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Regional Demographic and Economic Profile

2011

REGIONAL TRANSPORTATION PLAN

4 Regional Demographic and Economic Profile

Understanding Franklin County’s current and future demographic, socioeconomic, and land use patterns are necessary to effectively plan for the region’s transportation needs. Chapter 4 examines in detail the current population and economic conditions of the county in order to determine any transportation issues that should be addressed. Chapter 4 also looks to the future and examines projected population and job growth with the intent of anticipating future transportation demands and needs.

Franklin County is the most rural county in the Commonwealth of Massachusetts. It is located in the northernmost portion of the Connecticut River Valley of Western Massachusetts. It borders both Vermont and New Hampshire. Franklin County also borders the Massachusetts counties of Hampshire to the south, Berkshire to the west, and Worcester to the east.

Franklin County has a population of 71,372 and a population density of 98 people per 100 square miles in its 725 square mile area. The majority of the twenty-six towns in the county are very small – averaging approximately 1,400 residents. The largest municipality, and only city, is Greenfield with a population of 17,456 people. Ninety percent of the

housing stock in Franklin County is owner-occupied, of which 60 percent are in the form of single-family homes (U.S. Census Bureau, 2008).

The landscape in Franklin County is predominately open space, forest, and farmland. The soils in the Connecticut River Valley are ideal for agricultural uses, and consequently, the region has a rich agricultural history, which has helped it avoid the national trend of suburbanization in recent years. As of 2005, 77 percent of the land in the county is forested and another 8 percent is composed of farmland. The remaining lands are mainly residential (4%), open space (2.2%), and commercial/industrial (0.5%) (MassGIS 2005).

Regional Demographics

Population

To better assess the transportation needs of the region, it is necessary to understand how the population in Franklin County is changing – whether it is growing or decreasing, aging or getting younger, or even becoming wealthier or poorer.

Between 1970 and 2000, the county’s population grew by 20 percent, an increase of 12,300. Much of this growth took place during the 1970’s and 1980’s.

Between 1970 and 2000, the county’s population grew by 20 percent.

Following the trend of slower growth that began in the 1990’s, the county actually lost a small amount of population (163 people) between 2000 and 2010, resulting in a total population of 71,372 in 2010 (a growth rate of -0.2%). Table 4-1 shows the change in population

Table 4-1: Population for Franklin County and other Western Massachusetts Counties, 1970 to 2000

Geography	1970 Population	1980 Population	1990 Population	2000 Population	1970-2000	
					Change	Percent Change
Franklin County	59,233	64,317	70,092	71,535	12,302	20.8%
Berkshire County	149,407	145,110	139,352	134,953	-14,454	-9.7%
Hampden County	459,050	443,018	456,310	456,617	-2,433	-0.5%
Hampshire County	123,997	138,813	146,568	152,251	28,254	22.8%
Worcester County	638,114	646,352	709,705	750,963	112,849	17.7%
Massachusetts	5,689,170	5,737,037	6,016,425	6,349,097	659,927	11.6%

Source: U.S. Census Bureau - 1970, 1980, 1990, and 2000 Census of Population & Housing.

between 1970 and 2000, while Table 4-2 illustrates the more recent change in the last decade. These tables also show how Franklin County's population growth compares with its surrounding counties during those time periods.

The population growth that occurred between 2000 and 2010 in Franklin County primarily occurred in the towns located on the northern and eastern edges of the region (see map at the end of this chapter), with a few exceptions. These towns most likely grew the most during this time period because they have the most developable land remaining for construction of new homes in the county and are also located close to the larger employment centers in Worcester and Hampshire Counties. The towns that lost the greatest amount of population are mainly located in the central portion of Franklin County, where the majority of the jobs are located. This could reflect the trend of declining job opportunities in these communities. Table 4-3 lists the population change and percentage change for each town during the last ten years (note: it is important to examine both raw change and percent change as many of the towns have such small populations that a percent change can exaggerate total population increases or decreases).

Age Distribution of the Population

For transportation planning, it is important to know not only the size of a region's population, but also its composition by age group and how that may change over time. As people age, their use of the transportation network tends to change. For example, school children and the elderly are less likely to drive by themselves and are more likely to use public transit. In addition, the number of adult workers in a region affects peak traffic volumes as they commute to their workplaces.

Like much of the nation, Franklin County is getting gradually older as the "Baby Boomer" generation ages. Figure 4-1 shows that almost half (45%) of the Franklin County population is currently aged 45 and older. Of that, 15 percent is aged 65 and older. The

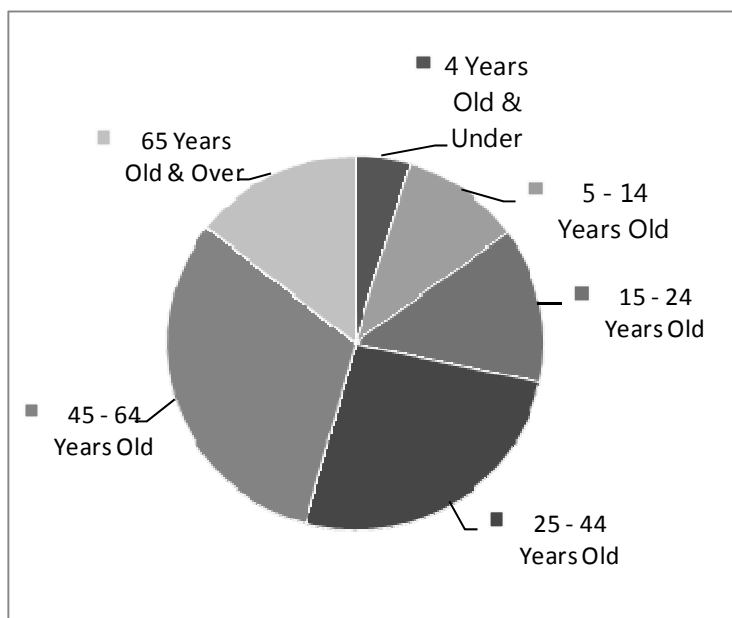
Table 4-2: Estimated Population for Franklin County and other Western Massachusetts Counties, 2000 to 2010

Geography	2000 Census Population	2010 Census Population	2000-2010	
			Change	Percent Change
Franklin County	71,535	71,372	-163	-0.2%
Berkshire County	134,953	131,219	-3,734	-2.8%
Hampden County	456,617	463,490	7,262	1.6%
Hampshire County	152,251	158,080	5,829	3.8%
Worcester County	750,963	798,552	47,589	6.3%
Massachusetts	6,349,097	6,547,629	198,532	3.1%

Sources: U.S. Census Bureau - 2000 Census of Population & Housing; U.S. Census Bureau - 2010 Redistricting Summary Data, released March 2011.

age group of 65 and older is one of the most likely to rely on public transportation for daily travel. Not only would this group benefit from an efficient bus system, but would also be greatly assisted by other forms of public transit, such as taxis and senior citizen van services.

Figure 4-1: Franklin County Age Distribution, 2008



Source: U.S. Census Bureau - 2008 Populations Estimates, released July 2009.

The region is expected to see a significant increase in the number of elderly residents over time. The "Baby Boomer" generation (born 1946 to 1964) will be reaching 65 years old as this RTP is published in 2011, and reach 75 years old in 2021. Studies have shown that nationally, over 40 percent of people age

75 and above are non-drivers.¹ As a result, it will be important to provide transportation services, including public transit and paratransit/van services for Franklin County's expanding elderly population.

Other age groups of interest for transportation planning are 25 to 44 years old and 45 to 65 years old. These age groups comprise the bulk of the workforce, and typically make their trips to and from work during the peak morning evening commute hours. It is important that the regional transportation network has sufficient capacity to accommodate commuting travel. The 2006-2008 American Community survey showed that 88 percent of Franklin County residents commute to work by car (with 72% driving alone and 8% carpooling), 4 percent walked, and 1 percent took a taxi, motorcycle, or bicycle. Traffic congestion during commuting hours can be addressed in part through provision and promotion of alternatives to single occupancy vehicle travel for work commutes. Alternatives could include the use of park and ride lots for carpooling or transit, ridesharing programs, and bicycle and pedestrian facilities. Congestion can also be influenced through flexible work schedules and through the provision of telecommunications infrastructure that helps support residents who work from their homes. In 2008, approximately 5.2 percent of Franklin County residents worked at home.

¹ Straight, A., *Community Transportation Survey*, America Association of Retired People, 1997.

Table 4-3: Population Change for Franklin County Towns, 2000 to 2010

Geography	2000 Census Population	2010 Census Population	2000-2010	
			Change	Percent Change
Deerfield	4,750	5,125	375	7.9%
Erving	1,467	1,800	333	22.7%
Orange	7,518	7,839	321	4.3%
Leverett	1,663	1,851	188	11.3%
Gill	1,363	1,500	137	10.1%
Conway	1,809	1,897	88	4.9%
Northfield	2,951	3,032	81	2.7%
New Salem	929	990	61	6.6%
Rowe	351	393	42	12.0%
Warwick	750	780	30	4.0%
Monroe	93	121	28	30.1%
Hawley	336	337	1	0.3%
Bernardston	2,155	2,129	-26	-1.2%
Shutesbury	1,810	1,771	-39	-2.2%
Montague	8,489	8,437	-52	0.6%
Leyden	772	711	-61	-7.9%
Ashfield	1,800	1,737	-63	-3.5%
Whately	1,573	1,496	-77	-4.9%
Buckland	1,991	1,902	-89	-4.5%
Charlemont	1,358	1,266	-92	-6.8%
Sunderland	3,777	3,684	-93	-2.5%
Heath	805	706	-99	-12.3%
Wendell	986	848	-138	-14.0%
Colrain	1,813	1,671	-142	-7.8%
Shelburne	2,058	1,893	-165	-8.0%
Greenfield	18,168	17,456	-712	-3.9%
Franklin County	71,535	71,372	-163	-0.2%

Sources: U.S. Census Bureau – 2000 Census of Population & Housing; U.S. Census Bureau – 2010 Redistricting Summary Data, released March 2011.

Ethnic and Racial Diversity

Due to its rural nature and location far from major urban centers, Franklin County is the least racially and ethnically diverse county in the Commonwealth. As of 2010, the U.S. Census Bureau shows that approximately 94 percent of the population in the county is White. This is compared to a Massachusetts percentage of 80 percent that is White. The remaining 6 percent of the population in Franklin County is split predominately between Black (1.1%) and Asian (1.3%), with a very small percentage (0.3%) that is Native American/Alaska Native. Hispanics make up the largest minority in Franklin

County at 3.2 percent.² The racial and ethnic composition of the population has remained fairly stable since 2000, although the Hispanic population has increased slightly from 2 percent of the total population in 2000.

While Franklin County may not have a large population of minorities or ethnicities, it is committed to the principles of Environmental Justice and to ensuring that all segments of the population are able to fully participate in its transportation planning processes and that they all have decent access to transportation facilities and services. As part of the Environmental Justice analysis that was completed in 2000, the towns with the largest total minorities (300 or more people) were identified to ensure that they were receiving equitable transportation services. Those towns are: Greenfield, Montague, Sunderland, and Orange. The greatest percentage of minorities as a fraction of a town's total population are Sunderland (13% minority), Greenfield (8%), Wendell (8%), Shutesbury (8%), Montague (6%), Charlemont (6%), and Orange (5%). (Note: due to U.S. Census data limitations, 2000 is the most recent year for which this data at the town level is available at the time of the writing of this plan.)

As mentioned in Chapter 2, the Environmental Justice analysis that was completed showed that the Environmental Justice Target Areas (defined as locations with at least 5 percent of the total population identified as minorities or 12 percent of the population living in households below the poverty level) are generally better served by the current transit infrastructure than are Franklin County residents as a whole. This is because most of the target areas are located in town centers or downtown areas with fairly high population densities for the region. While these areas may receive better transit services than much of the rest

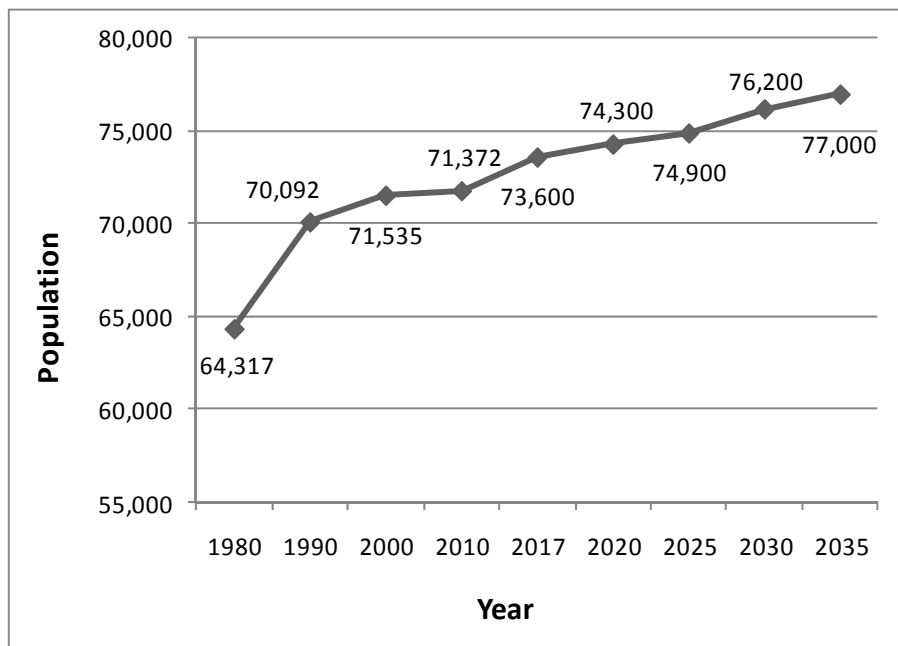
² According to U.S. Census definition, Hispanic or Latinos are considered an ethnicity and may be of any race.

of the county, the transit infrastructure can be and should be improved. This is especially important in light of the fact that minorities and lower-income households rely on public transit much more than the average population.

Population Projections to 2035

The demographic data presented previously shows that the Franklin County population is currently fairly stable – it is growing slowly, it is gradually getting older, and the ethnic composition is only slightly changing. This population status is important in determining how current transportation issues should be addressed. It is also important to look ahead and forecast how the population may change in the future in order to meet the shifting demands of the region. As part of this effort, MassDOT has developed socio-economic forecasts for all regions of the Commonwealth, including Franklin County, out to the year 2035. Those forecasts have also been applied to the twenty-six municipalities in the

Figure 4-2: Estimated Franklin County Population, 1980 to 2035



Source: MassDOT, in collaboration with FRCOG, 2011.

county. In general, the MassDOT forecasts show that the next twenty-five years will be a period of moderate growth for the Commonwealth as a whole. Massachusetts is projected to grow at about 10 percent – with some places increasing more rapidly

and others more slowly. The state’s pace of growth also applies to Franklin County – its population is projected to grow by a total of 7 percent from 2010 to 2035, increasing to 77,000 people by the year 2035. This total population growth for the county over the next twenty-five years will consist of approximately 5,600 people. Figure 4-2 shows this projected growth in relation to the county’s past growth since 1980.

In order to determine the town-level populations over the next twenty-five years, FRCOG used the MassDOT county projections as a control and assumed that each town’s share of the 2010 county population would remain the same into the future. Town population forecasts are included in Appendix C. According to these population projections, the greatest total population increases are expected for the Towns of Greenfield, Montague, Orange, and Deerfield.

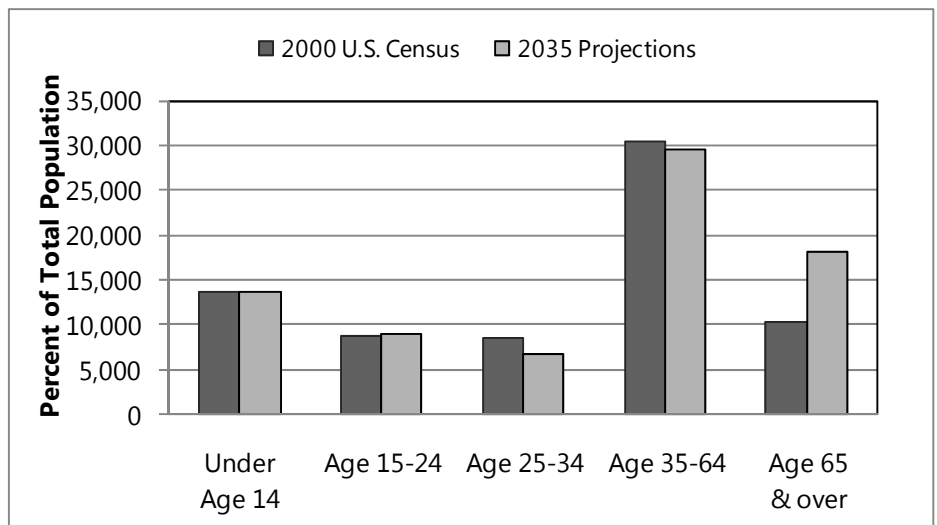
Population Projections by Age Group

As mentioned, it is useful to forecast the future age distribution of the population to help assess and plan for the potential future transportation needs of specific age groups, such as schoolchildren, workforce commuters, and the elderly. As part of the town-level projections, the FRCOG estimated the population age distribution for each Franklin County town for the years 2010, 2020, 2030, and 2035. Tables summarizing these forecasts are given in Appendix C. These projections were created using the MassDOT forecasts assuming that Franklin County and its towns will experience the same patterns of age distribution changes as Massachusetts overall.

Figure 4-3 summarizes the estimated future population age distribution for Franklin County between 2000 and 2035. It shows that the most significant population trend over the next twenty-five years will be the aging of the population and the

growing number of the elderly. From 2000 to 2035, the share of residents aged 65 years old and older will increase by 77 percent - making this segment of the population almost a quarter of the total county population at 23.4 percent. From 2000 to 2035, almost all other age groups will experience declines in their share of the population. Most notably, the largest decrease will occur in the 25-34 age cohort. This group, predominately composed of workforce commuters, will decrease by 20 percent. These forecasted changes in the age distribution of the future Franklin County population can have significant impacts on the transportation infrastructure, since elderly populations depend more on public transportation and paratransit services than the population as a whole. A decrease in the number of commuters may also require a shift of focus as future services are planned.

Figure 4-3: Population Age Distribution for Franklin County, 2000 and 2030



Income and Employment Profile

Income and Wealth

The income levels of a community often indicate the potential transportation needs of a region. Areas with lower-income populations tend to benefit more from the existence of public transportation because the costs associated with using public transportation are less than the costs of owning and maintaining a car. In addition, low income households do not have the resources needed to cope with rising fuel costs,

such as moving closer to work or purchasing a more fuel-efficient vehicle.³

In general, U.S. Census data shows that Franklin County's incomes are much lower than in

Massachusetts as a whole. In 2008, the median household income for the county was \$53,100, which is much less (18 percent less) than Massachusetts's median household income of \$64,680. Another income indicator is per capita income. By this measure, Franklin County's income is still 24 percent lower than the Commonwealth's. Franklin County's per capita income is \$27,244, compared to the Massachusetts per capita income of \$33,806. The lower per capita and median income figures for Franklin County in part reflect the lower average salaries and lower costs of living in Western Massachusetts compared to Boston and other Eastern Massachusetts communities. However, these statistics also reflect economic challenges within the region. These challenges include the loss of a historic manufacturing employment base. As numerous jobs have left Franklin County, they have often not been replaced by comparable employment opportunities with good wages, which have resulted in lower incomes in the region.

Due to the timing of this RTP update, recent U.S. Census data is not available for incomes at the town level within Franklin County. According to the 2000 Census, thirteen of the twenty-six towns in Franklin County had per capita incomes that were among the lowest 55 per capita incomes by town in the Commonwealth. As in most places, the towns with the lowest income statistics and highest poverty rates are primarily found in the more urban, densely settled communities, such as Greenfield, Montague, Orange, and Sunderland. These communities, that also have the largest minority populations as well,

³ Cooper, Mark N. "Rising Energy Prices Strain Household Budgets and the Economy For Most Americans," *Consumers Union*. September 2004.

have been the focus of the FRCOG's Environmental Justice work. In 2000, there were also some rural communities with low incomes and high poverty, located primarily along Route 2.

According to the U.S. Census Bureau's Small Area Income Estimates Program, Franklin County had an estimated 12.1 percent poverty rate, compared to 10.1 percent for the State in 2008. Franklin County had the 11th highest poverty rate of the 14 counties in Massachusetts. Poverty figures from the 2000 Census, the latest figures available for individual towns, show that nine of the twenty-six Franklin County towns had a higher proportion of persons living below the poverty level than the State average (9.3%), and five of these towns had higher poverty rates than the National average (12.4%). The areas experiencing high poverty rates include several of the downtowns and village centers that had once been traditional hubs of manufacturing employment, such as Turners Falls (18.9%), downtown Greenfield (15.7%), Shelburne Falls (10.1%), and downtown Orange (9.1%). The small, remote hill towns of Monroe (21.8%) and Hawley (14.2%) are also impacted by high poverty rates.

Employment

Regional employment trends reflect both the condition of the national and regional economy and changes in the region's population. When employment opportunities are created in a region, people are likely to move there. Similarly, when jobs in a region are lost, there is typically an out-migration of residents. To understand long-range transportation trends and commuting patterns, it is important to understand the size of an area's labor force and its employment level. An area's labor force is defined as the number of residents age 16 or over who are currently employed or who are searching for work. Unemployment figures describe the percentage of people in the labor force who are not employed (part-time or full-time) during a certain period, and who are actively seeking work.

Labor Force

According to the Massachusetts Executive Office of Labor and Workforce Development (EOLWD), over the last decade Franklin County's labor force grew

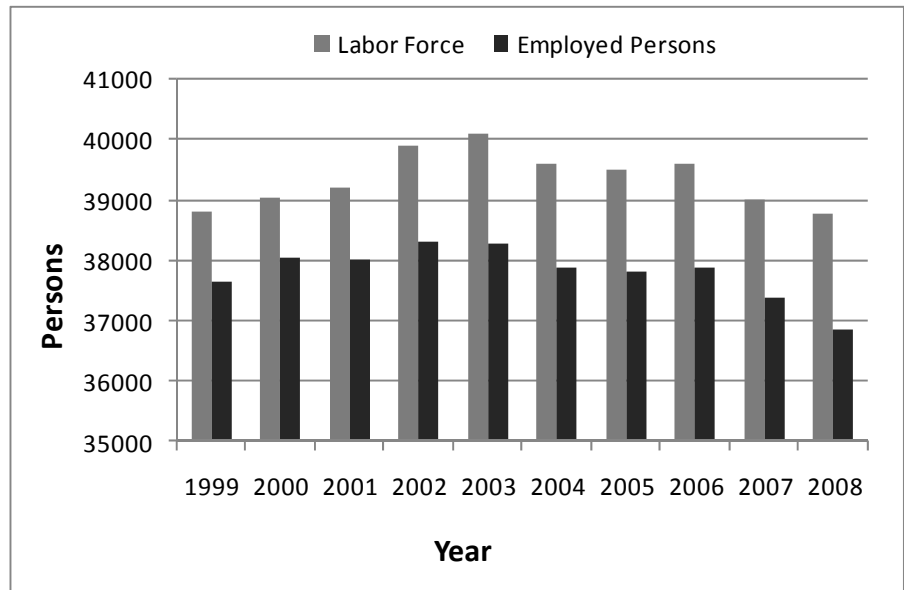
and then decreased back to 2000 levels. This pattern reflects the larger national pattern of the struggling recession-dominated economy of the last several years.

Labor force information by town is summarized in Appendix C at the back of the Regional Transportation Plan. Predictably, the largest town labor forces in Franklin County are located in the most populated communities. Greenfield contains 24 percent of the county's population and accounts for 23 percent of the labor force for Franklin County. Together, the four largest towns (Greenfield, Montague, Orange, and Deerfield) in the region comprise 53 percent of Franklin County's total population and 51 percent of the county's labor force.

In 2009, Franklin County's unemployment rate of 7.9 percent was only slightly lower than the State (8.4%) and the Nation (9.3%). However, unemployment levels among the individual towns vary greatly. Several towns have consistently experienced high rates of unemployment. According to data from the Massachusetts Department of Workforce Development for 2009, 8 towns in Franklin County had higher unemployment rates than the National rate. The towns with the highest unemployment rates fall into two types of categories: 1) isolated hill towns and 2) downtowns and village centers that had been traditional hubs of manufacturing employment. The hill towns of Monroe and Rowe have unemployment

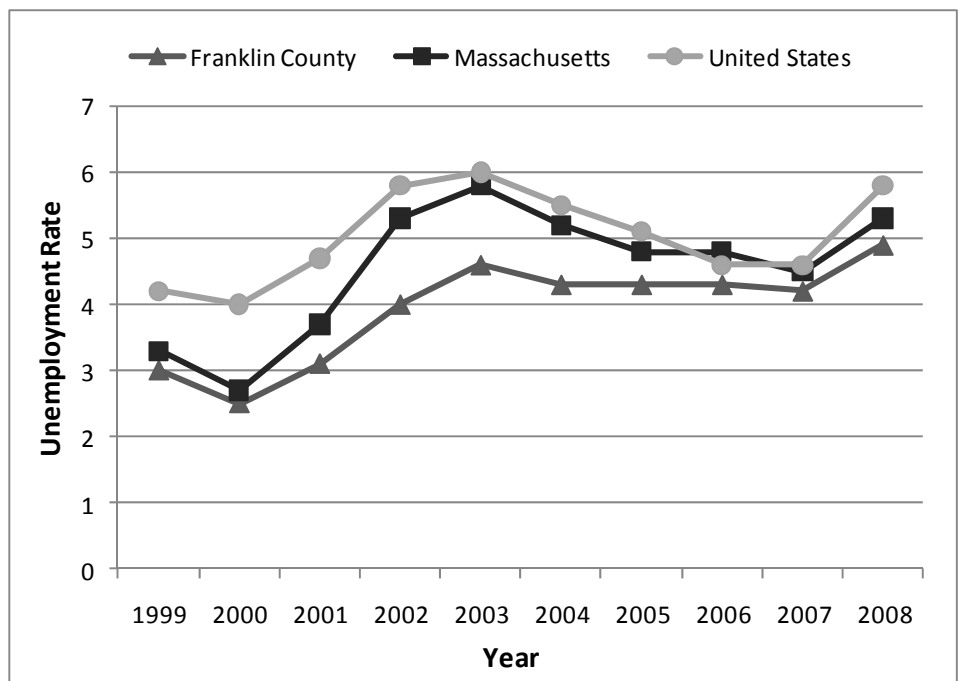
rates of 14.8 and 9.1 percent, respectively. The employment centers of Orange (11.0%), Shelburne (10.8%), Erving (9.6%), and Montague (9.2%) are also sites of high unemployment. These unemployment

Figure 4-4: Franklin County Labor Force and Employed Persons, 2000 to 2010



Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), 2010.

Figure 4-5: Unemployment Rates at the County, State, and National levels, 2000 to 2009



Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD), 2010.

figures do not distinguish between full or part-time employment and obscure the fact that underemployment is a significant problem for the region. As major manufacturing employers closed in the region there was a loss of full-time jobs with benefits and poverty became more prevalent.

Although the unemployed are not commuting to jobs, they are often traveling for employment interviews and training. Unemployed residents can greatly benefit from support services, including transit services, which can help them access, obtain, and keep good jobs. Without adequate public transportation options, it can be difficult for potential workers who do not have the use of a vehicle to access and maintain quality employment. Assisting low-income residents with transportation to work, training, and educational opportunities that can improve their employment options, is a major focus of the transit network in Franklin County and of proposed transit service improvements. Chapter 9, "Transit and Paratransit Services," describes in detail the transit network and its various services.

The best estimates of self-employed workers in Franklin County are from the U.S. Census Bureau's data on non-employer businesses, which is reported annually (with a two-year lag time) and is thought to capture most self-employed workers. Non-employer establishments are defined as having no paid employees (other than the self-employed individual), have annual business receipts of \$1,000 or more, and are subject to federal income taxes (thus excluding non-profit organizations). The Census Bureau's most recent data (2008) estimates that Franklin County has an estimated 6,191 non-employer businesses, which is an increase of 440 businesses since 2003.

Major Employers

The largest employers in Franklin County are listed in Table 4-4 and are also shown on a map at the end of this chapter. The table includes all 39 of the employers in the region that have at least 100 employees. Most of the major employers are located in the county's primary employment centers, including Deerfield, Greenfield, Orange, and Whately. Yankee Candle, which has its headquarters and a large retail store in Deerfield and manufacturing

facility in Whately, is the largest employer in Franklin County with more than 1,000 employees. In total, there are 8 manufacturers on the major employers list and 8 school districts and educational institutions, including Greenfield Community College. The remaining major employers include 7 retail establishments, 3 medical and health facilities, 2 transportation companies, 2 construction companies, and a mix of other service and information employers.

It is important to note that many Franklin County residents are employed outside of Franklin County; 37 percent of employed county residents commute to jobs outside of the county, often in nearby communities in Hampshire County, such as Amherst and Northampton. The largest single employer of Franklin County residents is the University of Massachusetts at Amherst. In 2002, UMass Amherst estimated that it employed 1,250 Franklin County residents (not including student employees). UMass Amherst has a total of approximately 5,300 non-student staff and faculty members (UMass, 2006).

The closure or downsizing of major employers in the region has had a variety of impacts on the regional economy and on residents. These events have had a negative impact on employment levels and incomes, and at times have contributed to the out-migration of the traditional working age populations. Table 4-5 lists selected, major employer closures and layoffs experienced since 2000. Not disclosed in the table are the ripple effects of jobs lost in related fields, jobs lost in smaller operations linked to specific industry clusters, or reductions in weekly work hours. Also not included in the data is the number of employees hired or rehired at a later date by the same companies or new companies created by laid off employees who turned their skills into new entrepreneurial enterprises.

Table 4-4: Major Employers in Franklin County, 2010.

Number of Employees	Company Name	Location
1,000-4,999	Yankee Candle Co Inc	South Deerfield
500-999	Pelican Products Inc	South Deerfield
250-499	Deerfield Academy	Deerfield
250-499	Northfield Mt Hermon School	Gill
250-499	Greenfield Community College	Greenfield
100-249	Berkshire East Ski Area	Charlemont
100-249	Historic Deerfield Inc	Deerfield
100-249	F M Kuzmeskus Inc	Gill
100-249	Bete Fog Nozzle Inc	Greenfield
100-249	Buckley Healthcare Ctr	Greenfield
100-249	Charlene Manor Extended Care	Greenfield
100-249	Coca-Cola Bottling Co	Greenfield
100-249	Franklin County Sheriff	Greenfield
100-249	Greenfield Savings Bank	Greenfield
100-249	Home Depot	Greenfield
100-249	Kennametal Inc	Greenfield
100-249	Lane Construction Corp	Northfield
100-249	MBW Inc	Orange
100-249	Mohawk Trail Regional High School	Shelburne Falls
100-249	Channing Bete Co Inc	South Deerfield
100-249	Deerfield Elementary School	South Deerfield
100-249	Frontier Regional School	South Deerfield
100-249	All States Asphalt Inc	Sunderland
100-249	Farren Care Ctr Inc	Turners Falls
100-249	Franklin County Tech School	Turners Falls
100-249	Heat-Fab Inc	Turners Falls
100-249	Judd Wire Inc	Turners Falls
100-249	Lightlife Foods	Turners Falls
100-249	Erving Paper Mill	Erving
100-249	Zoar Outdoor	Charlemont
100-249	Travel Kuz	Gill
100-249	Sandri Co	Greenfield
100-249	The Recorder	Greenfield
100-249	Renovators Old Mill Marketing	Millers Falls
100-249	Quabbin Inc	Orange
100-249	Ralph C Mahar Regional School District	Orange
100-249	Rodney Hunt Co	Orange
100-249	Walmart	Orange
100-249	Town Of Shutesbury	Shutesbury

The availability of workforce training programs and transit options to allow workers to attend these programs is a vital resource in helping these workers pursue new employment opportunities.

hikes. For example, in the North Quabbin region, there are new initiatives to promote local wood products and to train guides for hiking.

Tourism Services

One growing sector of the region's economy is the tourism sector. Many of the communities in Franklin County view tourism as a way to enhance their local economies and support local artisans and craftspeople, and also to promote and protect the region's natural, cultural, and historic resources, including farmland and forestland. The Master Plans and Community Development Plans created by a number of towns in the region include recommendations for promoting the towns and the region overall as a place to visit, and for expanding current agri-tourism, eco-tourism, and cultural tourism offerings related to historic sites and artisans. Offerings such as farm stands, maple sugar houses serving pancakes, and other forms of interactive experiences are growing in the agricultural industry. By offering value-added products for sale and visitor activities, many farms have increased the number of customers and their profit margins while diversifying their revenues. Activities such as the "Buy Local" campaign coordinated by Community Involved in Sustaining Agriculture (CISA) and CISA's guides to local farms help support these businesses. Eco-tourism activities include outdoor recreation such as bicycling, rafting, skiing as well as education-related opportunities, like guided nature

Table 4-5: Selected Large Employer Closures and Layoffs, 2000 – June 2010

Industry Sector	Company	Location	Approx. Jobs Lost	Year
Manufacturing	Millers Falls Paper Mill	Erving	120	2000
Manufacturing	Yankee Candle Company	Deerfield	275	2001
Research & Development	Telaxis Communications	Deerfield	253	2000-2002
Manufacturing	Kennametal	Greenfield	148	2002-2003, 2009
Health Care Services	FMC Beacon Program, Franklin Baystate Medical System	Greenfield	148	2002-2003, 2009
Transportation	N & B Trucking	Deerfield	70	2005
Manufacturing	Oxford Foods	Deerfield	85	2006
Manufacturing	Thomas & Betts	Orange	150	2007
Manufacturing	Pliant Corporation	Deerfield	125	2008-2009
Telecommunications	Verizon Call Center	Greenfield	85	2008
Educational/Government	UMass	Amherst*	350	2002-2004, 2008-2010
Educational Services	Northfield Mt. Hermon School	Northfield/Gill	117	2004-2009
Financial Services	Phoenix Home Mutual Life Ins.	Greenfield	111	2000, 2008
Education Services	Maple Valley School	Wendell	120	2009
Manufacturing	Disston Company	Deerfield	54	2009

*Amherst is located just outside of Franklin County, but is included in this list since UMass is the largest employer of Franklin County residents.

The FRCOG assists communities with these initiatives on behalf of various granting agencies.

The FRCOG is developing the Franklin County Bikeway, with off-road sections completed in 2008 and many shared roadways marked with trailblazing signs in 2009. The FRCOG also worked in close partnership with the Town of Orange to create their Riverfront Park in downtown Orange which helps advance the creation of a Millers River Greenway between Riverfront Park and the Millers River Environmental Park in downtown Athol.

Another activity related to tourism is the designation of scenic byways in the region. Franklin County has the most scenic byways in the state with 5 of the 7 byways in Western Massachusetts – one of which is a nationally designated scenic byway. The designation of scenic byways and the creation of management plans for the scenic byway corridors can help protect and promote the scenic, cultural, historic, natural, and recreational assets along the byways. The scenic byway corridor management plans always include a tourist component. The FRCOG’s many scenic byway tourism activities are described more fully in Chapter 15, “Scenic Byways & Regional Tourism.”

Employment Projections

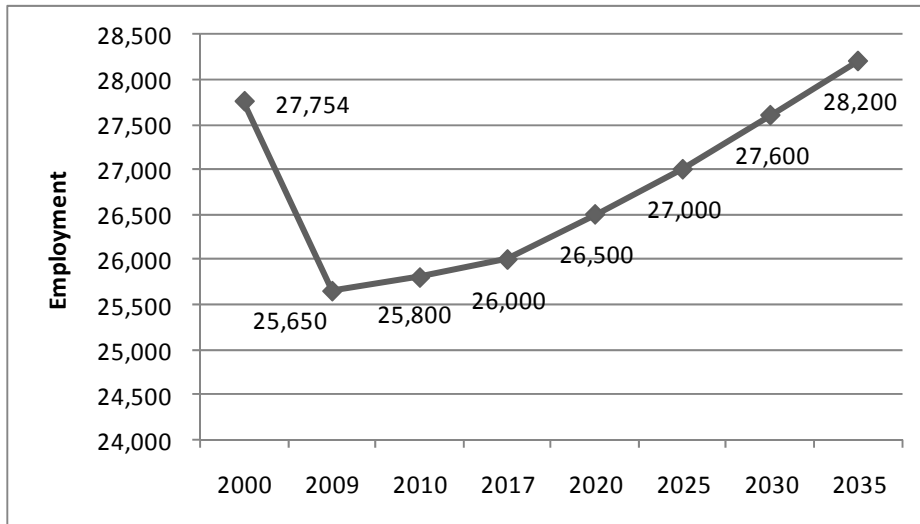
Employment projections are useful for transportation planning, because they can help estimate future commute travel flows and help assess the need for transportation services and facilities for work-related travel.

As with the population forecasts used in this RTP, the employment forecasts were produced by MassDOT based on the same basic methodology that was used for the 2007 RTP. The total employment in an area is equal to the number of employed residents in the area, plus the number of non-residents who commute into that area to work. Excluded from the figure are the residents who commute out of the area to work.

MassDOT provided employment forecasts for the regional level. FRCOG then allocated these projections to the municipal level for all of the towns within Franklin County. Appendix C shows the results of this exercise. These allocations were performed with the assumption that each town’s share of employment will remain constant over the next twenty-five years. This is based on the premise that primary employment trends are regional and

the employment centers in Franklin County today will continue to be the employment centers in the county for the foreseeable future. From an employment perspective, the most important population changes are those that occur at the regional level. Population changes for individual towns, especially smaller towns, have only a minor impact on employment since many workers commute to jobs outside of their community.

Figure 4-6: Estimated Franklin County Employment, 2000 to 2035



As shown in Figure 4-6, the forecasts show that Franklin County’s total employment will grow by 9 percent over the next twenty-five years. This is similar to the state, which is projected to grow by 10 percent over the same time frame. Current employment in Franklin County stands at 25,560 and will grow by an additional 2,500 employees by the year 2035.

The forecasts show that Franklin County will add jobs by the year 2035. However, because of the lingering effect of the recent economic recession, employment levels will not match 2000 employment levels until the year 2030. In terms of planning for the transportation of commuters in the region, these forecasts seem to indicate that the current highway infrastructure may be sufficient for commuters’ needs. The status of the public transit system should be evaluated to ensure that it is serving the workforce efficiently and effectively. In addition, the return of passenger rail to the region should be

evaluated as to how it can best serve the area’s labor force as it grows.

Transportation Profile

Because of Franklin County’s rural character and limited transit services, the county has a high level of private vehicle ownership and usage and most of Franklin County residents rely heavily on their vehicles for travel.

Registered Motor Vehicles

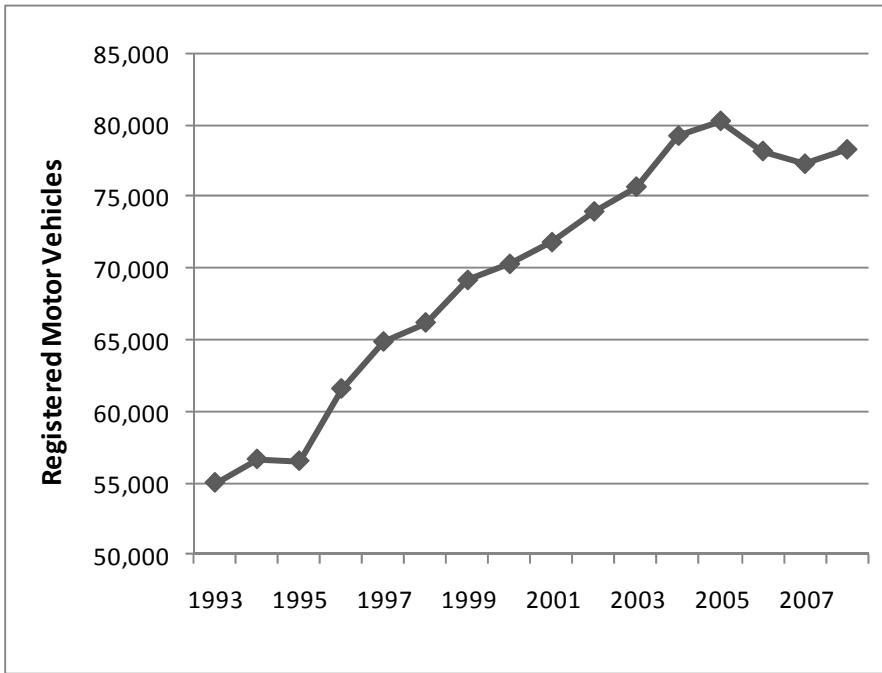
Data on the number of registered motor vehicles based in Franklin County show that the number of vehicles in the region continues to grow at a rate faster than the population. Between 1990 and 2000, the number of registered vehicles in Franklin County increased 28 percent to 69,770. Between 2000 and 2008, the number of registered vehicles grew by another 15 percent to 80,268. Overall, during the sixteen years between 1993 and 2008, the number of registered vehicles grew

by 42 percent. At the same time, Franklin County’s population only grew by 6 percent. The disproportionate increase in the number of registered vehicles compared to population growth, suggests there is increasing motor vehicle usage in the region and a growing dependence on motor vehicles for transportation. This trend is likely to continue despite the small decline and leveling of registered vehicles that occurred from 2006 to 2008. This change in trend is most likely temporary due to poor economic conditions and will continue to increase again as the economy recovers.

Households Without Cars

The decennial U.S. Census is the best source of data on households without motor vehicles. According to the 2000 U.S. Census, 8 percent of Franklin County households (approximately 2,285 households) do not own or have access to a motor vehicle for their transportation needs, compared to 13 percent of households statewide.

Figure 4-7: Total Number of Registered Motor Vehicles



Source: Massachusetts Department of Revenue, Division of Local Services, 2009.

The Census figures show that the two population groups that are most likely to not own a car are renter households and older households. An estimated 16 percent of renter households in Franklin County have no vehicle available. The higher rate of carlessness among renters is related to two primary factors. One, most of Franklin County's rental housing is located in village and downtown areas that, because of their population density, typically have the highest degree of access to transit services. Secondly, renter households, on average, have lower incomes than homeowners and are more likely not to own a private vehicle because of the costs associated with vehicle ownership. Studies by the Bureau of Transportation Statistics (BTS) and the Surface Transportation Policy Program (STTP) have found that transportation costs are typically the second largest household expense next to housing. Low income households can be particularly burdened by transportation costs, spending a quarter of their income or more, on their travel and private vehicle expenditures. The STTP study found that switching from the use of a private vehicle to transit service can save a family thousands of dollars annually.

The Census data show that, by age group, elderly households, especially older elderly, are most likely to not have a car. For example, 22 percent of households led by householders aged 75 or older are carless. Reasons for the higher level of carless households among the elderly include physical limitations, which make driving difficult, and as discussed above, the expense of private vehicle ownership for elderly fixed-income households.

Commuting Trends

Mode of Transportation to Work

The automobile is the primary mode for commuting travel in Franklin County. The most current source of information on commuting patterns within the region is the U.S. Census

Bureau's 2006-2008 American Community Survey. Between 2006 and 2008, 88 percent of Franklin County's employed residents commuted to work by car; with 79 percent driving to work alone, and 10 percent carpooling. Table 4-6 compares Franklin County's modes of transportation to that of Massachusetts. The percentage of Franklin County workers that took transit is small: in 2000, only 1 percent took transit. In Franklin County, an estimated 3.8 percent of workers walked to work –

Table 4-6: Mode of Transportation for Franklin County Residents, 2008

Mode of Transportation	Franklin County	Massachusetts
Drive Alone	79.3%	72.9%
Carpool	8.8%	8.4%
Transit	1.3%	8.9%
Bicycle	0.4%	0.6%
Walk	3.8%	4.4%
Taxi, Motorcycle, Other	0.9%	0.8%
Worked at Home	5.2%	3.8%

Source: U.S. Census Bureau – 2006-2008 American Community Survey, CTPP.

an increase of almost 1 percent since 2000. In addition, 5.2 percent of workers in Franklin County worked from home. Town level data is not available for the 2006-2008 period, but historically many of those that worked from home lived in the more remote hilltowns of the county. The 2000 U.S. Census showed that in five Franklin County towns, over 10 percent of employed residents worked from home; these towns are Ashfield, Conway, Hawley, Leverett, and Rowe. Except for Leverett, all these communities are located in the western Franklin County hilltowns, the most rural area of Franklin County.

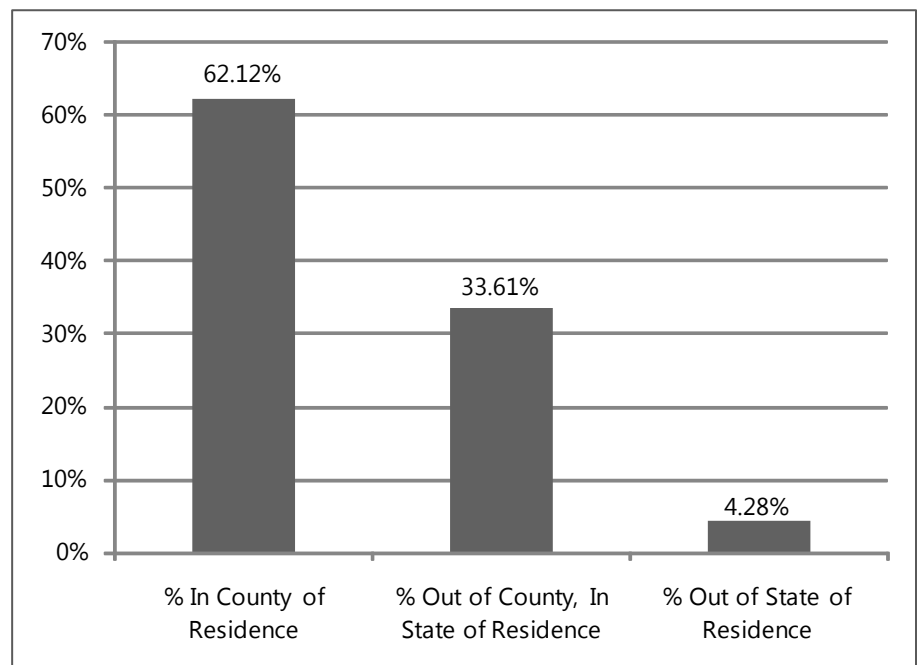
It is anticipated that the employees working from home, also known as telecommuters, will continue to increase in Franklin County in the coming decades. The growth in telecommuting will be driven by the increasing number of technology and information-based jobs that can be conducted from remote locations, such as a workers' home. It will also be driven by the number of people who move to Franklin County, but who choose to keep jobs that are based outside of the region and to which they do not need to commute to every day. Another important factor that will promote telecommuting in the region is the recent and pending expansion of telecommunications infrastructure and high-speed internet services in the region. It is currently estimated that approximately half of all Franklin County towns have broad access to high-speed internet services in their community. The other half of these towns may only have access in very limited areas or have no broadband access at all. Fortunately, the Massachusetts Broadband Institute (MBI), assisted by efforts initiated by WesternMA Connect, have undertaken significant steps toward bringing broadband and high-speed internet access to more communities in the region. In collaboration

with MassDOT, the MBI has recently completed the installation of a fiber optic conduit along the Interstate-91 Corridor. The I-91 project is the first stage of over \$70 million of "middle mile" infrastructure investment over the next three years to be made by the MBI in western Massachusetts, including Franklin County. As the telecommunications infrastructure begins to branch out from the middle mile, the region will be more able to attract and retain workers who wish to work from home and who need high-speed internet access to be able to do so.

Commute Patterns

The U.S. Census Bureau's American Community Survey collects information on where residents work compared to where they live. The Census Bureau estimates that, during the 2006-2008 period, approximately 62 percent of Franklin County residents worked in Franklin County, and the other 38 percent commuted to jobs outside the county (Figure 4-8). The majority of residents commuting to work outside Franklin County worked in Hampshire

Figure 4-8: Location of Franklin County Residents' Work



Source: U.S. Census Bureau – 2006-2008 American Community Survey, CTPP.

County (20%), though some worked in Worcester County (6%), Hampden County (5%), or Windham County, Vermont (2%). The remaining 4 percent of employed Franklin County residents worked

elsewhere, many of them likely in Eastern Massachusetts.

A major contributing factor for the population increase that is occurring in many of the eastern (between 2005 and 2010) and southern (between 2000 and 2005) Franklin County towns is the easy commute from the county to jobs in Hampshire County and other nearby regions. Eastern towns in Franklin County, such as Orange, are especially facing similar trends. Orange is located along Route 2, a major east-west highway in Massachusetts that intersects the I-95/128 corridor in the Boston metropolitan area. The Census data show that more workers are commuting longer distances to their jobs than in the past. Between 2006-2008, 6.3 percent (2,188) of employed Franklin County residents commuted an hour or more to their jobs, up from 5.6 percent (2,059) in 2000.

Most of the workers who commute to jobs in Franklin County live within Franklin County. The most recent commuting data available at the town level is from the 2000 U.S. Census. While this data is older, it is unlikely that there have been significant changes to the commuting patterns within the county over the last decade. Table 4-7 gives the county of origin for workers commuting to the five towns in Franklin County with the highest levels of employment (Greenfield, Deerfield, Montague, Orange, and Whately). At least 60 percent of the people working in each of these towns reside in Franklin County.

For example, an estimated 85 percent of people

working in Montague live in Franklin County, as do 84 percent of Greenfield workers. The data also show that 26 percent of people working in Whately and 18 percent of people working in Deerfield live in Hampshire County.

The highest levels of commuting into Franklin County on a town basis are seen for Athol, Northampton, and Amherst, with an estimated 830, 640, and 500 residents respectively from each community commuting to jobs in Franklin County.

For Franklin County residents commuting to jobs outside of Franklin County, two major destinations are Amherst and Northampton. According to the 2000 U.S. Census, approximately 3,600 Franklin County residents work in Amherst, and 1,900 Franklin County residents work in Northampton. In addition, the largest single employer of Franklin County residents is the University of Massachusetts (UMass) at Amherst.

Table 4-7: Commute Patterns to Major Franklin County Employment Centers, 2000

Town	Employment Level (Workers)	% of Total Workers Residing in Franklin County	% of Total Workers Residing in Hampshire County	% of Total Workers Residing in Hampden County	% of Total Workers Residing in Worcester County	% of Total Workers Residing in Other Areas
Greenfield	10,509	84.1%	7.0%	2.4%	1.6%	4.9%
Deerfield	3,456	69.3%	18.1%	7.0%	2.0%	3.5%
Montague	2,988	85.4%	5.0%	4.2%	2.0%	3.4%
Orange	2,306	67.9%	2.4%	1.0%	26.5%	1.7%
Whately	1,846	62.9%	25.6%	8.7%	0.7%	2.1%

*This includes self-employed workers and employees working at work. Source: U.S. Census Bureau – 2000 Census, Summary File 3.

Table 4-8 provides a summary of selected towns outside of Franklin County to which Franklin County residents commute. In addition to Amherst and Northampton, other towns with significant numbers of employees from Franklin County include Hadley, Hatfield, and Athol. It is noteworthy that few Franklin County residents commute to employment centers in Berkshire County such as North Adams. Residents from towns that border Berkshire County are much more likely to commute to Greenfield or to towns in Hampshire County.

Land Use

As the state's most rural region, Franklin County has experienced only a limited amount of development. Historically, farmlands and forests occupied almost all of the county's land area. Today, forestland is still the predominant land use, accounting for more than three-quarters (77%) of the county's acreage, and even the most urbanized towns in the county, such as Greenfield, are at least 45 percent forested. Farmland is the

Table 4-8: Selected Employment Centers and Number of Franklin County Commutes

Town	Employment Level (Workers)	Number of Workers Commuting from Franklin County*	% of Total Workers that are from Franklin County
Hampshire County			
Amherst	23,501	3,631	15.5%
Hadley	4,092	713	17.4%
Hatfield	2,544	532	20.9%
Northampton	20,037	1,914	9.6%
Worcester County			
Athol	4,543	941	20.7%
Berkshire County			
North Adams	6,652	50	0.8%

*This includes self-employed workers and employees working.

Source: U.S. Census Bureau – 2000 Census, Summary File 3.

Table 4-9: Franklin County Land Use, 2005

Land Use Category	Acreage	% of Total
<i>Undeveloped Land</i>	436,975	94.3%
Forest	357,909	77.2%
Agriculture	36,072	7.8%
Open Land	8,164	1.8%
Recreation	1,716	0.4%
Water/Wetlands	33,111	7.1%
<i>Developed Lands</i>	26,535	5.7%
Residential	18,981	4.1%
Commercial/Industrial	2,178	0.5%
Urban Open*	2,072	0.4%
Transportation	2,167	0.5%
Other Developed Uses**	1,136	0.2%
<i>Total Acreage</i>	463,511	100%

*Urban Open land includes parks, cemeteries, public and institutional buildings, and green spaces.

**Other Developed Uses include mining and waste disposal.

Source: MassGIS, 2005.

second largest land use, comprising 7.8 percent of the county's total land area. All developed land uses (residential, commercial, etc.) combined account for only 5.7 percent of the county's acreage. These figures are based on MassGIS' 2005 mapping of land uses from aerial photographs. The 2005 acreage by land use for Franklin County is shown in Table 4-9. Although Franklin County is predominately undeveloped, it has been experiencing substantial growth and development in recent decades. Between 1985 and 1999, the amount of developed land in Franklin County increased 30 percent (7,200 acres). Most of this new development, almost 6,600 acres, was residential in nature. In Massachusetts, new residential development can occur along road corridors with relative ease, due to the State's Approval-Not-Required (ANR) rules, which allow for the subdivision of land without Planning Board approval, if certain conditions can be met. These conditions are that each subdivided lot must meet minimum road frontage requirements and must have adequate access to protect public safety and welfare. As a result of the expansion in residential acreage from 1985 and 1999, the amount of Franklin County agricultural land decreased by 12 percent and the amount of forestland fell by 2 percent.

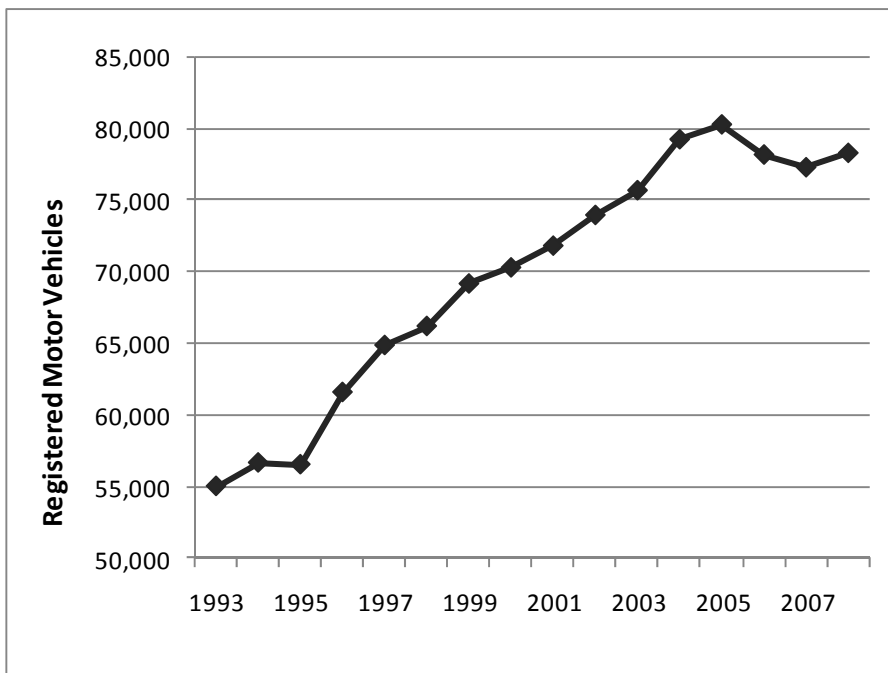
MassGIS recently updated its aerial photography and land use data in 2005. Unfortunately, due to different data collection methodology, the 2005 land use data is not directly comparable to the 1999 land use data. As a result, it is difficult to assess how land uses have changed in the six years between 1999 and 2005. However, the trend of residential growth is believed to be continuing since 1999, albeit at a much slower pace during the latter half of the decade due to the poor state of the national economy. Building permit data show that between 2000 and 2004, the number of new housing units in the region grew by 1,126 or 25 percent. Almost all of these housing units were single-family homes built along existing roadways, such as on ANR lots. There are currently very few subdivisions being built in the region. However, as growth in the region continues and there is less land along existing frontage available for development, it is anticipated that more subdivisions will be constructed. These subdivisions will include new roadways to serve the new homes. These roadways will need to be maintained as either private roads by the developer and property owners, or as public roads by the communities in which they are located. The impact of the subdivision roads on existing roadway infrastructure will also need to be assessed.

Since 2004, the pace of residential home construction has decreased. Between 2004 and 2009, the number of building permits issued declined significantly – dropping by 77 percent (as seen in Figure 4-9). This rate of decline is similar to that of the state, New England, and the nation. During the same time period, New England’s number of building permits issued also declined by 70 percent. These decreases in home construction can be directly attributable to the national credit crisis and resulting “Great Recession” and, as a result, are viewed as temporary. In fact, the number of single family

building permits has begun to increase during 2010. Massachusetts saw an increase of 33% between August 2009 and August 2010. During the same time period, New England experienced a 32% increase and the United States increased by 10 percent.⁴

In response to development pressures and concerns about their ability to handle future potential growth, in recent years a number of Franklin County communities, including Erving, Gill, and Orange have revised their zoning bylaws to direct growth to areas within their towns with the highest current levels of development and the best infrastructure (water, sewer, roadways) to accommodate new growth. Towns have also worked to encourage other areas to

Figure 4-9: Number of Building Permits Issued in Franklin County, 2000 to 2009



Source: U.S. Census Bureau, 2009

remain undeveloped farmland and forestland. In particular, land conservation organizations in the region, such as the Franklin County Land Trust and the Mount Grace Land Conservation Trust, have protected a considerable amount of private farm and forestland in the region through purchases of land and the purchases of development rights for other

⁴ “Construction Statistics,” National Association of Home Builders, August 2010.

land parcels. As of November 2010, 29 percent of the total acreage of Franklin County has been protected from development (MassGIS).

It is good for the region to be proactive in planning for its future, and for its future transportation infrastructure needs. It is important to consider the link between land use and transportation as new transportation facilities are reviewed or the expansion of old facilities are evaluated. It is also important to recognize that transportation improvements or expansions, such as adding roadway lanes, upgrading bridges to remove weight restrictions, or establishing and expanding transit services, can themselves promote additional development and influence future development patterns.

Summary of Demographics and Socioeconomic Trends

The following are key demographic and socioeconomic trends that have significant implications for the transportation system and transportation planning within the region:

- **There have been increased rates of population growth, in the eastern and northern areas of Franklin County.**
Population growth in the outer lying areas of the county mean that more people will be likely traveling farther for their daily trips, whether it is for work or for errands. This could lead to higher maintenance costs for road infrastructure. To save on the wear and tear of the roads, the public transit systems to these areas should be evaluated to determine if the service is sufficient or should be adjusted.
- **There has been and will continue to be a high growth in the number of elderly residents.** The elderly are one of the largest user groups of public transportation services, both fixed-route transit and more intensive, expensive demand-response van service. These services will likely need to be expanded to meet rising demand due to the

aging of the population and the increasing number of seniors living in Franklin County.

- **There will likely be an expansion of Environmental Justice target populations in the future.**

As the state and national economies recover, it is anticipated that future development pressures and rising land costs in Hampshire and Hampden Counties are likely to result in larger Environmental Justice target populations living in Franklin County. It will be important to ensure that the target populations have adequate access to transportation services and that they continue to be included in regional transportation planning processes. Some of these groups' transportation needs, including their commute and travel patterns, may differ from that of other residents, and this issue, combined with potential cultural and language barriers, will have to be addressed. The FRCOG is committed to working with other agencies in the region to do so.

- **Increased employment in Franklin County.**

The forecasts show that employment will increase in Franklin County. This increase will most likely be focused in current employment centers. It will be important to evaluate the public transit and passenger rail services to ensure that they are efficiently and effectively meeting the commuting workforce's needs.

- **Growing number of telecommuters.**

It is expected that the number of telecommuters, workers who work primarily from home using technology to be connected to their employer, will continue to grow in coming decades. U.S. Census data show that the number of employed Franklin County residents that work from home has been steadily increasing over the past twenty years. In 1990, 4 percent of residents worked from home compared to the 5 percent in 2000. In 2008, the U.S. Census estimates that this increased slightly to 5.2 percent. The

projected continued growth in telecommuting will be driven by the increasing number of technology and information-based jobs that can be conducted primarily from remote locations. The trend will also be driven by the growing number of people who move to Franklin County for its relatively low living costs and other attractive attributes, but who choose to keep jobs that are based outside of the region that they do not need to commute to every day.

Another factor that will promote telecommuting in the region is the ongoing expansion of high-speed internet and telecommunications infrastructure in the region. In collaboration with MassDOT, the Massachusetts Broadband Institute has recently completed the installation of a fiber optic conduit along the I-91 Corridor. The I-91 project is the first stage of over \$70 million of "middle mile" infrastructure investment over the next three years to be made by the MBI in Western Massachusetts, including Franklin County. As the telecommunications infrastructure begins to branch out from the middle mile, the region will be more able to attract and retain workers who wish to work from home and who need high-speed internet access to be able to do so.