

# SECTION

# 3

## **COMMUNITY SETTING**

The Town of Shelburne contains rural landscapes that have been established, developed, and affected by its human inhabitants over the past several hundred years. Planning for natural, cultural, and recreational resources in Shelburne must account for the complex relationships between people and the open spaces and natural resources upon which they depend. For example, development without consideration of the natural systems that need to be protected, such as drinking water supplies, could reduce the quality of life for future generations.

The information provided in this section, Community Setting, inventories and assesses the human and land use components of the landscape, moving from the present, to the past, and then to the potential future based on current development trends. The Regional Context gives a snapshot of Shelburne today, and identifies the ways in which the location of the town within the region has affected its growth and quality of open space and recreational resources. History of the Community looks at the manner in which the human inhabitants settled and developed the landscapes in Shelburne. Next, using statistical information and analysis, Population Characteristics shows the reader who the people of Shelburne are today and how population and economic trends may affect the town in the future. Finally, Growth and Development Patterns describes specifically how the Town of Shelburne has developed over time and the potential future impacts that the current zoning may have on open space, drinking water supplies, and municipal services.

### **A. REGIONAL CONTEXT**

Regional Context concentrates on the location of the Town of Shelburne relative to natural and socio-economic resources as well as conditions shared by communities in the region. It describes the significant influence a town's physical location can have on its characteristics, including the quality and quantity of open space in the town as well as its recreational resources. Regional Context also considers the impact that different land uses, located within Shelburne and surrounding communities, have on regional open space and recreational resources.

The Town of Shelburne is located in northwestern Massachusetts, in central Franklin County. Shelburne is bordered by Colrain on the north; Greenfield on the east; Deerfield and Conway on the southeast and south; and Buckland and Charlemont on the west and northwest.

## A.1 Natural Resources Context

In order to plan for the protection of open space and natural resources in the Town of Shelburne, residents should consider the role natural resources play across the region. Two regional landscape-level natural resources important in both Shelburne and in surrounding communities are abundant and contiguous forestland and watersheds. The presence and relatedness of these significant resources presents both opportunities and challenges to open space and recreation planning.

### A.1.1 Large Blocks of Contiguous Forestland

Forests constitute one of the most important natural resources in the Town of Shelburne and the region. The Commonwealth of Massachusetts owns approximately 75 acres of the forestland in Shelburne, which is overseen by the Department of Conservation and Recreation. These forestlands include Shelburne State Forest (49 acres), located in western Shelburne and Wilcox Hollow State Park Forest (25.7 acres), also located in western Shelburne on the Deerfield River. Massachusetts Audubon Society owns High Ledges, a 571-acre wildlife sanctuary located in northwestern Shelburne.

In 2010 the Massachusetts Department of Fish and Game and The Nature Conservancy launched *BioMap2: Conserving the Biodiversity of Massachusetts in a Changing World*.<sup>1</sup> This project, produced by the Natural Heritage and Endangered Species Program (NHESP), is a comprehensive biodiversity conservation plan for Massachusetts intended to promote strategic land protection of areas that support diverse ecosystems and habitats. *BioMap2* endeavors to protect the state's biodiversity in the context of projected effects of climate change. *BioMap2* combines NHESP's 30 years of rare species and natural community documentation with the Division of Fish and Wildlife's<sup>2</sup> 2005 State Wildlife Action Plan (SWAP). It also integrates The Nature Conservancy's assessment of ecosystem and habitat connections across the State and incorporates ecosystem resilience in the face of anticipated impacts from climate change. *BioMap2* data replaced former BioMap and Living Waters data.

*BioMap 2* identifies Core Habitat and Critical Natural Landscapes across the state. Core Habitat are critical for the long-term persistence of rare species and other Species of Conservation Concern, as well as a wide diversity of natural communities and intact ecosystems across the Commonwealth. Core Habitat includes:

- Habitats for rare, vulnerable, or uncommon mammal, bird, reptile, amphibian, fish, invertebrate, and plant species;
- Priority Natural Communities;
- High-quality wetland, vernal pool, aquatic, and coastal habitats; and
- Intact forest ecosystems.

Critical Natural Landscapes complement Core Habitat and include large natural Landscape Blocks that provide habitat for wide-ranging native species, support intact ecological processes,

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<sup>1</sup> [http://www.mass.gov/dfwele/dfw/nhesp/land\\_protection/biomap/biomap\\_home.htm](http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap_home.htm)

<sup>2</sup> <http://www.mass.gov/dfwele/dfw/>

maintain connectivity among habitats, and enhance ecological resilience. Critical Natural Landscapes also include buffering uplands around coastal, wetland and aquatic Core Habitats to help ensure their long-term integrity. Critical Natural Landscapes may overlap with Core Habitat.

Shelburne has several areas considered by the NHESP to contain Core Habitat and/or Critical Natural Landscapes that buffer or link lands to Core Habitat areas. These areas are located along water resources, such as the Deerfield River and smaller tributaries, and in several forested areas (see Section 4: Environmental Inventory and Analysis for more details and a map showing these areas). Large blocks of contiguous forestland such as these are important regional resources for several reasons. First they represent an area with a low degree of fragmentation. Wildlife species that require a certain amount of deep forest cover separate from people's daily activities tend to migrate out of fragmenting landscapes. New frontage lots and subdivisions can often result in a widening of human activity, an increase in the populations of plants and animals that thrive alongside humans (i.e. raccoons and squirrels) and a reduction in the species that have larger home ranges and unique habitat needs. When these large blocks of forest are protected from development they help to protect and provide for clean water and viable wildlife populations. In addition, areas of unfragmented forest are more suitable for active forest management.

#### A.1.2. Watersheds

Watersheds are the areas of land that drain to a single point along a stream or river. The Town of Shelburne is located in the southeastern portion of the Deerfield River Watershed, which encompasses all or part of twenty (20) western Massachusetts communities and sixteen (16) towns in Vermont. From Stratton Mountain in Vermont to the confluence with the Connecticut River in Greenfield, Massachusetts, the Deerfield River drains a regional landscape that is 665 square miles in size, of which 347 are in Massachusetts. The Deerfield's length is 70.2 miles, forty-four (44) of which are in Massachusetts. The Deerfield River, one of the coldest and cleanest rivers in Massachusetts, has a steep gradient, dropping 46.8 feet per mile from its headwaters to the USGS gauge near West Deerfield, a distance of 69.5 river miles. This feature has made the Deerfield River a magnet for hydroelectric power generation, with ten (10) hydroelectric developments constructed on the river since 1912. Given its gradient and excellent water quality, the Deerfield River has seen a long history of use by fishermen and whitewater enthusiasts. The Commonwealth of Massachusetts actively stocks the river to augment native populations.

The degree of forest continuity, pattern of residential development, and the purity of the water in the Deerfield River Watershed are beyond the control of any one community. The Town of Shelburne could promote the conservation of all its significant open space and natural resources, but if surrounding towns fail to protect land, plan growth, or continue to monitor and participate in the cleanup of brooks and rivers, their level of impact on the resources that disregard political boundaries (water, wildlife populations, scenic views, trails, etc.) will be less significant. Shelburne needs to take an active role in the conservation of regionally important natural resources, whether or not they occur in town.

## **A.2 Socio-Economic Context**

Agriculture, manufacturing, waterpower, and tourism all have had an influence on the development and growth of the Town of Shelburne. Unlike many communities along the major waterways in the region, Shelburne did not experience major economic decline since its manufacturing heyday, but rather shifted to a tourism-based economy.

Given the prime farmland soils of the uplands, agriculture has played a significant role in the Town of Shelburne throughout its history. During the late 1880s Shelburne was considered the leading milk producer of Franklin County and was also shipping its milk via rail to Boston and Springfield. Due to the suitable climate, apple orchards were planted and became a major agricultural crop.

In 1912, the Deerfield River was harnessed for hydropower providing electricity to the area as well as giving a major boost to several manufacturers in Shelburne Falls, including Lamson and Goodnow (located on the Buckland side of the river), which continues in operation to this day. In 1914, the Mohawk Trail (Route 2) was opened as an auto-touring route, thus transforming Shelburne into a tourist destination and stopover. Tourism is becoming a dominant driver of the town's economy, as people visit the region for recreational and cultural opportunities.

Between 1998 and 2001, Shelburne experienced a significant loss in manufacturing jobs. Since then, the remaining manufacturing in town has remained relatively stable, while service jobs now account for a large share of employment in town, providing goods and services to residents and tourists alike. Agriculture continues to be important to the local economy, with agricultural land accounting for roughly 17 percent of the town's total area. Finally, the area's high quality of life and affordable housing make it attractive to artists and artisans, who are helping to grow the creative economy in the region.

Like many of the communities in the western and eastern edges of Franklin County, there has not been the same level of pressure to develop the open spaces of Shelburne for residential development as compared to communities along the Interstate 91 corridor. Shelburne's population declined by eight percent from 2000 to 2010, but is expected to grow modestly over the next 20 years. It is unclear how the changing local economy will impact the town's population in the future. As baby boomers age, Shelburne may become an attractive location for retirees wishing to live in a scenic setting that also offers a wide array of cultural and recreational opportunities. New industries that are less tied to specific locations may find Shelburne an attractive location that offers a high quality of life to its employees. If recreational tourism related to the Deerfield River and other natural and cultural amenities in the region grows, the increased influx of tourists could lead to demand for more businesses in town that support tourism. The community may have a brief opportunity to protect natural, open space, and recreation resources in advance of any future development. Currently, due to the local economy and lower property values relative to other areas in the region, development rights may be purchased at lower rates than would be possible if the town were to wait for the need for land protection to become more apparent.

## **B. HISTORY OF THE COMMUNITY**

The early history of Shelburne surrounds the area of Shelburne Falls, then known as Salmon Falls. The Falls were considered an important native fishing site. After colonial settlement of the area, Salmon Falls were also the site of extensive colonial fishing. A 1743 statute designated twenty acres of land along the Deerfield River for use as a public fishing area, which was sold later in the 18<sup>th</sup> Century to a private landowner. The uplands of Shelburne were also utilized as pastureland by colonials prior to settlement.

Permanent settlement of Shelburne began in the vicinity of Shelburne Falls, c.1760, by five families. Only sixteen years later, the population had risen to 575 with most of the settlement occurring east of Shelburne Falls. The majority of these early settlers were Presbyterian Scotch Irish who migrated from New Hampshire. By c. 1770, settlement began in the area of the Hill Cemetery in central Shelburne with the construction of the town's first meetinghouse. The rich soils of the uplands, used both for crops and grazing, provided the early residents of Shelburne with their economic base. Lumbering also took place at this time, but on a smaller scale.

Between 1775 – 1830, sawmills and gristmills took advantage of the waterfalls in Shelburne, but agriculture was still the number one commercial activity. Between 1760 and 1790 Shelburne's population expanded 105 percent but essentially remained the same for the next forty years.

During the Early Industrial Period (1830 – 1870), the population in Shelburne grew by 59 percent, reaching 1,582 by 1870. Although Shelburne remained predominantly an agricultural community, manufacturing made its way to the town with the establishment of the snathe and cutlery company, Lamson and Goodnow, in 1837. Soon thereafter, Shelburne Falls became home to small tool manufacturing, shops for manufacturing of farming implements, and two fabric mills. In addition to manufacturing, the production of butter and cheese, maple syrup, and apples for export, produced prosperity in Shelburne and resulted in an expansion of a residential district along Water Street and the construction of commercial blocks along Bridge Street. The civic center of the town was moved from Village Hill in central Shelburne south to Shelburne Center along Greenfield Road.

Manufacturing continued to thrive in Shelburne during the period 1870-1915. Contributing to this growth were the arrival of the Troy & Greenfield Railroad in 1867, the Shelburne Falls and Colrain Street Railway in 1896, and the introduction of hydroelectricity in 1912. In addition to Lamson and Goodnow, Shelburne's industry consisted of hardware manufacturers, box makers, a silk manufacturer and knitting mills. Agriculture also continued to prosper. By the 1880s, Shelburne was considered the leading milk producer in Franklin County and was third in the production of cheese. With its location on the rail line, dairy farmers in Shelburne also began selling to milk distributors for markets in Boston, Springfield and Northampton. In spite of the fact that its economy was booming, Shelburne's population slowly decreased over this period. Residential construction ceased outside of Shelburne Falls while the town's commercial district along Bridge Street expanded, though primarily during the 1870s.

Between 1915 and 1920, Shelburne's population saw a period of decline and then increased 10 percent over the next twenty years to 1,636. The trolley system closed in 1927, yet Shelburne Falls continued to grow as the center of both commercial and industrial activity in town. In 1914, the Mohawk Trail (Route 2), which was designed as a scenic tourist route, brought tourism related commercial development to that portion of Shelburne along the highway. The major industry during this period was the Mayhew Steel Products Company, which manufactured a variety of forged tools and employed approximately 200 people in 1930. Dairy farming, along with other farm products such as apples and maple syrup, continued as the primary agricultural activities in the uplands of Shelburne.

Since the early 20<sup>th</sup> century, there has been a shift from manufacturing to tourist-related businesses such as restaurants, retail establishments, bed and breakfasts, etc. Shelburne Falls has a strong artistic community, which is evident with the many art galleries and studios located in the village. Agriculture still plays an important role and many farms and orchards continue to operate. A map of Shelburne's 50 farms and other agricultural-based activities was created for this plan update (see Section 4).

Shelburne's significant historic resources are its village and agricultural land use patterns. The villages of Shelburne Falls and Shelburne Center retain interesting buildings associated with the town's residents and events. The living history of productive fields, pastures and old farmsteads also contributes to the town's special character. The architecture in this working landscape represents what the rest of New England once looked like.

Important historic resources that relate to open space and recreation in Shelburne include the following:

- The Shelburne Falls National Historic District (NHD) encompasses approximately 163 acres, spanning the entire village in Shelburne, as well as a portion of the village on the Buckland side of the river. The district was expanded from just the commercial core of the village, designated in 1988, to include the surrounding predominantly residential areas in 2010. The commercial core of the Shelburne Falls NHD, located ½ mile from Route 2, contains many contributing commercial, civic, and religious buildings located primarily to the north and south of Bridge Street in Shelburne and on State Street in Buckland. Within the NHD are the Glacial Potholes located in the Deerfield River, just south of the dam and falls. There are 360 resources in the expanded district, with only 25 of these non-contributing (built after 1960).
- The Deerfield River Mill and the Glacial Potholes at the bottom of Salmon Falls on the Deerfield River are both considered historically significant landscapes. The Glacial Potholes were formed as glaciers receded and meltwater caused smaller rocks to spin thus carving out these irregular holes. The Deerfield River Mill, or Frost Mill, is located off Deerfield Avenue just north of the Glacial Potholes and contains retail space.
- Historically significant buildings in Shelburne Center.

- Historically significant structures scattered throughout the town from the Deerfield Town Line North to Smead Road on the Colrain border. The only visible pattern to these structures is their association with both historic landscapes and scenic roads.
- Historically significant landscapes. Many of these landscapes are tied to the agricultural history of Shelburne and remain largely intact.

For more information on the town’s historic resources, please see the expanded discussion in Section 4 under Scenic Resources and Unique Environments and the Cultural Resources Map at the end of Section 4.

## **C. POPULATION CHARACTERISTICS**

In this section, Shelburne’s needs for open space and recreational resources are assessed based upon an analysis of demographic and employment statistics. The demographic information includes changes in total population, changes in the relative importance of different age groups in Shelburne, and measures of income. The employment statistics section covers labor force, and employment by industry sector.

### **C.1 Demographic Information**

#### **C.1.1 Population and Population Change**

Demographics are useful for forecasting the need for open space and recreational resources that may be required by residents over time. According to the U.S. Census, Shelburne’s population growth rate during the 1970s was greater than the county and state averages, but significantly less than the county and state in the 1980s (*see Figure 3-1*). In the 1990s, Shelburne grew at a slightly faster rate than the county but slower than the state. In the last decade, Shelburne’s population declined by 8 percent, compared to a slight decline of 0.2 percent in the county, and an increase of 3 percent statewide. Overall, between 1970 and 2010, Shelburne’s population increased by 57 people (*see Table 3-1*), equal to a growth rate of 3 percent. This is in contrast to Franklin County as a whole, which experienced a 20 percent increase in population over the same period, and to the Commonwealth of Massachusetts, which had a 15 percent increase in population. Shelburne has a population density of 81 people per square mile.<sup>3</sup>

**Table 3-1: Population for Shelburne, Franklin County and Massachusetts 1970-2010**

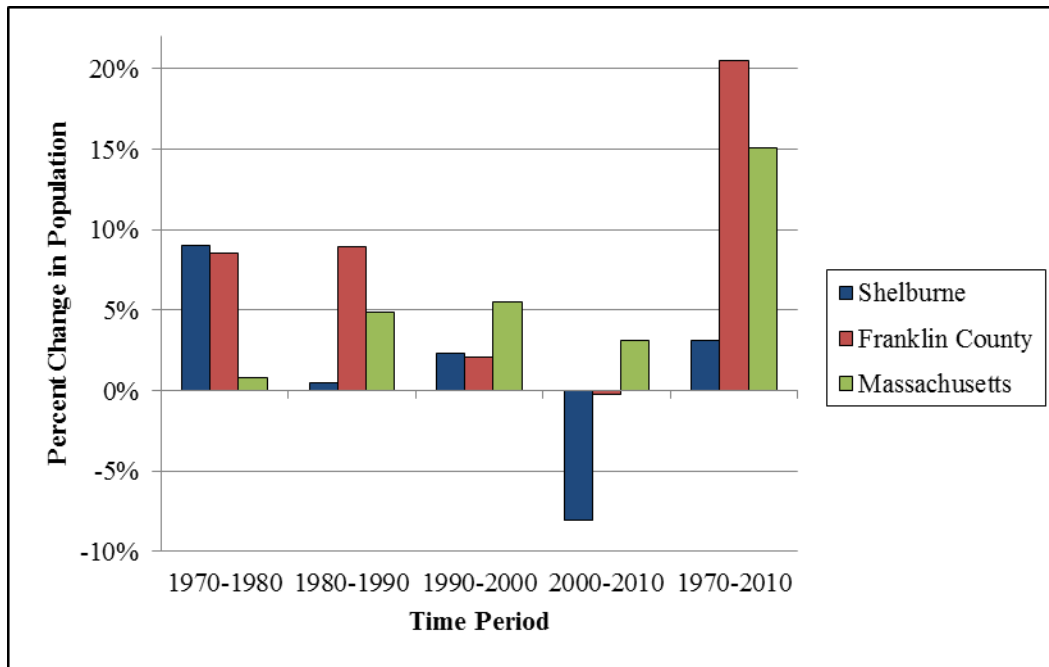
<b>Geography</b>	<b>U.S. Census Population</b>				
	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>
Shelburne	1,836	2,002	2,012	2,058	1,893
Franklin County	59,223	64,317	70,092	71,535	71,372
Massachusetts	5,689,377	5,737,037	6,016,425	6,349,097	6,547,629

Sources: U.S. Census Bureau, 1970, 1980, 1990, 2000, and 2010 Census of Population and Housing.

<sup>3</sup> Population density is calculated using Shelburne’s 2010 population count (1,893), by Shelburne’s total area (23.4 square miles).

According to the Franklin Regional Council of Government’s (FRCOG) Population Forecasts, the town’s population may once again experience an increase in population over the next 20 years. FRCOG projections estimate the Town of Shelburne’s population will be 2,040 by 2035, an increase of 8 percent. Franklin County is projected to have a similar rate of population increase over the same time period.

**Figure 3-1: Percent Change in Population, 1970 – 2010**



Source: 1970, 1980, 1990, 2000, 2010 U.S. Census Bureau.

**Table 3-2: Population by Age in Shelburne, Franklin County, and Massachusetts, 2000 and 2010**

Geography	Total Population	% 9 Years & Under	% 10-19 Years	% 20-24 Years	% 25-44 Years	% 45-64 Years	% 65-74 Years	% 75 Years & Over
Shelburne								
2000	2,050	10.1%	15.9%	3.1%	24.5%	26.7%	8.5%	11.2%
2010	1,893	7.8%	11.7%	5.1%	20.8%	35.0%	9.9%	9.6%
Difference	-157	-2.3%	-4.1%	2.1%	-3.7%	8.3%	1.4%	-1.6%
Franklin County								
2000	71,535	11.5%	14.3%	5.4%	28.5%	25.9%	6.7%	7.5%
2010	71,372	10.0%	11.9%	6.0%	23.1%	33.7%	7.9%	7.3%
Difference	-163	-1.5%	-2.4%	0.6%	-5.4%	7.8%	1.2%	-0.2%
Massachusetts								
2000	6,349,097	13.0%	13.3%	6.4%	31.3%	22.4%	6.7%	6.8%
2010	6,547,629	11.5%	13.3%	7.3%	26.5%	27.7%	7.0%	6.8%



Geography	Total Population	% 9 Years & Under	% 10-19 Years	% 20-24 Years	% 25-44 Years	% 45-64 Years	% 65-74 Years	% 75 Years & Over
Difference	198,532	-1.5%	0.0%	0.9%	-4.8%	5.3%	0.3%	0.0%

Source: U.S. Census, 2000 and 2012.

Shelburne has an older resident population, with a higher percentage of its population in the 45-64, 65-74, and 75 years and over age categories than the County and the State. While the percentage of the population in the 45-64 and 65-74 age categories increased from 2000 to 2010 across all three geographies, the increase was larger in Shelburne. Shelburne also experienced a greater decrease in the percentage of the two youngest age group categories, 9 years and under and 10-19, than the County and the State over the same period. If the relatively large cohort of older (45-64) working-aged residents were to continue to reside in Shelburne, it will result in a significant population of individuals in the older age cohort in the next ten years. Residents of all ages need facilities and programs that provide safe spaces for recreating as well as access to open space. An aging population may require accessible recreational facilities, such as walking paths, and programming geared towards continued learning and community engagement.

Identifying the best location for the development of new open space and recreation resources should consider where the concentration of population will occur and which parts of the local citizenry require specific needs. As will be seen in the fourth part of Section 3, Growth and Development Patterns, future growth depends in large part on zoning, slopes, soil and groundwater related constraints, and on which lands are protected from development. Town officials could identify key parcels in town that might be future parks and walking trails that are close to the current distinct neighborhoods and/or areas that may later be developed for residential uses. Officials could be looking for opportunities to conserve land in Shelburne that protects valuable scenic and natural resources and provides public access to open spaces with natural, cultural, and recreational values.

Whatever the generational make up of the future community, recreation and open space needs may change over time. What would Shelburne's response be to these potential increasing and changing needs? How can these services and facilities be created in an inexpensive manner to both the town and the residents? The answers to these questions may depend in part on the current and potential economic and financial well being of Shelburne and its residents.

### C.1.2 Economic Wealth of Residents and Community

Measures of the income levels of Shelburne residents as compared to the County and State are helpful in assessing the ability of the citizenry to pay for recreational resources and programs and access to open space. Table 3-3 describes the earning power of residents in Shelburne as compared to the County and the State. Overall, Shelburne households earn incomes that are higher than the County and lower than the State. Shelburne's median household income (\$63,542) is estimated to be significantly higher than the County's (\$52,002), and just below the State's (\$64,509). The per capita income for the town (total income for all residents divided by the total population) is estimated to be \$29,694, which is closer to the County estimate of \$27,544, than the State estimate of \$33,966. Additionally, the percentage of people living below

the poverty level in Shelburne is lower than both the County and the State, at 7.8 percent. According to the Census data, it appears that the financial well-being of Shelburne residents is higher than the county, and only somewhat less than the state. Shelburne’s slightly lower per capita income figure (in comparison to the high median household income estimate) may be due to the town’s having a number of senior housing facilities.

**Table 3-3: Income and Poverty Statistics for Shelburne, Franklin County, and Massachusetts, 2010**

<b>Geography</b>	<b>Per Capita Income Estimate</b>	<b>Median Household Income Estimate</b>	<b>Percent of Individuals Below Poverty Level*</b>
<b>Shelburne</b>	\$29,694	\$63,542	7.8%
<b>Franklin County</b>	\$27,544	\$52,002	11.3%
<b>Massachusetts</b>	\$33,966	\$64,509	10.5%

\*Individuals living below poverty level for whom the poverty status has been determined  
 Source: 2006-2010 American Community Survey.

Although Shelburne’s resources today are clearly both its people and its built and natural landscapes, the status of its finances could be affected by an interdependent relationship that exists between the two. The costs of the community services provided to residents are paid for with the tax revenues generated by different kinds of property, both developed and undeveloped. Some developed uses like housing are often considered a loss because the school costs of one household are rarely made up by the revenues generated by that same property. One reason that towns encourage economic development is to have some other type of property to share the tax burden. Protected open space on the other hand costs very little, provides a meager amount of tax revenues, but reduces the amount of housing that can occur. This relationship is explored in more detail in subsection D. Growth and Development Patterns.

## **C.2 Employment Statistics**

An analysis of employment statistics like labor force, unemployment rates, numbers of employees, and place of employment is used to describe the local economy. Labor force figures can reflect the ability of a community to provide workers to fuel incoming and expanding businesses; it is comprised of residents who are able to work. Unemployment rates can show how well residents are faring in the larger economy while employment figures describe the number of employees in different types of businesses in town. Employment can be used as a measure of productivity that can help determine what new businesses could be encouraged in town. The town may decide to encourage business development to supply local jobs and to build taxable value, which can help pay for municipal services and facilities including recreational parks and programming as well as protected open space.

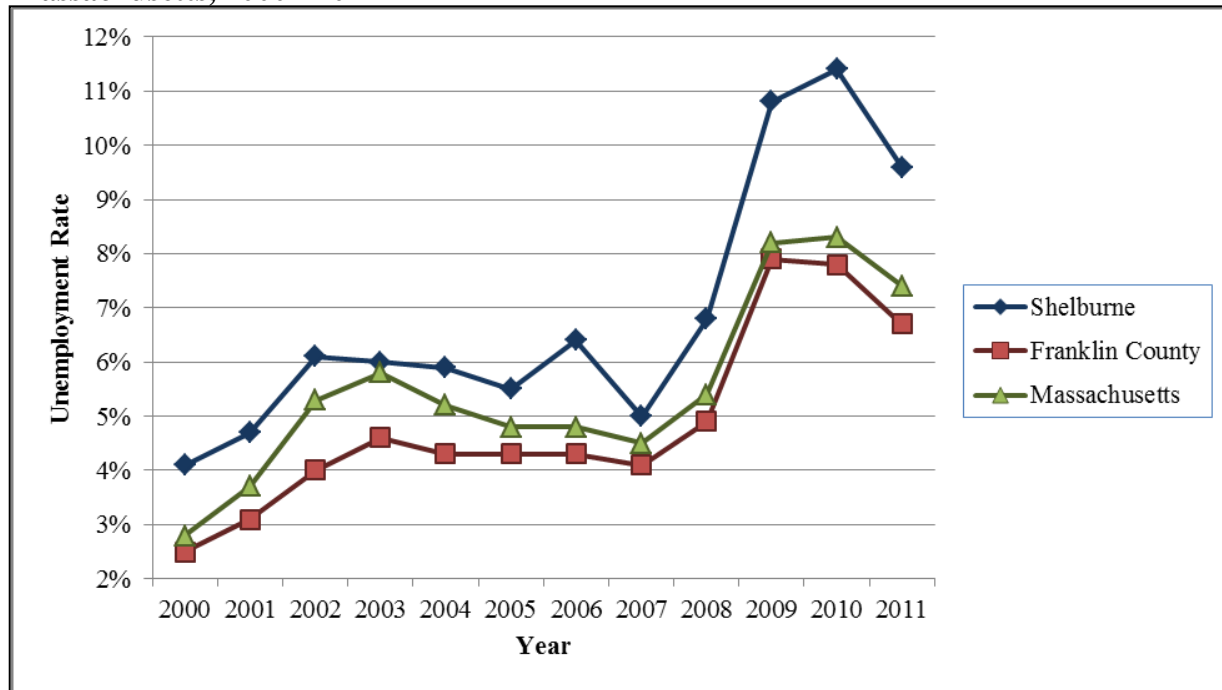
### C.2.1 Shelburne’s Labor Force

The labor force is defined as the pool of individuals living in town who are 16 years of age and over, and are either employed or who are actively seeking employment. Persons not actively seeking employment, such as some enrolled students, retirees, or stay-at-home parents, are excluded from the labor force. Between 2000 and 2011, Shelburne’s labor force fluctuated from

a high of 1,144 in 2002, to 1,039 in 2011. Approximately 27% of Shelburne’s labor force works within town, while the rest commute to jobs outside of town. Additionally, in 2010 it is estimated that 7 percent of Shelburne’s labor force worked from home, which is a higher percentage than the county (6%), and the state (4%).<sup>4</sup>

From 2000 to 2011, Shelburne residents consistently experienced higher rates of unemployment than that of the county and state. In 2010, unemployment peaked at 11.4%, before falling to 9.6% in 2011 (see Figure 3-2 below). Shelburne’s unemployment rate increased to a greater degree than the county and state during the recent national and global economic downturn.

**Figure 3-2: Annual Unemployment Rates in Shelburne, Franklin County, and Massachusetts, 2000 - 2011**



Source: Massachusetts Executive Office of Labor and Workforce Development.

### C.2.2 Employment within Shelburne

In 2011 there were 138 businesses within Shelburne, providing an average of 717 jobs on a monthly basis over the course of the year. Overall, the number of businesses in town has slowly increased over the last ten years, while the total employment, or jobs provided by these establishments, has fluctuated. In 2003, the average annual monthly employment in Shelburne was 859, the highest in the last ten years, while 2011 saw the lowest employment numbers (Table 3-4).

<sup>4</sup> 2006-2010 American Community Survey estimates.

**Table 3-4: Number of Business Establishments and Annual Average Monthly Employment, 2001 - 2011**

<b>Year</b>	<b>Total # of Establishments</b>	<b>Average Monthly Employment</b>
<b>2001</b>	114	773
<b>2002</b>	117	802
<b>2003</b>	125	859
<b>2004</b>	132	780
<b>2005</b>	132	796
<b>2006</b>	133	789
<b>2007</b>	132	804
<b>2008</b>	126	805
<b>2009</b>	129	743
<b>2010</b>	135	769
<b>2011</b>	138	717
<b>Change, 2001-2011</b>	<b>24</b>	<b>-56</b>

Source: Massachusetts Executive Office of Labor and Workforce Development.

The largest sectors for employment in Shelburne in 2011 were other services (excluding public administration), making up 13.7 percent of total employment in town, construction (12.3%), retail trade (10.5%), health care and social assistance (9.6%), and accommodation and food services (9.3%). As displayed in Table 3-5, employment in Shelburne varies from the county and the state in several ways – Shelburne has a much larger percentage of employment in other services, construction, and transportation and warehousing. Manufacturing has historically been an important sector in town, however, between 1998 and 2001 manufacturing lost 62 percent of all of its jobs in town. In 2011, manufacturing made up 7% of total employment in town, which is a slight decrease since 2001 when it accounted for 8% of total employment.

**Table 3-5: Employment by Sector in Shelburne, Franklin County, and Massachusetts, 2011**

<b>Sector</b>	<b>Shelburne</b>	<b>Franklin County</b>	<b>Massachusetts</b>
Other Services, Ex. Public Admin	13.7%	5.3%	4.3%
Construction	12.3%	3.8%	3.7%
Retail Trade	10.5%	11.4%	10.8%
Health Care and Social Assistance	9.6%	13.6%	16.6%
Accommodation and Food Services	9.3%	7.5%	8.2%
Manufacturing	7.3%	13.7%	8.1%
Transportation and Warehousing	7.0%	3.6%	3.0%
Finance and Insurance	4.5%	2.2%	5.4%
Professional and Technical Services	3.1%	1.7%	8.0%
Wholesale Trade	2.6%	2.5%	3.9%
Real Estate and Rental and Leasing	1.1%	0.6%	1.3%
<b>Total</b>	<b>81.0%</b>	<b>66.0%</b>	<b>73.3%</b>

Source: Massachusetts Executive Office of Labor and Workforce Development.

It should be noted that data is not provided for a number of employment sectors in Shelburne for confidentiality reasons due to there being a small number of establishments in a particular sector. These sectors include educational services, which makes up 16 percent of countywide employment and 10 percent at the state level; as well as the arts, entertainment, and recreation, and agriculture, forestry, fishing and hunting sectors. These sectors play an important role in Shelburne's economy, and support businesses that may fall under other sectors, such as accommodation and food services. As seen in Table 3-5, nineteen percent of Shelburne's employment is unaccounted for due to suppression of data for confidentiality reasons.

Agriculture provides many public benefits beyond employment. Access to fresh, local food, retention of significant historical landscapes and prime agricultural soils, scenery, and rural character are just a few of the contributions that active agricultural businesses provide to Shelburne residents. A strong market for locally produced goods helps to support agricultural businesses. As transportation costs continue to rise, the demand for local food may increase, adding to the importance of protecting the agricultural land already available.

The Shelburne Falls Composting Collaborative is an example of how business sectors can work together to support one another. The Collaborative is an innovative project begun in 2010 to reduce the cost of waste disposal for downtown businesses in Shelburne Falls. Seven businesses currently participate in the program, in which compostable waste is diverted out of the traditional waste stream and transported to a local farm. The project helps businesses remain viable by reducing costs, and has the potential to support additional local farms by providing a source of compost. A recommended strategy for improving the long-term feasibility of the project includes implementing a direct business-to-farm pickup and disposal system for farms in the area.

The region's rural landscape and quality of life, as well as its affordable cost of living, has allowed many artisans to pursue their careers professionally or to start businesses. A recent analysis of creative economy data demonstrated a higher proportion of artists in Franklin County, relative to other areas of the state. Photographers, potters, glassblowers, writers, fiber artisans, visual artists, performance artists, woodworkers, and others are active in the region. Shelburne is part of this growing community of artists. In 2012, the Village of Shelburne Falls was designated as a Cultural District. According to the Massachusetts Cultural Council, a Cultural District is a compact, walkable area of a community with a concentration of cultural facilities, activities, and assets. A Cultural District designation is designed to help communities attract artists and cultural enterprises, encourage business and job growth, expand tourism, preserve and reuse historic buildings, enhance property values, and foster local cultural development.

Shelburne's population is expected to grow modestly over the next twenty years. The overall population will continue to age if older working residents continue to reside in town. A growing senior population will have implications for land use within the river valleys and villages. Residents may continue to depend on jobs in other communities and counties, yet manufacturing will likely retain its local importance as an employer. The economic base of Shelburne has shifted away from manufacturing towards trade and service-based businesses, while agriculture continues to offer Shelburne residents with limited employment opportunities and all of the other benefits including scenery and access to fresh, locally grown food, and the arts community continues to thrive. Shelburne cannot expect its natural rural landscape to be forever outside the

influence of development. On the contrary, Massachusetts is a slowly urbanizing state and Shelburne may already be experiencing the interest of prospective homeowners from the New York City-Hartford-Springfield Corridor, looking for a quieter pace of living.

## **D. GROWTH AND DEVELOPMENT PATTERNS**

### **D.1 Patterns and Trends**

Over the past two hundred years, Shelburne's residents developed their community using the productivity of the area's forests, good grazing soils, and the waterpower of the Deerfield River. Manufacturing and agriculture have been the dominant sectors of the economy in Shelburne up until the early 20<sup>th</sup> Century. Over the past 100 years, Shelburne has seen its local economy transformed into one that is partially dependent upon tourism. Between 1990 and 2001, Shelburne's manufacturing businesses reduced the number of employees by 62 percent.

The land use figures presented in this section are based on data provided by MassGIS. MassGIS classifies land uses based on aerial photograph interpretation conducted by the Department of Forestry's Resource Mapping Project at the University of Massachusetts, Amherst. Statewide data including all municipalities are available for 2005, 1999, 1985, and 1971.<sup>5</sup> Initially, analysis was conducted through manual interpretation of the aerial photos. In 2005, the land use data was created using semi-automated methods. MassGIS uses 38 land use classifications in the 2005 data, an increase from the 21 codes in the 1999 dataset. It is important to note that readers should exercise caution in comparing land use data over the years. Such comparisons can provide only an *estimation* of the trends in land use change over the years. Due to different data collection and analysis methodologies used over the decades, direct comparisons between the various datasets cannot be made with precision.

Between 1971 and 1999, one of the more significant land use changes in Shelburne has been the loss of cropland, pasture, and forest; and the increase in the number of acres in abandoned fields, orchard, and large-lot residential development (*see Table 3-6*). Based on the GIS data, roadside forest (112 acres), cropland (43 acres), pasture (49 acres), and abandoned fields (11 acres) were converted to help develop 215 acres of large-lot residential development. These frontage approval-not-required lots are located primarily along the following roads:

- Wilson Graves Road
- Little Mohawk and Old Village Roads
- Rte. 2 in Eastern Shelburne
- Old Greenfield Road
- Zera Fiske Road
- South Shelburne Road
- Lucy Fiske Road
- Taylor Road

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<sup>5</sup> The first statewide land use maps were created in 1953-54 from 1951-52 aerial photos. These maps were never digitized. They are available in the Map Collection Archives at the W.E.B. DuBois Library at the University of Massachusetts, Amherst.

**Table 3-6: Changes in the Land Area of Specific Natural Resource, Agricultural, and Development Land Uses Between 1971 and 1999 in Shelburne**

	Land Use Acreages in 1971	Land Use Acreages in 1999	Change in Acreage Between 1971 and 1999
Forestland*	10,566	10,399	-167
Cropland	1,544	1,306	-238
<b>Pasture</b>	<b>1,191</b>	<b>816</b>	<b>-375</b>
Orchard	342	538	196
<b>Abandoned Fields/Open</b>	<b>384</b>	<b>741</b>	<b>357</b>
Residential > 1/2 acre	405	620	215
Commercial	38	58	20
Total Area (includes additional acres in other land use categories)	14,978	14,978	

Source: MacConnell 1999 Massachusetts GIS Land Use Coverage. Note\*: Forestland in this data set includes forested wetlands.

Table 3-7 below provides a summary of the percentage of select land uses in Shelburne in 2005. In 2005, approximately 72 percent of the total area in town was forested, 17 percent was in agricultural use, 5 percent was in residential use, the majority on lots greater than a half acre, and less than 1 percent was in industrial and commercial use. Between 2000 and 2010, it is estimated that 31 building permits were issued for new homes in Shelburne, for a total of 32 new units (one building permit was for a two family residence).<sup>6</sup>

**Table 3-7: Summary of Shelburne Land Use, 2005<sup>7</sup>**

Land Use Category	Acres	Percentage of Total Acreage in Town
Forest	10,713	71.5%
Agriculture	2,473	16.5%
Residential (< .5 acre lots & multi-family)	86	0.6%
Residential (> .5 acre lots)	533	3.6%
Commercial	68	0.5%
Industrial	5	0.0%
Wetlands	382	2.5%
Participation Recreation	30	0.2%
Water	162	1.1%
Urban Public/Institutional	30	0.2%
Open Land	278	1.9%
Other	219	1.5%
Total	14,979	100.0%

Source: MassGIS 2005 Land Use Data.

<sup>6</sup> U.S. Census: <http://censtats.census.gov/bldg/bldgprmt.shtml>.

<sup>7</sup> For more information on the definition of land use categories, go to: <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus2005.html>.

Based on the current zoning in town, large lot residential development is expected to continue to be the dominant pattern of land conversion in Shelburne. In addition to losses in farmland and forestland, new residential development has other less obvious impacts, including increases in traffic congestion, school costs, and road maintenance expenditures.

## **D.2 Infrastructure**

### D.2.1 Transportation Systems

#### Roads

Bisecting the Town of Shelburne is its principal highway, State Route 2. This is a major east-west highway in northern Massachusetts, which intersects with Interstate Route 91, a major north-south route, in the town of Greenfield. State Route 112, which runs along Shelburne's northwestern boundary with the town of Charlemont, is a north-south thoroughfare linking Shelburne Falls to Colrain to the north. It is an important route for tourists, most especially skiers on their way to the slopes in Vermont. Both routes are state-designated scenic byways. The Mohawk Trail Scenic Byway (Route 2 and Route 2A), was designated in 1953, and is one of the earliest scenic byways in New England. Route 112 was designated as a scenic byway in 2004. Corridor management plans have been completed for both byways, making them eligible for National Scenic Byway funding for various projects along the roadway, including open space protection and recreational facilities.

#### Transit

The Franklin Regional Transit Authority (FRTA) provides fixed route bus service to Shelburne Falls on weekdays. Route 41 makes four trips per day, two in the morning and two in the afternoon, from the John W. Olver Transit Center in Greenfield to Charlemont village center, stopping in Shelburne Falls each way. Transportation for the elderly and people with disabilities is also provided by the FRTA's demand response service.

#### Rail

Although railroad tracks cross through the southwestern end of town, Shelburne has no rail service. In 1896, a Victorian iron truss bridge across the Deerfield River was constructed, and in 1908, a concrete trolley bridge (now the Bridge of Flowers) connecting Shelburne and Buckland was constructed. The 400-foot trolley bridge spans the Deerfield River in Shelburne Falls and was built by the Shelburne Falls and Colrain Street Railway. The trolley served Buckland, Shelburne and Colrain workers and students with a physical link to the Boston & Maine and New York, New Haven & Hartford railroads at their station on the Buckland side of the Deerfield River.

Freight rail service on the Buckland side of Shelburne Falls is available from Pan Am Rail Systems. This rail line is one of the most important east/west freight rail lines in northern New England, serving up to 5 million tons annually of freight between eastern Massachusetts and eastern New York (near Albany). Franklin County is also served by two north/south routes in the central section of the county.



Access to passenger rail service will be available by 2014 at the John W. Olver Transit Center in downtown Greenfield, within a 15 minute drive from the Village of Shelburne Falls. The Amtrak Vermonter service will provide service from Washington D.C. to Vermont, including New York City.

### *Bicycle and Pedestrian*

Since 1991 and the passage of the federal Intermodal Surface Transportation Efficiency Act (ISTEA), bicycling and walking have been recognized as viable and efficient modes of transportation. Consequently, bicycle and pedestrian facilities are included as a regular part of transportation planning activities on the federal, state, regional, and local levels. Not only are bicycling and walking integral components of the transportation system in Shelburne and Franklin County, but they are also crucial components that help make the region a livable place. The U.S. Department of Transportation and the Federal Highway Administration have recently focused their attention on the important role these modes of transportation play and the many benefits they provide a community, including: reduction of greenhouse gases and other air pollution, lowered energy costs, less use of land and pavement, increased health benefits for people, economic savings, increased social interactions, and community revitalization.

The Shelburne Falls Village Pedestrian Level Lighting and Amenities Project was completed in the early 2000s and included the installation of historic replica pedestrian level streetlights in areas on Bridge Street, Deerfield Avenue and State Street. In addition, benches and trash receptacles appropriate to the historical character of the village were provided. The improvements matched those made in other areas of the village, in order to create a cohesive image for the entire downtown. The Town is continually addressing repairs and replacement of sidewalks, and has applied successfully for Community Development Block Grant (CDBG) funds in past years to make improvements. A new project that the town has been working on in coordination with the Shelburne Falls Area Business Association (SFABA) is to provide safe access to the glacial potholes area. **Design has been completed for a handicap accessible walkway, and now the Town is seeking funding to implement the project. [any updates to this project?]** The sidewalk on Bridge Street has also been identified as an area for improvement, as tree roots have caused irregularities in the walking surface. This is particularly dangerous for seniors, who may have a harder time navigating the uneven pavement.

The Safe Routes to School Program is a federal program intended to: (a) enable and encourage children, including those with disabilities, to walk and bicycle to school; (b) make bicycling to school safe and more appealing; (c) to facilitate the planning, development, and implementation of projects that will improve safety; and (d) to reduce traffic, fuel consumption, and air pollution in the vicinity of schools. The program includes a technical assistance component to help schools carry out programs that encourage walking and biking to school, as well as funding for infrastructure-related planning, design, and construction projects that will improve the ability of students to walk and bicycle to school. Eligible projects include: sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements. Such projects may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools (within approximately 2 miles).

As part of the 2012 Franklin County Regional Transportation Plan, the Buckland-Shelburne Elementary School was recommended as a good candidate for the Safe Routes to School Program, because there are already students who walk to the school, and the proximity of the school to residential areas. According to input provided from the school, between 20-30 students regularly walk to school in Shelburne, though this number is less in the winter. The school noted that improvements such as bike paths, increased signage, extension/improvement of existing sidewalks, and traffic control would help encourage more children to walk to school.

Recently the FRCOG partnered with the YMCA in Greenfield, Baystate Franklin Medical Center, Greenfield Community College, and the Franklin County Chamber of Commerce to develop and launch *Walk Franklin County – for the Health of It!* This cooperative program works to promote walking for transportation, reduction of air pollution, and physical fitness and health. The *Walk Franklin County – for the Health of It!* project is a free program that allows participants to measure and record their walking progress and receive rewards for reaching their walking goals. The FRCOG has completed sets of walking maps for each town in Franklin County, including a downtown Shelburne Falls walking route. Maps are available online at <http://www.walkfranklincounty.org/maps.php>.

The Franklin County Bikeway is a project under implementation by the FRCOG with the aim to provide a biking network, with both on-road and off-road facilities, throughout Franklin County, linking employment, recreational, and educational destinations. Routes travelling through Shelburne are all shared-roadway facilities. These include the 11.3 mile Shelburne-Vermont Connector along Route 112, and the 10.2 mile West County Greenfield Connector, which travels along Taylor Road in Shelburne providing a connection from Conway to Greenfield. These routes are all marked with Franklin County Bikeway signs. Bikeway maps are available online at [http://www.frcog.org/services/transportation/trans\\_bikeway.php](http://www.frcog.org/services/transportation/trans_bikeway.php).

#### D.2.2 Water Supply Systems

The Town of Shelburne is served by one community public water system, the Shelburne Falls Fire District, which lies in the North River valley of the town of Colrain. The District has two active wells, and an emergency supply in the Fox Brook Reservoir. The wells are located between 120 and 165 feet from the banks of the North River. Farmland on the west side of the North River and within the Interim Wellhead Protection Area is protected through the Agricultural Preservation Restriction program. Fox Brook Reservoir has a surface area of approximately 3 acres and a total storage capacity of 12 million gallons. The district provides water to 2,200 customers in the village of Shelburne Falls on both sides of the river. The District's permit currently allows them to withdraw 310,000 gallons daily and is able to meet demand. Approximately half of the water consumed was by Buckland residents and businesses and half by Shelburne's.<sup>8</sup> The Shelburne Falls Fire District also serves fifty residents in Colrain. The remainder of the Town of Shelburne's population is serviced by private wells. The Shelburne Falls Fire District has a delineated Zone II Recharge Area.

One of the issues facing the Shelburne Falls Fire District is the protection of the water source. Development can impact water quantity and quality. Future growth can affect the drinking water

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<sup>8</sup> 2010 Buckland Open Space and Recreation Plan.

resources available for use. Threats to groundwater include agricultural runoff, salt storage residue, road salting, contaminated runoff from paved surfaces, failing septic systems, leaking underground storage tanks (UST), abandoned unlined landfills, and chemical contamination from business and industry. To date, development around the water sources has been moderate, and the municipal public water supply, which is closely monitored, has not suffered from contamination. However, the town of Colrain is not willing to utilize their town funding to protect land around the Shelburne Falls Fire District wellheads. The onus is, therefore, on the Fire District to protect this resource. The Fire District has already acquired some land around the water supplies in Colrain. However, this is an expensive and time-consuming strategy. The 2010 Buckland Open Space and Recreation Plan recommends that the towns of Buckland and Shelburne work to identify any aquifers and potential water supply sources within their own town boundaries to ensure protection of the local water supply.

During Tropical Storm Irene in August, 2011, flooding along the North River in Colrain resulted in electrical and other damage to the Shelburne Falls Fire District North River well head and water pump. Due to the power outages of these systems, the village of Shelburne Falls was drawing water from two 500,000 gallon storage tanks, and residents and businesses were asked to restrict their water use for consumption and hygiene purposes only in order to conserve the supply. The tanks hold enough water to supply the district for approximately six days, if users are conservative about how much water they use. Power was restored to the system before the tanks were depleted. It is not possible to precisely measure the amount of water in the tanks, so it is unknown exactly how close they were to being depleted.<sup>9</sup> Flooding of the well heads will continue to be an issue, due to the close proximity of the wells to the North River. Even if back-up power is available, if the well heads are submerged by flood waters, the system would be down due to electrical equipment at the well heads not being able to function. Additionally, when the well heads are submerged with water, they need to be sanitized for public health reasons.<sup>10</sup>

### D.2.3 Sewer and Septic Systems

The Shelburne Falls Wastewater District provides municipal sewage treatment to the village of Shelburne Falls. The plant has a total design capacity to treat .25 million gallons of wastewater per day, and currently treats roughly .15 to .17 million gallons per day (approximately 65 percent of design capacity). The district is focusing its efforts on reducing inflow and infiltration to lower the number of gallons of groundwater and stormwater treated by the plant. The collection system is over 100 years old, and is therefore susceptible to leakage into the system through old pipes. The Town of Shelburne has applied for and received grants over the last 20 years to replace deteriorating pipes with new piping that will reduce the amount of infiltration into the system.<sup>11</sup> Other areas of Shelburne are serviced by private septic systems. In areas served by septic systems and wells, typically at least an acre is needed for a single family home in order to accommodate these systems, depending on how well the soil percolates.

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<sup>9</sup>“Emergency Water Restriction in Shelburne Falls,” *The Recorder*, August 30, 2011; “Shelburne Falls still under water restriction,” *The Recorder*, September 2, 2011.

<sup>10</sup> Draft 2012 Shelburne Multi-Hazard Mitigation Plan.

<sup>11</sup> Ibid.

### D.3 Long-term Development Patterns

Long-term development patterns will be based on a combination of land use controls and population trends.

#### D.3.1 Land Use Controls

There are five zoning districts in Shelburne, as regulated by the Town of Shelburne Zoning Bylaws, last amended at Town Meeting in May, 2012. The districts determine uses that are allowed by right and uses allowed by special permit while the areas have different dimensional requirements (*see Table 3-8*).

**Table 3-8: Shelburne Zoning Districts and Lot Dimension Requirements, 2012**

Zoning District	Minimum Area (sq. ft.)	Minimum Frontage (ft.)	Front Yard Setback (ft.)	Side Yard Setback (ft.)	Rear Yard Setback (ft.)	Maximum Building Height (ft.)
Rural Residential / Agriculture (RA)	86,000	250	25	20	20	35
Village Residential (VR)	20,000	100	20	10	20	35
Village Commercial (VC)	20,000	100	20	10	20	35
Commercial (C)	86,000	250	30	30	30	35
Industrial (I)	86,000	250	50	30	30	35

Source: Town of Shelburne Zoning Bylaws, 2012.

The largest district by far is the Rural Residential / Agriculture (RA) district, which encompasses most of the town outside of Shelburne Falls and the Route 2 corridor. The minimum lot size is roughly 2 acres, though for multi-family dwellings the minimum lot size may be larger due to space needs for on-site sewage disposal and drinking water. The Village Residential (VR) and Village Commercial (VC) districts are located in Shelburne Falls, and require a minimum lot size of approximately a half acre, with an acre minimum required if public water or sewer is not available. This minimum lot size renders most of the lots within these two districts as non-conforming, since existing lots are half this size or smaller. In order to allow for the preservation and continuation of the historic village development pattern in this area, the town should consider revising the zoning to allow for a smaller minimum lot size in the village that is more consistent with the existing lot dimensions. Design guidelines could be incorporated for any new infill that might occur as part of this re-zoning, to ensure the historic characteristics of the village are maintained.

Much of the Route 2 corridor outside of the village area is within the Commercial (C) district, with a 2 acre lot size minimum. The Industrial (I) district is located along Route 112 north of Shelburne Falls, and behind Bridge Street along the Deerfield River. There is also a Flood Plain Overlay District that regulates development within the 100-year flood plain, and a Commercial Mobile Radio Service Overlay District which regulates the development of wireless communications facilities.

At Annual Town Meeting held May 1, 2012 the town of Shelburne voted to impose a temporary moratorium on permits for construction of any wind turbine energy system. The purpose of this moratorium was “to allow sufficient time to engage in a planning process to address the effects of such structures and uses in Town and to enact bylaws in a manner consistent with sound land use planning goals and objectives.” A Wind Power Advisory Group was established in the fall of 2012 to assist the Planning Board in researching issues related to both small-scale and large-scale wind turbines. Funding was also secured to hire a consultant to offer technical assistance to the Planning Board in developing a wind bylaw. The objective of this process is for the Planning Board to have a small-scale wind power bylaw for presentation at the Annual Town Meeting in May 2013.<sup>12</sup>

Shelburne’s zoning bylaws include a special regulation for Cluster Housing, which is allowed by Special Permit on a tract of 20 acres or more. This provision allows for lots with less frontage and smaller setbacks than the dimensional requirements, providing that the total number of dwelling units does not exceed what would be possible under the conventional dimensional requirements. At least 25 percent of the area also must be set aside as protected open space. While this provision allows a developer some flexibility, it does not provide much of an incentive over developing in a conventional manner. The town may want to explore revising this bylaw to better accomplish its open space and recreation goals, as well as other community goals. The Massachusetts Executive Office of Energy and Environmental Affairs’ Smart Growth/ Smart Energy Toolkit provides information on Open Space Residential Design bylaws, and the Pioneer Valley Planning Commission (PVPC) has information and a model bylaw available for reference.<sup>13</sup>

For the purposes of the Open Space and Recreation Plan, which seeks to estimate future land use patterns, it is assumed that new residential development that occurs in the rural area, or in areas with only public water but not sewer, will be developed as approval-not-required lots or in subdivisions with minimum lot sizes of one acre or more. Without incentives for Cluster Housing, such as density bonuses or allowing this type of development by-right with Site Plan Review, it is unlikely that developers will choose to use this method for new subdivisions. While dimensional requirements in the Village Center zoning districts are flexible to a degree (front setbacks are allowed to be smaller based on what exists on surrounding properties), the minimum lot size required may hamper future redevelopment of existing structures, and discourage new development from occurring in this area, thereby forcing new development to occur in rural areas of town.

The challenge for Shelburne and other communities is to find a model for growth that protects vital natural resource systems and maintains a stable property tax rate. In designing the model, it is important to understand the fiscal impact of different land uses, which can be calculated based on the relationship of property tax revenues generated to municipal services used. Although protected open space typically has a low assessed value and thus generates low gross tax revenues, municipal expenditures required to support this use are typically much lower than the

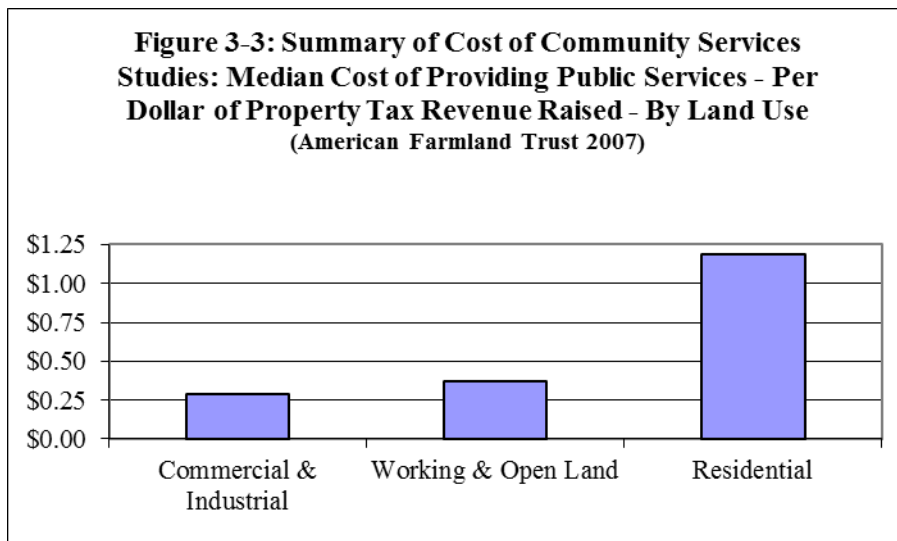
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<sup>12</sup> Town of Shelburne Planning Board website: [http://www.townofshelburne.com/plan\\_b.html](http://www.townofshelburne.com/plan_b.html).

<sup>13</sup> Massachusetts Executive Office of Energy and Environmental Affairs’ toolkit: [http://www.mass.gov/envir/smart\\_growth\\_toolkit/pages/mod-osrd.html](http://www.mass.gov/envir/smart_growth_toolkit/pages/mod-osrd.html); PVPC toolkit: [http://www.pvpc.org/val\\_vision/html/toolbox/PDFs/strategies/Strategy4.pdf](http://www.pvpc.org/val_vision/html/toolbox/PDFs/strategies/Strategy4.pdf).

tax revenue generated. In 2009, the American Farmland Trust (AFT) completed a Cost of Community Services (COCS) study for the neighboring town of Deerfield. A COCS analysis is a process by which the fiscal impacts of different land uses within a town are compared to determine whether a use has a positive or negative net fiscal impact. The study found that for each \$1 of revenue received from residential properties in fiscal year 2008, Deerfield spent \$1.14 providing services to those lands. For each \$1 from commercial land the town spent 55 cents, for each \$1 from industrial land the town spent 47 cents providing services, and for each \$1 received from farm and open land the town spent 33 cents. Overall residential land uses created a deficit of \$1.7 million, while the other three categories generated surpluses: \$573,397 from commercial, \$688,648 from industrial, and \$318,842 from farm and open land. While residential land use contributes the largest amount of revenue, its net fiscal impact is negative.<sup>14</sup>

These findings are consistent with other COCS analyses across the country conducted over the last two decades. Figure 3-3 demonstrates the summary of more than 120 COCS studies. For every dollar of property tax revenues received from residential property, the amount of money expended by the town to support homeowners is over a dollar, while farm/forest and commercial/industrial property provide a positive fiscal impact.



Source: American Farmland Trust 2007

These findings support open space and farmland preservation, and commercial and industrial development, as a way to help towns balance their budgets. However the long term impacts of these strategies should also be considered. Large amounts of commercial strip development along Route 2 would increase the town’s tax base, but could also result in environmental degradation, increased traffic and congestion, a loss of community character, and a general loss of quality of life for Shelburne residents. Increased industrial development could generate jobs as well as an increased demand for housing in town. Permanently protecting a large portion of the town’s open space and farmland from development could provide locally grown food and jobs, but may also jeopardize the ability for future generations to determine the best use for the land. It

<sup>14</sup> *The Economic and Fiscal Contribution of Farm and Open Land in Deerfield, Massachusetts*. The American Farmland Trust. September 2009.

also can increase the cost of the remaining available land, making affordable housing development more difficult.

Additionally, the current capacity of different services in town should be evaluated when considering what types of development to encourage. If a community is near or at capacity for services such as police, fire, water, roads, or schools, any additional population growth could be quite costly as these services would need to be expanded. However if a community has an excess in service capacity in these areas, new residential growth would not necessarily be a strain on the town's budget.<sup>15</sup>

For Shelburne, an approach that encompasses both appropriate business development and conservation of natural resources will best satisfy the desires of residents to maintain their community character while offsetting the tax burden.

In conclusion, Shelburne might consider:

- Encouraging manufacturing despite its declining employment numbers in the town and in the State;
- Considering ways to direct future development where impacts to natural, open space, and recreational resources will be minimized; and,
- Supporting local businesses in the agricultural, forestry, arts and culture, and tourism sectors for their economic contribution to residents, because of the public benefits received from active farming, and to offset the costs of potential future residential development.

By continuing to pursue strategies that involve active land conservation, zoning measures that direct development while protecting natural resources, other important environmental values, and sustainable economic development, Shelburne may be able to sustain and enhance both the community's quality of life and its agricultural and historic village character.

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<sup>15</sup> *Cost of Community Services Studies: Making the Case for Conservation*. Julia Freedgood, 2002.