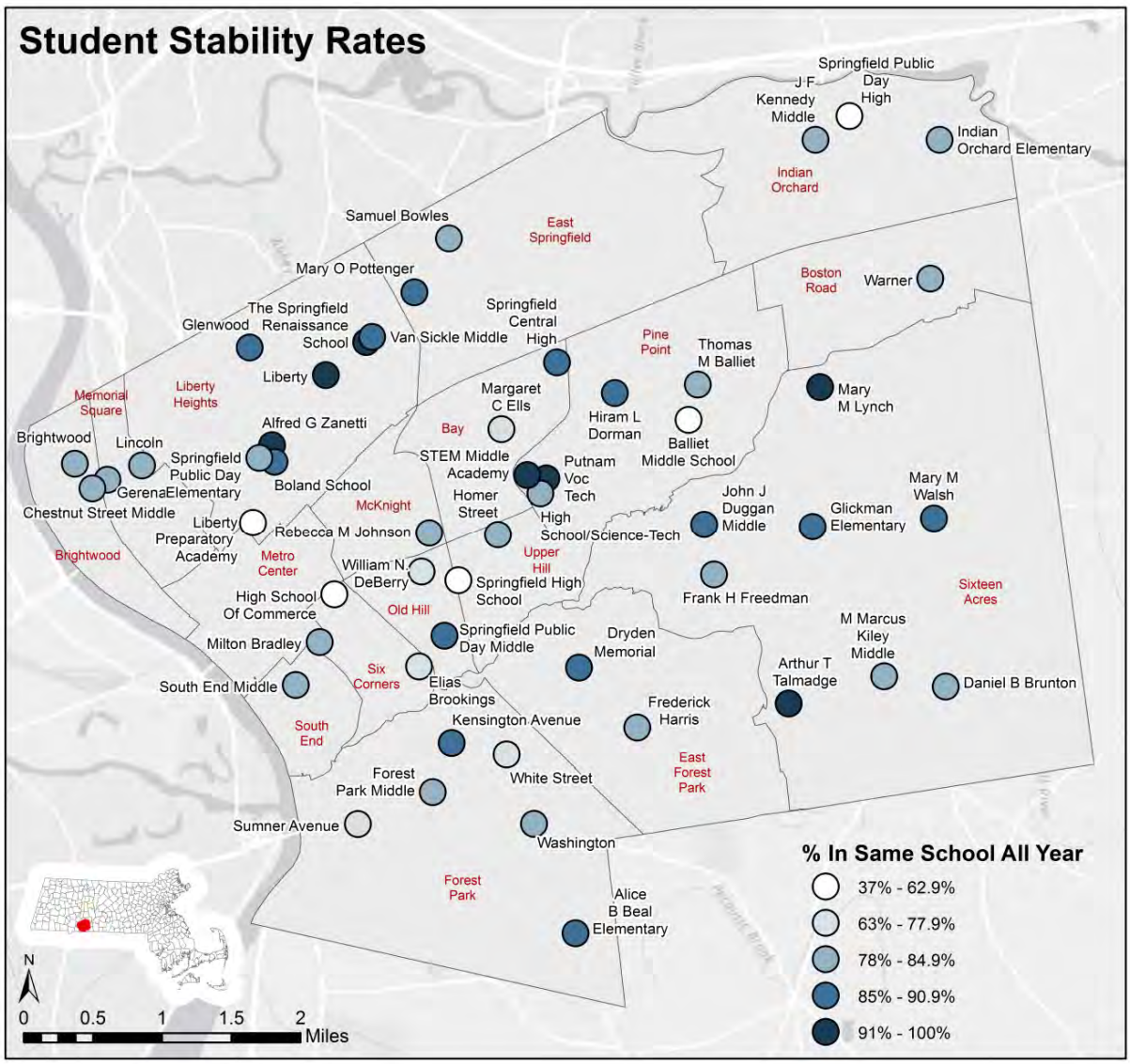
While overall, the city's students experience relative stability during their education, a handful of outlying schools' stability rates suggest deeper issues that cause an interruption in education. Liberty Preparatory Academy (38.7%), Balliet Middle School (60.3%), and Elias Brookings School (71.6%) serve transient student bodies. When examined closely, though, the type of school and population it is designed to serve provide more details on these low rates. Liberty Preparatory Academy operates a portion of the school as an educational facility that aids students with substance abuse issues. Balliet Middle School, an alternative school, offers heightened social and emotional counseling services for students. Low rates in traditional public schools are evident, too, with Springfield High School (55.4%) and High School of Commerce (62.8%) experiencing very high turnover.

LONG TERM TRENDS: CITY, REGION, STATE



Source: Massachusetts Department of Elementary and Secondary Education

STUDENT MOBILITY – NEIGHBORHOOD COMPARISONS – 2013



DATA BY SCHOOL

See full list of data by school on following page.

STUDENT MOBILITY – NEIGHBORHOOD DATA COMPARISON – 2013

NAME	2013
Liberty Preparatory Academy	*38.7%*
Springfield High School	*55.4%*
Balliet Middle School	*60.3%*
Public Day High School	*61.8%*
High School Of Commerce	*62.8%*
Elias Brookings	*71.2%*
Early College High School	*73.8%*
White Street	*74.8%*
Margaret C Ells	*76.0%*
William N. DeBerry	*77.0%*
Sumner Avenue	*77.2%*
Thomas M Balliet	*79.7%*
Homer Street	*79.8%*
High School/Science-Tech	*79.8%*
Gerena	*80.1%*
Warner	*80.1%*
Frank H Freedman	*80.9%*
Frederick Harris	*80.9%*
Milton Bradley School	*80.9%*
Washington	*80.9%*
Daniel B Brunton	*81.0%*
Forest Park Middle	*81.2%*
South End Middle School	*81.6%*
Rebecca M Johnson	*81.7%*
Samuel Bowles	*81.7%*
Lincoln	*81.9%*
Indian Orchard	*83.0%*

NAME	2013
John F Kennedy	*83.4%*
M Marcus Kiley Middle	*83.8%*
Public Day Elementary School	*84.1%*
Chestnut Street Middle	*84.4%*
Brightwood	*84.5%*
Mary O Pottenger	*85.5%*
Boland School	*85.6%*
Kensington Avenue	*86.6%*
Springfield	***86.8%***
Public Day Middle School	*87.3%*
Mary M Walsh	*87.7%*
Van Sickle Middle School	*87.9%*
John J Duggan	*88.1%*
Hiram L Dorman	*88.2%*
Glickman	*88.9%*
Dryden Memorial	*89.0%*
Glenwood	*89.3%*
Central High	*90.3%*
Alice B Beal Elementary	*90.6%*
Pioneer Valley	***91.7%***
Arthur T Talmadge	*92.0%*
Liberty	*92.0%*
Mary M Lynch	*92.7%*
STEM Middle Academy	*93.3%*
Putnam Vocational Technical	*94.3%*
Massachusetts	***95.6%***
Renaissance School	*95.9%*
Alfred G Zanetti	*97.5%*

HEALTH AND SAFETY

The health and safety of the City of Springfield affects residents on a personal, local, and regional scale, influencing their quality of life, physical and mental well-being, and their ability to care for themselves, their families, and their neighbors. Due to a variety of factors, including mandated universal health coverage, world-class hospitals, and leading research institutions dedicated to the issue, the Commonwealth of Massachusetts is a leading state pertaining to the health of its citizens. Health and safety indicators range from those that point to instances of systemic failure to those that reveal notable success. Other indicators allude to areas where a widespread shift in behavior, or perception, or cultural and community supports are needed, such as obesity and substance abuse rates. Premature mortality, asthma, and diabetes touch on systemic problems, societal habits, and personal behaviors which, consequentially, impact the health and safety of the city. Crime rates measure the degree of safety and stress residents and their visitors are exposed to throughout the community.

In Springfield, there have been many encouraging strides in the health and safety field. Cases of premature mortality have fallen, less of the population are using tobacco products, and the percentage of mental health hospitalizations have stabilized. Moreover, the continually declining crime rates are a testament to progress made in terms of public safety. Conversely, there are concerning trends related to the daily nutrition of residents, as well a growth in documented cases of diabetes, mirroring the state trend. The presence of obesity, a well-publicized public health pandemic, is also experiencing unprecedented growth throughout the community, requiring targeted public health efforts.

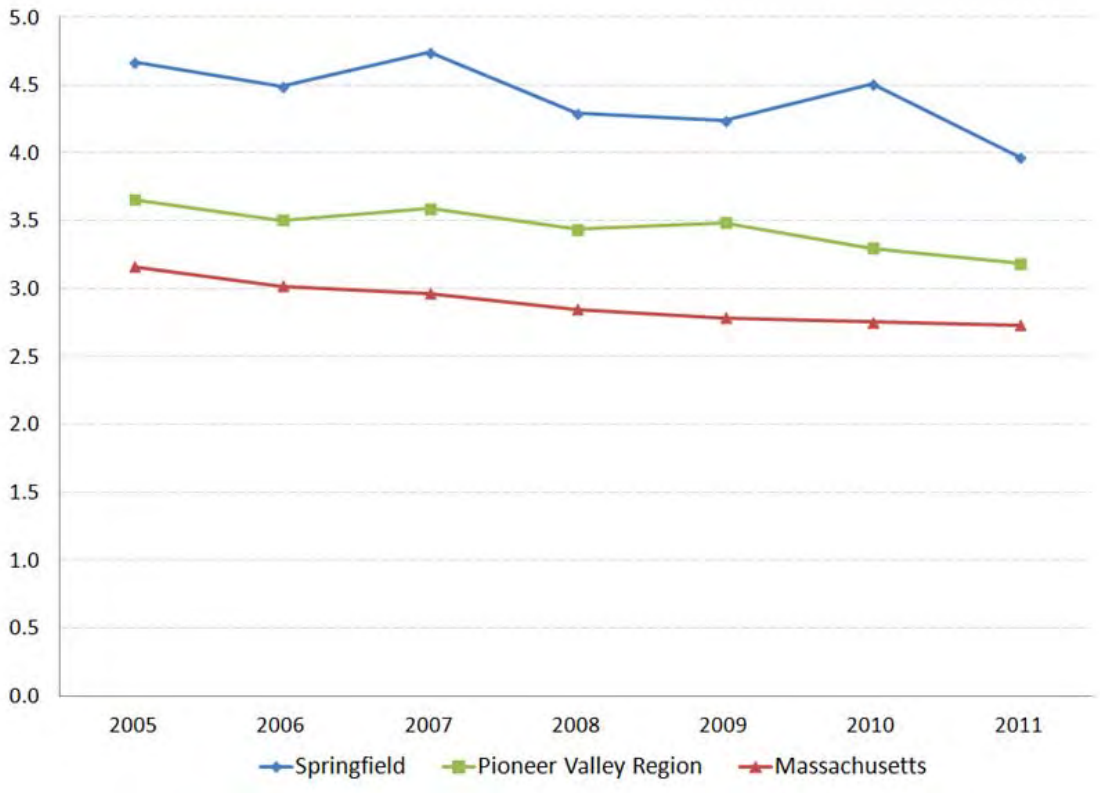
PREMATURE MORTALITY

The premature mortality rate is a widely recognized indicator of the state of public and environmental health in a community. High premature mortality rates draw attention to areas where preventable health issues are not remedied through existing policy and the current health care system. Moreover, these rates may allude to hardship a population faces when accessing care. This indicator reflects the number of people who die prematurely, as defined by the Massachusetts Department of Public Health (deaths occurring before age 75), each year for every 1,000 people in the population.

In 2011, the city of Springfield reported premature mortality rates of 3.97, remarkably higher than those of the state (2.73) and region (3.18). Instances of morality decreased in 2011 to their lowest point since 2005. While Springfield's historic trend has been somewhat unstable, the region and the state have both exhibited a gradual decline in their cases of premature mortality.

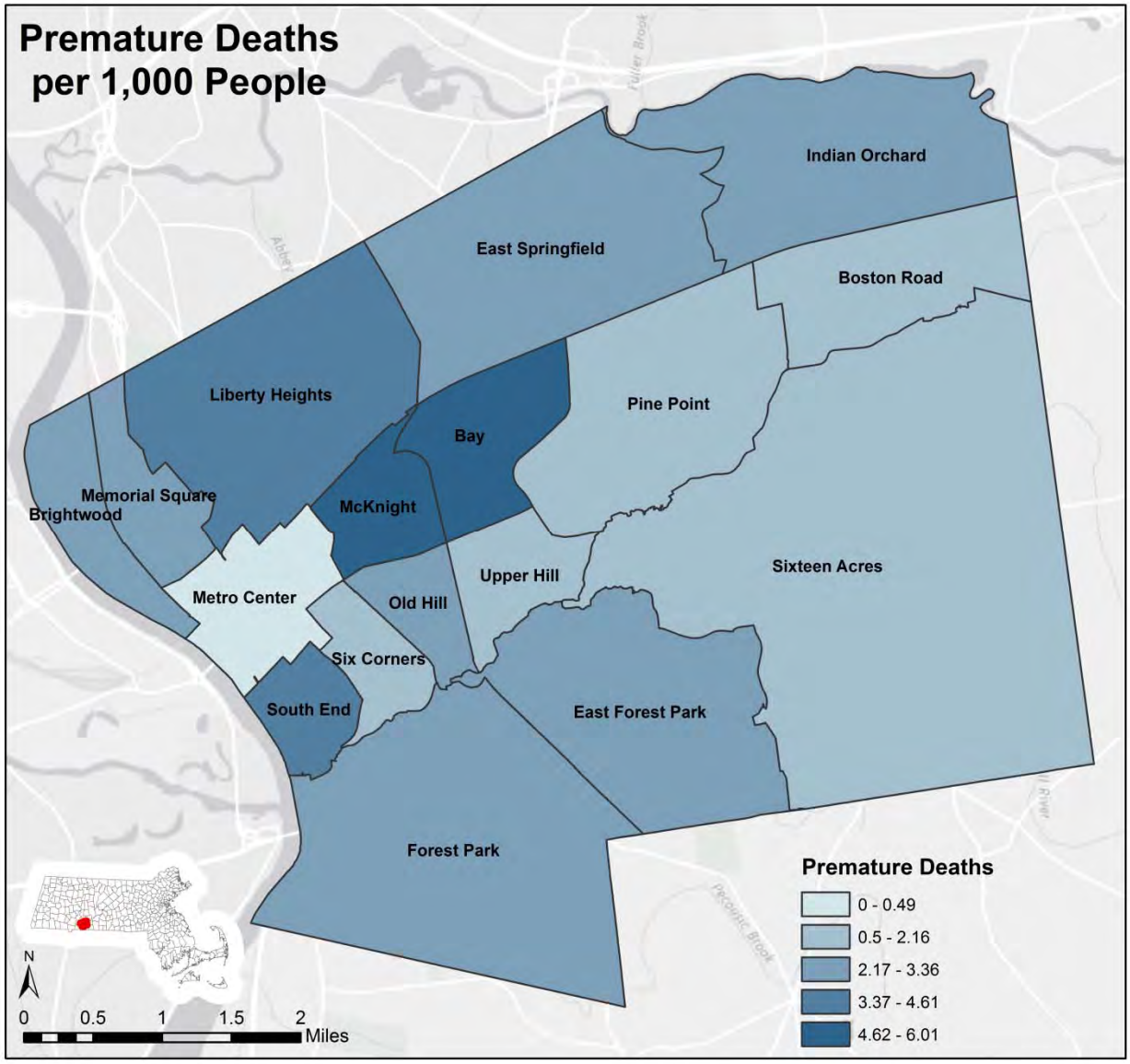
At the neighborhood level, McKnight (6.01) and Bay (5.63) encompassed significantly elevated rates of premature death in 2011 and were 2-3 times more likely to live a shorter life than others across the region and state. While the majority of Springfield neighborhoods reported between 2 to 3 cases per 1,000 people, Metro Center (0.49), and Upper Hill (1.97) are positive outliers. Residents of these neighborhoods, some which encompass better socioeconomic conditions, may have increased access to the local health care system and, subsequently, be able to take preventative measures to combat fatalities.

LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Public Health; U.S. Census Bureau

PREMATURE MORTALITY - NEIGHBORHOOD COMPARISONS – 2011



DATA BY NEIGHBORHOOD

NAME	2011	NAME	2011
Metro Center	*0.5*	***Massachusetts***	***2.7***
Upper Hill	*2.0*	*East Springfield*	*3.0*
Six Corners	*2.0*	***Pioneer Valley***	***3.2***
Pine Point / Boston Road	*2.1*	*Old Hill*	*3.4*
Sixteen Acres	*2.2*	***Springfield***	***4.0***
Forest Park	*2.6*	*Liberty Heights / Atwater*	*4.0*
Brightwood / Memorial Square	*2.6*	*South End*	*4.6*
East Forest Park	*2.7*	*Bay*	*5.6*
Indian Orchard	*2.7*	*McKnight*	*6.0*

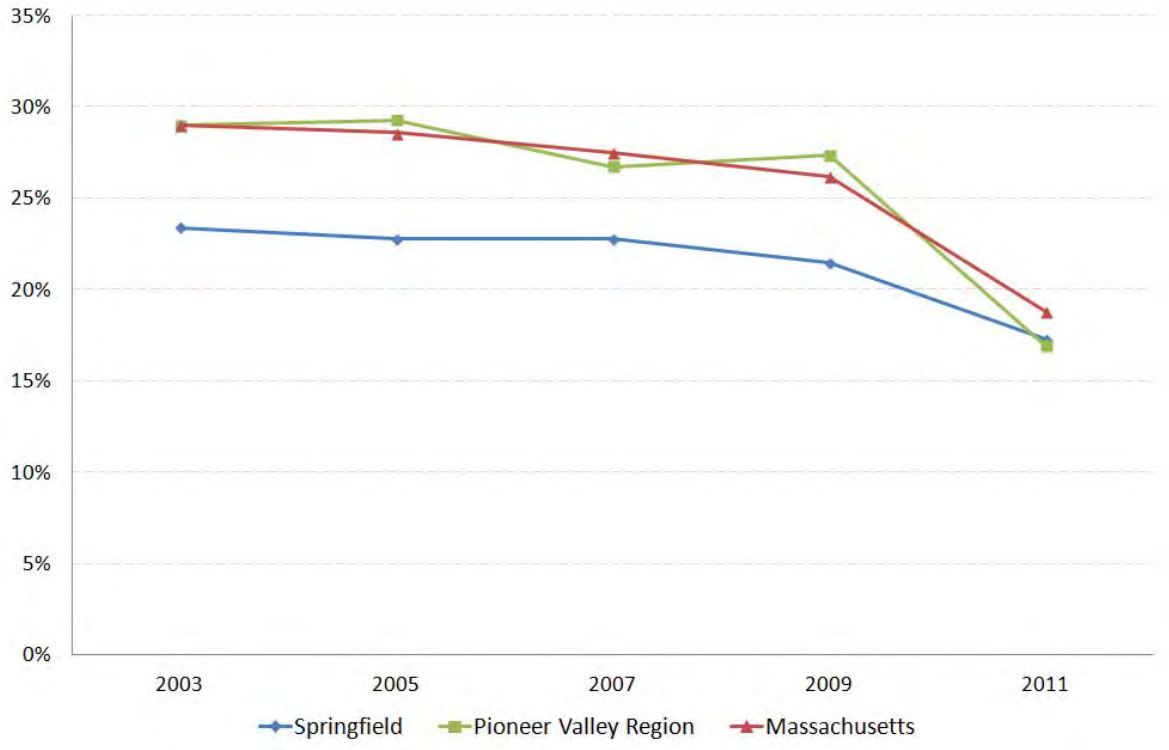
NUTRITION

The human diet contains nutrients allows us to function – both physically and mentally. Foods such as fruits, vegetables, and whole grains are highly composed of nutrients. These foods, which have necessary antioxidants, vitamins, minerals, and protein, are essential in a healthy diet. While not directly causal, nutrition and economics are often integrally related. Access to healthy foods that make up such a balanced diet often depends on the geography and economic circumstances of a population. Economic and geographic inequality often result in communities with less buying power, public safety challenges, and negative nutrition connotations based on stereotypes. Limited accessibility is compounded by full service supermarkets refusing to locate in those neighborhoods. This indicator serves as one proxy for how well the nutrition needs of the residents in Springfield are met, including their opportunities to access affordable healthy foods. The percentage of the population that indicated that they receive sufficient fruits and vegetables (5 or more servings per day) is reflected in this indicator.

Throughout the state, the percentage of residents who access and maintain a healthy diet has sharply descended to levels lower than they were in 2003. As of 2011, only 18.8% of Massachusetts' residents reported a sufficient dietary regimen. In the Pioneer Valley, 16.9% of the population faces adequate nutrition, despite the presence of numerous farms in the region. The population of Springfield, where 17.3% of people reported maintaining healthy diets, has consistently been much lower than rates in the broader region, though state and regional declines have brought all of Massachusetts closer in line with the city rates.

Overall, a startlingly large number of residents are burdened with dietary deficiencies, compounded by socioeconomic conditions. Undoubtedly, the growth in unemployment and loss of income, triggered by the recent recession, may correlate with this trend. Additionally, geographic inequalities may contribute to this rate in Springfield. Many neighborhoods and smaller population clusters within them are not within proximity of full-service supermarkets. Accessibility, along with dietary habits, education, and policy, must be tailored to counteract this trend.

LONG TERM TRENDS: CITY, REGION, STATE



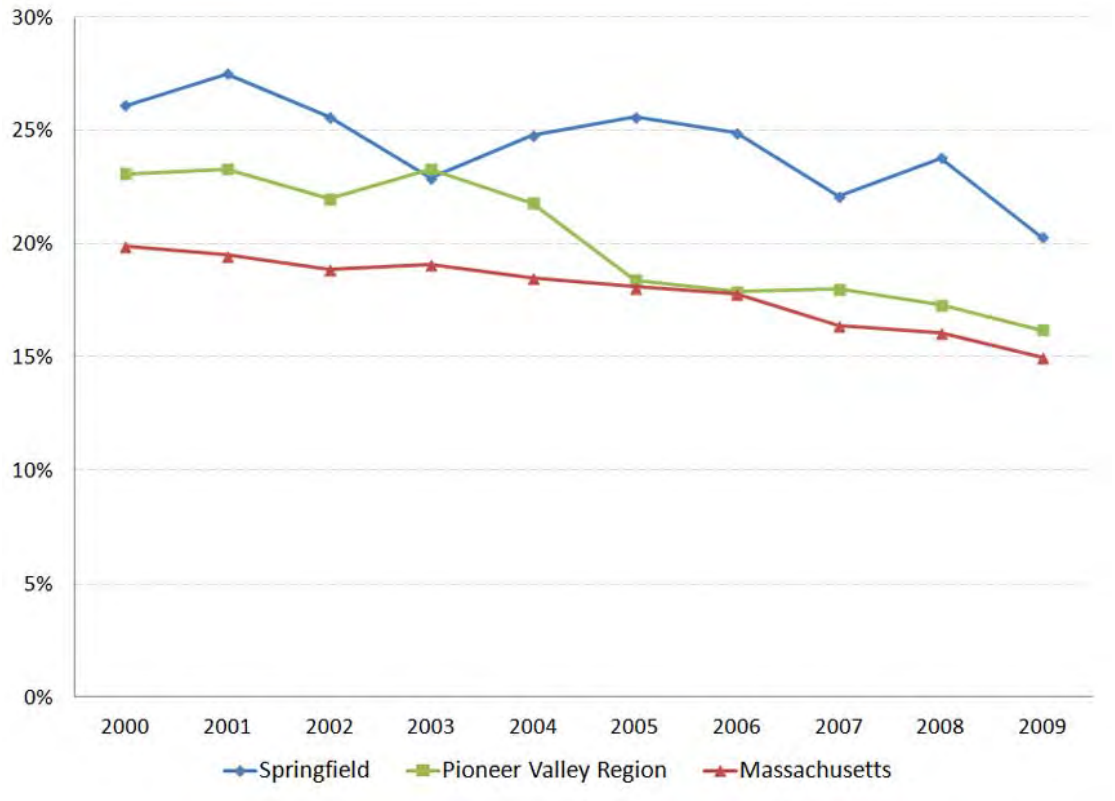
Source: MA Department of Public Health; U.S. Census Bureau

TOBACCO USE

It is now well known that tobacco use causes countless serious health conditions, including death. According to the U.S. Centers for Disease Control and Prevention, "tobacco use is the single most preventable cause of disease, disability, and death in the United States." Identifying the percentage of adults that engage in tobacco use help us to understand how well we, as a community, are reducing the prevalence of this harmful and risky behavior and thus the likelihood of continued health needs that are likely to arise. The estimated percent of all people who are currently tobacco smokers is reflected in this indicator.

Throughout the state, tobacco use has continually declined throughout the past decade, falling from 19.9% in 2000 to 15.0% in 2009. Regionally, use is more prevalent, at 16.2% in 2009, yet declining after a period of elevation between 2002 and 2003. While tobacco use has diminished in Springfield, the descending trend has been relatively unstable. Climbing in 2005 to 25.6%, the rate of use subsequently fell to 22.1% in 2007, only to rise 1.7% the following year. As of 2009, 20.3% of Springfield's population regularly consumes tobacco products, a rate much higher than those regionally or statewide, remaining approximately 5.3% higher than the state, as of 2009.

LONG TERM TRENDS: CITY, REGION, STATE



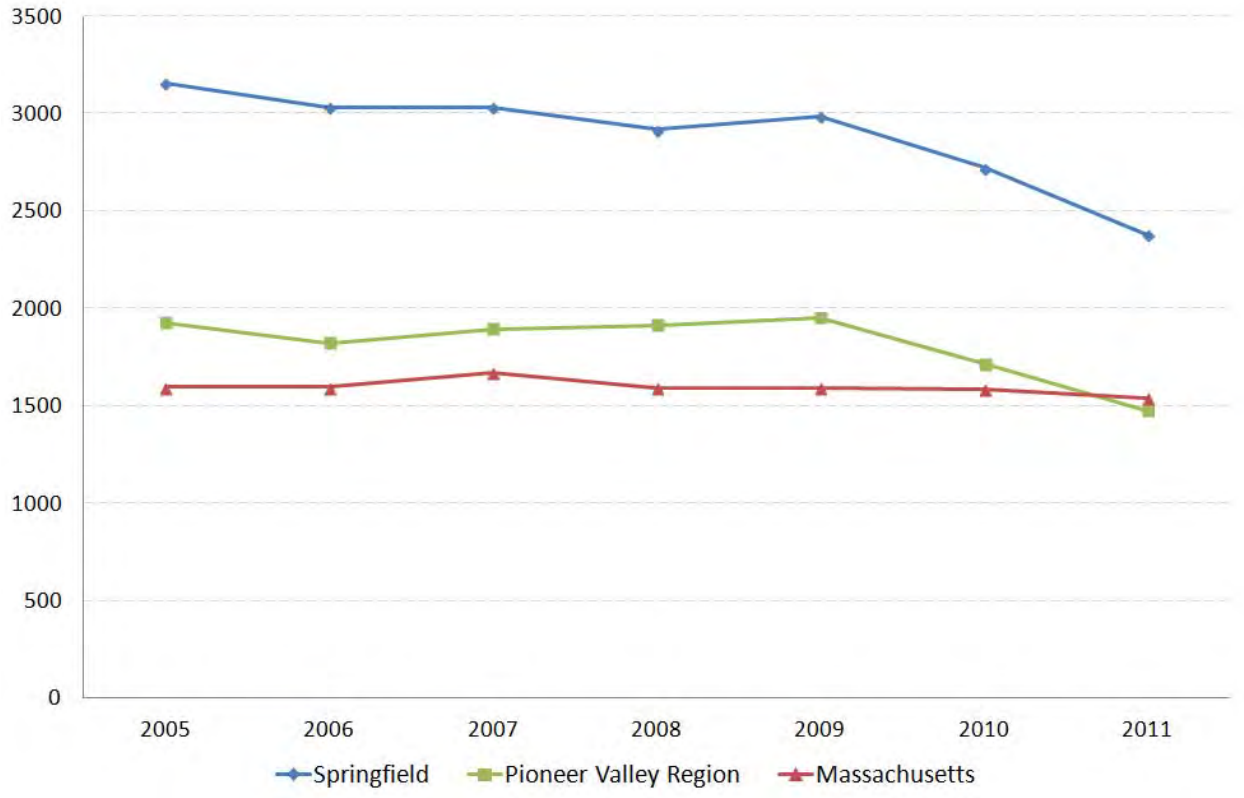
Source: BRFSS, MA Department of Public Health; U.S. Census Bureau

SUBSTANCE ABUSE

The prevalence of substance abuse is an indicator of health and risk factors related to drug and alcohol usage. A community with high rates of substance abuse is more likely to have disproportionate rates of crime, poverty, and poor health. Individual patterns of substance use can lead to significant distress and hardship, including failure to attend work/school, impaired driving, and substance-related legal problems. Consequentially, this can lead to the deterioration of relationships with family and friends. Accurately depicting the percentage of the population who is burdened by substance abuse is difficult, as statistics are reported based on rehabilitation facility admissions. This indicator reflects the number of substance abuse program admissions per 100,000 people.

As of 2011, Massachusetts and the Pioneer Valley reported 1,541 and 1,476 people per 100,000, respectively. These figures are overshadowed in Springfield, where 2,378 people per 100,000 were admitted to rehabilitation programs in the same year. Possessing an unsettling contrast in figures when looked at collectively, Springfield has actually experienced a consistent decline in admissions; in 2005, 3,156 people per 100,000. Often, this phenomenon is cyclical and may be influenced by disparate socioeconomic conditions, which are present within certain neighborhoods in the city.

LONG TERM TRENDS: CITY, REGION, STATE



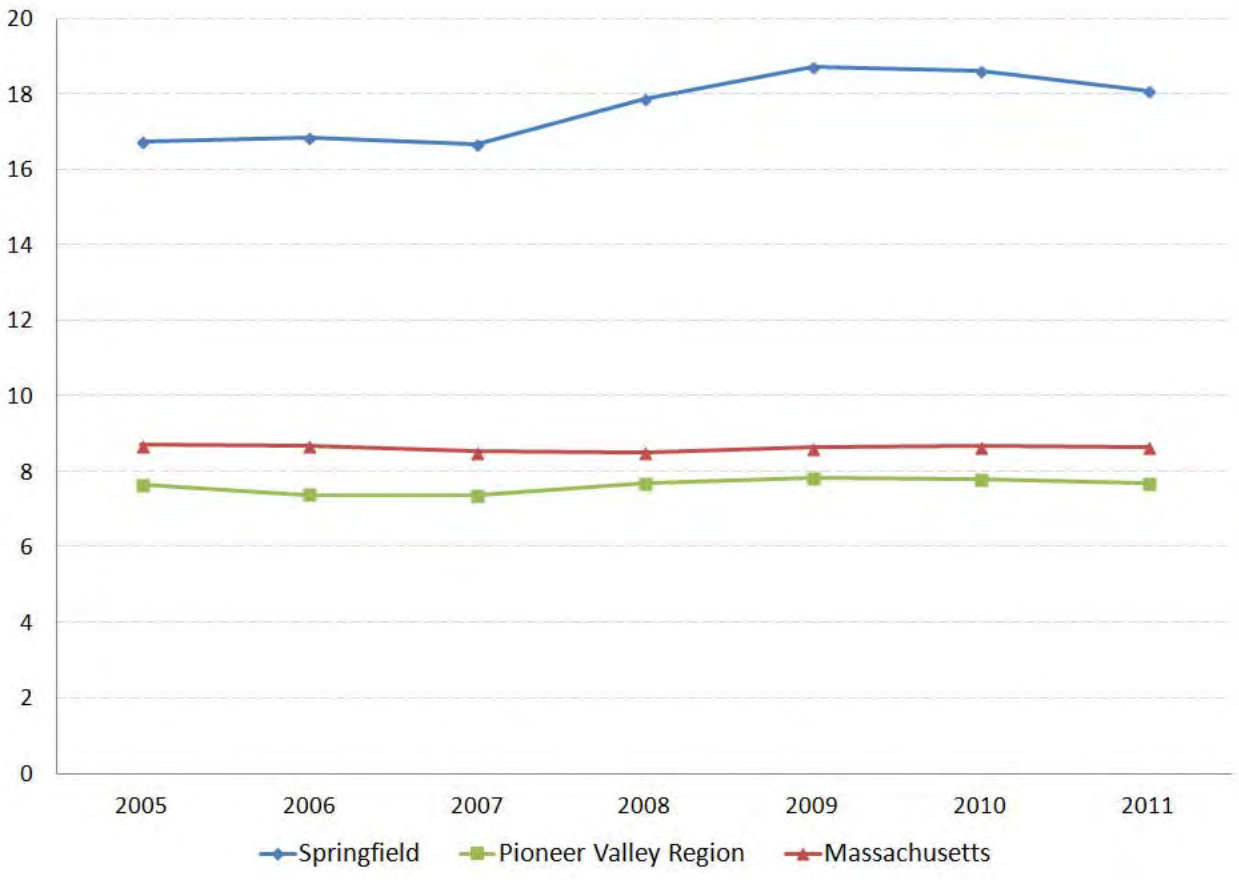
Source: MA Department of Public Health; U.S. Census Bureau

MENTAL HEALTH

One's psychological health is relevant to every aspect of life. Fluctuations in mental health can result in personal, social, and economic hardship, including how active that person is in their community. According to the World Health Organization, "mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community." High levels of mental health distress in a community can suggest underlying social and societal problems and be indicative of socioeconomic hardship, such as poverty, unemployment, and crime. Understanding the severity of our community's mental health condition is integral to ascertaining if the broad health needs of all are being met through current policy and initiatives. This indicator illustrates the number of mental health hospitalizations per 1,000 people in the population as a whole

In Massachusetts, approximately 8.7 people per 1,000 were admitted to medical facilities with psychological health ailments in 2011. Slightly below this, the Pioneer Valley reported 7.7 people per 1,000 were similarly admitted. Overshadowing these figures, Springfield had rates more than double, with 18.1 residents per 1,000 hospitalized for mental health related issues during the same time. This gap continues to widen. For the city, this figure has grown since 2006, when 16.8 residents per 1,000 were admitted to mental healthcare facilities. Conversely, the regional and state trends have remained somewhat stagnant throughout the decade.

LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Public Health, U.S. Census Bureau

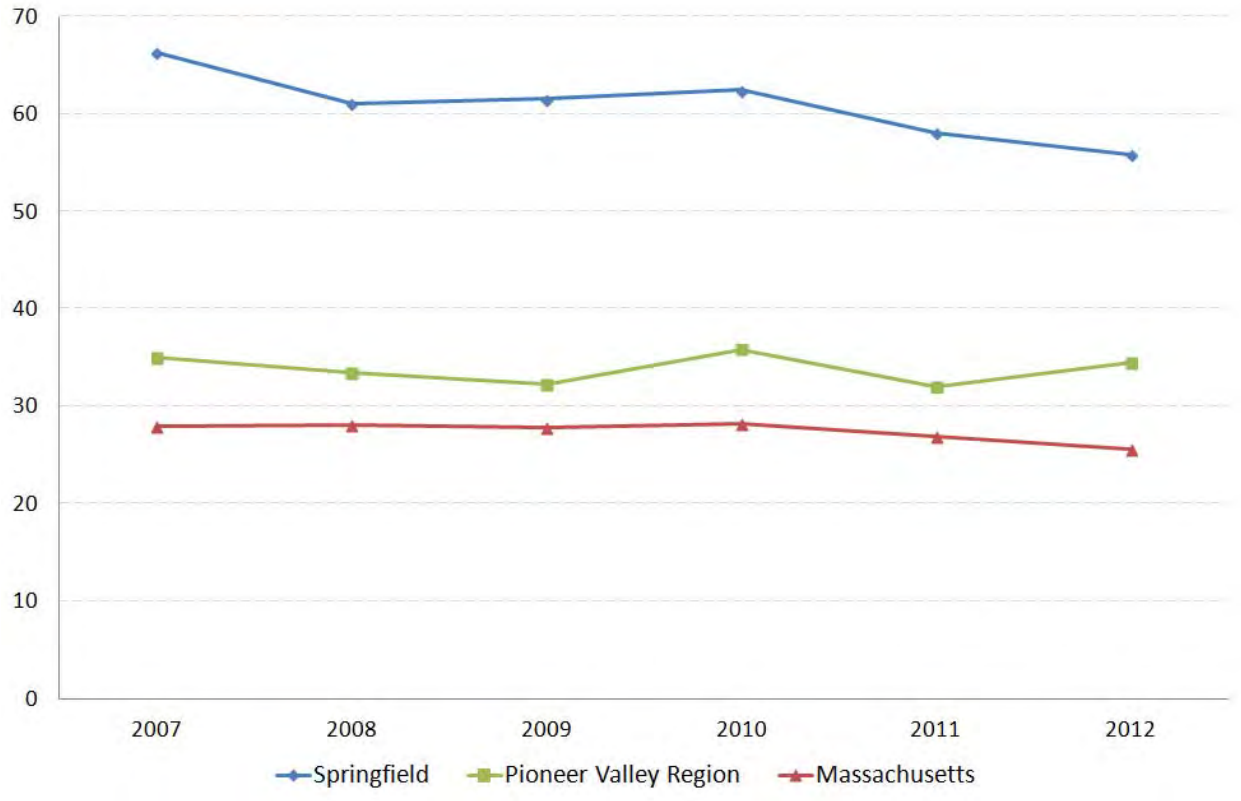
CRIME

Crime rates are one of the most direct and recognizable indicators of public safety and well-being. Reflecting a community's ability to protect its people and their property, crime statistics depict the probability that a person will become a victim of a crime. Safe living conditions are determinants of people's quality of life, as well as the socioeconomic vitality of a region. High crime rates discourage employers from conducting business and people from spending time out in the community. Subsequently, municipalities are required to spend more money protecting public safety, thus diverting public funds from other important areas. The number of reported violent and property crimes per 1,000 people is represented by this indicator. Violent crimes include murder, rape, robbery, and aggravated assault. Property crimes include burglary, larceny, and motor vehicle thefts.

Although crime rates have declined significantly in Springfield (dropping more than 15% in 6 years), they continue to hover far above those of the state and region. Massachusetts reported 25.6 instances of property and violent crime per 1,000 people in 2012, diminishing only slightly from previous years. The Pioneer Valley region's occurrence of crime, 34.5 per 1,000 people, rests above that of the state. Within the region, contrasting rates exist which contribute to this aggregate. Springfield, with 55.9 reported crimes per 1,000 people during the same year, faces starkly different circumstances than other communities.

Accentuated by poverty, socioeconomic instability, and public health risks, the crime rate in Springfield has declined since 2007, when 66.3 crimes per 1,000 people were reported. Regardless, it is evident that it is still an issue of some enormity that the city must grapple with. Not depicted are crimes which occurred yet went unreported, a reality faced throughout the city. While police departments are often referenced as the first to remedy high crime rates, concerted outreach by social and educational services are often the most effective method of addressing the underlying factors that result in crime.

LONG TERM TRENDS, CITY REGION, STATE



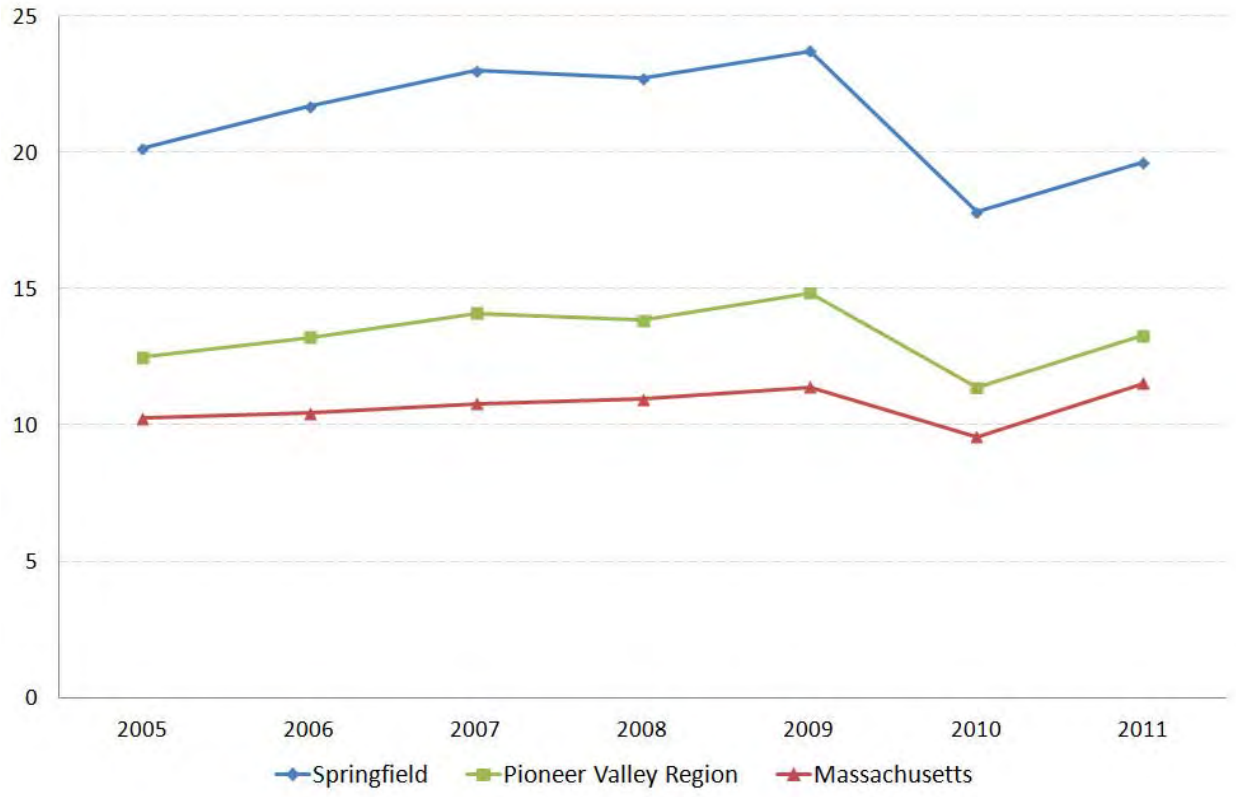
Source: U.S. Federal Bureau of Investigation

ASTHMA

Asthma is related to environmental health, specifically air quality such as the presence of mold in older residential structures or excess congestion through residential or school environments. Rates of asthma measure the impact of our living environment on physical health. Furthermore, they portray the manner in which environmental health factors are disseminated across a diverse population. An increase in asthma hospitalizations is frequently indicative of problematic environmental conditions faced by surrounding residents. The number of people admitted to hospitals due to asthma-related complications is represented in this indicator, measured by the number of hospitalizations per 1,000 people. It should be noted that rapid climactic changes often unveil increased asthma symptoms. Therefore, rates of admittance may also be related to variations in seasonal weather patterns.

In 2011, approximately 11.6 people per 1,000 were admitted to Massachusetts' hospitals due to asthma-related complications. The Pioneer Valley, which reported 13.3 admissions per 1,000 people, encompasses an array of environments, some of which may compound asthma complications. The figure for 2011 in Springfield, 19.6 people per 1,000, illustrates the disparity evident throughout the region. Although the city experienced a steep decline in 2010, rates of asthma appear to be rising again. A multitude of environmental health phenomenon, such as air pollution, contributes to this rate. Prescience regarding the causes of asthma was not realized until recently, resulting in a disproportionate number of residents reporting these ailments in cities with lower socioeconomic conditions.

LONG TERM TRENDS: CITY, REGION, STATE



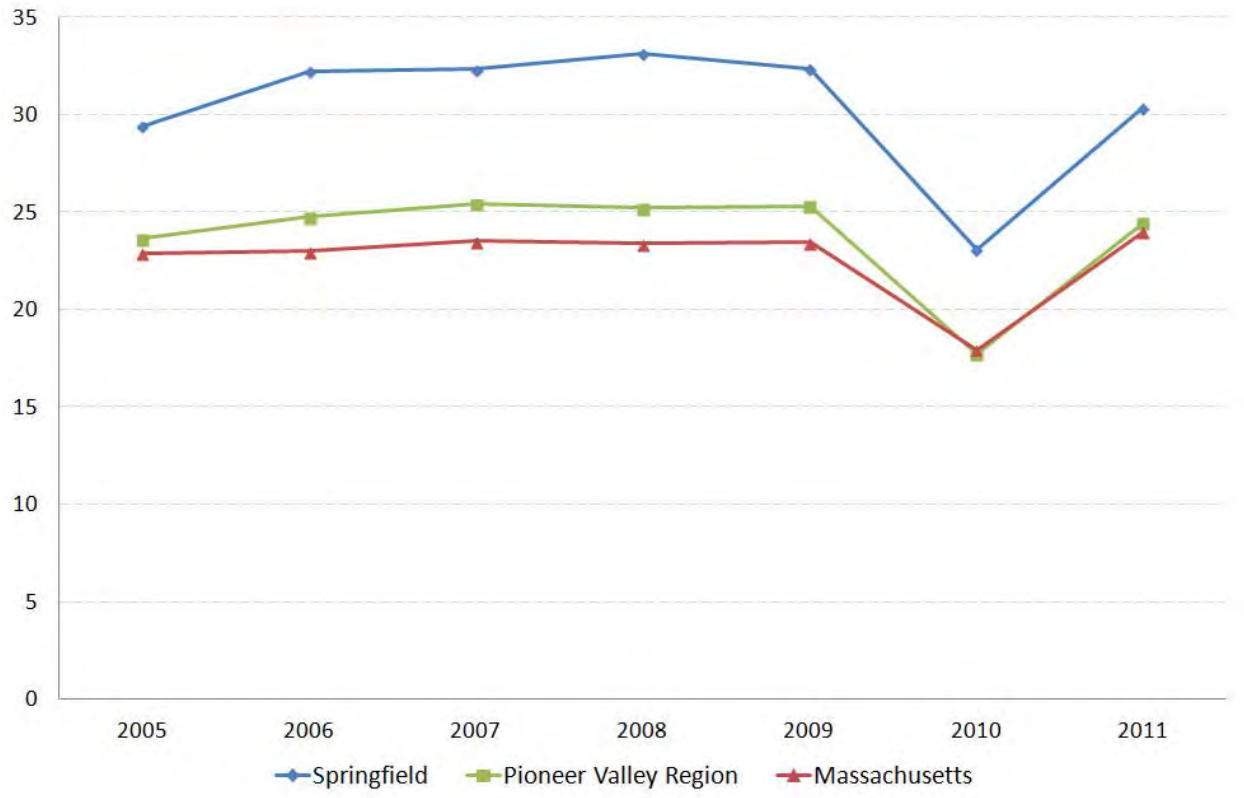
Source: MA Department of Public Health, U.S. Census Bureau ACS 1-year estimates

DIABETES

Similar to cardio vascular disease and many types of cancer, diabetes is a health condition whose risk can often be reduced by diet and lifestyle choices. Diabetes may also lead to other serious diseases and can be life threatening. In addition to the physical impact, the prevalence of diabetes can create financial burden, both on an individual and community at-large. Thus, monitoring the prominence of diabetes in the population is imperative. Policy that is crafted to facilitate a healthy lifestyle and nutritious diet is the best countermeasure in preventing diseases, such as diabetes, throughout the population. The number of hospitalizations due to diabetes and diabetes related complications per 1,000 people are reflected in this indicator.

Within Massachusetts, the number of patients afflicted with diabetes has remained relatively stagnant. As of 2011, 23.9 people per 1,000 were hospitalized for the disease. The Pioneer Valley, which reported 24.4 people per 1,000, hovered slightly above the state as a whole. Access to quality and affordable health care has allowed these trends to remain manageable. However, Springfield reported 30.4 people per 1,000 as burdened with the disease during the same year, substantially departing from the state and regional trend. While the trend has fluctuated in the city, the rise may be attributed to a combination of poor nutrition and increased medical attention resulting in diagnosis. Despite a significant decrease in 2010, the overall trend of the city's diabetes rate appears to be on the rise.

LONG TERM TRENDS: CITY, REGION, STATE



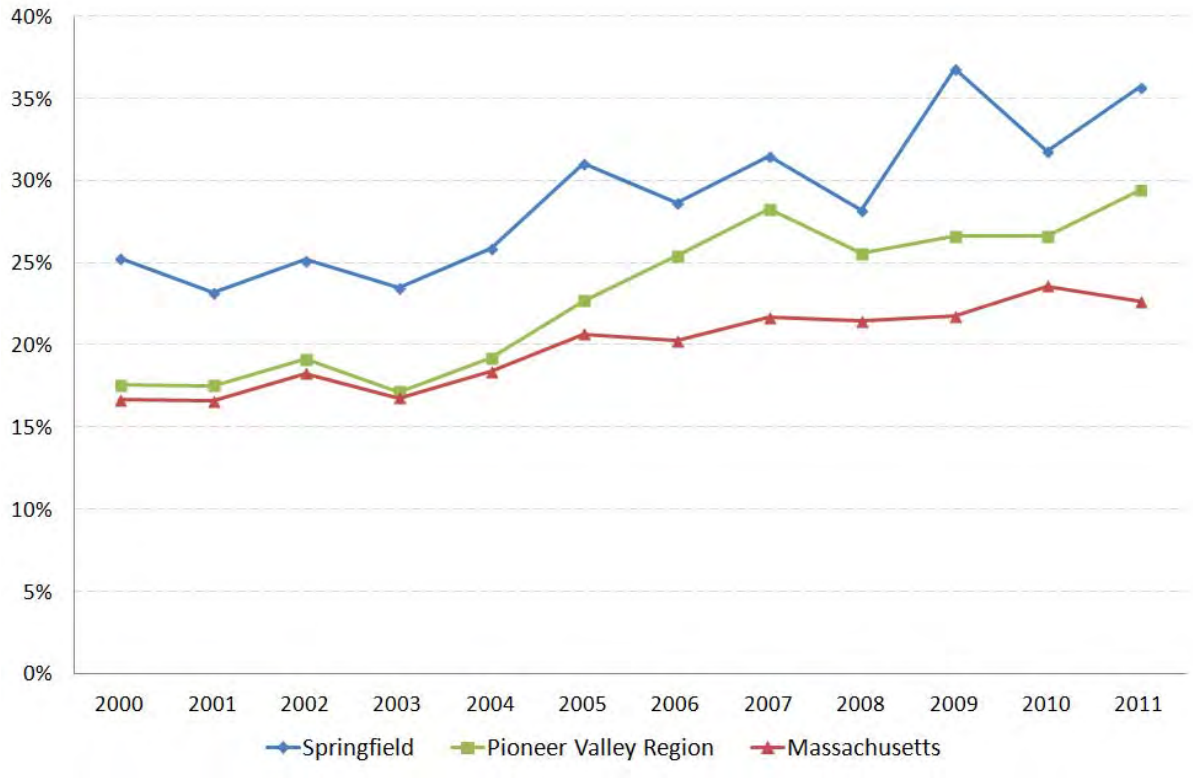
Source: MA Department of Public Health, U.S. Census Bureau

OBESITY

The American epidemic of obesity is well documented and known. A myriad of risks, such as higher rates of cardiovascular diseases, diabetes, musculoskeletal disorders, and some cancers are linked to obesity. To a large extent, being overweight or obese is impacted by diet, exercise, and lifestyle choices. Genetics are also a determinant of the disease. Obesity rates act as a proxy for the education, awareness, and healthcare resources available to population to combat this growing trend. These include stores with healthy food options and access to parks, bike paths, and recreational opportunities. As diet, especially for youths, often emanates health complications, such as obesity, later in life, it is important to comprehend obesity rates with contextual information regarding health food accessibility. Obesity is measured through the Body Mass Index (BMI). While this is the accepted metric for measuring obesity, it presumptuously disregards body type and muscle mass, both which contribute to weight and thus is recognized as an imperfect measure. Nonetheless the percentage of the population whose Body Mass Index (BMI) was greater than 30% (considered obese) is reflected in this indicator.

The growth of obesity rates across the state is unsettling. This trend is accentuated in Springfield, where 35.7% of residents were considered obese, as of 2011. This is substantially higher than both the state (22.7%) and the Pioneer Valley region (29.4%). While the state has experienced growth in this epidemic, Springfield's rapid increase overshadows this. Since 2000, when 25.3% of Springfield residents were reported as obese, the rate has risen by 10.4%. Compounded by the lack of accessible supermarkets and healthy foods, rates have spiked from 28.2% in 2008 to 36.8% in 2009, parallel to the economic downturn. Solely analyzing the cost of healthy foods, which are often substantially more expensive than processed and artificial foods, illustrates how dietary habits are often declined out of necessity as residents financially struggled during the recession. Overall, education, awareness, accessibility, and policy which manages costs are the most effective means of combating this concerning urban trend.

LONG TERM TRENDS: CITY, REGION, STATE



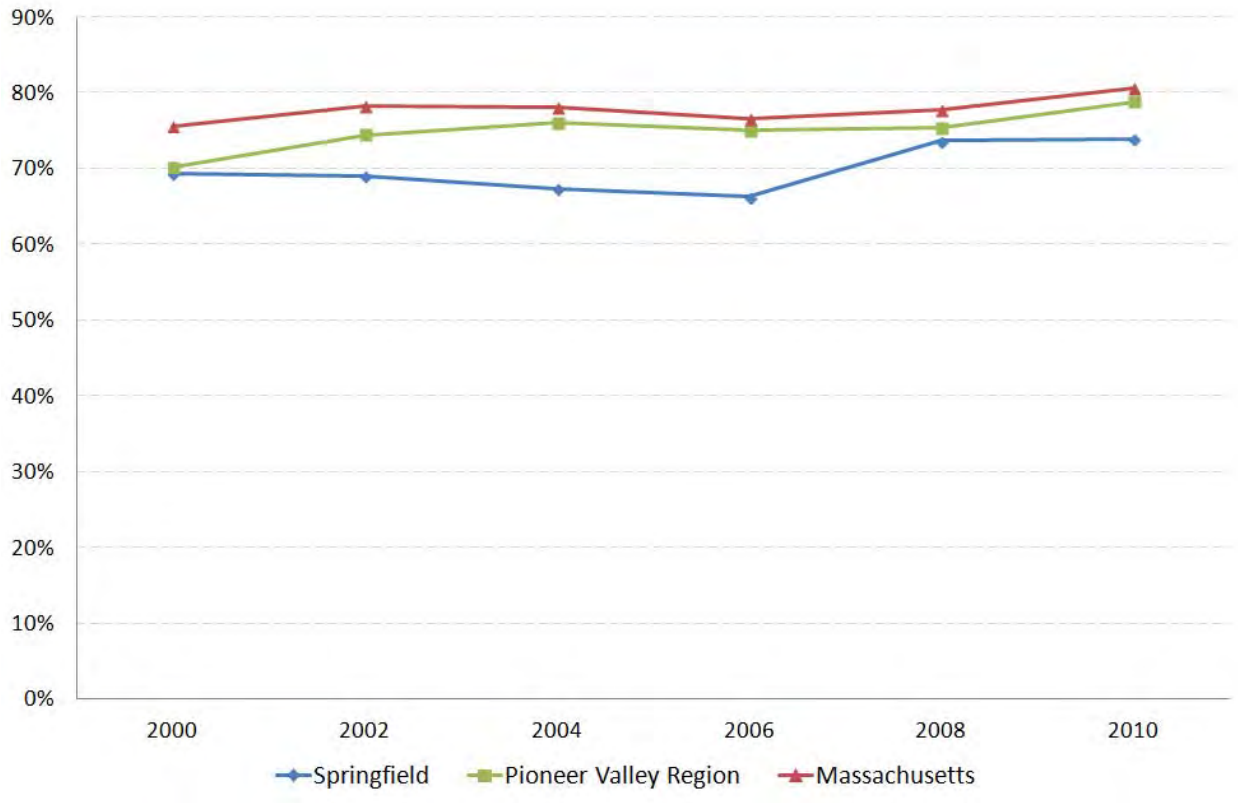
Source: MA Department of Public Health, U.S. Census Bureau

ORAL HEALTH

Oral health, in addition to having healthy teeth, encompasses broader issues. As described by the U.S Surgeon General, oral health involves being free of chronic oral-facial pain conditions, oral and throat cancers, oral soft tissue lesions, birth defects such as cleft lip and palate, and scores of other diseases and disorders that affect the oral, dental, and other tissues. Dentists and other oral health care providers are trained to look for early signs of much broader problems ranging from malnutrition, eating disorders, and cancerous tumors. The National Institute of Health recommends that annual visits with an oral health care provider can help ensure adequate prevention and diagnosis of factors that may lead to oral health issues. Visits also allow for risk assessment, risk management, and, if necessary, treatment of oral diseases and disorders. The percentage of all people who had a dental visit within the last year is reflected in this indicator.

Overall, Springfield has experienced a positive trend in the percentage of residents who regularly visit the dentist, increasing from 69.4% in 2000 to 73.9% in 2010. Evident is a slight decline between 2002 and 2006, despite state and regional trends inching upward. Comparatively, 78.8% of people in the Pioneer Valley and 80.6% of all Massachusetts residents received annual oral healthcare in 2010. As the state health insurance mandate took effect in 2006, a greater number of the population acquired health insurance that covered dental visits. In Springfield, which falls only 6.7% behind Massachusetts, progress may continue with concerted efforts towards accessibility, education, and awareness of the importance of annual visits to a dentist.

LONG TERM TRENDS: CITY, REGION, STATE



Source: MA Department of Public Health, U.S. Census Bureau

ECONOMIC SECURITY

Economic security is essential for local prosperity, elevated quality of life, and social stability. Topics relevant to financial security, household income, income inequality, rates of poverty, rates of unemployment, and the presence of food deserts, are discussed in this section. These indicators measure overall health and vitality of the city, as without financial security, people cannot afford their basic needs. Furthermore, without economic security, one cannot support a thriving local economy, or contribute to the local tax base, which is subsequently invested in community safety, education, and infrastructure.

Overall, Springfield's economic security has been weakened in recent years when compared with the region and the state. For example, the median household income in the city is approximately 47%, or half, of the median income for the rest of Massachusetts. While unemployment rates have gone down slightly, they continue to remain comparatively high, with income inequality also substantially increasing during recent years. Undoubtedly, the economic recession's implications resonated throughout the city. Positively, though, the rates of poverty for people aged 65+ have continued to decline. When examined closely, the neighborhoods in the city experience imbalanced economic security.

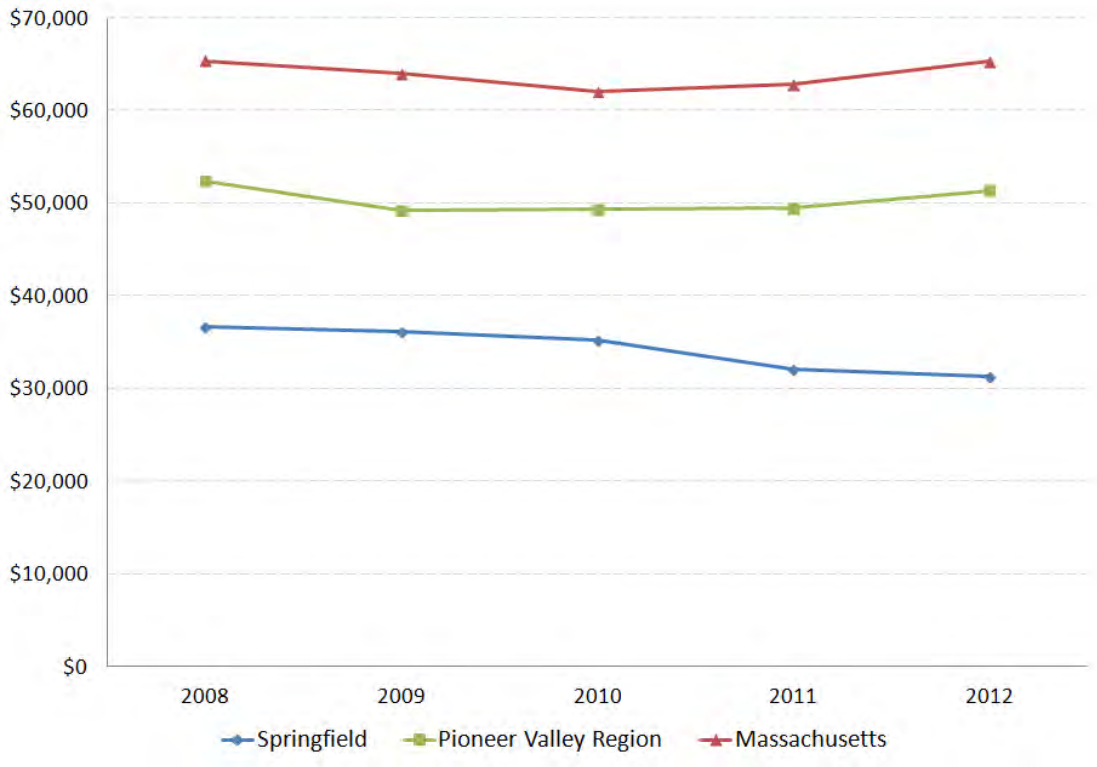
HOUSEHOLD INCOME

Median household income represents the amount of money a household who is middle-income for a given area receives in a year. It is a common indicator of household finances and economic standing. Unlike measuring average (mean) income, median income is not as affected by a few extremely large or small cases. The median amount of money a household brings in is perhaps the most important indicator of economic security, as it is reflective of a household's ability to provide for itself. Half of all households have more income and half of all households have less income than the median household income for a given community. A household refers to any group of people who live within the same housing unit. Collectively, this figure is determined according to the income received by all members of the household who are older than 14 during the course of the year. Household income includes wages, social security, retirement funds, public assistance, and other forms of cash income.

As evident in the graph below, the 2012 median household income in Springfield ($31,356) falls far below that of both the Pioneer Valley ($51,381) and the state ($65,339). Indeed, in 2012, Springfield's median household income was less than half of that statewide. Springfield's latest decline in median household income occurred during the recent recession, though as regional and state incomes have begun to recover, Springfield has continued to see decline. This suggests that city households did not possess the economic insulation that allowed other Massachusetts' households to experience relative stability during hardships throughout the economy.

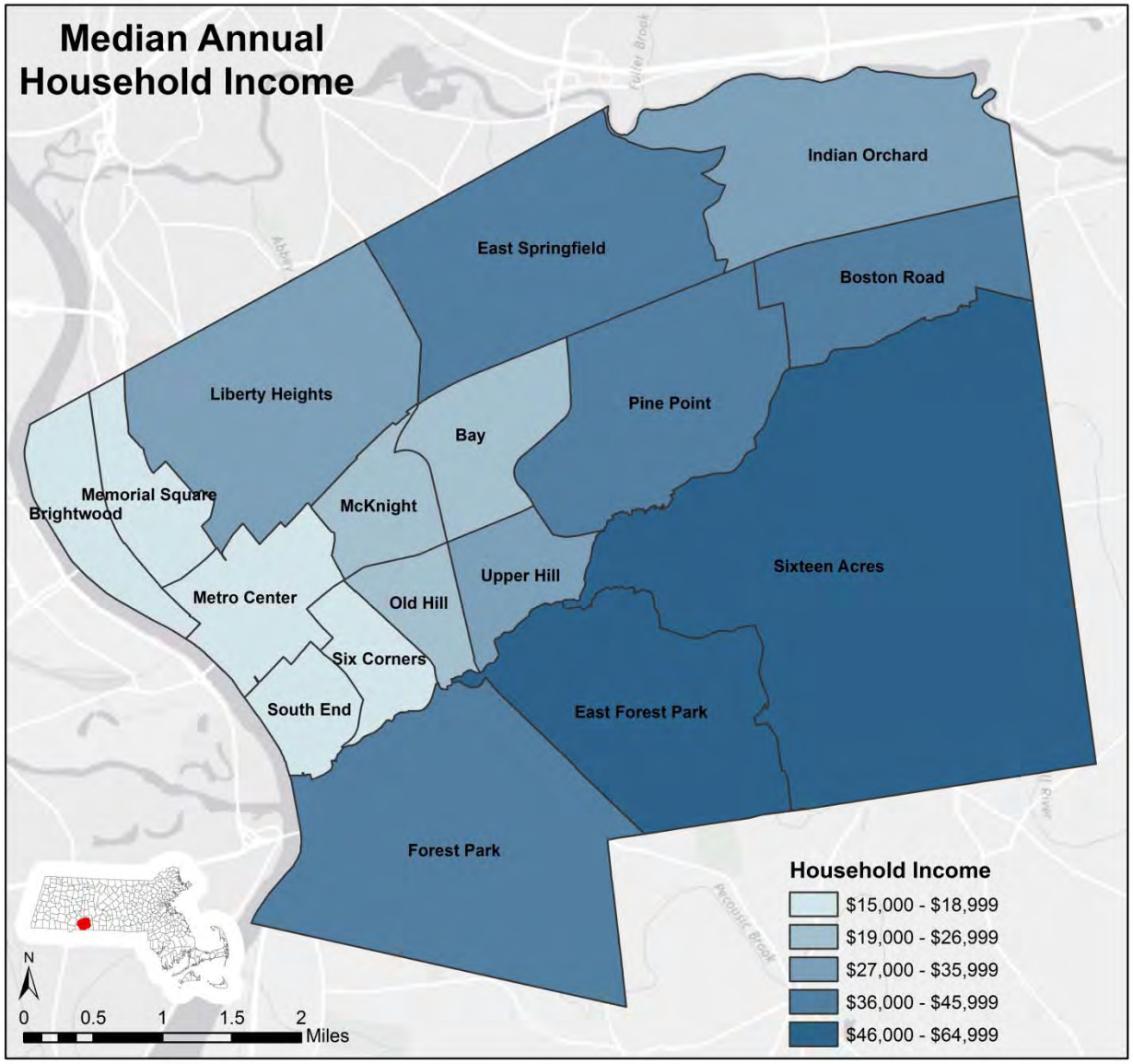
Within the city, there exists a disparity which should be examined closely. Neighborhoods, such as East Forest Park ($64,362) and Sixteen Acres ($54,605) maintain a high level of median household income that is in line with the state average. This trend diverges, though, as residents in neighborhoods such as Brightwood ($15,495), Metro Center ($16,114), and Memorial Square ($16,973) possess the lowest economic capabilities. Median household income in East Forest Park is more than four times higher than that in Brightwood. Although neighborhoods such as Upper Hill ($35,581) and Pine Point ($45,731) offset the lowest-performing neighborhoods in Springfield, their median household income is still much less than that of Massachusetts.

LONG TERM TRENDS: CITY, REGION, STATE



Source: U.S. Census Bureau, American Community Survey

HOUSEHOLD INCOME – NEIGHBORHOOD COMPARISONS- 2008-2012



DATA BY NEIGHBORHOOD

NAME	2012
Brightwood	*$15,495*
Metro Center	*$16,114*
Memorial Square	*$16,974*
South End	*$17,441*
Six Corners	*$18,763*
Old Hill	*$23,021*
McKnight	*$25,991*
Bay	*$26,600*
Springfield	***$31,356***
Indian Orchard	*$33,060*

NAME	2012
Liberty Heights	*$33,651*
Upper Hill	*$35,581*
Forest Park	*$40,513*
East Springfield	*$40,518*
Boston Road	*$42,188*
Pine Point	*$45,732*
Pioneer Valley	***$51,381***
Sixteen Acres	*$54,606*
East Forest Park	*$64,362*
Massachusetts	***$65,339***

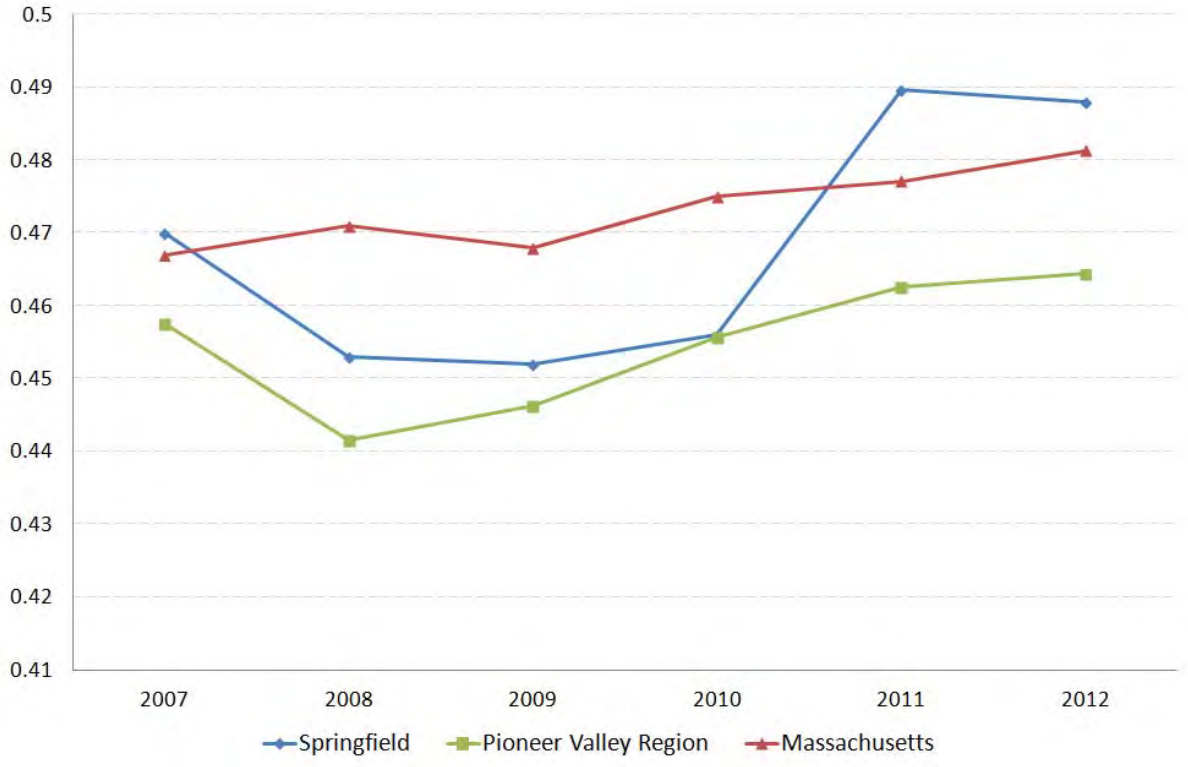
INCOME EQUALITY

Measuring the overall level of income equality between the people throughout the region is necessary to accurately analyze an area's economic condition. This is done by looking at how income is distributed throughout a study area. A community with lower levels of economic inequality is more likely to have economic and social stability and thus a higher quality of life. The income equality of an area is measured with the Gini Coefficient, which illustrates how uniformly income is distributed. Calculating the Gini Coefficient provides a number on a scale of 0 to 1, where 0 is complete equality and 1 is complete inequality. Conducting these measurements are necessary as patterns of inequality can be revealed which would otherwise not appear in a simple income analysis. The Gini Coefficient has the ability to account for higher incomes that would skew those analysis that analyze standard averages. Furthermore, this analysis depicts socioeconomic segregation. A neighborhood may appear to have low levels of inequality, but when looked at collectively with other areas, the neighborhood could be an area of concentrated poverty or concentrated wealth.

Historically, as income inequality increased throughout the state, the Pioneer Valley and City of Springfield experienced a decline. This culminated in 2010, when Springfield experienced a rise in income inequality, from .0456 (2010) to .4896 (2011). During these years, the state's incremental growth in inequality continued. In 2012, Springfield's Gini, .488, fell only slightly below that of the state, .481. However, the Pioneer Valley's income inequality, .464, is lower than both, yet the city's trend does not reflect the trend of the the region and state

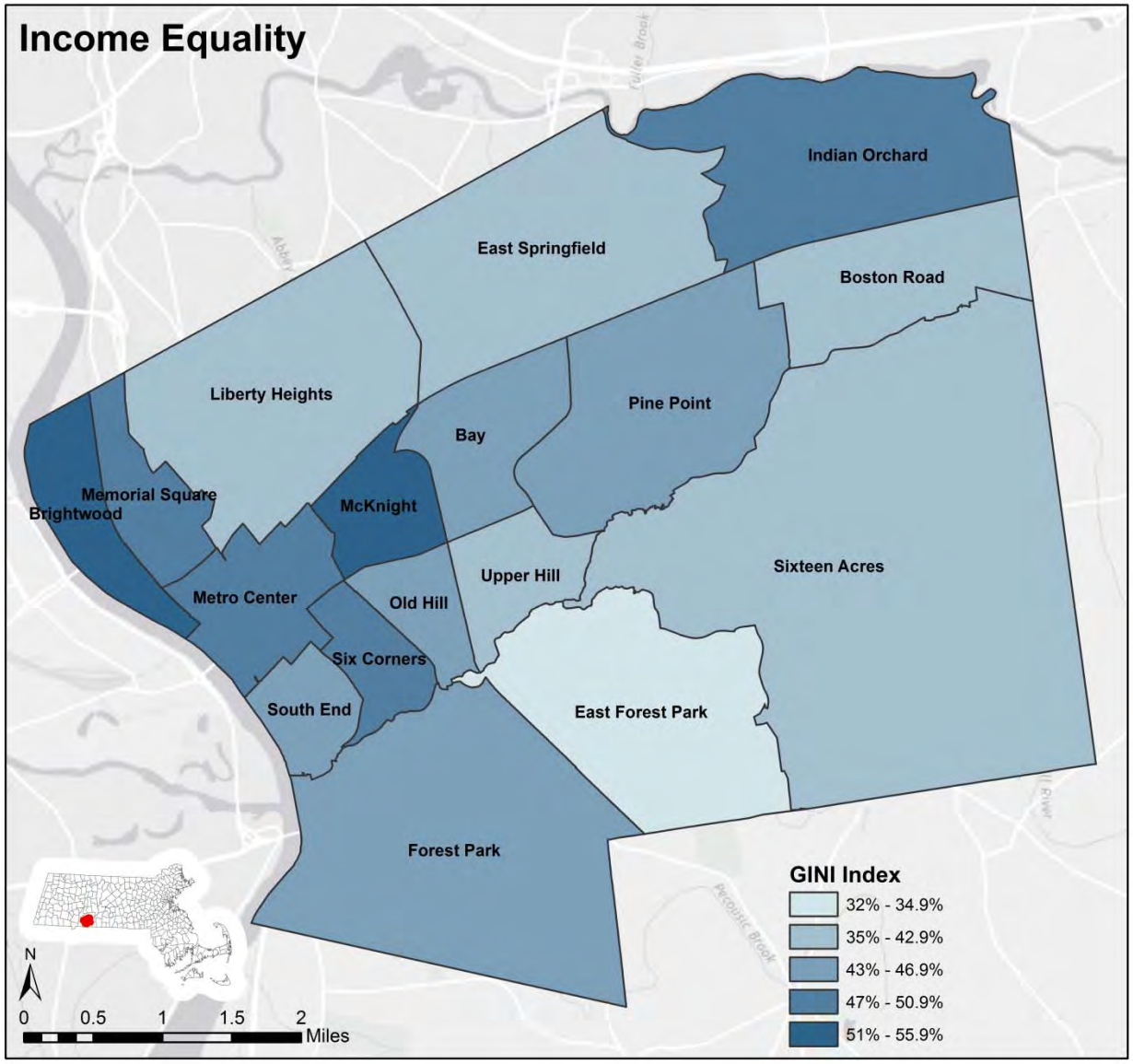
This economic shift disproportionately affected certain neighborhoods in the city. In 2012, the neighborhoods of Brightwood (.538), Memorial Square (.508), and McKnight (.550) have inequality metrics that are higher than those of other neighborhoods and the city (.448) as a whole. Conversely, East Forest Park (.34) and East Springfield (.38) maintained a more homogenous distribution. These figures, coupled with the historical trend of heightened inequality overall, illustrate the disparity present amongst the different neighborhoods of the city.

LONG TERM TRENDS: CITY, REGION, STATE



Source: U.S. Census Bureau, American Community Survey

INCOME EQUALITY – NEIGHBORHOOD COMPARISONS – 2008-2012



DATA BY NEIGHBORHOOD

NAME	2012
East Forest Park	*0.35*
East Springfield	*0.39*
Sixteen Acres	*0.39*
Upper Hill	*0.40*
Boston Road	*0.41*
Liberty Heights	*0.42*
Forest Park	*0.43*
Pine Point	*0.43*
South End	*0.43*
Bay	*0.46*

NAME	2012
Pioneer Valley	***0.46***
Old Hill	*0.47*
Six Corners	*0.47*
Massachusetts	***0.48***
Indian Orchard	*0.49*
Springfield	***0.49***
Metro Center	*0.50*
Memorial Square	*0.51*
Brightwood	*0.54*
McKnight	*0.55*

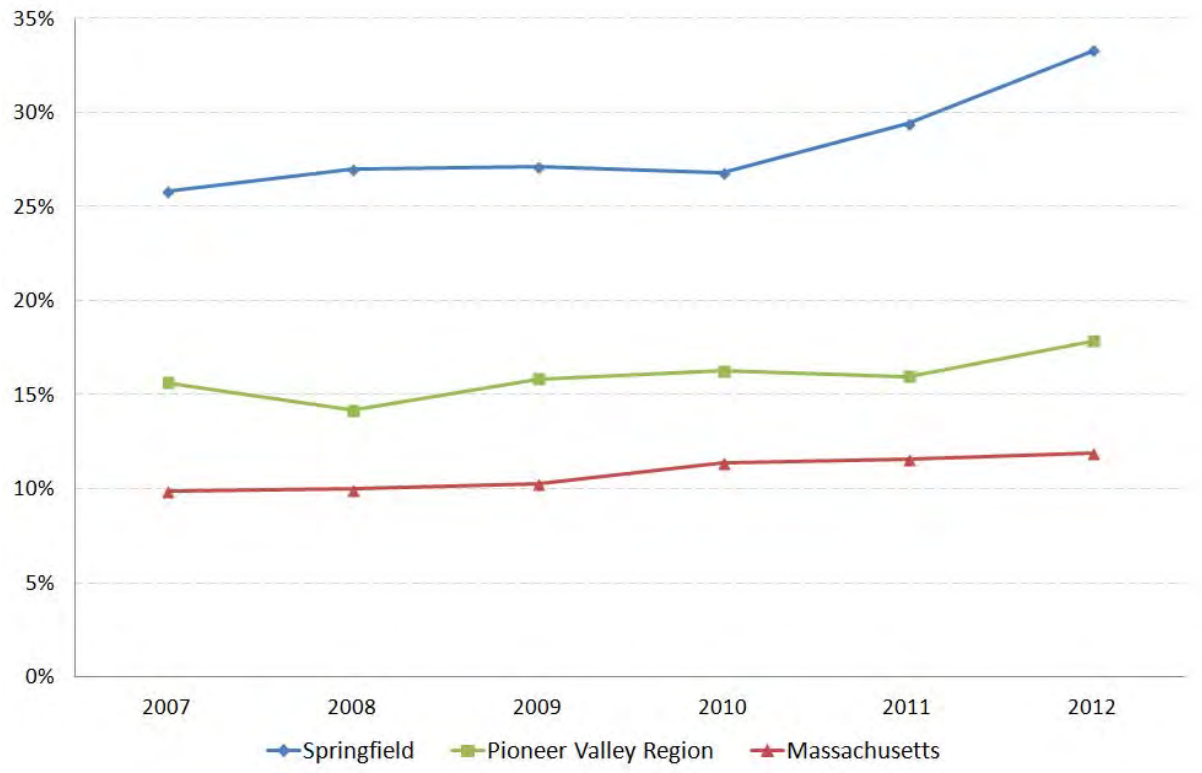
POVERTY

Poverty rates are an important indicator of what portion of a community's population likely lacks the necessary resources, such as food security and adequate income, to provide for themselves or their families. Identifying these areas allows government and private organizations to strategically allocate resources to alleviate poverty. The poverty rate, the common unit of measurement, is the percentage of all people (for whom poverty status was determined) who are living in households with incomes that fall below the federal poverty line. The poverty line is established by calculating the proportion of household income and current cost of basic goods and services, such as food, housing, and transportation. Although the threshold is adjusted over time and is dependent on family size and ages of family members, it is increasingly thought to understate the extent of poverty. In 2012, the poverty threshold for a family of four with two children under 18 was $23,283 – an unsettling level of income given that a low-cost one-bedroom apartment in western Massachusetts will typically rent for more than $7,500 per year.

This economic reality in Springfield which, historically, has maintained a poverty rate more than twice as high as the state and 10% or more higher than the region, requires attention. Furthermore, the recession exacerbated this, leading it to jump from 26.8% in 2010 to 33.3% in 2012— a direct impact of widespread unemployment and low wages.

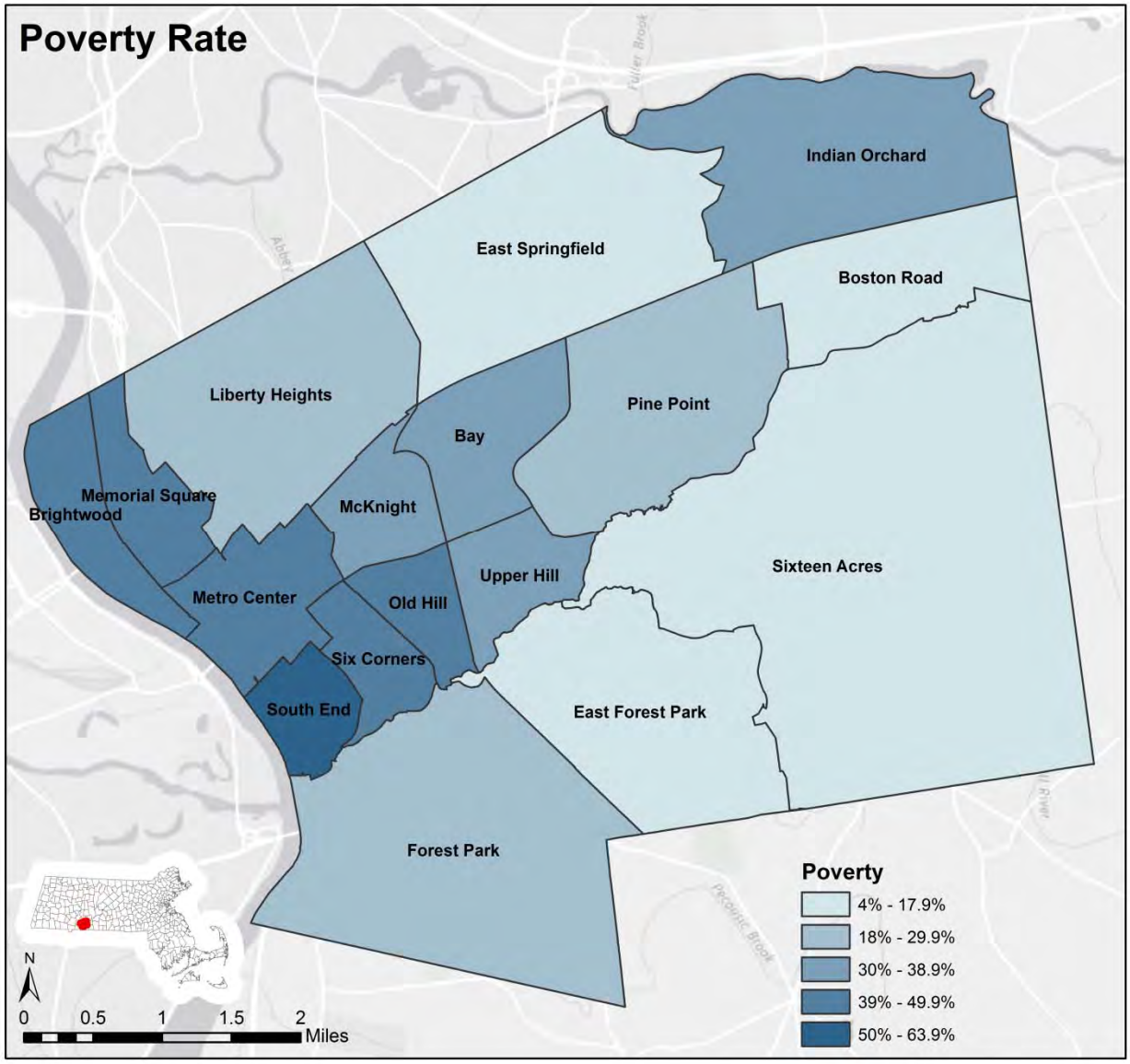
While poverty rates are high across the city, there is clear disparity amongst neighborhoods. As of 2012, over two-thirds of neighborhoods in Springfield had rates more than double (sometimes six-fold higher) that statewide. The South End (63.60%), Memorial Square (49.28%), Six Corners (49.29%), Metro Center (48.93%), Brightwood (47.50%), and Old Hill (46.20%) all maintained acutely high rates of poverty that are disproportionate to the city's rate (33.30%). Moreover, when compared to the rate of poverty present in the Pioneer Valley (17.87%) and Massachusetts at-large (11.90%), it is evident that resources need to be directed to combat these current trends to ensure Springfield's poverty rate steadily declines in the years to come.

LONG TERM TRENDS: CITY, REGION, STATE



Source: U.S. Census Bureau, American Community Survey

POVERTY – NEIGHBORHOOD COMPARISONS 2008-2012



DATA BY NEIGHBORHOOD

NAME	2012
East Forest Park	*4.8%*
Massachusetts	***11.9%***
Sixteen Acres	*15.1%*
East Springfield	*16.2%*
Boston Road	*17.1%*
Pioneer Valley	***17.9%***
Pine Point	*22.6%*
Forest Park	*24.7%*
Liberty Heights	*29.6%*
Springfield	***33.3%***

NAME	2012
Upper Hill	*34.8%*
McKnight	*35.7%*
Bay	*36.3%*
Indian Orchard	*38.9%*
Old Hill	*46.2%*
Brightwood	*47.5%*
Metro Center	*48.9%*
Memorial Square	*49.3%*
Six Corners	*49.3%*
South End	*63.6%*

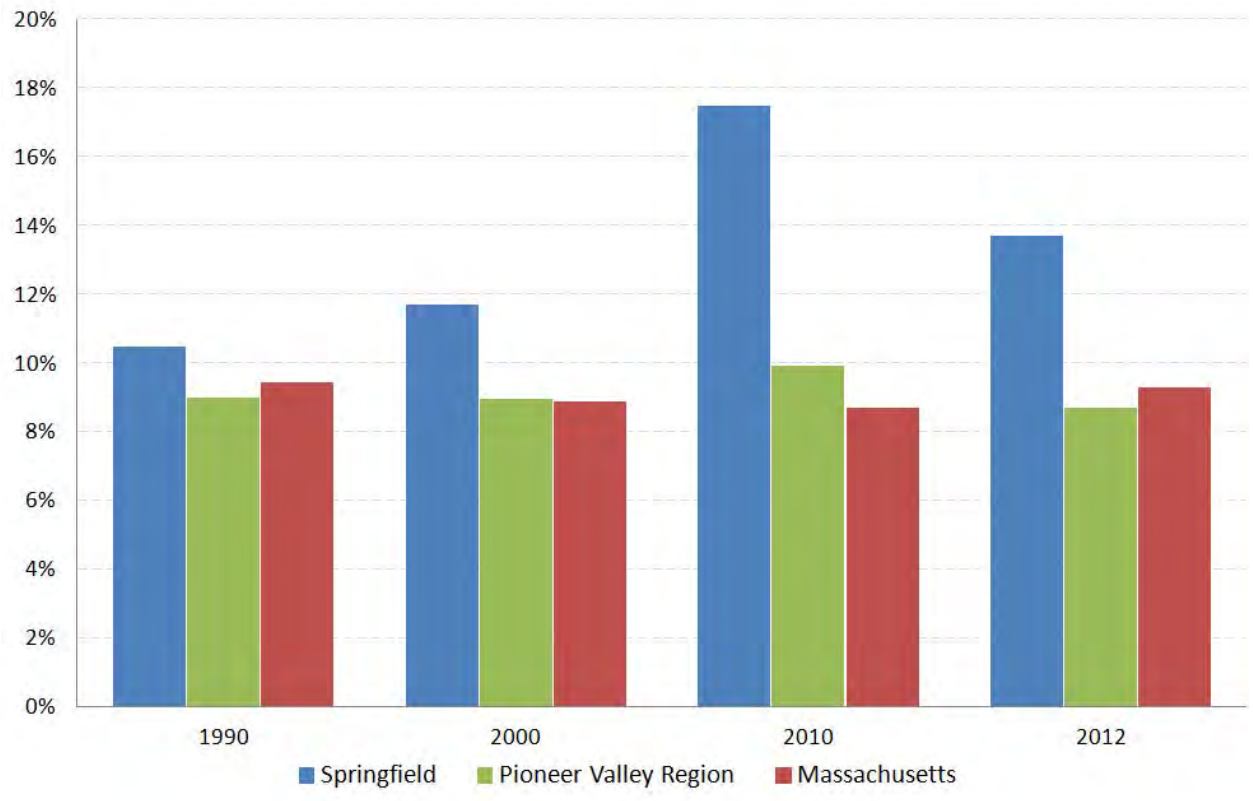
POVERTY RATES FOR PEOPLE 65+

As people age, their income and support networks may decrease significantly, often at a time when certain expenses may be climbing, such as health and medical costs. It is not uncommon for people to move from relative economic security throughout their working career to a lower income or impoverished economic state during this time, triggered by a reliance on fixed incomes and retirement savings that they accrued. As people get older, their ability to work to support themselves economically is reduced and they may be less likely to have friends or family members who can assist them. This indicator measures the percentage of all people over the age of 65 whose income falls below the poverty line. It is an indicator of the health and well-being of our older population.

Over the past two decades, there has been a significant increase in poverty rates for residents of Springfield who are over the age of 65. This has diverged from the state and Pioneer Valley, whose rates have remained relatively stagnant. A decline of 3.8% since 2010 illustrates a positive trend in Springfield which requires additional attention. The year of 2010, when the city's rate increased to 17.5%, may have a correlation to the market decline, which disproportionately affected those living on fixed-incomes.

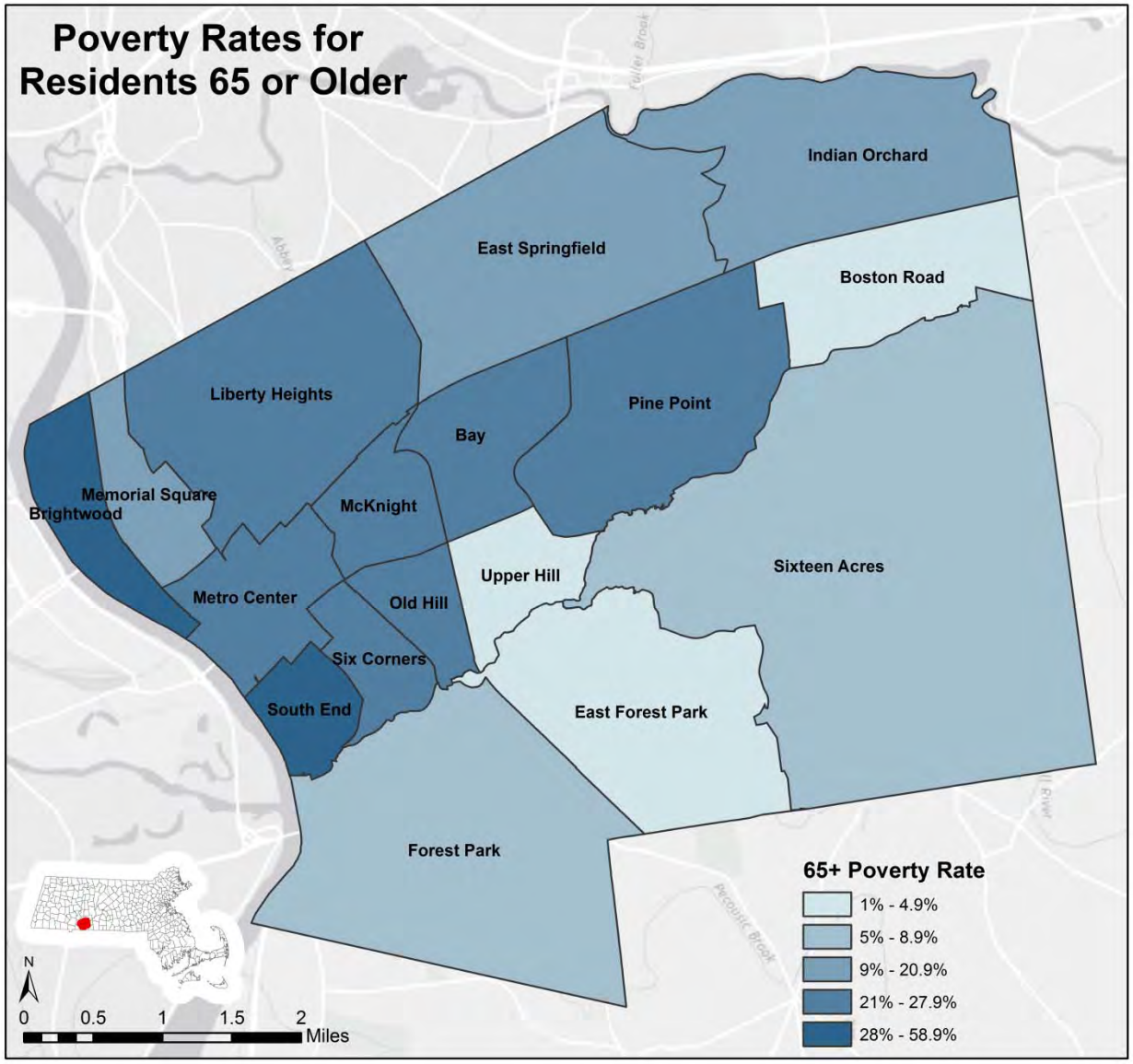
As with most economic indicators in Springfield, there is significant variation between neighborhoods in the City. While rates in Forest Park (8.2%), Sixteen Acres (7.6%), Upper Hill (4.5%), East Forest Park (2.96%), and Boston Road (1.9%) were relatively low, all falling below 10%, two thirds of all neighborhoods had rates over 20 percent. In 2012, the city experienced rates of 13.7%, higher than those of the region (8.6%) and the state (9.3%). Residents who are 65+ in the South End (58.5%), McKnight (27.1%), and Old Hill (26.4%) face a disproportionate economic hardship.

LONG TERM TRENDS: CITY, REGION, STATE



Source: U.S. Census Bureau

POVERTY RATES FOR PEOPLE 65+ - NEIGHBORHOOD COMPARISONS – 2008-2012



DATA BY NEIGHBORHOOD

NAME	2012
Boston Road	*1.9%*
East Forest Park	*3.0%*
Upper Hill	*4.5%*
Sixteen Acres	*7.6%*
Forest Park	*8.2%*
Pioneer Valley	***8.7%***
Massachusetts	***9.3%***
Springfield	***13.7%***
Memorial Square	*18.3%*
Indian Orchard	*20.4%*

NAME	2012
East Springfield	*21.0%*
Bay	*23.1%*
Liberty Heights	*23.7%*
Pine Point	*23.8%*
Six Corners	*24.7%*
Metro Center	*25.5%*
Old Hill	*26.4%*
McKnight	*27.1%*
Brightwood	*51.0%*
South End	*58.5%*

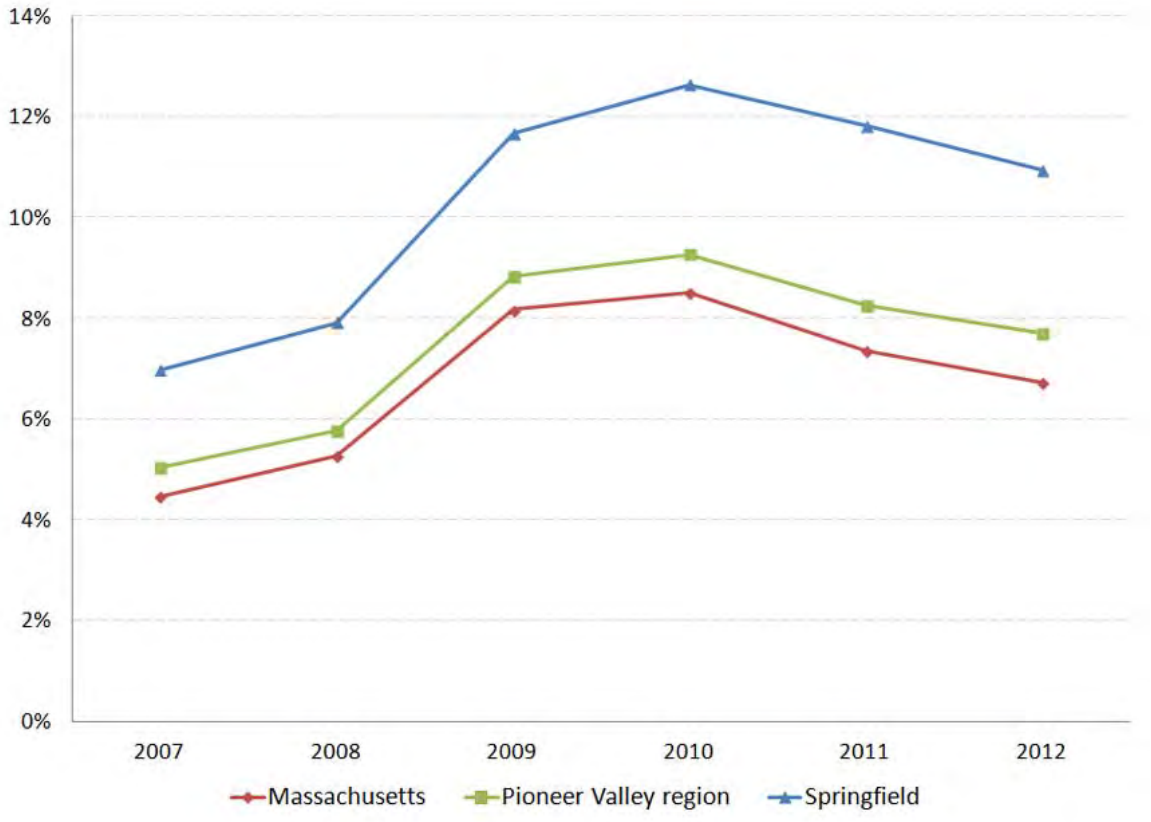
UNEMPLOYMENT

The unemployment rate is the percentage of people in the region's labor force who do not have a job. The labor force is defined as the sum of the population who currently possess a job along with those who are actively searching for employment. The unemployment rate is a commonly used indicator to report on the state of the economy and labor market. A high unemployment rate may indicate a contracting economy. Furthermore, unemployment rates depict the portion of a community's population that is financially insecure due to lack of employment.

Unemployment in Springfield has fluctuated widely since 2007, when it was reported at 6.98%. By 2012, 10.95% of the labor force in the city was reportedly unemployed. This figure is substantially above the regional rate, 7.7%, and the state rate, 6.72%. Consistently, Springfield has reported unemployment that is approximately 4% higher than the state since 2009, the year the city's trend sharply diverged from the incremental growth in unemployment throughout Massachusetts.

Substantial disparities are evident between neighborhoods[9] in Springfield. Although East Forest Park (6%), Boston Road (9%), and Sixteen Acres (11%) reported the lowest unemployment rates in the city, the majority of Springfield neighborhoods reported unemployment rates that hovered between 11-19%. Furthermore, Metro Center (21%), Old Hill (30%), and Memorial Square (31%) currently face a daunting challenge. In these areas, rates that are two to three times those of adjacent neighborhoods illustrate the unevenness of the current labor market.

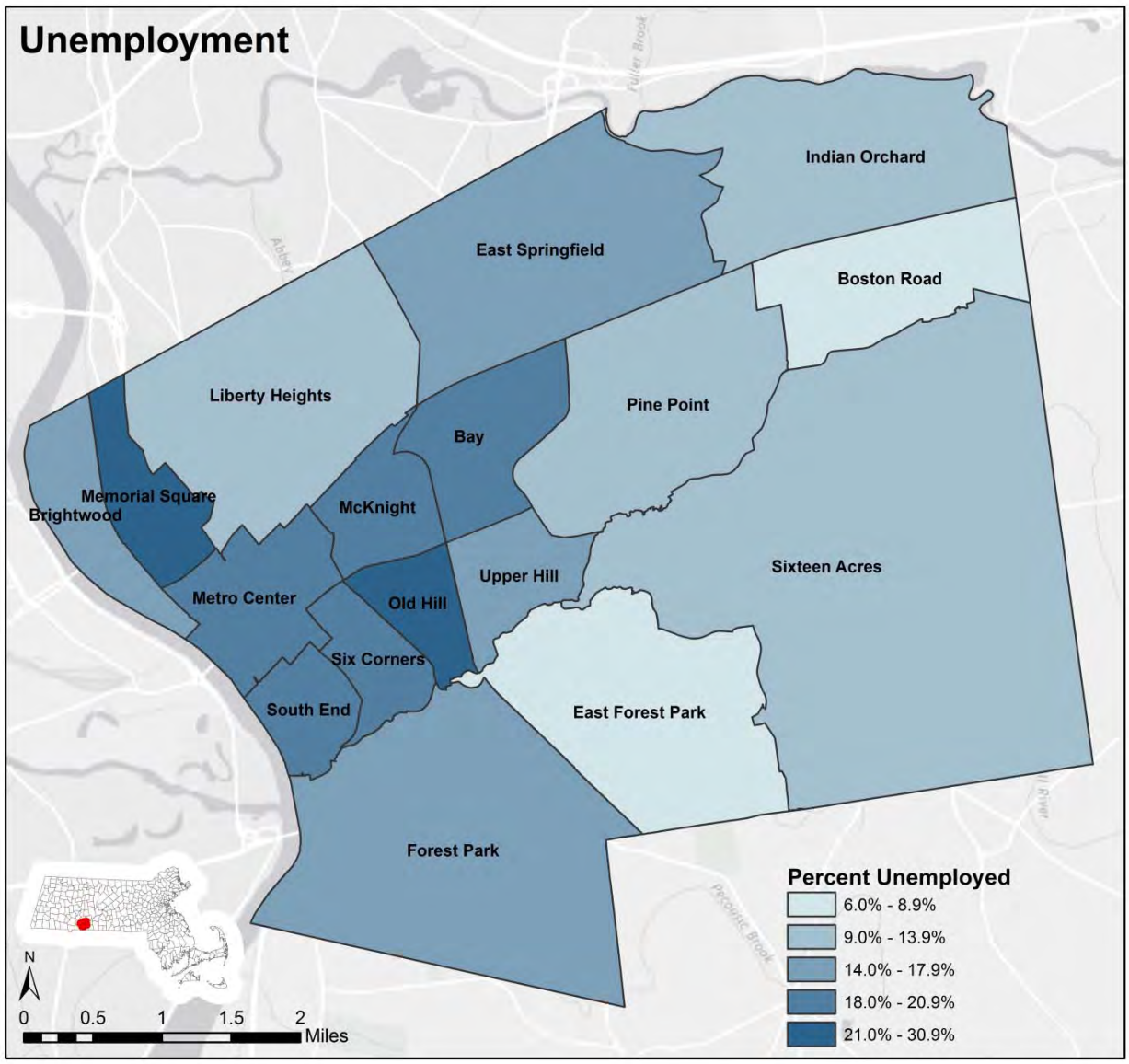
LONG TERM TRENDS: CITY, REGION, STATE



Source: Massachusetts Executive Office of Labor and Workforce Development

[9] **Important Note About Data:** Neighborhood data is provided from Census Bureau estimates as it is not through the MA EOLWD. Neighborhood data should NOT be compared to City, Region, or State Data.

UNEMPLOYMENT –NEIGHBORHOOD COMPARISONS – 2008-2012



DATA BY NEIGHBORHOOD *(SEE FOOTNOTE ON PREVIOUS PAGE.)*

NAME	2012	NAME	2012
East Forest Park	*6.3%*	*Brightwood*	*16.6%*
Massachusetts	***6.7%***	*Upper Hill*	*17.0%*
Pioneer Valley	***7.7%***	*Forest Park*	*17.7%*
Boston Road	*8.8%*	*Six Corners*	*18.5%*
Springfield	***10.9%***	*McKnight*	*18.5%*
Sixteen Acres	*11.0%*	*South End*	*19.2%*
Indian Orchard	*13.4%*	*Bay*	*19.4%*
Liberty Heights	*13.7%*	*Metro Center*	*20.6%*
Pine Point	*13.9%*	*Old Hill*	*29.5%*
East Springfield	*15.6%*	*Memorial Square*	*30.8%*

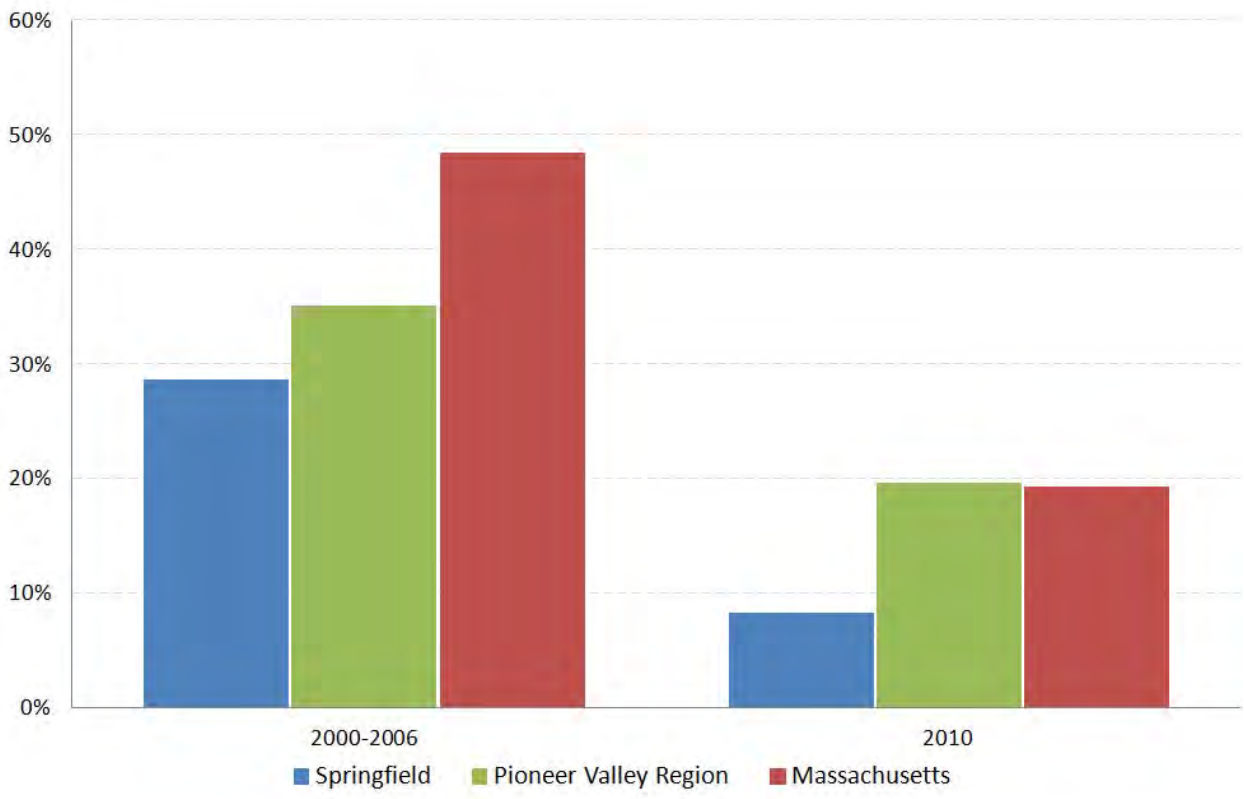
FOOD DESERTS

The Center for Disease Control (CDC) and Prevention defines food deserts as "areas that lack access to affordable fruits, vegetables, whole grains, low fat milk, and other foods that make up a full range of a healthy diet." The absence of accessibility can negatively affect people's physical wellness and economic stability, both of which influence the overall sustainability and health of a community. This indicator examines data from a U.S. Department of Agriculture (USDA) study identified food dessert locations by census tract. Food Deserts are defined here as the percentage of population with low access to grocery stores within 1 mile for urban areas and 10 miles for rural areas.

In the early 2000's Massachusetts had large populations living in food deserts, approaching 50% but this decreased below 20% in 2010. This is an imminent issue for the Pioneer Valley and City of Springfield, as well, with 2010 figures of 19.6% and 8.2% respectively. Within the region there is disparity between urban and rural populations. In rural locales, 1.48% of the population faces "low access." In contrast, 35.19% of residents in urban locations do not have adequate access to healthy foods.

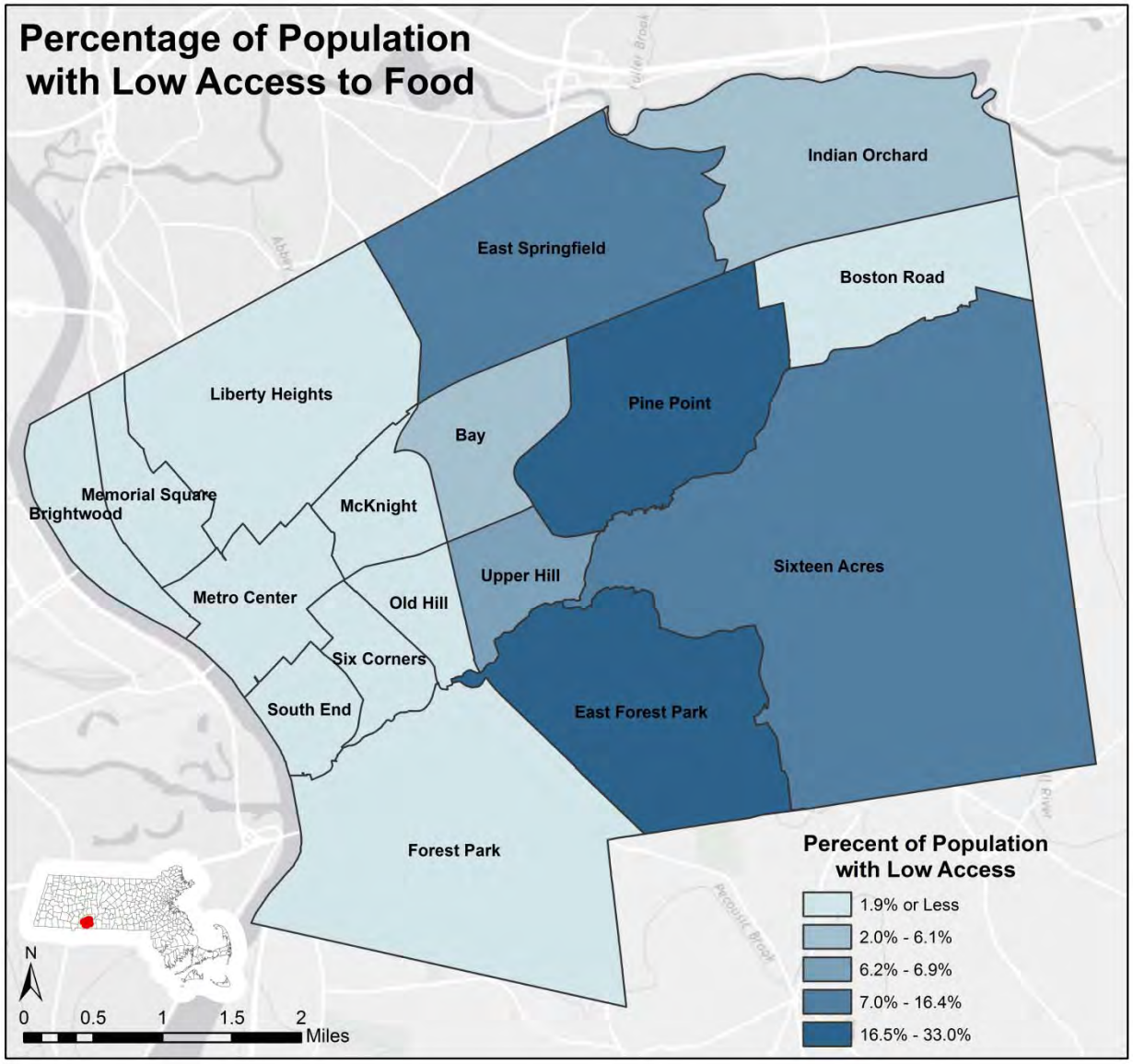
Access to food is not equal across Springfield neighborhoods. Residents of East Forest Park (32.5%), Pine Point (25.7%), and Sixteen Acres (16.4%) have severely limited access to markets that provide healthy foods. This is due to a combination of lack of grocery stores within proximity of neighborhood residential areas and limited means of transportation. The populations without access to healthy foods in other neighborhoods, such as Upper Hill (6.8%), Bay (6.1%), and Indian Orchard (5.9%), are smaller as residents of these areas both live within a closer proximity to grocery stores and/or may have higher rates of personal vehicle ownership which would ease access.

LONG TERM TRENDS: CITY, REGION, STATE



Source: USDA, Economic Research Service: Food Access Research Atlas 2000-2006 Aggregate and 2010

FOOD DESERTS –NEIGHBORHOOD COMPARISONS –2010



DATA BY NEIGHBORHOOD

NAME	2010
Liberty Heights	*0.0%*
Brightwood	*0.0%*
Memorial Square	*0.0%*
Metro Center	*0.0%*
McKnight	*0.0%*
Boston Road	*0.0%*
Old Hill	*0.0%*
Six Corners	*0.0%*
South End	*0.0%*
Forest Park	*1.5%*

NAME	2010
Indian Orchard	*6.0%*
Bay	*6.1%*
Upper Hill	*6.9%*
Springfield	***8.24%***
East Springfield	*14.8%*
Sixteen Acres	*16.4%*
Massachusetts	***19.35%***
Pioneer Valley	***19.68%***
Pine Point	*25.7%*
East Forest Park	*32.6%*

HOUSING

A basic need in all urban areas, housing for Springfield's residents is essential for the economic and social vitality of the city. Fundamental components of economic security, safe and affordable homes are the backbone of strong, stable, and vibrant communities. The ability to own a home establishes roots that encourage people to further invest, socially and economically, in their community. Investing in this manner positively impacts many aspects of a locality, including the environment, economy, education, and health. Housing is also the most common method of establishing personal wealth. Once acquired, it can be transferred to following generations, effectively improving their quality of life and economic capacity. Tracking housing costs reveals insight into the financial state of homeowners and renters, an important metric to monitor during periods of growth and development.

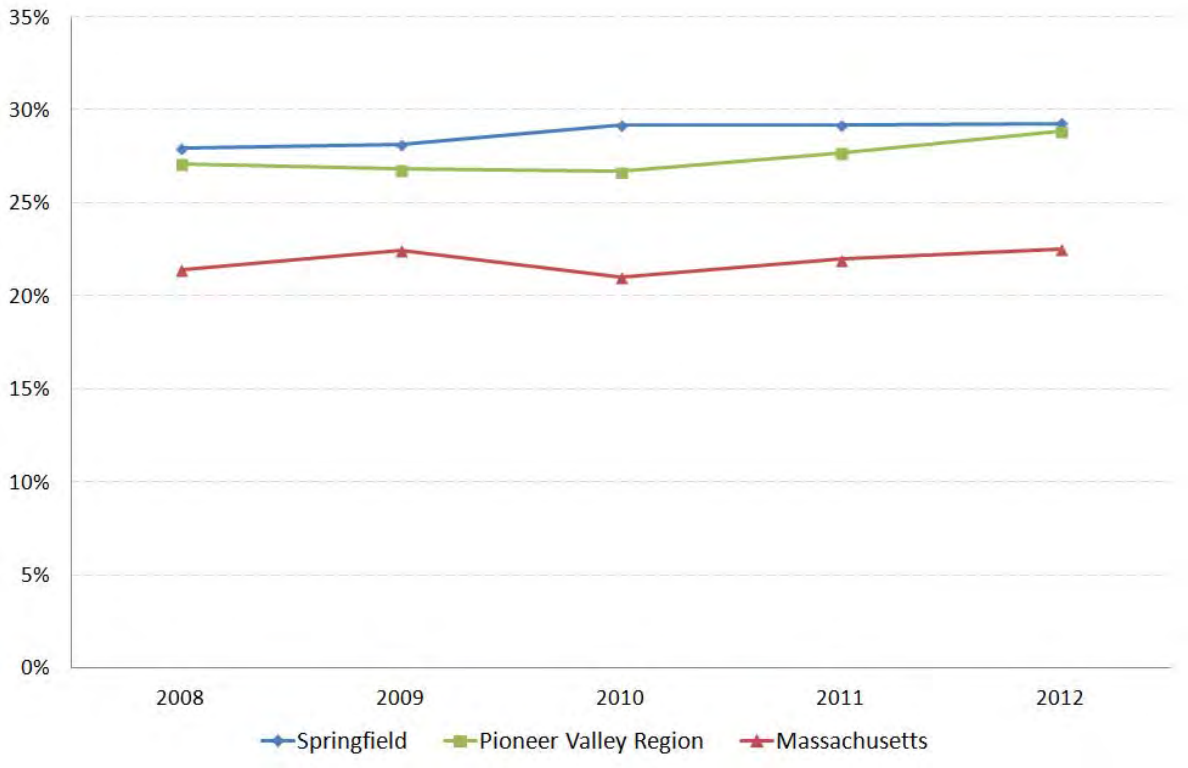
Overall, the situation of the city's housing is mixed. Progress has been made pertaining to housing foreclosures, with rates stabilizing following the recession. Cases of homelessness also continue to fall, diverging from the increases that have been experienced statewide. However, rates of home ownership are down slightly from previous years. The housing cost burden in the city also continues to rise.

HOUSING AFFORDABILITY

Home values often vary in relation to location. However, this variation alone does not express whether the cost of housing is out of sync with the income of those who live in the same community. The goal of the affordability ratio is to capture the affordability of housing in one community in relation to the income of its residents. Because this ratio compares income and home prices in a community, results that portray the community as not affordable are indicative of a community in which current residents may not be able to afford to remain. It is not a measure of absolute affordability based on any universal standard that would compare prices in one community directly to another. The ratio of median household income over median single family home price is depicted as a percentage. The closer to 100% the value lies, the more affordable housing costs are in that particular community. Conversely, the closer a municipality scores to 0%, then that particular community would be considered less affordable and subsequently an area that may displace current residents. A lack of affordability often emanates displacement, when current residents must move due to staggering housing costs, and should be monitored closely.

Statewide, affordability has fluctuated between 2008, when 21.4% of costs were affordable, and 2012, when 22.5% of costs were considered affordable. Influenced by the recession, most notably a decrease in housing prices and widespread unemployment, the affordability trend of the Pioneer Valley has slightly increased to 28.8% in 2012 from 27.1% in 2008. Springfield, which has experienced a 1.32% rise in affordability between 2008 and 2012, was composed of a 29.3% affordability ratio in 2012. The fact that Springfield's rates are so closely aligned with those regionally for this indicator is rare. It is likely a reflection that while incomes are much lower in Springfield, home prices are similarly low.

LONG TERM TRENDS: CITY, REGION, STATE



Source: Pioneer Valley Planning Commission, U.S. Census

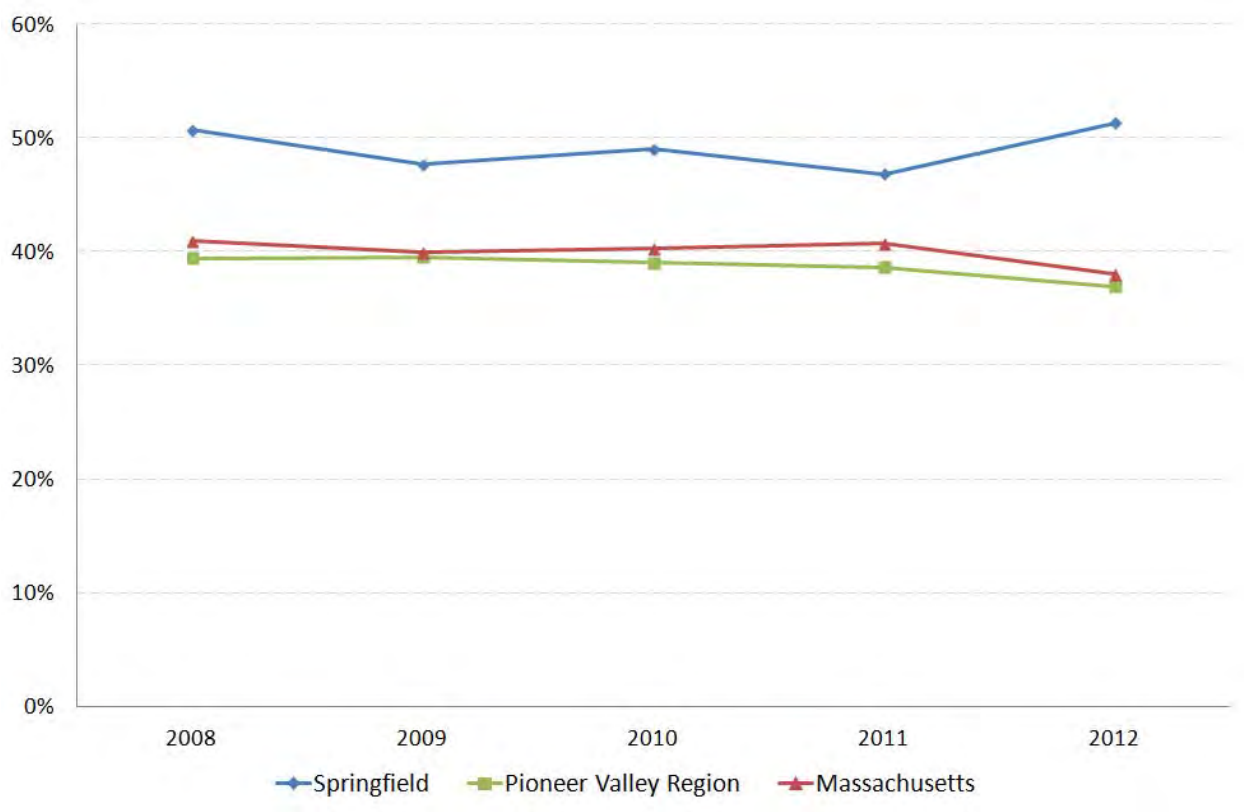
HOUSING COST BURDEN

According to many government agencies, people who pay more than 30% of their income on housing costs are considered to be housing cost burdened. The U.S. Census Bureau provides estimates on this statistic in the American Community Survey. Data for this indicator includes renters, as well as homeowners with mortgages who were surveyed. Monthly owner costs include payment for rent, mortgages, real estate taxes, various insurances, utilities, fuels, mobile home costs, and condominium fees. Housing cost burden identifies anyone who pays over 30% of their income towards either rent or home ownership.

From 2008-2012, approximately half of all Springfield residents have been housing cost burdened. Although housing cost burdens have gradually declined since 2008 across the state and region, Springfield has diverged from this trend. Throughout Massachusetts, housing cost burdens have remained somewhat flat, noticeably declining 2.6% from 2011, when they were 40.7%, to 2012, when they were 38.0%. The Pioneer Valley region has reflected this, slightly decreasing annually to 36.9% as of 2012. Springfield's rate has consistently remained 10- 15% higher than the region and has fluctuated more widely. Its 2012 rate, 51.3%, rests above that of 2008, 50.7%.

The presence of this phenomenon varies by neighborhood. Bay (64.56%), Metro Center (63.50%), and Six Corners (60.96%) are composed of figures that are almost two-times those of the state and region. The neighborhoods between these outliers reported 41-59% of house units incurring costs that burden owners and tenants. East Forest Park, where 35.12% of households pay more than 30% of their income towards housing costs, and Sixteen Acres, where 37.69% of households do the same, are the only two neighborhoods with cost burdens affecting less than 40% of reported households.

LONG TERM TRENDS: CITY, REGION, STATE



Source: Pioneer Valley Planning Commission, U.S. Census

HOME OWNERSHIP

Home ownership is a significant indicator of economic security. As the primary financial investment for the vast majority of people in this country, the rate of home ownership represents financial, employment, and income stability. Home ownership also strengthens communities by forging a firm connection between people and the place they live. However, the downside of a high owner-occupancy rate is that rental options for young, old, or transitional populations are subsequently limited as housing stock departs from the rental market. Home ownership is expressed as the percent of all housing units that are occupied by the property's owner.

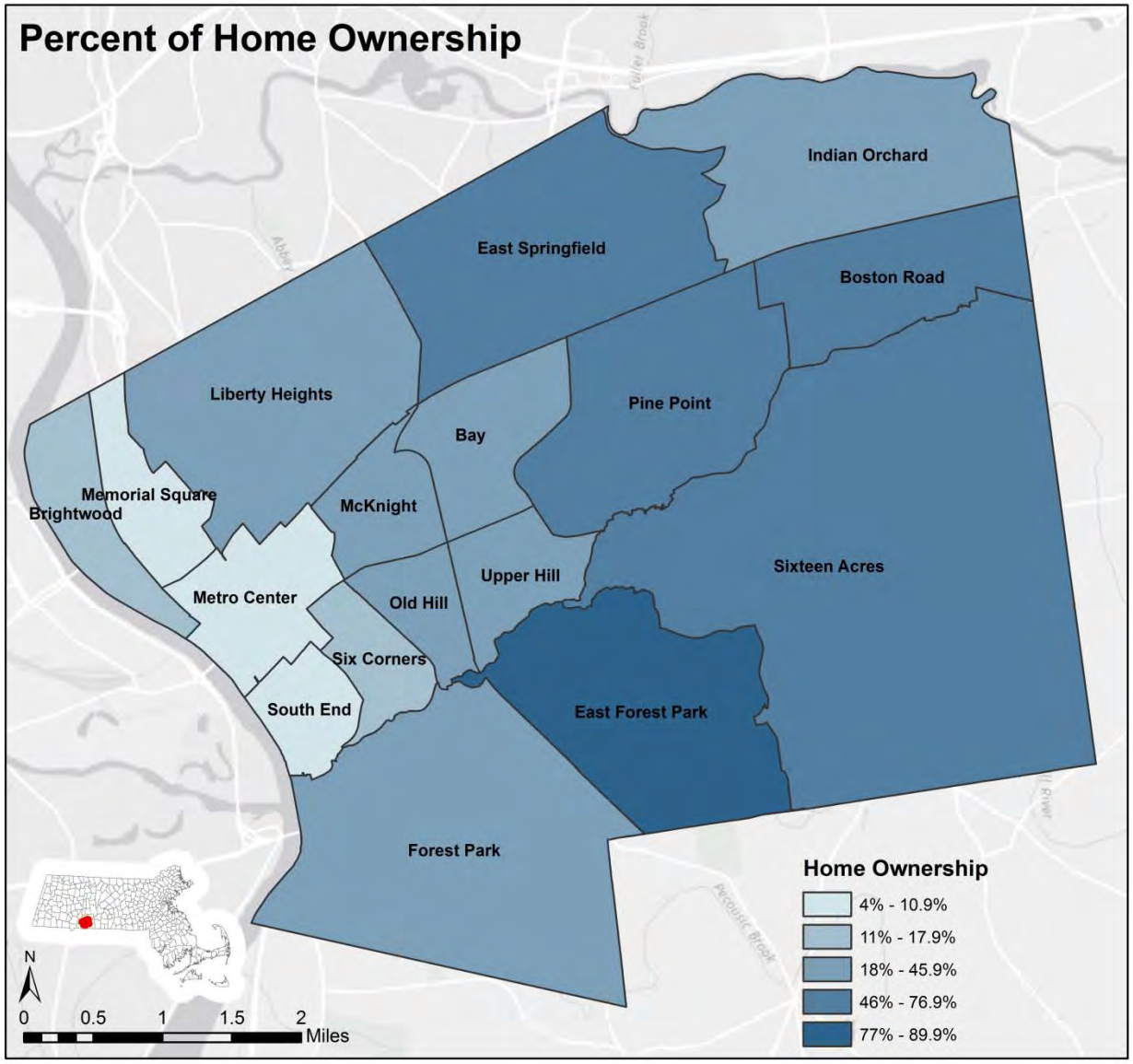
Home ownership rates have risen slightly across the state between 1990 (59.2%) and 2012 (62.2%). This increase is echoed in the Pioneer Valley, where rates rose from 60.6% in 1990 to 63.6% in 2012. Springfield, which maintains a substantially lower 2012 rate of 47.5%, experienced a divergence from the overall trend, subsequently decreasing 1.86% from its 1990 rate of 49.3%

When examined in detail, it is evident that ownership is not share equally across neighborhoods within the city. East Forest Park (89.5%), Sixteen Acres (76.9%), and East Springfield (73.1%) envelop a significant portion of residents who own their homes and may experience a greater degree of economic stability. Many neighborhoods reported rates between 35-45%, a fraction of the state and regional trends of home ownership. This figure continues to decrease in neighborhoods closer to the urban core. The majority of residents in the Metro Center (4.1%), the South End (5.9%), and Memorial Square (10.3%) reported they did not own their housing.

LONG TERM TRENDS: CITY, REGION, STATE

Source: U.S. Census Bureau

HOME OWNERSHIP – NEIGHBORHOOD COMPARISON – 2012



DATA BY NEIGHBORHOOD

NAME	2012
Metro Center	*4.0%*
South End	*5.9%*
Memorial Square	*10.3%*
Six Corners	*15.3%*
Brightwood	*17.5%*
Old Hill	*36.1%*
McKnight	*38.3%*
Bay	*38.3%*
Indian Orchard	*41.5%*
Upper Hill	*43.3%*

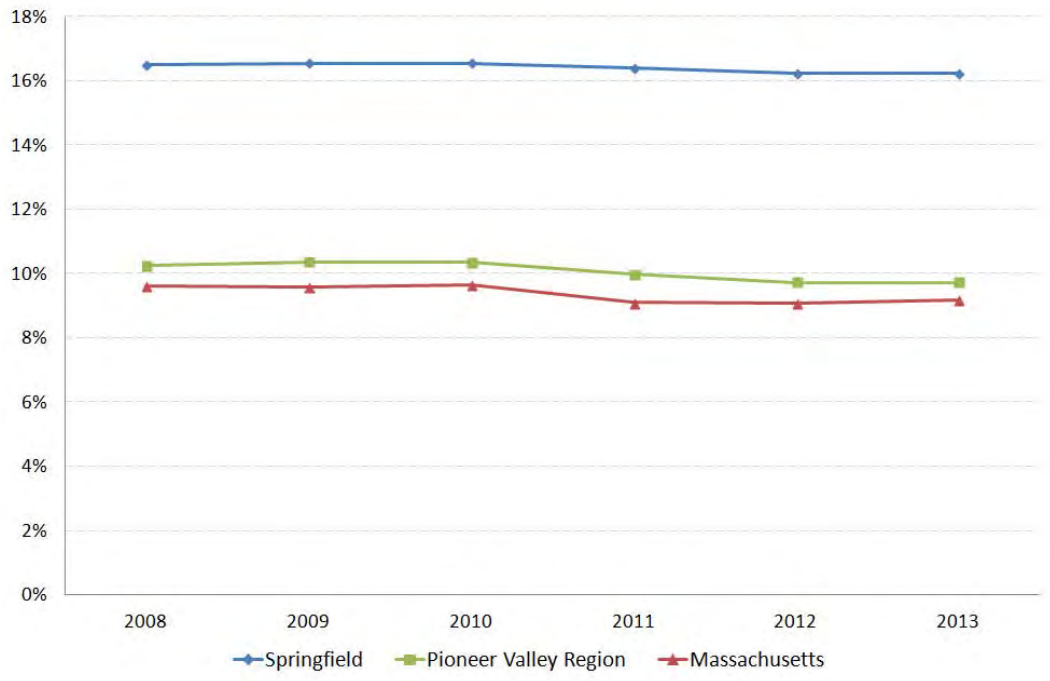
NAME	2012
Liberty Heights	*44.5%*
Forest Park	*45.6%*
Springfield	***49.8%***
Massachusetts	***63.2%***
Pioneer Valley	***63.7%***
Pine Point	*65.1%*
East Springfield	*73.1%*
Boston Road	*73.3%*
Sixteen Acres	*76.7%*
East Forest Park	*89.5%*

SUBSIDIZED HOUSING

Subsidized housing is housing that is restricted to individuals and families with low to moderate incomes. Those who qualify typically receive financial assistance to bring down the cost of owning or renting the unit, usually in the form of a government subsidy. Subsidized housing in Massachusetts dates back to the 1930s when the state and federal government acknowledged that there was an overriding public interest in providing subsidies to lower income households. This was a response to the daunting reality of a lack of housing affordability. The theory was and continues to be that such assistance will help to alleviate the housing cost burden and allow these households to focus on employment, education, and personal health. This indicator measures the percent of all housing units in a community that are designated as subsidized housing units.[10] Not included in this indicator is housing that is affordable, but does not have established long-term affordability restrictions attached to the property.

Springfield's subsidized housing stock overshadows that of the state and region. In the city, 16.2% of housing units are publically subsidized compared to 9.7% of units in the Pioneer Valley and 9.1% of units in Massachusetts. Since 2008, state and regional trends have incrementally declined. In 2008, 9.6% of units statewide were financed with a subsidy and income-restricted. Springfield's declining trend has been more negligible. Historically, it has remained stable, and the 2013 figure of 16.2% has deviated little from the 16.5% reported in 2008. Broadly, the housing composition of the city contains almost twice as many subsidized units as are present in the Pioneer Valley and state of Massachusetts, although these figures vary at the neighborhood-level. More than a third of subsidized units mapped in Springfield neighborhoods were in the three neighborhoods of Metro Center, Sixteen Acres, and Brightwood.

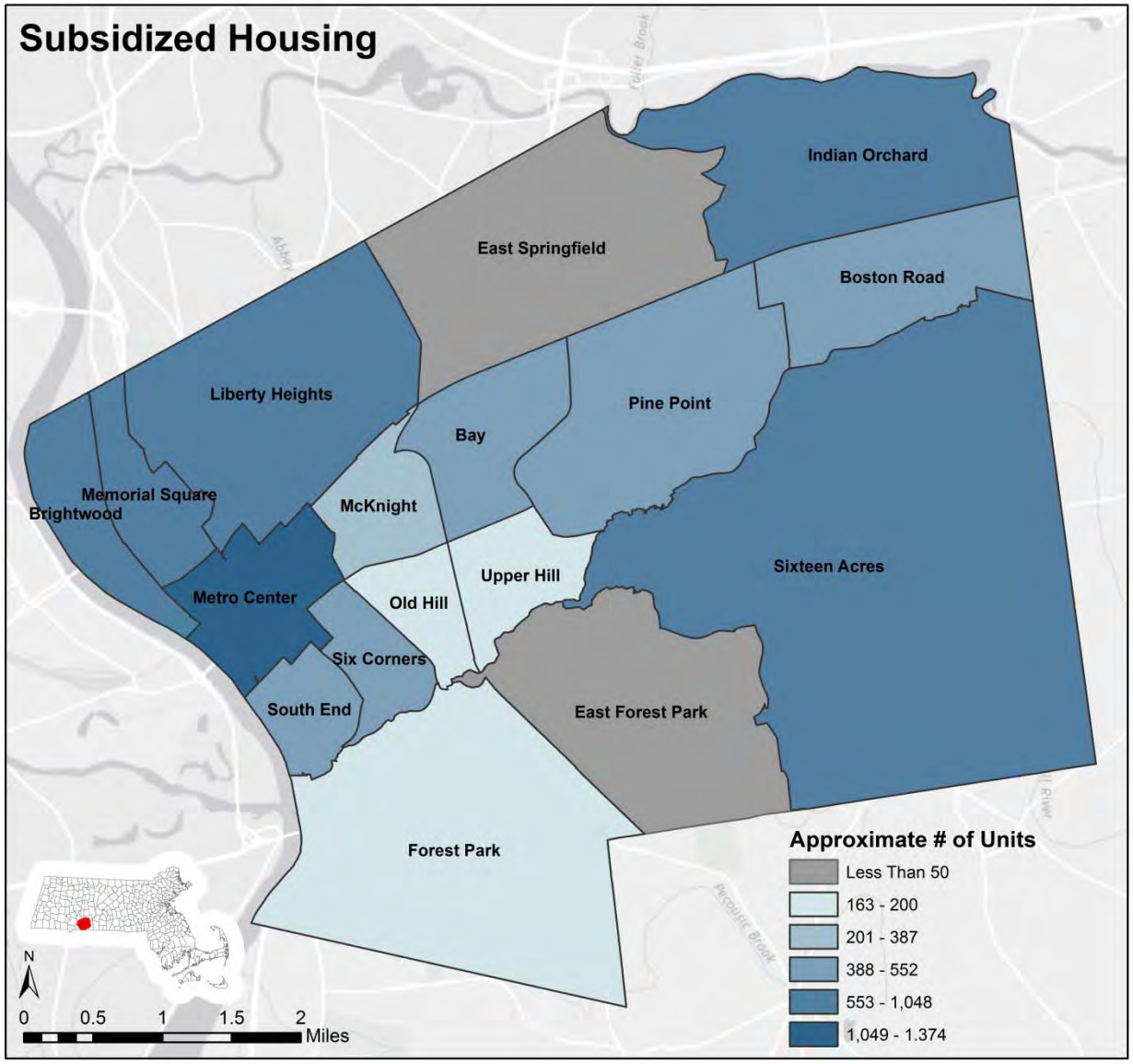
LONG TERM TRENDS: CITY, REGION, STATE



Source: Massachusetts Executive Office of Housing and Economic Development; U.S. Census

[10] **Neighborhood Data Limitations**: A list of subsidized housing units was provided by MA DHCD as of 5/12/14. In most cases, units we provided with a specific address, but about 9% of all units (962) were listed with addresses that were "confidential" or "scattered" and thus we were unable to apply those units to specific neighborhoods. As a result, neighborhood rates were not calculated as they could not be guaranteed to be valid, and some neighborhood unit counts are actually larger than listed on the map. Still, over 90% of units are mapped accurately and should provide a strong basis for examining distribution of subsidized housing throughout the city.

SUBSIDIZED HOUSING – NEIGHBORHOOD COMPARISON – 2014



DATA BY NEIGHBORHOOD

NAME	2014
East Springfield	*7*
Upper Hill	*163*
Old Hill	*170*
Forest Park	*200*
McKnight	*387*
South End	*460*
Pine Point	*471*
Boston Road	*482*

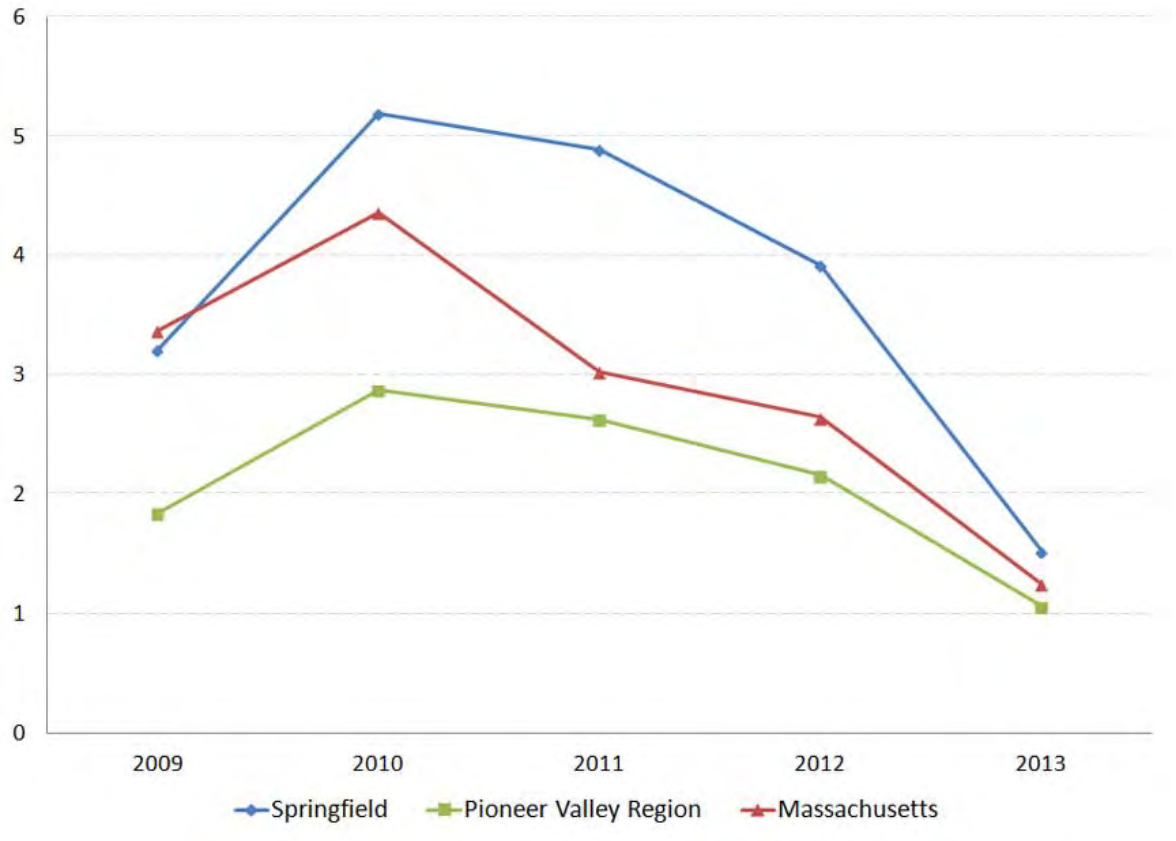
NAME	2014
Bay	*492*
Six Corners	*552*
Liberty Heights	*712*
Memorial Square	*743*
Indian Orchard	*844*
Brightwood	*975*
Sixteen Acres	*1048*
Metro Center	*1374*

FORECLOSURE RATES

Foreclosure rates are an important indicator of areas of distress and unstable neighborhoods. Having a home foreclosed upon represents a massive loss in equity for the individual, and therefore collectively reflects a loss in equity of the region. Foreclosures affect more than the individual family who loses their house, as they tend to drive down property values of homes in the surrounding area when they are sold below market value or when they sit vacant and deteriorate for an extended period of time. The latest wave of foreclosures has been on the heels of the recession that started in 2008 when a housing market crash was one of the primary causes of the economic downturn. This indicator measures foreclosure deeds as a rate per 1,000 housing units.

In 2010, instances of foreclosure peaked in Massachusetts, with 4.35 housing units out of 1,000 being repossessed by mortgage lenders. Subsequently, this figure dropped by over half, with the foreclosure of only 1.24 homes per 1,000 occurring in 2013. While relatively insulated, the Pioneer Valley also experienced a rise in 2010, subsequently decreasing to 1.06 in 2013, just under statewide rates. Resonating throughout Springfield, 5.18 foreclosed units out of 1,000 in 2010 illustrated the dire effects of the housing market decline on the city. While this was approximately double the rate of foreclosure experienced in the Pioneer Valley, it closely mirrors the state. Since then, housing market stabilization has resulted in the lowest foreclosure rates in five years. As of 2013, 1.52 homes out of 1,000 were foreclosed on, slightly higher than the statewide rate of 1.24 units per 1,000, but vivid and significant progress over years past.

LONG TERM TRENDS: CITY, REGION, STATE



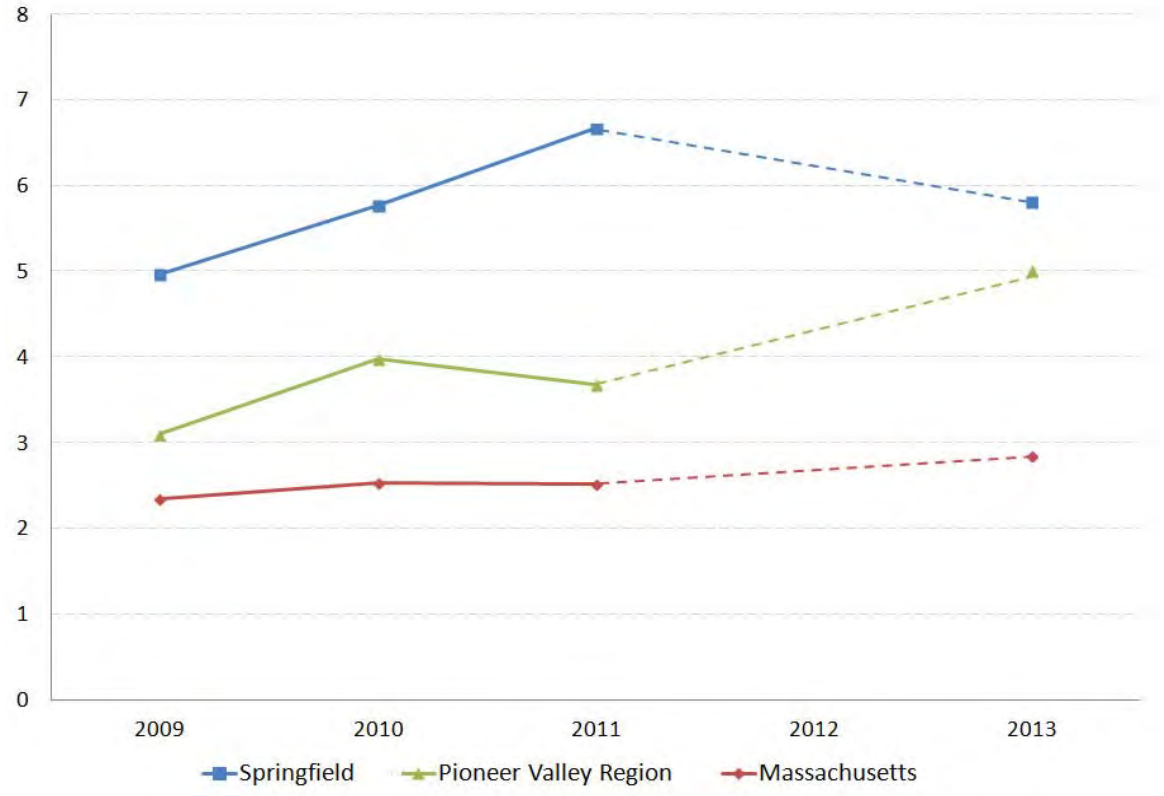
Source: Pioneer Valley Planning Commission, The Warren Group, US Census Bureau ACS 5-year Estimates

HOMELESSNESS

Reaching the point of homelessness is perhaps the most vulnerable a person can be. One is completely exposed to the physical and emotional impacts of weather, crime, hunger, and social isolation. The degree to which a community has a large homeless population can serve as a proxy for how well our region is taking care of its residents and how well these residents can take care of themselves. Factors contributing to homelessness include: education, skills, and access allowing for gainful employment, affordable housing, mental health services, and non-discretionary expenses such as food. This indicator measures the number of individual people per 1,000 residents who were counted as homeless at a single point in time counted in emergency shelters, transitional housing, or had no shelter at all.[11]

Across the state, cases of homelessness peaked in 2010, when 2.53 per 1,000 residents were reported homeless. In 2013 rates rose again, with 2.84 residents per 1,000. The growing trend of homelessness throughout the state is concerning. Of greater concern, the Pioneer Valley, and City of Springfield had much higher rates. The Pioneer Valley, which reported a rate of 5.01 per 1,000 in 2013, also experienced an increase, albeit more drastic, following the regional peak in 2010 when 3.98 residents per 1,000 were declared homeless. Springfield, which reported rates more than double that of the region and the state in 2011, when cases peaked at 6.67 per 1,000, exhibits progress. Diverging from the statewide trend, Springfield's rate noticeably fell in 2013, to 5.82 per 1,000, following the startling increases which commenced in 2009.

LONG TERM TRENDS: CITY, REGION, STATE



Source: Source: Western Mass Network to End Homelessness, U.S. Department of Housing and Urban Development

[11] **Note about the data:** 3-county data represents Hampshire, Franklin, and portions of Hampden Counties. The way data was collected and represented changed in 2012. Per county data was not available prior to 2012. We were not able to calculate the Pioneer Valley data for 2012 and Springfield city data was not available so 2012 was left out as alignment of geographies and data could not be made to previous years.

ENVIRONMENT

The condition of the environment is one of the paramount factors that influence a city and population's long-term health and quality of life. Air quality, water quality, and sustainable transportation options all affect residents' physical well-being, economic stature, long-term livelihood, and the capacity to enjoy their surroundings. By reducing the day-to-day impact of contemporary life on the environment, through pollution reduction and efforts relating to sustainability, an improved quality of life can be reached and endowed to future generations.

The average time it takes for residents of Springfield to commute to their places of employment has increased slightly, although the historic trend is flat. Moreover, the percentage of residents commuting with environmentally-friendly transportation modes is also down. However, the addition of Riverfront Park and Bikeway, the city's first dedicated path for pedestrians and bicyclists, is an example of the environmental progress that can be a catalyst for further sustainability.

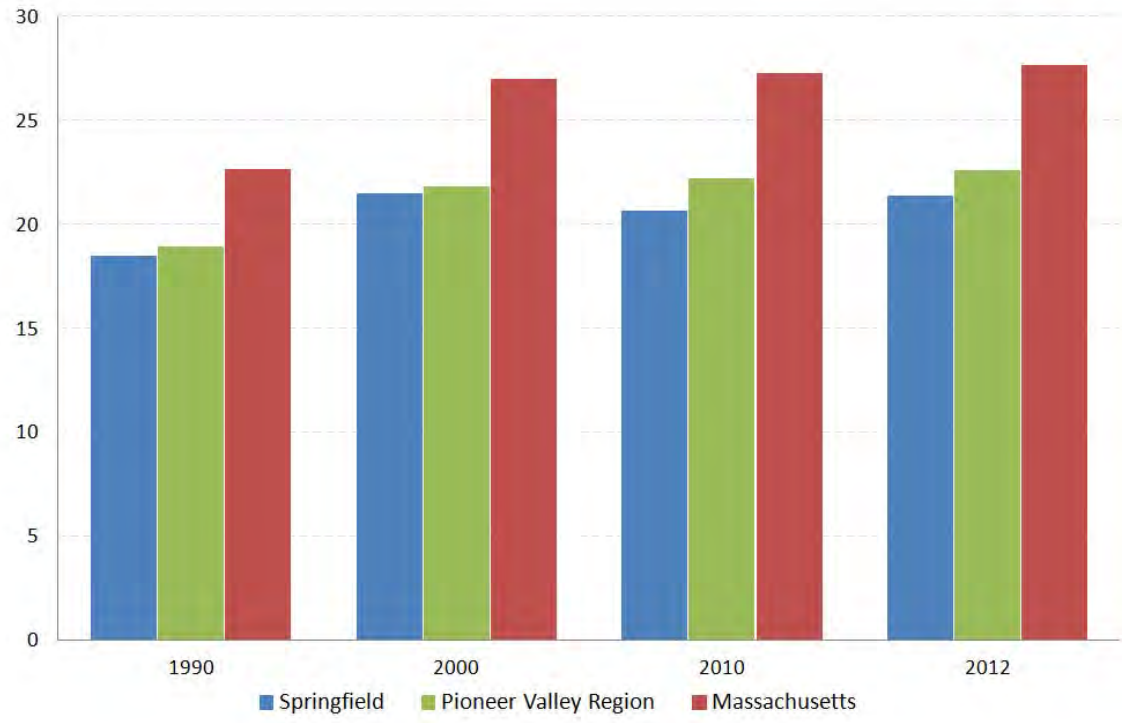
AVERAGE COMMUTE TIME

Understanding shifts in citizens' average commute time illustrates an important component when assessing impacts on the environment. This can serve as a proxy for analyzing transportation system efficiency, worker productivity, and greenhouse gas emissions. Factors that may impact commute time include the distance from work employees typically live, rush-hour traffic volume. Moreover, it can show flaws in the level of availability and accessibility of public transit, including wait times, journey length, and the number of available transit stops. This indicator measures the average commute time (in minutes) from a person's home to their place of employment.[12]

As of 2012, a typical Massachusetts resident spent approximately 27.7 minutes in-transit during their commute. Influenced by new development and heightened congestion, this is higher than the 22.7 minutes one would spend traveling to work in 1990. Residents in the Pioneer Valley (22.6 minutes) and Springfield (21.4 minutes) have shorter commutes, although their modal choices are comparatively limited. This figure has been flat since 2000, although above the 1990 averages of 18.9 minutes, for the Pioneer Valley, and 18.5 minutes, for Springfield.

When examined, there are vivid differences in commute time contingent upon which neighborhood one resides in. For example, those who live in Memorial Square (26.4 minutes), the South End (24.8 minutes), Sixteen Acres (23.6 minutes), and Six Corners (22.1 minutes) experience longer commutes. Residents of Brightwood, Metro Center (16.2 minutes), Old Hill (18.9 minutes), and Upper Hill (20.1 minutes) experience the city's shortest commute times. These neighborhoods are located near employment centers, yet they also boast high numbers of residents who utilize 'environmentally-friendly' modes of transportation during their commute.

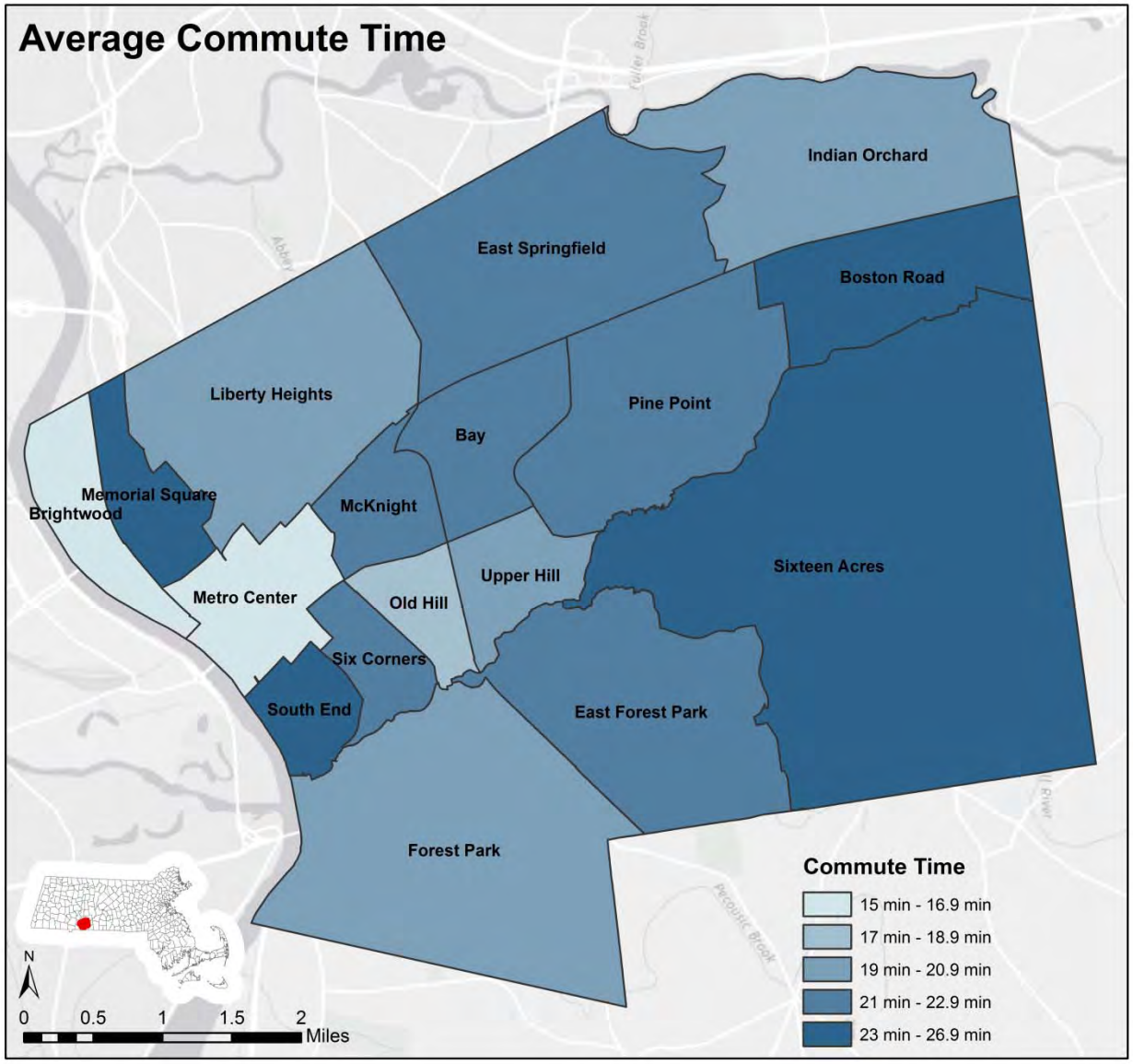
LONG TERM TRENDS: CITY, REGION, STATE



Source: U.S. Census Bureau, ACS 5 Year Estimates, Dicennial Census

[12] **Note about the data**: Data does not include people who work from home.

AVERAGE COMMUTE TIME – NEIGHBORHOOD COMPARISONS – 2012



DATA BY NEIGHBORHOOD

NAME	2012
Brightwood	*16.0*
Metro Center	*16.2*
Old Hill	*18.9*
Upper Hill	*20.1*
Indian Orchard	*20.8*
Forest Park	*20.8*
Liberty Heights	*20.8*
Bay	*21.0*
Pine Point	*21.3*
Springfield	***21.4***

NAME	2012
East Forest Park	*21.5*
East Springfield	*21.5*
McKnight	*21.7*
Six Corners	*22.1*
Pioneer Valley	***22.6***
Sixteen Acres	*23.6*
Boston Road	*23.8*
South End	*24.8*
Memorial Square	*26.4*
Massachusetts	***27.7***

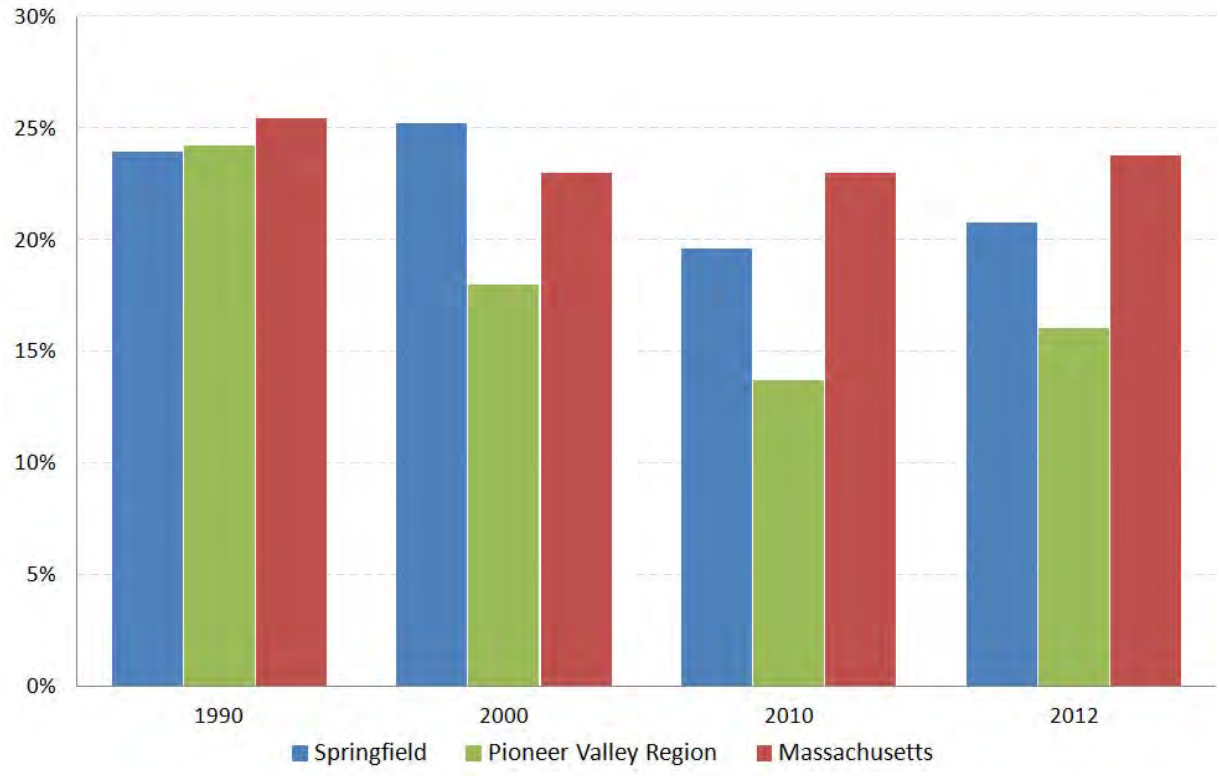
ENVIRONMENTALLY FRIENDLY TRANSPORTATION

Commuting to work by single-occupancy vehicle is one of the major causes of pollution. Unsustainable greenhouse gas (GHG) emissions are compounded by traffic congestion, a rush-hour familiarity. The portion of residents that use "environmentally friendly" modes of transportation during their commute is a key metric in evaluating how well the region's population is moving away from environmentally detrimental modes, thus reducing GHG emissions. "Environmentally friendly" transportation options include carpooling, all forms of public transit, bicycling, or walking. By proxy, this indicator can illuminate possible issues regarding vehicular congestion, parking availability, air quality, and the ability to walk or bike. The percentage of all residents who utilize one of these "environmentally friendly" methods to commute to work is reflected in this indicator.

In Massachusetts during 2012, 23.8% of those surveyed reported that they utilized sustainable modes during their commute. Although up slightly from the year 2000, when 23% acknowledged this, this negligible growth requires continued exertion towards making these means of travel easier and more affordable. Regionally, only 16% of the population in the Pioneer Valley commutes in an environmentally-friendly manner. Here, there are abrupt fluctuations between 1990 (24.4%) and 2010 (13.6%).

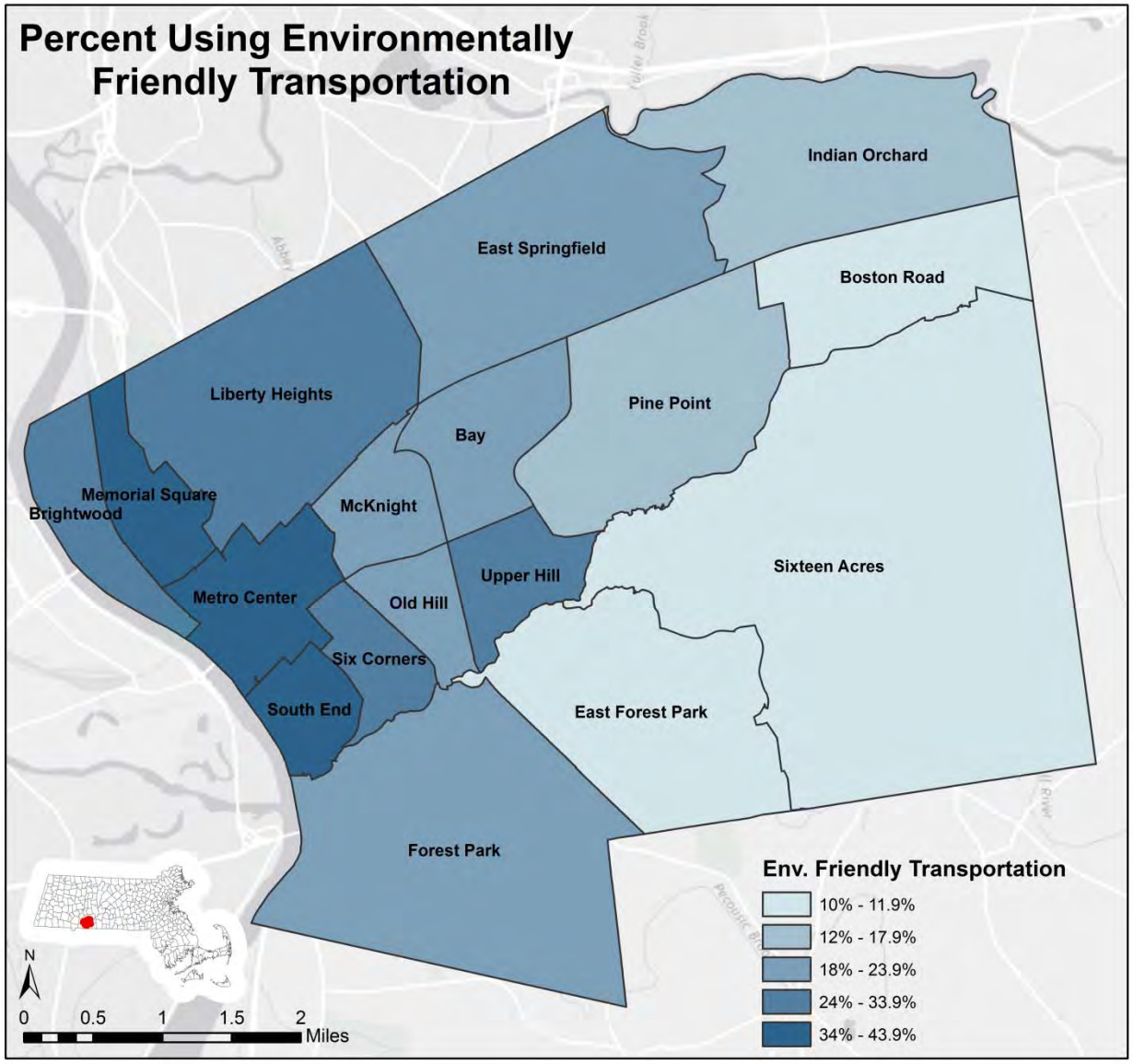
In Springfield, which reported that 20.8% of city residents used sustainable travel during their commute in 2012, smaller fluctuations are evident since 1990, when the figure was 23.9%. When examined closely in 2012, there are divergences at the neighborhood-level which may suggest major differences in neighborhood walkability or access to transit. For example, the South End (43.9%), Metro Center (42.2%), Memorial Square (35.9%), and Six Corners (33.1%) all exhibited robust commuting habits with approximately twice as many residents utilizing sustainable modes of transport. In contrast, East Forest Park (10.5%), Sixteen Acres (10.5%), Boston Road (11.6%), and Indian Orchard (14.7%) reported a much higher majority of residents commuting in single-occupancy-vehicles. These figures, though, remain only slightly below those of the city and the region.

LONG TERM TRENDS: CITY, REGION, STATE



Source: U.S. Census Bureau

ENVIRONMENTALLY FRIENDLY TRANSPORTATION – NEIGHBORHOOD COMPARISONS – 2012



DATA BY NEIGHBORHOOD

NAME	2012
Sixteen Acres	*10.5%*
East Forest Park	*10.5%*
Boston Road	*11.6%*
Indian Orchard	*14.8%*
Pioneer Valley	***16.0%***
Pine Point	*17.6%*
East Springfield	*19.0%*
McKnight	*19.6%*
Forest Park	*20.2%*
Springfield	***20.8%***

NAME	2012
Old Hill	*21.9%*
Bay	*23.1%*
Massachusetts	***23.8%***
Liberty Heights	*25.3%*
Upper Hill	*25.8%*
Brightwood	*28.3%*
Six Corners	*33.1%*
Memorial Square	*36.0%*
Metro Center	*42.2%*
South End	*43.9%*