

GREATER METROWEST Economic Profile 2013[©]

**FACING ECONOMIC
UNCERTAINTY IN 2013**



**21ST ANNUAL MERC CONFERENCE
WHAT DO WE NEED TO KNOW ?**

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Framingham
State University

MetroWest Economic
Research Center



Framingham State University

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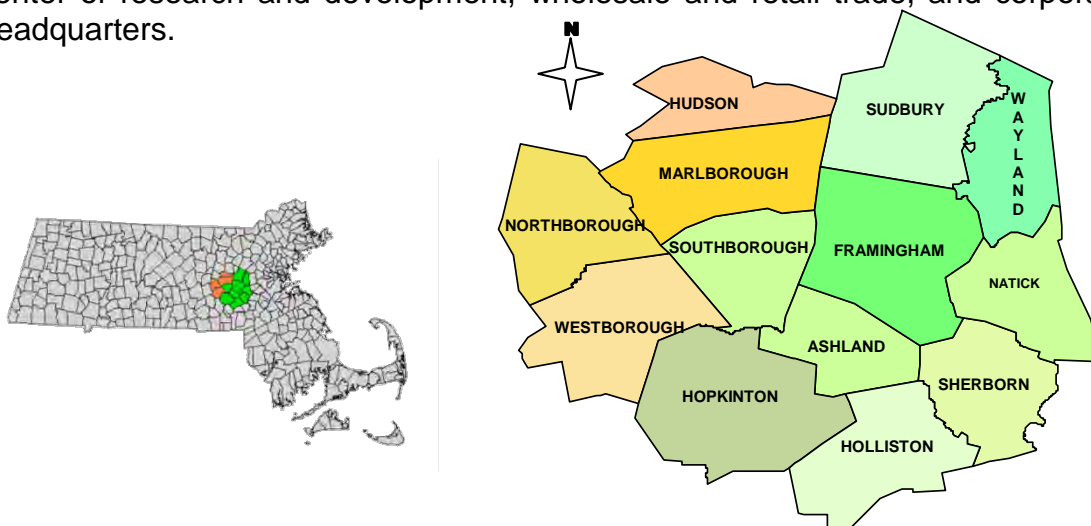
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INTRODUCTION

Greater MetroWest (GMW) includes thirteen communities located between Boston and Worcester: the nine towns of the MetroWest Cohesive Commercial Statistical Area (CCSA), and the four communities of the Greater Marlborough Region. With a population of more than 281,000, the region hosts a very well educated and highly skilled labor force of more than 154,000 individuals who reside in households with high incomes when compared to the state and the nation. Strategically located between Boston and Worcester, GMW benefits from four major highways serving the region's residents and businesses: Interstate 495, Interstate 90 (Massachusetts Turnpike) and U.S. routes 9 and 20.

In 2011 Greater MetroWest businesses generated more than 177,000 jobs and a payroll exceeding \$12.5 billion. The region provided 4.5% of the Massachusetts labor force, 5.6% of Massachusetts employment, and 6.6% of Massachusetts payroll. Home to thousands of small and medium sized businesses as well as large national firms like Astra Zeneca, Bose, Boston Scientific, Cumberland/Gulf, EMC, Genzyme, Intel, Mathworks, Raytheon, Staples, TJX, and the internationally known U.S. Army Natick Laboratories, GMW is a recognized center of research and development, wholesale and retail trade, and corporate headquarters.



The *2013 Greater MetroWest Economic Profile* includes the most recent economic data for the region and its individual communities, and trends over the past three decades as well as comparisons with the state and the nation. This comprehensive publication provides economic data and analyses of labor force and unemployment, employment (including payroll, wages and establishments), housing permits, existing home sales, cost of living, municipal revenue, municipal taxes, and K-12 public school enrollment.

The MetroWest Economic Research Center (MERC) at Framingham State University creates and maintains economic databases on a number of regional economies in the state. For more information on the data and analyses in this report, please contact MERC.

2013 Greater MetroWest Economic Profile

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GREATER METROWEST - UNEMPLOYMENT

UNEMPLOYMENT¹

Each month the MetroWest Economic Research Center (MERC) at Framingham State University calculates a composite unemployment rate for the Greater MetroWest region which includes MetroWest and the Greater Marlborough Region. The unemployment rate is household-based and reflects the labor market status of the **residents** of the regions. The information for the rate is obtained from the Massachusetts Executive Office of Labor and Workforce Development which provides monthly estimates of the size of the local labor force, the number of employed and unemployed residents, and the unemployment rates for all Massachusetts cities and towns.

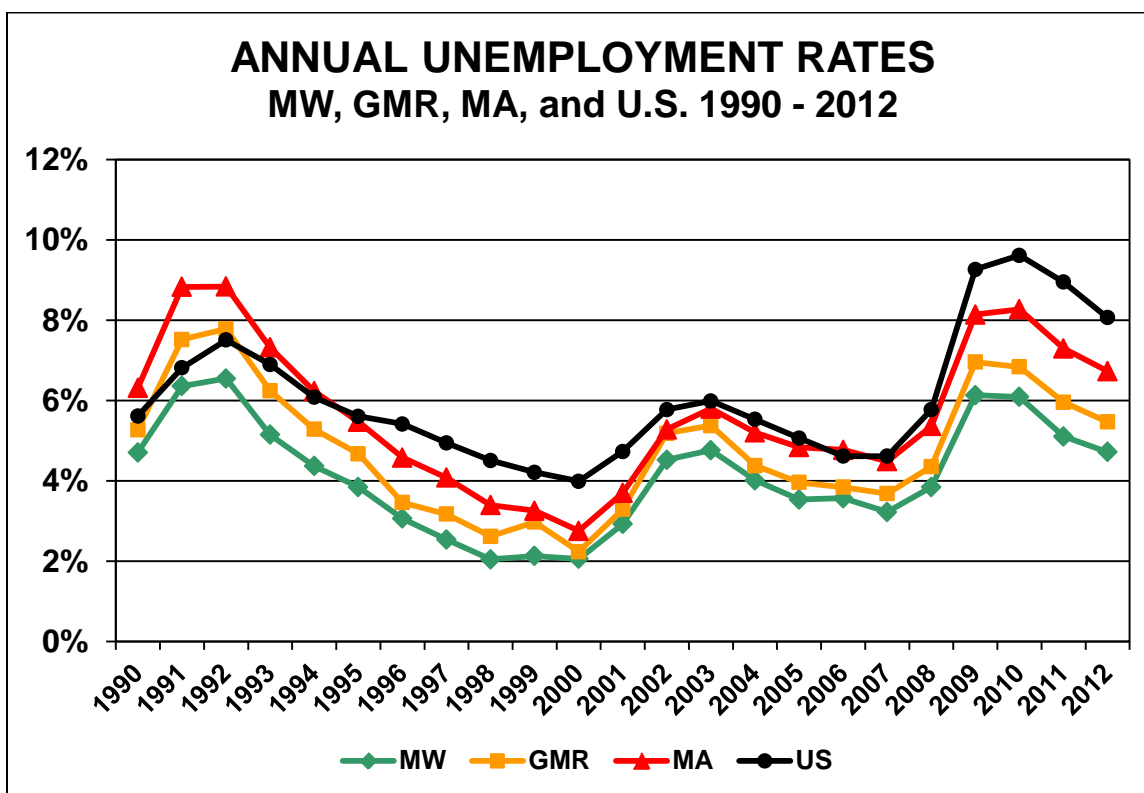
The unemployment rate is a measure of the amount of unutilized labor in the economy. The rate represents the proportion of unemployed individuals in the labor force. The **labor force** is defined as all civilian non-institutionalized persons age 16 and over who are either employed or unemployed. The **employed** are those individuals who work as paid employees, are self-employed, or who work 15 hours or more as unpaid workers in a family operated enterprise. Also included as employed are people who did not work but who had a job from which they were temporarily absent due to vacation, illness, childcare problems or other personal obligations, whether or not they were paid during their absence. The **unemployed** are those who did not hold a job during the survey period but were actively seeking employment. For example, the February 2013 unemployment rate in Framingham of 4.9% was based on the following information: the size of the labor force was **estimated** at 38,081 workers, the sum of 36,201 residents who were employed and 1,880 residents who were unemployed. The rate, expressed as a percentage, was obtained by dividing the unemployed (1,880) by the labor force (38,081) and multiplying by 100 to get the unemployment rate of 4.9%.

Not everyone in the working age population is included in the labor force. Individuals who were in the working age population but who could not be classified as employed or unemployed (a full time homemaker, for example) would not be counted in the labor force.

The local area unemployment rates for the cities and towns are not seasonally adjusted and are subject to periodic revision and re-benchmarking. For purposes of comparison, the state and national unemployment rates shown in this report are likewise not seasonally adjusted.

¹The definition of terms such as labor force, employed, and unemployed are based on those in *The BLS Handbook of Methods*, U. S. Bureau of Labor Statistics, September 2011.

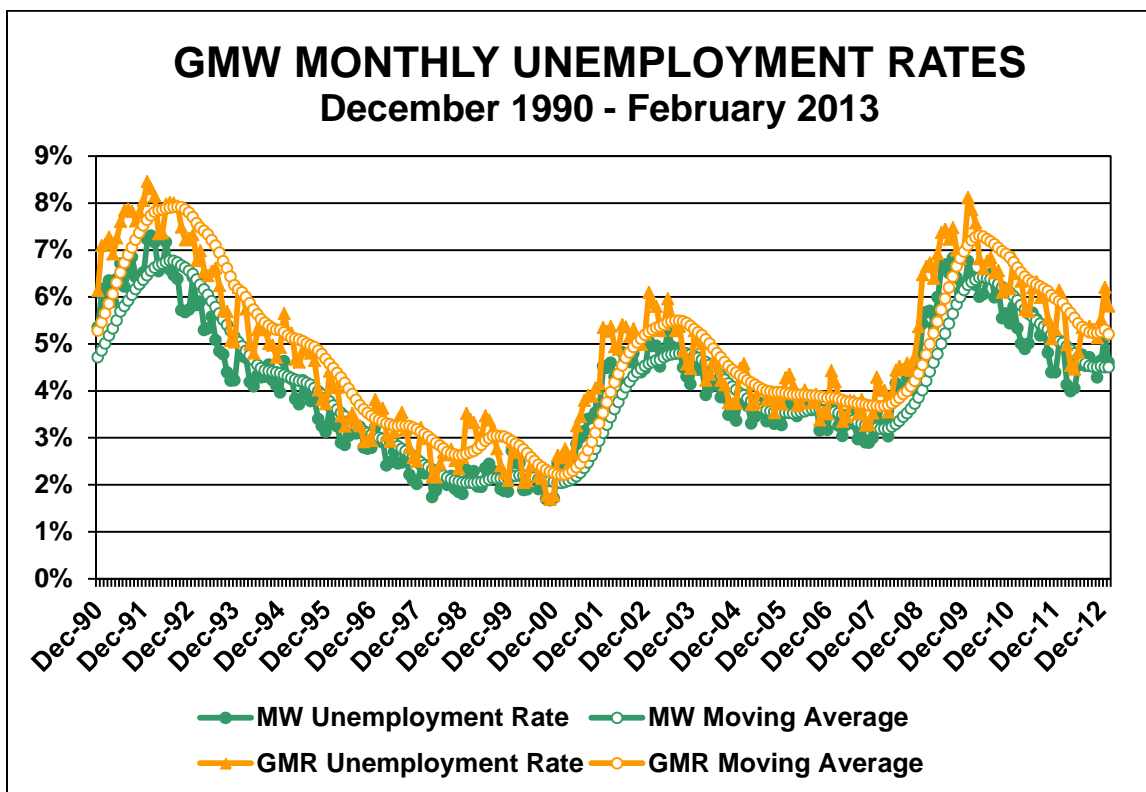
GREATER METROWEST – UNEMPLOYMENT



Source: MA EOLWD and MERC

- The annual unemployment rates for MetroWest (MW), the Greater Marlborough Region (GMR), Massachusetts (MA), and the United States (U.S.) from 1990 to 2012 are calculated by averaging the monthly unemployment rates for each year.
- The unemployment rate in MetroWest decreased from 5.1% in 2011 to 4.5% in 2012 while in the Greater Marlborough Region it decreased from 6.0% to 5.2% in the same period.
- Both Massachusetts and the United States displayed decreases in their unemployment rates of -0.9% in 2012. Massachusetts witnessed a decrease from 7.4% in 2011 to 6.5% in 2012, while the nation posted a decrease from 9.0% to 8.1% in the same period.
- MetroWest and the Greater Marlborough Region have consistently posted annual unemployment rates lower than both Massachusetts and the United States except in both 1991 and 1992 when the GMR recorded higher annual unemployment rates than the nation.

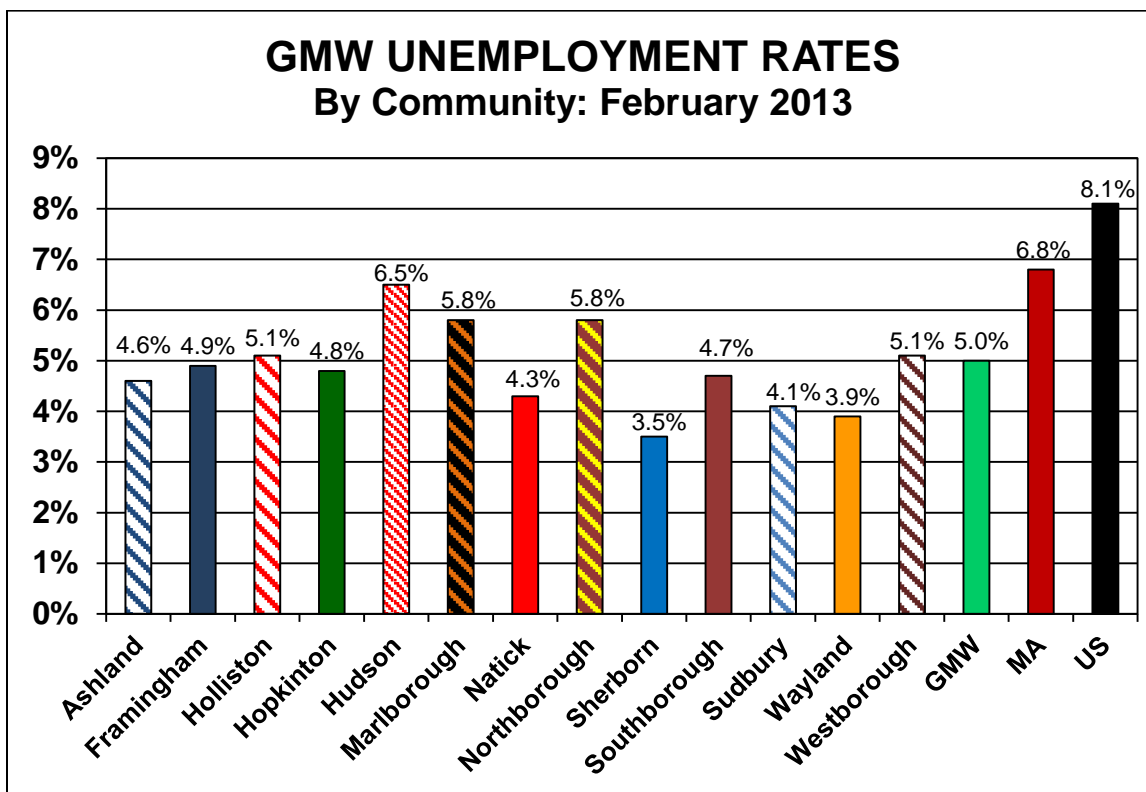
GREATER METROWEST – UNEMPLOYMENT



Source: MA EOLWD and MERC

- This graph examines the monthly unemployment rates and the 12-month moving average rates for MetroWest (MW, shown in green) and the Greater Marlborough Region (GMR, shown in orange) from December 1990 to February 2013. The 12-month moving average smoothes out the month-to-month variation of the data.
- The unemployment rate in MetroWest peaked at 7.3% in February 1992, and in the Greater Marlborough Region it peaked at 8.5% in January 1992. Both regions reached their lowest unemployment rate of 1.7% in November 2000.
- The unemployment rate in MetroWest was 4.6% in February 2013, a decrease of -0.6% from the previous month's rate of 5.2%. The Greater Marlborough Region's unemployment rate showed a decrease of -0.4% from 6.6% in January 2013 to 5.8% in February 2013.
- In the most recent recession, unemployment rates in MetroWest and the Greater Marlborough Region peaked in January 2010 at 6.8% and 8.0%, respectively. These peaks were lower than the peaks reached during the recession in the early 1990s.

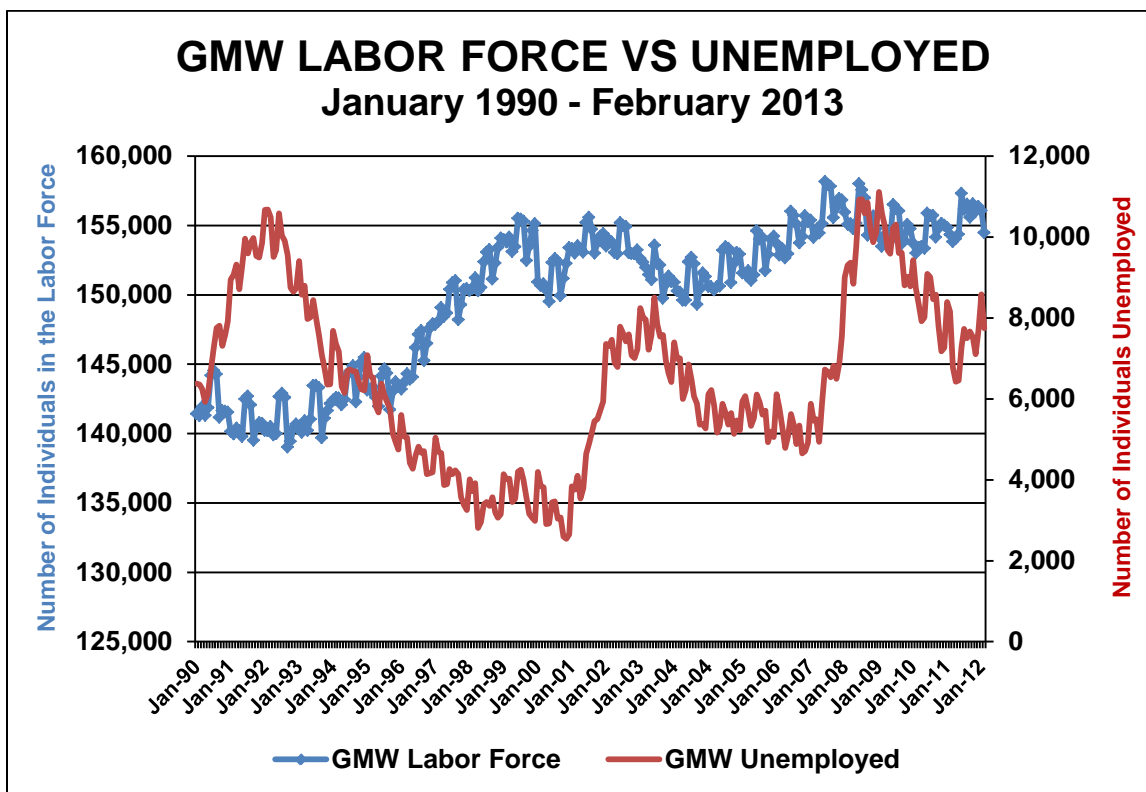
GREATER METROWEST – UNEMPLOYMENT



Source: MA EOLWD and MERC

- In February 2013, each of the communities in Greater MetroWest (GMW) posted lower unemployment rates than the Massachusetts rate and the United States rate of 6.8% and 8.1%, respectively.
- Among the thirteen communities in Greater MetroWest, Holliston, Hudson, Marlborough, Northborough, and Westborough were the five communities in the region that posted unemployment rates higher than the Greater MetroWest's rate of 5.0%.
- Sherborn posted the lowest unemployment rate at 3.5%, followed by Wayland at 3.9%.
- Hudson had the highest unemployment rate in February 2013 at 6.5%, followed by Marlborough and Northborough at 5.8%.

GREATER METROWEST – UNEMPLOYMENT



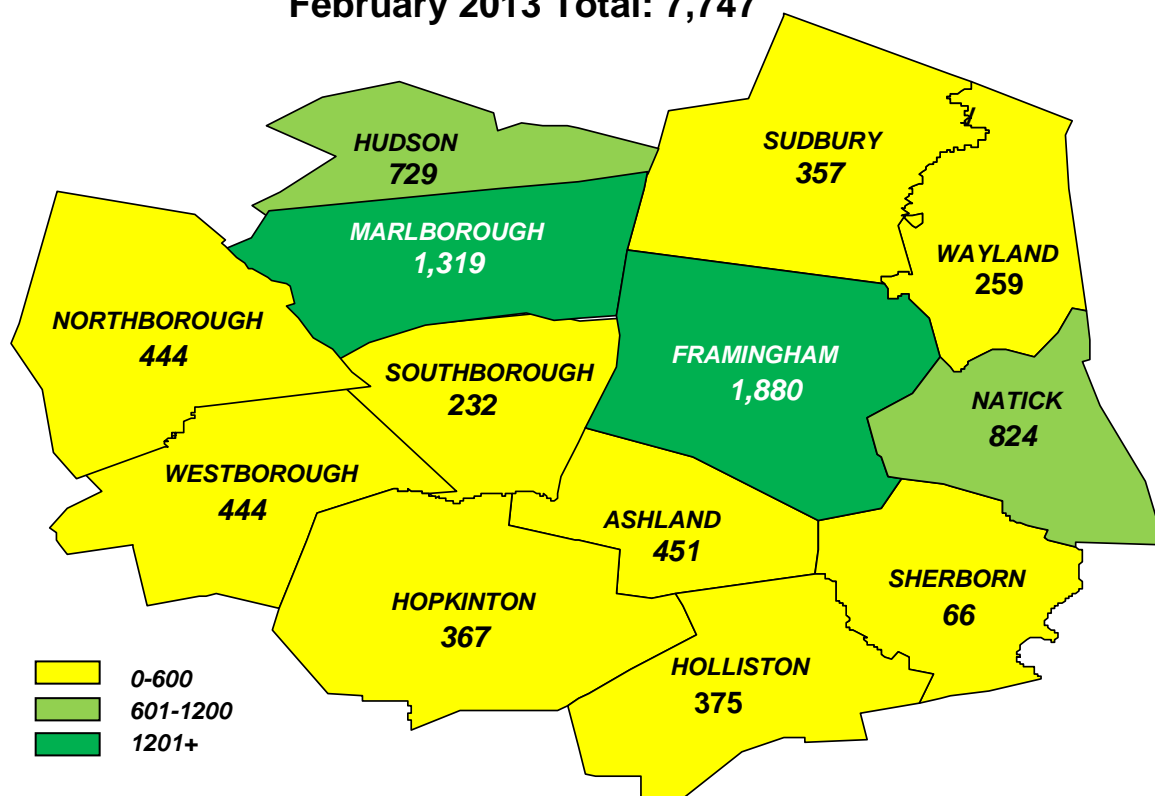
Source: MA EOLWD and MERC

- The number of individuals in the labor force is shown blue, measured by the left-hand scale, and the number of individuals unemployed is shown in red, measured on the right-hand scale, for Greater MetroWest (GMW) between January 1990 and February 2013. The labor force includes individuals aged 16 years and older who were either employed or unemployed. An individual is unemployed if he or she did not have a job but was actively seeking employment.
- In February 2013, the total labor force in Greater MetroWest was 154,483 individuals. The total labor force reached its highest point throughout the 23-year period in June 2008 with 158,420 individuals. The region's total labor force reached its lowest point in September 1992 with 139,027 individuals.
- There were 7,747 unemployed individuals in the Greater MetroWest region in February 2013. The number of unemployed reached its highest point of 11,117 individuals in January 2010. The total number of unemployed reached its lowest point of 2,545 individuals in November 2000.

GREATER METROWEST – UNEMPLOYMENT

GMW NUMBER OF UNEMPLOYED

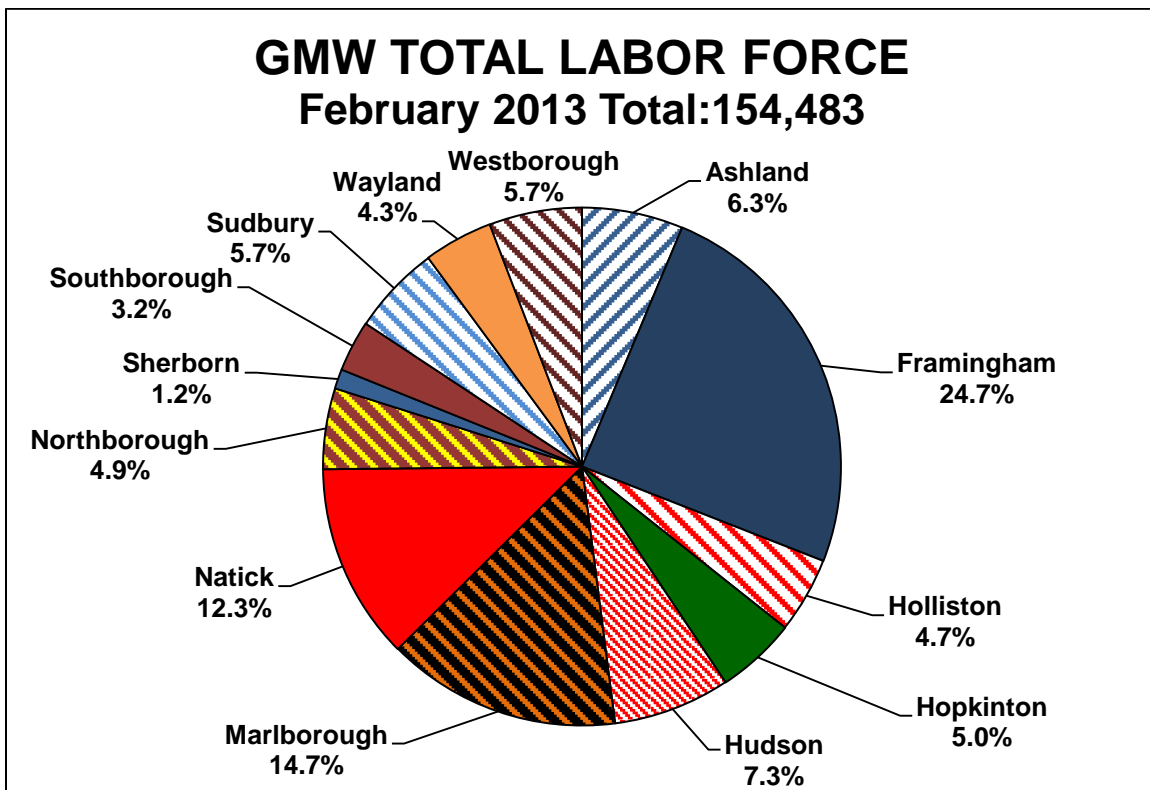
February 2013 Total: 7,747



Source: MA EOLWD and MERC

- The total number of unemployed individuals in Greater MetroWest (GMW) in February 2013 was 7,747.
- Framingham had the largest number of unemployed individuals in the region with 1,880, followed by Marlborough with 1,319 individuals and Natick with 824 individuals. These three communities were home to about half of the unemployed individuals in Greater MetroWest.
- Among the thirteen communities in the region, Sherborn had the smallest number of unemployed individuals at 66, followed by Southborough with 232 individuals and Wayland with 259 individuals.
- In February 2013, Northborough and Westborough had the same number of unemployed individuals at 444.

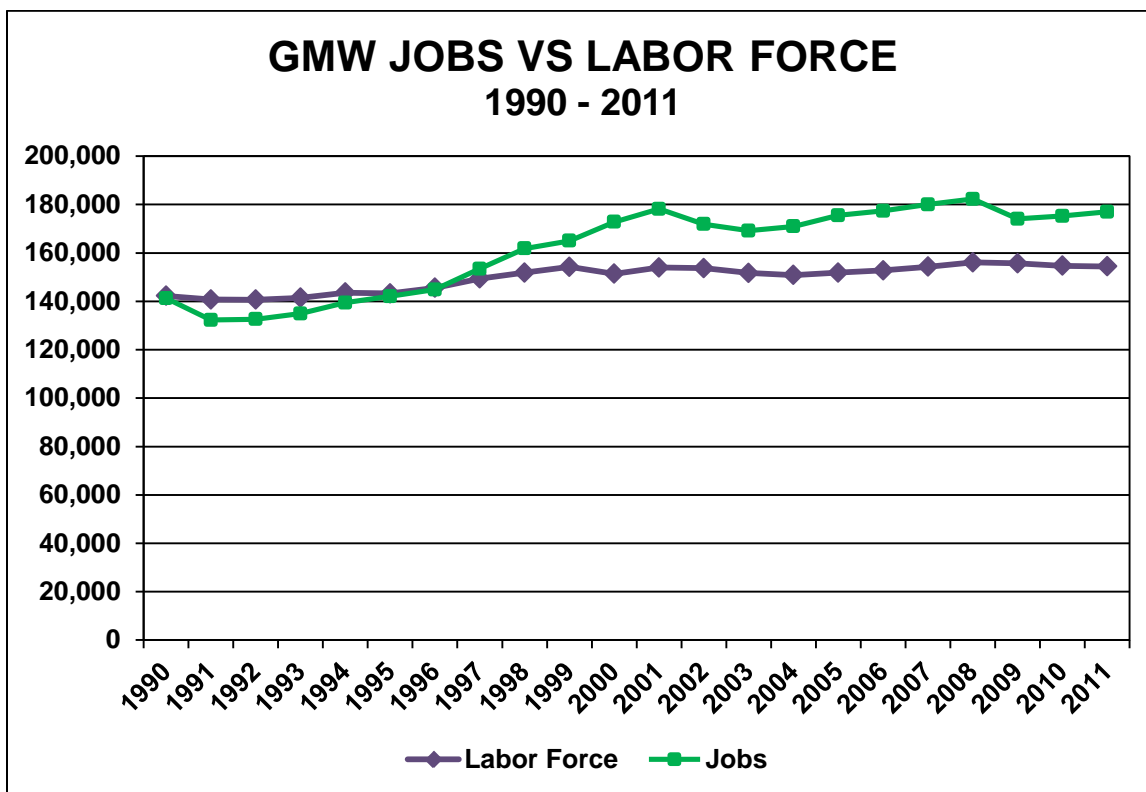
GREATER METROWEST – UNEMPLOYMENT



Source: MA EOLWD and MERC

- The total labor force in Greater MetroWest (GMW) in February 2013 was 154,483 individuals.
- MetroWest contributed 104,110 individuals, or approximately 67% of the total labor force while the Greater Marlborough Region contributed 50,373 individuals, or approximately 33% of the total labor force.
- Among the communities in GMW, Framingham contributed the largest portion of the labor force with 24.7%, or 38,081 individuals. Marlborough was the second largest contributor with 14.7%, or 22,743 individuals, followed by Natick with 12.3%, or 19,009 individuals. About half of the total labor force in GMW was provided by these three communities.
- Sherborn was the smallest contributor to the labor force in GMW with 1.2%, or 1,892 individuals, followed by Southborough with 3.2%, or 4,938 individuals, and Wayland with 4.3%, or 6,673 individuals.

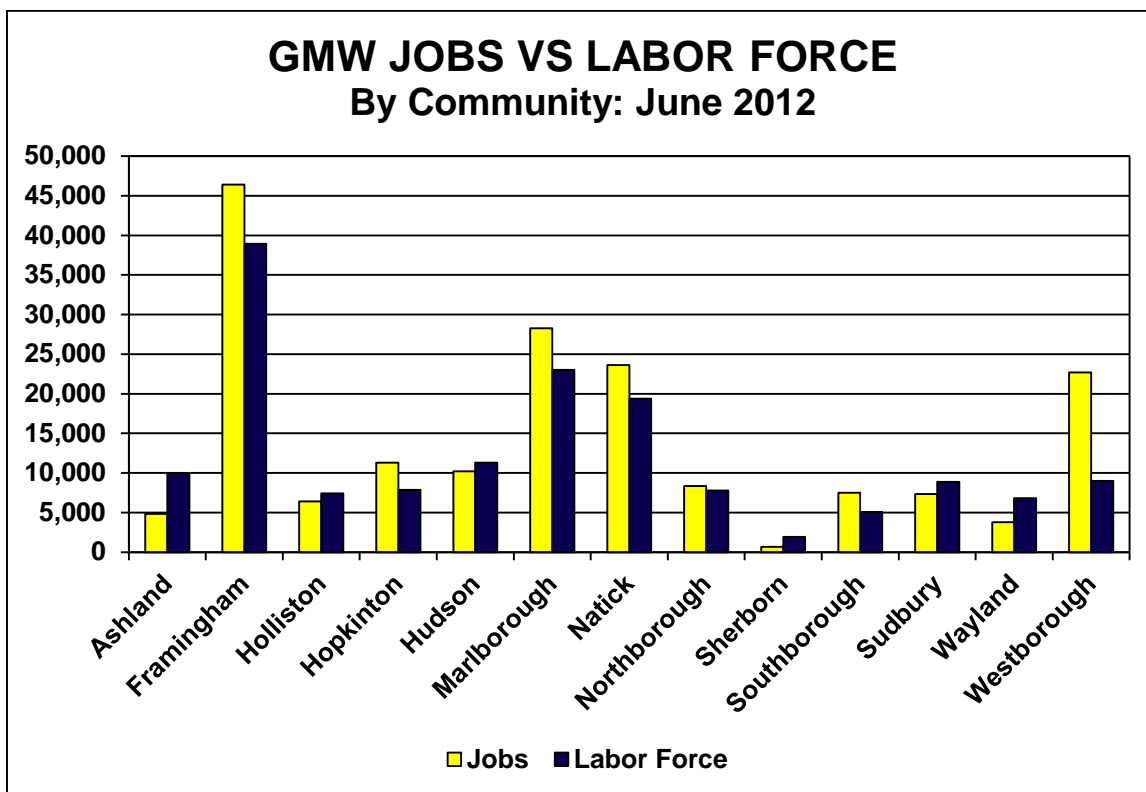
GREATER METROWEST – UNEMPLOYMENT



Source: MA EOLWD and MERC

- The total number of jobs (shown in green) refers to the total number of jobs in establishments located in Greater MetroWest (GMW) and the total number of individuals in the labor force (shown in purple) consists of residents in GMW currently employed or unemployed.
- During the period from 1990 to 2011, the number of jobs and individuals in the labor force were at their highest levels in 2008, when the number of jobs reached 182,265 and the number of individuals in the labor force was recorded at 156,109.
- From 1990 to 1996, the number of jobs in GMW was smaller than the number of individuals in the labor force, implying that the region was a net exporter of labor. Between 1997 and 2011, the number of individuals in the labor force was smaller than the number of jobs in the region, implying that the region was a net importer of labor.
- In 2011, the total number of jobs in GMW was 176,972 and the labor force consisted of 154,452 individuals. There were about 22,500 more jobs than individuals in the labor force during the year.

GREATER METROWEST – UNEMPLOYMENT



Source: MA EOLWD and MERC

- The total number of jobs, shown in yellow, is compared to the total number of individuals in the labor force, shown in blue, for each community in Greater MetroWest (GMW). Jobs refer to the number of jobs in the establishments that are located in each community while the labor force consists of all residents in each community who are either currently employed or unemployed.
- There were 181,312 jobs available in GMW in June 2012. Framingham contributed the highest number with 46,427 jobs. The second highest contributor was Marlborough with 28,263 jobs, followed by Natick with 23,640 jobs and Westborough with 22,674 jobs. These four communities contributed more than two-thirds of the total number of jobs in GMW.
- The total number of jobs in Framingham, Hopkinton, Marlborough, Natick, Northborough, Southborough, and Westborough was larger than the total number of individuals in the labor force. This implies that these seven communities were net importers of labor. In the remaining six communities, the number of individuals in the labor force was larger than the number of jobs, implying that these communities were net exporters of labor.

GREATER METROWEST - EMPLOYMENT

EMPLOYMENT¹

The MetroWest Economic Research Center (MERC) at Framingham State University maintains an employment database for the MetroWest CCSA™, the Greater Marlborough Region, the South Shore CCSA™, the 495/MetroWest Region, and other substate economies. MERC has documented remarkable growth in regional employment and wages as well as major changes in industrial structure and employment since 1980. For this publication MERC has developed employment data for Greater MetroWest (GMW).

MERC research relies on the Massachusetts Executive Office of Labor and Workforce Development (MA EOLWD), ES-202 series to develop time series for employment, payroll, wages and establishments in the Greater MetroWest Region. ES-202 data are derived from quarterly census reports filed by all employers subject to unemployment laws, both state and federal, and cover 98% of all U.S. jobs. More than 150,000 Massachusetts employers subject to unemployment compensation laws participate in the quarterly census.

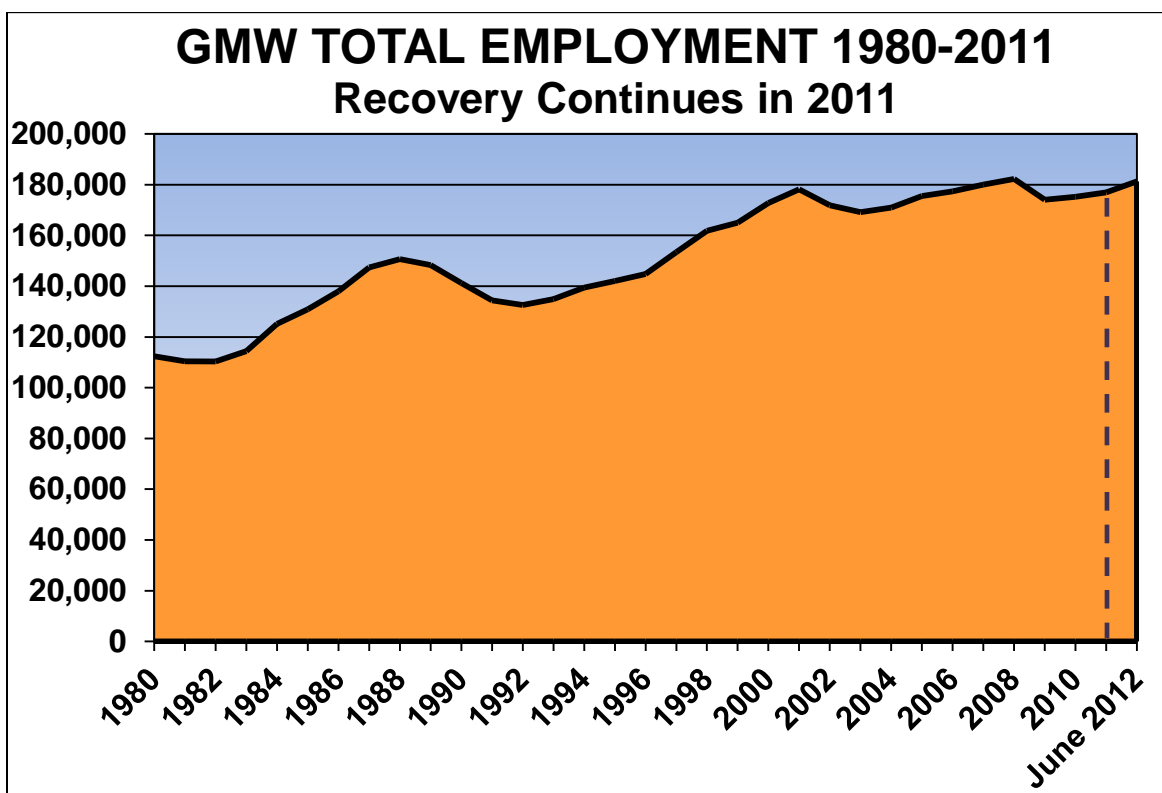
For the first time in 2002, employers were classified by industry solely in accordance with the North American Industry Classification System (NAICS). NAICS groups together establishments that use the same processes to produce goods and services. NAICS has permanently replaced the Standard Industrial Classification (SIC) system, which was in use for the previous 70 years. Because the criteria for the classification of establishments differs between NAICS and the SIC system, time series data for industrial sectors prior to 2001 cannot be provided. For a more detailed description of NAICS categories as used in this publication, please see the Appendix.

In the ES-202 series, **employment** refers to the count of all persons on the payroll of establishments, subject to the law, who worked full-time or part-time within the 13 communities of Greater MetroWest. Annual **payroll** includes all wages and salaries paid to covered employees including commissions, bonuses, stock options, overtime and sick pay. The **average annual wage** is derived by dividing the gross annual payroll by the average annual employment. **Establishment** or place of work refers to an economic unit that produces goods or services at a single location and is engaged in one type of economic activity. A firm, therefore, may have one or more establishments where work is produced. More complete definitions are included in the Appendix.

Please note that data and analysis included in this section (*Greater MetroWest - Employment*) refer to business establishments, *not* residents, located within the 13 communities. Please also note that totals may not always add due to rounding.

¹The definitions of terms are based on those in the *Handbook of U.S. Labor Statistics* (1998), *Employment and Wages in Massachusetts and the Major Metropolitan Statistical Areas Annual Averages 1993-1996*, the *North American Industry Classification System - United States, 2002*, www.bls.gov/cew, and MA EOLWD, *Employment and Wages by Industry and Area (ES202)*.

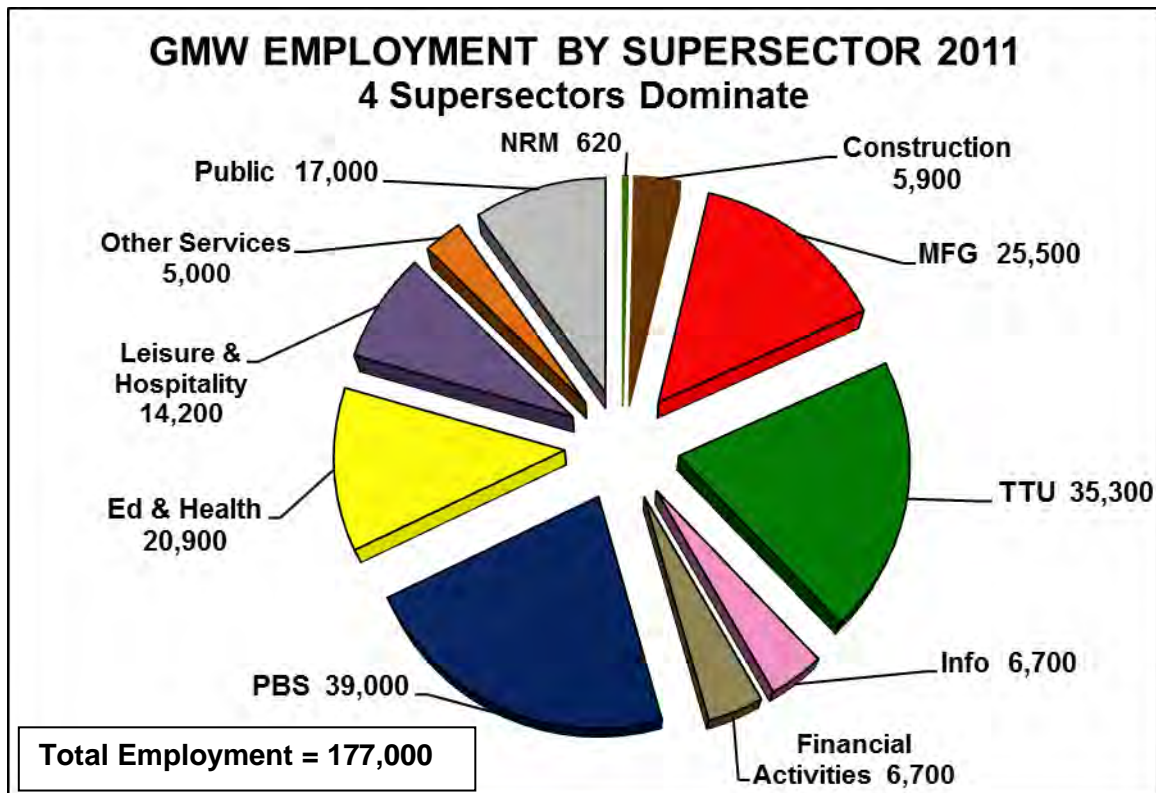
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- In 2011 Greater MetroWest (GMW) annual employment totaled 177,000, up 1,700 jobs or 1.0% since 2010 and up by 2,900 jobs, or 1.7% since 2009. In June 2012 GMW employment was 181,300 jobs.
- In 1980 GMW employment totaled 112,400 jobs. By 2011 GMW employment had reached 177,000 jobs, a gain of 64,600 jobs or 57.5% over 31 years.
- Over the past three decades GMW experienced four business cycles with peaks occurring in 1988, 2001, and 2008 and troughs in 1982, 1991, 2003, and 2009.
- In 2011 GMW total employment was 5,300 jobs below its historical peak of 182,300 jobs reached in 2008. Following its historical peak, GMW employment fell to 174,100 jobs in 2009, a decline of 8,200 jobs or -4.5% due to the Great Recession. GMW then entered a slow recovery with employment rising by 2,900 jobs or 1.7% by 2011.
- In 2011 MetroWest CCSA employment totaled 106,600, comprising 60.3% of GMW employment. Greater Marlborough Region employment totaled 70,300 jobs, or 39.7% of GMW employment.

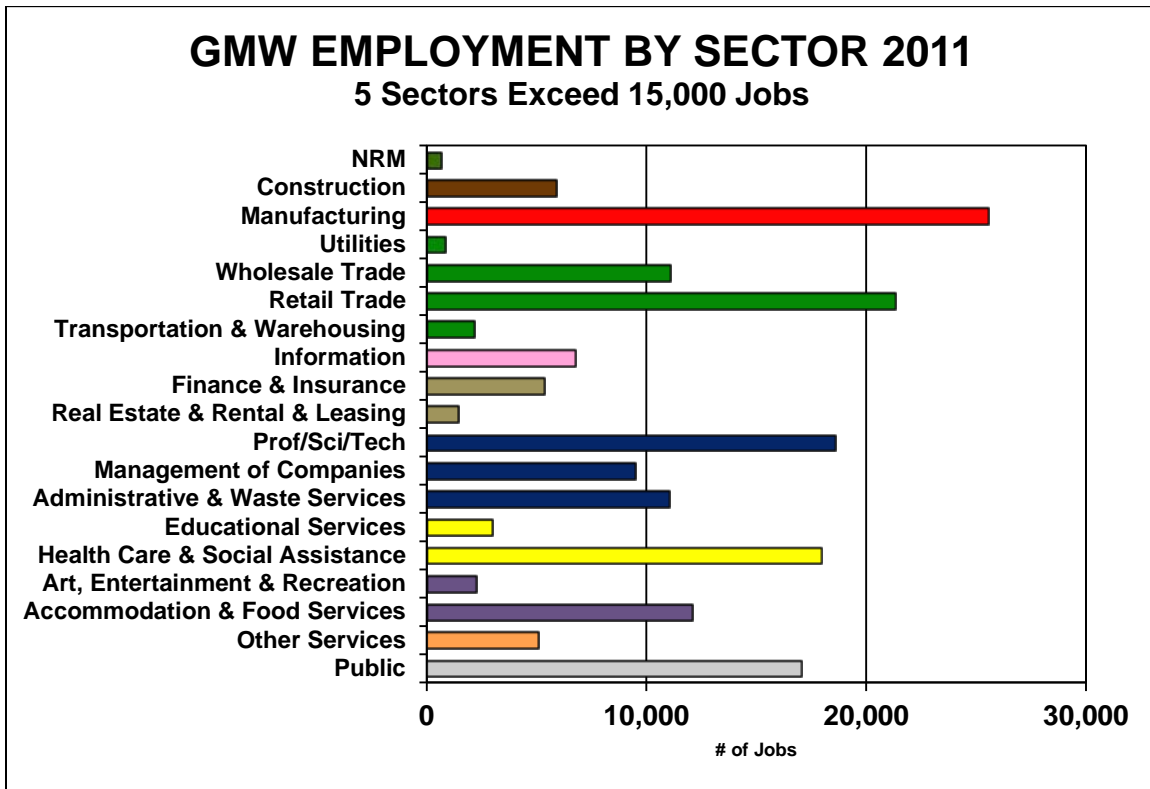
GREATER METROWEST – EMPLOYMENT



Source: MA EOLWD and MERC

- In 2011 Greater MetroWest (GMW) employment reached 177,000 jobs, up 1,700 jobs or 1.0% from 2010. Four large supersectors dominated the region.
- The Professional and Business Services (PBS) supersector generated the most employment, 39,000 jobs, or 22.0% of regional employment. Trade, Transportation and Utilities (TTU) contributed the second highest, 35,300 jobs, or 19.9% of GMW's jobs. Manufacturing (MFG) and Education and Health followed with 25,500 and 20,900 jobs, or 14.4% and 11.8% of regional employment, respectively.
- Combined, these four largest supersectors supplied 120,700 jobs, over two-thirds of the regional employment.
- Six other supersectors: Natural Resources & Mining (NRM), Construction, Information, Financial Activities, Leisure & Hospitality, and Other Services each had employment of less than 15,000 jobs.
- In 2011 the private sector produced 90.4% of the jobs in GMW, and the public sector, 9.6%. The private sector's share of the employment increased slightly by 0.3 percentage points from its 90.1% share in 2010.

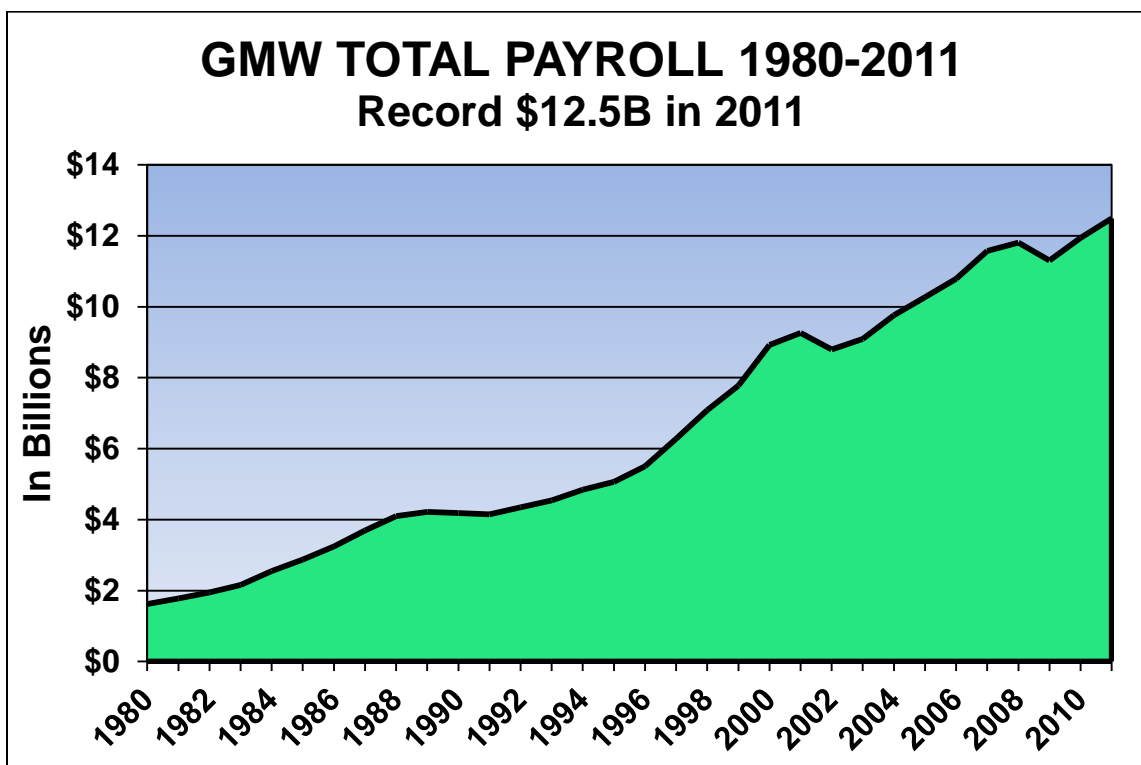
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- In 2011 Greater MetroWest (GMW) employment stood at 177,000 jobs, an increase of 1.0% or 1,700 jobs from 2010.
- The five largest sectors: Manufacturing, Retail Trade, Professional, Scientific and Technical Services, Health Care & Social Assistance, and Public produced a combined 100,300 jobs, or 56.7% of the jobs in the region.
- Manufacturing led with 25,500 jobs, 14.4% of the region's jobs. Retail Trade followed contributing 21,300 jobs, or 12.0%. Professional, Scientific and Technical Services (Prof/Sci/Tech), the third largest provider of jobs, contributed 18,500 or 10.5% of the region's jobs. Health Care & Social Assistance and Public followed with 17,900 and 17,000 jobs, or 10.1% and 9.6% of regional employment, respectively.
- Four GMW sectors produced between 9,000 and 13,000 jobs: Wholesale Trade, Management of Companies, Administrative & Waste Management, and Accommodation & Food Services.
- Six of the nineteen sectors each contributed fewer than 5,000 jobs to the region.

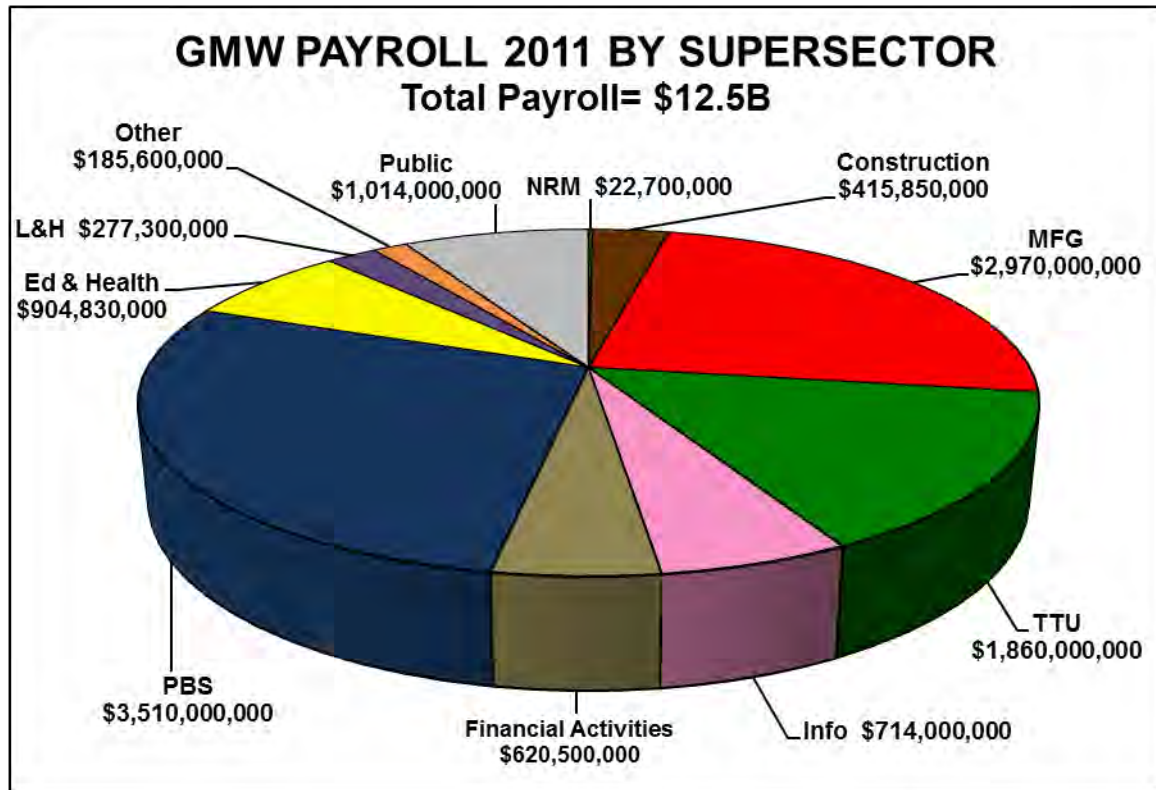
GREATER METROWEST - EMPLOYMENT



Source: MA EOLD and MERC

- Greater MetroWest (GMW) total payroll rose to a historical high of \$12.5 billion in 2011, an increase of \$550 million or 4.6% since 2010.
- Since its last sharp decline in 2009 due to the Great Recession, GMW payroll has fully recovered rising by \$1.2 billion or 10.5%.
- However, the GMW payroll rose by a smaller percentage, 4.6%, in 2010-2011 than it did in the previous year when total GMW payroll climbed by 5.7%.
- Over the past three decades, total GMW payroll has climbed steadily, declining only three times during contractions.
- In 1980 the GMW payroll equaled \$1.6 billion. By 2011 payroll had reached \$12.5 billion. This was an increase of \$10.9 billion or 671% since 1980.
- In 2011 MetroWest CCSA payroll totaled \$7.4 billion, comprising 59.2% of the GMW payroll. Greater Marlborough Region payroll totaled \$5.1 billion, comprising 40.8% of the GMW payroll.

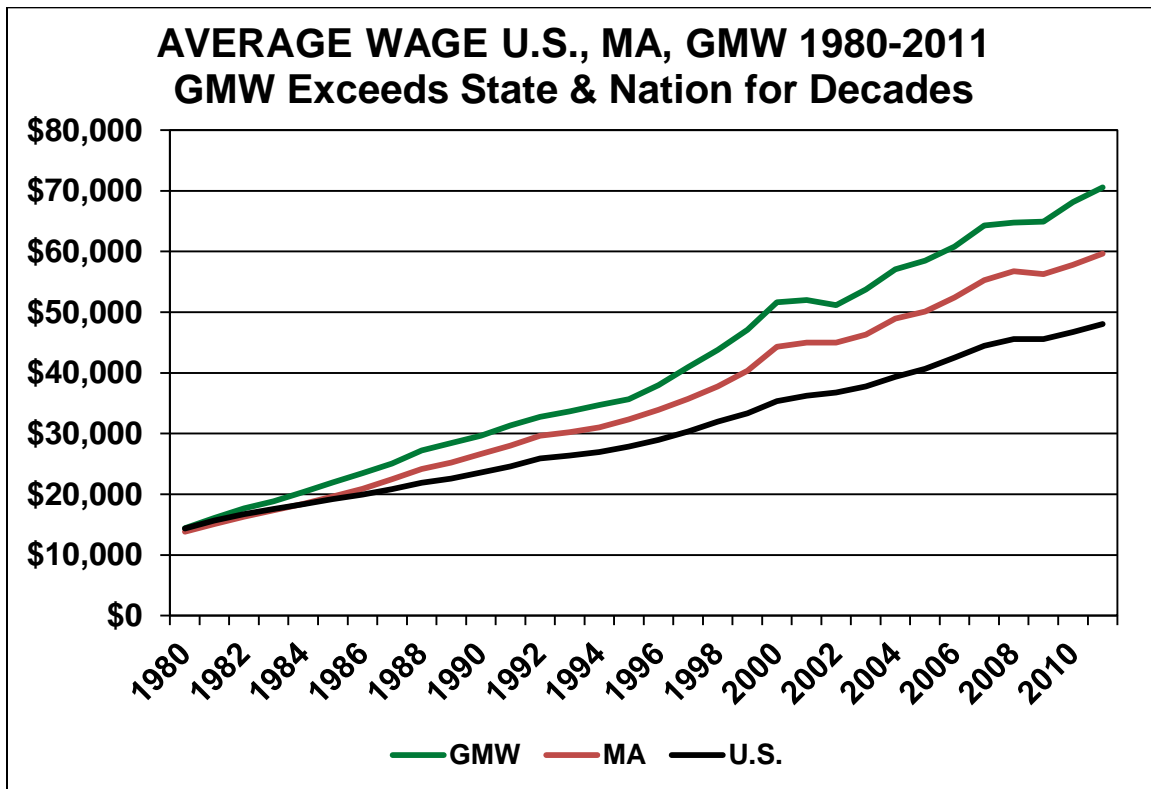
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- Greater MetroWest (GMW) payroll totaled a record \$12.5 billion in 2011, up 4.6% from 2010. Total payroll includes all wages and salaries paid to covered employees, including commissions, bonuses, stock options, overtime and sick pay. Three private sector supersectors: Professional and Business Services (PBS), Manufacturing (MFG) and Trade, Transportation and Utilities (TTU) had payrolls exceeding one billion dollars.
- PBS produced the largest share of payroll in the region, \$3.5 billion, or 28.1% of the region's total payroll. MFG followed with a payroll of \$3 billion, or 23.8% of the region's total payroll. TTU produced a payroll of \$1.9 billion or 14.9%. Combined, the three supersectors generated \$8.3 billion in payroll, two-thirds of GMW's total payroll.
- Five supersectors produced 5.0% or less of regional payroll: Natural Resources & Mining (NRM), Construction, Financial Activities, Leisure and Hospitality (L&H), and Other Services.
- The private sector produced 91.9% of the region's payroll. The public sector generated 8.1% of GMW's total payroll.

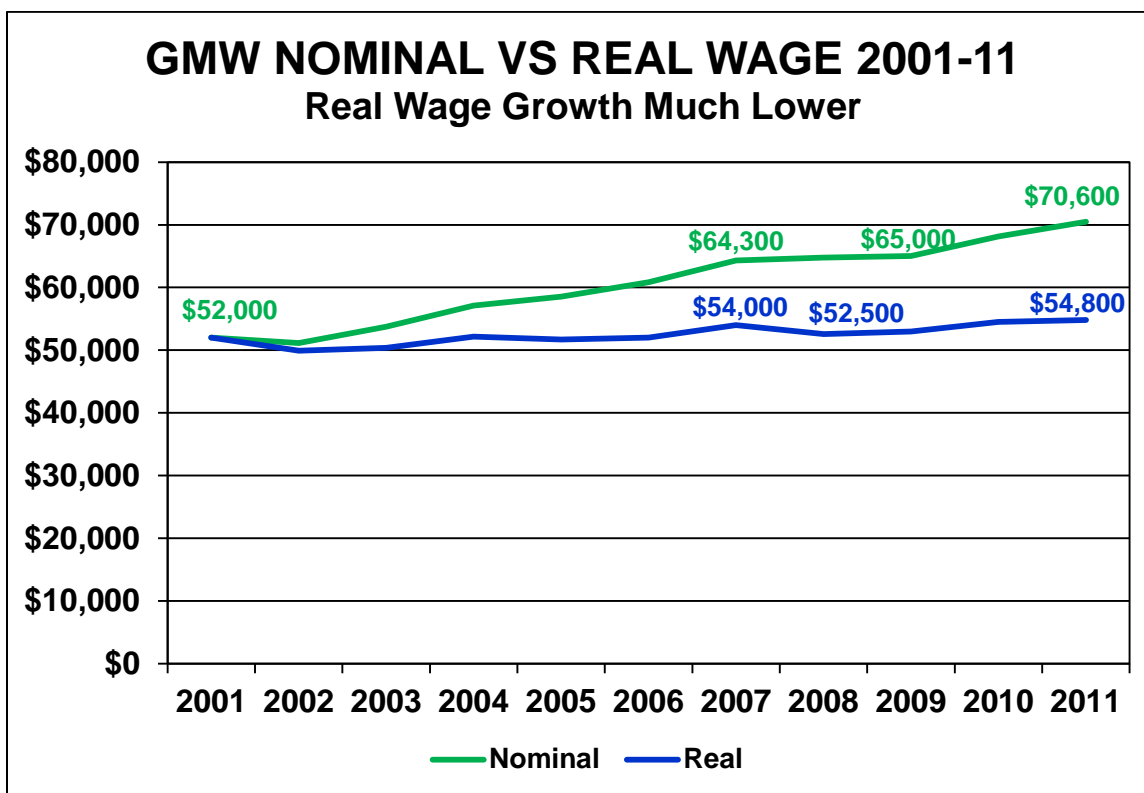
GREATER METROWEST - EMPLOYMENT



Source: USBLS, MA EOLWD and MERC

- In 2011 the Greater MetroWest (GMW) average annual wage reached a historical high of \$70,600, up \$2,400 or 3.6% from 2010.
- In 2011 the GMW average annual wage exceeded the Massachusetts' average wage of \$59,700 by \$10,900, or 18.3%, and the United States' average wage of \$48,000 by \$22,500, or 46.9%.
- Average annual wages for GMW, Massachusetts, and the nation were initially very similar in 1980. Over the next three decades the wage gap among the three widened. The one exception occurred when the wage gap narrowed during the 2001-03 dot-com recession.
- In 2011 the MetroWest CCSA average annual wage was \$69,300, 16.2% higher than the Massachusetts' average annual wage, and 44.3% higher than the United States' average annual wage. The Greater Marlborough Region average annual wage of \$72,500 exceeded the Massachusetts average annual wage by 21.5% and the national average annual wage by 50.9%.

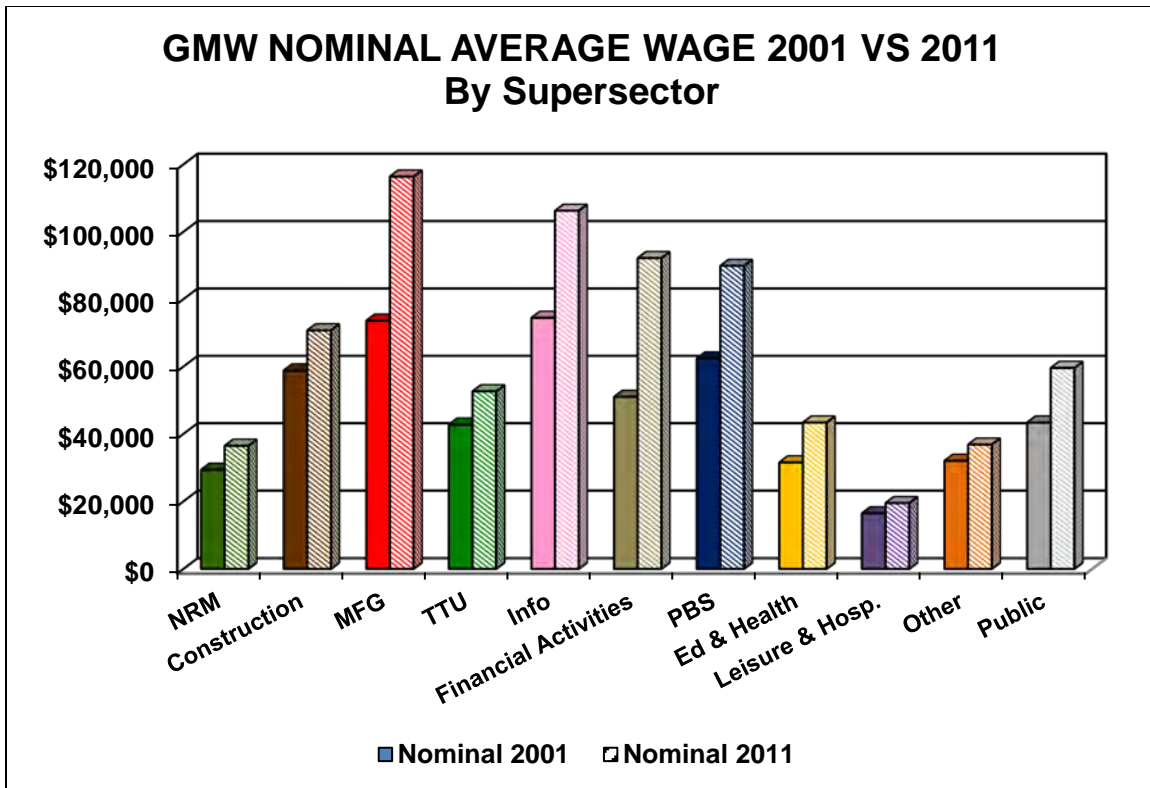
GREATER METROWEST - EMPLOYMENT



Source: U.S BLS, MA EOLWD and MERC

- The Greater MetroWest (GMW) real wage is calculated using the Boston CPI for all Urban Wage Earners and Clerical Workers and 2001 as the base year in correcting for inflation. The GMW nominal wage in green and the real wage in blue were compared over the past decade.
- The GMW nominal average annual wage climbed by 23.7% from \$52,000 in 2001 to \$64,300 in 2007. The next two years (2007-2009) saw a minimal gain of 1.0% in the nominal wage. The average annual nominal wage then surged to \$70,600, growing 8.7% between 2009 and 2011.
- The GMW average annual real wage grew slowly from \$52,000 in 2001 to \$54,000 in 2007, rising only 3.8% over the six year span. The Great Recession hurt real wages in GMW as the real wage fell by 2.6% in 2008. By 2011 the average annual real wage had risen to \$54,800, only 1.5% above the 2007 level.
- Over the ten year period the average annual nominal wage in GMW increased by 35.8%, from \$52,000 in 2001 to \$70,600 in 2011. In contrast, real wages rose by only 5.4% from \$52,000 in 2001 to \$54,800 in 2011. In 2011 the GMW average annual real wage was 22.8% lower than the GMW average annual nominal wage.

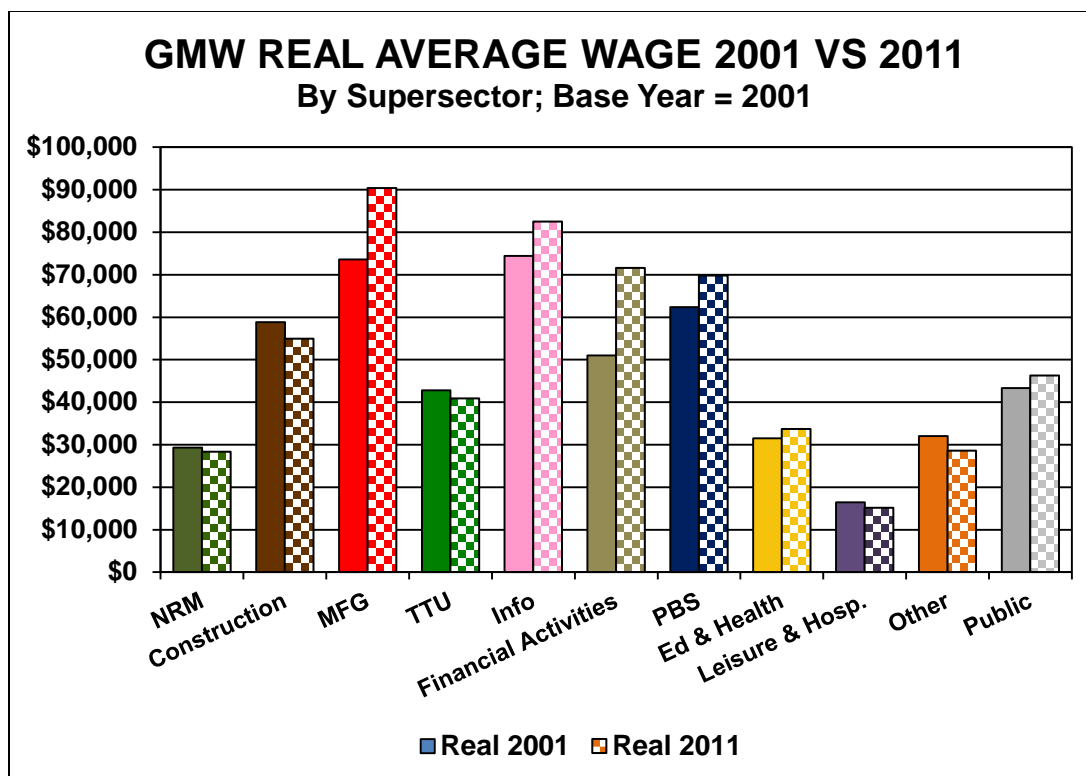
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- Nominal average annual wages are derived by dividing the gross annual payroll by the average annual employment. The average wage for Greater MetroWest (GMW) was \$70,600 in 2011, up 3.6% from 2010.
- In 2011 nominal average annual wages in five of the eleven supersectors exceeded the GMW average wage of \$70,600: Manufacturing (MFG) (\$116,400), Information (\$106,200), Financial Activities (\$92,200), Professional and Business Services (PBS) (\$89,900), and Construction (\$70,700).
- Between 2001 and 2011 Financial Activities experienced the largest percentage gain in nominal wage, up 80.8%. The Manufacturing nominal wage climbed by 58.1%, followed by PBS, 44.1%, and Information, 42.7%.
- Among all supersectors, Leisure & Hospitality offered the lowest average annual wage in both 2001 and 2011. In 2001 the Leisure & Hospitality average wage, \$16,400, represented only 22.3% of the average Manufacturing wage (\$73,600). By 2011 the Leisure & Hospitality average wage, \$19,500, represented only 16.7% or one-sixth of the average Manufacturing wage (\$116,400).

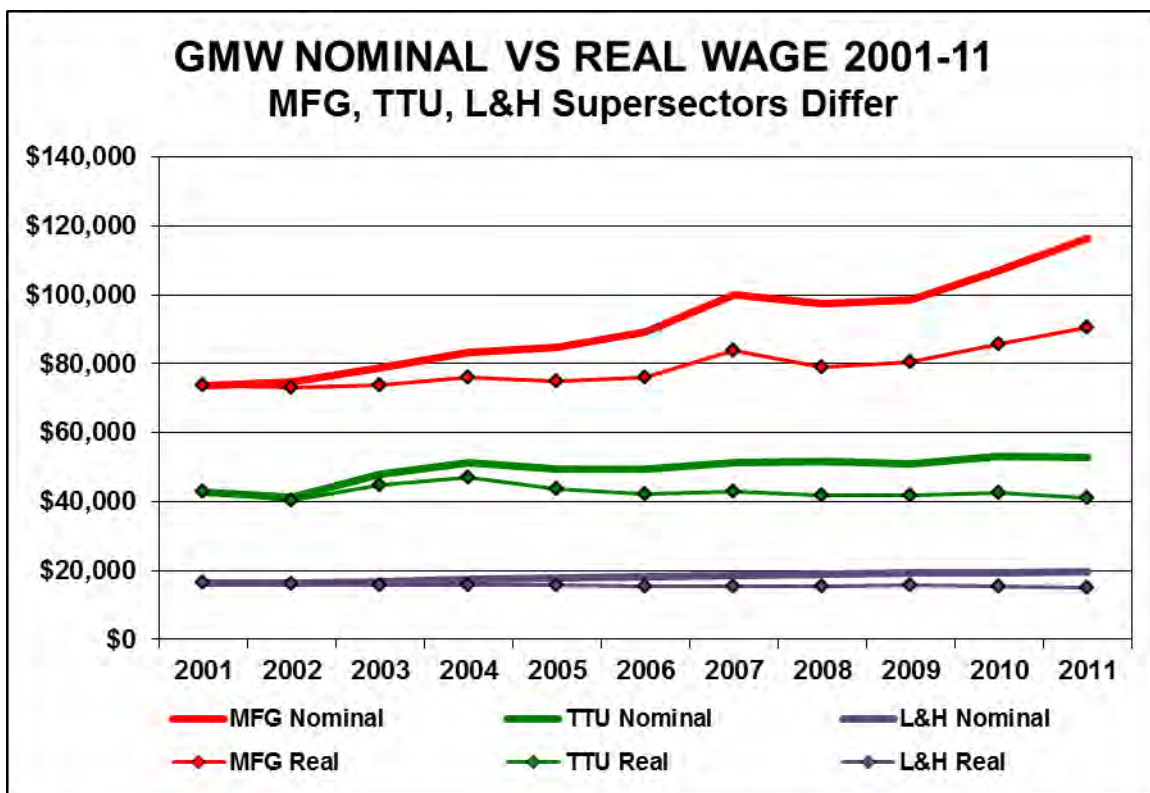
GREATER METROWEST - EMPLOYMENT



Source: USBLS, MA EOLWD and MERC

- The Greater MetroWest (GMW) average annual real wage is calculated using the Boston CPI for all Urban Wage Earners and Clerical Workers and 2001 as the base year in correcting for inflation. Average annual real wages for all GMW supersectors were compared for 2001 and 2011.
- Six of the eleven GMW supersectors reported real wage increases over the decade led by Financial Activities, up 40.4%. Real wages in five of eleven supersectors declined over the decade, led by Other Services, down 10.7%.
- In 2011 Manufacturing (MFG) produced the highest average real wage, \$90,400, up 22.8% from 2001, followed by Information, \$82,500, up 10.8% from 2001.
- In 2011 Leisure & Hospitality (L&H) offered the lowest average annual real wage, \$15,100, down 8.0% over the decade. Natural Resources & Mining (NRM) and Other Services also recorded 2011 real wages below \$30,000.
- The gap between the highest average real wage (Manufacturing) and lowest average real wage (L&H) widened from 2001 to 2011. In 2001 the Manufacturing average real wage exceeded L&H's real wage by 348%. By 2011 the gap between the Manufacturing and Leisure & Hospitality average annual real wages had widened to 498%.

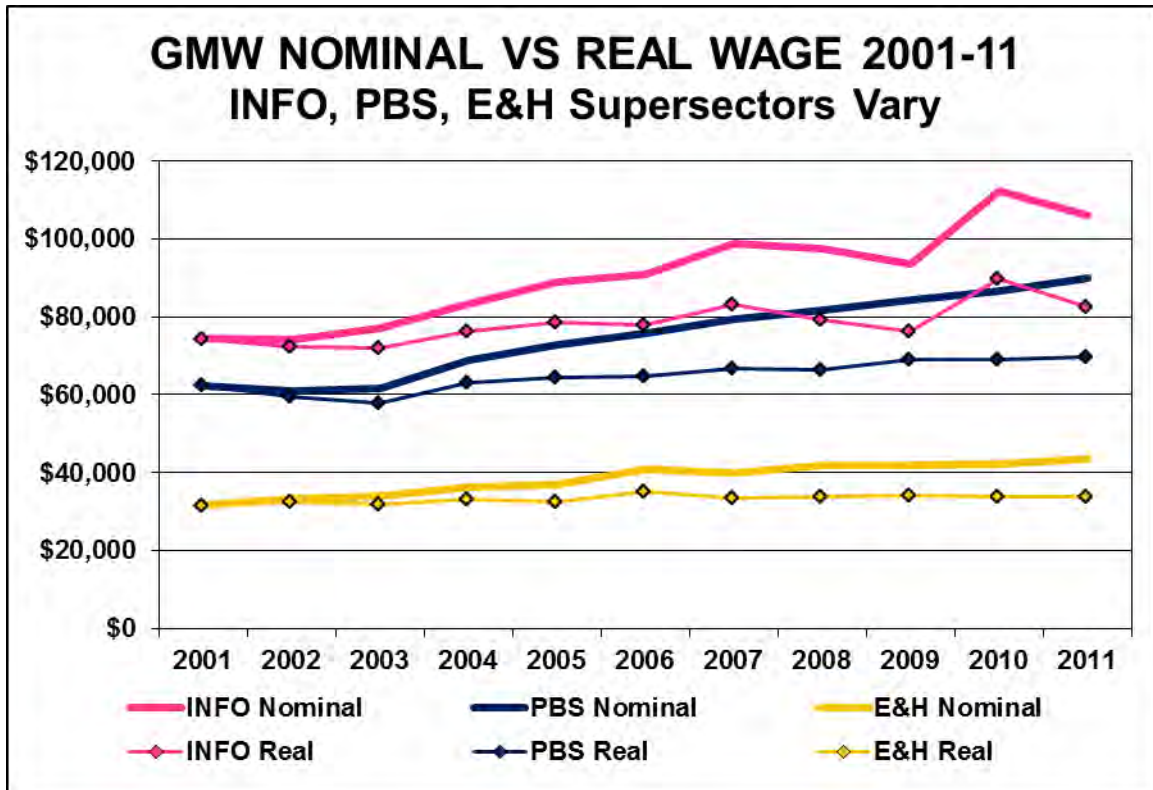
GREATER METROWEST - EMPLOYMENT



Source: USBLS, MA EOLWD and MERC

- The Greater MetroWest (GMW) real wage is calculated using the Boston CPI for all Urban Wage Earners and Clerical Workers and 2001 as the base year in correcting for inflation. The above graph compares the nominal average annual wage of three important GMW supersectors with their real average annual wage for 2001-2011 to show the effects of inflation on wages.
- The average annual nominal wage in Manufacturing (MFG), the region's fourth largest employer in red, rose by 58.1% from \$73,600 in 2001 to \$116,400 in 2011, dipping in 2008. However, the MFG real wage grew 22.8% from \$73,600 in 2001 to \$90,400 in 2011.
- Trade, Transportation & Utilities (TTU), the region's second largest employer in green, experienced nominal wage growth of 23.1% from \$42,800 in 2001 to \$52,600 in 2011. However, the real average annual TTU wage *declined* by 4.5% from \$42,800 in 2001 to \$40,900 in 2011.
- Leisure & Hospitality (L&H), the region's sixth largest employer in purple, saw its average nominal wage rise by 18.5% from \$16,400 in 2001 to \$19,500 in 2011. In contrast, the real average L&H wage *declined* by 8.0% over the decade from \$16,400 in 2001 to \$15,100 in 2011.

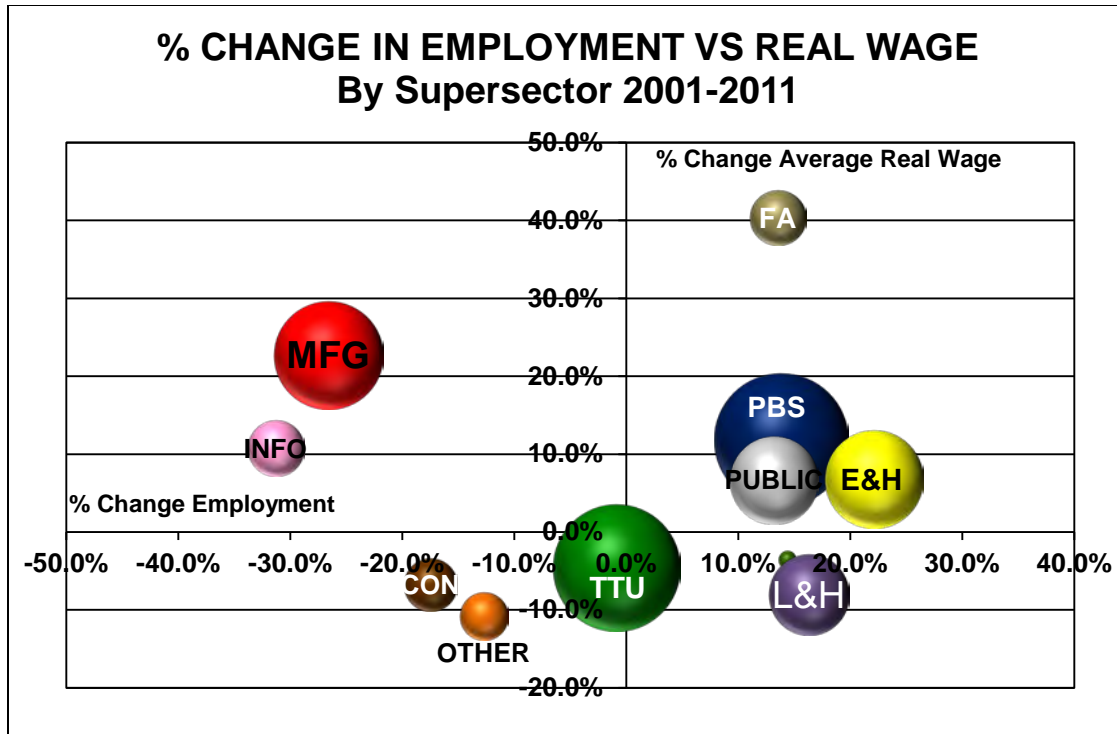
GREATER METROWEST - EMPLOYMENT



Source: USBLS, MA EOLWD and MERC

- The Greater MetroWest (GMW) real wage is calculated using the Boston CPI for all Urban Wage Earners and Clerical Workers and 2001 as the base year in correcting for inflation. Nominal and real wages were compared for three important GMW supersectors
- The average annual nominal wage in Information (INFO) in pink, climbed by 42.7%, from \$74,500 in 2001 to \$106,200 in 2011 with mid-decade volatility. The Information average nominal wage peaked in 2010 at \$112,200. The Information average annual real wage rose by 10.8% over the decade from \$74,500 in 2001 to \$82,500 in 2011.
- The average annual nominal wage for Professional Business and Services (PBS), the region's largest employer in blue, increased by 44.1% to peak at \$89,900 in 2011. Over the decade, the average annual real PBS wage grew by 11.9% from \$62,400 in 2001 to \$69,800 in 2011.
- Education and Health (E&H), the region's fourth largest employer in yellow, experienced nominal wage growth of 37.5% over the past decade to the peak at \$43,400 in 2011. The average annual real E&H wage rose from \$31,500 in 2001 to \$33,700 in 2011, an increase of 6.8%.

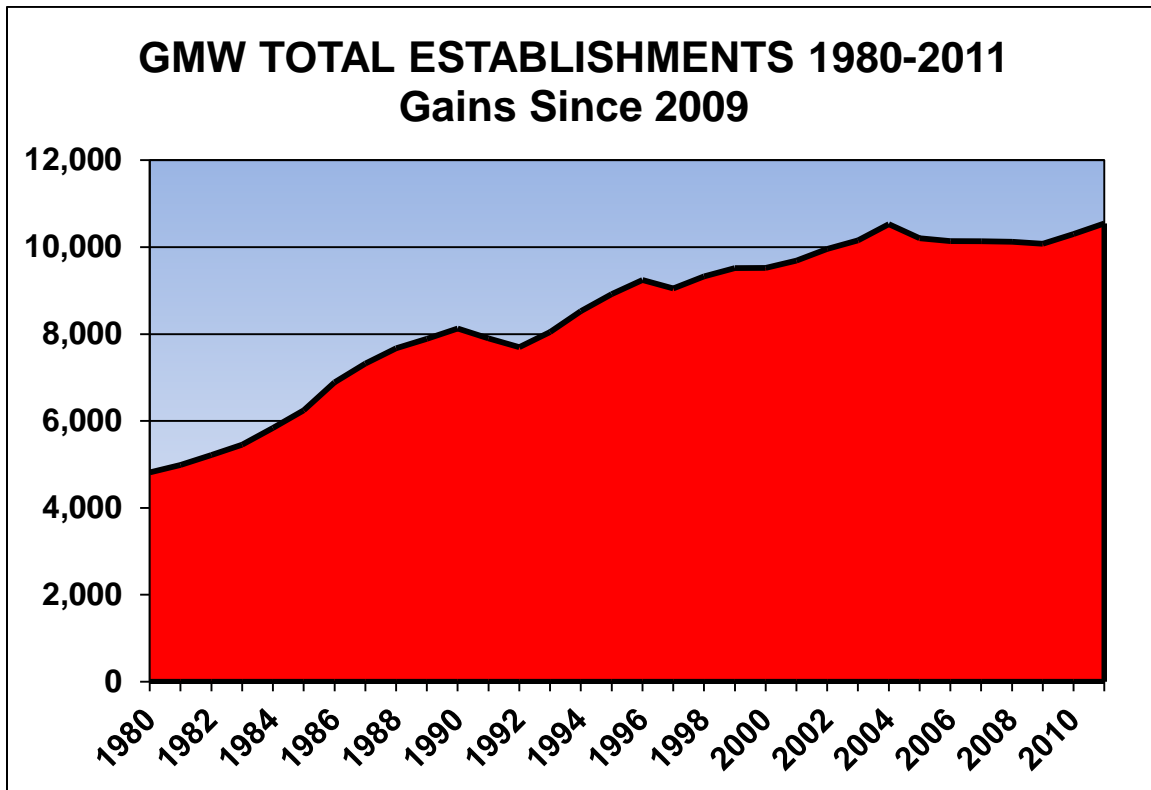
GREATER METROWEST - EMPLOYMENT



Source: USBLS, MA EOLWD and MERC

- The above graph compares the percentage change in the Greater MetroWest (GMW) real average annual wage versus percentage change in GMW employment over the past decade. The horizontal axis shows % changes in employment while the vertical axis shows % changes in real average wage. Bubble size depicts the supersectors' 2011 share of employment in the region.
- In four supersectors both real average wage and employment rose over the decade. Financial Activities (FA) led in real wage gains, 40.4%, while employment rose by 13.5%. Education & Health (E&H) led in employment gains, 22.1%, while its real wage increased by 6.8%. Professional and Business Services (PBS) and Public had modest gains. Jobs rose in a fifth supersector, Leisure & Hospitality, but its real wage declined.
- Three supersectors declined in *both* real wage and employment over the decade. Trade, Transportation and Utilities (TTU), the region's second largest employer, saw real wage decline 4.5% and employment decline 0.9%. In Construction, the real wage fell 6.7%, and employment, 17.5%. The Other Services real wage fell 10.7%, and employment declined 12.7%.
- Manufacturing (MFG) experienced solid gains in real wage at 22.8%, but employment plummeted by 26.6% over the decade. Similarly, the Information real average wage climbed by 10.8% while employment fell even further, declining by 31.3%.

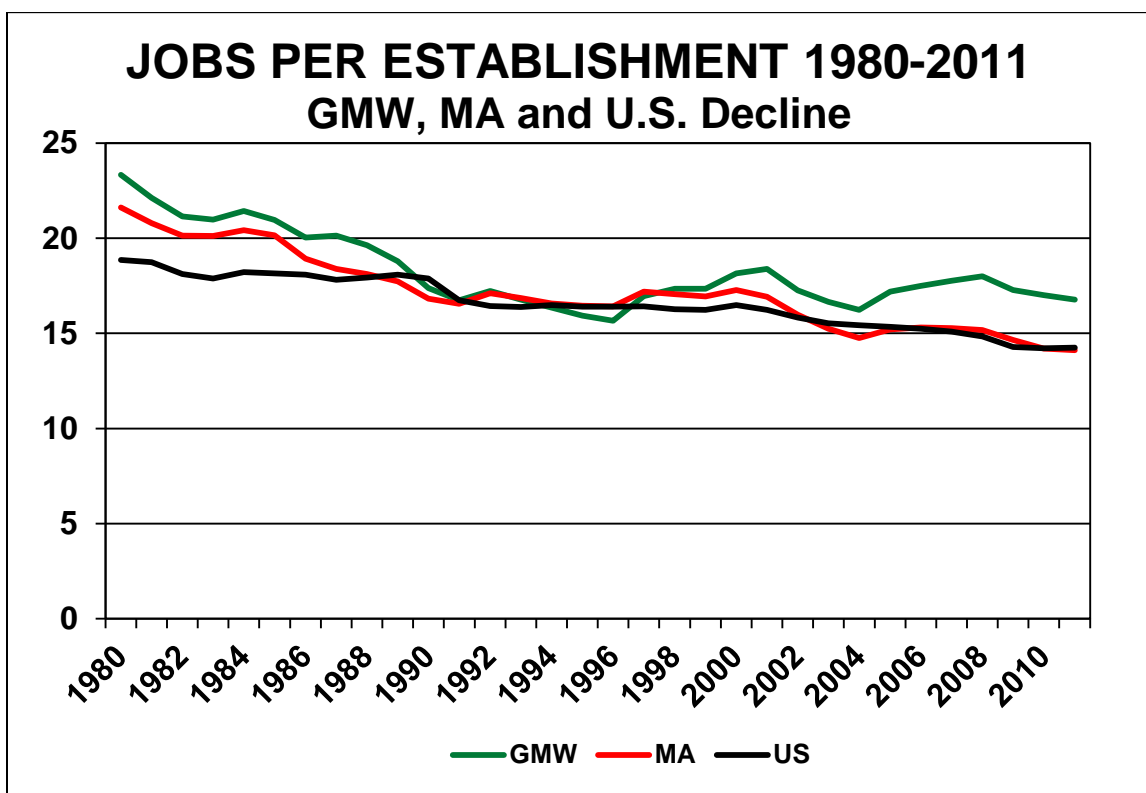
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- The number of establishments or separate places of work in the Greater MetroWest (GMW) totaled a record high 10,550 in 2011, up 250 establishments, or 2.4%, from 2010.
- Massachusetts number of establishments rose since 2010 by 4,200 establishments, or 1.9%, and the United States number increased by 88,700 establishments or 1%.
- From 1980 to 2011 the number of GMW establishments more than doubled, increasing by 5,700 or by 119%.
- However, between 2005 and 2009 the number of GMW establishments remained flat. In 2011 the GMW record peak was only 17 establishments higher than the previous high in 2004. This represented a 0.2% increase in GMW establishments over the seven year period (2004-2011).
- In 2011 the MetroWest CCSA was home to 6,820 establishments, comprising 64.7% of GMW establishments. The Greater Marlborough Region was home to 3,720 establishments, comprising 35.3% of GMW establishments.

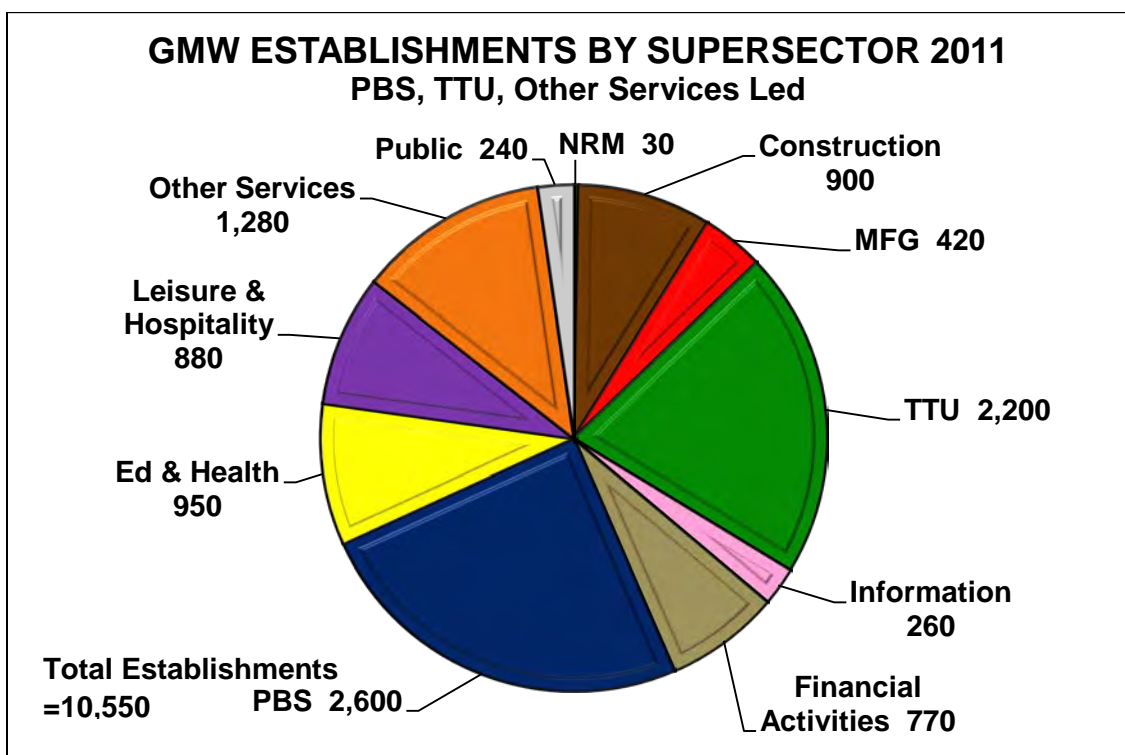
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- The Greater MetroWest (GMW) number of jobs per establishment or separate places of work in 2011 equaled 16.8, higher than both the Massachusetts and the United States numbers of jobs per establishment of 14.1 and 14.2, respectively.
- Since the pre-Great Recession employment peak in 2008, the number of jobs per establishment in GMW has fallen from 18 to 16.8, a 6.8% decline.
- Over the same period 2008-2011, the number of Massachusetts (MA) jobs per establishment fell by 7.0%, similar to the GMW decline. Both GMW's and MA's declines exceeded the 4.0% decrease in the number of United States jobs per establishment from 2008-2011.
- Over the entire 1980-2011 period, the GMW's number of jobs per establishment fell by about 6.6 jobs per establishment from 23.3 to 16.8, a decline of 28.1%. The Massachusetts number of jobs per establishment declined by 7.5 jobs per establishment, or -34.8%. The United States' number of jobs per establishment fell by 4.6 jobs, a 24.5% decline over the 31 years.
- In summary, places of work in the region, state, and nation now employ notably fewer people per establishment than they did in 1980.

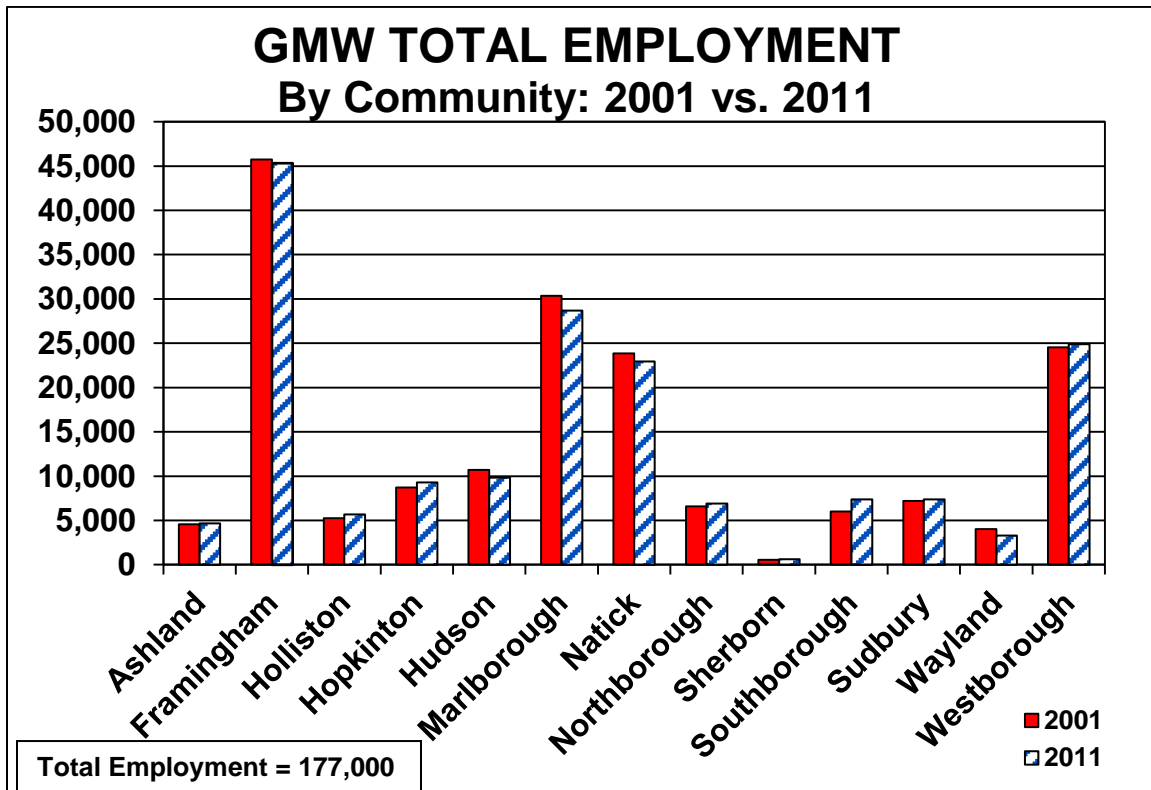
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- In 2011 Greater MetroWest (GMW) establishments equaled 10,550, up 2.4% from 2010. Three supersectors dominated the region, each contributing more than 1,000 establishments or separate places of work.
- Professional and Business Services (PBS) led with the most establishments in the region, 2,580, or 24.5% of the region's total establishments. Trade, Transportation and Utilities (TTU) followed with 2,230, 21.1% of the region's establishments. Other Services occupied 1,270 separate places of work or 12.1% of the region's establishments.
- The top three supersectors in terms of establishments: Professional Business and Services (PBS), Trade, Transportation & Utilities (TTU) and Other Services produced a total of 6,080 establishments or 57.7% of the region's total establishments.
- Four supersectors contributed 5.0% or less to the regional establishments: Natural Resources and Mining (NRM), Manufacturing, Information, and Public.
- Manufacturing, the third largest supersector in terms of employment, had only 420 establishments in 2011, but a high number of jobs per establishment.

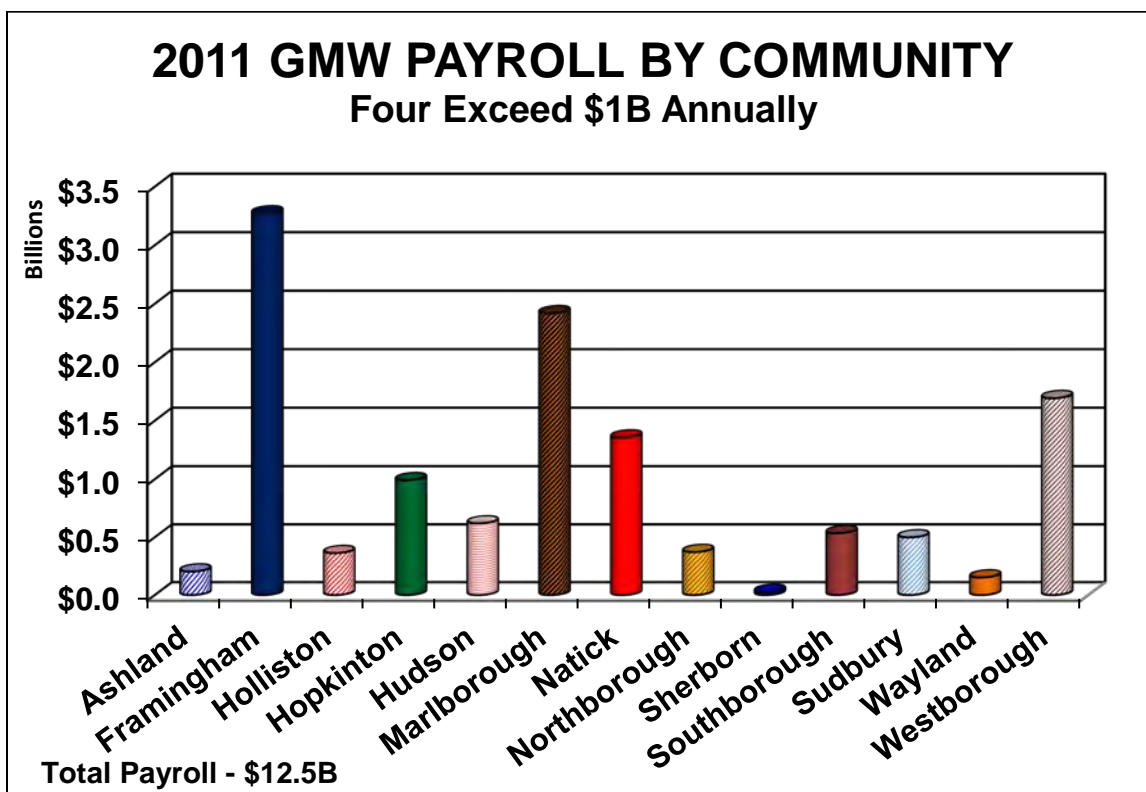
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- Greater MetroWest (GMW) employment totaled 177,000 jobs, up 1,700 jobs or 1% since 2010.
- Over the decade (2001-11) eight of the thirteen GMW communities increased their employment: Ashland, Holliston, Hopkinton, Northborough, Sherborn, Southborough, Sudbury, and Westborough. Southborough had the largest absolute gain, up 1,400, or 22.7% since 2001. Hopkinton had the second largest gain, up 600 jobs (6.6%), followed by Holliston, up 430 jobs (8.1%).
- Since 2001 five GMW communities lost jobs: Framingham, Hudson, Marlborough, Natick and Wayland. Marlborough had the largest absolute decline, down 1,700 jobs, or -5.5%. Hudson followed, down 900 jobs, or -8.2%, and Wayland, down 700 jobs, or -17.6%.
- Over the decade Southborough had the largest percentage gain in jobs followed by Sherborn (14.3%). Wayland suffered the largest percentage loss in employment, followed by Marlborough and Natick (-3.9%).

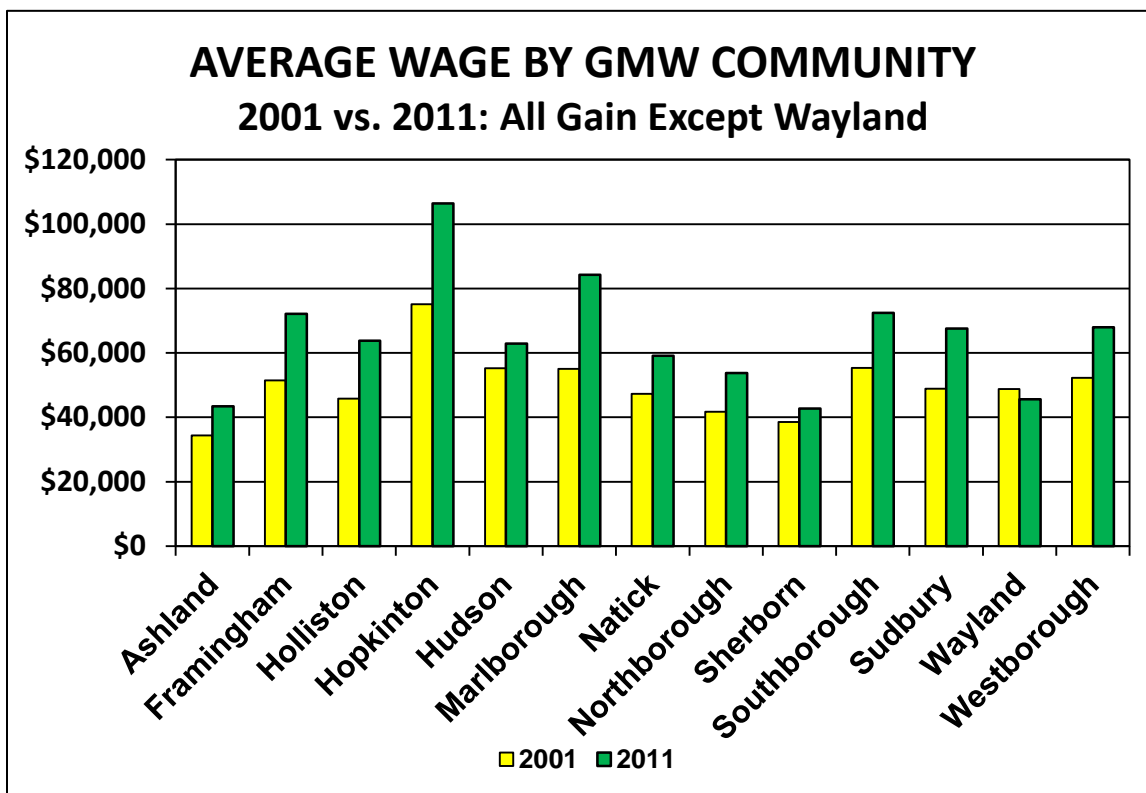
GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- Greater MetroWest (GMW) businesses produced a total payroll of \$12.5 billion in 2011, up 4.6% from 2010.
- Framingham's businesses produced the highest payroll, \$3.3 billion, due to its concentration of establishments and high wage industrial sectors.
- Businesses in four GMW communities: Framingham (\$3.3 billion), Marlborough (\$2.4 billion), Westborough (\$1.7 billion), and Natick (\$1.4 billion) each produced payrolls over \$1 billion. Combined, these four communities generated a payroll of over \$8.7 billion or 70% of the total GMW payroll.
- Hopkinton fell just short of a \$1 billion payroll; its payroll rose \$158 million or 19.0% from 2010. Two other towns had payrolls between \$500 million and \$1 billion: Hudson (\$618 million) and Southborough (\$534 million).
- Businesses in six towns each had annual payrolls under \$500 million: Ashland, Holliston, Northborough, Sherborn, Sudbury, and Wayland.

GREATER METROWEST - EMPLOYMENT



Source: MA EOLWD and MERC

- In 2011 Greater MetroWest (GMW) average annual wage reached a record \$70,600, 18.3% higher than the Massachusetts' average annual wage of \$59,700 and 46.9% higher than the United States' average annual wage of \$48,000.
- The average wage in each of the thirteen Greater MetroWest (GMW) communities, except Wayland, rose between 2001 and 2011.
- Jobs in Hopkinton led all GMW communities in 2011 with the highest average wage of \$106,400, experienced the largest gain since 2001, up \$31,200. Marlborough, with the second highest wage of \$84,200, followed, up \$29,200 from 2001. Wayland was the only town to experience a decline in average wage; its average wage fell by \$3,200 to \$45,600 in 2011.
- Among all GMW communities in 2011, Sherborn's job offered the lowest average wage, \$42,800, followed by Ashland, \$43,400.
- In 2011 the average annual wages of eight communities exceeded \$60,000: Framingham, Holliston, Hopkinton, Hudson, Marlborough, Southborough, Sudbury, and Westborough. In 2001 only Hopkinton had an average wage that exceeded \$60,000.

GREATER METROWEST - EMPLOYMENT

Employment Comparison Greater MetroWest Region By Community 2011

Community/ Region	Number of Jobs*	Average Wage	Total Payroll* (millions)	Number of Establishments*	Largest Supersector
Ashland	4,680	\$43,400	\$203	440	TTU **
Framingham	45,330	\$72,200	\$3,271	2,300	PBS ***
Holliston	5,670	\$63,800	\$362	460	PBS
Hopkinton	9,300	\$106,400	\$990	470	Manufacturing
Hudson	9,830	\$62,900	\$618	620	Manufacturing
Marlborough	28,700	\$84,200	\$2,418	1,520	TTU
Natick	22,940	\$59,100	\$1,356	1,500	TTU
Northborough	6,910	\$53,700	\$371	550	TTU
Sherborn	620	\$42,700	\$27	150	Public
Southborough	7,390	\$72,400	\$535	420	PBS
Sudbury	7,380	\$67,500	\$498	660	Manufacturing
Wayland	3,320	\$45,600	\$151	430	Public
Westborough	24,900	\$67,900	\$1,692	1,030	PBS
MetroWest CCSA	106,630	\$69,330	\$7,393	6,820	PBS
Greater Marlborough Region	70,340	\$72,500	\$5,100	3,720	PBS
Greater MetroWest	177,000	\$70,600	\$12,492	10,550	PBS
Massachusetts	3,191,604	\$59,700	\$190,422	226,090	Education & Health

Source: MA EOLWD and MERC

*Rounded

**Trade, Transportation and Utilities (TTU)

***Professional and Business Services (PBS)

GREATER METROWEST - HOUSING

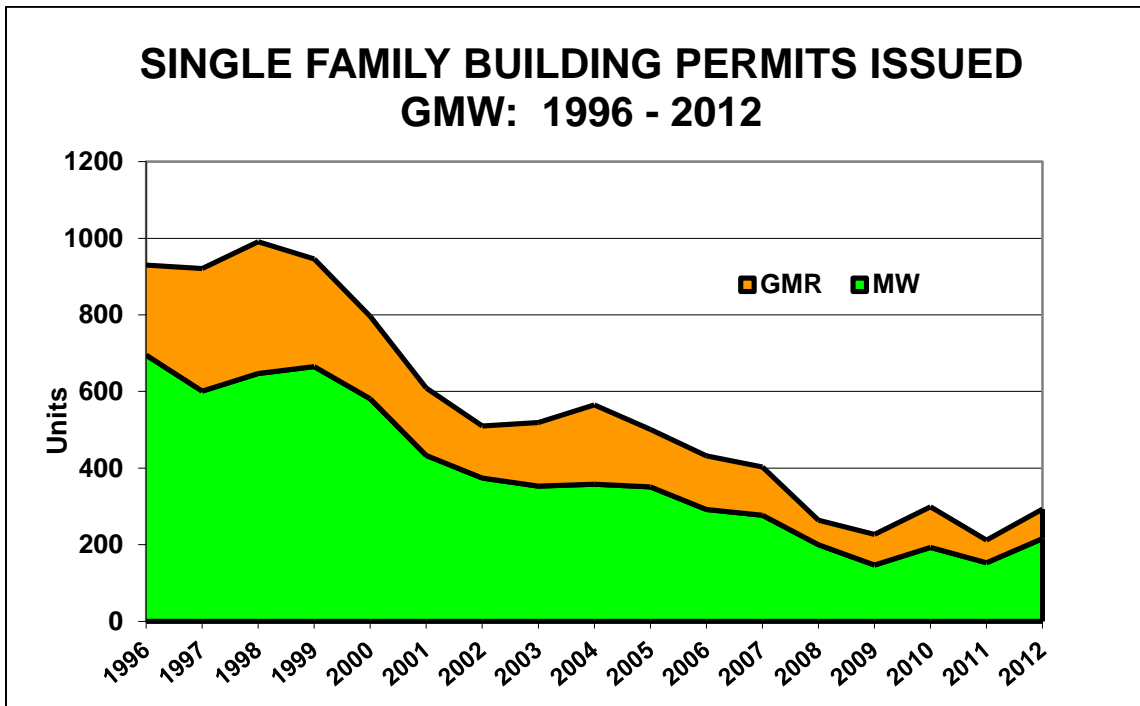
HOUSING

The MetroWest Economic Research Center (MERC) at Framingham State University collects and analyzes data on housing permits issued and existing home sales for Greater MetroWest, the aggregated MetroWest CCSA and Greater Marlborough Region. The MetroWest CCSA includes Ashland, Framingham, Holliston, Hopkinton, Natick, Sherborn, Southborough, Sudbury and Wayland. The Greater Marlborough Region includes Hudson, Marlborough, Northborough, and Westborough. MERC gathers housing data for these thirteen communities from several sources.

Data on new building permits issued for single family homes are collected by MERC using information from the U.S. Census. Annual data for permits issued in the cities and towns for 2012 is estimated using the December year-to-date values. Building permits data for Massachusetts and the United States are based on estimates published by the Federal Reserve Bank of Boston (FRBB).

Information on existing home sales is based on data published by The Warren Group for *Banker & Tradesman*. Most of these data are available from 1987 forward, and were significantly revised in the spring of 2008 in order to better capture market activity. Hence some of the housing figures in this report are not directly comparable to the values reported in previous MERC publications. Data are collected on single and multi-family residences sold in the thirteen communities. Median house price is measured at the 50th percentile in each town; that is, half the homes sold for more than the median price and half sold for less than the median price. Median prices for the regions are estimated. It is important to remember that a change in median price does not reflect appreciation or depreciation in the value of individual homes. Rather, there is a different mix of homes sold each year.

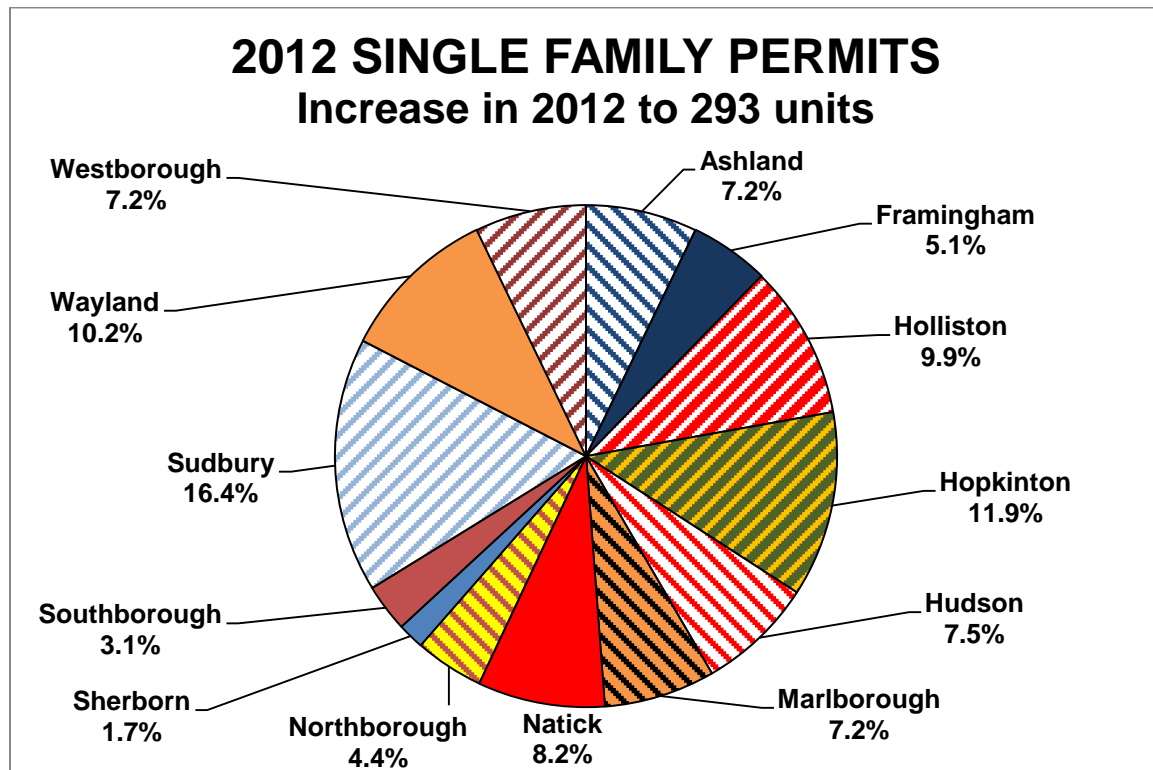
GREATER METROWEST – HOUSING



Source: U.S. Census, Federal Reserve Bank of Boston, and MERC

- New residential housing permits issued each year for single family homes in Greater MetroWest, indicated by the height of the graph above, peaked at nearly 1000 units in 1998. After increasing in 2010 for the first time since 2004, the number of permits issued in Greater MetroWest fell again in 2011 to about 233 units and rebounded in 2012 to 293 permits issued.
- Metrowest, depicted in green, accounted for between 64% and 75% of the permits issued in the region over the time period, while Greater Marlborough Region, in orange, accounted for between 25% and 36%. From 2011 to 2012, MetroWest permits increased by 29.2% while Greater Marlborough permits increased by 23.4%.
- Permits issued in Greater MetroWest are at very low levels and have been since before the “Great Recession.” However, in 2012 permits issued for single family homes in the region registered a notable increase from 2011.

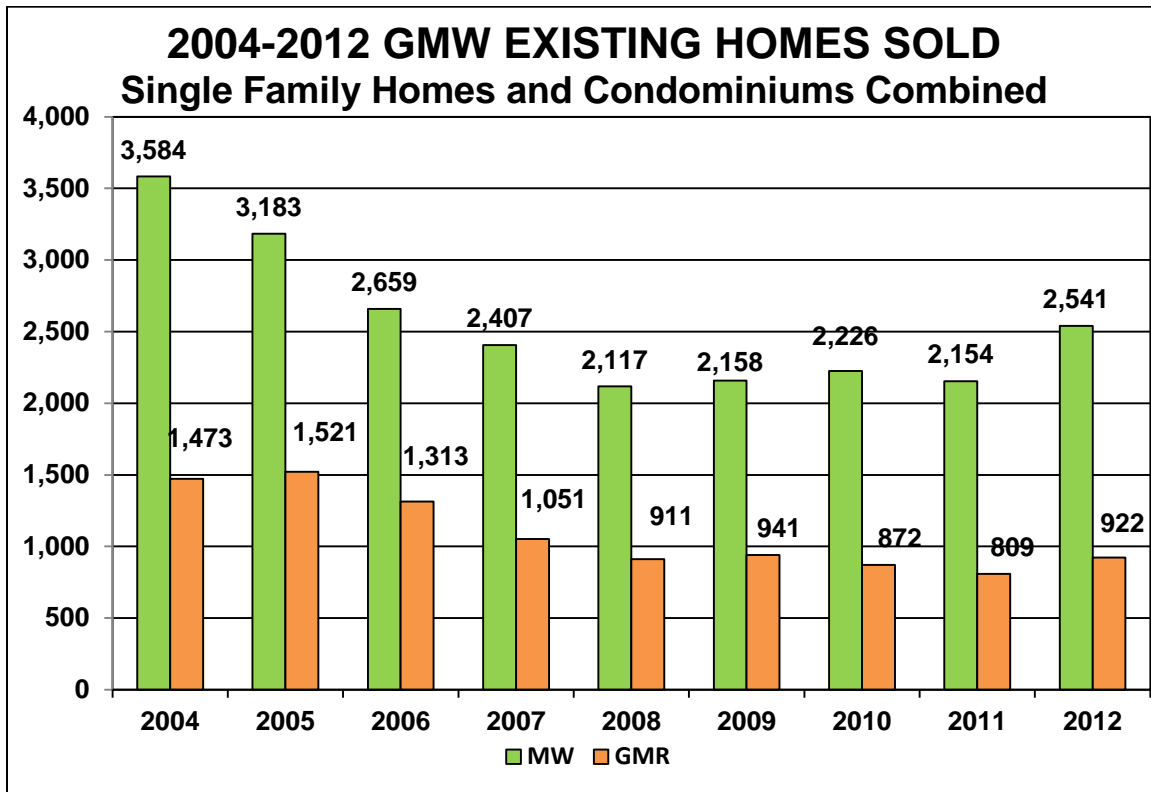
GREATER METROWEST – HOUSING



Source: U.S. Census and MERC

- New residential housing permits issued for single-family homes in Greater MetroWest increased in 2012 from 2011 to 293 permits issued.
- Hopkinton, Sudbury, and Wayland contributed 11.9%, 16.4%, and 10.2%, respectively. Holliston contributed another 9.9%. Together these four communities make up almost half of Greater MetroWest's new permits issued for 2012.
- Ashland, Hudson, Marlborough, Natick, and Westborough each added between 7.0% and 8.5% to total regional permits issued. Framingham and Northborough contributed 5.1% and 4.4%, respectively. Sherborn, and Southborough contributed the smallest amounts at 1.7% and 3.1%, respectively.

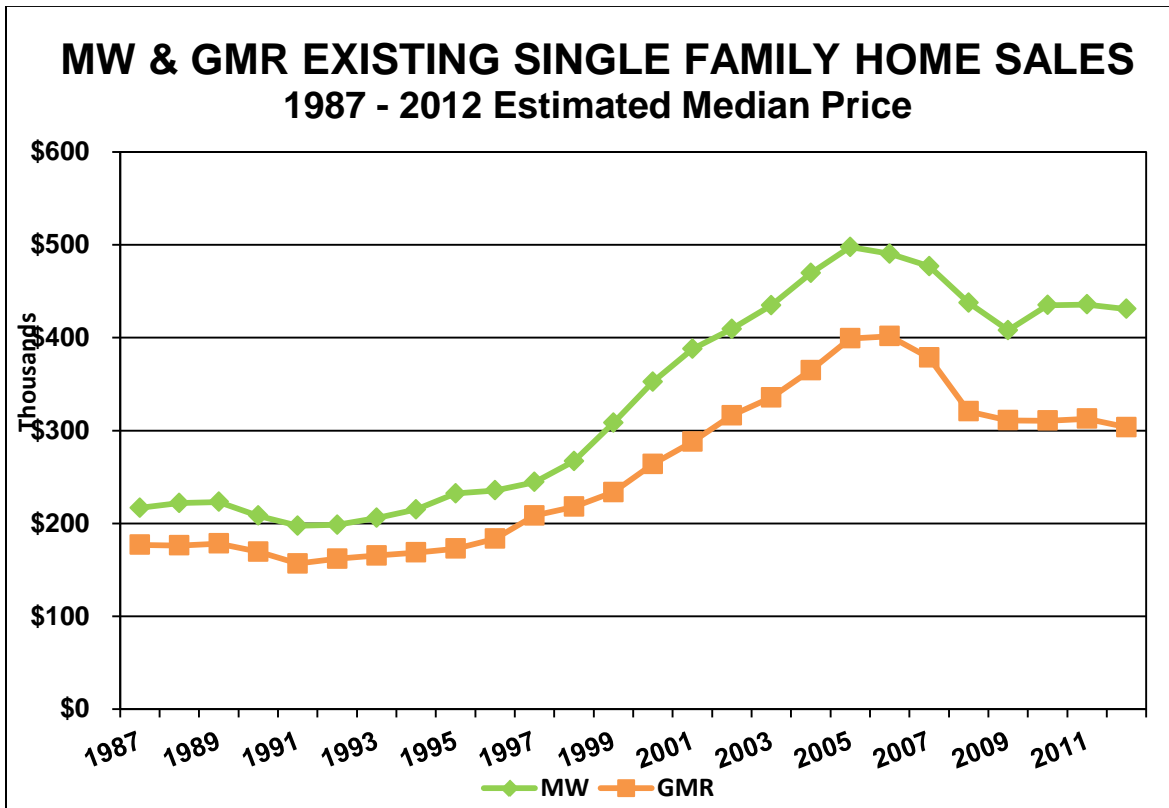
GREATER METROWEST – HOUSING



Source: The Warren Group and MERC

- Existing home sales of single family homes and condominiums combined are shown above for both MetroWest (MW) in green and Greater Marlborough (GMR) in orange. The data is shown over a nine-year period from 2004 to 2012. These sales consist of a different mix of homes sold each year. Comparably, MW has a greater number of home sales than GMR.
- The lowest point of single family homes and condo sales in MetroWest occurred in 2008 at 2,117 units sold. The second lowest value occurred in 2011 at 2,154 units sold. This value increased in 2012 to 2,541 units sold, a gain of 18%. In contrast in 2004 in MetroWest, these sales stood at almost 3600 units sold, the highest in the period covered.
- Combined single family home and condo sales in Greater Marlborough were at their lowest at about 809 units sold in 2011, a decrease of 63 units from the previous year. This value rebounded in 2012 to 922 units sold, a gain of 14%.
- In Greater MetroWest, combined single family and condo sales were more than 5,000 units sold in 2004, fell to fewer than 3,000 units sold in 2011 and rebounded in 2012 to almost 3,500 units sold, a healthy 16.9% gain.

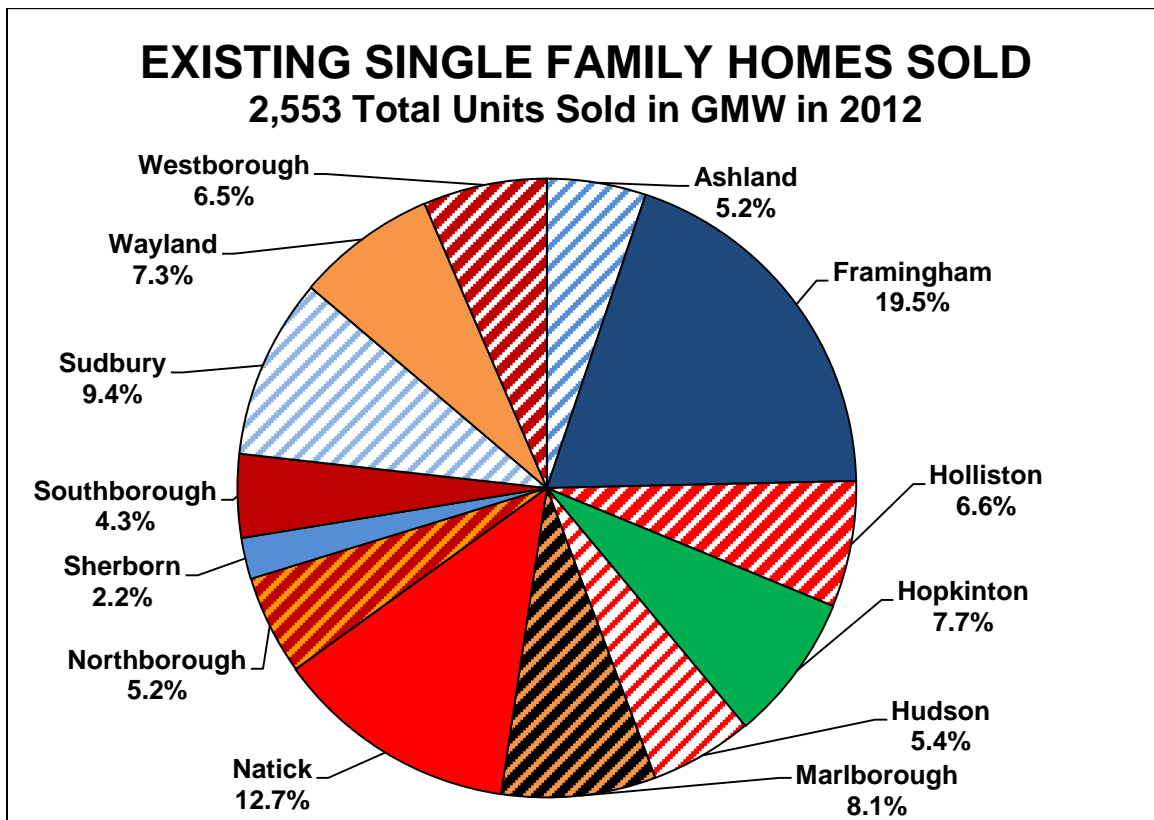
GREATER METROWEST – HOUSING



Source: The Warren Group and MERC

- The graph above shows estimated median sales prices for the Greater Marlborough Region (GMR) and MetroWest (MW) over the 25-year period between 1987 and 2012.
- Both the Greater Marlborough Region and MetroWest experienced the lowest prices for existing single family home sales in 1991 at \$156,848 and \$197,462, respectively. Comparatively, both regions experienced neighboring peak median sale prices; MW peaked in 2005 at \$497,506, and GMR peaked in 2006 at \$401,536.
- Beginning in 1991, the median sales price for existing single family homes in GMR rose on average 6.5% per year until 2006, while in MetroWest it rose on average of 6.9% until 2005.
- In both MetroWest and GMR, the estimated median sales price for single family homes declined for a few years in the mid-2000's, and has remained relatively stable for the last few years.

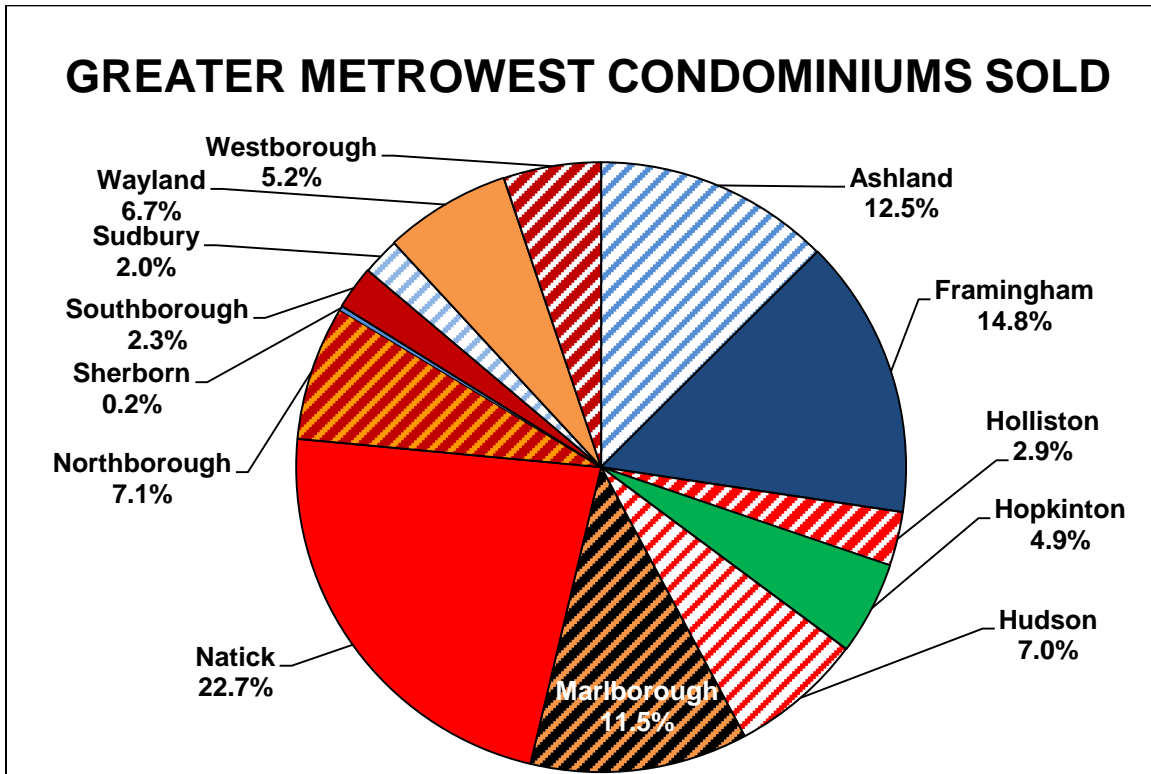
GREATER METROWEST – HOUSING



Source: The Warren Group and MERC

- During 2012, 2,553 single family homes were sold in Greater MetroWest (GMW), as opposed to 2,122 single family homes in 2011. This represents an annual increase of 431 homes sold.
- Framingham and Natick registered the two largest shares of home sales in Greater MetroWest, together comprising 32.2% of regional home sales. Framingham had the highest percentage with 19.5%, followed by Natick with 12.7%.
- Ashland, Holliston, Hopkinton, Hudson, Northborough, Wayland and Westborough each contributed between 5% and 8% of the existing single family homes sales in GMW. Marlborough and Sudbury contributed 8.1% and 9.4% respectively.
- The smallest proportions of home sales occurred in Sherborn and Southborough, contributing 2.2% and 4.3%, respectively. Sherborn single family home sales totaled 55 units in 2012.

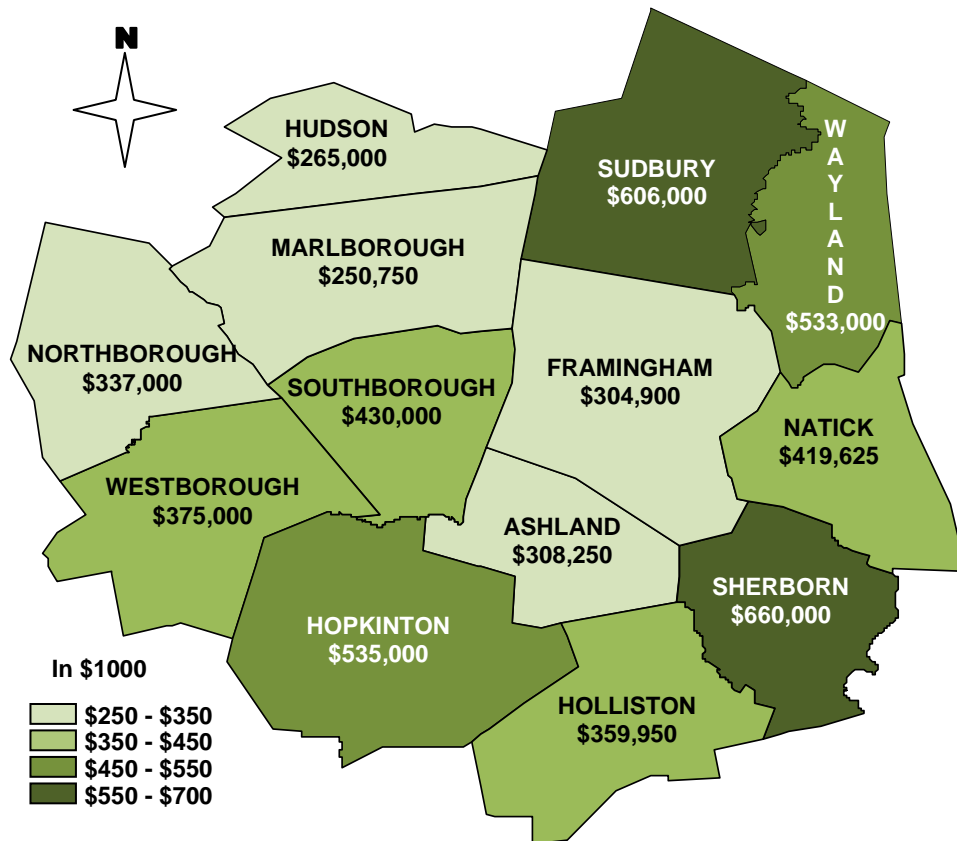
GREATER METROWEST – HOUSING



Source: The Warren Group and MERC

- During 2012, 910 condominium housing units were sold in Greater MetroWest (GMW). This represents an annual increase of 8.33%.
- Ashland, Framingham, and Natick comprised 50.0% of the region's total condominium sales. Natick registered 22.7%, or almost one-quarter, of GMW sales. Meanwhile, Ashland and Framingham contributed 12.5% and 14.8%, respectively.
- Contributing 5% or less were the following communities: Holliston, Hopkinton, Sherborn, Southborough, and Sudbury.
- Sherborn contributed the smallest number of condominium unit sales with only 2 units sold, which is less than 1% of the total regional condominium sales.

2012 EXISTING SINGLE FAMILY HOME SALES Median Prices in Greater MetroWest

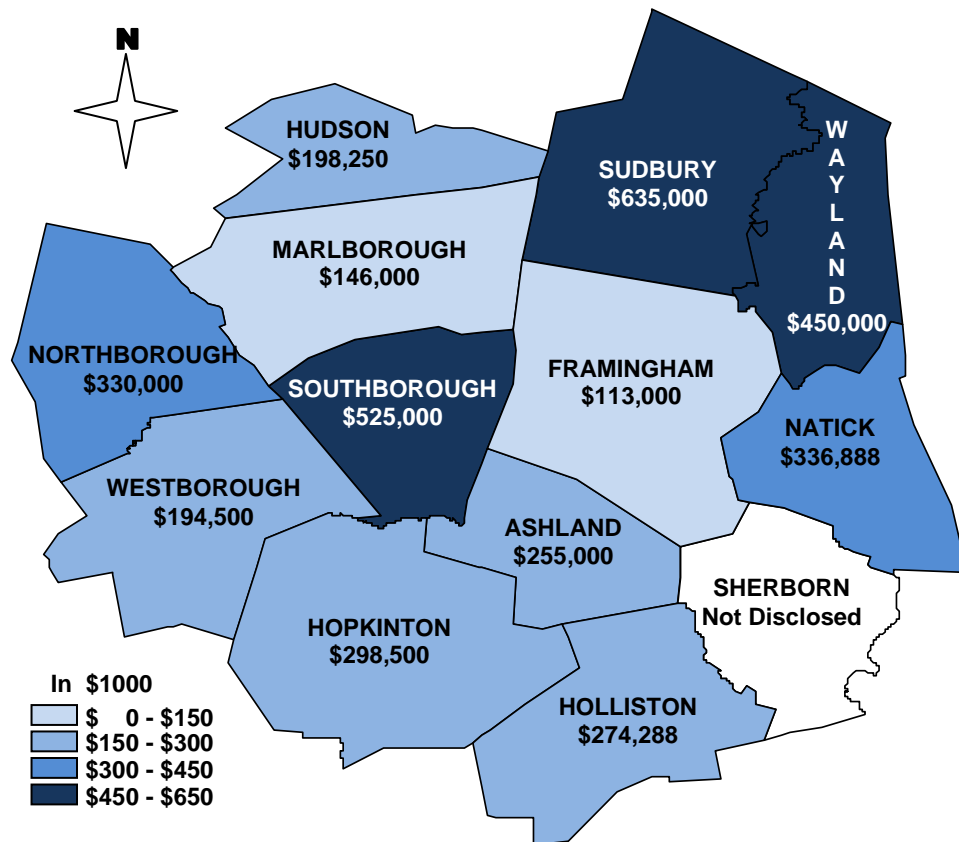


Source: The Warren Group and MERC

- The median sales prices of existing single family homes sold in 2012 in the thirteen Greater MetroWest (GMW) communities are depicted in the map above. Median sales prices ranged from \$250,750 in Marlborough to \$660,000 in Sherborn.
- Nine communities had median sales prices under \$450,000. Ashland, Framingham, Hudson, Marlborough and Northborough all fell into the \$250,000 to \$350,000 median sale price range. Holliston, Natick, Southborough and Westborough landed in the \$350,000 to \$450,000 range.
- The remaining communities had median sales prices above \$450,000. Hopkinton had a median sales price of \$535,000 and Wayland recorded \$533,000. Sherborn and Sudbury posted the highest median sales prices in 2012 at \$660,000 and \$606,000 respectively.

GREATER METROWEST – HOUSING

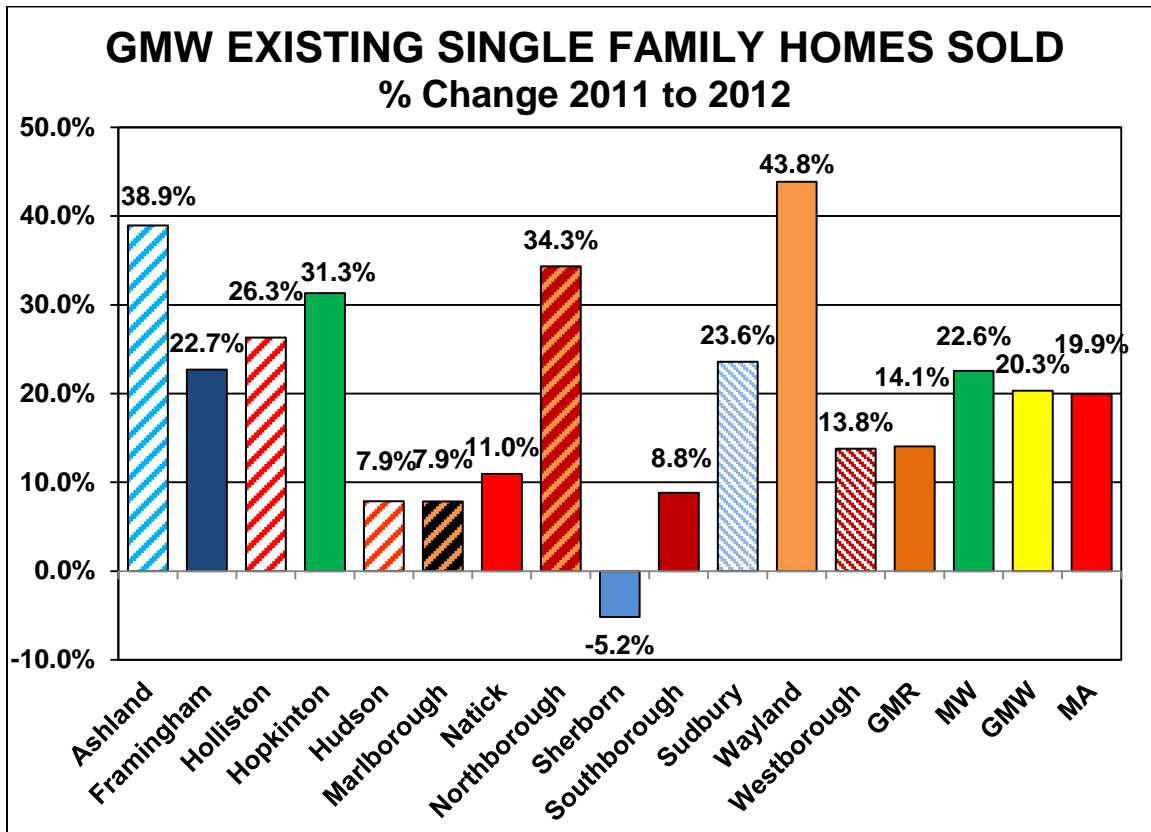
2012 CONDOMINIUM PRICES GREATER METROWEST



Source: The Warren Group and MERC

- This map depicts the median sales prices of condominiums in Greater MetroWest (GMW) in 2012.
- Framingham and Marlborough were the only communities that had median condominium sale prices below \$150,000. The lowest price in the region occurred in Framingham at \$113,000. Five of the communities, Ashland, Hopkinton, Holliston, Hudson and Westborough had median sales prices ranging from \$150,000 to \$300,000.
- Other than Sherborn, for which a median condominium sale price was not disclosed, the remaining communities had median condominium prices greater than \$300,000. Natick and Northborough were the only communities that recorded median condominium sale prices between \$300,000 and \$450,000. Southborough, Sudbury, and Wayland had median condominium prices over \$450,000 and in 2012 Sudbury achieved the highest median condominium sale price within the region at \$635,000.

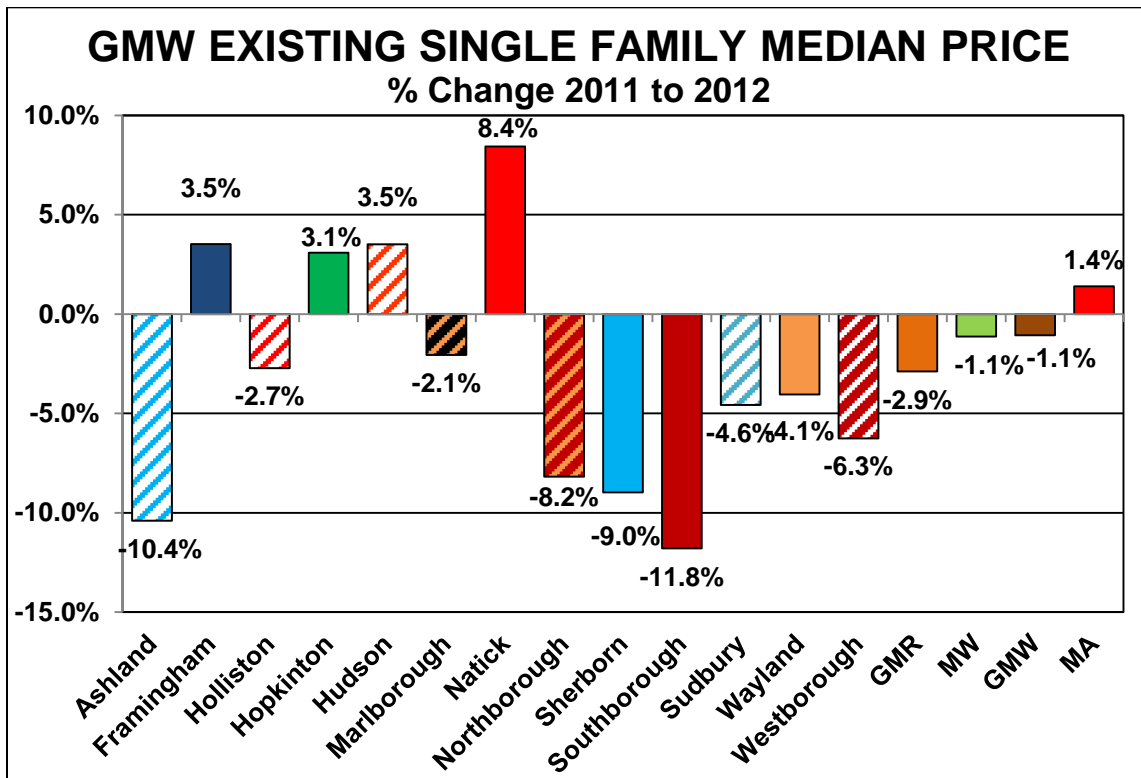
GREATER METROWEST – HOUSING



Source: The Warren Group and MERC

- Above is a graph that shows the percent change in existing single family home sales from 2011 to 2012 in Greater MetroWest (GMW) and in each of its thirteen communities; in MetroWest (MW) and the Greater Marlborough Region (GMR), and in Massachusetts.
- In 2012 there were 431 more units sold in Greater MetroWest compared to 2011. This represented a 20.3% increase, as opposed to the 2.5% decrease between 2010 and 2011.
- Every community, except Sherborn, registered an increase in units sold with Wayland leading the way with an increase of 57 more units sold, up 43.8%. Next were increases in: Ashland (38.9%), Northborough (34.3%) and Hopkinton (31.3%). Their respective increases in units sold were 37 units, 34 units and 47 units.
- Sales in Framingham, Holliston and Sudbury increased between 22% and 27%; this was 92, 35 and 46 units respectively; while Natick and Westborough sales increased between 11% and 14% or 32 and 20 units respectively. The number sold in Hudson, Marlborough and Southborough increased between 7% and 9% or 10, 15 and 9 units respectively.

GREATER METROWEST – HOUSING



Source: The Warren Group and MERC

- The estimated median sales price for existing single family homes in Greater MetroWest (GMW) decreased 1.1% from \$403,192 in 2011 to \$398,924 in 2012. In contrast, the median price in Massachusetts increased 1.4% from the 2011 median sale price of \$286,000 to the 2012 median sale price of \$290,000.
- Within the region, Southborough had the greatest percentage decrease in median price falling from \$487,500 in 2011 to \$430,000 in 2012, a loss of 11.8%.
- Only four communities, Framingham, Hopkinton, Hudson and Natick recorded median price increases. Natick's increase of 8.4% from \$387,000 in 2011 to \$419,625 in 2012 is by far the greatest increase. Framingham and Hudson each increased 3.5% with Hopkinton's estimated median sale price increasing by 3.1%.
- Both MetroWest (MW) and the Greater Marlborough Region (GMR) suffered a decline in estimated single-family median sale price. Only three of the nine towns experienced median sale price increases in MW and only one of the four communities in GMR registered a median sale price increase in 2012.

GREATER METROWEST – COST OF LIVING

MEASURING THE COST OF LIVING IN METROWEST

The MetroWest Economic Research Center (MERC) tracks the cost of living in the MetroWest¹ CCSA area by calculating the average cost of a “market basket” of 57 items that are representative of the items typically purchased by professional and executive households. The items in this “market basket” were selected by The Council for Community and Economic Research (C2ER - formerly ACCRA) based on a survey of consumer spending patterns done by the U.S. Bureau of Labor Statistics. The 57 items are grouped into six categories: grocery items, housing, utilities, transportation, health care and miscellaneous goods and services. In addition to the overall cost of living index, MERC also calculates separate indexes for each of these sub-categories.

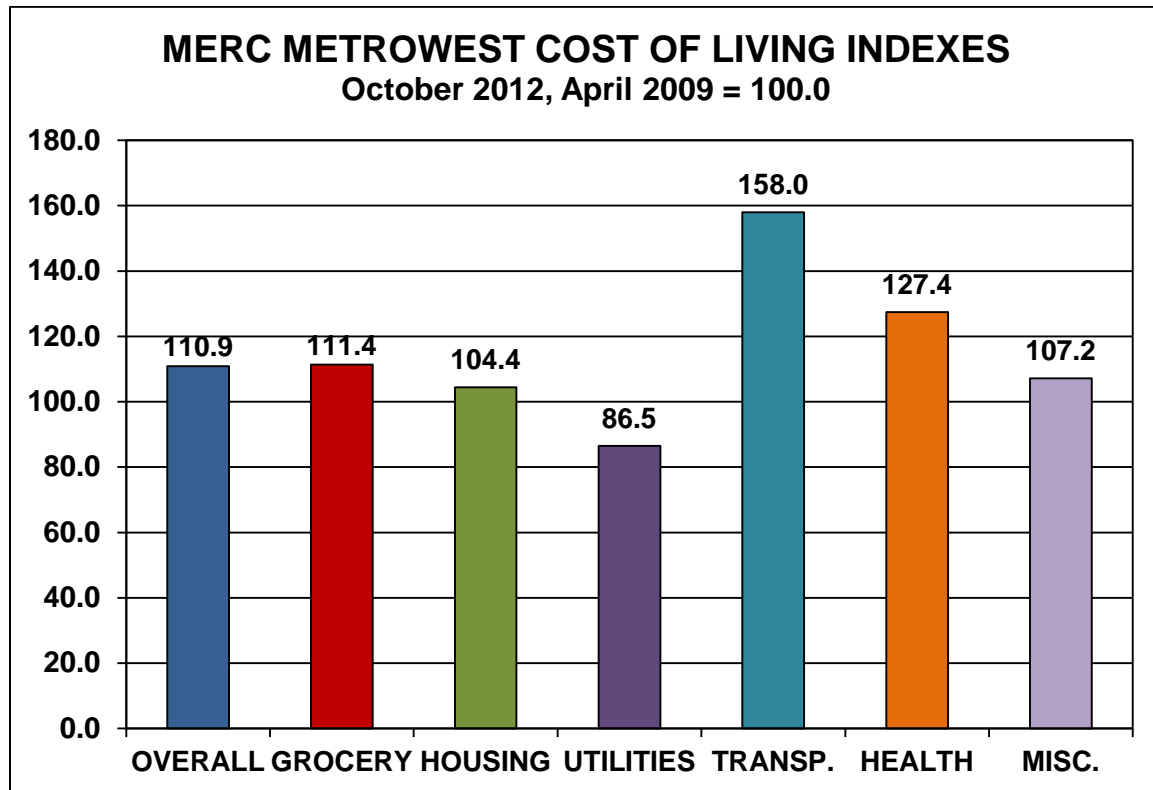
During each survey period, MERC gathers data on the prices of these items from over 100 businesses in the MetroWest area and calculates the average price of each item. These average prices are then used to calculate an index for each of the six categories mentioned above and, from them, the overall cost of living index for the area. When calculating each sub-index, every item is assigned a weight that reflects the relative importance of the item in that category of goods and services. The overall cost of living index is then a weighted average of the six sub-indexes, with the weights here reflecting the relative importance of each of the six sub-groups in the overall cost of living. The weights, like the items in the “market basket”, are also determined by C2ER based on the information obtained in the Bureau of Labor Statistics survey mentioned previously.

In addition to using this data to track the cost of living in MetroWest over time, MERC sends its survey results to C2ER to be included in that group’s survey of living costs across the nation. The data from MetroWest are combined with the same data from approximately 300 other U.S. communities to calculate the overall average cost of the “market basket” of goods and services. C2ER calls this the “national average” and then calculates a cost of living index (still called the ACCRA index) for each community as a percentage of this national average. The overall index for each city or town is also broken down into the same six sub-indexes described above and is calculated using the same weighting process. These results make it possible to compare living costs in different areas across the country.

Because these indexes are calculated from the prices of a relatively small sample of the many goods and services which middle-management households actually purchase, they are only estimates of the true cost of living in any given area. As with any figure calculated from sample data, there is a margin of error in the estimate. Since the items in the market basket were not randomly chosen, however, it is not possible to calculate exactly what that margin of error is. In its literature, C2ER suggests that small differences in these indexes (up to 3 or 4 percentage points) do not necessarily mean that differences in the true cost of living actually exist.

¹ MetroWest CCSA includes the towns of Ashland, Framingham, Holliston, Hopkinton, Natick, Sherborn, Southborough, Sudbury, and Wayland.

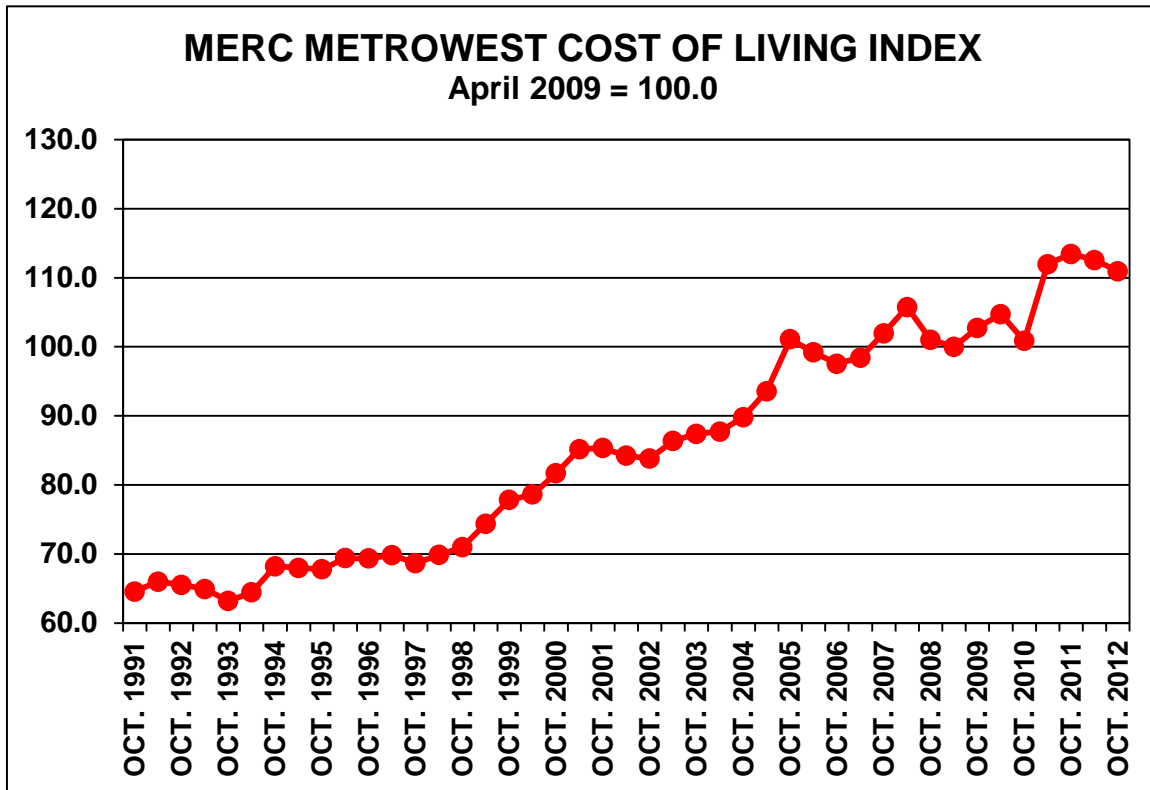
GREATER METROWEST – COST OF LIVING



Source: MERC

- The MERC Overall Cost of Living Index for MetroWest was 110.9 in October 2012. This indicates that the cost of living in MetroWest was about 11% higher in October of last year than it was in April 2009. This is only about a 1% decrease in the index from one year earlier.
- The Transportation Index had a significantly higher value than the other indexes, 158.0, in October 2012. This indicates that in October 2012 transportation costs were almost 60% higher than they were in April 2009. The index was, however, down about 9% from its value twelve months earlier, in April 2011.
- The lowest index was the Utilities Index, with a value of 86.5, about 14% lower than in April 2009. This is the only index with a value less than that of the base year, April 2009.

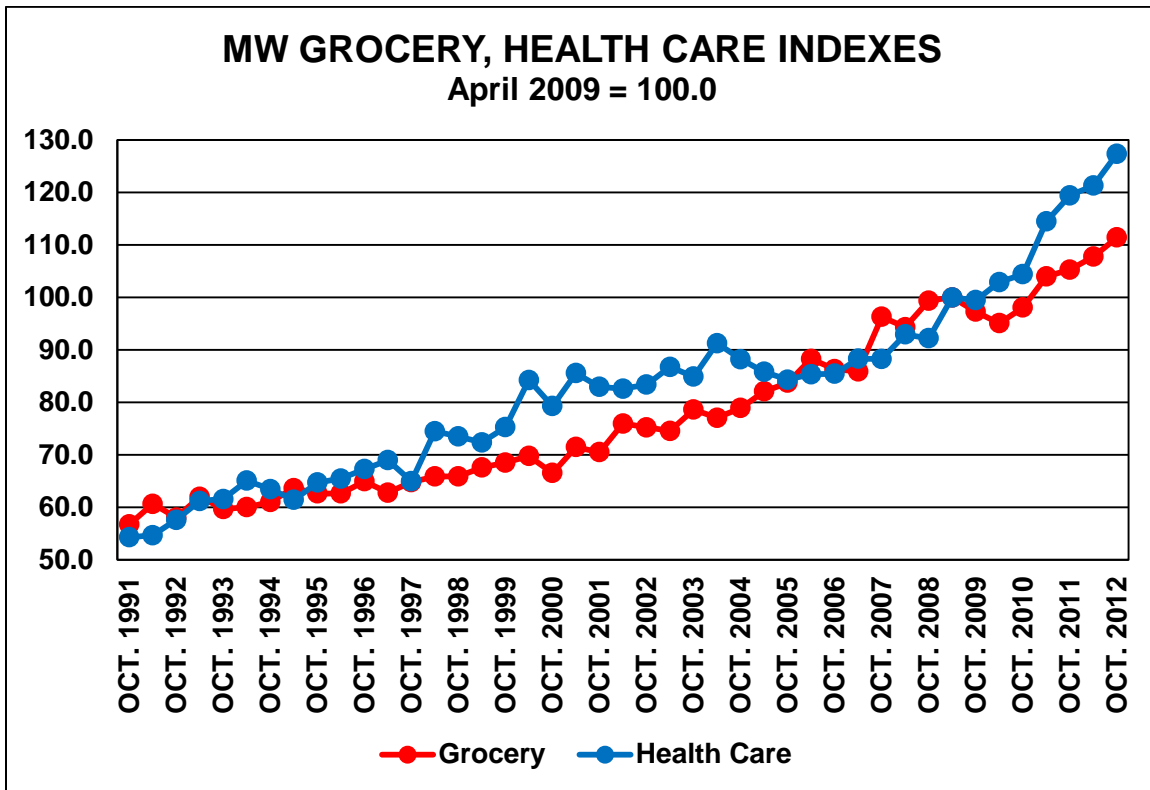
GREATER METROWEST – COST OF LIVING



Source: MERC

- In the last year, from October 2011 to October 2012, the MERC MetroWest Cost of Living Index fell by 2.2%. This is only the first decline in the index over any 12 month period since a drop of just about 1% between April 2008 and April 2009.
- Over the entire period shown on the graph, this index rose about 71.7%, which is an increase of 2.61% per year on average.
- The index peaked in October 2011 at 113.4, meaning that at that time the cost of living in MetroWest was about 13% higher than it was two and one-half years earlier. Since that peak, the Overall Index has fallen twice, to 112.6 in April 2012 and then to 110.9 in the most recent (October 2012) survey.

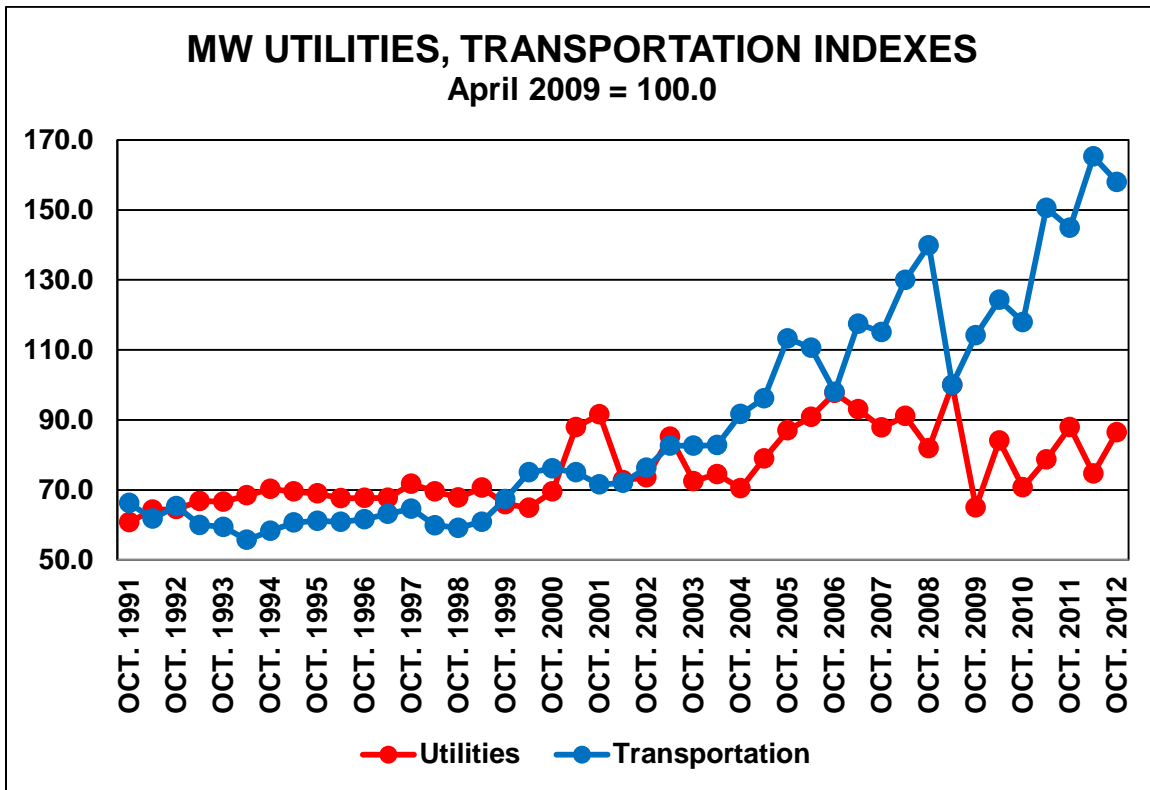
GREATER METROWEST – COST OF LIVING



Source: MERC

- During the 21 years between October 1991 and October 2012, the Health Care and Grocery Items Indexes rose at a very stable rate, exhibiting less volatility than almost all of the other sub-indexes.
- The Health Care Index had the second largest overall increase of the six sub-indexes, an increase of 134.6%. This represents an average annual increase of just over 4% per year.
- The Grocery Items Index increased at an average rate of about 3.2% per year; with the index almost doubling over the 21 years. Its value went from 56.7 in October 1991 to 111.4 this past October.
- During the last year shown on the graph, October 2011 to October 2012, the Health Care Index increased by 6.6%. This follows a 14.4% rise one year earlier.
- Between October 2011 and October 2012, the Grocery Items Index rose by just under 6% to its final value of 111.4.

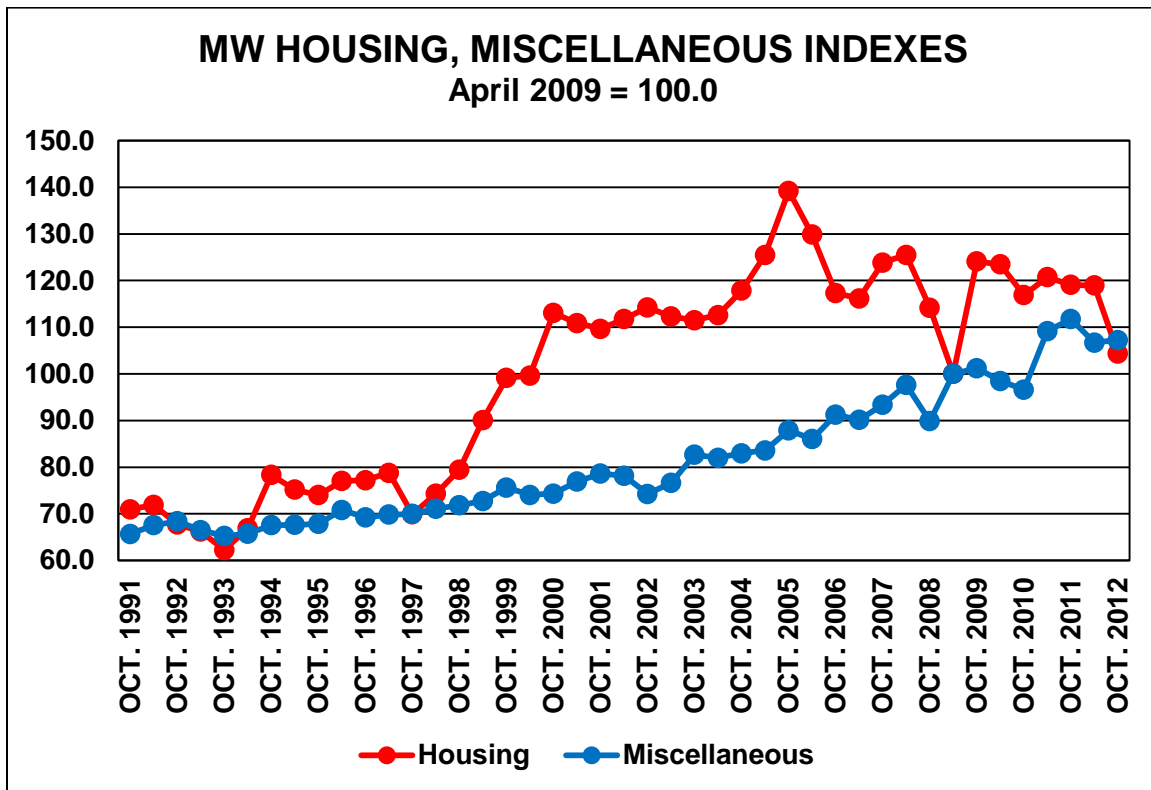
GREATER METROWEST – COST OF LIVING



Source: MERC

- The Utilities and Transportation Indexes showed a similar pattern over the 21 years shown on the graph. Both indexes were very stable between October 1991 and October 1999.
- Over those eight years, the Utilities Index had increased by less than 10% in total. Since that time this index has exhibited considerably more volatility. Fourteen of the 26 year-to-year changes since Oct. 1999 have been larger 10%.
- Between October 1991 and October 1999 the Transportation Index rose by just about 1.8%. Since that time its value has more than doubled from 67.4 to 158.0, an annual average rate of increase of almost 6.8%.
- Over the entire 21 years, the average annual rate of increase of the Utilities Index was 1.7%; while the Transportation Index increased at a rate of just under 4.3% per year.

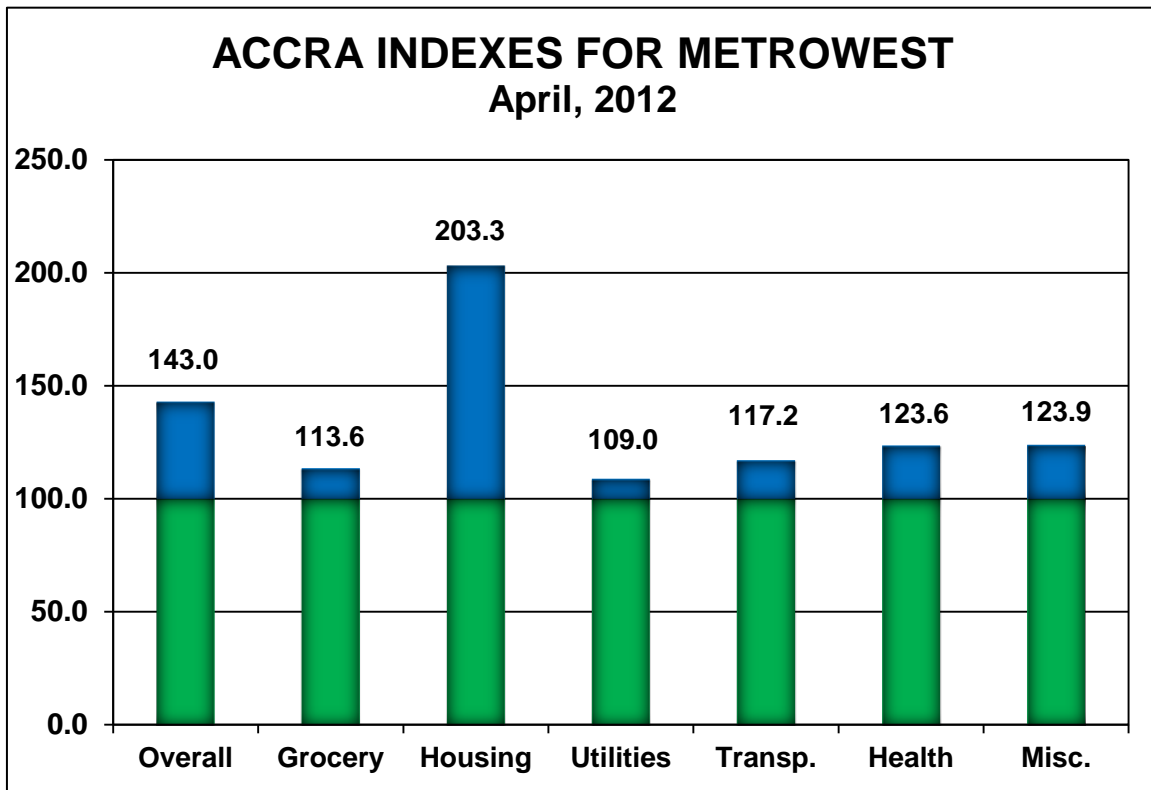
GREATER METROWEST – COST OF LIVING



Source: MERC

- The October 2012 value of the Housing Index was 104.4. This means that MetroWest housing costs in October 2012 were about 4.4% higher than they were in April 2009. This value was slightly more than 12% lower than its value one year earlier.
- In October 1997 the Housing Index stood at 69.9, virtually unchanged from its October 1991 value of 71.0. The index then began to rise rather steadily, reaching a peak of 139.2 in October of 2005. In the 16 surveys conducted during that time, only three times did the index fall over any twelve-month period.
- In the 14 surveys done since this peak in the Housing Index, there have been 8 decreases in the index from its value one year earlier. Of these eight, half have been drops of more than 10%, with the largest being a 20.3% decline occurring between April 2008 and April 2009.
- In contrast, the Miscellaneous Goods and Services Index was much less volatile. It rose at an average annual rate of about 2.4% per year over the 21 years. Only 4 times since 1991 has this index changed by more than 10% in any twelve-month period.

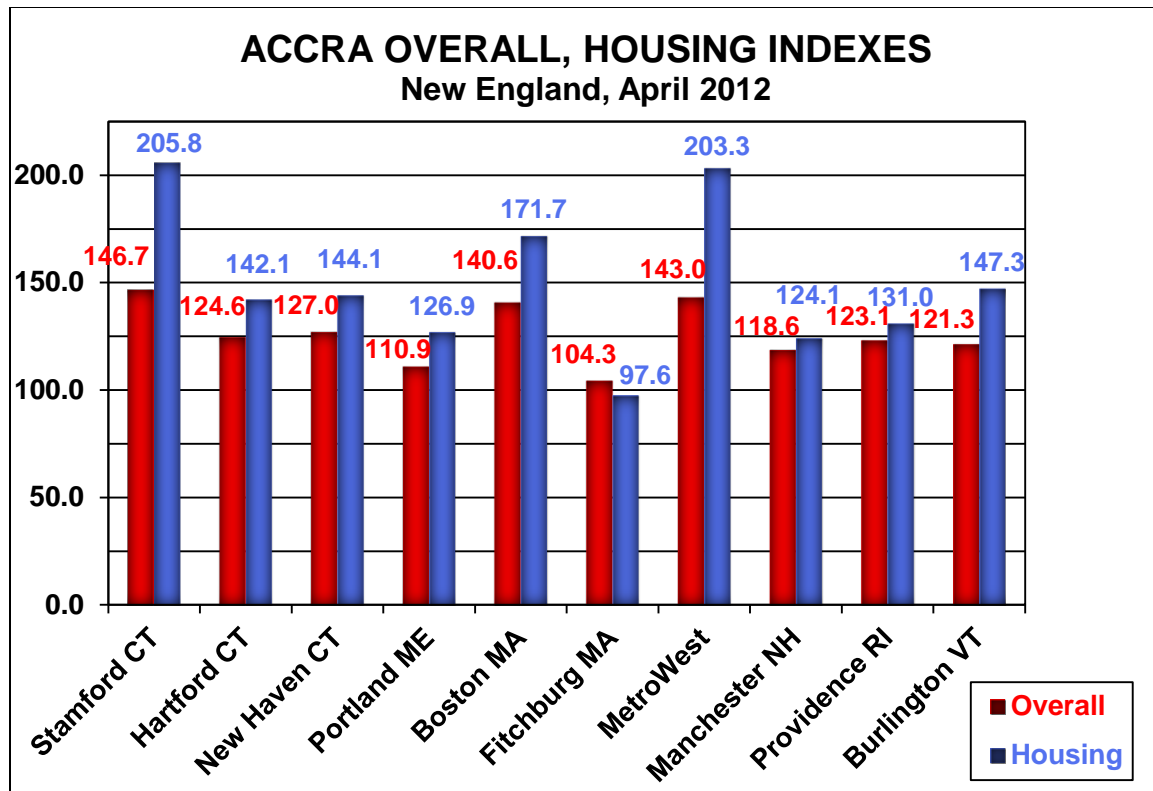
GREATER METROWEST – COST OF LIVING



Source: C2ER and MERC

- The Overall ACCRA Cost of Living Index for MetroWest in April 2012 was 143.0. By this measure the cost of living in MetroWest was about 43% above the national average at that time. The national average equals 100.0 and is shown by the green segment of each bar.
- An Overall Index of 143.0 is slightly higher than what we typically find for MetroWest; it is usually in the mid to high 130's. All six of the sub-indexes for MetroWest were significantly (more than 3 percentage points) higher than the national average, another typical result.
- The Housing Index was the highest of the six with a value of 203.3. This implies that housing costs in this area were roughly double the national average in April of last year. This is also slightly higher than what we usually see, and is probably the reason for the unusually high Overall Index.
- The Utilities Index had the lowest value of the 6 sub-indexes: 109.0. It was followed by the Grocery Items and Transportation Indexes, which were the second and third lowest at 113.6 and 117.2 respectively.

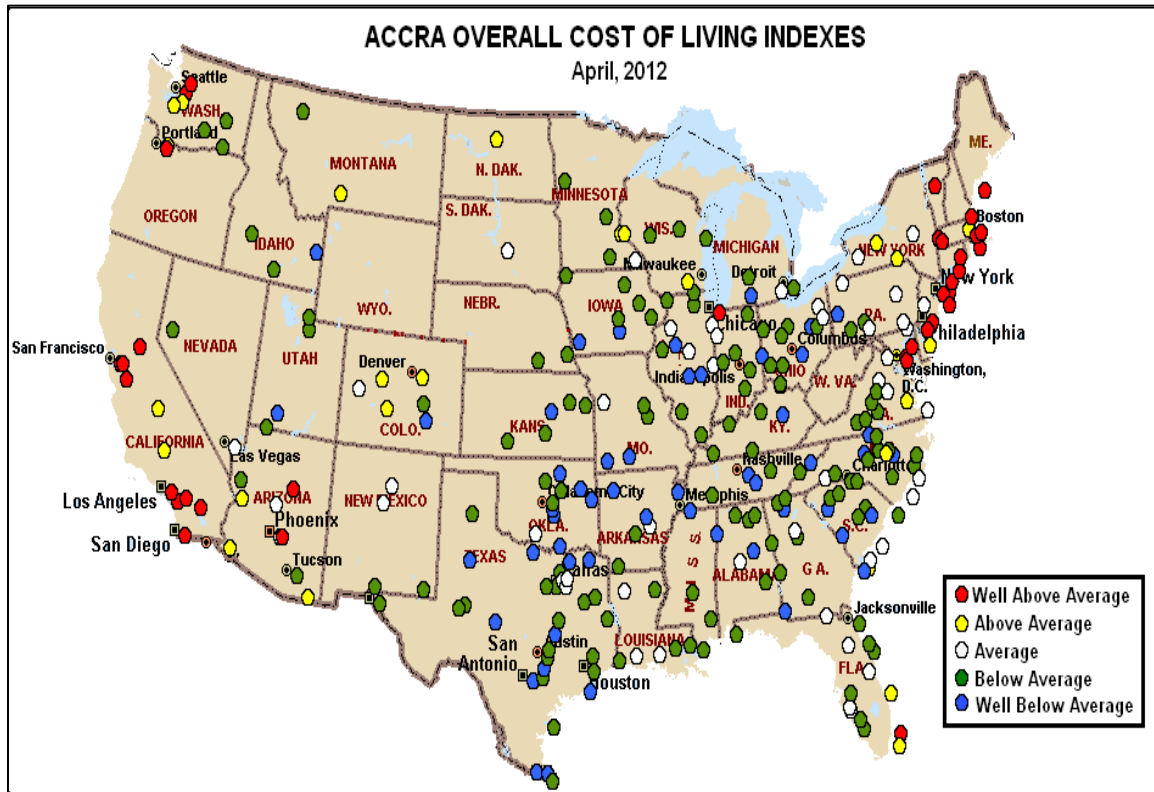
GREATER METROWEST – COST OF LIVING



Source: C2ER and MERC

- The Overall Cost of Living Indexes (in red) and the Housing Indexes (in blue) for MetroWest, Boston and the other 7 areas in New England that participated in the April 2012 C2ER survey are shown in this graph. Every single one of them is above the national average of 100.0, with the exception of the Housing Index for Fitchburg.
- Stamford, CT had the highest Overall Index in April 2012 at 146.7, implying that the cost of living in Stamford was around 47% higher than the national average. The next highest Overall Indexes were those for MetroWest (143.0) and Boston (140.6).
- The lowest Overall Indexes in the region were found in Fitchburg, MA (104.3), Portland, ME (110.9) and Manchester, NH (118.6).
- The communities with the 3 highest Overall Indexes also had the 3 highest Housing Indexes: Stamford at 205.8, MetroWest at 203.3 and Boston at 171.7.
- The fact that the Housing Index was higher than the Overall Index in 9 of these 10 New England communities suggests that the high cost of housing in New England is a significant contributor to the high cost of living in this region.

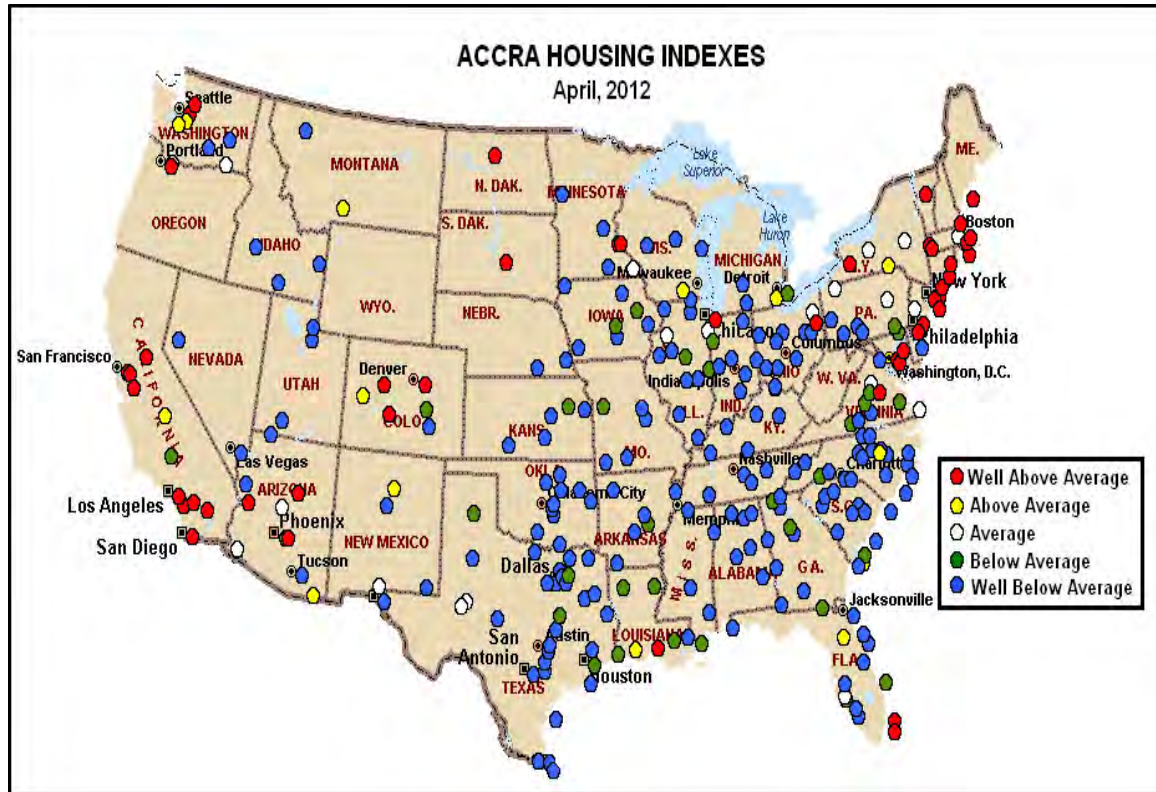
GREATER METROWEST – COST OF LIVING



- Communities with the highest living costs (red dots) were mostly located in the Northeast or on the West Coast. Manhattan (233.5) had the highest Overall Index followed by Brooklyn (183.4) and Honolulu (170.8). MetroWest was the 9th highest at 143.0 and Boston was 12th with an Overall Index of 140.6.
- Twenty of the 40 highest Overall Indexes in the survey were found in the area between New England and Washington D.C., while another 12 were on the West coast.
- Harlingen, TX had the lowest Overall Index for April 2012, with an index of 81.6, which means that the overall cost of living in Harlingen was about 20% lower than the national average and about 60% lower than MetroWest. The next lowest Overall Indexes were both found in Texas: Wichita Falls at 84.7 and McAllen with an index of 85.4.
- In all, 52 of the 305 communities participating in the April 2011 survey had Overall Indexes below 90.0, which is more than 10% lower than the national average.

Note: The Overall ACCRA Index was used for this classification. Average means that the index was between 97 and 103, Above Average is an index between 103.1 and 110.0; Well Above Average is an index higher than 110. A community with an index below 90.0 is classified as Well Below Average, while Below Average is an index between 90.0 and 96.9.

GREATER METROWEST – COST OF LIVING



Source: C2ER and MERC

- The Housing Indexes from the April 2012 survey exhibited a pattern similar to that seen in the Overall Indexes on the previous page: with the red circles concentrated primarily in the Northeast and on the West coast. There was, however, very much more variation in the values of the Housing Indexes.
- One notable difference is that while the highest Overall Index was 233.5, the highest Housing Index was 459.3; implying housing costs over 4 and one-half times the national average. Both of these values were found in Manhattan.
- While 44 of the 305 communities participating in the April 2012 survey had Overall Indexes above 110.0, there were 57 communities reporting Housing Indexes above that figure.
- At the other end of the spectrum, 175 of these 305 communities (57.4%) had Housing Indexes well below average i.e. indexes more than 10% below the national average. The lowest Housing Index, 67.1, over 30% lower than the national average was found in Tulsa, Oklahoma.

Note: The ACCRA Housing Index was used for this classification. Average means that the index was between 97 and 103, Above Average is an index between 103.1 and 110.0; Well Above Average is an index higher than 110. A community with an index below 90.0 is classified as Well Below Average, while Below Average is an index between 90.0 and 96.9.

GREATER METROWEST - MUNICIPAL REVENUE

MUNICIPAL REVENUE

Municipalities report budgeted revenue, actual revenue and actual expenditures to the Massachusetts Department of Revenue (DOR), Division of Local Services (DLS) on form Schedule A which includes a tax recapitulation report. The DLS of the DOR prepares many analyses from these reports. The MetroWest Economic Research Center (MERC) at Framingham State University uses the underlying information as well as DLS reports to prepare analyses for the local region.

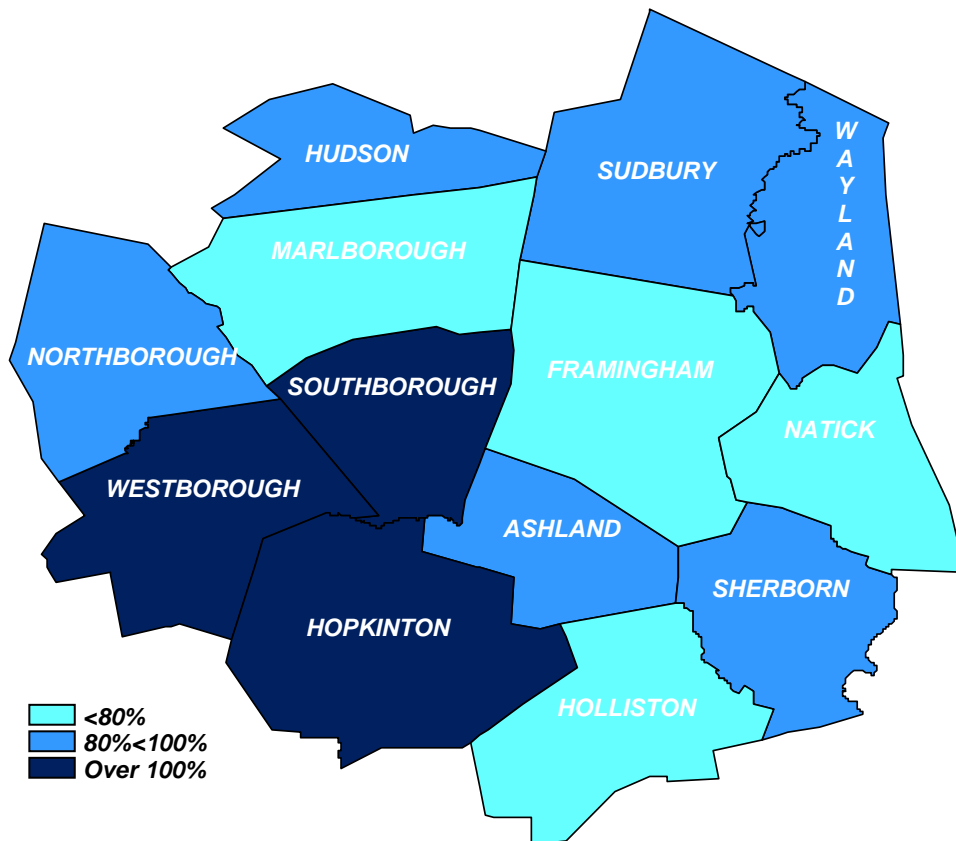
Unless otherwise stated, revenue presented in this report represents budgeted revenue reported to the Massachusetts Department of Revenue, Division of Local Services by the respective municipalities. It consists of the total tax levy, state aid, local receipts and an “all other” category. The tax levy consists of assessments on personal property, industrial, commercial, open space and residential real estate. Personal property includes furnishings of second homes and some inventories and equipment of unincorporated businesses. On-site vehicles of utility companies are generally included in this category as well. State aid is earmarked as state aid for education and state aid for general government. Local receipts include motor vehicle excise taxes, licenses and charges for services. The “all other” category includes free cash and other available funds. Budgeted revenue and actual revenue differ very little.

Tax levies are subject to limitations imposed by related legislation. In any given year, the tax levy cannot exceed 2½ percent of the total assessed value of the property of the community. In addition, the tax levy cannot increase by more than 2 ½ percent of the prior year tax levy limit plus new growth without voter approval of an operating budget override or a debt exclusion override. An operating budget override constitutes a permanent adjustment to the tax levy base that is used for subsequent year calculation limits while a debt exclusion override is in effect only for the life of the bond for which it was approved. It does not become a permanent adjustment to the tax levy base. Individual communities are also able to determine the extent to which property taxes will be borne by residential taxpayers or commercial and industrial (C&I) taxpayers. Some communities choose to tax residential, commercial and industrial property at the same rate while others use split rates. Personal property is generally taxed at C&I rates imposed by the respective community.

With the residential exemption, the tax burden shifts within the residential class from owner-occupied, and relatively lower valued properties, to relatively higher valued ones and to those not eligible for the exemption, such as vacant land, rental properties and seasonal homes. The small commercial exemption is a similar shift within the class in that it excludes a percentage of the assessed value of each eligible parcel. It covers commercial real property valued at less than \$1 million that is occupied by certified small business (10 or fewer employees).

GREATER METROWEST – MUNICIPAL REVENUE

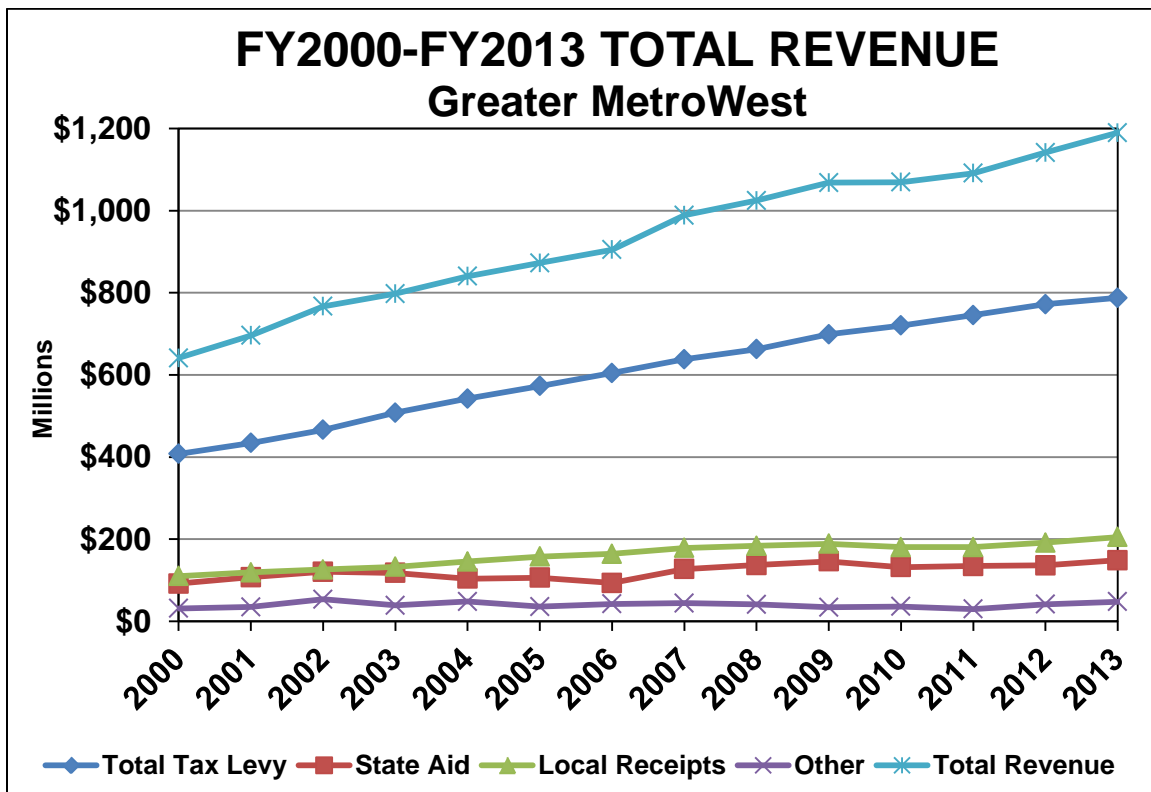
GREATER METROWEST GROWTH IN MUNICIPAL REVENUE FY2000 – FY2013



Source: MA Department of Revenue, DLS, and MERC

- Municipal revenue percentage growth from FY2000 to FY2013 in Greater MetroWest (GMW) is divided into three intervals: less than 80%, 80% to less than 100% and greater than 100%.
- From FY2000 to FY2013 total GMW municipal revenue increased from \$641.2 million to approximately \$1.2 billion, a gain of 85.5%.
- The three communities of Hopkinton, Southborough and Westborough experienced growth of more than 100%. Framingham, Holliston, Marlborough and Natick were the four communities that experienced less than 80% growth during the period. The remaining six communities experienced growth in the 80% to 100% range.
- Hopkinton and Southborough experienced the largest percentage growth, a 116.5% increase. The community with the lowest percentage growth was Marlborough at 71.1%.

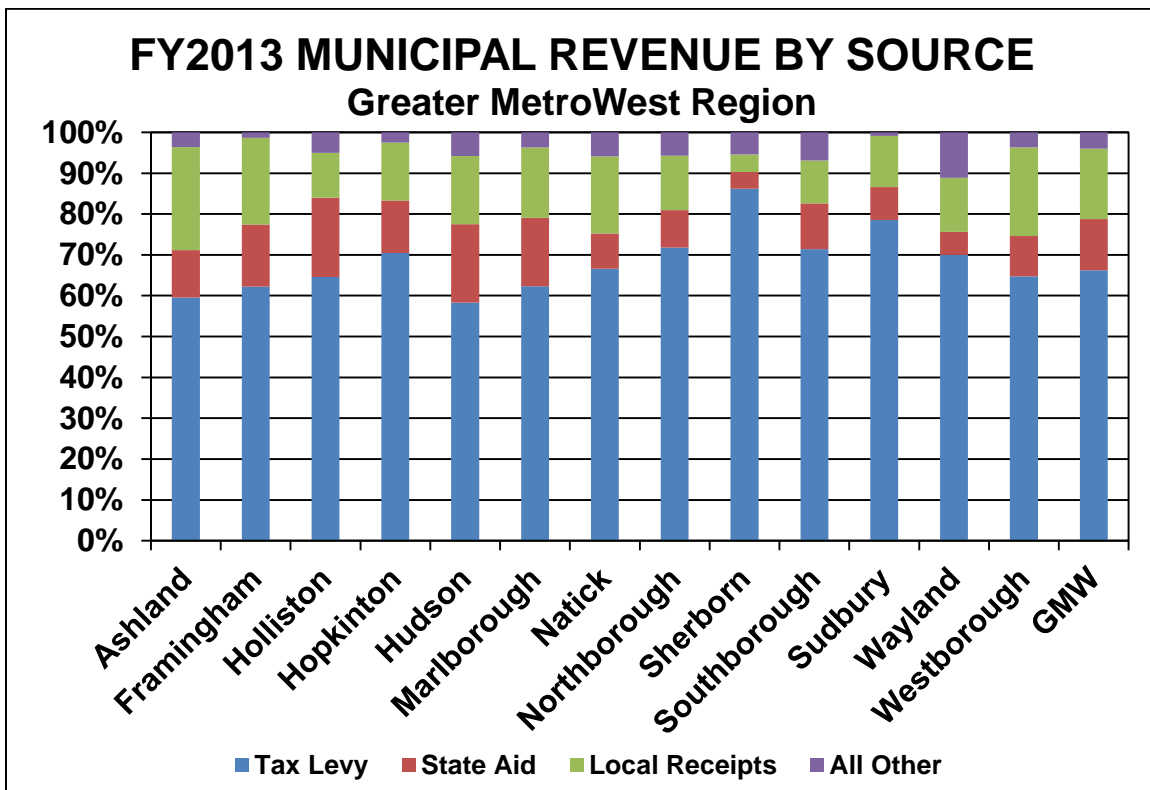
GREATER METROWEST – MUNICIPAL REVENUE



Source: Department of Revenue, DLS and MERC

- Total municipal revenue for Greater MetroWest (GMW) rose from \$641.3 million in FY2000 to \$1,189.6 million in FY2013, an increase of 86%.
- The tax levy for the region grew every year for an overall increase of 93%; the tax levy increased from \$407 million in FY2000 to \$787.5 million in FY2013. The tax levy rose by 2% increase from FY2012 to FY2013.
- Local receipts reached the highest value in FY2013 at \$205.1 million, an increase of 7.2% from FY2012 and an increase of 86.5% since the start of the period in FY2000.
- State aid for GMW was one of the lowest contributors to Total Revenue, rising from \$91.8 million in FY2000 to \$148.9 million in FY2013, an increase of 62.2%. State aid increased 9.3% from FY2012 to FY2013.
- The “all other” category was the lowest contributor in the period. In FY2000 “all other” stood at \$31.7 million. By FY2013 it reached \$47.9 million, an increase of 51.3%. Revenue from the “all other” category perked in FY2002 at \$53.8 million. The total for FY2013 was almost 11% below this peak value.

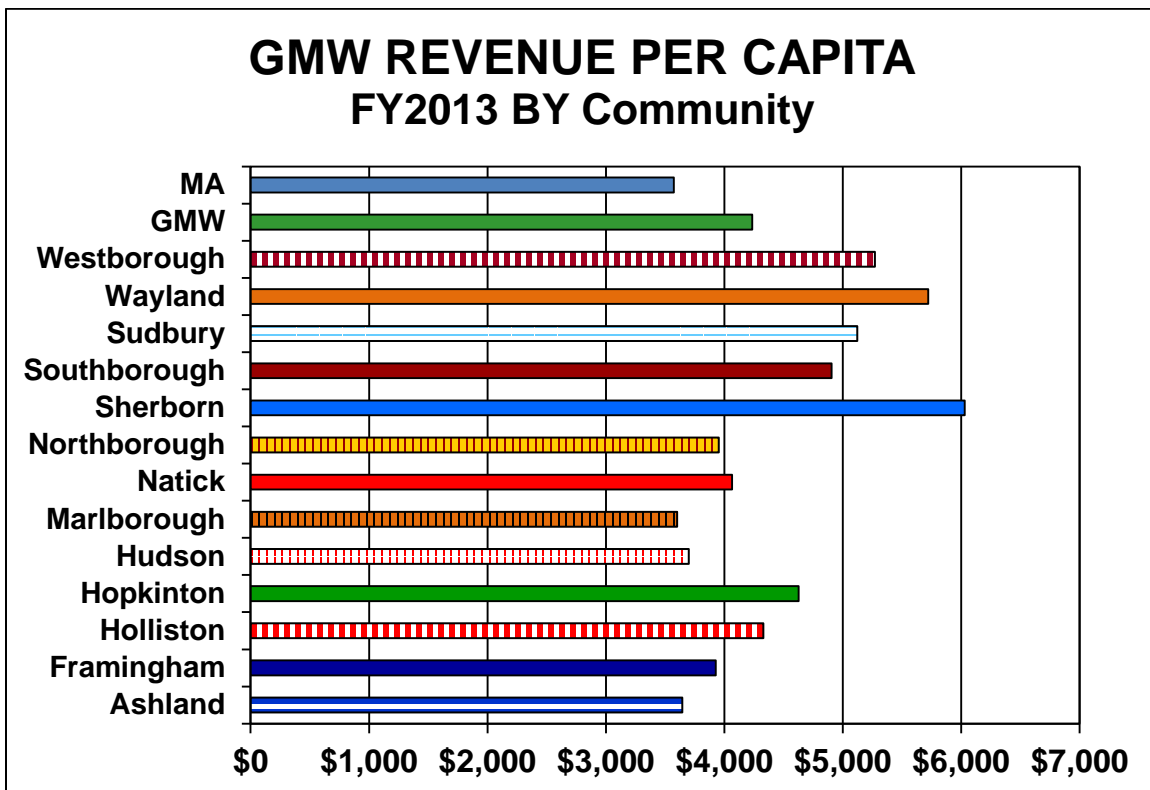
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- In FY2013 the municipal revenue components for Greater MetroWest (GMW) varied by community. The total tax levy represented the largest contributor in each of the thirteen communities and the region. The percent of municipal revenue contributed by the tax levy ranged from a low of 58% in Hudson to a high of 86% in Sherborn.
- State aid as a percentage of total revenue varied from a low of 4% in Sherborn to its highest percentage in Holliston and Hudson at 19%.
- Local receipts ranged from 4% in Sherborn to a high of 25% in Ashland, a difference of 21percentage points.
- “All other” had the smallest contribution to municipal revenue with a low of just 1% in Framingham and Sudbury. The highest percentage was in Wayland where 11% of municipal revenue came from the “all other” category.

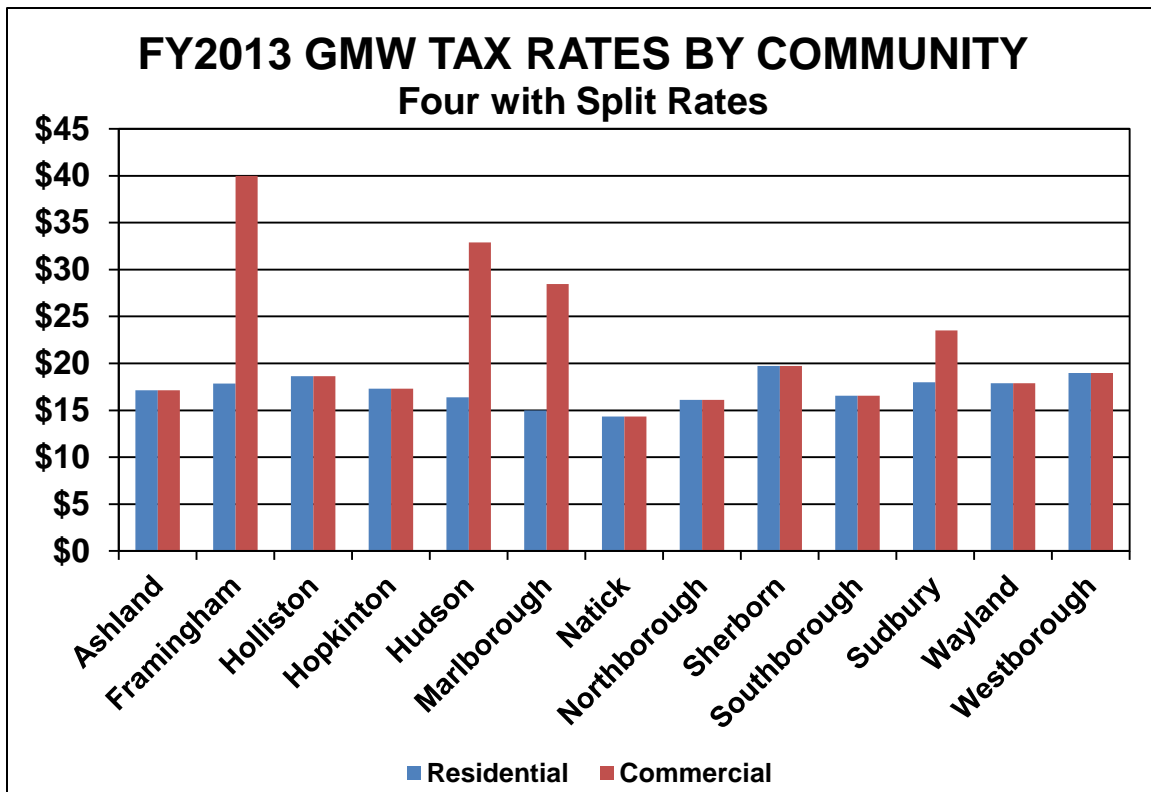
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS and MERC

- Municipal revenue per capita for Greater MetroWest (GMW) communities for FY2013 can be viewed as spending per capita as communities are required to balance their budgets. All thirteen communities had municipal revenue per capita above the state average of \$3,573.
- Of the thirteen GMW communities, Sherborn had the highest municipal revenue per capita at \$6,029, 5% higher than Wayland which had the second highest municipal revenue per capita at \$5,722. Marlborough had the lowest with \$3,601, just slightly lower than Ashland and Hudson which had per capita revenues of \$3,645 and \$3,699 respectively.
- Six of the thirteen communities fell below the GMW municipal revenue per capita average of \$4,235: Ashland, Framingham, Hudson, Marlborough, Natick and Northborough.
- Each of the remaining seven communities were above the GMW municipal revenue per capita average.

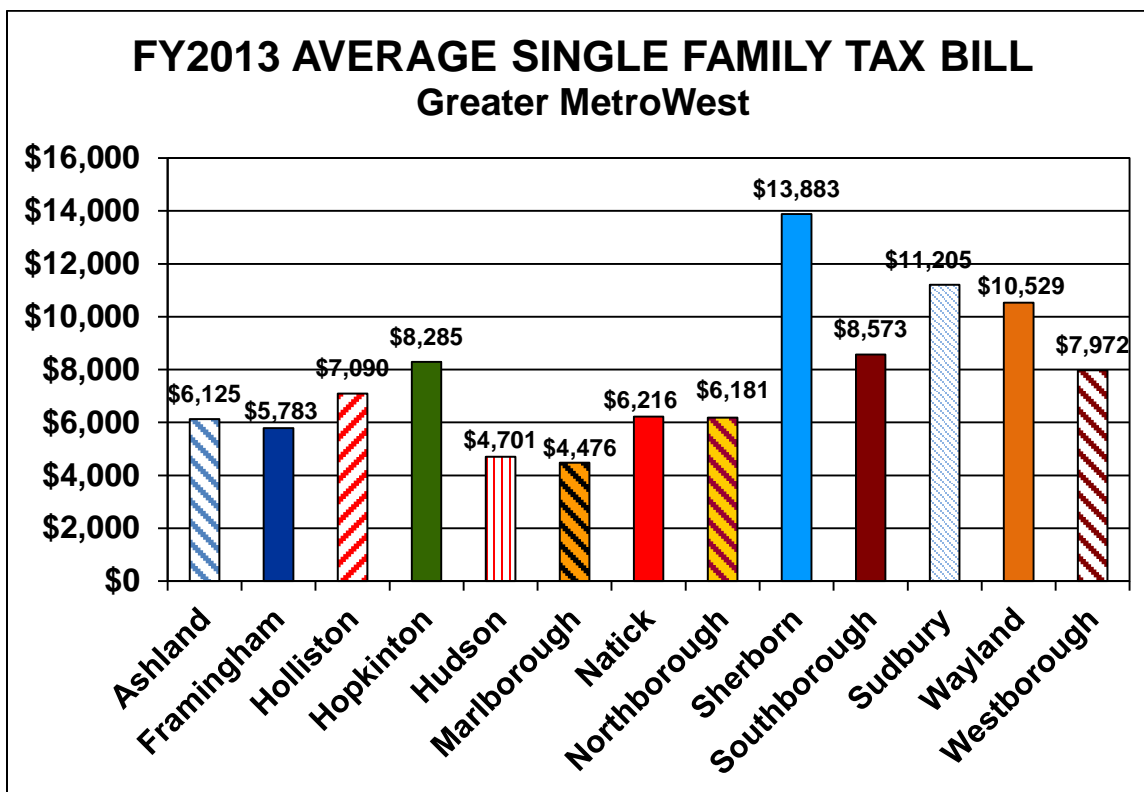
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- The graph compares residential and commercial & industrial tax rates per \$1,000 of assessed value for Greater MetroWest (GMW) communities.
- In the region nine of the thirteen communities had the same rates for both residential and commercial & industrial property.
- The four communities with split rates in GMW were Framingham, Hudson, Marlborough and Sudbury.
- In FY2013 Natick had the lowest rates for both residential and commercial & industrial tax rates at \$14.34. Framingham had the highest for commercial & industrial tax rates at \$39.98. The four split rate communities had the highest commercial & industrial rates.
- Residential rates fell between \$19.72 in Sherborn and \$14.34 in Natick.
- Commercial rates were: Framingham at \$39.98, Hudson at \$32.90, Marlborough at \$23.46 and Sudbury at \$23.52.

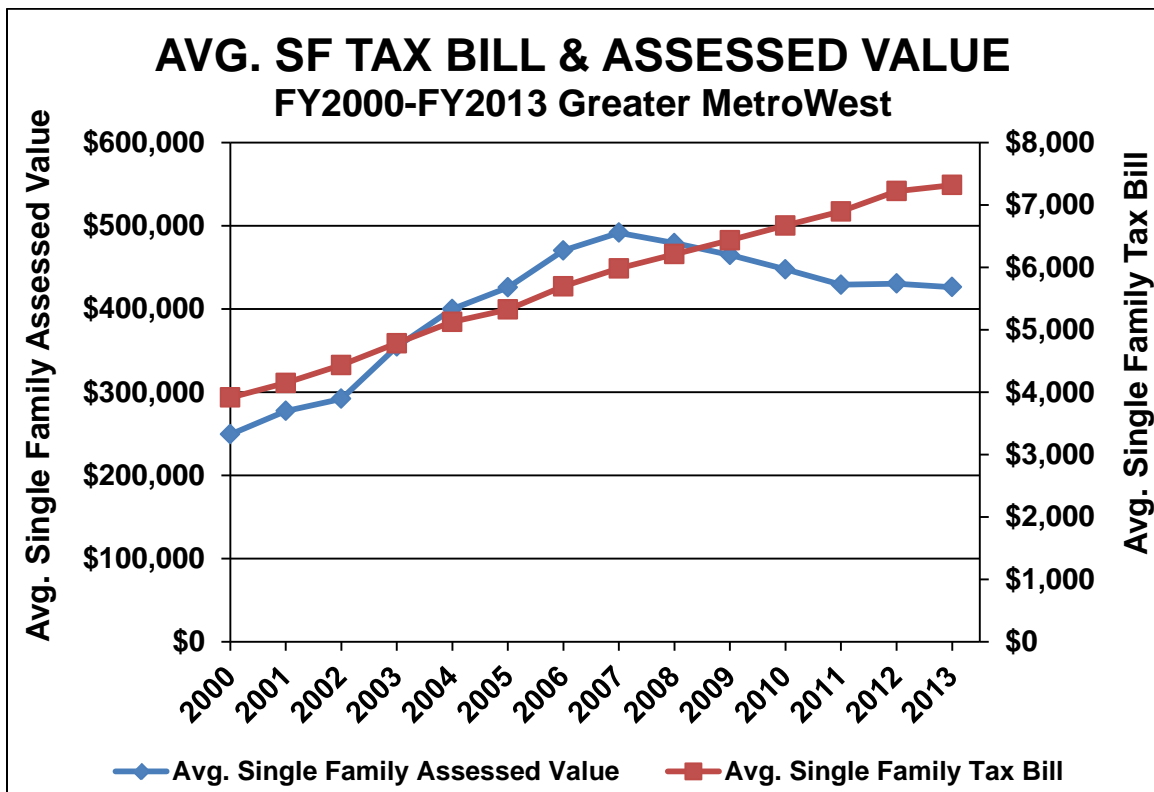
GREATER METROWEST - MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- The average single family residential tax bill in FY2013 differed by community from a low of \$4,540 in Marlborough to a high of \$13,883 in Sherborn.
- Sherborn's average single family tax bill was 32.7% higher than the average single family tax bill in Marlborough
- Among the eleven remaining communities the average single family tax bill ranged from \$4,701 in Hudson to \$11,205 in Sudbury with communities like Southborough and Hopkinton falling in the middle with values of \$8,573 and \$8,285, respectively.
- The average assessed value for the single family homes, is arrived at by dividing the total single family assessed value for each community by the number of single family parcels in that community.
- The average single family tax bill is determined by applying the respective residential tax rate to the average single family assessed value for each community.

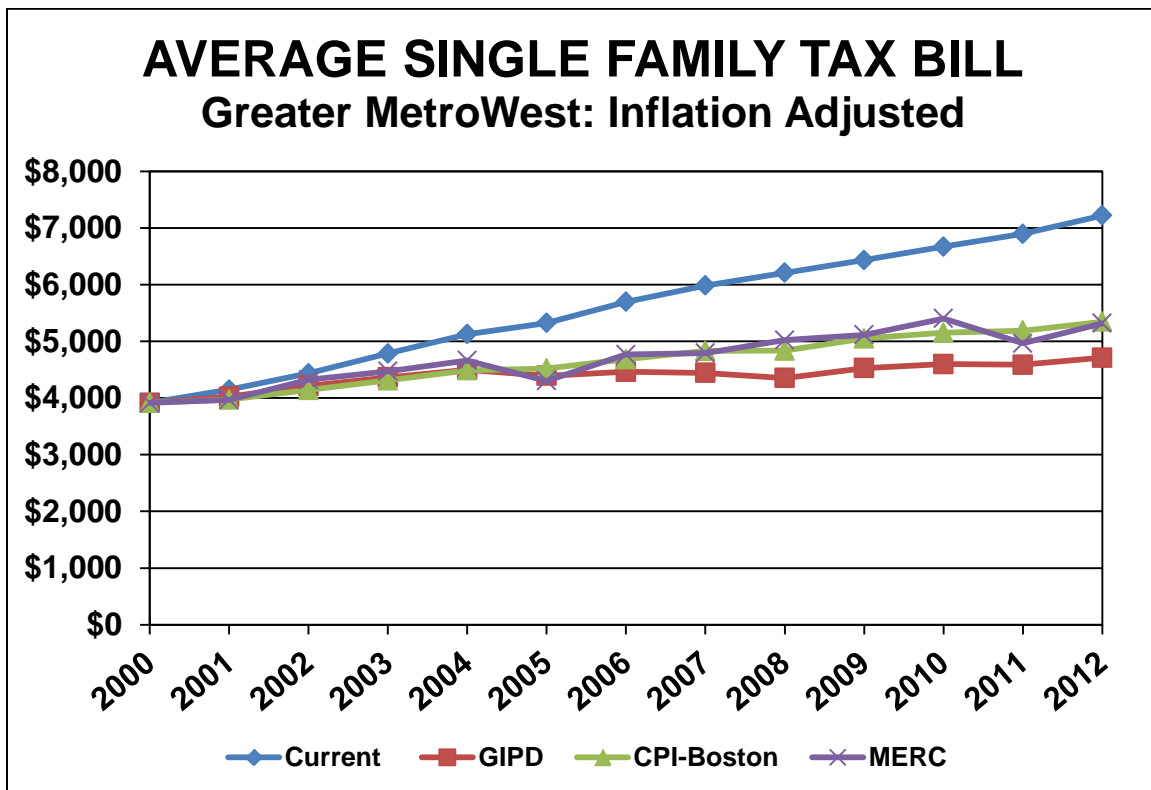
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- The average single family assessed value for Greater MetroWest (GMW), excluding Marlborough, is shown in blue and read on the left vertical axis. The average single family tax bill is shown in red and read on the right vertical axis.
- The average single family tax bill increased from a low of \$3,915 in FY2000 to a high of \$7,320 in FY2013. This showed an increase of 87.0% over the period. Each year the average single family tax bill increased.
- From FY2000 to FY2013 the average single family assessed value fluctuated. The lowest value occurred in FY2000 at \$249,490 and peaked in FY2007 at \$491,631, falling until 2011, with a slight increase in FY2012 and a small decrease to \$426,383 in FY2013.
- The average single family tax bill for the region was determined by calculating a residential tax rate for the region and applying this to average single family assessed value. The rate was determined by dividing the residential tax levy by the residential assessed value for the region. The average single family assessed value for the region was determined by dividing total single family assessed value for the region by the total single family dwellings.

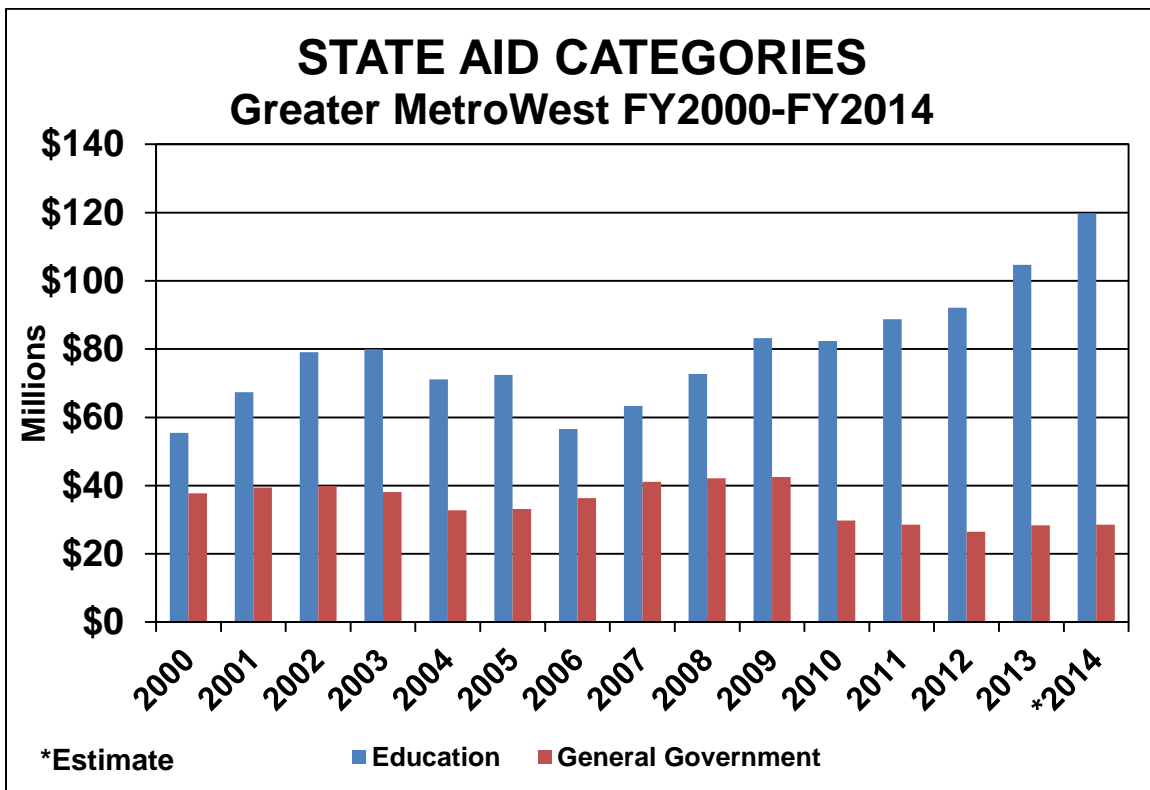
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS and MERC

- This graph depicts the average single family tax bill in Greater MetroWest (GMW) excluding Marlborough for FY2000 to FY2012. The values are measured in nominal or current dollars and also adjusted for inflation.
- The actual single family tax bill, shown in blue, increased every year during this time period from \$3,915 in FY2000 to \$7,222 in FY2012.
- Three different price indexes were used to reveal the inflation-adjusted dollar increase for the average single family tax bill: MERC's MetroWest Cost of Living Index, the Boston Consumer Price Index (CPI), and the State and Local Government Implicit Price Deflator (GIPD).
- All three inflation adjustments yielded higher total tax bills in FY2012 than in FY2000. The Boston CPI produced the largest increase in the tax bill over the period, an increase of \$1,431, followed by the MERC index at \$1,402 and the GIPD increasing by \$795.

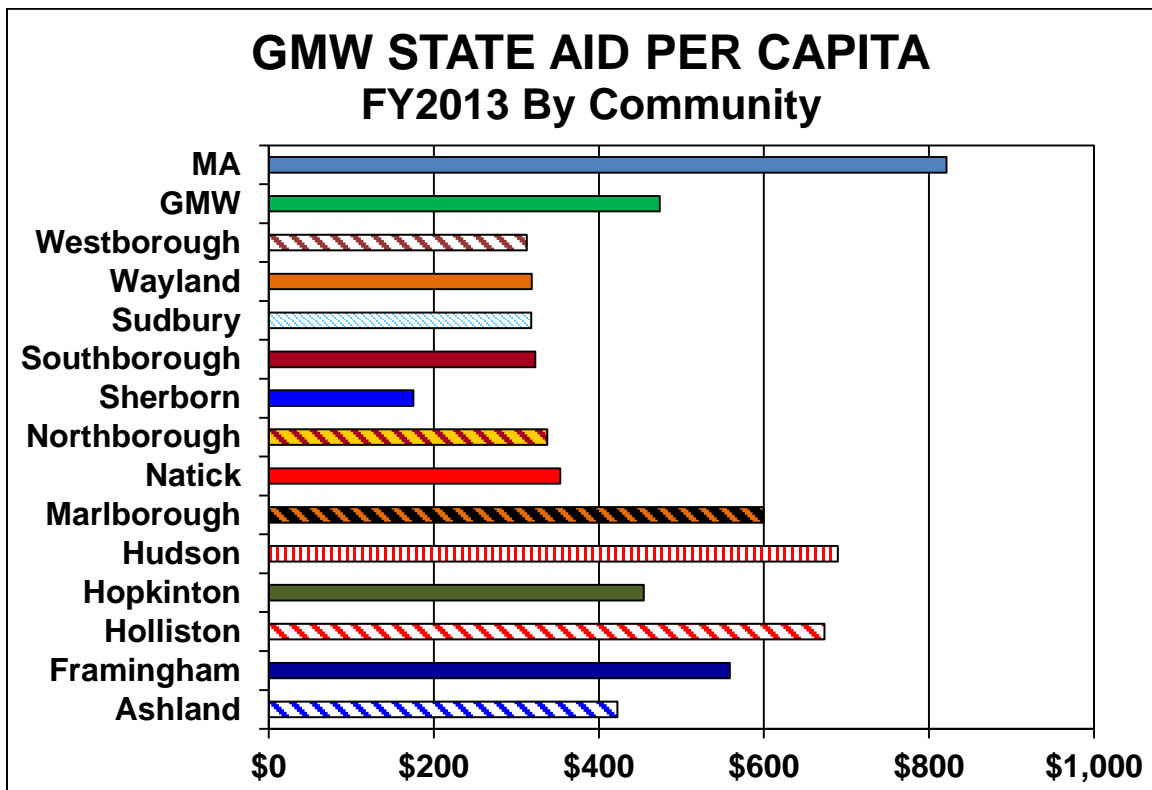
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- State aid for education in Greater MetroWest (GMW) increased from \$55.5 million in FY2000 to an estimated \$119.7 million in FY2014, more than double the earlier amount. Over the period, with only three exceptions, state aid for education increased every year. State aid for education peaked in FY2003 and did not reach that level again until FY2009.
- The highest amount of state aid for education for GMW was received in FY2013 at \$104.7 million and is estimated to grow in FY2014, using the Governor's proposed budget.
- State aid for general government in the GMW communities for the same period, had a much lower range with a high of \$42.1 million in 2008 to a low of \$28.3 million in FY2013.
- Since the high point in FY2008 general government state aid has declined with a slight increase projected for FY2014.
- Total state aid has varied in its path with a period of increase then decline. Currently total state aid is increasing and is estimated to increase in FY2014 as well.

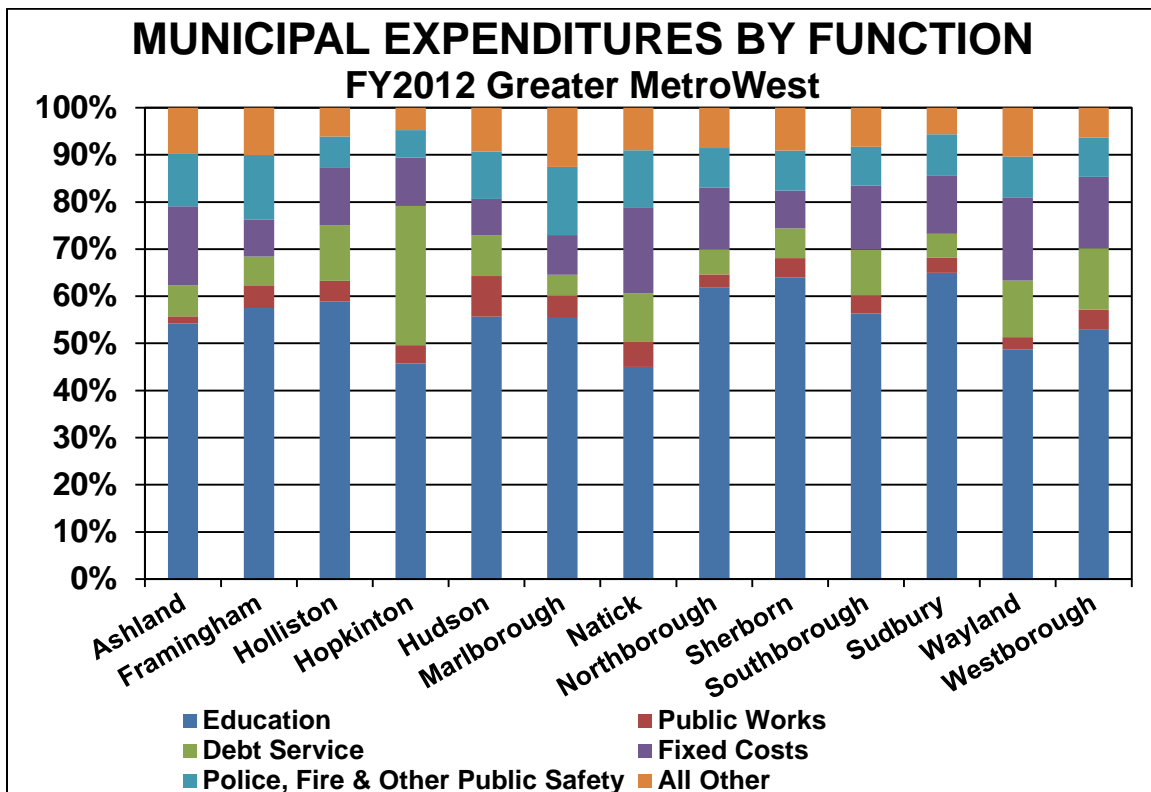
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- The graph shows per capita state aid given directly to each of the thirteen communities in Greater MetroWest (GMW) as well as the region and the state for FY2013. State aid per capita is calculated by dividing the sum of the aid given to a community by the population of the community.
- Per capita state aid given to the communities ranged from a low of \$175 in Sherborn to a high of \$690 in Hudson. Communities in the region received an average of \$474 per capita in state aid.
- The Massachusetts average of state aid per capita for all municipalities was \$821. All thirteen communities in GMW received less than the Massachusetts average.
- State aid reflected in this graph consists of both state aid for education and state aid for general government given directly to the respective communities. Total state aid given to all the communities as shown above was \$133,104,881.
- Note that the communities of Northborough and Southborough belong to a regional school district as do Sudbury (with Lincoln) and Sherborn (with Dover). State aid given directly to these regional schools districts is not included in the above calculations.

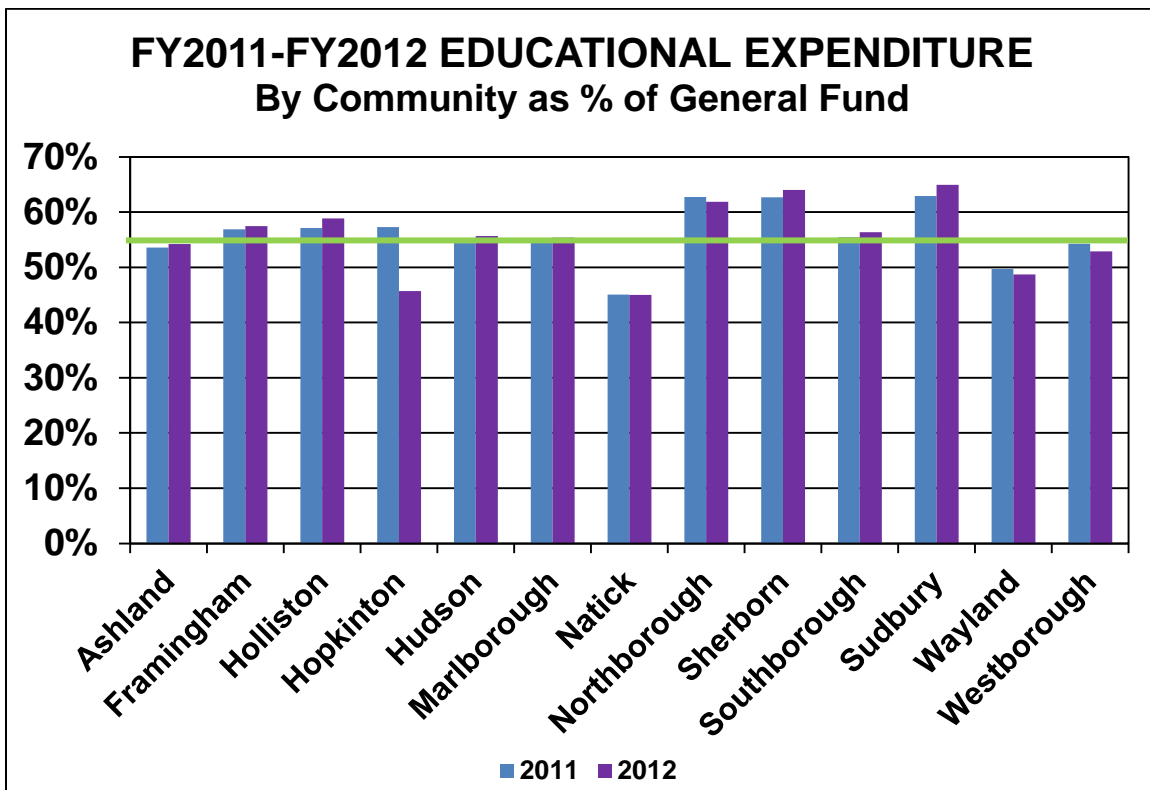
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- Total general fund expenditures in FY2012 in Greater MetroWest (GMW) were \$930.6 million, an increase of \$40 million from FY2011.
- Municipal expenditures are classified into six main categories: education, public works, debt service, fixed costs, police, fire & other public safety and “all other”. Fixed employee benefits for all municipal employees are included in fixed costs.
- Of the thirteen communities, only Hopkinton, Natick and Wayland had less than 50% of their municipal expenditures go to education with 45.7%, 45% and 48.7% respectively. The other ten communities had education shares ranging from 52.9% in Westborough to 64.9% in Sudbury compared to the GMW average of 54.7%.
- The remaining categories varied by community. For the region fixed cost was the second highest expenditure at 12.1%. Public works had the lowest expenditure in the region at just 4.4%. Debt services, police, fire & other public safety and “all other” had percentages of 9.8%, 10.4%, 8.7%, respectively for the region.

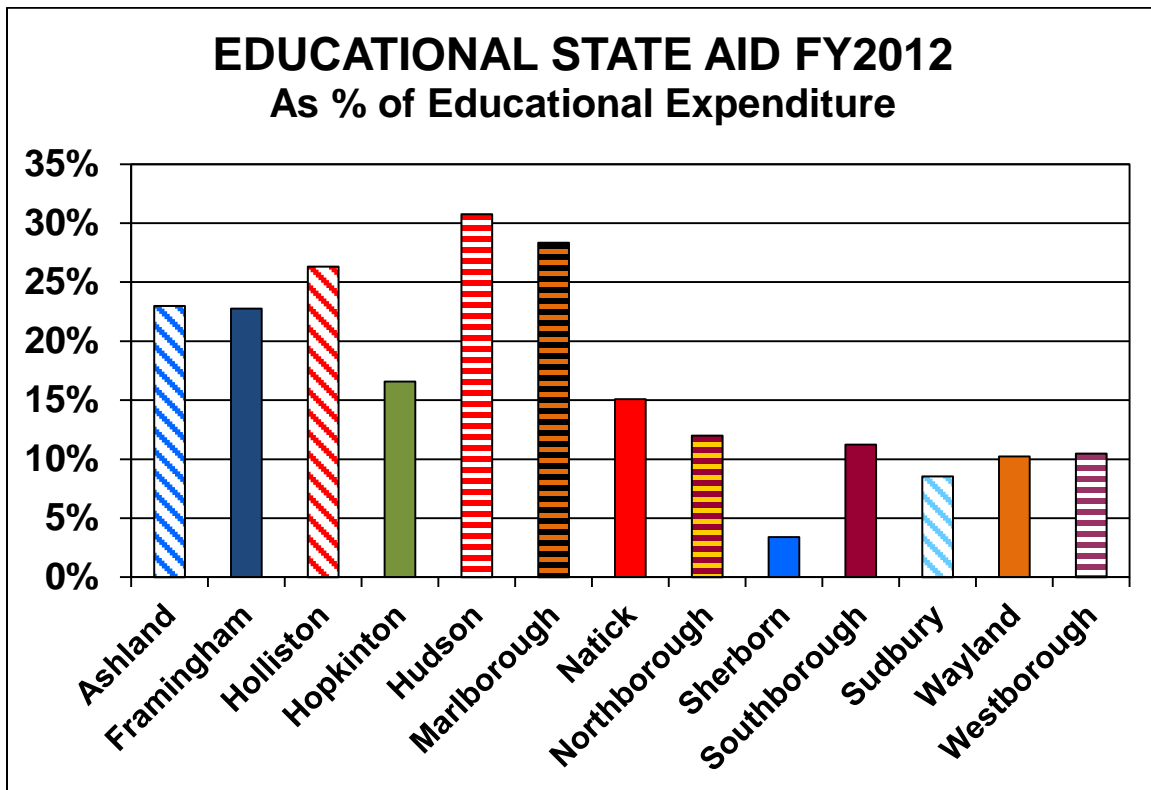
GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- This graph shows educational expenditures as a percentage of the general fund in FY2011 in blue and FY2012 in purple for the communities that make up Greater MetroWest (GMW).
- In FY2011, total educational expenditures in GMW totaled \$492 million or 55.2% of total general fund expenditures. In FY2012 the total educational expenditure was \$508.7 million or 54.7% of total general fund expenditures. The green line represents the GMW average of 54.7% for FY2012. Education expenditures do not include employee benefits.
- Of the thirteen communities seven had educational expenditure percentages above the GMW average of 55% in FY2011. Those communities included Framingham (56.9%), Holliston (57.1%), Hopkinton (57.3%), Northborough (62.8%), Sherborn (62.7%), Southborough (55.5%) and Sudbury (62.9%). In FY2012 eight of the thirteen communities had percentages above the GMW average of 54.7%. These included Framingham (57.5%) Holliston (58.9%), Hudson (55.6%), Marlborough (55.4%), Northborough (61.9%), Sherborn (64.0%), Southborough (56.4%) and Sudbury (64.9%).
- In both FY2011 and FY2012 Ashland, Natick, Wayland and Westborough had educational expenditure percentages below the regional average.

GREATER METROWEST – MUNICIPAL REVENUE



Source: MA Department of Revenue, DLS, and MERC

- Hudson had the largest educational state aid as a percentage of educational expenditure at 30.8%. Marlborough, Holliston and Ashland followed Hudson at 28.3%, 26.3% and 23%, respectively.
- Sherborn had the lowest percentage with 3.4% while Sudbury had the second lowest with 8.5%; more than double the percentage for Sherborn. Noteworthy, Sherborn is part of a regional middle school and high school district. Northborough and Southborough, as well as, Sudbury (with Lincoln) also belong to regional school districts which means state aid given directly to these regional school districts is not included in this calculation.
- The remaining communities of Framingham, Hopkinton, Natick, Northborough, Southborough, Wayland and Westborough had percentages ranging from a low of 10.2% in Wayland to a high of 22.8% in Framingham.

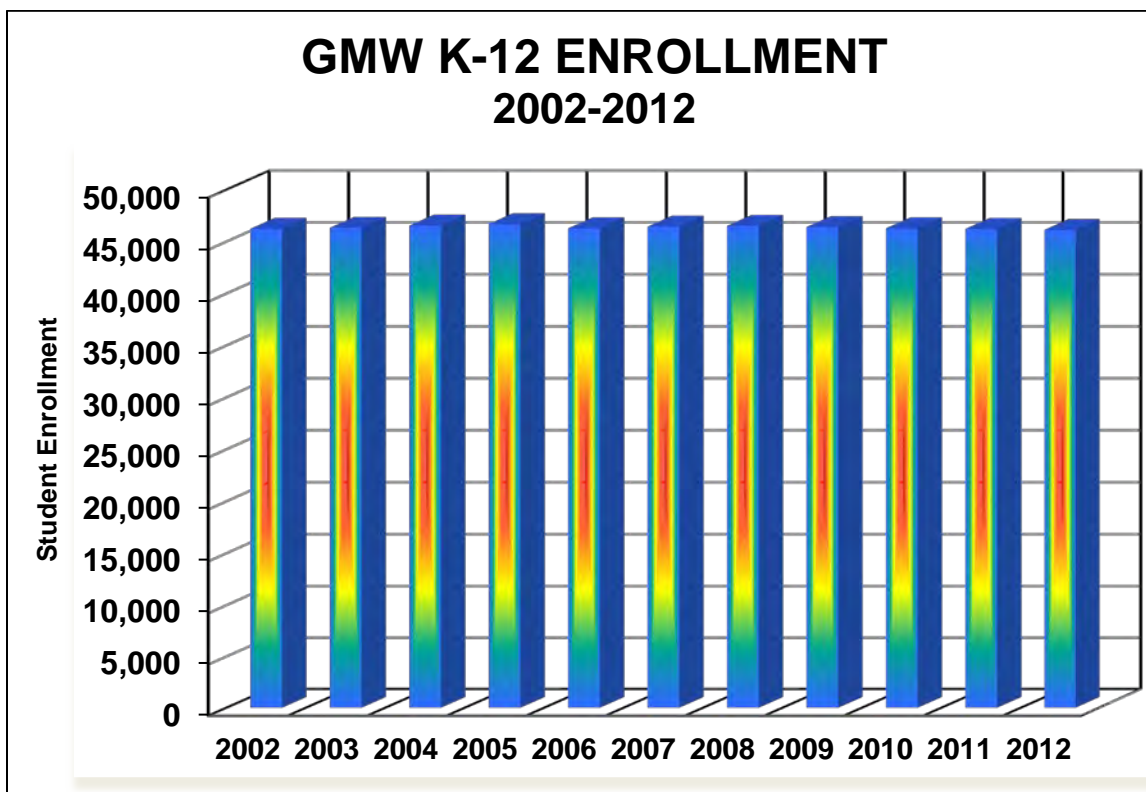
GREATER METROWEST K-12 PUBLIC SCHOOL ENROLLMENT

K-12 PUBLIC SCHOOL ENROLLMENT

The MetroWest Economic Research Center (MERC) at Framingham State University annually collects data on K-12 public school enrollment for several substate regions. Greater MetroWest public school enrollment is calculated for kindergarten through grade 12 using the annual state student census conducted in October of each year. Included in the data are all public school students in regular education, special education, ELL (English Language Learners), regional charter schools and regional vocational high schools. MERC contacts the region's charter schools, McAuliffe Regional Charter School and the Advanced Math and Science Academy, to obtain their enrollment figures.

The Massachusetts Department of Elementary and Secondary Education implemented a student enrollment database, the Student Information Management System (S.I.M.S.) in 2000. The MERC K-12 data presented in this report are obtained from both the October 2012 S.I.M.S. student census and data provided directly to MERC by the local school districts.

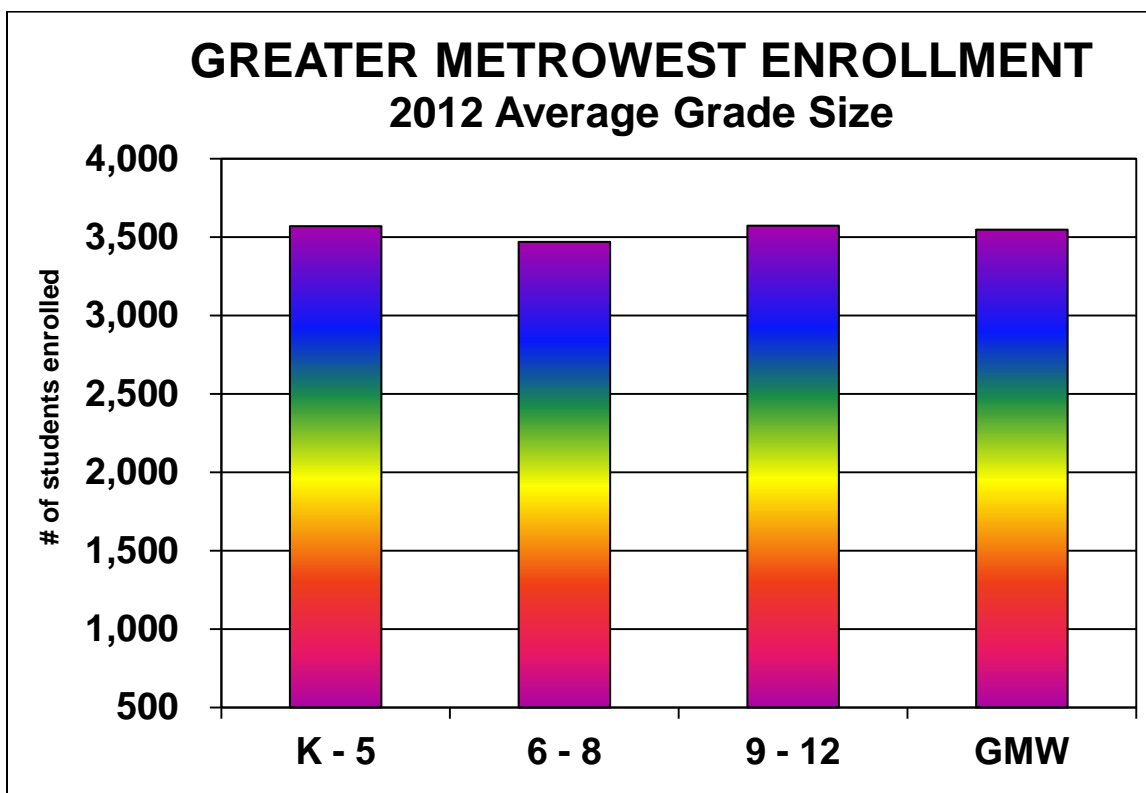
GREATER METROWEST REGION K-12 ENROLLMENT



Source: MA Department of Elementary and Secondary Education and MERC

- Public school enrollment in Greater MetroWest (GMW) experienced a slight decline (0.2%) from 2002 to 2012. Student enrollment in 2002 was 46,224 and was 46,120 in 2012. The enrollment declined by 104 students. The enrollment for the vocational schools is included in the above graph but not enrollments for the charter schools.
- The vocational school enrollment in 2002 was 1,396. In 2012 the vocational school enrollment declined by -5.0% to 1,326 students.
- Enrollment in Greater MetroWest increased from 2002 to 2005 by 0.10%. Public school enrollment began to decline in 2005.
- Charter school enrollment rose from 97 students in 2002 to 1,279 in 2012, an increase of 1,219%.

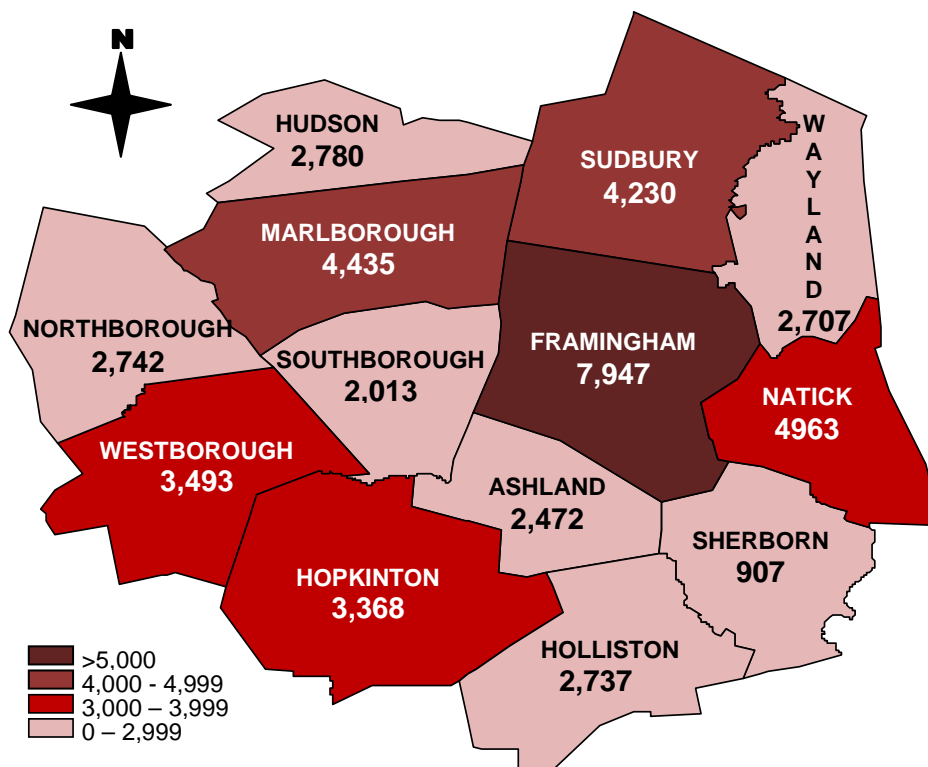
GREATER METROWEST REGION K-12 ENROLLMENT



Source: MA Department of Elementary and Secondary Education and MERC

- The 2012 Greater MetroWest (GMW) K-12 public school enrollment averaged 3,548 students per grade. The regional average grade enrollment decreased 0.09% from 2011.
- In 2012 the average number of students per grade at the elementary school level, kindergarten through fifth grade was 3,570. This represents a decrease of 0.9% from 2012 to 2011.
- At the middle school level, grades 6 through 8, the average number of students per grade was 3,470, a decrease of 0.55% compared to 2011.
- The average number of students per grade at the high school level was 3,573, an increase of 0.22% relative to 2010.
- Charter school enrollment is not included in the average grade size calculations.

GREATER METROWEST 2012 Public School Enrollment

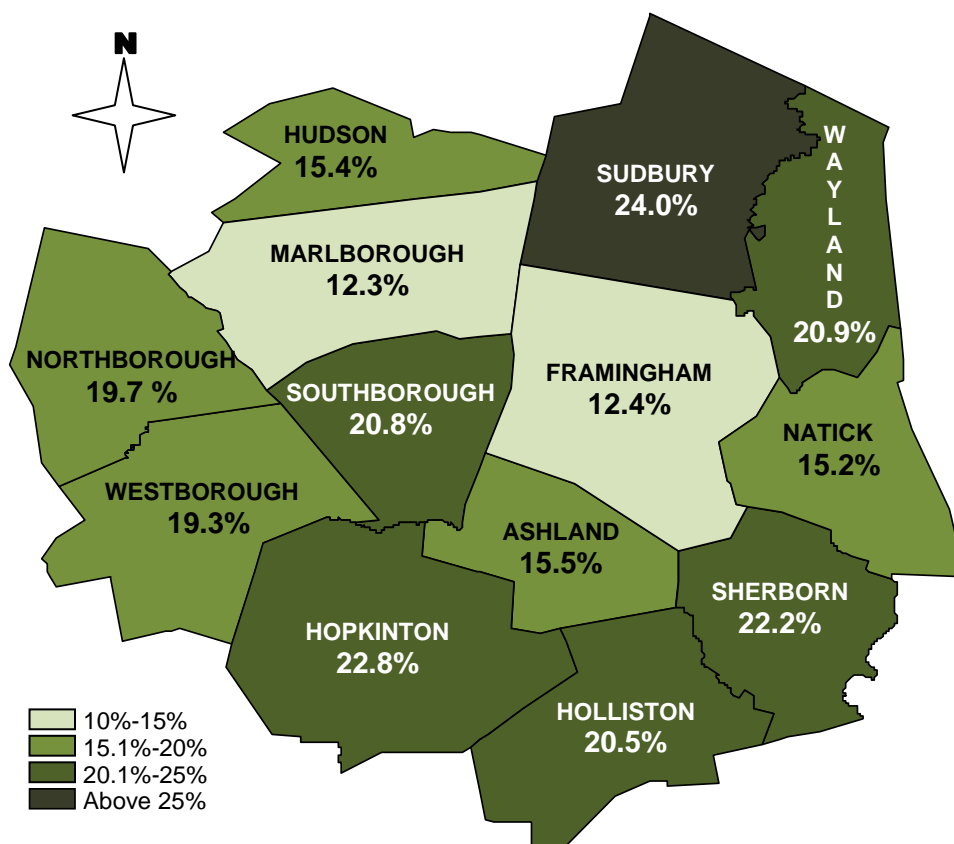


Source: MA Department of Elementary and Secondary Education and MERC

- K-12 public school enrollment in Greater MetroWest (GMW) totaled 44,794 students. This figure does not include students enrolled in charter schools and vocational schools.
- The community reporting the highest enrollment was Framingham with a student enrollment of 7,947. The communities of Marlborough, Natick, and Sudbury had enrollment between 4,000 and 5,000 students. Hopkinton and Westborough each had about 3,400 students enrolled.
- Ashland, Holliston, Hudson, Northborough, Southborough, and Wayland had enrollment between 2,000 and 3,000 students. Sherborn reported the smallest enrollment at 907 students.
- Enrollment in vocational high schools for Greater MetroWest totaled 1,326 students in 2012. These students are not included in the figure reported in the map above. Vocational student enrollment has increased 4.1% from 2011.
- Enrollment in the charter schools totaled 1,279 students in 2012, up 3.8% from 2011.

GREATER METROWEST REGION K-12 ENROLLMENT

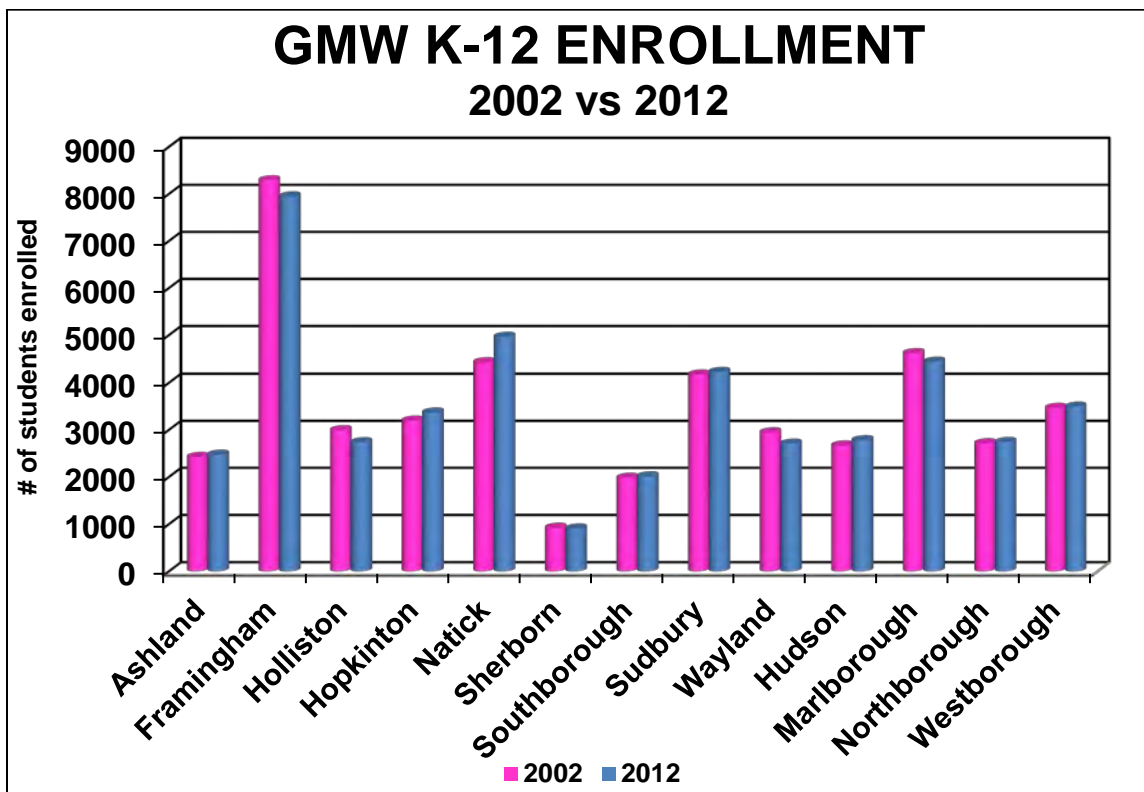
GREATER METROWEST PUBLIC SCHOOL ENROLLMENT As Percentage of 2012 Population



Source: U. S. Census and MERC

- K -12 public school enrollment in the Greater MetroWest Region (GMW) for 2012 was 46,120 students. This figure does not include 1,279 students enrolled in charter schools.
- This map measures the proportion of the community enrolled in public school. Public school enrollment in 2012 is given as a percentage of 2012 population estimated in the most recent census data available. The highest enrollment as a percentage of population occurred in Sudbury, followed by Hopkinton. In these communities, just over 1 in 4 residents were in public schools.
- Over 20% of the population in the communities of Hopkinton, Holliston, Sherborn, Southborough, Sudbury, and Wayland attend public school.
- Framingham, Marlborough and Natick, with the largest population and public school enrollment, also reported the smallest percentage of the population in public school.

GREATER METROWEST REGION K-12 SCHOOL ENROLLMENT



Source: MA Department Elementary and Secondary Education and MERC

- K-12 public school enrollment not including vocational and charter schools in Greater MetroWest (GMW) totaled 44,794 students in 2012, a slight decline from 44,827 in 2002.
- Natick had the largest increase in public school enrollment from 2002 to 2012, 12.2%, followed by Hopkinton (5.4%) and Hudson (4.2%). Westborough had the smallest increase in public school enrollment, a gain of 0.7%.
- The remaining communities of Ashland, Southborough, Sudbury, and Northborough experienced increases ranging from 0.9% to 1.9%.
- Holliston had the largest decrease in public school enrollment from 2002 to 2012, -8.6%, followed by Wayland (-8.1%) and Framingham (-4.1%). Marlborough and Sherborn public school enrollment also decreased, at -3.9% and -1.6%, respectively.
- Vocational school enrollment was 1,396 in 2002 and 1,326 in 2012, a decline registering -5.0%. Charter school enrollment in 2002 was 97 students. In 2012, the charter school enrollment was 1,279 in 2012, a 1,219% increase.

APPENDIX

North American Industry Classification System (NAICS)

In 2001 the North American Industry Classification System (NAICS) permanently replaced the Standard Industrial Classification (SIC) system in use for seventy years. NAICS is an industrial classification system that groups establishments into industries based on the activities in which they are primarily engaged. It is a comprehensive system covering the entire field of economic activities, both producing and non-producing. NAICS has twenty separate industrial sectors that are described in this appendix. These twenty sectors are grouped into eleven supersectors. Most NAICS data used in this publication is presented by supersectors.

NAICS Supersectors*

Goods-Producing Domain (GPD)

Natural Resources and Mining Supersector

- 11 Agriculture, Forest, Fishing and Hunting
- 21 Mining

Construction Supersector

- 23 Construction

Manufacturing Supersector

- 31-33 Manufacturing

Service Producing Domain (SPD)

Trade, Transportation and Utilities Supersector

- 22 Utilities
- 42 Wholesale Trade
- 44-45 Retail Trade
- 48-49 Transportation and Warehousing

Information Supersector

- 51 Information

Financial Activities Supersector

- 52 Finance and Insurance
- 53 Real Estate and Rental and Leasing

Professional and Business Services Supersector **

- 54 Professional, Scientific and Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support and Waste Management and Remediation Services

Education and Health Services Supersector

- 61 Educational Services
- 62 Health Care and Social Assistance

Leisure and Hospitality Supersector

- 71 Arts, Entertainment, and Recreation
- 72 Accommodation and Food Services

Other Services Supersector

- 81 Other Services (except Public Administration)

Public Supersector* as used in this publication, includes the Public Administration NAICS sector defined below, plus all other jobs in federal, state and local government.

NAICS Sectors

Natural Resources and Mining Supersector:

11-Agriculture, Forestry, Fishing and Hunting comprises establishments primarily engaged in crop growing, animal raising, and timber and fish harvesting.

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21-Mining comprises establishments that extract naturally occurring mineral solids, liquid minerals, and gases.

Construction Supersector:

23-Construction comprises establishments primarily engaged in the construction of buildings or engineering projects.

Manufacturing Supersector:

31-33-Manufacturing comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

Trade, Transportation and Utilities Supersector:

22-Utilities comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply and sewage removal, through a permanent infrastructure of lines, mains, and pipes.

42-Wholesale Trade comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise, including the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing. The wholesaling process is an intermediate step in the distribution of merchandise.

44-45-Retail Trade comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers.

48-49-Transportation and Warehousing comprises industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation (air, rail, water, road, and pipeline).

Information Supersector:

51-Information comprises establishments engaged in producing and distributing information and cultural products, providing the means to transmit these products, and processing data.

Financial Activities Supersector:

52-Finance and Insurance comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions.

53-Real Estate and Rental and Leasing comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets.

Professional and Business Services Supersector:**

54-Professional, Scientific, and Technical Services comprises the performing of professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. Some activities performed include: legal advice and

APPENDIX

representation, accounting, engineering services, computer services, research services, advertising services, and veterinary services.

55-Management of Companies and Enterprises comprises establishments that either hold the securities of companies for the purpose of owning a controlling interest or influencing management decisions, or establishments that administer, oversee, and manage establishments of the company and that normally undertake the organizational planning and decision making role of the company.

56-Administrative and Support and Waste Management and Remediation Services include establishments performing routine support activities for the day-to-day operations of other organizations. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.

Education and Health Services Supersector:

61-Educational Services comprises establishments that provide instruction and training to a wide variety of subjects. This instruction and training provided by specialized establishments, such as schools, colleges, universities, and training centers.

62-Health Care and Social Assistance comprises establishments that provide health care and social assistance for individuals.

Leisure and Hospitality Supersector:

71-Arts, Entertainment, and Recreation comprises a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons.

72-Accommodation and Food Services comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption.

Other Services Supersector:

81-Other Services (except Public Administration) comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment repairing, administering religious activities, grantmaking, advocacy, and providing laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

Public Supersector* as used in this publication, includes the Public Administration NAICS sector defined below, plus all other jobs in federal, state and local government.

Public Administration The Public Administration sector consists of establishments of federal, state, and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area.

****Professional and Business Services Supersector:** In this and other MERC publications MERC uses the acronyms **PBS** and **BPS** interchangeably to refer to this NAICS supersector.

SOURCES

- The Council for Community and Economic Research (C2ER) (formerly ACCRA)
- *Banker & Tradesman*; The Warren Group
- Bureau of Labor Statistics, U. S. Department of Labor (U.S.B.L.S.)
- Federal Reserve Bank of Boston
- Massachusetts Department of Elementary and Secondary Education
- Massachusetts Department of Revenue, Division of Local Services (DLS)
- Massachusetts Executive Office of Labor and Workforce Development (MA EOLWD)
- MetroWest Economic Research Center (MERC)
- United States Census Bureau, U. S. Department of Commerce

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