

Draft

IV. The Regional Economy

This section provides an overview of the current economic conditions in the Greater Lowell region by updating the statistical data provided previously in the Annual CEDS Update for 2005-2007 and providing an overview of the State of the Economy. By providing this “snapshot” of the regional economy, we can assess the current economic conditions and adjust our policies to address the current problems and to build upon the available economic opportunities. The annual re-assessment of the Regional Economy also provides direction for the goal-setting process as well.

The Regional Economy section consists of two components: Needs Analysis Update and State of the Economy. Under the Needs Analysis Update component, updated information related to population estimates and projections, employment (unemployment rates, labor force figures, employment projections, closings/layoffs, current employment and tax rates) and the housing market (household projections, housing sales and prices, Chapter 40B inventory and foreclosures) are included. With the State of the Economy portion of this section, information from the Massachusetts Department of Workforce Development is utilized to provide an overview of the Massachusetts and Greater Lowell economies and to build upon the Needs Analysis Update component. Additional information from economic reports on the state and regional economies are also included.

A. Needs Analysis Update

The U.S. Census has released new population estimates for the Greater Lowell region as of July 10, 2008. Based upon these population estimates, the Greater Lowell region experienced a growth rate of 2.1% between the U.S. Census figures (281,225) in April 2000 and the estimated figures (287,132) for July 1, 2007. As outlined in Chart 1 below, the decline in population, based upon the estimates, in Lowell (1.6%) were offset by the increases in population in Billerica (7.8%), Chelmsford (0.8%), Dracut (3.3%), Dunstable (16.3%), Pepperell (2.4%), Tewksbury (2.6%), Tyngsborough (7.0%) and Westford (5.0%):

Chart 1: Greater Lowell Population Estimates: 2000-2006

Community	4/1/2000	7/1/2002	7/1/2003	7/1/2004	7/1/2005	7/1/2006	7/1/2007
Billerica	38,981	39,415	39,425	39,998	40,069	41,391	42,038
Chelmsford	33,858	33,640	33,844	33,810	33,852	33,707	34,128
Dracut	28,562	28,756	28,742	28,716	28,971	29,385	29,498
Dunstable	2,829	2,990	3,051	3,105	3,163	3,222	3,290
Lowell	105,167	104,710	104,213	103,777	103,383	103,229	103,512
Pepperell	11,142	11,386	11,405	11,448	11,439	11,412	11,409
Tewksbury	28,851	29,266	29,200	29,164	29,120	29,418	29,607
Tyngsborough	11,081	11,309	11,302	11,401	11,369	11,542	11,860
Westford	20,754	21,212	21,310	21,501	21,520	21,507	21,790
NMCOG Region	281,225	282,684	282,492	282,920	282,886	284,813	287,132

Source: U. S. Census Population Estimates as of July 10, 2008.

The Massachusetts Highway Department developed population projections last year for the region until 2030. These population projections were based upon a statewide model that then assigns a specific share to each Metropolitan Planning Organization (MPO) region and then to its individual communities. NMCOG offers comments on the draft projections and the final projections are adjusted accordingly. Based upon the population projections established by MassHighway, the region was expected to increase its population by 8.1% between 2000 and 2010 and by 22.3% between 2000 and 2030. Outlined below in Chart 2 are the population projections for the Greater Lowell region and its individual communities:

Chart 2: Greater Lowell Population Projections: 2000-2030

COMMUNITY	2000	2010	2015	2020	2025	2030
Billerica	38,981	40,020	40,470	41,090	41,650	42,150
Chelmsford	33,858	34,920	35,460	36,110	36,900	37,500
Dracut	28,562	33,408	34,700	36,900	38,100	40,300
Dunstable	2,829	3,780	4,300	4,850	5,490	6,120
Lowell	105,167	108,210	109,790	111,200	112,010	113,270
Pepperell	11,142	14,150	17,120	18,660	20,300	22,450
Tewksbury	28,851	30,915	31,700	32,300	32,500	33,270
Tyngsborough	11,142	13,430	14,610	15,400	16,200	17,400
Westford	20,754	24,807	26,350	28,490	29,350	31,340
Greater Lowell	281,225	304,000	314,500	325,000	332,500	343,800

Source: 2000 U.S. Census; projections by MassHighway in consultation with NMCOG

In comparison to the U.S. Census population estimates, the MassHighway projections seem to underestimate the growth in Billerica and overestimate the growth in the City of Lowell. The population estimates for Billerica in July 2007 total 42,038, while the population projections for 2010 total only 40,020. Similarly, while the U.S. Census population estimates for July 2007 indicate a population decline to 103,542 for the City of Lowell, the population projections developed by MassHighway reflected a population increase to 108,210 in 2010. Similar discrepancies exist with the other communities as the population projections show increases in every period for every community.

In order to compare the population estimates with the population projections, Chart 3 on the next page summarizes the population growth rates for the NMCOG region and the individual communities within the region. By comparing the 2000-2007 and 2000-2010 columns, the differences between the population estimates developed by the U.S. Census and the population projections developed by MassHighway become readily apparent:

Chart 3: Growth Rates by Community and Region

Community	1990-2000	2000-2007	2000-2010	2000-2020	2000-2030
Billerica	3.6%	7.8%	2.7%	5.4%	8.1%
Chelmsford	4.6%	0.8%	3.1%	6.7%	10.8%
Dracut	11.6%	3.3%	17.0%	29.2%	41.1%
Dunstable	26.5%	16.3%	33.6%	71.4%	116.3%
Lowell	1.7%	-1.6%	2.9%	5.7%	7.7%
Pepperell	10.3%	2.4%	27.0%	66.9%	101.5%
Tewksbury	5.8%	2.6%	7.2%	12.0%	15.3%
Tyngsborough	28.2%	7.0%	20.5%	39.0%	56.2%
Westford	26.6%	5.0%	19.5%	37.3%	51.0%
NMCOG Region	6.7%	2.1%	8.1%	15.6%	22.3%

Source: U.S. Census for 1990 and 2000 and Population Estimates for July 1, 2007.

Projections for 2010, 2020 and 2030 developed by the Massachusetts Highway Department

2. Employment

The employment situation in the Greater Lowell region has been stabilized since the early 2000's when there were extensive layoffs in the information technology and computer manufacturing sectors. However, according to Professor Andrew Sum at the Center for Labor Market Studies at Northeastern University, the growth rate in the civilian labor force in Massachusetts ranked last among all states at -1.7% between 2002 and 2005. Between 2002 and 2006, the labor force growth rate was 0.2%, which ranked last in New England behind Vermont (8.3%), Maine (6.7%), New Hampshire (6.6%), Rhode Island (6.3%) and Connecticut (6.1%). During the six year period from July 2000 to July 2006, Massachusetts ranked 47th of all states in terms of population growth (1.2%), as compared to the U.S. population growth rate of 6%. This limited growth in population was attributed to high levels of domestic out-migration (232,945 residents between 2000 and 2005) being only partially offset by the high level of international migration (153,980 people between 2000 and 2005). Only two other states – Louisiana (due to Hurricane Katrina) and New York – had higher net levels of domestic out-migration. The states benefiting from this mass out-migration from Massachusetts between 2003 and 2005 included Florida, New Hampshire, Texas, North Carolina, Maine, Connecticut, Rhode Island, Virginia, Washington and Illinois. As a result of these factors, the educational attainment levels of the current labor force have shifted considerably and offer new challenges for private industry and the workforce development and educational systems in the Commonwealth.

This section provides an overview of the labor force, employment levels and unemployment rates of the Greater Lowell region in comparison to the state and the nation as a whole. Employment projections developed by the Massachusetts Highway Department are compared to the actual employment levels through June 2008. The listing of closings developed by the Rapid Response Team in Massachusetts shows that there have been fewer closings recently than occurred in the 2004-2006 period. The major employers in the region, as identified by the *Lowell Sun* in March 2008, are compared to those identified in March 2007. Updated information on the number of establishments, employment levels and average wage rates by community is also provided. The current tax rates for FY 08 are also included.

Labor Force

The Greater Lowell labor force increased by 1.4% between 2007 and June 2008, which is comparable to the 1.5% increase at the state level for the same period. Every community in the NMCOC region experienced an increase in their labor force, ranging from 0.5 % in Dracut to 1.4 % in Lowell. This represented a turnaround from the 2005 to May 2007 situation, as predicted in the Annual CEDS Update for 2005-2007. Listed below in Chart 4 are the updated labor force figures for the Greater Lowell region and individual communities:

Chart 4: Labor Force Levels by Community and Region

Community	2005 Annual	2006 Annual	2007 Annual	June 2008	% Change 2007-June 2008
Billerica	22,261	22,385	23,034	23,194	0.7%
Chelmsford	18,855	18,975	18,133	18,998	4.8%
Dracut	16,246	16,342	16,530	16,620	0.5%
Dunstable	1,811	1,823	1,852	1,863	0.6%
Lowell	49,988	50,106	49,716	50,433	1.4%
Pepperell	6,454	6,449	6,417	6,471	0.8%
Tewksbury	16,475	16,556	16,650	16,757	0.6%
Tyngsborough	6,347	6,381	6,467	6,505	0.6%
Westford	11,694	11,775	11,721	11,795	0.6%
NMCOG Region	150,131	150,792	150,520	152,636	1.4%
Massachusetts	3,374,200	3,404,400	3,408,200	3,458,200	1.5%

Source: Massachusetts Department of Employment Security

Employment Levels

The employment levels in the region, based upon community employment figures, increased from 142,496 in 2005 to 144,384 in 2007, or by 1.3%. However, the employment levels increased only by 0.02% between 2007 (144,384) and June 2008 (144,411). Within this period of time, the employment levels for each community were consistent, except for Pepperell, whose employment level increased by 46 or 0.7%. Outlined below in Chart 5 are the employment figures for the region:

Chart 5: Employment Levels for the NMCOG Region

Community	2005 Average	2006 Average	2007 Average	June 2008	% Change 2007-June 2008
Billerica	21,237	21,351	22,072	22,069	-0.01%
Chelmsford	18,099	18,197	18,133	18,131	-0.01%
Dracut	15,449	15,531	15,765	15,763	-0.01%
Dunstable	1,747	1,756	1,791	1,790	-0.06%
Lowell	46,764	47,015	46,978	46,972	-0.01%
Pepperell	6,186	6,179	6,180	6,226	0.7%
Tewksbury	15,702	15,786	15,960	15,958	-0.01%
Tyngsborough	6,065	6,098	6,195	6,194	-0.02%
Westford	11,247	11,307	11,310	11,308	-0.02%
NMCOG Region	142,496	143,220	144,384	144,411	.002%
Massachusetts	3,211,000	3,234,900	3,255,600	3,274,300	0.6%

Source: Massachusetts Department of Employment Security

As shown on the previous page, the employment levels at the state level increased by 1.4% between 2005 and 2007 and by only 0.6% between 2007 and June 2008.

As with the population projections, MassHighway developed employment projections for the Greater Lowell region through a “top-down” approach that utilizes employment projections for the state as a whole and then assigns shares of these figures to the MPO regions and individual communities within those regions. Based upon this approach, the employment projections for the state are more accurate than those for the regions or individual communities. Outlined below in Chart 6 are the employment projections for the Greater Lowell region through 2030:

Chart 6: Employment Projections for the Greater Lowell Region

COMMUNITY	2000	2010	2015	2020	2025	2030
Billerica	20,862	28,796	28,965	29,080	29,111	28,930
Chelmsford	15,711	24,670	24,910	25,105	25,200	25,100
Dracut	4,927	5,460	5,619	5,725	5,810	5,920
Dunstable	258	354	401	455	475	520
Lowell	36,185	39,990	41,541	43,314	44,065	45,170
Pepperell	1,685	1,770	1,804	1,893	1,952	2,000
Tewksbury	18,003	19,370	19,601	19,800	19,837	19,930
Tyngsborough	4,476	5,203	5,679	5,882	5,950	6,200
Westford	11,997	14,987	15,780	16,546	16,700	17,530
Greater Lowell	129,000	140,600	144,300	147,800	149,100	151,300

Source: 2000 U.S. Census; projections by MassHighway in consultation with NMCOG

Unemployment Rates and Per Capita Income

The unemployment rate for the Greater Lowell region increased from 4.7% in June 2007 to 5.4% in June 2008. Overall the unemployment rates for the region have been consistent and generally have been slightly higher than the state unemployment rates. However, due to the major layoffs in industries not associated with Massachusetts or the region, such as the automobile industry, the national unemployment rate grew from 4.7% in June 2007 to 5.7% in June 2008. During the twenty-four month period from July 2006 to June 2008, the national unemployment rate was 4.7%, while the Massachusetts unemployment rate was 4.6%. The City of Lowell, which had an unemployment rate of 5.7% for the same twenty-four month period, exceeded the national unemployment rate by 1%. In June 2008 the unemployment rate for the City of Lowell (6.9%) was 1.2% higher than the national unemployment rate (5.7%). Summarized on the next page in Chart 7 are the unemployment rates for the NMCOG region, the state, the nation and the individual communities within the NMCOG region:

Chart 7: Unemployment Rates for 2005, 2006, 2007 and June 2007 and 2008.

Community	2005	2006	2007	June 2007	June 2008
Billerica	4.6%	4.6%	4.2%	4.4%	4.9%
Chelmsford	4.0%	4.1%	3.7%	3.9%	4.6%
Dracut	4.9%	5.0%	4.6%	4.7%	5.2%
Dunstable	3.5%	3.7%	3.3%	2.9%	3.9%
Lowell	6.4%	6.2%	5.5%	5.9%	6.9%
Pepperell	4.2%	4.2%	3.7%	3.3%	3.8%
Tewksbury	4.7%	4.7%	4.1%	4.2%	4.8%
Tyngsborough	4.4%	4.4%	4.2%	4.2%	4.8%
Westford	3.8%	4.0%	3.5%	3.6%	4.1%
NMCOG Region	5.1%	5.0%	4.5%	4.7%	5.4%
Massachusetts	4.8%	5.0%	4.5%	4.6%	5.3%
United States	5.1%	4.6%	4.6%	4.7%	5.7%

Source: Massachusetts Department of Employment Security

As outlined in the *Greater Lowell Comprehensive Economic Development Strategy (CEDS) for 2004-2008*, the City of Lowell is slightly above 80% of the national per capita income figure for 2000. However, the majority of Census Tracts in the City of Lowell are well below the 80% national per capita income figure and the following Census Tracts are eligible for EDA funding based upon their 2000 per capital income figures: 3101, 3103-3105, 3107-3113, 3117-3121 and 3124. No other Census Tracts or communities meet the per capital income criteria for EDA funding.

Plant Layoffs

The suburban communities in the region have been largely impacted by the number of layoffs experienced by private firms located within their community. These layoffs impact not only the community where the private firm is located, but also the communities in the region where the employees reside. Companies have a responsibility to notify the Commonwealth's Rapid Response Team of impending layoffs and this information is provided to the public as part of the federal WARN System. The number of layoffs in the region (800) during 2007 and 2008 was significantly lower than those reported in the Five-Year CEDS or in the 2004-2006 period, however, the impact of job losses at Schott Solar and Nutcracker Brands in Billerica, Mercury Computer Systems and Kronos, Inc. in Chelmsford, Joan Fabrics in Lowell and Tyngsborough, Adden Furniture and M/A COM, Inc. in Lowell and the DJ Reardon Company in Tewksbury remain significant. Outlined in Chart 8 on the next page are the documented layoffs in the NMCOG region according to the Massachusetts Rapid Response Team:

Chart 8: Layoffs in the NMCOC Region

<u>Community</u>	<u>Company</u>	<u>Effective Date</u>	<u>Employees Affected</u>
Billerica	Schott Solar, Inc.*	6/27/07	200
	Jabil Circuit	3/28/08	30
	GSI Lumonics Trust Inc.	4/28/08	8
	Nutcracker Brands	5/1/08	90
Chelmsford	Mercury Computer Systems	6/28/07	65
	Daily Racing Form	5/17/08	7
	Fidelity National Information	5/22/08	30
	Kronos Inc.	9/30/08	87
Lowell	Joan Fabrics	4/27/07	90
	M/A COM, Inc.	9/30/07	30
	Adden Furniture	2/19/08	70
	Microsemi Microwave Products	4/11/08	8
	Adden Furniture	6/1/08	13
Tewksbury	DJ Reardon Company	7/14/08	56
Tyngsborough	Joan Fabrics	6/11/07	25
Westford	Alcatel Lucent	11/30/07	3

* Schott Solar, Inc. has decided to remain in Billerica.

Source: *Massachusetts Rapid Response Team*

Businesses

The number of businesses in the Greater Lowell region increased from 6,999 in the third quarter of 2006 to 7,016 in the third quarter of 2007 for an overall increase of 0.2%, which was less than the 1 % increase in businesses at the state level for the same period of time. Average monthly employment increased by 4.7% in the NMCOC region during this period of time and the average weekly wage increased by 7.2%. At the state level, the average monthly employment increased by only 1.3%, while the average weekly wage increased by only 5.5%. Specific information on the establishments, employment and wages for the NMCOC region and its communities is summarized below in Chart 9:

Chart 9: Establishments, Employment and Wages for the NMCOC Region

<u>Community</u>	<u>Establishments</u>		<u>Average Monthly Employment</u>		<u>Average Weekly Wage</u>	
	<u>2006 (Q3)</u>	<u>2007 (Q3)</u>	<u>2006 (Q3)</u>	<u>2007 (Q3)</u>	<u>2006 (Q3)</u>	<u>2007 (Q3)</u>
Billerica	1,181	1,190	22,897	22,800	\$ 1,172	\$ 1,276
Chelmsford	1,154	1,138	21,350	21,065	1,055	1,096
Dracut	596	595	4,888	4,942	716	715
Dunstable	55	57	282	274	581	593
Lowell	1,936	1,946	32,974	33,003	859	916
Pepperell	233	229	1,440	1,499	615	643
Tewksbury	817	835	15,417	15,620	1,040	1,079
Tyngsborough	376	374	4,391	4,525	625	671
Westford	651	652	11,334	11,791	1,358	1,563
NMCOC Region	6,999	7,016	114,973	115,519	1,013*	1,086*
State	208,821	210,902	3,197,357	3,240,481	\$ 950	\$ 1,002

Source: *ES-202 Reports*

* *Estimate*

Industry Composition

In analyzing the industry composition for the Greater Lowell region, the region consisted of principally industries in the service-providing domain, as opposed to the goods-producing domain. In terms of total establishments, more than 3.6 times the number of establishments were in the service-providing domain as the goods-producing domain. Within the service-providing domain, Trade, Transportation & Utilities (23.2%), Professional & Business Services (22%), Other Services (18.8%) and Education and Health Service (12%) establishments comprised more than two-thirds of the service-providing establishments. Construction (72.7%) and Manufacturing (26.5%) establishments dominated the goods-producing domain.

In terms of Average Monthly Employment, the ratio between the service-providing domain and the goods-producing domain was slightly less at 3.5. Education (26.4%), Trade, Transportation & Utilities (24%), Professional & Business Services (18.7%) and Leisure and Hospitality (11%) comprised more than 80% of total monthly employment in the service-providing domain. Manufacturing (72.9%) and Construction (26.4%) comprised the major employment components of the goods-producing domain.

The Average Weekly Wage for all industries was \$ 1,146, while the goods-producing domain paid an average weekly wage of \$ 1,485 and the service-provided domain paid only \$ 1,018. The highest salaries were paid in the Information (\$ 1,777), Manufacturing (\$ 1,666), Professional & Business Services (\$ 1,569) and Public Administration (\$ 1,075) sectors, as shown in Chart 10 below:

Chart 10: Composition of Industry in the NMCOG Region by NAICS code for 2007

	<u>Establishments</u>		<u>Average Monthly Employment</u>		<u>Average Weekly Wage</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	
Total, All Industries	7,018	100.0	116,400	100.0	\$ 1,146
Goods-Producing Domain	1,509	21.5	26,029	22.4	\$ 1,485
Natural Resources and Mining	12	0.8	199	0.8	897*
Construction	1,097	72.7	6,862	26.4	1,002
Manufacturing	400	26.5	18,969	72.9	1,666
Service-Providing Domain	5,509	78.5	90,370	77.6	\$ 1,018
Trade, Transportation & Utilities	1,277	23.2	21,695	24.0	923
Information	116	2.1	5,876	6.5	1,777
Financial Activities	476	8.6	3,916	4.3	1,012
Professional & Business Services	1,212	22.0	16,890	18.7	1,569
Education and Health Service	652	12.0	23,890	26.4	867
Leisure and Hospitality	635	11.5	9,938	11.0	327
Other Services	1,037	18.8	4,047	4.5	683
Public Administration	94	1.7	4,119	4.6	1,075*

Source: ES-202 Reports

** Estimate*

Major Employers

Based upon information developed by the *Lowell Sun* in March 2008, the major employers for 2008 are compared to those identified in 2007 in Chart 11 below:

Chart 11: Major Employers in the NMCOG Region – 2007 and 2008

Rank	Employer (2007)	Employees	Employer (2008)	Employees
1	Raytheon	8,000	Raytheon	8,000
2	DeMoulas Supermarkets	5,500	DeMoulas Supermarkets	5,500
3	BAE Systems	5,200	BAE Systems	5,000
4	Lahey Clinic	4,355	Lahey Clinic	4,000
5	United Parcel Service	2,300	United Parcel Service	2,200
6	Teradyne Inc.	1,850	Mitre Corp.	1,976
7	Mitre Corp.	1,829	Lowell General Hospital	1,810
8	Emerson Hospital	1,686	Teradyne Inc.	1,800
9	Lowell General Hospital	1,680	Cisco Systems	1,625
10	M/A Com Inc.	1,675	Analog Devices, Inc.	1,600
11	Analog Devices, Inc.	1,650	Verizon Communications	1,600
12	Verizon Communications	1,600	Sun Microsystems	1,600
13	Sun Microsystems	1,550	Emerson Hospital	1,560
14	Cisco Systems	1,500	Hannaford Bros.	1,500
15	Kronos Inc.	1,500	Saints Medical Center	1,400
16	Hannaford Bros.	1,500	Wal-Mart Stores, Inc.	1,350
17	Saints Medical Center	1,497	The Home Depot, Inc.	1,350
18	Wal-Mart Stores, Inc.	1,350	Kronos Inc.	1,300
19	The Home Depot, Inc.	1,300	Millipore Corporation	1,142
20			Tyco Electronics, Ltd.	1,100

Source: The Lowell Sun, March 2007 and March 2008

Current Tax Rates

The setting of the tax rates can provide a balance between the property tax generated by homeowners and the taxes provided by the business community. Outlined in Chart 12 below are the updated tax rates for the communities in the Greater Lowell region:

Chart 12: Fiscal Year 2008 Tax Rates by Class for the Greater Lowell Region

<u>Community</u>	<u>Residential</u>	<u>Open Space</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Personal Property</u>
Billerica	\$ 11.02	-	\$ 24.75	\$ 24.75	\$ 24.75
Chelmsford	13.50	-	13.50	13.50	13.50
Dracut	10.55	-	10.55	10.55	10.55
Dunstable	11.64	-	11.64	11.64	11.64
Lowell	10.60	-	21.27	21.27	21.27
Pepperell	10.06	-	10.06	10.06	10.06
Tewksbury	10.45	\$ 10.45	19.21	19.21	19.21
Tyngsborough	11.71	-	11.71	11.71	11.71
Westford	13.40	-	13.58	13.58	13.40

Rate per \$ 1,000 evaluation

Source: Mass. Department of Revenue, Division of Local Services

3. Housing Market

The cost and availability of housing in the Greater Lowell region remains a major barrier to economic growth of the region. Without the availability of affordable housing for its workforce, private firms can not retain their jobs or expand their workforce. Since the publication of the *Greater Lowell Comprehensive Economic Development Strategy (CEDS) for 2004-2008* and the *Annual CEDS Update for 2005-2007*, the housing sector has been the most impacted sector within the region's economy. The number of housing units built and sold has been reduced and the cost of housing has begun to show the impacts of this slowdown. While the number of housing units built for low- and moderate-income families under Chapter 40B have increased in the region, the sale of market-rate housing units have slowed due to increased mortgage costs and declining and aging populations. Foreclosure petitions in the region have increased by more than 409% between FY'07 and FY'08. These collective issues make the state of housing in the region the most problematic area for the expansion of the regional economy.

As with the population and employment projections completed by the Massachusetts Highway Department, the household projections were developed to show the growth of households in the Greater Lowell region. Households are defined by the U.S. Census as being equivalent to "occupied housing units". According to the projections developed by MassHighway, the number of households in the Greater Lowell region was expected to increase from 99,542 in 2000 to 128,400 in 2030. Based upon these projections, Lowell's share of households would be reduced from 38.2% in 2000 to 32.5% in 2030. Other communities with decreasing shares of the households in the region were Billerica,

Chelmsford and Tewksbury. Summarized below in Chart 13 are the household projections for the Greater Lowell region:

Chart 13: Household Projections

COMMUNITY	2000	2010	2015	2020	2025	2030
Billerica	12,961	13,885	14,402	14,838	15,215	15,540
Chelmsford	12,826	13,377	13,630	13,929	14,232	14,340
Dracut	10,450	12,586	13,266	14,265	14,783	15,640
Dunstable	936	1,300	1,498	1,732	2,025	2,270
Lowell	37,992	39,743	40,454	41,119	41,570	41,770
Pepperell	3,845	5,167	6,159	6,807	7,514	8,330
Tewksbury	9,955	11,051	11,542	11,845	12,048	12,370
Tyngsborough	3,741	4,680	5,152	5,572	5,967	6,440
Westford	6,836	8,511	9,197	10,193	10,848	11,700
Greater Lowell	99,542	110,300	115,300	120,300	124,200	128,400

Source: 2000 U.S. Census; projections by MassHighway in consultation with NMCOG

According to the household projections, the number of households in the Greater Lowell region will increase by 20.9% between 2000 and 2020 and 29.3% between 2000 and 2030. In analyzing the household projection figures, the largest household growth areas are anticipated to be in Dracut, Dunstable, Pepperell, Tyngsborough and Westford. Outlined below in Chart 14 are the percentage changes between 2000 and 2020 and 2000 and 2030 for the Greater Lowell region and its individual communities:

Chart 14: Households in the NMCOG Region – 2000, 2020 and 2030

Community	2000	2020	% Change 2000-2020	2030	% Change 2000-2030
Billerica	12,961	14,838	14.5%	15,540	20.3%
Chelmsford	12,826	13,929	8.6%	14,340	11.9%
Dracut	10,450	14,265	36.5%	15,640	49.7%
Dunstable	936	1,732	85.0%	2,270	145.9%
Lowell	37,992	41,119	8.2%	41,770	10.2%
Pepperell	3,845	6,807	77.0%	8,330	116.5%
Tewksbury	9,955	11,845	19.0%	12,370	24.1%
Tyngsborough	3,741	5,572	48.9%	6,440	72.6%
Westford	6,836	10,193	49.1%	11,700	71.9%
NMCOG Region	99,542	120,300	20.9%	128,400	29.3%

Source: U.S. Census for 2000

Projections for 2020 and 2030 developed by the Massachusetts Highway Department

The Greater Lowell region has shown some progress in addressing the affordable housing goals established by former Governor Michael Dukakis through Executive Order 418. As of April 6, 2007, the Greater Lowell region had 8,479 subsidized housing units, or 8.34% of the year-round housing units documented in the 2000 U.S. Census. More than 61.7% of these subsidized units were located in the City of Lowell. As of July 2008 the subsidized housing inventory in the Greater Lowell region had grown by 6.4% to 9,020 units, as documented by the Executive Office of Housing and Economic Development (EOHED) and Lowell's share had been reduced to 58%. Outlined on the next page in

Chart 15 are the subsidized housing unit comparisons for each community in the Greater Lowell region:

Chart 16: Subsidized Housing Units in the Greater Lowell region

Community	2000 Census Year-Round Units	Chap. 40B Units (as of 4/07)	Chap. 40B Units (as of 7/08)	Percent 40B Units (as of 7/08)
Billerica	13,055	640	649	5.0%
Chelmsford	12,981	885	885	6.8%
Dracut	10,597	614	614	5.8%
Dunstable	933	0	0	0
Lowell	39,381	5,231	5,231	13.3%
Pepperell	3,905	122	122	3.1%
Tewksbury	10,125	512	921	9.1%
Tyngsborough	3,784	292	292	7.7%
Westford	6,877	183	306	4.4%
NMCOG Region	101,638	8,479	9,020	8.9%

Source: Executive Office of Housing and Economic Development

The Massachusetts housing market has changed significantly during the past three years. Beginning in February 2005, the sales of single-family homes in Massachusetts have fell in 36 out of 39 months, according to the Warren Report. Sales in single-family homes in Massachusetts declined by 29.8% between 2004 and 2007. Sales of single-family homes dropped even more, according to the Warren Report, when the “credit crisis” hit in July 2007. This contributed to a total sales decline statewide of more than 20% in the first part of 2008 and a decline in sales in the Merrimack Valley of 19.1% during the same period of time. Median prices of single-family homes have been declining for 26 months in Massachusetts, while the Merrimack Valley has lost 10% in median prices during the first four months of 2008. Professor Ross Gittell of the University of New Hampshire projected a 14% decline in housing prices for Massachusetts between 2005 and mid-May 2008, the largest decline in New England. Professor Gittell predicted that housing prices wouldn’t return to their peak until 2010 and Professor Adam Clayton-Matthews of the University of Massachusetts argued that these price declines were good for the Massachusetts economy. Professor Matthews predicted that Massachusetts would not recover its lost jobs from the early 2000’s until 2011.

These housing conditions can be seen in the Greater Lowell housing market as well. The sale of single-family homes in the region declined from 2,177 homes in 2006 to 1,783 houses in 2007, or by 18.1%, while the median sales prices increased from \$ 325,598 in 2006 to \$ 337,324 in 2007, or by 3.6%. Condo sales decreased from 1,495 in 2006 to 1,359 in 2007, or by 9.1%, and their median sales prices decreased from \$ 225,629 in 2006 to \$ 200,740 in 2007, or by 11%. The sale of all housing units declined from 4,585 in 2006 to 3,804 in 2007, or by 17%, by 887 units, or while the median sales prices decreased from \$ 290,022 in 2006 to \$ 289,175 in 2007, or by 0.3%. Summarized on the next page in Chart 16 are the Housing Sales and Median Sales Prices for the region in 2007:

Chart 16: 2007 Housing Sales and Median Sales Prices in the NMCOC Region

Community	2007 Single Family Sales	2007 Single Family Median Sales Prices	2007 Condo Sales	2007 Condo Median Sales Prices	All Housing Sales in 2007	All Housing Median Sales Prices in 2007
Billerica	319	\$ 342,500	105	\$ 195,000	504	\$ 335,000
Chelmsford	274	353,500	186	242,250	502	310,000
Dracut	184	285,000	146	179,950	393	242,000
Dunstable	19	399,900	0	0	25	415,000
Lowell	413	251,000	564	175,000	1,263	228,500
Pepperell	81	322,500	18	168,500	126	300,000
Tewksbury	187	338,500	169	265,000	410	309,950
Tyngsborough	88	381,100	51	182,000	201	320,000
Westford	218	498,500	120	210,000	380	400,750
NMCOG Region	1,783	\$ 337,324 (estimate)	1,359	\$ 200,740 (estimate)	3,804	\$ 289,175 (estimate)

Source: Warren Group

Even though the data for 2008 is limited to six months (January to June), the trends in the decline in sales and median sales prices (with the exception of condo prices) can be readily seen in Chart 17 below:

Chart 17: 2008 (Jan.-June) Housing Sales and Median Sales Prices in the NMCOC Region

Community	2008 Single Family Sales	2008 Single Family Median Sales Prices	2008 Condo Sales	2008 Condo Median Sales Prices	All Housing Sales in 2008	All Housing Median Sales Prices in 2008
Billerica	132	\$ 315,000	37	\$ 244,900	196	\$ 315,000
Chelmsford	120	319,500	72	219,250	210	272,000
Dracut	88	264,000	41	165,000	155	234,000
Dunstable	11	413,000	0	0	12	399,000
Lowell	183	196,000	59	165,000	501	183,900
Pepperell	25	310,000	3	87,500	45	293,000
Tewksbury	92	319,450	61	280,700	171	310,000
Tyngsborough	29	328,750	14	173,500	71	260,626
Westford	73	430,000	57	259,900	146	338,950
NMCOG Region	753	\$ 294,324 (estimate)	454	\$ 227,310 (estimate)	1,507	\$ 256,296 (estimate)

Source: Warren Group

For comparison purposes, we would expect the sales figures in 2008 to be half of the 2007 data to maintain a consistent trend. However, sales of single-family homes for the region in 2008 (753) represented only 42.2% of the total single-family sales in 2007. The sale of condominiums in 2008 was barely a third of the 2007 level, while the sale of all housing units in the first six months of 2008 was only 39.6% of the total housing sales in 2007. Reflecting the decline in sales for 2007 and the first six months of 2008, the single family median sales prices fell by 12.7% between 2007 and the first half of 2008. The median sales prices for condominiums actually increased from \$ 200,740 in 2007 to

\$ 227,310 in the first half of 2008, or by 13.2%. The median sales prices for all housing sales decreased from \$ 289,175 in 2007 to \$ 256,296 in the first half of 2008, or by 11.4%.

Compared below in Chart 19 are the housing sales and median sales prices for the NMCOG region in 2003, 2006, 2007 and 2008 (January to June). More detailed information on historic housing data by community is available on page 94 of the *Greater Lowell Comprehensive Economic Development Strategy (CEDS) for 2004-2008*.

Chart 18: Housing Sales and Median Sales Prices Comparison for the NMCOG region.

NMCOG Region	Single Family Sales	Single Family Median Sales Prices (estimate)	Condo Sales	Condo Median Sales Prices (estimate)	All Housing Sales	All Housing Median Sales Prices (estimate)
2003	2,792	\$ 297,679	1,465	\$ 192,000	5,472	\$ 266,398
2006	2,177	\$ 325,598	1,495	\$ 225,629	4,585	\$ 290,022
2007	1,783	\$ 337,324	1,359	\$ 200,740	3,804	\$ 289,175
2008 (Jan.-June)	753	\$ 294,324	454	\$ 227,310	1,507	\$ 256,296

Source: Warren Group

Through information provided by the Warren Group, foreclosure petition information for July 2006 to June 2007 and July 2007 to June 2008 are summarized below in Chart 19. The number of foreclosure petitions in the region increased from 172 in FY'07 to 876 in FY'08, or by 409.3%. The City of Lowell accounted for nearly half of the total foreclosure petitions in the region in FY'08, yet the suburban communities saw significant increases in their foreclosure petitions. This data is summarized below in Chart 19:

Chart 19: Foreclosure petitions in the NMCOG Region (7/06-6/08)

	7/06 – 6/07	7/06 – 6/07	7/07 – 7/08	7/07 – 6/08
Community	Number of Records	% of Region	Number of Records	% of Region
Billerica	28	16.3	114	13.0
Chelmsford	17	9.9	58	6.6
Dracut	27	15.7	113	12.9
Dunstable	1	0.6	7	0.8
Lowell	66	38.4	420	47.9
Pepperell	5	2.9	19	2.2
Tewksbury	16	9.3	89	10.2
Tyngsborough	4	2.3	29	3.3
Westford	8	4.7	27	3.1
NMCOG Region	172	100.0	876	100.0

Source: Warren Group