



# Montachusett Regional Population Projections

Prepared by the  
**Montachusett Regional Planning Commission  
(MRPC)**

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## 1. Introduction

The gains and losses in population of any defined geographic area has significant ramifications for its economy, transportation patterns, development trends, and a multitude of other aspects that define the quality of life for its residents. Therefore, it is vital that predictions are made about the population growth or decline of a town or region in order to more appropriately plan for the future of the community. Population projections use past growth trends in order to extrapolate what the population of an area may look like in upcoming years. Demographers and planners use varying methods to produce such projections, depending on the scale of the geographic area as well as the availability of certain data. This report uses the Hamilton-Perry Method, which is described in further detail in the subsequent section. The population of the region and its 22 communities are projected by age and gender for the years 2020, 2030, and 2040. These projections will be compared to the projections produced by the University of Massachusetts' Donahue Institute. The communities within the region should be consulted to determine which projections most accurately reflect their predicted future growth patterns given their local knowledge.

## 2. Methodology

### 2.1. Cohort-Change Ratios

As stated above, this report uses the Hamilton Perry Method to determine population projections by age and gender for the Montachusett Region as a whole, as well as the 22 individual communities. This method uses data from the two most recent censuses (2000 and 2010) to determine the level of growth and/or decline that has previously occurred in an area. This is done through "cohort-change ratios," which are calculated as follows<sup>1</sup>:

$${}_nC_x = {}_nP_{x+y,a} / {}_nP_{x,b}$$

Where:

- $n$  = the number of years that the cohort spans (ie: age 20 to 24)
- $x$  = the earliest age of the cohort (20 in the 20-24 year-old cohort)
- $y$  = the number of years between the two censuses used
- $a$  = most recent census year
- $b$  = the second most recent census year
- ${}_nC_x$  = the Cohort Change Ratio for a certain age cohort
- ${}_nP_{x+y,a}$  = the population aged  $x+y$  to  $x+y+n$  in the most recent census
- ${}_nP_{x,b}$  = the population aged  $x$  to  $x+n$  in the second most recent census

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<sup>1</sup> David A. Swanson, Alan Schlottmann, and Bob Schmidt, "Forecasting the Population of Census Tracts by Age and Sex: An Example of the Hamilton-Perry Method in Action," *Population Research and Policy Review* 29, no. 1 (2009):

In other words, Cohort Change Ratios show us how many residents have left or moved into the area in a particular age group. If the population of a cohort remained completely stagnant, meaning no one within the cohort moved in or out of the region or passed away, then the cohort change ratio would have a value of 1. If more people within that cohort left or passed away than moved to the area, the ratio would be less than 1, indicating population loss for that particular cohort. If the number of people within that cohort that moved to the area exceeded the number of people that moved or passed away, then the cohort change ratio would be greater than 1, indicating population growth for that particular cohort. An example of calculating a cohort-change ratio for the population aged 35 to 39 in 2000 is as follows:

$${}_5C_{35} = {}_5P_{45,2010} / {}_5P_{35,2000}$$

In simpler terms, the population aged 45-49 in the 2010 census divided by the population aged 35-39 in the 2000 census gives us the cohort-change ratio for the 35-49-year-old cohort in the year 2000. To illustrate even further, say the number of residents in a particular area aged 35 to 39 in 2000 was 200 ( ${}_5P_{35,2000} = 200$ ). Also assume that the number of residents in that area aged 45 to 49 in 2010 was 300 ( ${}_5P_{45,2010} = 300$ ). Therefore, the cohort change ratio for the population aged 34 to 39 in 2000 would be calculated as follows:

$$\begin{aligned} {}_5C_{35} &= 300 / 200 \\ {}_5C_{35} &= 1.5 \end{aligned}$$

The cohort-change ratio of 1.5 indicates that the cohort that was between the ages 35 and 39 in the year 2000 increased in size by 50% by the time the same cohort was between the ages of 49 and 49 in 2010.

## 2.2. Projections

Once the Cohort-Change Ratios are produced for each age cohort, they can then be multiplied by the population of the corresponding cohort in the most recent census to determine the projected population of the cohort in the number of years that span between censuses, which in this instance is ten years. The formula for this is as follows:

$${}_nP_{x+z,a+y} = ({}_nP_{x+y,a} / {}_nP_{x,b}) \times {}_nP_{x,a}$$

Where:

- n = the number of years that the cohort spans (ie: age 20 to 24)
- x = the earliest age of the cohort (20 in the 20-24-year-old cohort)
- y = the number of years between the two censuses used
- a = most recent census year
- b = the second most recent census year

- ${}_nC_x$  = the Cohort Change Ratio for a certain age cohort
- ${}_nP_{x+y,a}$  = the population aged  $x+y$  to  $x+y+n$  in the most recent census
- ${}_nP_{x,b}$  = the population aged  $x$  to  $x+n$  in the second most recent census
- ${}_nP_{x,a}$  = the population aged  $x$  to  $x+n$  in the most recent census
- ${}_nP_{x+y,a+y}$  = the population aged  $x+y$  to  $x+y+n$  in the number of years between the two censuses used

To illustrate this more clearly, the population projection for the cohort aged 45 to 49 in the year 2020 is calculated as follows:

$${}_5P_{45, 2020} = ({}_5C_{35}) \times ({}_5P_{35,2010})$$

Or,

$${}_5P_{45, 2020} = ({}_5P_{45,2010} / {}_5P_{35,2000}) \times ({}_5P_{35,2010})$$

This means that the population aged 45-49 in 2020 is calculated by multiplying the ratio of the population aged 45 to 49 in 2010 to the population aged 35 to 39 in 2000 by the population aged 35-39 in 2010. Using the figures from the example from 2.1, we can calculate the projected population of the cohort ages 45 to 49 in 2010. As stated above, assume the cohort change ratio for the cohort aged 35 to 39 in 2000 is 1.5 (300/200). Additionally, assume the population aged 35 to 39 in 2010 is 400. Therefore, by plugging these numbers in to the equation (as shown below), we can calculate the projected population of those between 45 to 49 years of age in 2020 (which is 600 residents).

$${}_5P_{45, 2020} = (1.5) \times (400)$$

$${}_5P_{45, 2020} = 600$$

### 2.2.1. Projecting Populations Aged 85 +

As seen in the above sections, the US Decennial Census uses age groups that span five years. However, populations above the age of 85 are lumped together in a final age group. Therefore, the standard method used to create cohort change ratios cannot be utilized for this grouping. However, a similar process can be performed using the following formula:

$$C_{75+} = P_{85+,a} / {}_5P_{75+,b}$$

For this equation, the 75+ age category is created by summing the final three age groupings of the census (75-79, 80-84, and 85+).

### 2.2.2. Projecting Populations Aged 0 to 9

Because projections calculated using the Hamilton-Perry Method rely on data regarding the population of the cohort ten years younger than the cohort population being projected, the youngest age group for which a cohort change ratio can be developed is 10 to 14. Therefore, the Child Woman Ratio is used for the cohorts aged 0 to 4 and 5 to 9. The formulas for the Child Woman Ratios for these age groups are below.<sup>i</sup>

- Females aged 0-4:  ${}_5FP_{0,a+y} = ({}_5FP_{0,a} / {}_{30}FP_{15,a}) \times ({}_{30}FP_{15,a+y})$
- Females aged 5-9:  ${}_5FP_{5,a+y} = ({}_5FP_{5,a} / {}_{30}FP_{20,a}) \times ({}_{30}FP_{20,a+y})$
- Males aged 0-4:  ${}_5MP_{0,a+y} = ({}_5MP_{0,a} / {}_{30}FP_{15,a}) \times ({}_{30}FP_{15,a+y})$
- Males aged 5-9:  ${}_5MP_{5,a+y} = ({}_5MP_{5,a} / {}_{30}FP_{20,a}) \times ({}_{30}FP_{20,a+y})$

Where all symbols are the same as above except for:

- MP = male population
- FP = female population

As an example, the population of females aged 0-4 in 2020 would be projected by multiplying the ratio of females aged 0-4 in 2010 to the number of females aged 15 to 44 in 2010 by the projected female population aged 15 to 44 in 2020. This example expressed in a mathematical formula is as follows:

$${}_5FP_{0,2020} = ({}_5FP_{0,2010} / {}_{30}FP_{15,2010}) \times ({}_{30}FP_{15,2020})$$

### 2.3. Pros and Cons of Using the Hamilton Perry Method

As mentioned previously, there are different methods through which one can project populations. One of the other most common methods used is the Cohort-Component Method, which uses data regarding mortality, fertility, and net migration to create rates of change for the future. This method is often best used at the national level, as using it at the subnational level requires data regarding internal migration, which can be difficult to obtain. Therefore, the Hamilton Perry Method is much more appropriate for the Montachusett Region and its communities, given the difficulty of obtaining data of this nature at such a small geographic scale. Moreover, research often shows that the cohort-component method does not necessarily produce more accurate projections<sup>2</sup>.

However, it is important to note the pitfalls of the Hamilton Perry Method, as well as population projections in general. Population projections cannot account for many situations that may occur in the future, including economic booms, migration rates, diseases, and many other unpredictable

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<sup>2</sup> Smith, Stanley K., and Jeff Tayman. "An Evaluation of Population Projections by Age." *Demography* 40, no. 4 (2003): 741-57. doi:10.1353/dem.2003.0041.



factors. In addition, the Hamilton Perry Method assumes that trends in fertility, mortality, and net migration will stay constant throughout the projection period. Given this, the projections discussed later on in this report should be digested with a sense of this inherent error present in projected population numbers.

## **2.4. Data**

The data used for this report was derived from the US Census Bureau; specifically, from the 1990, 2000, and 2010 Decennial Census. The tables used for all three census years was P12: Sex by Age. The cohort change ratios for both 1990- 2000 and 2000-2010 were calculated by sex and age for all 22 communities and the region as a whole. The ratios were then averaged to create the final cohort change ratios which were applied to the 2010 population figures to produce the 2020 population projections. The same ratios were then applied to the 2020 projection numbers to project the 2030 population levels, and again to the 2030 projections to produce the 2040 projected populations.

### **2.4.1. Fort Devens**

In 1996, a military base with a population of 8,973 named Fort Devens closed in the Montachusett Region. The base was located in the Towns of Ayer, Harvard, Lancaster, and Shirley, with the majority of the base's population living within the official borders of Harvard. The populations of Fort Devens are included in the Census population data for each of the three towns. The closure of the base resulted in major population loss that was not indicative of future trends. Hence, the inclusion of the Fort Devens population in the 1990 population figures for Harvard, Shirley, and Ayer would greatly skew projections. Therefore, we chose to remove the Fort Devens population from all three towns to ensure that the population projections would more accurately represent long term trends. To do this, several steps were employed for each town. First, the population of Fort Devens by age cohort and gender were obtained from the 1990 Decennial Census. Then, these figures were multiplied by the percentage of the base's population that lived in that town. The percentages of the base's population that lived in each town are as follows:

- 8% of Fort Devens' population lived in Ayer
- 85% of Fort Devens' population lived in Harvard
- 7% of Fort Devens' population lived in Shirley
- 0% of Fort Devens' population lived in Lancaster.

It should be mentioned that by multiplying the Fort Devens population numbers by a single percentage, it is assumed that there was equal distribution of the base's population by age throughout the three towns. Given that this is most likely untrue, there may be some error in the population numbers for these three towns for the year 1990. However, given the lack of availability of detailed data regarding population by age and town for Fort Devens, this was the best approach available.

These figures representing the percentage of the base that lived in each town were then subtracted from the respective age and gender's population for each town to get the population data for Ayer, Harvard, and Shirley excluding the Fort Devens population for 1990. These figures were then used for the calculation of Cohort Change Ratios as discussed above. However, the remaining population within Fort Devens (now known simply as Devens) was included in the population figures for the Towns in 2000 and 2010.

### **3. Results**

For the purpose of simplicity, only figures regarding percent changes and percent of the total population will be addressed in the text below. All of the results of the projections by community, age, and gender are available by request from the MRPC in excel format.

### 3.1. Montachusett Region

#### 3.1.1. Percent Change

Table 1: Regional Percent Changes

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-10.3%	Under 5 years	-11.2%	Under 5 years	-4.2%	Under 5 years	-1.7%	Under 5 years	-7.7%
5 to 9 years	12.8%	5 to 9 years	-16.6%	5 to 9 years	-2.7%	5 to 9 years	-2.8%	5 to 9 years	-4.3%
10 to 14 years	26.2%	10 to 14 years	-8.8%	10 to 14 years	-11.9%	10 to 14 years	-4.2%	10 to 14 years	-1.7%
15 to 19 years	6.4%	15 to 19 years	14.7%	15 to 19 years	-17.3%	15 to 19 years	-2.7%	15 to 19 years	-2.8%
20 to 24 years	-24.9%	20 to 24 years	22.5%	20 to 24 years	-7.5%	20 to 24 years	-11.9%	20 to 24 years	-4.2%
25 to 29 years	<b>-30.5%</b>	25 to 29 years	-0.8%	25 to 29 years	19.0%	25 to 29 years	-17.3%	25 to 29 years	-2.7%
30 to 34 years	-18.6%	30 to 34 years	-18.5%	30 to 34 years	18.0%	30 to 34 years	-7.5%	30 to 34 years	-11.9%
35 to 39 years	15.1%	35 to 39 years	<b>-26.4%</b>	35 to 39 years	-3.6%	35 to 39 years	19.0%	35 to 39 years	-17.3%
40 to 44 years	34.9%	40 to 44 years	-15.9%	40 to 44 years	-19.9%	40 to 44 years	17.9%	40 to 44 years	-7.5%
45 to 49 years	52.1%	45 to 49 years	19.7%	45 to 49 years	<b>-27.8%</b>	45 to 49 years	-3.7%	45 to 49 years	19.0%
50 to 54 years	<b>67.7%</b>	50 to 54 years	36.0%	50 to 54 years	-16.2%	50 to 54 years	-19.9%	50 to 54 years	17.8%
55 to 59 years	29.2%	55 to 59 years	57.0%	55 to 59 years	17.9%	55 to 59 years	<b>-27.8%</b>	55 to 59 years	-3.7%
60 to 64 years	-12.0%	60 to 64 years	<b>70.1%</b>	60 to 64 years	35.1%	60 to 64 years	-16.2%	60 to 64 years	-19.9%
65 to 69 years	-17.6%	65 to 69 years	29.6%	65 to 69 years	56.7%	65 to 69 years	17.9%	65 to 69 years	<b>-27.7%</b>
70 to 74 years	2.0%	70 to 74 years	-12.3%	70 to 74 years	<b>162.8%</b>	70 to 74 years	35.1%	70 to 74 years	-16.2%
75 to 79 years	15.3%	75 to 79 years	-16.2%	75 to 79 years	76.3%	75 to 79 years	56.7%	75 to 79 years	17.9%
80 to 84 years	22.8%	80 to 84 years	4.5%	80 to 84 years	55.8%	80 to 84 years	<b>74.0%</b>	80 to 84 years	35.1%
85 years and over	25.6%	85 years and over	23.6%	85 years and over	4.4%	85 years and over	46.6%	85 years and over	<b>60.7%</b>
Total	6.3%	Total	3.7%	Total	6.2%	Total	2.7%	Total	-1.7%

The age groups with the most intense growth and decline are highlighted for each time period in Table 1, and all of the proceeding percent change tables. As seen above, there is projected growth in older ages groups. This is consistent with the national dialogue about an aging population as one of the largest cohorts, the baby boomers, move through the life cycle. Overall, the region is projected to see moderate growth between 2010 and 2020, almost no change between 2020 and 2030, and a moderate decrease in population between 2030 and 2040.

### 3.1.2. Percent of Population

Table 2: Regional Percent of Population

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 5 years	7.8%	6.6%	5.6%	5.1%	4.9%	4.6%
5 to 9 years	7.1%	7.6%	6.1%	5.6%	5.3%	5.1%
10 to 14 years	6.5%	7.7%	6.8%	5.6%	5.2%	5.2%
15 to 19 years	6.7%	6.7%	7.4%	5.8%	5.5%	5.4%
20 to 24 years	7.5%	5.3%	6.3%	5.5%	4.7%	4.6%
25 to 29 years	9.1%	5.9%	5.7%	6.4%	5.1%	5.1%
30 to 34 years	<b>9.6%</b>	7.3%	5.8%	6.4%	5.8%	5.2%
35 to 39 years	8.4%	9.1%	6.4%	5.8%	6.8%	5.7%
40 to 44 years	7.2%	<b>9.1%</b>	7.4%	5.6%	6.4%	6.0%
45 to 49 years	5.4%	7.7%	<b>8.9%</b>	6.0%	5.7%	6.9%
50 to 54 years	4.1%	6.4%	8.4%	6.7%	5.2%	6.2%
55 to 59 years	3.9%	4.7%	7.1%	<b>7.9%</b>	5.5%	5.4%
60 to 64 years	4.1%	3.4%	5.6%	7.1%	5.8%	4.7%
65 to 69 years	3.9%	3.0%	3.8%	5.6%	6.4%	4.7%
70 to 74 years	3.3%	3.2%	2.7%	6.6%	<b>8.7%</b>	<b>7.4%</b>
75 to 79 years	2.5%	2.7%	2.2%	3.6%	5.5%	6.6%
80 to 84 years	1.7%	1.9%	1.9%	2.8%	4.8%	6.6%
85 years and over	1.4%	1.7%	2.0%	1.9%	2.8%	4.5%
Under 19	28.1%	28.5%	25.9%	22.0%	20.8%	20.3%
20 to 39 years	34.5%	27.6%	24.1%	24.1%	22.3%	20.5%
40 to 59 years	20.5%	27.9%	31.8%	26.1%	22.8%	24.5%
Over 60	16.9%	15.9%	18.2%	27.8%	34.1%	34.7%

As seen in Table 2, the region's population is aging, and the younger population levels are subsiding. The youngest cohort (ages 0 – 19) is expected to consistently lose population and move from the second largest cohort to the smallest cohort by percent of the total population from 2010 to 2040. The young adult cohort (ages 20 to 39) is expected to also lose population, although it is projected to remain somewhat stagnant between 2010 and 2020. The middle age population (ages 40 to 59) is expected to decrease. The most significant change expected to occur is a large increase in the population of the oldest cohort (those over the age of 60), which is expected to account for over 1/3 of the population by 2030. Figures 1 and 2 on the following pages further illustrate the expected population changes by cohort for the region.

Figure 1: Projection Population by Age Cohort by Year

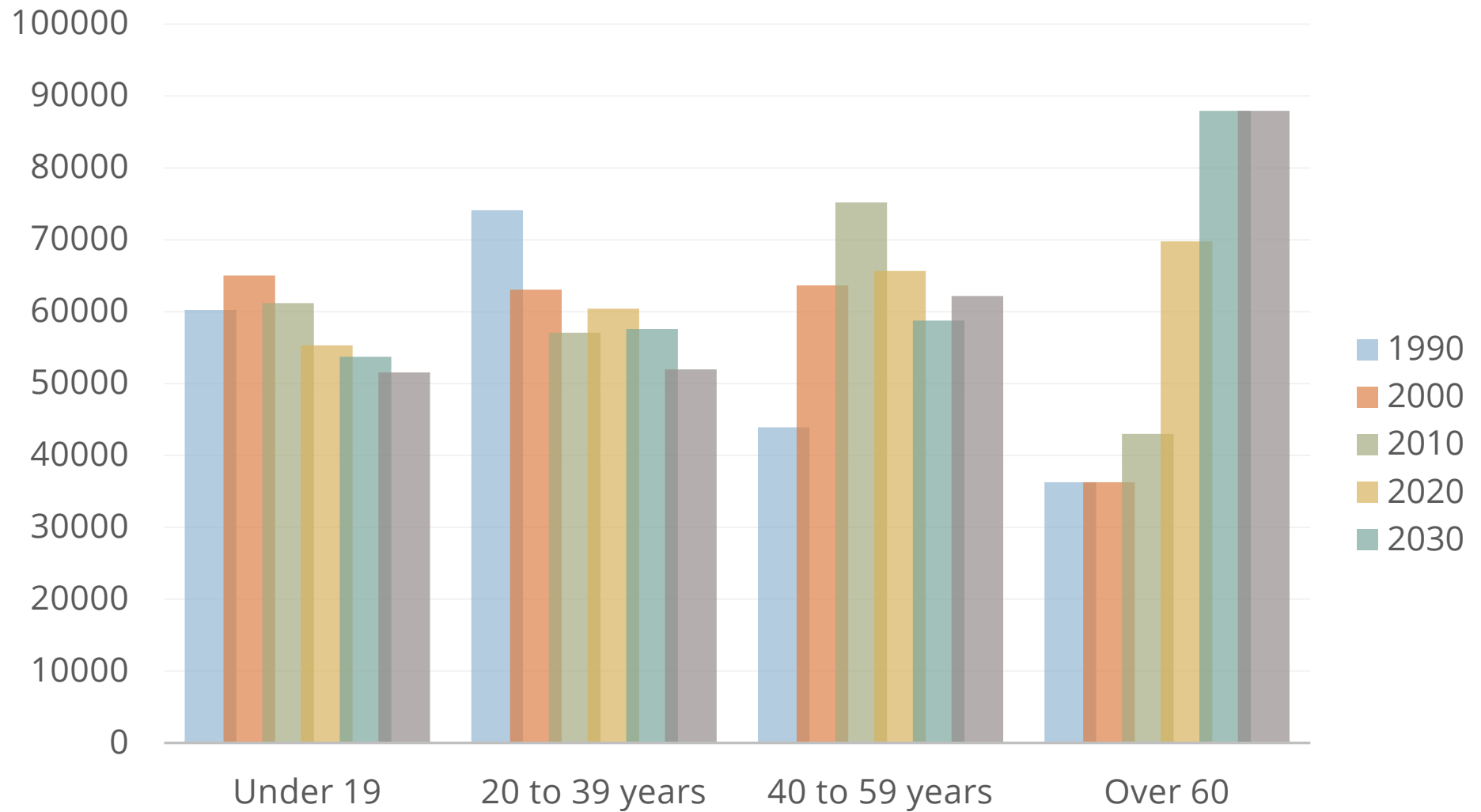
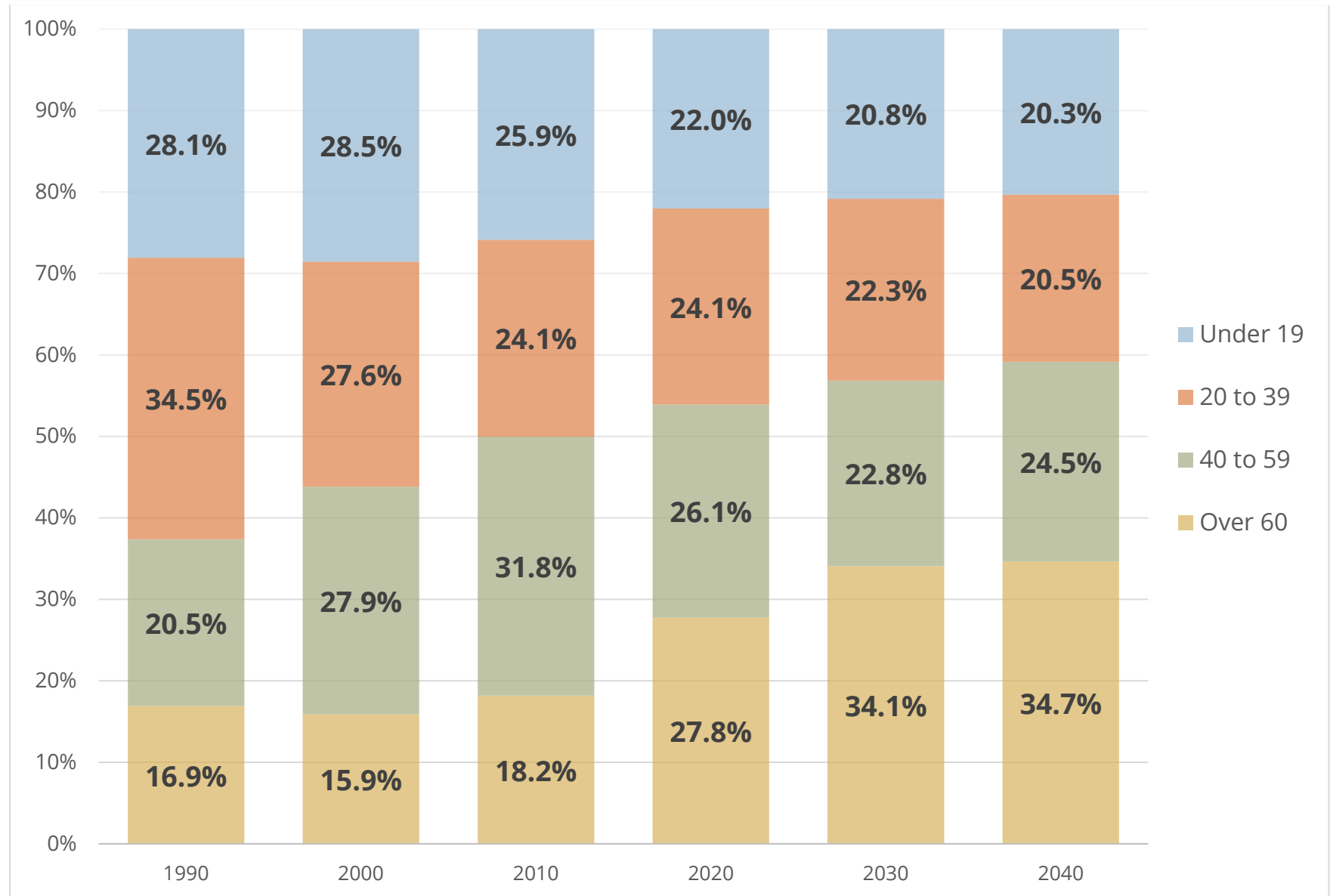


Figure 2: Composition of Montachusett Region by Age Cohort



### 3.2. Ashburnham

Table 3: Ashburnham Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-24.9%	Under 5 years	-6.3%	Under 5 years	15.8%	Under 5 years	-18.6%	Under 5 years	-5.2%
5 to 9 years	-3.2%	5 to 9 years	-6.1%	5 to 9 years	-9.8%	5 to 9 years	-6.5%	5 to 9 years	3.4%
10 to 14 years	14.9%	10 to 14 years	-12.4%	10 to 14 years	-13.2%	10 to 14 years	17.1%	10 to 14 years	-19.3%
15 to 19 years	8.3%	15 to 19 years	30.8%	15 to 19 years	-18.2%	15 to 19 years	-9.9%	15 to 19 years	-6.4%
20 to 24 years	-5.6%	20 to 24 years	21.4%	20 to 24 years	-15.0%	20 to 24 years	-12.9%	20 to 24 years	16.0%
25 to 29 years	-36.7%	25 to 29 years	-6.8%	25 to 29 years	41.1%	25 to 29 years	-18.1%	25 to 29 years	-9.9%
30 to 34 years	<b>-43.9%</b>	30 to 34 years	-15.7%	30 to 34 years	28.6%	30 to 34 years	-14.1%	30 to 34 years	-13.7%
35 to 39 years	-18.3%	35 to 39 years	<b>-22.2%</b>	35 to 39 years	-15.9%	35 to 39 years	41.2%	35 to 39 years	-17.8%
40 to 44 years	37.3%	40 to 44 years	-21.6%	40 to 44 years	-27.4%	40 to 44 years	28.0%	40 to 44 years	-13.9%
45 to 49 years	59.2%	45 to 49 years	10.8%	45 to 49 years	<b>-32.4%</b>	45 to 49 years	-15.2%	45 to 49 years	41.0%
50 to 54 years	<b>96.1%</b>	50 to 54 years	48.0%	50 to 54 years	-24.2%	50 to 54 years	-27.5%	50 to 54 years	28.2%
55 to 59 years	39.6%	55 to 59 years	86.6%	55 to 59 years	2.7%	55 to 59 years	<b>-32.5%</b>	55 to 59 years	-15.1%
60 to 64 years	-4.4%	60 to 64 years	<b>118.6%</b>	60 to 64 years	40.2%	60 to 64 years	-24.2%	60 to 64 years	-27.4%
65 to 69 years	-7.9%	65 to 69 years	38.8%	65 to 69 years	88.2%	65 to 69 years	2.7%	65 to 69 years	<b>-32.5%</b>
70 to 74 years	-1.5%	70 to 74 years	14.0%	70 to 74 years	<b>99.0%</b>	70 to 74 years	41.3%	70 to 74 years	-23.9%
75 to 79 years	34.6%	75 to 79 years	-11.9%	75 to 79 years	42.2%	75 to 79 years	88.2%	75 to 79 years	2.7%
80 to 84 years	48.8%	80 to 84 years	17.2%	80 to 84 years	4.8%	80 to 84 years	<b>97.2%</b>	80 to 84 years	42.2%
85 years and over	2.7%	85 years and over	73.7%	85 years and over	-13.5%	85 years and over	30.6%	85 years and over	<b>76.9%</b>
Total	2.1%	Total	9.6%	Total	-0.5%	Total	-1.6%	Total	-5.7%

Table 4: Percent of Population for Ashburnham

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	32.5%	31.5%	29.1%	26.9%	25.9%	25.2%
20 to 39 years	34.1%	23.8%	19.5%	19.3%	21.0%	20.2%
40 to 59 years	21.7%	32.8%	35.5%	29.2%	24.5%	28.0%
Over 60	11.7%	12.0%	16.0%	24.6%	28.7%	26.6%

Similar to the narrative of the region as a whole, Table 4 shows declines in young populations (< 19) and significant increases in older populations (60 +) for the Town of Ashburnham. In fact, between 2010 and 2040, the oldest cohort (60 +) will move from the smallest cohort of the population to the second largest cohort of the population. The middle age cohort (40 to 69) will become a smaller share of the population. Additionally, Ashburnham is projected to see significant loss of population in the cohort born between 1960 and 1974 throughout the next several years. Overall, Ashburnham's population is expected to decrease in increasing intensity over the projected 30 years.

### 3.3. Ashby

Table 5: Ashby Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-24.2%	Under 5 years	-9.0%	Under 5 years	83.0%	Under 5 years	-36.5%	Under 5 years	-7.3%
5 to 9 years	-3.8%	5 to 9 years	-18.4%	5 to 9 years	46.2%	5 to 9 years	-33.8%	5 to 9 years	16.1%
10 to 14 years	4.5%	10 to 14 years	-6.7%	10 to 14 years	-17.3%	10 to 14 years	83.3%	10 to 14 years	-36.6%
15 to 19 years	26.1%	15 to 19 years	5.6%	15 to 19 years	-22.3%	15 to 19 years	44.7%	15 to 19 years	-33.1%
20 to 24 years	-11.8%	20 to 24 years	35.2%	20 to 24 years	-16.3%	20 to 24 years	-18.7%	20 to 24 years	75.5%
25 to 29 years	-35.9%	25 to 29 years	3.4%	25 to 29 years	17.5%	25 to 29 years	-22.4%	25 to 29 years	48.0%
30 to 34 years	<b>-41.5%</b>	30 to 34 years	-16.4%	30 to 34 years	43.3%	30 to 34 years	-19.4%	30 to 34 years	-16.3%
35 to 39 years	-7.0%	35 to 39 years	<b>-32.4%</b>	35 to 39 years	2.2%	35 to 39 years	15.9%	35 to 39 years	-22.3%
40 to 44 years	29.1%	40 to 44 years	-21.6%	40 to 44 years	-27.1%	40 to 44 years	43.0%	40 to 44 years	-19.0%
45 to 49 years	<b>113.8%</b>	45 to 49 years	10.1%	45 to 49 years	<b>-37.4%</b>	45 to 49 years	3.3%	45 to 49 years	14.5%
50 to 54 years	91.2%	50 to 54 years	53.7%	50 to 54 years	-27.9%	50 to 54 years	-27.1%	50 to 54 years	42.9%
55 to 59 years	3.6%	55 to 59 years	<b>140.9%</b>	55 to 59 years	3.7%	55 to 59 years	<b>-37.4%</b>	55 to 59 years	3.7%
60 to 64 years	-3.0%	60 to 64 years	79.4%	60 to 64 years	59.6%	60 to 64 years	-28.1%	60 to 64 years	-27.3%
65 to 69 years	-18.3%	65 to 69 years	38.2%	65 to 69 years	<b>110.3%</b>	65 to 69 years	4.0%	65 to 69 years	<b>-37.5%</b>
70 to 74 years	34.9%	70 to 74 years	-4.7%	70 to 74 years	81.0%	70 to 74 years	59.7%	70 to 74 years	-28.1%
75 to 79 years	26.8%	75 to 79 years	7.7%	75 to 79 years	18.6%	75 to 79 years	<b>114.2%</b>	75 to 79 years	5.1%
80 to 84 years	20.7%	80 to 84 years	51.4%	80 to 84 years	-12.1%	80 to 84 years	82.7%	80 to 84 years	57.4%
85 years and over	4.5%	85 years and over	21.7%	85 years and over	5.8%	85 years and over	20.9%	85 years and over	<b>84.6%</b>
Total	4.7%	Total	8.0%	Total	6.6%	Total	1.4%	Total	-6.5%

Table 6: Percent of Population for Ashby

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	32.5%	30.9%	26.6%	33.7%	29.8%	25.2%
20 to 39 years	32.5%	23.4%	19.2%	18.2%	17.8%	20.6%
40 to 59 years	22.2%	32.7%	38.0%	25.8%	24.5%	28.2%
Over 60	12.8%	12.9%	16.2%	22.3%	27.9%	26.0%

The Town of Ashby shows a similar pattern of change as the region as a whole, including large gains in the older cohorts. Also in a similar fashion to Ashburnham, Ashby is projected to see significant loss of population in the cohort born between 1960 and 1974 throughout the next several years. However, it is projected that there will be moderate increases in the youngest cohort of the population between 2010 and 2030 before declining again by 2040. Overall, the level of growth is projected to fluctuate, with growth between 2010-2020 and 2020-2030, but population decreases between 2030 and 2040.



### 3.4. Athol

Table 7: Athol Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-31.5%	Under 5 years	-0.3%	Under 5 years	-21.4%	Under 5 years	-0.6%	Under 5 years	-11.3%
5 to 9 years	-18.2%	5 to 9 years	-7.5%	5 to 9 years	<b>-24.8%</b>	5 to 9 years	17.3%	5 to 9 years	-17.9%
10 to 14 years	11.0%	10 to 14 years	-15.6%	10 to 14 years	-9.6%	10 to 14 years	-21.7%	10 to 14 years	-0.3%
15 to 19 years	16.4%	15 to 19 years	-4.0%	15 to 19 years	-14.2%	15 to 19 years	<b>-25.3%</b>	15 to 19 years	18.0%
20 to 24 years	-11.1%	20 to 24 years	19.8%	20 to 24 years	-18.7%	20 to 24 years	-9.5%	20 to 24 years	-22.0%
25 to 29 years	<b>-39.0%</b>	25 to 29 years	17.2%	25 to 29 years	-4.4%	25 to 29 years	-14.1%	25 to 29 years	<b>-25.5%</b>
30 to 34 years	-33.8%	30 to 34 years	-5.8%	30 to 34 years	16.1%	30 to 34 years	-18.6%	30 to 34 years	-9.5%
35 to 39 years	5.1%	35 to 39 years	-15.7%	35 to 39 years	1.1%	35 to 39 years	-4.4%	35 to 39 years	-14.1%
40 to 44 years	43.8%	40 to 44 years	-21.7%	40 to 44 years	-13.0%	40 to 44 years	16.7%	40 to 44 years	-18.9%
45 to 49 years	54.6%	45 to 49 years	9.9%	45 to 49 years	-17.6%	45 to 49 years	1.1%	45 to 49 years	-4.4%
50 to 54 years	<b>57.8%</b>	50 to 54 years	45.6%	50 to 54 years	-22.2%	50 to 54 years	-13.0%	50 to 54 years	16.4%
55 to 59 years	12.4%	55 to 59 years	49.2%	55 to 59 years	12.0%	55 to 59 years	-17.6%	55 to 59 years	1.1%
60 to 64 years	-16.9%	60 to 64 years	<b>55.4%</b>	60 to 64 years	47.1%	60 to 64 years	-22.3%	60 to 64 years	-13.0%
65 to 69 years	-19.0%	65 to 69 years	12.9%	65 to 69 years	48.6%	65 to 69 years	12.3%	65 to 69 years	-17.6%
70 to 74 years	-11.5%	70 to 74 years	-15.4%	70 to 74 years	<b>53.7%</b>	70 to 74 years	47.6%	70 to 74 years	-22.5%
75 to 79 years	9.0%	75 to 79 years	<b>-25.5%</b>	75 to 79 years	16.6%	75 to 79 years	48.7%	75 to 79 years	12.9%
80 to 84 years	20.7%	80 to 84 years	-20.4%	80 to 84 years	-11.0%	80 to 84 years	<b>53.6%</b>	80 to 84 years	<b>47.9%</b>
85 years and over	46.9%	85 years and over	3.3%	85 years and over	-4.8%	85 years and over	-3.6%	85 years and over	31.0%
Total	-1.3%	Total	2.5%	Total	-1.7%	Total	-2.3%	Total	-5.7%

Table 8: Percent of Population for Athol

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	29.9%	28.0%	25.9%	19.0%	19.7%	20.1%
20 to 39 years	30.5%	24.3%	24.6%	23.1%	21.7%	19.0%
40 to 59 years	18.6%	26.9%	30.7%	27.6%	26.5%	27.5%
Over 60	20.9%	20.9%	21.3%	30.3%	32.2%	33.4%

For the town of Athol, losses are predicted to occur in school-aged children and young adults. In addition, similar to the region as a whole, the projections indicate gains in older cohorts. The young adult cohort (20 to 39) will also hold a smaller share of the population. The cohort of middle aged residents (40 to 59) will be replaced as the largest cohort by the oldest cohort (60 +). Overall, the town of Athol is projected to see net population decline over the next 20 to 30 years.

### 3.5. Ayer

Table 9: Ayer Percent Change

% Change ('90-'00)		% Change ('00-'10) *		% Change ('10-'20) *		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-7.4%	Under 5 years	-4.5%	Under 5 years	-9.4%	Under 5 years	4.2%	Under 5 years	-4.4%
5 to 9 years	20.1%	5 to 9 years	-8.7%	5 to 9 years	-9.0%	5 to 9 years	3.6%	5 to 9 years	-0.6%
10 to 14 years	37.4%	10 to 14 years	-3.5%	10 to 14 years	-6.4%	10 to 14 years	-9.3%	10 to 14 years	4.1%
15 to 19 years	49.6%	15 to 19 years	2.0%	15 to 19 years	-0.4%	15 to 19 years	-8.9%	15 to 19 years	3.5%
20 to 24 years	<b>-32.5%</b>	20 to 24 years	18.8%	20 to 24 years	4.6%	20 to 24 years	-6.4%	20 to 24 years	-9.2%
25 to 29 years	-27.6%	25 to 29 years	-16.6%	25 to 29 years	42.9%	25 to 29 years	-0.4%	25 to 29 years	-8.9%
30 to 34 years	9.0%	30 to 34 years	-29.0%	30 to 34 years	16.6%	30 to 34 years	4.7%	30 to 34 years	-6.5%
35 to 39 years	56.6%	35 to 39 years	<b>-31.7%</b>	35 to 39 years	-14.1%	35 to 39 years	43.2%	35 to 39 years	-0.2%
40 to 44 years	<b>72.4%</b>	40 to 44 years	-3.5%	40 to 44 years	-24.3%	40 to 44 years	17.0%	40 to 44 years	4.9%
45 to 49 years	63.9%	45 to 49 years	38.5%	45 to 49 years	<b>-27.0%</b>	45 to 49 years	-14.1%	45 to 49 years	42.9%
50 to 54 years	64.8%	50 to 54 years	74.5%	50 to 54 years	-3.6%	50 to 54 years	-24.3%	50 to 54 years	17.3%
55 to 59 years	30.4%	55 to 59 years	39.8%	55 to 59 years	50.5%	55 to 59 years	<b>-27.1%</b>	55 to 59 years	-14.1%
60 to 64 years	-22.0%	60 to 64 years	<b>61.8%</b>	60 to 64 years	<b>76.6%</b>	60 to 64 years	-3.6%	60 to 64 years	-24.3%
65 to 69 years	-0.8%	65 to 69 years	15.7%	65 to 69 years	48.8%	65 to 69 years	50.4%	65 to 69 years	<b>-26.9%</b>
70 to 74 years	57.8%	70 to 74 years	-24.8%	70 to 74 years	64.7%	70 to 74 years	76.0%	70 to 74 years	-3.6%
75 to 79 years	15.7%	75 to 79 years	3.8%	75 to 79 years	12.3%	75 to 79 years	48.5%	75 to 79 years	50.3%
80 to 84 years	26.9%	80 to 84 years	18.6%	80 to 84 years	-12.9%	80 to 84 years	64.6%	80 to 84 years	<b>74.1%</b>
85 years and over	59.1%	85 years and over	-20.0%	85 years and over	28.4%	85 years and over	6.4%	85 years and over	38.4%
Total	16.6%	Total	1.9%	Total	7.2%	Total	4.7%	Total	1.4%

\*It should be noted that the Town of Ayer includes a portion of the population of Devens for the 2000 and 2010 Census figures.

Table 10: Percent of Population for Ayer

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	26.2%	27.1%	25.6%	21.4%	20.8%	20.7%
20 to 39 years	40.7%	33.5%	26.8%	26.3%	28.9%	26.8%
40 to 59 years	18.0%	24.6%	31.7%	28.4%	22.9%	25.1%
Over 60	15.2%	14.8%	15.9%	23.9%	27.4%	27.4%

The Town of Ayer is expected to lose population in the youngest cohort, most significantly between 2010 and 2020. The young adult cohort is expected to fluctuate over the next several years, but remain somewhat the same at about 27% of the population. The middle age population is expected to decline; moving from the largest cohort in 2010 to the second smallest cohort in 2040. Lastly, the oldest cohort is expected to grow immensely, almost doubling the percentage of the population it accounts for by 2040. Overall, the Town of Ayer is predicted to see growth between now and 2040, but to a lesser degree as the decades pass.

### 3.6. Clinton

Table 11: Clinton Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-21.7%	Under 5 years	8.6%	Under 5 years	<b>-32.3%</b>	Under 5 years	13.3%	Under 5 years	-15.8%
5 to 9 years	13.6%	5 to 9 years	-14.9%	5 to 9 years	-24.7%	5 to 9 years	22.3%	5 to 9 years	-19.5%
10 to 14 years	31.0%	10 to 14 years	-14.4%	10 to 14 years	4.0%	10 to 14 years	<b>-31.7%</b>	10 to 14 years	12.4%
15 to 19 years	-0.8%	15 to 19 years	9.4%	15 to 19 years	-13.2%	15 to 19 years	-24.3%	15 to 19 years	21.7%
20 to 24 years	-27.3%	20 to 24 years	15.3%	20 to 24 years	-8.6%	20 to 24 years	4.0%	20 to 24 years	-32.3%
25 to 29 years	<b>-34.6%</b>	25 to 29 years	-2.6%	25 to 29 years	10.4%	25 to 29 years	-13.2%	25 to 29 years	<b>-24.5%</b>
30 to 34 years	-22.5%	30 to 34 years	-16.4%	30 to 34 years	7.9%	30 to 34 years	-8.6%	30 to 34 years	4.0%
35 to 39 years	23.6%	35 to 39 years	-22.2%	35 to 39 years	-10.3%	35 to 39 years	10.4%	35 to 39 years	-13.2%
40 to 44 years	49.7%	40 to 44 years	-11.5%	40 to 44 years	-21.5%	40 to 44 years	7.9%	40 to 44 years	-8.6%
45 to 49 years	53.6%	45 to 49 years	19.7%	45 to 49 years	-20.8%	45 to 49 years	-10.2%	45 to 49 years	10.0%
50 to 54 years	<b>57.6%</b>	50 to 54 years	42.2%	50 to 54 years	-8.8%	50 to 54 years	-21.3%	50 to 54 years	7.2%
55 to 59 years	16.5%	55 to 59 years	<b>51.8%</b>	55 to 59 years	20.3%	55 to 59 years	-20.8%	55 to 59 years	-10.2%
60 to 64 years	-17.7%	60 to 64 years	43.8%	60 to 64 years	49.1%	60 to 64 years	-8.8%	60 to 64 years	-21.3%
65 to 69 years	-31.7%	65 to 69 years	18.4%	65 to 69 years	<b>50.1%</b>	65 to 69 years	20.6%	65 to 69 years	-20.7%
70 to 74 years	-7.1%	70 to 74 years	-24.1%	70 to 74 years	49.7%	70 to 74 years	48.8%	70 to 74 years	-8.3%
75 to 79 years	22.6%	75 to 79 years	<b>-40.0%</b>	75 to 79 years	26.5%	75 to 79 years	49.4%	75 to 79 years	20.9%
80 to 84 years	39.8%	80 to 84 years	-17.2%	80 to 84 years	-20.3%	80 to 84 years	<b>50.1%</b>	80 to 84 years	<b>48.5%</b>
85 years and over	31.2%	85 years and over	6.0%	85 years and over	-13.6%	85 years and over	-3.1%	85 years and over	33.2%
Total	1.6%	Total	1.3%	Total	-1.0%	Total	-1.4%	Total	-5.8%

Table 12: Percent of Population for Clinton

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	25.0%	25.3%	24.1%	16.6%	18.8%	19.5%
20 to 39 years	37.0%	29.9%	26.9%	26.5%	26.8%	23.8%
40 to 59 years	18.2%	26.0%	30.9%	30.3%	25.3%	26.7%
Over 60	19.8%	18.8%	18.2%	26.6%	29.2%	30.0%

The Town of Clinton is projected to see fluctuating growth and decline of residents under the age of 19, but the population is projected to see a net loss of almost 5% between 2010 and 2040. The young adult population (20 to 34 years) is projected to decline slightly, and so is the middle aged population. Similar to other communities in the region, the oldest cohort will move from the smallest cohort in 2010 to the largest cohort in 2040. Overall, the Town of Clinton is projected to see moderate population loss from 2010 to 2030, but much more significant population loss between 2030 and 2040.

### 3.7. Fitchburg

Table 13: Fitchburg Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-20.6%	Under 5 years	3.1%	Under 5 years	<b>-46.2%</b>	Under 5 years	38.0%	Under 5 years	-24.8%
5 to 9 years	8.2%	5 to 9 years	-19.8%	5 to 9 years	-37.3%	5 to 9 years	<b>59.0%</b>	5 to 9 years	-35.5%
10 to 14 years	15.8%	10 to 14 years	-14.2%	10 to 14 years	-0.8%	10 to 14 years	<b>-47.1%</b>	10 to 14 years	40.4%
15 to 19 years	-8.1%	15 to 19 years	16.7%	15 to 19 years	-22.7%	15 to 19 years	-40.3%	15 to 19 years	<b>66.9%</b>
20 to 24 years	-22.2%	20 to 24 years	22.7%	20 to 24 years	-16.6%	20 to 24 years	-0.9%	20 to 24 years	-47.7%
25 to 29 years	-29.6%	25 to 29 years	-0.3%	25 to 29 years	12.3%	25 to 29 years	-22.7%	25 to 29 years	<b>-38.3%</b>
30 to 34 years	-22.3%	30 to 34 years	-1.8%	30 to 34 years	10.8%	30 to 34 years	-17.2%	30 to 34 years	-0.4%
35 to 39 years	5.0%	35 to 39 years	-13.0%	35 to 39 years	-9.8%	35 to 39 years	12.3%	35 to 39 years	-22.7%
40 to 44 years	29.5%	40 to 44 years	-12.8%	40 to 44 years	-7.2%	40 to 44 years	10.5%	40 to 44 years	-17.0%
45 to 49 years	35.8%	45 to 49 years	16.2%	45 to 49 years	-17.0%	45 to 49 years	-9.8%	45 to 49 years	12.2%
50 to 54 years	<b>40.1%</b>	50 to 54 years	35.5%	50 to 54 years	-14.7%	50 to 54 years	-7.2%	50 to 54 years	10.6%
55 to 59 years	11.8%	55 to 59 years	44.2%	55 to 59 years	12.8%	55 to 59 years	-16.9%	55 to 59 years	-9.9%
60 to 64 years	-29.5%	60 to 64 years	<b>44.3%</b>	60 to 64 years	33.5%	60 to 64 years	-14.7%	60 to 64 years	-7.2%
65 to 69 years	<b>-37.0%</b>	65 to 69 years	12.1%	65 to 69 years	<b>43.8%</b>	65 to 69 years	12.8%	65 to 69 years	-16.7%
70 to 74 years	-5.7%	70 to 74 years	-25.3%	70 to 74 years	39.7%	70 to 74 years	33.5%	70 to 74 years	-14.7%
75 to 79 years	4.6%	75 to 79 years	<b>-37.8%</b>	75 to 79 years	12.4%	75 to 79 years	43.6%	75 to 79 years	12.9%
80 to 84 years	1.6%	80 to 84 years	-2.1%	80 to 84 years	-26.8%	80 to 84 years	38.7%	80 to 84 years	33.4%
85 years and over	11.6%	85 years and over	3.5%	85 years and over	-16.6%	85 years and over	-10.4%	85 years and over	23.3%
Total	-5.1%	Total	3.1%	Total	-6.6%	Total	-3.6%	Total	-8.7%

Table 14: Percent of Population for Fitchburg

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	28.6%	29.3%	27.3%	16.2%	20.1%	22.7%
20 to 39 years	34.6%	29.5%	29.4%	31.3%	29.2%	22.9%
40 to 59 years	17.0%	23.3%	26.3%	27.6%	25.4%	27.3%
Over 60	19.8%	17.9%	17.0%	24.9%	25.3%	27.2%

In a similar pattern to the rest of the region, the City of Fitchburg is projected to see decline in its youngest cohort. The population under the Age of 19 is projected to decrease dramatically by 2020, and then see a moderate increase by 2040. The young adult cohort is expected to remain somewhat stagnant until 2030, but then decline significantly by 2040. The middle age cohort is projected to remain the same percentage of the population within one percentage point. Lastly, as was seen for all communities discussed so far, the oldest cohort will see significant increases, though not as dramatic as some of the other communities discussed in this report. Overall, the population of the City of Fitchburg is expected to decline to a greater extent the majority of the communities in the Montachusett Region.

### 3.8. Gardner

Table 15: Gardner Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-17.5%	Under 5 years	-2.3%	Under 5 years	-37.0%	Under 5 years	20.6%	Under 5 years	-21.7%
5 to 9 years	13.7%	5 to 9 years	-27.2%	5 to 9 years	-28.5%	5 to 9 years	35.6%	5 to 9 years	-26.3%
10 to 14 years	27.8%	10 to 14 years	-19.3%	10 to 14 years	-1.2%	10 to 14 years	<b>-36.8%</b>	10 to 14 years	20.1%
15 to 19 years	12.1%	15 to 19 years	3.8%	15 to 19 years	-23.7%	15 to 19 years	-27.9%	15 to 19 years	34.5%
20 to 24 years	-22.4%	20 to 24 years	6.7%	20 to 24 years	-11.2%	20 to 24 years	-1.2%	20 to 24 years	<b>-36.6%</b>
25 to 29 years	<b>-32.3%</b>	25 to 29 years	-5.4%	25 to 29 years	13.9%	25 to 29 years	-23.7%	25 to 29 years	-25.7%
30 to 34 years	-18.8%	30 to 34 years	-15.4%	30 to 34 years	2.1%	30 to 34 years	-10.9%	30 to 34 years	-1.4%
35 to 39 years	19.0%	35 to 39 years	-26.8%	35 to 39 years	-9.0%	35 to 39 years	13.9%	35 to 39 years	-23.7%
40 to 44 years	44.9%	40 to 44 years	-18.8%	40 to 44 years	-15.4%	40 to 44 years	2.1%	40 to 44 years	-10.9%
45 to 49 years	58.4%	45 to 49 years	16.6%	45 to 49 years	-26.0%	45 to 49 years	-8.9%	45 to 49 years	13.8%
50 to 54 years	<b>62.5%</b>	50 to 54 years	34.6%	50 to 54 years	-15.6%	50 to 54 years	-15.4%	50 to 54 years	2.3%
55 to 59 years	9.3%	55 to 59 years	49.8%	55 to 59 years	19.8%	55 to 59 years	-26.0%	55 to 59 years	-8.8%
60 to 64 years	-26.2%	60 to 64 years	<b>60.7%</b>	60 to 64 years	35.3%	60 to 64 years	-15.5%	60 to 64 years	-15.4%
65 to 69 years	-20.6%	65 to 69 years	2.9%	65 to 69 years	54.2%	65 to 69 years	19.7%	65 to 69 years	-25.9%
70 to 74 years	0.6%	70 to 74 years	<b>-37.2%</b>	70 to 74 years	<b>73.7%</b>	70 to 74 years	35.4%	70 to 74 years	-15.4%
75 to 79 years	2.9%	75 to 79 years	-20.4%	75 to 79 years	2.4%	75 to 79 years	53.3%	75 to 79 years	19.4%
80 to 84 years	5.2%	80 to 84 years	1.9%	80 to 84 years	<b>-37.7%</b>	80 to 84 years	<b>71.7%</b>	80 to 84 years	<b>35.6%</b>
85 years and over	21.7%	85 years and over	13.7%	85 years and over	-6.8%	85 years and over	-13.4%	85 years and over	31.5%
Total	3.2%	Total	-2.6%	Total	-4.0%	Total	-2.7%	Total	-7.5%

Table 16: Percent of Population for Gardner

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	24.9%	25.9%	23.3%	15.3%	17.9%	18.9%
20 to 39 years	34.8%	28.6%	25.7%	26.2%	25.5%	21.6%
40 to 59 years	18.7%	26.0%	30.6%	28.7%	25.4%	27.1%
Over 60	21.6%	19.5%	20.4%	29.8%	31.2%	32.4%

Similar to the City of Fitchburg, the youngest cohort of the City of is projected to decrease dramatically by 2020, and then see a moderate increase by 2040. Both the young adult and middle age cohorts are projected to decrease slightly in numbers. Last, as was seen for all communities discussed so far, the oldest cohort is expected to move from the smallest to the largest cohort between 2010 and 2020, and remain as the largest cohort for at least the next two decades. Overall, the City of Gardner has a very similar projected growth pattern to Fitchburg for the next several decades, and is also projected to decline in its overall population until 2040.

### 3.9. Groton

Table 17: Groton Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	35.4%	Under 5 years	-38.2%	Under 5 years	-2.0%	Under 5 years	29.4%	Under 5 years	2.1%
5 to 9 years	61.6%	5 to 9 years	-14.2%	5 to 9 years	-30.4%	5 to 9 years	50.2%	5 to 9 years	1.4%
10 to 14 years	73.6%	10 to 14 years	16.3%	10 to 14 years	-33.1%	10 to 14 years	-1.9%	10 to 14 years	29.3%
15 to 19 years	2.9%	15 to 19 years	52.7%	15 to 19 years	-11.7%	15 to 19 years	-30.4%	15 to 19 years	50.4%
20 to 24 years	<b>-43.9%</b>	20 to 24 years	57.4%	20 to 24 years	22.2%	20 to 24 years	-33.1%	20 to 24 years	-1.6%
25 to 29 years	-33.7%	25 to 29 years	-2.2%	25 to 29 years	56.6%	25 to 29 years	-11.2%	25 to 29 years	-31.9%
30 to 34 years	-6.4%	30 to 34 years	-44.8%	30 to 34 years	57.7%	30 to 34 years	22.9%	30 to 34 years	-33.2%
35 to 39 years	39.1%	35 to 39 years	<b>-46.9%</b>	35 to 39 years	9.9%	35 to 39 years	56.5%	35 to 39 years	-11.0%
40 to 44 years	31.3%	40 to 44 years	-15.0%	40 to 44 years	-42.0%	40 to 44 years	57.7%	40 to 44 years	22.8%
45 to 49 years	43.9%	45 to 49 years	44.8%	45 to 49 years	<b>-48.0%</b>	45 to 49 years	10.1%	45 to 49 years	56.5%
50 to 54 years	72.4%	50 to 54 years	73.4%	50 to 54 years	-25.5%	50 to 54 years	-42.0%	50 to 54 years	58.0%
55 to 59 years	56.8%	55 to 59 years	86.7%	55 to 59 years	28.1%	55 to 59 years	<b>-48.1%</b>	55 to 59 years	10.2%
60 to 64 years	56.0%	60 to 64 years	110.6%	60 to 64 years	58.0%	60 to 64 years	-25.3%	60 to 64 years	-42.0%
65 to 69 years	-3.6%	65 to 69 years	87.8%	65 to 69 years	72.0%	65 to 69 years	28.3%	65 to 69 years	<b>-47.8%</b>
70 to 74 years	11.6%	70 to 74 years	32.4%	70 to 74 years	<b>128.6%</b>	70 to 74 years	59.7%	70 to 74 years	-25.0%
75 to 79 years	25.4%	75 to 79 years	-2.1%	75 to 79 years	86.6%	75 to 79 years	72.2%	75 to 79 years	28.3%
80 to 84 years	24.0%	80 to 84 years	60.2%	80 to 84 years	12.8%	80 to 84 years	<b>127%</b>	80 to 84 years	60.6%
85 years and over	<b>100%</b>	85 years and over	<b>134.3%</b>	85 years and over	1.7%	85 years and over	50.5%	85 years and over	<b>80.8%</b>
Total	27.1%	Total	11.5%	Total	-1.6%	Total	6.7%	Total	5.6%

Table 18: Percent of Population for Groton

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	30.5%	34.3%	30.7%	21.3%	24.6%	27.5%
20 to 39 years	31.8%	24.1%	15.3%	20.3%	21.8%	16.5%
40 to 59 years	27.6%	31.7%	38.6%	30.9%	23.2%	29.8%
Over 60	10.1%	10.0%	15.4%	27.5%	30.5%	26.2%

The youngest cohort of Groton is expected to slightly decrease compared with the other communities discussed so far. The young adult cohort is expected to increase and then decrease, but remain somewhat the same as it was in 2010 in 2040. The middle aged population is projected to decrease the most significantly. Lastly, the oldest cohort is supposed to increase significantly. The town as a whole is projected to see a slight population decrease by 2020, followed by two decades of population growth.



### 3.10. Harvard

Table 19: Harvard Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	25.3%	Under 5 years	<b>-40.4%</b>	Under 5 years	58.2%	Under 5 years	-21.2%	Under 5 years	1.5%
5 to 9 years	40.4%	5 to 9 years	-12.7%	5 to 9 years	-9.2%	5 to 9 years	4.4%	5 to 9 years	5.4%
10 to 14 years	79.9%	10 to 14 years	0.7%	10 to 14 years	-32.6%	10 to 14 years	55.0%	10 to 14 years	-19.9%
15 to 19 years	-22.5%	15 to 19 years	34.5%	15 to 19 years	-10.8%	15 to 19 years	-9.2%	15 to 19 years	4.4%
20 to 24 years	<b>-53.6%</b>	20 to 24 years	<b>144.8%</b>	20 to 24 years	-14.1%	20 to 24 years	-28.9%	20 to 24 years	34.7%
25 to 29 years	7.5%	25 to 29 years	65.3%	25 to 29 years	-1.2%	25 to 29 years	-10.6%	25 to 29 years	-14.7%
30 to 34 years	45.3%	30 to 34 years	3.6%	30 to 34 years	89.0%	30 to 34 years	-16.9%	30 to 34 years	-27.3%
35 to 39 years	20.8%	35 to 39 years	-34.8%	35 to 39 years	108.4%	35 to 39 years	-0.1%	35 to 39 years	-10.6%
40 to 44 years	20.9%	40 to 44 years	-38.6%	40 to 44 years	90.7%	40 to 44 years	89.9%	40 to 44 years	-17.3%
45 to 49 years	20.5%	45 to 49 years	12.2%	45 to 49 years	-29.9%	45 to 49 years	<b>112.7%</b>	45 to 49 years	-0.5%
50 to 54 years	80.8%	50 to 54 years	9.5%	50 to 54 years	<b>-34.9%</b>	50 to 54 years	94.7%	50 to 54 years	90.3%
55 to 59 years	<b>116.3%</b>	55 to 59 years	31.7%	55 to 59 years	7.6%	55 to 59 years	-29.8%	55 to 59 years	<b>113.1%</b>
60 to 64 years	52.0%	60 to 64 years	72.2%	60 to 64 years	12.3%	60 to 64 years	<b>-34.9%</b>	60 to 64 years	97.1%
65 to 69 years	20.6%	65 to 69 years	101.4%	65 to 69 years	36.5%	65 to 69 years	7.2%	65 to 69 years	-30.5%
70 to 74 years	45.0%	70 to 74 years	50.4%	70 to 74 years	73.6%	70 to 74 years	12.1%	70 to 74 years	<b>-34.9%</b>
75 to 79 years	71.3%	75 to 79 years	-16.2%	75 to 79 years	<b>146.7%</b>	75 to 79 years	36.6%	75 to 79 years	7.3%
80 to 84 years	52.9%	80 to 84 years	29.8%	80 to 84 years	58.9%	80 to 84 years	74.3%	80 to 84 years	11.9%
85 years and over	39.4%	85 years and over	40.4%	85 years and over	22.9%	85 years and over	68.9%	85 years and over	53.4%
Total	28.3%	Total	9.0%	Total	14.1%	Total	19.9%	Total	9.8%

Table 20: Percent of Population for Harvard

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	28.6%	28.0%	24.5%	27.8%	17.6%	15.3%
20 to 39 years	25.8%	20.6%	22.0%	15.6%	20.3%	16.5%
40 to 59 years	35.1%	39.5%	36.4%	28.1%	43.3%	49.3%
Over 60	10.5%	11.9%	17.1%	28.6%	18.8%	18.9%

The youngest cohort's population in Harvard is projected to grow between 2010 and 2020, but decrease significantly between 2020 and 2040. The young adult cohort is also projected to decrease in size. The middle aged cohort is expected to grow and account for almost half of the population, which is unlike any other town in the region. Last, the oldest cohort of Harvard is forecasted to remain somewhat stagnant, which is also much different than the patterns displayed by most of the other communities in the region. This may be due to the errors inherent in calculating the population of Harvard without Fort Devens for 1990, which is discussed in Section 2.4.1. Overall, the town of Harvard is projected to see significant growth in the next several decades.

### 3.11. Hubbardston

Table 21: Hubbardston Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	20.6%	Under 5 years	-28.0%	Under 5 years	58.6%	Under 5 years	7.3%	Under 5 years	1.2%
5 to 9 years	42.4%	5 to 9 years	-19.3%	5 to 9 years	20.4%	5 to 9 years	18.2%	5 to 9 years	10.6%
10 to 14 years	65.3%	10 to 14 years	2.2%	10 to 14 years	-21.7%	10 to 14 years	58.2%	10 to 14 years	7.7%
15 to 19 years	42.6%	15 to 19 years	27.6%	15 to 19 years	-14.7%	15 to 19 years	20.4%	15 to 19 years	18.3%
20 to 24 years	0.0%	20 to 24 years	131.1%	20 to 24 years	-12.2%	20 to 24 years	-22.3%	20 to 24 years	57.3%
25 to 29 years	<b>-24.6%</b>	25 to 29 years	-15.8%	25 to 29 years	72.5%	25 to 29 years	-14.6%	25 to 29 years	20.6%
30 to 34 years	-7.6%	30 to 34 years	<b>-42.8%</b>	30 to 34 years	<b>216.9%</b>	30 to 34 years	-12.4%	30 to 34 years	-21.6%
35 to 39 years	35.4%	35 to 39 years	-33.6%	35 to 39 years	-10.1%	35 to 39 years	72.9%	35 to 39 years	-14.6%
40 to 44 years	78.5%	40 to 44 years	-18.0%	40 to 44 years	<b>-39.3%</b>	40 to 44 years	<b>218.2%</b>	40 to 44 years	-12.3%
45 to 49 years	115.9%	45 to 49 years	31.3%	45 to 49 years	-32.6%	45 to 49 years	-10.0%	45 to 49 years	72.8%
50 to 54 years	<b>145.1%</b>	50 to 54 years	72.8%	50 to 54 years	-16.4%	50 to 54 years	<b>-39.2%</b>	50 to 54 years	<b>216.9%</b>
55 to 59 years	97.7%	55 to 59 years	128.8%	55 to 59 years	28.7%	55 to 59 years	-32.4%	55 to 59 years	-10.5%
60 to 64 years	10.1%	60 to 64 years	<b>141.8%</b>	60 to 64 years	74.2%	60 to 64 years	-16.5%	60 to 64 years	<b>-39.2%</b>
65 to 69 years	25.7%	65 to 69 years	84.1%	65 to 69 years	139.9%	65 to 69 years	29.3%	65 to 69 years	-32.3%
70 to 74 years	48.9%	70 to 74 years	25.7%	70 to 74 years	126.7%	70 to 74 years	74.1%	70 to 74 years	-16.5%
75 to 79 years	73.0%	75 to 79 years	6.3%	75 to 79 years	102.1%	75 to 79 years	140.4%	75 to 79 years	29.5%
80 to 84 years	-17.2%	80 to 84 years	129.2%	80 to 84 years	3.1%	80 to 84 years	126.7%	80 to 84 years	74.1%
85 years and over	56.3%	85 years and over	52.0%	85 years and over	18.8%	85 years and over	64.2%	85 years and over	123.8%
Total	39.8%	Total	12.1%	Total	18.8%	Total	18.6%	Total	10.0%

Table 22: Percent of Population for Hubbardston

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	32.6%	33.2%	28.0%	25.8%	25.9%	25.7%
20 to 39 years	35.8%	26.4%	19.6%	23.4%	21.5%	19.1%
40 to 59 years	21.3%	31.0%	37.7%	27.9%	24.6%	30.8%
Over 60	10.3%	9.4%	14.8%	22.9%	28.0%	24.4%

For the Town of Hubbardston, although the cohort will make up a smaller percentage of the town as a whole, the youngest cohort is expected to see population growth, in contrast to most of the towns in the region. Populations between 20 and 39 are also expected to increase by 2040, although they will make up a smaller percentage of the population as a whole, given the extreme increases in population of those over the age of 60. Similarly, the middle aged cohort will grow in size, but moderately compared to the oldest cohort. By 2040, the middle aged cohort will be the largest by size. Overall, the Town of Hubbardston is projected to see significant growth between now and 2040.



### 3.12. Lancaster

Table 23: Lancaster Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-8.5%	Under 5 years	-5.7%	Under 5 years	3.7%	Under 5 years	-22.2%	Under 5 years	-2.3%
5 to 9 years	8.9%	5 to 9 years	-11.4%	5 to 9 years	-8.2%	5 to 9 years	-14.2%	5 to 9 years	3.1%
10 to 14 years	15.7%	10 to 14 years	2.2%	10 to 14 years	-10.5%	10 to 14 years	2.9%	10 to 14 years	-21.5%
15 to 19 years	-20.7%	15 to 19 years	26.2%	15 to 19 years	-17.3%	15 to 19 years	-8.5%	15 to 19 years	-13.9%
20 to 24 years	<b>-21.8%</b>	20 to 24 years	7.9%	20 to 24 years	6.4%	20 to 24 years	-10.6%	20 to 24 years	-0.1%
25 to 29 years	-5.3%	25 to 29 years	13.9%	25 to 29 years	13.1%	25 to 29 years	-17.4%	25 to 29 years	-11.6%
30 to 34 years	6.6%	30 to 34 years	-13.6%	30 to 34 years	10.9%	30 to 34 years	5.7%	30 to 34 years	-10.7%
35 to 39 years	42.7%	35 to 39 years	<b>-29.8%</b>	35 to 39 years	35.9%	35 to 39 years	13.2%	35 to 39 years	-17.5%
40 to 44 years	39.6%	40 to 44 years	-20.0%	40 to 44 years	3.8%	40 to 44 years	10.5%	40 to 44 years	5.7%
45 to 49 years	33.3%	45 to 49 years	53.4%	45 to 49 years	<b>-31.9%</b>	45 to 49 years	37.8%	45 to 49 years	13.4%
50 to 54 years	<b>64.0%</b>	50 to 54 years	19.1%	50 to 54 years	-12.2%	50 to 54 years	2.5%	50 to 54 years	10.0%
55 to 59 years	41.0%	55 to 59 years	55.8%	55 to 59 years	42.2%	55 to 59 years	<b>-32.0%</b>	55 to 59 years	35.8%
60 to 64 years	10.5%	60 to 64 years	<b>68.7%</b>	60 to 64 years	18.1%	60 to 64 years	-12.0%	60 to 64 years	0.9%
65 to 69 years	-8.3%	65 to 69 years	61.7%	65 to 69 years	47.6%	65 to 69 years	38.9%	65 to 69 years	<b>-32.2%</b>
70 to 74 years	13.9%	70 to 74 years	12.2%	70 to 74 years	<b>69.0%</b>	70 to 74 years	17.4%	70 to 74 years	-11.2%
75 to 79 years	5.6%	75 to 79 years	29.8%	75 to 79 years	38.3%	75 to 79 years	49.3%	75 to 79 years	34.5%
80 to 84 years	18.4%	80 to 84 years	29.1%	80 to 84 years	5.3%	80 to 84 years	<b>71.2%</b>	80 to 84 years	16.6%
85 years and over	20.8%	85 years and over	3.3%	85 years and over	25.2%	85 years and over	23.3%	85 years and over	<b>48.7%</b>
Total	10.8%	Total	9.1%	Total	7.0%	Total	3.0%	Total	-0.6%

Table 24: Percent of Population for Lancaster

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	28.4%	24.8%	23.6%	23.2%	17.5%	15.7%
20 to 39 years	36.2%	33.7%	28.4%	20.5%	29.3%	26.4%
40 to 59 years	21.8%	28.2%	31.0%	26.8%	27.6%	32.0%
Over 60	13.7%	13.3%	17.0%	29.5%	25.6%	25.9%

The Town of Lancaster follows a similar profile of most of the communities in the region, with a declining youth cohort and an increasing presence of the older cohort. The largest cohort for 2040 is projected to be the middle age cohort, which is projected to fluctuate through the next few decades but arrive at a similar percentage of the population as it was in 2010. Overall, the Town of Lancaster's population is projected to increase between 2010-2020 and 2020-2030, and slightly decline between 2030 and 2040.

### 3.13. Leominster

Table 25: Leominster Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-1.7%	Under 5 years	-17.5%	Under 5 years	-39.5%	Under 5 years	40.1%	Under 5 years	-22.7%
5 to 9 years	28.2%	5 to 9 years	-19.8%	5 to 9 years	<b>-40.8%</b>	5 to 9 years	<b>60.8%</b>	5 to 9 years	-28.3%
10 to 14 years	33.8%	10 to 14 years	-8.4%	10 to 14 years	-14.4%	10 to 14 years	-39.1%	10 to 14 years	39.1%
15 to 19 years	9.3%	15 to 19 years	9.4%	15 to 19 years	-12.9%	15 to 19 years	<b>-40.5%</b>	15 to 19 years	<b>60.1%</b>
20 to 24 years	-31.4%	20 to 24 years	12.5%	20 to 24 years	0.1%	20 to 24 years	-14.6%	20 to 24 years	-41.6%
25 to 29 years	<b>-31.6%</b>	25 to 29 years	-9.2%	25 to 29 years	20.4%	25 to 29 years	-13.1%	25 to 29 years	<b>-43.4%</b>
30 to 34 years	-10.1%	30 to 34 years	-24.4%	30 to 34 years	7.4%	30 to 34 years	0.1%	30 to 34 years	-14.6%
35 to 39 years	24.4%	35 to 39 years	<b>-28.3%</b>	35 to 39 years	-11.3%	35 to 39 years	20.4%	35 to 39 years	-13.0%
40 to 44 years	33.0%	40 to 44 years	-15.3%	40 to 44 years	-22.0%	40 to 44 years	7.3%	40 to 44 years	0.1%
45 to 49 years	47.1%	45 to 49 years	18.4%	45 to 49 years	-26.4%	45 to 49 years	-11.3%	45 to 49 years	20.4%
50 to 54 years	<b>55.0%</b>	50 to 54 years	29.5%	50 to 54 years	-14.1%	50 to 54 years	-22.0%	50 to 54 years	7.3%
55 to 59 years	20.7%	55 to 59 years	42.0%	55 to 59 years	20.5%	55 to 59 years	-26.3%	55 to 59 years	-11.4%
60 to 64 years	-12.1%	60 to 64 years	<b>51.9%</b>	60 to 64 years	30.8%	60 to 64 years	-14.0%	60 to 64 years	-22.0%
65 to 69 years	-8.0%	65 to 69 years	15.1%	65 to 69 years	<b>45.5%</b>	65 to 69 years	20.4%	65 to 69 years	-26.1%
70 to 74 years	4.3%	70 to 74 years	-15.2%	70 to 74 years	54.3%	70 to 74 years	30.5%	70 to 74 years	-13.7%
75 to 79 years	31.0%	75 to 79 years	-12.8%	75 to 79 years	17.7%	75 to 79 years	45.6%	75 to 79 years	20.3%
80 to 84 years	45.9%	80 to 84 years	-0.6%	80 to 84 years	-13.2%	80 to 84 years	53.8%	80 to 84 years	30.2%
85 years and over	28.3%	85 years and over	45.0%	85 years and over	-1.3%	85 years and over	3.6%	85 years and over	33.1%
Total	8.3%	Total	-1.3%	Total	-4.0%	Total	-1.4%	Total	-7.0%

Table 26: Percent of Population for Leominster

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	25.8%	27.6%	25.2%	13.2%	18.7%	20.8%
20 to 39 years	36.3%	29.0%	24.8%	27.8%	26.5%	20.9%
40 to 59 years	20.5%	26.2%	30.4%	29.6%	24.2%	26.9%
Over 60	17.4%	17.2%	19.7%	29.5%	30.6%	31.4%

The youngest cohort's population in Leominster is projected to fluctuate, first with a steep decline from 2010 to 2020, then slowly gaining in numbers between 2020 and 2040. The percentage of the population that is in the young adult cohort is expected to increase between 2010 and 2020, but then decline to about five percentage points less than it was in 2010 between 2020 and 2040. The oldest cohort will gain significant residents, which will make it the largest cohort in Leominster by 2030. Overall, the City of Leominster is projected to lose population every decade until 2040, with the change between 2030 and 2040 being the most severe.

### 3.14. Lunenburg

Table 27: Lunenburg Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-9.0%	Under 5 years	-11.9%	Under 5 years	-9.2%	Under 5 years	-1.0%	Under 5 years	-10.0%
5 to 9 years	0.9%	5 to 9 years	-8.3%	5 to 9 years	-22.2%	5 to 9 years	15.4%	5 to 9 years	-12.4%
10 to 14 years	18.8%	10 to 14 years	-3.9%	10 to 14 years	-14.0%	10 to 14 years	-9.2%	10 to 14 years	-1.2%
15 to 19 years	5.3%	15 to 19 years	9.8%	15 to 19 years	-12.0%	15 to 19 years	-21.8%	15 to 19 years	14.8%
20 to 24 years	<b>39.0%</b>	20 to 24 years	38.8%	20 to 24 years	-10.8%	20 to 24 years	-14.2%	20 to 24 years	-9.2%
25 to 29 years	-37.1%	25 to 29 years	8.5%	25 to 29 years	7.9%	25 to 29 years	-12.0%	25 to 29 years	-22.5%
30 to 34 years	-20.0%	30 to 34 years	-28.3%	30 to 34 years	28.7%	30 to 34 years	-10.7%	30 to 34 years	-14.7%
35 to 39 years	-1.0%	35 to 39 years	<b>-30.6%</b>	35 to 39 years	3.5%	35 to 39 years	7.8%	35 to 39 years	-12.0%
40 to 44 years	19.9%	40 to 44 years	-13.9%	40 to 44 years	-30.8%	40 to 44 years	28.7%	40 to 44 years	-10.7%
45 to 49 years	34.9%	45 to 49 years	9.9%	45 to 49 years	<b>-34.0%</b>	45 to 49 years	3.5%	45 to 49 years	7.7%
50 to 54 years	<b>53.8%</b>	50 to 54 years	22.5%	50 to 54 years	-14.8%	50 to 54 years	-30.8%	50 to 54 years	28.6%
55 to 59 years	19.9%	55 to 59 years	63.8%	55 to 59 years	0.2%	55 to 59 years	<b>-34.0%</b>	55 to 59 years	3.5%
60 to 64 years	-5.3%	60 to 64 years	<b>92.0%</b>	60 to 64 years	10.4%	60 to 64 years	-14.9%	60 to 64 years	-30.8%
65 to 69 years	-7.8%	65 to 69 years	36.0%	65 to 69 years	53.9%	65 to 69 years	0.5%	65 to 69 years	<b>-33.9%</b>
70 to 74 years	-7.0%	70 to 74 years	12.0%	70 to 74 years	<b>77.8%</b>	70 to 74 years	10.5%	70 to 74 years	-14.9%
75 to 79 years	12.1%	75 to 79 years	15.8%	75 to 79 years	22.0%	75 to 79 years	53.9%	75 to 79 years	0.6%
80 to 84 years	43.5%	80 to 84 years	4.8%	80 to 84 years	5.7%	80 to 84 years	<b>77.9%</b>	80 to 84 years	10.5%
85 years and over	50.7%	85 years and over	49.5%	85 years and over	7.7%	85 years and over	15.6%	85 years and over	<b>50.5%</b>
Total	3.1%	Total	7.3%	Total	-2.8%	Total	-3.2%	Total	-6.2%

Table 28: Percent of Population for Lunenburg

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	27.7%	28.0%	25.2%	19.4%	21.6%	22.5%
20 to 39 years	30.4%	23.1%	18.8%	21.0%	20.1%	18.3%
40 to 59 years	25.8%	32.9%	35.2%	29.5%	26.2%	29.6%
Over 60	16.1%	16.0%	20.9%	30.1%	32.1%	29.6%

The Town of Lunenburg is projected to see decreases in residents under the age of 19, but to a lesser degree than the region as a whole. The young adult cohort is projected to remain at about the same percent of the population. The middle aged population is projected to reduce in size. The oldest cohort is also projected to increase in size, but not to the same degree as many communities within the region and the region as a whole. Overall, the Town of Lunenburg is projected to experience increasingly severe decline in its population levels.

### 3.15. Petersham

Table 29: Petersham Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-11.8%	Under 5 years	-5.0%	Under 5 years	-19.4%	Under 5 years	10.4%	Under 5 years	-10.1%
5 to 9 years	12.5%	5 to 9 years	-25.0%	5 to 9 years	-14.6%	5 to 9 years	0.6%	5 to 9 years	-2.3%
10 to 14 years	26.2%	10 to 14 years	0.0%	10 to 14 years	-3.2%	10 to 14 years	-22.6%	10 to 14 years	10.4%
15 to 19 years	-15.6%	15 to 19 years	21.5%	15 to 19 years	-27.1%	15 to 19 years	-15.0%	15 to 19 years	0.6%
20 to 24 years	<b>-43.8%</b>	20 to 24 years	47.2%	20 to 24 years	-7.2%	20 to 24 years	-3.2%	20 to 24 years	-22.6%
25 to 29 years	-16.9%	25 to 29 years	-51.0%	25 to 29 years	70.3%	25 to 29 years	-27.1%	25 to 29 years	-14.7%
30 to 34 years	-34.4%	30 to 34 years	-16.9%	30 to 34 years	25.4%	30 to 34 years	-7.5%	30 to 34 years	-2.0%
35 to 39 years	7.2%	35 to 39 years	-33.7%	35 to 39 years	<b>-44.4%</b>	35 to 39 years	69.9%	35 to 39 years	-27.1%
40 to 44 years	-10.1%	40 to 44 years	-20.6%	40 to 44 years	-23.1%	40 to 44 years	24.7%	40 to 44 years	-8.5%
45 to 49 years	52.6%	45 to 49 years	0.9%	45 to 49 years	-30.8%	45 to 49 years	<b>-44.0%</b>	45 to 49 years	69.5%
50 to 54 years	<b>133.3%</b>	50 to 54 years	21.9%	50 to 54 years	-31.1%	50 to 54 years	-23.5%	50 to 54 years	25.0%
55 to 59 years	53.5%	55 to 59 years	78.8%	55 to 59 years	-6.2%	55 to 59 years	-30.3%	55 to 59 years	<b>-43.7%</b>
60 to 64 years	-18.8%	60 to 64 years	<b>107.7%</b>	60 to 64 years	30.9%	60 to 64 years	-31.5%	60 to 64 years	-23.1%
65 to 69 years	-29.0%	65 to 69 years	72.7%	65 to 69 years	69.9%	65 to 69 years	-6.1%	65 to 69 years	-30.2%
70 to 74 years	36.2%	70 to 74 years	-34.4%	70 to 74 years	<b>136.1%</b>	70 to 74 years	31.8%	70 to 74 years	-31.8%
75 to 79 years	11.1%	75 to 79 years	-2.5%	75 to 79 years	48.1%	75 to 79 years	71.5%	75 to 79 years	-7.4%
80 to 84 years	0.0%	80 to 84 years	19.4%	80 to 84 years	-30.3%	80 to 84 years	<b>129.3%</b>	80 to 84 years	35.8%
85 years and over	16.7%	85 years and over	<b>-39.3%</b>	85 years and over	26.0%	85 years and over	14.1%	85 years and over	<b>73.9%</b>
Total	4.3%	Total	4.6%	Total	0.4%	Total	-2.4%	Total	-7.8%

Table 30: Percent of Population for Petersham

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	24.2%	23.6%	22.0%	18.6%	17.2%	18.6%
20 to 39 years	27.4%	21.0%	15.8%	13.9%	16.5%	14.8%
40 to 59 years	25.0%	33.4%	36.3%	26.4%	22.4%	25.0%
Over 60	23.3%	21.9%	25.9%	41.1%	43.9%	41.5%

The youngest cohort of the Town of Petersham is projected to decrease modestly compared to the rest of the region. The young adult cohort is projected to cumulatively remain about the same in size, although the 20 to 24-year-old cohort is expected to decrease significantly. The middle aged cohort is also expected to decrease in size. Lastly, the oldest cohort of Petersham is expected to increase significantly in size. Overall, the Town of Petersham is expected to have a declining population.

### 3.16. Phillipston

Table 31: Phillipston Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-19.3%	Under 5 years	-20.8%	Under 5 years	-6.8%	Under 5 years	1.6%	Under 5 years	-22.2%
5 to 9 years	-4.8%	5 to 9 years	-24.6%	5 to 9 years	-7.0%	5 to 9 years	1.1%	5 to 9 years	-17.6%
10 to 14 years	37.7%	10 to 14 years	-26.8%	10 to 14 years	-16.5%	10 to 14 years	-7.2%	10 to 14 years	1.6%
15 to 19 years	11.5%	15 to 19 years	14.7%	15 to 19 years	-30.0%	15 to 19 years	-7.8%	15 to 19 years	1.1%
20 to 24 years	-37.8%	20 to 24 years	51.0%	20 to 24 years	-29.8%	20 to 24 years	-17.4%	20 to 24 years	-6.6%
25 to 29 years	<b>-43.9%</b>	25 to 29 years	14.5%	25 to 29 years	13.3%	25 to 29 years	-30.1%	25 to 29 years	-7.7%
30 to 34 years	-16.4%	30 to 34 years	-42.1%	30 to 34 years	61.7%	30 to 34 years	-31.5%	30 to 34 years	-15.9%
35 to 39 years	23.8%	35 to 39 years	<b>-49.5%</b>	35 to 39 years	21.5%	35 to 39 years	13.5%	35 to 39 years	-30.3%
40 to 44 years	44.4%	40 to 44 years	5.1%	40 to 44 years	-47.4%	40 to 44 years	61.3%	40 to 44 years	-31.5%
45 to 49 years	64.9%	45 to 49 years	29.0%	45 to 49 years	<b>-50.6%</b>	45 to 49 years	22.1%	45 to 49 years	13.4%
50 to 54 years	54.2%	50 to 54 years	52.3%	50 to 54 years	2.1%	50 to 54 years	-47.2%	50 to 54 years	<b>59.2%</b>
55 to 59 years	41.4%	55 to 59 years	74.4%	55 to 59 years	24.8%	55 to 59 years	<b>-51.0%</b>	55 to 59 years	23.9%
60 to 64 years	-1.9%	60 to 64 years	66.0%	60 to 64 years	47.5%	60 to 64 years	2.0%	60 to 64 years	-47.4%
65 to 69 years	56.7%	65 to 69 years	25.5%	65 to 69 years	88.2%	65 to 69 years	24.4%	65 to 69 years	<b>-50.4%</b>
70 to 74 years	-18.2%	70 to 74 years	59.3%	70 to 74 years	33.6%	70 to 74 years	49.2%	70 to 74 years	1.9%
75 to 79 years	-45.8%	75 to 79 years	<b>184.6%</b>	75 to 79 years	-2.2%	75 to 79 years	<b>89.3%</b>	75 to 79 years	24.2%
80 to 84 years	0.0%	80 to 84 years	-6.3%	80 to 84 years	47.5%	80 to 84 years	32.4%	80 to 84 years	51.9%
85 years and over	<b>533.3%</b>	85 years and over	-42.1%	85 years and over	<b>116.3%</b>	85 years and over	15.7%	85 years and over	52.5%
Total	9.2%	Total	3.8%	Total	-1.7%	Total	-4.2%	Total	-8.1%

\*note: the extreme percent changes are often a result of very low numbers

Table 32: Percent of Population for Phillipston

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	32.5%	31.3%	25.4%	21.2%	21.8%	21.6%
20 to 39 years	34.4%	26.8%	19.3%	23.3%	20.2%	17.8%
40 to 59 years	22.4%	31.1%	40.2%	32.1%	27.7%	33.4%
Over 60	10.8%	10.8%	15.0%	23.4%	30.4%	27.3%

The youngest cohort in Phillipston is expected to decrease at a more moderate pace than the region as a whole. The young adult cohort is expected to see a net decrease, although the younger sub-cohorts (20-24 and 25 to 29) are expected to decline in population, and the older sub-cohorts (30-34 and 35-39) are expected to grow. The middle aged cohort's population is expected to decline overall, but growth is projected to occur for the older ages of the cohort. Finally, the oldest cohort is expected to grow significantly. Overall, the Town of Phillipston's population is expected to decrease with increasing intensity throughout the years up to 2040.

### 3.17. Royalston

Table 33: Royalston Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-26.8%	Under 5 years	-18.3%	Under 5 years	-5.3%	Under 5 years	6.5%	Under 5 years	-14.6%
5 to 9 years	-7.2%	5 to 9 years	-35.0%	5 to 9 years	5.3%	5 to 9 years	5.8%	5 to 9 years	-11.0%
10 to 14 years	27.1%	10 to 14 years	-31.1%	10 to 14 years	-17.6%	10 to 14 years	-4.8%	10 to 14 years	6.5%
15 to 19 years	40.8%	15 to 19 years	-2.0%	15 to 19 years	-37.0%	15 to 19 years	5.6%	15 to 19 years	5.8%
20 to 24 years	-8.7%	20 to 24 years	47.6%	20 to 24 years	-37.1%	20 to 24 years	-18.1%	20 to 24 years	-4.5%
25 to 29 years	-23.9%	25 to 29 years	-3.9%	25 to 29 years	20.9%	25 to 29 years	-37.0%	25 to 29 years	5.6%
30 to 34 years	-30.8%	30 to 34 years	-38.6%	30 to 34 years	94.4%	30 to 34 years	-35.8%	30 to 34 years	-16.7%
35 to 39 years	-10.9%	35 to 39 years	-39.6%	35 to 39 years	9.2%	35 to 39 years	21.0%	35 to 39 years	-37.2%
40 to 44 years	33.7%	40 to 44 years	-40.0%	40 to 44 years	-34.0%	40 to 44 years	94.8%	40 to 44 years	-35.6%
45 to 49 years	67.9%	45 to 49 years	1.5%	45 to 49 years	-42.9%	45 to 49 years	8.4%	45 to 49 years	20.9%
50 to 54 years	210.0%	50 to 54 years	52.7%	50 to 54 years	-43.5%	50 to 54 years	-33.4%	50 to 54 years	92.6%
55 to 59 years	91.4%	55 to 59 years	88.1%	55 to 59 years	-2.0%	55 to 59 years	-42.9%	55 to 59 years	7.7%
60 to 64 years	-15.6%	60 to 64 years	259.3%	60 to 64 years	41.8%	60 to 64 years	-43.5%	60 to 64 years	-33.3%
65 to 69 years	-51.9%	65 to 69 years	134.6%	65 to 69 years	78.1%	65 to 69 years	-8.7%	65 to 69 years	-43.0%
70 to 74 years	-8.3%	70 to 74 years	-18.2%	70 to 74 years	269.9%	70 to 74 years	41.2%	70 to 74 years	-43.4%
75 to 79 years	-3.0%	75 to 79 years	-31.3%	75 to 79 years	94.4%	75 to 79 years	68.2%	75 to 79 years	3.3%
80 to 84 years	100.0%	80 to 84 years	64.3%	80 to 84 years	-40.1%	80 to 84 years	278.7%	80 to 84 years	39.5%
85 years and over	28.6%	85 years and over	-27.8%	85 years and over	24.4%	85 years and over	21.7%	85 years and over	97.7%
Total	9.3%	Total	0.3%	Total	1.4%	Total	-1.7%	Total	-8.2%

\*note: the extreme percent changes are often a result of very low numbers

Table 34: Percent of Population for Royalston

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	32.7%	31.6%	24.4%	22.7%	21.1%	22.2%
20 to 39 years	30.7%	22.5%	18.0%	20.8%	17.4%	15.3%
40 to 59 years	21.3%	34.0%	38.3%	27.5%	24.8%	30.0%
Over 60	15.3%	12.0%	19.3%	29.0%	36.8%	32.5%

The Town of Royalston's youngest cohort is expected to decline to a much less significant degree than the region as a whole. The young adult cohort is also expected to decrease in size, although more so in the younger sub-cohorts. The middle age cohort is also expected to decrease in size. Lastly, the oldest cohort is expected to increase significantly in size. Overall, the Town of Royalston is expected to grow in total population by 2020, but then shrink in size between 2020 and 2040.



### 3.18. Shirley

Table 35: Shirley Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	2.1%	Under 5 years	<b>-14.2%</b>	Under 5 years	12.6%	Under 5 years	-10.2%	Under 5 years	-9.8%
5 to 9 years	12.9%	5 to 9 years	-10.3%	5 to 9 years	1.8%	5 to 9 years	-8.5%	5 to 9 years	-0.7%
10 to 14 years	5.2%	10 to 14 years	-6.3%	10 to 14 years	-10.0%	10 to 14 years	11.8%	10 to 14 years	-9.8%
15 to 19 years	9.4%	15 to 19 years	34.6%	15 to 19 years	<b>-17.4%</b>	15 to 19 years	1.4%	15 to 19 years	-8.2%
20 to 24 years	21.2%	20 to 24 years	12.1%	20 to 24 years	-9.4%	20 to 24 years	-4.6%	20 to 24 years	3.3%
25 to 29 years	4.1%	25 to 29 years	5.0%	25 to 29 years	41.5%	25 to 29 years	<b>-14.7%</b>	25 to 29 years	-3.8%
30 to 34 years	<b>-21.1%</b>	30 to 34 years	5.5%	30 to 34 years	25.6%	30 to 34 years	-8.4%	30 to 34 years	-1.8%
35 to 39 years	22.8%	35 to 39 years	-7.6%	35 to 39 years	14.6%	35 to 39 years	41.4%	35 to 39 years	<b>-14.8%</b>
40 to 44 years	47.9%	40 to 44 years	-12.2%	40 to 44 years	0.4%	40 to 44 years	25.7%	40 to 44 years	-8.4%
45 to 49 years	<b>77.4%</b>	45 to 49 years	33.8%	45 to 49 years	-11.5%	45 to 49 years	14.2%	45 to 49 years	41.4%
50 to 54 years	65.2%	50 to 54 years	44.3%	50 to 54 years	-10.7%	50 to 54 years	-1.8%	50 to 54 years	26.1%
55 to 59 years	42.6%	55 to 59 years	<b>94.3%</b>	55 to 59 years	28.7%	55 to 59 years	-11.4%	55 to 59 years	14.4%
60 to 64 years	-9.8%	60 to 64 years	88.3%	60 to 64 years	35.8%	60 to 64 years	-10.7%	60 to 64 years	-2.1%
65 to 69 years	-9.8%	65 to 69 years	17.4%	65 to 69 years	<b>116.1%</b>	65 to 69 years	26.1%	65 to 69 years	-12.2%
70 to 74 years	37.9%	70 to 74 years	-6.1%	70 to 74 years	84.9%	70 to 74 years	34.7%	70 to 74 years	-10.3%
75 to 79 years	57.7%	75 to 79 years	-11.7%	75 to 79 years	19.3%	75 to 79 years	<b>115.4%</b>	75 to 79 years	23.7%
80 to 84 years	25.5%	80 to 84 years	67.2%	80 to 84 years	-14.0%	80 to 84 years	84.2%	80 to 84 years	34.1%
85 years and over	19.5%	85 years and over	79.6%	85 years and over	-7.5%	85 years and over	21.7%	85 years and over	<b>80.2%</b>
Total	17.3%	Total	13.1%	Total	12.3%	Total	8.3%	Total	3.1%

Table 36: Percent of Population for Shirley

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	25.7%	23.5%	20.5%	22.5%	15.9%	14.3%
20 to 39 years	38.9%	34.1%	30.9%	22.8%	31.7%	28.7%
40 to 59 years	22.4%	30.1%	34.2%	28.8%	30.0%	34.2%
Over 60	13.0%	12.3%	14.4%	25.9%	22.4%	22.8%

The youngest cohort in Shirley is expected to decrease in population. Both the young adult and the middle age cohort are projected to fluctuate in size, but remain at about the same percentage of the population by 2040. Lastly, similar to most communities in the Montachusett Region, the oldest cohort is expected to grow significantly in the next 20 + years. Overall, the Town of Shirley's population is projected to grow most significantly between now and 2020, and grow but at increasingly lesser rates between 2020-2030 and 2030-2040.

### 3.19. Sterling

Table 37: Sterling Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-5.1%	Under 5 years	-16.6%	Under 5 years	-5.6%	Under 5 years	-5.5%	Under 5 years	-4.6%
5 to 9 years	24.0%	5 to 9 years	-12.0%	5 to 9 years	-20.7%	5 to 9 years	4.6%	5 to 9 years	-4.5%
10 to 14 years	16.4%	10 to 14 years	-2.2%	10 to 14 years	-17.8%	10 to 14 years	-5.6%	10 to 14 years	-5.5%
15 to 19 years	-9.9%	15 to 19 years	24.1%	15 to 19 years	-12.3%	15 to 19 years	-20.5%	15 to 19 years	4.5%
20 to 24 years	<b>-25.1%</b>	20 to 24 years	6.5%	20 to 24 years	2.2%	20 to 24 years	-17.6%	20 to 24 years	-5.6%
25 to 29 years	-23.6%	25 to 29 years	-7.2%	25 to 29 years	21.2%	25 to 29 years	-11.7%	25 to 29 years	-20.9%
30 to 34 years	-21.1%	30 to 34 years	<b>-35.0%</b>	30 to 34 years	15.3%	30 to 34 years	1.7%	30 to 34 years	-16.5%
35 to 39 years	3.4%	35 to 39 years	-31.2%	35 to 39 years	-1.4%	35 to 39 years	21.8%	35 to 39 years	-12.2%
40 to 44 years	14.2%	40 to 44 years	-19.7%	40 to 44 years	<b>-35.6%</b>	40 to 44 years	15.3%	40 to 44 years	1.7%
45 to 49 years	47.5%	45 to 49 years	8.5%	45 to 49 years	-32.8%	45 to 49 years	-1.2%	45 to 49 years	22.2%
50 to 54 years	<b>102.0%</b>	50 to 54 years	21.3%	50 to 54 years	-22.0%	50 to 54 years	<b>-35.6%</b>	50 to 54 years	15.3%
55 to 59 years	76.6%	55 to 59 years	63.5%	55 to 59 years	3.3%	55 to 59 years	-32.8%	55 to 59 years	-1.2%
60 to 64 years	14.3%	60 to 64 years	<b>116.8%</b>	60 to 64 years	17.3%	60 to 64 years	-21.9%	60 to 64 years	<b>-35.6%</b>
65 to 69 years	-7.2%	65 to 69 years	107.2%	65 to 69 years	51.5%	65 to 69 years	3.4%	65 to 69 years	-32.8%
70 to 74 years	3.0%	70 to 74 years	19.8%	70 to 74 years	<b>112.4%</b>	70 to 74 years	17.3%	70 to 74 years	-21.8%
75 to 79 years	59.0%	75 to 79 years	20.5%	75 to 79 years	83.2%	75 to 79 years	51.3%	75 to 79 years	3.5%
80 to 84 years	79.7%	80 to 84 years	14.8%	80 to 84 years	14.8%	80 to 84 years	<b>112.2%</b>	80 to 84 years	17.3%
85 years and over	21.7%	85 years and over	232.1%	85 years and over	15.0%	85 years and over	42.8%	85 years and over	<b>61.2%</b>
Total	12.0%	Total	7.6%	Total	-1.3%	Total	-1.6%	Total	-4.1%

Table 38: Percent of Population for Sterling

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	30.9%	29.4%	26.5%	21.7%	21.6%	21.9%
20 to 39 years	31.4%	24.1%	17.4%	17.9%	19.6%	17.6%
40 to 59 years	25.7%	34.0%	35.4%	28.5%	23.5%	26.8%
Over 60	12.0%	12.6%	20.6%	31.8%	35.3%	33.6%

The youngest cohort of the Town of Sterling is expected to drop significantly by 2020, and then stay relatively stagnant until 2040. The young adult population is expected to grow by 2020 and experience some decline by 2040, but remain at about the same percentage level of the population as a whole. The middle age population is projected to decrease significantly by 2030, but then experience growth between 2030 and 2040. The oldest population cohort is expected to grow, consistent with the region as a whole. Overall, the Town of Sterling is projected to decrease in population through 2040.



### 3.20. Templeton

Table 39: Templeton Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	7.5%	Under 5 years	-2.6%	Under 5 years	-0.5%	Under 5 years	10.1%	Under 5 years	-0.9%
5 to 9 years	4.4%	5 to 9 years	-7.7%	5 to 9 years	-5.7%	5 to 9 years	17.9%	5 to 9 years	0.7%
10 to 14 years	13.0%	10 to 14 years	16.0%	10 to 14 years	-6.3%	10 to 14 years	-0.5%	10 to 14 years	10.2%
15 to 19 years	-5.7%	15 to 19 years	40.4%	15 to 19 years	-19.3%	15 to 19 years	-6.1%	15 to 19 years	18.2%
20 to 24 years	-21.7%	20 to 24 years	39.1%	20 to 24 years	5.1%	20 to 24 years	-6.2%	20 to 24 years	-0.5%
25 to 29 years	<b>-26.7%</b>	25 to 29 years	0.6%	25 to 29 years	36.0%	25 to 29 years	-19.4%	25 to 29 years	-5.8%
30 to 34 years	-19.1%	30 to 34 years	-15.4%	30 to 34 years	34.1%	30 to 34 years	5.3%	30 to 34 years	-6.4%
35 to 39 years	20.6%	35 to 39 years	<b>-17.4%</b>	35 to 39 years	-5.0%	35 to 39 years	36.0%	35 to 39 years	-19.6%
40 to 44 years	31.8%	40 to 44 years	0.5%	40 to 44 years	<b>-23.8%</b>	40 to 44 years	34.3%	40 to 44 years	5.1%
45 to 49 years	28.2%	45 to 49 years	39.7%	45 to 49 years	-23.0%	45 to 49 years	-4.9%	45 to 49 years	36.0%
50 to 54 years	<b>63.9%</b>	50 to 54 years	39.4%	50 to 54 years	-2.3%	50 to 54 years	-23.9%	50 to 54 years	34.7%
55 to 59 years	28.1%	55 to 59 years	65.9%	55 to 59 years	24.0%	55 to 59 years	<b>-23.1%</b>	55 to 59 years	-4.7%
60 to 64 years	-12.1%	60 to 64 years	<b>81.8%</b>	60 to 64 years	32.4%	60 to 64 years	-2.2%	60 to 64 years	<b>-23.8%</b>
65 to 69 years	-11.2%	65 to 69 years	59.6%	65 to 69 years	50.1%	65 to 69 years	23.7%	65 to 69 years	-22.8%
70 to 74 years	-7.7%	70 to 74 years	8.8%	70 to 74 years	<b>62.6%</b>	70 to 74 years	32.4%	70 to 74 years	-1.8%
75 to 79 years	1.7%	75 to 79 years	3.4%	75 to 79 years	47.8%	75 to 79 years	51.0%	75 to 79 years	23.3%
80 to 84 years	20.5%	80 to 84 years	23.0%	80 to 84 years	-3.9%	80 to 84 years	<b>62.7%</b>	80 to 84 years	32.4%
85 years and over	8.2%	85 years and over	37.1%	85 years and over	-0.4%	85 years and over	22.9%	85 years and over	<b>46.0%</b>
Total	5.6%	Total	17.9%	Total	5.7%	Total	6.1%	Total	2.9%

Table 40: Percent of Population for Templeton

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	28.3%	28.1%	26.4%	22.3%	22.5%	23.4%
20 to 39 years	30.6%	26.0%	21.1%	22.5%	22.7%	19.9%
40 to 59 years	22.5%	29.1%	32.6%	28.5%	24.8%	28.2%
Over 60	18.6%	16.8%	19.9%	26.8%	30.0%	28.5%

The youngest cohort for Templeton is expected to decrease in size by 2020, but then gain population between 2020 and 2030, as well as between 2030 and 2040. The young adult cohort is expected to increase in size between now and 2030, but then experience decline between 2030 and 2040. The middle age cohort is projected to experience decline by 2030, but then gain in numbers by 2040. Finally, as is the same for almost all communities in the region, Templeton should see significant increases in their elderly population. Overall, the Town is expected to grow between now and 2040.

### 3.21. Townsend

Table 41: Townsend Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-9.3%	Under 5 years	-30.6%	Under 5 years	-4.8%	Under 5 years	-11.0%	Under 5 years	-16.0%
5 to 9 years	-11.0%	5 to 9 years	-18.9%	5 to 9 years	-27.9%	5 to 9 years	9.6%	5 to 9 years	-18.2%
10 to 14 years	8.0%	10 to 14 years	-21.8%	10 to 14 years	-25.0%	10 to 14 years	-4.8%	10 to 14 years	-11.0%
15 to 19 years	26.3%	15 to 19 years	-12.1%	15 to 19 years	-18.5%	15 to 19 years	-27.4%	15 to 19 years	8.9%
20 to 24 years	3.3%	20 to 24 years	11.4%	20 to 24 years	-23.0%	20 to 24 years	-25.0%	20 to 24 years	-4.8%
25 to 29 years	<b>-38.0%</b>	25 to 29 years	7.0%	25 to 29 years	-4.0%	25 to 29 years	-18.5%	25 to 29 years	-27.8%
30 to 34 years	-28.5%	30 to 34 years	-34.5%	30 to 34 years	43.0%	30 to 34 years	-22.9%	30 to 34 years	-25.1%
35 to 39 years	-15.5%	35 to 39 years	<b>-41.3%</b>	35 to 39 years	10.2%	35 to 39 years	-4.0%	35 to 39 years	-18.5%
40 to 44 years	24.4%	40 to 44 years	-27.1%	40 to 44 years	-35.1%	40 to 44 years	43.1%	40 to 44 years	-22.9%
45 to 49 years	84.9%	45 to 49 years	-0.6%	45 to 49 years	<b>-45.7%</b>	45 to 49 years	10.5%	45 to 49 years	-4.1%
50 to 54 years	<b>141.9%</b>	50 to 54 years	31.8%	50 to 54 years	-29.2%	50 to 54 years	-35.1%	50 to 54 years	43.2%
55 to 59 years	88.8%	55 to 59 years	85.3%	55 to 59 years	-0.6%	55 to 59 years	<b>-45.7%</b>	55 to 59 years	10.3%
60 to 64 years	12.0%	60 to 64 years	<b>129.8%</b>	60 to 64 years	35.5%	60 to 64 years	-29.2%	60 to 64 years	-35.1%
65 to 69 years	5.6%	65 to 69 years	82.4%	65 to 69 years	88.3%	65 to 69 years	-0.4%	65 to 69 years	<b>-45.6%</b>
70 to 74 years	20.3%	70 to 74 years	11.6%	70 to 74 years	<b>129.9%</b>	70 to 74 years	36.8%	70 to 74 years	-29.5%
75 to 79 years	3.4%	75 to 79 years	14.2%	75 to 79 years	73.1%	75 to 79 years	88.8%	75 to 79 years	0.0%
80 to 84 years	-4.7%	80 to 84 years	22.2%	80 to 84 years	10.7%	80 to 84 years	<b>130.4%</b>	80 to 84 years	37.0%
85 years and over	21.6%	85 years and over	40.3%	85 years and over	-2.8%	85 years and over	43.0%	85 years and over	<b>90.3%</b>
Total	8.3%	Total	-3.0%	Total	-5.0%	Total	-6.0%	Total	-11.2%

Table 42: Percent of Population for Townsend

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	35.3%	33.3%	27.3%	21.2%	22.1%	22.6%
20 to 39 years	34.8%	25.2%	20.4%	22.0%	20.1%	18.1%
40 to 59 years	20.7%	32.1%	36.4%	28.4%	25.2%	29.1%
Over 60	9.3%	9.4%	15.8%	28.4%	32.6%	30.3%

The youngest cohort in Townsend is expected to experience net decline through 2040, but the percent of the population it represents will decrease by 2020 only to increase by 2030 and 2040. The young adult population is predicted to increase by 2020, but decrease in 2030 and 2040. The middle age cohort is expected to decrease between 2010-2020 and 2020-2030, but increase by 2040. The oldest cohort is expected to become the largest share of the population by 2020 and remain so until 2040. Overall, the Town of Townsend is expected to decrease in population consistently.

### 3.22. Westminster

Table 43: Westminster Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-0.7%	Under 5 years	-23.1%	Under 5 years	16.2%	Under 5 years	-12.0%	Under 5 years	-2.9%
5 to 9 years	13.2%	5 to 9 years	-5.3%	5 to 9 years	-14.1%	5 to 9 years	6.3%	5 to 9 years	-0.9%
10 to 14 years	18.6%	10 to 14 years	-6.7%	10 to 14 years	-20.7%	10 to 14 years	15.9%	10 to 14 years	-11.8%
15 to 19 years	10.6%	15 to 19 years	9.6%	15 to 19 years	-3.5%	15 to 19 years	-14.0%	15 to 19 years	6.2%
20 to 24 years	<b>-26.0%</b>	20 to 24 years	35.6%	20 to 24 years	-12.6%	20 to 24 years	-20.8%	20 to 24 years	15.1%
25 to 29 years	-21.4%	25 to 29 years	4.2%	25 to 29 years	12.9%	25 to 29 years	-3.4%	25 to 29 years	-14.7%
30 to 34 years	-24.4%	30 to 34 years	-23.4%	30 to 34 years	32.3%	30 to 34 years	-12.3%	30 to 34 years	-20.8%
35 to 39 years	0.8%	35 to 39 years	<b>-28.0%</b>	35 to 39 years	9.2%	35 to 39 years	12.9%	35 to 39 years	-3.4%
40 to 44 years	-3.0%	40 to 44 years	-11.5%	40 to 44 years	<b>-28.9%</b>	40 to 44 years	33.4%	40 to 44 years	-12.6%
45 to 49 years	74.3%	45 to 49 years	1.6%	45 to 49 years	-28.3%	45 to 49 years	9.2%	45 to 49 years	12.9%
50 to 54 years	146.4%	50 to 54 years	8.6%	50 to 54 years	-16.3%	50 to 54 years	<b>-28.9%</b>	50 to 54 years	33.0%
55 to 59 years	53.3%	55 to 59 years	69.8%	55 to 59 years	2.9%	55 to 59 years	-28.3%	55 to 59 years	9.2%
60 to 64 years	-13.8%	60 to 64 years	<b>159.7%</b>	60 to 64 years	6.0%	60 to 64 years	-16.3%	60 to 64 years	<b>-28.9%</b>
65 to 69 years	-14.5%	65 to 69 years	54.2%	65 to 69 years	69.2%	65 to 69 years	2.9%	65 to 69 years	-28.3%
70 to 74 years	-2.0%	70 to 74 years	-21.4%	70 to 74 years	<b>172.1%</b>	70 to 74 years	6.1%	70 to 74 years	-16.3%
75 to 79 years	12.0%	75 to 79 years	-16.4%	75 to 79 years	56.9%	75 to 79 years	68.8%	75 to 79 years	2.8%
80 to 84 years	87.5%	80 to 84 years	5.0%	80 to 84 years	-25.3%	80 to 84 years	<b>175.3%</b>	80 to 84 years	6.7%
85 years and over	<b>148.3%</b>	85 years and over	50.0%	85 years and over	4.5%	85 years and over	11.4%	85 years and over	<b>78.0%</b>
Total	11.6%	Total	5.4%	Total	1.5%	Total	0.3%	Total	-2.9%

Table 44: Percent of Population for Westminster

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	29.4%	29.2%	26.1%	23.0%	23.4%	23.4%
20 to 39 years	30.8%	23.3%	19.7%	20.6%	20.4%	19.5%
40 to 59 years	25.1%	33.6%	35.4%	29.3%	26.4%	29.7%
Over 60	14.8%	13.9%	18.8%	27.1%	29.8%	27.4%

The youngest population cohort of Westminster is expected to decrease in size consistently through 2040. The young adult cohort is expected to increase slightly by 2020, and decrease by 2040. The middle age cohort is expected to decline between now and 2030, but then increase in size by 2040. The oldest cohort is expected to increase in size. Overall, the Town of Westminster is expected to see modest growth between now and 2030, and then decline between 2030 and 2040.

### 3.23. Winchendon

Table 45: Winchendon Percent Change

% Change ('90-'00)		% Change ('00-'10)		% Change ('10-'20)		% Change ('20-'30)		% Change ('30-'40)	
Under 5 years	-21.2%	Under 5 years	-18.7%	Under 5 years	-11.5%	Under 5 years	18.2%	Under 5 years	-13.5%
5 to 9 years	-1.5%	5 to 9 years	-18.4%	5 to 9 years	-15.5%	5 to 9 years	29.0%	5 to 9 years	-12.5%
10 to 14 years	43.8%	10 to 14 years	-14.7%	10 to 14 years	-21.8%	10 to 14 years	-10.4%	10 to 14 years	16.8%
15 to 19 years	54.1%	15 to 19 years	29.4%	15 to 19 years	-28.1%	15 to 19 years	-15.5%	15 to 19 years	29.1%
20 to 24 years	-32.6%	20 to 24 years	<b>55.8%</b>	20 to 24 years	-18.0%	20 to 24 years	-21.8%	20 to 24 years	-11.0%
25 to 29 years	<b>-37.0%</b>	25 to 29 years	5.5%	25 to 29 years	<b>58.0%</b>	25 to 29 years	-27.6%	25 to 29 years	-17.1%
30 to 34 years	-14.3%	30 to 34 years	-28.5%	30 to 34 years	51.1%	30 to 34 years	-18.0%	30 to 34 years	-21.7%
35 to 39 years	32.9%	35 to 39 years	<b>-27.9%</b>	35 to 39 years	-0.2%	35 to 39 years	<b>57.9%</b>	35 to 39 years	-28.1%
40 to 44 years	50.4%	40 to 44 years	-7.6%	40 to 44 years	<b>-31.2%</b>	40 to 44 years	51.4%	40 to 44 years	-18.0%
45 to 49 years	52.5%	45 to 49 years	45.5%	45 to 49 years	-31.1%	45 to 49 years	0.0%	45 to 49 years	<b>57.9%</b>
50 to 54 years	<b>62.8%</b>	50 to 54 years	51.2%	50 to 54 years	-7.4%	50 to 54 years	<b>-31.2%</b>	50 to 54 years	51.0%
55 to 59 years	31.2%	55 to 59 years	48.3%	55 to 59 years	47.4%	55 to 59 years	-31.0%	55 to 59 years	-0.3%
60 to 64 years	13.5%	60 to 64 years	52.8%	60 to 64 years	56.3%	60 to 64 years	-7.8%	60 to 64 years	<b>-31.2%</b>
65 to 69 years	-7.7%	65 to 69 years	34.3%	65 to 69 years	45.7%	65 to 69 years	47.9%	65 to 69 years	-30.5%
70 to 74 years	-13.4%	70 to 74 years	14.2%	70 to 74 years	51.5%	70 to 74 years	55.5%	70 to 74 years	-7.0%
75 to 79 years	14.4%	75 to 79 years	15.1%	75 to 79 years	23.7%	75 to 79 years	42.9%	75 to 79 years	48.7%
80 to 84 years	23.6%	80 to 84 years	11.5%	80 to 84 years	-1.2%	80 to 84 years	53.1%	80 to 84 years	54.5%
85 years and over	-11.1%	85 years and over	12.5%	85 years and over	5.7%	85 years and over	17.6%	85 years and over	40.4%
Total	9.2%	Total	7.2%	Total	2.3%	Total	3.9%	Total	-1.2%

Table 46: Percent of Population for Winchendon

Percent of Population						
	1990	2000	2010	2020	2030	2040
Under 19	31.9%	32.8%	28.8%	20.1%	22.2%	23.4%
20 to 39 years	33.9%	27.0%	23.0%	26.3%	25.1%	19.9%
40 to 59 years	19.1%	26.1%	31.4%	29.2%	24.4%	29.4%
Over 60	15.1%	14.1%	16.8%	24.5%	28.2%	27.4%

The youngest cohort of the Town of Winchendon is expected to decrease dramatically by 2020, but then increase between 2020-2030 and 2030-2040. In the opposite fashion, the young adult cohort is expected to increase by 2020, but decrease from 2020 to 2040. The middle aged cohort is expected to decrease between now and 2030, but increase between 2030-2040. Last, the oldest cohort is expected to grow significantly. Overall, Winchendon's population is predicted to increase between now and 2030, but decrease between 2030-2040.

## 4. Discussion

In order to compare the predicted growth patterns throughout the years, the maps on the following pages were created using the total actual and projected population change for each decade.

Additionally, maps were made for the percent changes based projections made by the University of Massachusetts' Donahue Institute for additional comparisons. The Donahue Institute uses the Cohort-Component Method as it's methodology for its projections. The results of the two projections methods are discussed in the following pages. The projected percent changes and population numbers for these separate projections can be found in the Tables below. Additionally, the pages 33-36 contain maps that illustrate the actual and projected growth as calculated by MRPC and the Donahue Institute.

Table 47: Comparison of Projection Methods – Percent Changes

	Actual Percent Changes		% Change (2010 - 2020)		% Change (2020 - 2030)		% Change (2030 - 2040)	
	1990 - 2000	2000 -2010	MRPC	UMDI	MRPC	UMDI	MRPC	UMDI
Ashburnham	2.1%	9.6%	-0.5%	6.1%	-1.6%	5.1%	-5.7%	7.0%
Ashby	4.7%	8.0%	6.6%	5.0%	1.4%	3.4%	-6.5%	1.6%
Athol	-1.3%	2.5%	-1.7%	6.1%	-2.3%	9.1%	-5.7%	19.5%
Ayer	16.6%	1.9%	7.2%	6.6%	4.7%	1.0%	1.4%	-2.3%
Clinton	1.6%	1.3%	-1.0%	1.9%	-1.4%	-0.7%	-5.8%	5.3%
Fitchburg	<b>-5.1%</b>	3.1%	<b>-6.6%</b>	3.0%	-3.6%	1.8%	-8.7%	-1.1%
Gardner	3.2%	-2.6%	-4.0%	<b>-2.9%</b>	-2.7%	<b>-5.4%</b>	-7.5%	-18.0%
Groton	27.1%	11.5%	-1.6%	6.9%	6.7%	6.5%	5.6%	6.8%
Harvard	<b>28.3%</b>	9.0%	14.1%	12.9%	<b>19.9%</b>	9.8%	9.8%	-3.2%
Hubbardston	39.8%	12.1%	<b>18.8%</b>	9.3%	18.6%	9.2%	<b>10.0%</b>	17.8%
Lancaster	10.8%	9.1%	7.0%	12.4%	3.0%	6.9%	-0.6%	12.3%
Leominster	8.3%	-1.3%	-4.0%	-2.3%	-1.4%	-4.6%	-7.0%	<b>-15.6%</b>
Lunenburg	3.1%	7.3%	-2.8%	4.6%	-3.2%	1.7%	-6.2%	-2.1%
Petersham	4.3%	4.6%	0.4%	3.5%	-2.4%	3.9%	-7.8%	2.3%
Phillipston	9.2%	3.8%	-1.7%	1.2%	-4.2%	-0.9%	-8.1%	-10.6%
Royalston	9.3%	0.3%	1.4%	-2.9%	-1.7%	-1.3%	-8.2%	-14.8%
Shirley	17.3%	13.1%	12.3%	<b>18.2%</b>	8.3%	<b>13.2%</b>	3.1%	13.1%
Sterling	12.0%	7.6%	-1.3%	2.0%	-1.6%	-2.6%	-4.1%	-9.5%
Templeton	5.6%	<b>17.9%</b>	5.7%	15.0%	6.1%	10.8%	2.9%	<b>29.0%</b>
Townsend	8.3%	<b>-3.0%</b>	-5.0%	1.0%	<b>-6.0%</b>	-4.9%	<b>-11.2%</b>	-16.6%
Westminster	11.6%	5.4%	1.5%	3.1%	0.3%	1.7%	-2.9%	-3.6%
Winchendon	9.2%	7.2%	2.3%	5.3%	3.9%	3.5%	-1.2%	2.2%
Montachusett	6.3%	3.7%	6.2%	3.7%	2.7%	1.7%	-1.7%	-1.9%

Table 48: Comparison of Actual Projected Numbers

Town	Census 2010	2020		2030		2040	
		MRPC	UMDI	MRPC	UMDI	MRPC	UMDI
Ashburnham	6081	6053	6449	5957	6780	5616	6900
Ashby	3074	3277	3228	3322	3339	3106	3313
Athol	11584	11392	12296	11131	13414	10495	14700
Ayer	7427	7961	7918	8338	7997	8453	7700
Clinton	13606	13471	13869	13279	13774	12513	15200
Fitchburg	40318	37652	41520	36292	42267	33135	42340
Gardner	20228	19418	19634	18901	18576	17479	17600
Groton	10646	10472	11378	11170	12120	11800	12042
Harvard	6520	7439	7361	8922	8083	9796	6700
Hubbardston	4382	5207	4791	6176	5232	6795	5480
Lancaster	8055	8617	9055	8879	9681	8822	9600
Leominster	40759	39129	39824	38577	38000	35873	36500
Lunenburg	10086	9800	10551	9487	10732	8902	10480
Petersham	1234	1239	1277	1209	1327	1115	1350
Phillipston	1682	1653	1702	1584	1687	1456	1600
Royalston	1258	1276	1222	1254	1206	1151	1150
Shirley	7211	8099	8523	8768	9648	9039	8650
Sterling	7808	7707	7966	7581	7759	7272	7500
Templeton	8013	8472	9213	8986	10208	9249	10975
Townsend	8926	8477	9014	7972	8571	7078	7900
Westminster	7277	7383	7504	7404	7628	7188	7445
Winchendon	10300	10541	10841	10955	11219	10827	11175
Montachusett	236475	251149	245136	258030	249248	253600	246300



Figure 3

## Population Change (1990 - 2000)

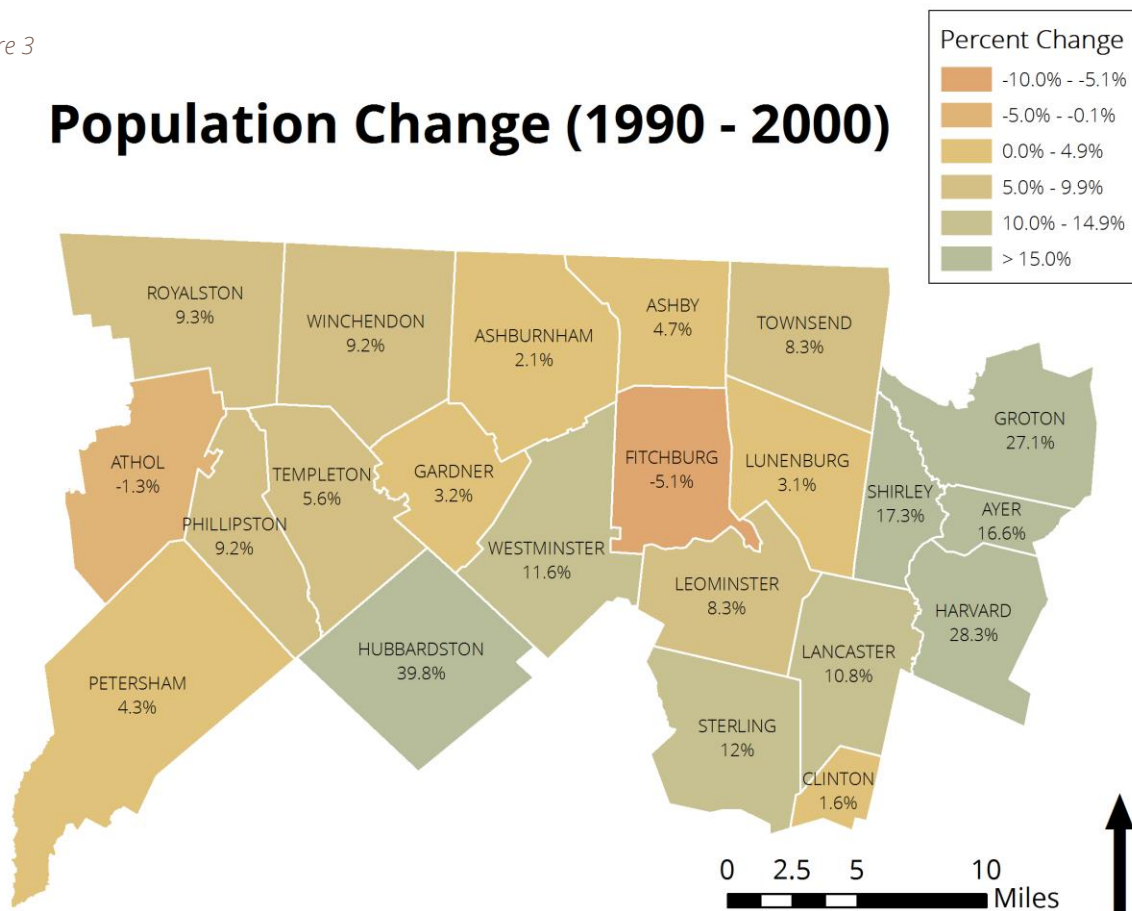


Figure 4

## Population Change (2000 - 2010)

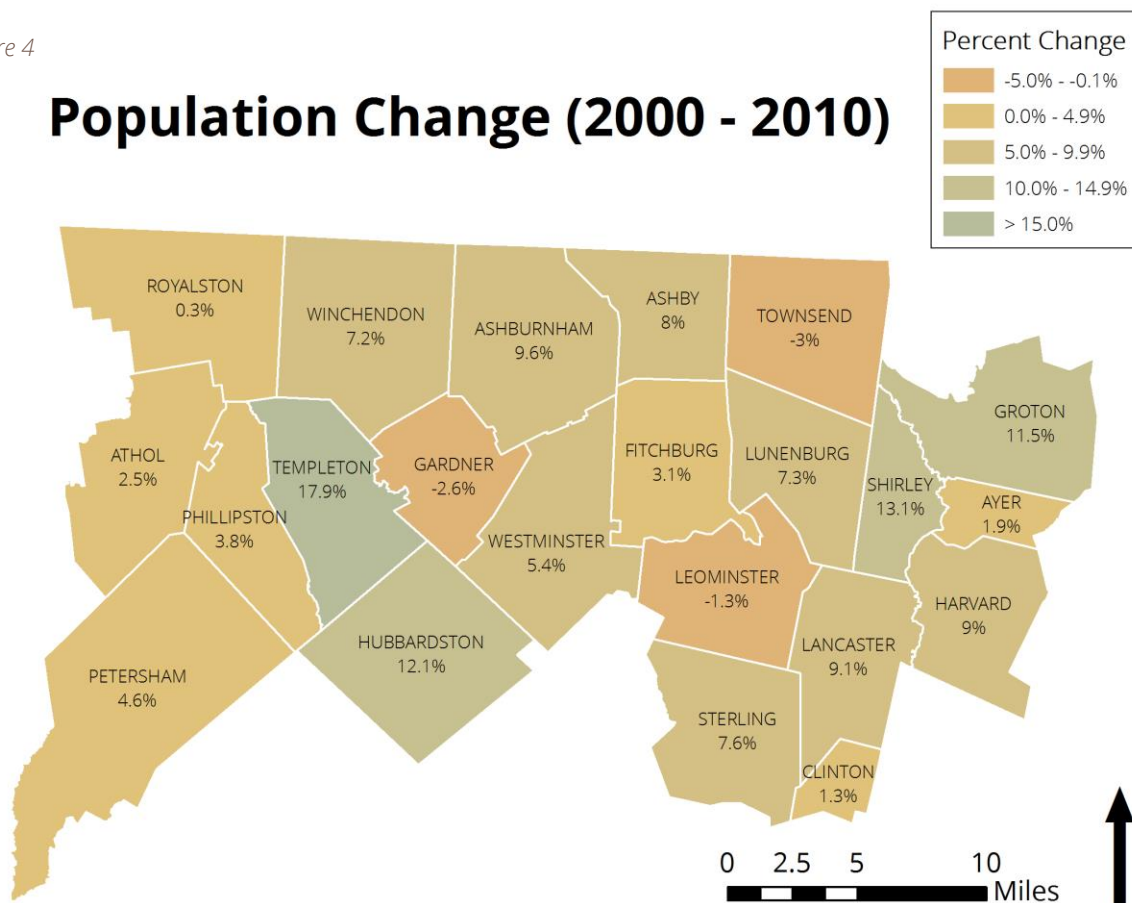


Figure 5

## Projected Population Change MRPC (2010 - 2020)

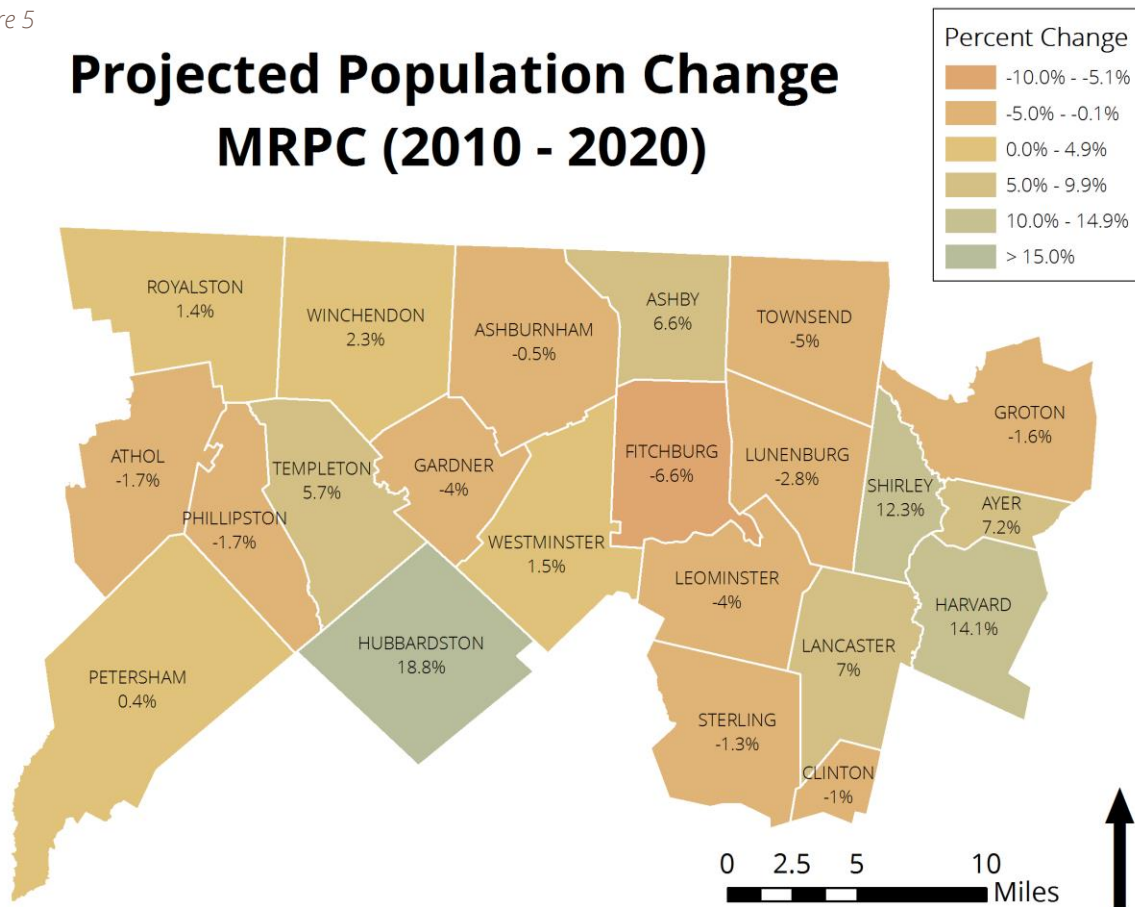


Figure 6

## Projected Population Change Donahue Institute (2010 - 2020)

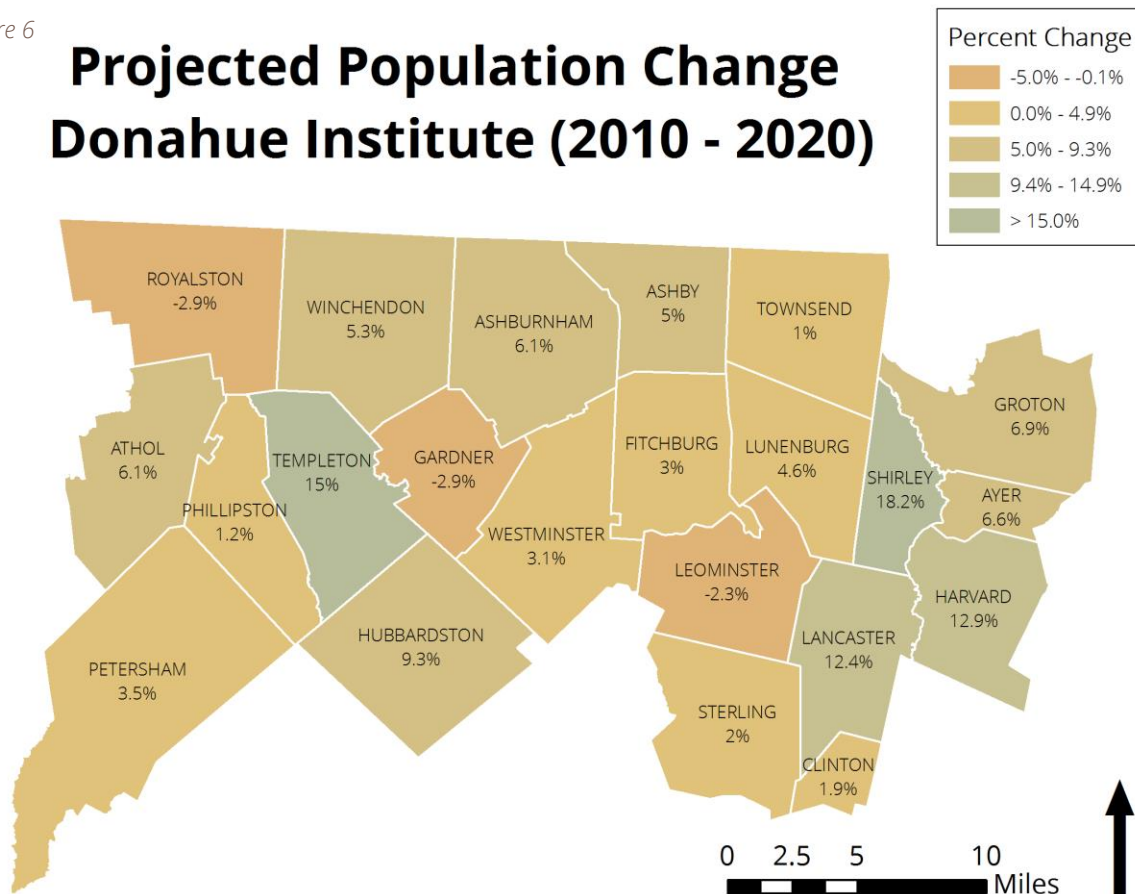




Figure 8

## Projected Population Change MRPC (2020 - 2030)

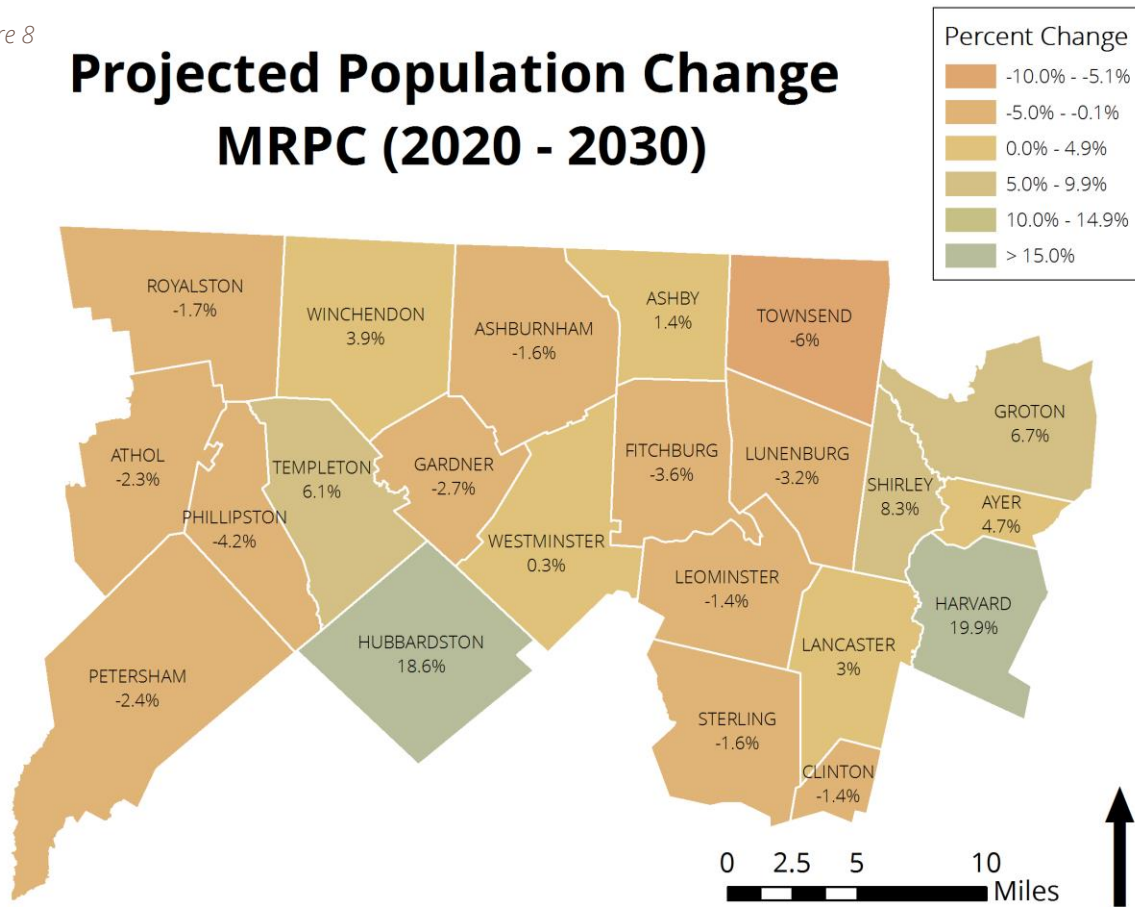


Figure 7

## Projected Population Change Donahue Institute (2020 - 2030)

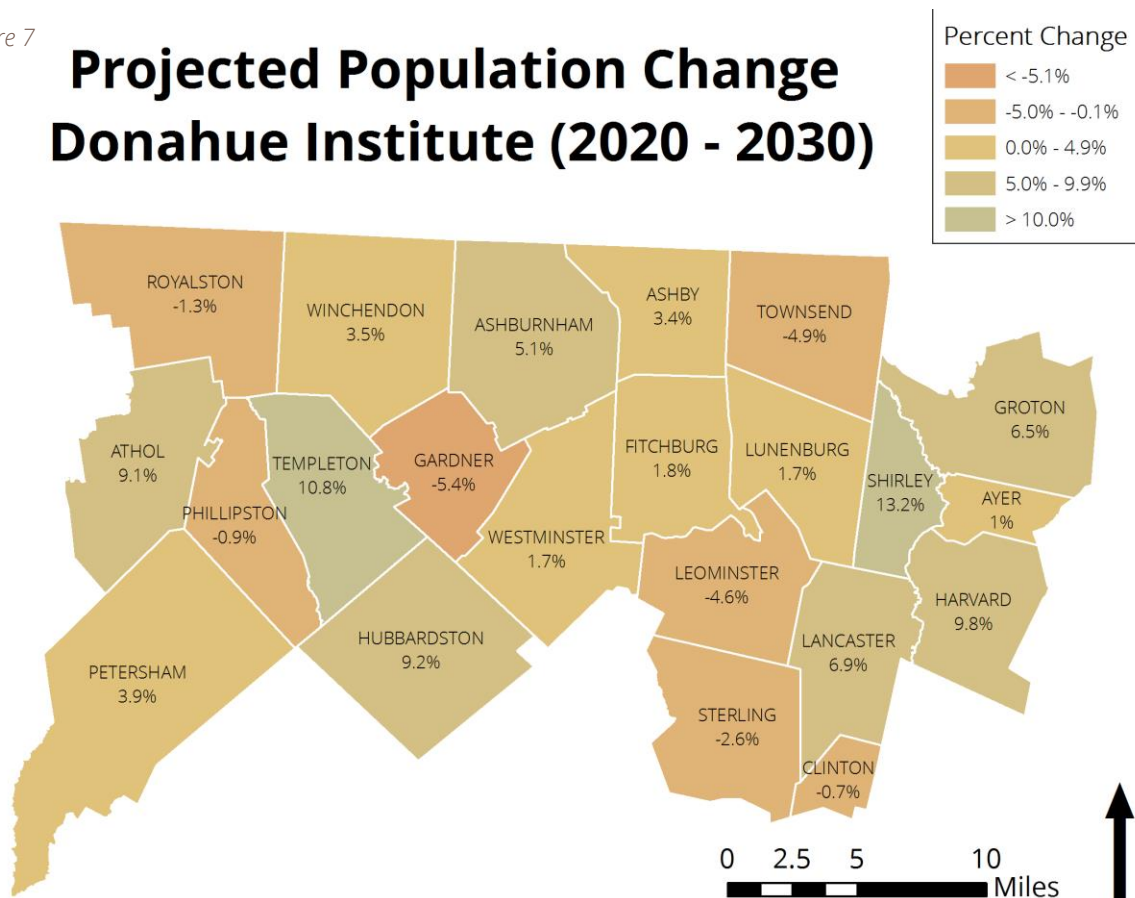


Figure 10

## Projected Population Change MRPC (2030 - 2040)

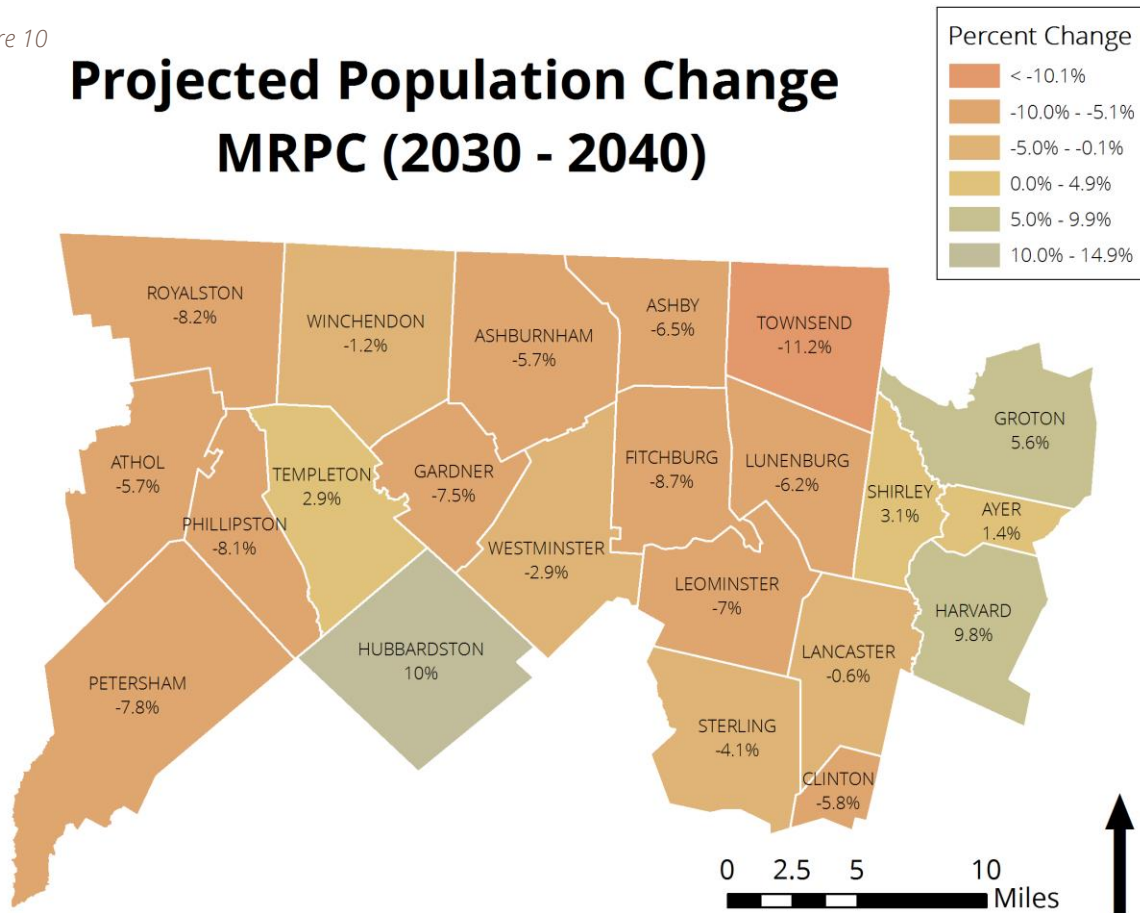
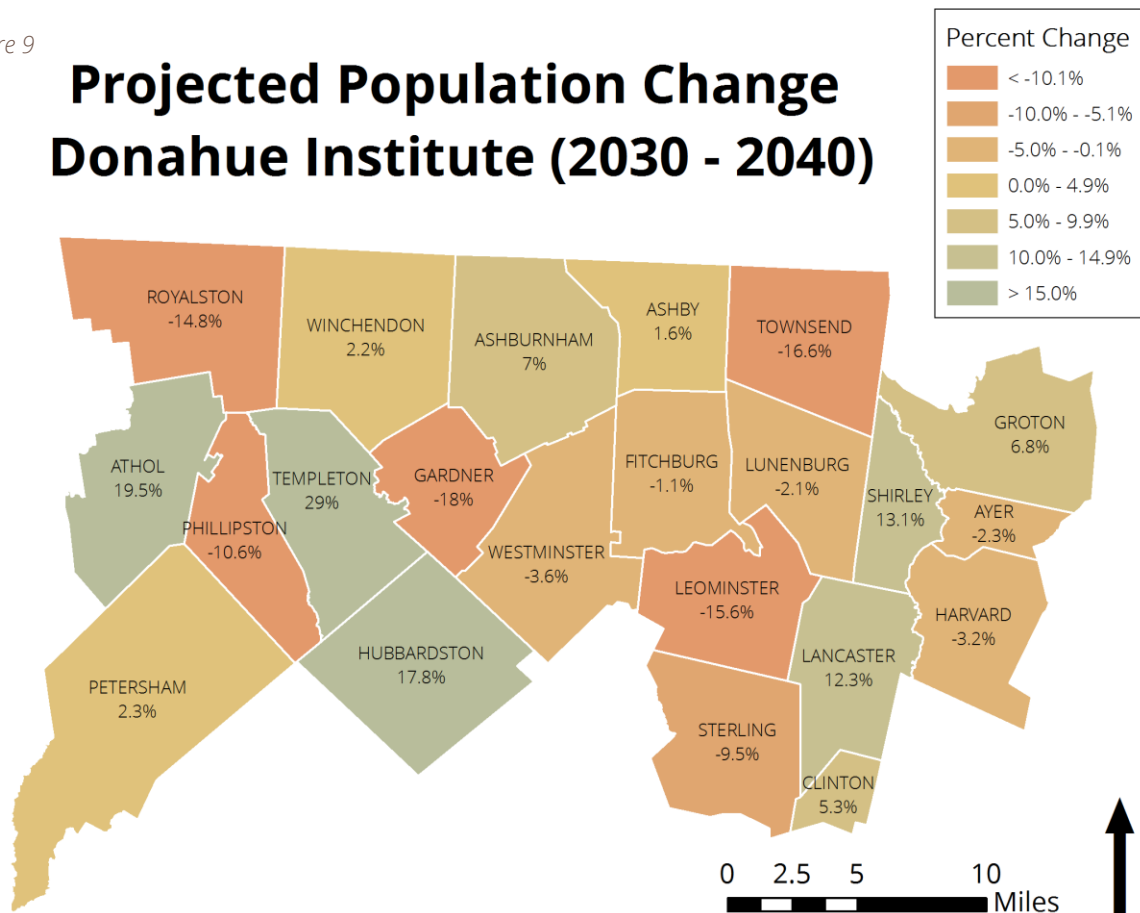


Figure 9

## Projected Population Change Donahue Institute (2030 - 2040)



#### **4.1. Actual Population Changes (1990-2000 and 2000-2010)**

Figures 3 and 4 show the actual population change that occurred between 1990 and 2000, and 2000 and 2010. As you can see, most of the towns experienced positive change, with the exception of Athol and Fitchburg in the 1990-2000-time period, and Gardner, Leominster, and Townsend in the 2000-2010-time period. The towns of Harvard, Groton, and Hubbardston all experienced very significant growth between 1990 and 2000; and between 2000 and 2010, the Town of Templeton experienced the most growth. Overall, the first two maps indicate that there was more significant growth overall in the region between 1990 and 2000; which aligns with the general economic well-being that persisted in the 1990s across the country.

#### **4.2. 2010-2020 Projected Change**

As seen in Figure 5, the community with the most significant decline according to our methodology is expected to be the City of Fitchburg (-6.6%). However, the Donahue Institute predicts about a 3% growth in population for Fitchburg, as seen in Figure 6. The community with the highest projected growth between 2010 and 2020 in this report is Hubbardston (18.8%). However, Donahue only expects about half of the percent change. Overall, the Donahue Institute has a much more optimistic outlook on the population changes between 2010 and 2020.

#### **4.3. 2020-2030 Projected Change**

The projections done for this report indicate less growth and more decline in populations across the region in between 2020-2030 as compared to 2010-2020, as seen in Figure 7. The town expected to have the most significant decline in this time period is Townsend (with a 6% decline in population). The Donahue Institute also expects negative population change for Townsend, but to a somewhat lesser degree (Figure 8). Harvard is expected to grow the most significantly in the projections created in this report, but again, the Donahue Institute expects growth at about half the percentage change. Similar to the projected population changes above, Donahue expects more positive change than our projections

#### **4.4. 2030-2040 Projected Change**

As seen in Figures 9 and 10 on the preceding page there is a significant difference between the two projections. In MRPC's projections, the Town expected to see the most significant decline is Townsend (-11.2%). The Donahue Institute's projections also predict significant population loss in Townsend (-16.6%), but predict that Gardner will lose even more population (-18%). Similarly, MRPC's projections predict that the town with the most growth will be Hubbardston (10%). The Donahue Institute predicts Hubbardston to grow to an even greater extent (17.8%), and Athol and Templeton to grow in population at an even greater extent (19.5% and 29%, respectively). Similar to the last two comparisons of expected growth, the Donahue Institute has predicted a more positive growth pattern between the years 2030 and 2040. Overall, our projections for population change between

2030 and 2040 predict a slow in growth and an increase in declining populations for our region as compared to the previous time frames discussed.

## 5. Conclusion

Figure 11 below represents the percent change for each agglomerated age cohort by year. As seen in the figure, the youngest cohort is expected to decline, with the most significant decrease expected to occur by 2020. The young adult cohort is expected to increase by 2020, but decline for the succeeding 20 years. The middle age cohort is expected to decrease significantly by 2030, but increase between 2030-2040. Lastly, the oldest cohort is expected to see dramatic increases by 2030, but taper off in growth between 2030-2040. Overall, this indicates an aging population, and consideration should be given to planning processes that will aid an increasingly elderly population in living a quality life in this region.

In regards to the adoption of the projections created for this report verses adopting the Donahue Institute, the majority of the decision should lie in the hands of planners and residents of the specific communities. This is because they possess local knowledge of trends which cannot be captured in a quantitative analysis.

Figure 11

