



TO: Planning Departments and Boards
FROM: Brad Harris, Transportation Project Director
DATE: January 19, 2018
RE: Population Projections for Montachusett Communities
CC: Mayors, Boards of Selectmen

As part of the development of what will be the 2020 Montachusett Regional Transportation Plan (RTP), the Montachusett Regional Planning Commission (MRPC) has been working with the Massachusetts Department of Transportation (MassDOT) and the University of Massachusetts Donahue Institute (UMDI) on population projections for 2020, 2030 and 2040 for our region and member communities. Through an examination of several factors, including birth, death, fertility and migration rates over past years, as well as Census data and prior projections from previous RTP's, a consensus was reached on population projections for the Montachusett Region, i.e. total population figures for 2020, 2030 and 2040 for all 22 Montachusett communities as a whole. These regional totals are shown in the following table.

Region	2010 Census	2020 Projection	2030 Projection	2040 Projection
Montachusett (22 Communities)	236,475	243,607	247,899	245,705

MassDOT has now asked the MRPC to develop community level projections based on these agreed upon regional totals through whatever method that the MRPC feels is best. After a review of three different projection methods, the MRPC has decided upon a weighted average method based on past trends from the 1990, 2000 and 2010 Census figures for our member communities and the region as a whole. The method was developed as follows:

1. The actual 1990, 2000 and 2010 Census figures for all 22 Montachusett communities was compiled as well as the total corresponding regional total.

Community	1990 Census	2000 Census	2010 Census
Ashburnham	5,433	5,546	6,081
Ashby	2,717	2,845	3,074
Athol	11,451	11,299	11,584
Ayer	6,251	7,287	7,427
Clinton	13,222	13,435	13,606
Fitchburg	41,194	39,102	40,318
Gardner	20,125	20,770	20,228
Groton	7,511	9,547	10,646
Harvard	4,662	5,981	6,520
Hubbardston	2,797	3,909	4,382
Lancaster	6,661	7,380	8,055
Leominster	38,145	41,303	40,759
Lunenburg	9,117	9,401	10,086
Petersham	1,131	1,180	1,234
Phillipston	1,485	1,621	1,682
Royalston	1,147	1,254	1,258
Shirley	5,432	6,373	7,211
Sterling	6,481	7,257	7,808
Templeton	6,438	6,799	8,013
Townsend	8,496	9,198	8,926
Westminster	6,191	6,907	7,277
Winchendon	8,805	9,611	10,300
Total	214,892	228,005	236,475

- From these figures for each decennial Census, the percent population of the regional total was derived. As an example:

In 1990, the population of Ashburnham was 5,433 and the regional total was 214,892. Dividing the Ashburnham population (5,433) by the regional total population (214,892) results in a figure of 2.53%. Therefore, 2.53% of the regional total population of 214,892 reside in the town of Ashburnham.

This percentage was calculated for each community for each decennial census (1990, 2000 and 2010) as shown in the following table.

Community	1990 Census	1990 Percent of Regional Total	2000 Census	2000 Percent of Regional Total	2010 Census	2010 Percent of Regional Total
Ashburnham	5,433	2.53%	5,546	2.43%	6,081	2.57%
Ashby	2,717	1.26%	2,845	1.25%	3,074	1.30%
Athol	11,451	5.33%	11,299	4.96%	11,584	4.90%
Ayer	6,251	2.91%	7,287	3.20%	7,427	3.14%
Clinton	13,222	6.15%	13,435	5.89%	13,606	5.75%
Fitchburg	41,194	19.17%	39,102	17.15%	40,318	17.05%
Gardner	20,125	9.37%	20,770	9.11%	20,228	8.55%
Groton	7,511	3.50%	9,547	4.19%	10,646	4.50%
Harvard	4,662	2.17%	5,981	2.62%	6,520	2.76%
Hubbardston	2,797	1.30%	3,909	1.71%	4,382	1.85%
Lancaster	6,661	3.10%	7,380	3.24%	8,055	3.41%
Leominster	38,145	17.75%	41,303	18.11%	40,759	17.24%
Lunenburg	9,117	4.24%	9,401	4.12%	10,086	4.27%
Petersham	1,131	0.53%	1,180	0.52%	1,234	0.52%
Phillipston	1,485	0.69%	1,621	0.71%	1,682	0.71%
Royalston	1,147	0.53%	1,254	0.55%	1,258	0.53%
Shirley	5,432	2.53%	6,373	2.80%	7,211	3.05%
Sterling	6,481	3.02%	7,257	3.18%	7,808	3.30%
Templeton	6,438	3.00%	6,799	2.98%	8,013	3.39%
Townsend	8,496	3.95%	9,198	4.03%	8,926	3.77%
Westminster	6,191	2.88%	6,907	3.03%	7,277	3.08%
Winchendon	8,805	4.10%	9,611	4.22%	10,300	4.36%
Total	214,892		228,005		236,475	

3. An average was then derived from the 1990 Percent of Regional Total, the 2000 Percent of Regional Total and the 2010 Percent of Regional Total. In order to place more importance on the most recent Census figures and trends, MRPC decided to add a weight factor to each decennial Census group. These weight factors were:

20% for the 1990 Percent of Regional Total;
30% for the 2000 Percent of Regional Total, and;
50% for the 2010 Percent of Regional Total.

This results in an Weighted Average Percent of Regional Total calculated as follows:

$$\text{Weighted Average} = [0.2(\text{1990 Percent of Reg. Total}) + 0.3(\text{2000 Percent of Reg. Total}) + 0.5(\text{2010 Percent of Reg. Total})]$$

Community	Weighted Avg of Region % 1990-2010
Ashburnham	2.52%
Ashby	1.28%
Athol	5.00%
Ayer	3.11%
Clinton	5.87%
Fitchburg	17.50%
Gardner	8.88%
Groton	4.21%
Harvard	2.60%
Hubbardston	1.70%
Lancaster	3.30%
Leominster	17.60%
Lunenburg	4.22%
Petersham	0.52%
Phillipston	0.71%
Royalston	0.54%
Shirley	2.87%
Sterling	3.21%
Templeton	3.19%
Townsend	3.88%
Westminster	3.03%
Winchendon	4.27%

4. This Weighted Average was then multiplied by the projected Regional Total for 2020, 2030 and 2040 to derive community level population projections for each MRPC municipality for the projected year. The results are listed in the following table.

Community	2020 Projections	2030 Projections	2040 Projections
Ashburnham	6,142	6,250	6,195
Ashby	3,111	3,166	3,138
Athol	12,185	12,399	12,290
Ayer	7,578	7,712	7,644
Clinton	14,312	14,564	14,435
Fitchburg	42,640	43,391	43,007
Gardner	21,639	22,021	21,826
Groton	10,247	10,427	10,335
Harvard	6,332	6,444	6,387
Hubbardston	4,144	4,217	4,180
Lancaster	8,025	8,166	8,094
Leominster	42,881	43,637	43,251
Lunenburg	10,275	10,456	10,364
Petersham	1,270	1,293	1,281
Phillipston	1,723	1,753	1,737
Royalston	1,310	1,333	1,321
Shirley	6,989	7,112	7,049
Sterling	7,817	7,955	7,885
Templeton	7,766	7,903	7,833
Townsend	9,472	9,639	9,554
Westminster	7,366	7,496	7,429
Winchendon	10,382	10,565	10,472
Total	243,607	247,899	245,705

MRPC is now seeking the feedback and opinions of its member communities as it relates to these projection figures. We ask that your municipality examine the proposed projection figures and provide us with any information, data, etc. that you feel is relevant and that may help to revise or update these projections. If your community also feels comfortable with these projections, we ask that you notify us as such.

Please keep in mind that these projection figures will **not** impact any funding to your community or the region. These projections are related to modelling efforts regarding the Commonwealth's transportation network and assessing possible future areas for examination. This effort will also be repeated with subsequent RTP's that will be produced every four years. Therefore, the next RTP after this 2020 effort will be prepared in 2024 and will then have the benefit of information from the 2020 decennial Census as part of its projection process.

Please provide any feedback to the MRPC by February 16th so that we can then proceed with additional projection efforts as part of the 2020 RTP development. If there are any questions or concerns in the interim, please contact Brad Harris at (978) 345-7376 ext. 311 or via email at bharris@mrpc.org.

Thank you.