

CHAPTER 8

LAND USE AND ZONING

The towns of Buckland and Shelburne are rural communities with a thriving village center. The village center of Shelburne Falls straddles the Deerfield River and comprises land from both Shelburne and Buckland. Shelburne Falls contains a mixture of manufacturing facilities, retail stores, office buildings, and restaurants, and serves as a regional employment and shopping center. It is also one of the major tourist destinations in Franklin County. Outside Shelburne Falls, forest and agricultural land, orchards and dairy farms dominate the landscape in both communities. Each of the towns has an historic rural village center in addition to Shelburne Falls, with concentrated residential development and civic activities.

The following land use goals were devised by each town based on the results of the Community Surveys (conducted by Buckland in 1996 and Shelburne in 1997). They were adopted by the towns at their respective Town Meetings. Recommended land use and zoning strategies are found at the end of this chapter. The strategies incorporate many of the recommendations identified in previous chapters. In many ways, the Land Use and Zoning chapter represents a synthesis of the work presented in previous chapters as it relates to land use and zoning.

Goals

- To protect the rural and historic character of Shelburne and Buckland.
- To protect the towns' natural resources and open space through appropriate zoning measures.
- To encourage small and medium scale commercial and light industrial development to locate in appropriate areas in town.

Use of Land in Buckland and Shelburne

In 1985 the University of Massachusetts compiled land use statistics and maps for Franklin County based on aerial photographs. This information is displayed visually on the 1985 Land Use Map to show the areas in the towns where various land uses were concentrated. This map also shows the relationship of land use to the road network and the water bodies. However, a more recent land use datalayer was needed for the Master Planning process and the University of Massachusetts was hired to compile and update land use data for Buckland and Shelburne as part of this Master Planning project. These are based on aerial photographs taken in 1995 and 1997. The 1995/97 Land Use Map displays this information visually. The Land Use Change Map uses the 1995/97 land use information and identifies the change in land use since 1985. This map

shows the location and nature of land use change as well as the overall acreage of change in various categories. Land use data from 1985 and 1995/97 is summarized in Tables 7-1 and 7-2.

Buckland

According to land use data generated by the University of Massachusetts using aerial photographs from 1995 and 1997 the town of Buckland is predominantly forested with 10,043 acres or 79% of its land area under forest. Twenty-five acres in town are occupied by commercial development and fifteen acres are in industrial development. According to the U.S. Census Bureau, Buckland had a population of 2,165 as of July 1, 1994. According to the 1995/97 land use data, residential development occupies a total of 715 acres in the town, with the predominant category being sparse development of housing lots greater than half an acre. Sparse residential development increased from 424 acres in 1985 to 575 acres in 1995/97. This represents a 36% (151 acres) increase in sparse residential development between 1985 and 1995/97. The increase has been primarily at the expense of forest land which decreased by 188 acres between 1985 and 1995/97 (see Table 7-1).

Table 7-1: Land Use Change – Buckland

Land Use Category	1985 Acreage	1995/97 Acreage	Land Use Change (Acres)
Sparse Residential -- greater than ½ acre lots	424	575	151
Residential -- ¼ - ½ acre lots *	120	110	-10
Residential -- less than ¼ acre lots *	31	30	-1
Multi-family residential	0	0	0
Commercial	19	25	6
Industrial	14	15	1
Mining, sand and gravel pits	8	10	2
Waste disposal	4	15	11
Transportation facilities	22	26	4
Water based recreation	1.5	1.5	0
Spectator recreation	28	7	-21
Participation recreation	8	32	24
Parks, cemeteries, green-space, and open urban land	29	22	-7
Forest	10,231	10,043	-188
Orchard, nursery, etc.	115	145	30
Pasture	628	638	10
Cropland	752	752	0
Open land	83	89	6
Wetland*	20	31	11
Total town acreage including water bodies	12,679 acres		

* Change is a result of improvements to land use and hydrology delineation, improvements in road data, and new geographic referencing system.

Agricultural land use in Buckland has increased somewhat during the period from 1985 to 1995/97. It now occupies 12% of the town's total land area. Cropland has remained constant at 752 acres. Land under pasture has shown a small expansion, increasing from 628 acres in 1985 to 638 acres in 1995/97. The Clesson Brook valley is one of the most fertile agricultural areas in

Buckland and is dominated by three large dairy farms along scenic Route 112. Other agricultural uses such as orchards and nurseries have increased from 115 acres in 1985 to 145 acres in 1995/97, representing a 26% increase. Detailed land use data for Buckland, including overall change in acreages from 1985 to 1995/97 is provided in Table 7-1.

Shelburne

Like Buckland, the town of Shelburne is dominated by forest. According to the 1995/97 data forest land occupies 10,185 acres or 68% of the total land area. The U.S. Census Bureau information states that Shelburne had a population of 1,887 as of July 1, 1994. Residential development covers 642 acres in the town, with the majority (518 acres) devoted to sparse residential development of 1/2 acre or more. This land use category showed an increased of 163 acres or 46%, from 355 acres in 1985 to 518 acres in 1995/97. Residential development on 1/4 acre to 1/2 acre lots increased by 7 acres or 10%, from 72 acres in 1985 to 79 acres in 1995/97. Residential lots of less than 1/4 acre probably remained constant, occupying about 45 acres, but changes in the geographic referencing system resulted in a slight decline in this category between 1985 and 1995/97. The increase in residential development was offset by a corresponding decrease in forest land, which declined by 250 acres or 2%, from 10,435 acres in 1985 to 10,185 acres in 1995/97 (see Table 7-2).

Table 7-2: Land Use Change – Shelburne

Land Use Category	1985 Acreage	1995/97 Acreage	Land Use Change (in acres)
Residential -- greater than 1/2 acre lots	355	518	163
Residential -- 1/4 - 1/2 acre lots	72	79	7
Residential -- less than 1/4 acre lots *	48	45	-3
Multi-family residential	0	0	0
Commercial	44	54	10
Industrial *	3	0	-3
Mining, sand and gravel pits	3	0	-3
Waste disposal	1	1	0
Transportation facilities *	8	5	-3
Water based recreation	0	0	0
Spectator recreation	9	0	-9
Participation recreation	74	84	10
Parks, cemeteries, green-space, and open urban land	49	40	-9
Forest	10,435	10,185	-250
Orchard, nursery, etc.	511	522	11
Pasture	1,289	1,315	26
Cropland	1,381	1,395	14
Open land	434	462	28
Wetland*	147	134	-13
Total town acreage including water bodies	14,966 acres		

* Change is a result of improvements to land use and hydrology delineation, improvements in road data, and new geographic referencing system.

Agricultural land in the town covers 3,232 acres, which equates to 22% of the land area. This includes cropland, pasture, and other agricultural uses such as orchards and nurseries. Each of these categories has shown a slight increase between 1985 and 1995/97. Cropland increased by 14 acres or 1%, pasture by 26 acres or 2%, and orchards and nurseries by 11 acres or 2%. Shelburne has a considerable number of retail and service businesses within its commercially zoned area along Route 2 as well as business and commercial development in Shelburne Falls. Commercial land in the town increased by 10 acres between 1985 and 1995/97, standing at 44 acres in 1985 and 54 acres in 1995/97. Table 7-2 lists Shelburne's land use in 1985 and 1995/97 and overall change in acreage in various land use categories.

Existing Patterns of Development

Over the years, Buckland and Shelburne have successfully maintained their traditional rural character. However, the towns are experiencing residential and commercial development pressure due to the proximity of Greenfield, a major regional employment center, and the location of Route 2, a major east-west highway and a significant tourist travel route.

The development pattern in both Buckland and Shelburne is characterized by village centers with compact mixed-use development, surrounded by rolling hills covered with mixed forests, and dairy farms, orchards, and farmhouses in the outlying rural areas. Residential development dots all the major roads in the towns. Both towns also have small rural village centers as well as the shared village of Shelburne Falls. Buckland and Shelburne both have pockets of industrial development in the Shelburne Falls Village District, and along Route 112 and the Deerfield River. Commercial development is concentrated in the Shelburne Falls village center and along the Route 2 corridor in Shelburne.

Village Centers

Early development in the towns occurred along the Deerfield River, which provided the towns with power and a transportation channel, fostering the industrial base, and hence the economy of the towns. Shelburne Falls village developed in a flat area in the river valley. Residential, commercial, and industrial development was concentrated in the village on small, compact lots. Manufacturing buildings of the industrial era like the Lamson - Goodnow complex still remain. Shelburne Falls village also retains many historic residential and commercial structures (see Chapter 2 - Historic & Scenic Resources).

This development pattern characterizes the traditional New England mill town. Most of the residential and commercial development in the village is on small parcels with narrow frontages and little or no setbacks. This pattern of development is non-compliant with the current zoning bylaws. Both Buckland and Shelburne require larger frontage, as well as front and side setbacks. In other words, under the current bylaws, any new development in Shelburne Falls would have to be on wider lots, with front and side setbacks, and would not easily conform to the character of the village. One way to encourage compact development in Shelburne Falls is to use it as a

receiving zone for a Transfer of Development Rights. This is discussed in greater detail in the section 'Transfer of Development Rights and Shelburne Falls Parcel Level Analysis.' In addition to the shared village center of Shelburne Falls, Buckland and Shelburne also have separate rural village centers that contain houses clustered around churches and civic buildings such as libraries.

Outlying Residential Development

As discussed in the Land Use Data section, residential development in both Buckland and Shelburne has increased considerably between 1985 and 1995/97. Sparse residential development was the land use category with the largest increase in both towns (151 acres in Buckland and 163 acres in Shelburne). Residential development in the towns occurs mainly through Approval Not Required (ANR) development. According to the Massachusetts Subdivision Control Law, M.G.L. Chapter 41, Sections 81-K through 81-GG land can be legally subdivided and recorded without approval of the Planning Board if it meets the following conditions:

- The lots shown on the plan must front on a way which the town clerk certifies is maintained and used as a public way, or a way shown on a plan approved and endorsed in accordance with the subdivision control law, or a way in existence when the subdivision control law became effective in the city or town in which the land lies, having in the opinion of the Planning Board sufficient width, suitable grades and adequate construction to provide for vehicular traffic in relation to the proposed use;
- The lots meet the minimum frontage requirements according to the town's zoning by-law; and
- Vital access to such lots exists to protect public safety and welfare.

Prior to receiving a building permit, the lots must also meet the requirements of a town's zoning bylaws including acreage. Approval Not Required development can lead to sprawling development along the towns' roads. Such sprawling development leads to fragmentation of wildlife habitat, farmland, forest land and scenic resources. It also requires new infrastructure, lengthens service routes for police, fire, and emergency service vehicles, creates more air pollution from automobiles, and increases road management costs including snow plowing.

Industrial and Commercial Development

In 1991 the American Farmland Trust conducted studies that found that industrial development is one of the most efficient forms of development in terms of tax revenue generated. The American Farmland Trust (AFT) studies found that the median ratio of dollars generated by industrial development to services required was \$1:\$0.40. The median ratio for residential development was found to be \$1:\$1.16. Some of the towns studied by the American Farmland Trust were near Buckland and Shelburne. Table 7-3 shows the cost of community service ratios (in \$) for these towns.

Table 7-3: Cost Of Community Service Ratios (In \$)*

	Residential	Commercial/ Industrial	Farm/Open Land
Deerfield	1:1.16	1:0.38	1:0.29
Gill	1:1.15	1:0.41	1:0.29

* American Farmland Trust, 1991

The industrial base of Buckland and Shelburne has largely remained intact, although there are some unused industrial structures such as a few of the Lamson - Goodnow buildings. Buckland has three areas zoned as General Industrial zones, all three along the Deerfield River. The first is in the Shelburne Falls village, the second in the northeast end of the town, along the Shelburne border, and the third is in the floodplain along the Buckland - Charlemont town line. Shelburne has two areas classified as Industrial, also along the Deerfield River. The first is in the Shelburne Falls village and the second is in the northwestern end of town, across the river from one of Buckland's industrial zones. The Current Zoning Map shows these areas graphically. The areas zoned for industry in both towns are largely built out with the remaining land having limited potential for industrial development due to environmental constraints such as steep slopes and floodplain considerations. Currently both towns allow residential development to occur in industrial areas. This puts conflicting land uses in close proximity. Industrial development may create some disturbances such as increased sound, light, or truck traffic. This is undesirable in or adjacent to residential areas. The steep and undulating topography of Buckland and Shelburne makes industrial development difficult and expensive in most parts of the towns. Flat areas and areas with shallow slopes that are not prime farmland are rare, and therefore should be reserved for industrial development. One method of ensuring that scarce land that is suitable for industrial use is retained for industrial development is to restrict residential development from areas zoned for industry.

In their responses to the Community Surveys, 68% of survey respondents from Buckland and 60% of survey respondents from Shelburne were of the opinion that zoning should segregate conflicting uses such as residential and industrial development. In Buckland, 77% of survey respondents felt that adaptive reuse of existing buildings was suitable for new business growth. In Shelburne 87% of survey respondents favored the reuse of existing buildings for commercial development and 57% for industrial development.

Buckland contains five pockets of land zoned Commercial, three along Route 112, and two in the Central Village District. If this development pattern were followed it would result in small commercial pockets fragmenting the rural landscape along scenic Route 112. However, in their response to the Community Survey, 52% of Buckland respondents thought that the commercially zoned areas along Route 112 are suitable for future commercial development. The Land Use Subcommittee considered consolidating some of these pockets to create one larger commercial area.

Shelburne has a Commercial zoned area along Route 2, the Scenic Mohawk Trail, from the town border on the east to the Village District on the west and a Commercial area in the village center along the Deerfield River. Commercial development in the commercially zoned area along Route 2 has more than tripled in ten years, increasing from 10 acres in 1985 to 33 acres in 1995/97. In response to the Community Survey, 76% of survey respondents from Shelburne

expressed concern about potential negative impacts of commercial growth along the Route 2 corridor. Of the Shelburne residents that responded to the survey, 67% were concerned about loss of scenic character, 62% feared the creation of an unbroken strip of commercial development, 45% were worried about the type of business that may locate there, and 38% about traffic impacts. The Level of Service Analysis completed indicates that Route 2 is experiencing a considerable degree of traffic congestion, particularly during the fall foliage season and efforts should be made to minimize future impacts (see Chapter 3 – Transportation Resources).

Future Patterns of Development

Future patterns of development will be determined by each town's zoning and the nature of land available for development. Both Buckland and Shelburne are divided into three zoning districts: Residential / Agriculture, Commercial, and Industrial. Acreages associated with the various zoning categories in Buckland are listed in Table 7-4 and for Shelburne in Table 7-5. Shelburne has established a Village Center District, which overlays the village of Shelburne Falls and permits smaller acreages and lot frontages than the surrounding Rural area. These are shown in Table 7-6. The town of Buckland allows reduced frontages and acreages in areas served by public water and sewer. Table 7-6 lists the dimensional requirements. Since this is largely within Shelburne Falls, it is referred to as the Village for the purpose of this Master Plan. The Current Zoning and 1995/97 Land Use Maps show the zoning districts and recent land use information.

Table 7-4: Zoning Districts - Buckland

Zone	Acreage in District
Residential/Agriculture Zone	12,367 acres
Commercial Zone	60 acres
Industrial Zone	252 acres
Total	12,679 acres

Table 7-5: Zoning Districts - Shelburne

Zone	Acreage
Residential/Agriculture Zone	14,270 acres
Central Village District	409 acres
Commercial Zone	628 acres
Industrial Zone	68 acres
Total	14,966 acres

Table 7-6: Dimensional Requirements – Buckland

Zone	Minimum Frontage	Minimum Lot Size
Rural (without public water and sewer)	200 feet	2 acres (87,120 sq. feet)
Village (with public water and sewer)	100 feet	20,000 sq. feet

Table 7-7: Dimensional Requirements – Shelburne

Zone	Minimum Frontage	Minimum Lot Size
Rural	250 feet	86,000 sq. feet
Central Village District	100 feet	20,000 sq. feet

The Residential/Agriculture zone comprises the largest zoning district in both towns. It occupies 94% of Buckland's and 93% of Shelburne's total land area. The roadside frontage in this area, with two-acre lot size and 200 - 250 foot frontage requirements, is the most susceptible to ANR residential development. The Village District in Buckland, which allows more compact development, is determined by water and sewer lines and is approximately 404 acres in area. A similar amount, 409 acres, is designated as the Central Village district in Shelburne. The Commercial zone in Buckland totals 60 acres and is divided into five distinct areas, two in Shelburne Falls and the remaining three strung along Route 112. Shelburne's Commercial zone occurs as a small parcel in Shelburne Falls village center and a long strip along most of Route 2, totaling 628 acres. Buckland has 252 acres of Industrial zoned land, while Shelburne has only 68 acres of land zoned Industrial. As discussed in the Existing Development Patterns section, a large percentage of this land is unsuitable for industrial development due to steep slopes or location in the floodplain or on prime farmland.

Build-out Analysis

Based on current zoning and development trends discussed in the previous section, the major impact to the towns is likely to occur through residential development. This finding is confirmed by the Build-out Analysis conducted as part of a Growth Management Study by the Franklin Regional Council of Governments in 1997 to identify potentially developable areas in various towns in Franklin County. Potentially developable land is that which does not have environmental constraints or steep slopes and that which is not permanently protected such as state forest or conservation land. The study included a residential, commercial and industrial Build-out Analysis of potentially developable land to estimate the gross acreage of industrial, commercial, and residential development which could be developed under present zoning.

The Growth Management Study employed Geographic Information System technology, specifically PC Arc/Info software. Figure 7-1 is a generalized flow chart showing the steps taken to conduct the Build-out Analysis. Please note that the word "coverage" is an Arc/Info term that

describes the data layer containing both the digital map and associated database. The digital data layers utilized for this analysis are regional in scale, typically 1:25,000 (1 inch = 2,083.33 feet), and therefore provide only a general estimate. The analysis is not parcel based and the accuracy of the estimates provided is limited by the scale of the data layers used to perform the Build-out Analysis. For example, a regional wetland data layer at a scale of 1:25,000 will have wetland boundary lines with a maximum locational accuracy of +/- 20 feet. Also, digital datalayers of soils and floodplain data were not available and therefore could not be incorporated into the methodology.

Figure 7-1: Build-out Analysis Methodology

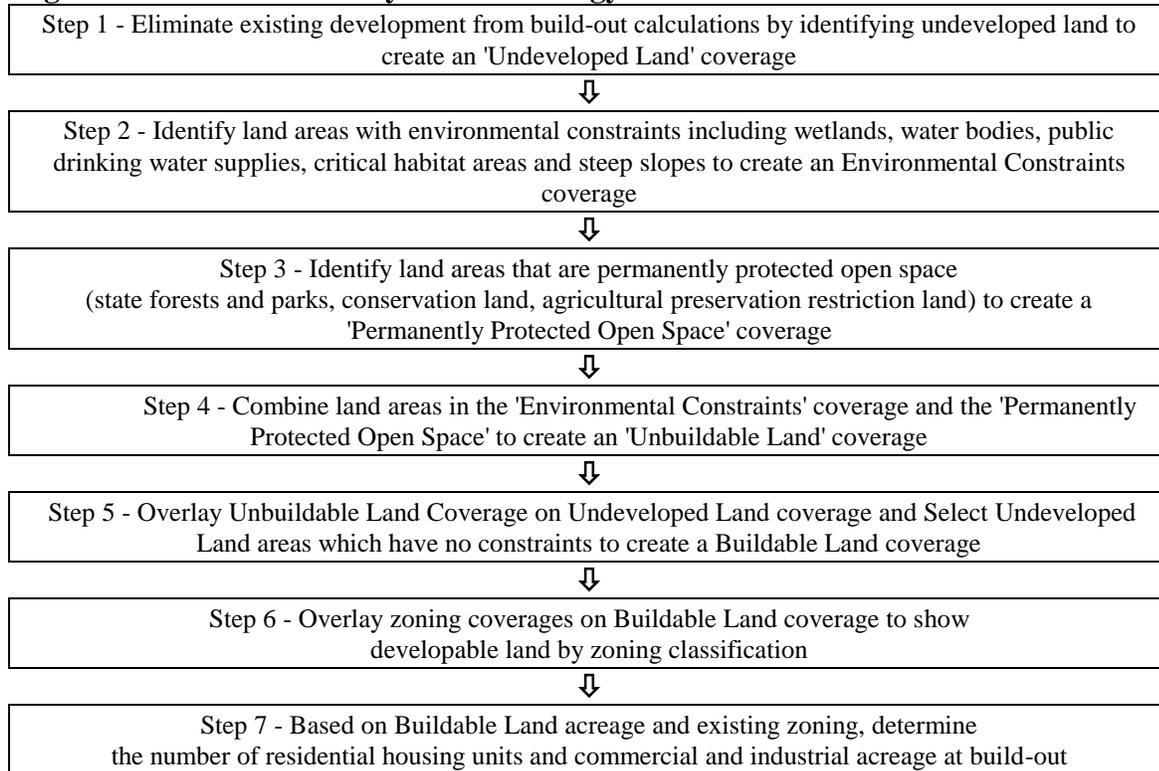


Table 7-8: Potentially Buildable Land Areas in Buckland*

	Acreage	Estimated Square Footage	Estimated Number of Residential Units	
			Minimum**	Maximum***
Commercial	21	185,430	N/A	N/A
Industrial	128	1,047,040	N/A	N/A
Residential (Village)	121	N/A	242	484
Residential (Rural)	7977	N/A	2632	3989

* Source: Growth Management Study Technical Report, FRCOG, 1997

** Based on 4 acre lot size

***Based on 2 acre lot size

Table 7-9: Potentially Buildable Land Areas in Shelburne*

	Acreage	Square Footage	Estimated Number of Residential Units	
			Minimum**	Maximum***
Commercial	234	2,066,220	N/A	N/A
Industrial	23	228,620	N/A	N/A
Residential (Central Village)	126	N/A	252	504
Residential (Rural)	9384	N/A	3097	4692

* Source: Growth Management Study Technical Report, FRCOG, 1997

** Based on 4 acre lot size

***Based on 2 acre lot size

Development Scenario for Selected Roads in Shelburne under Existing Bylaws

To supplement the Build-out Analysis, the Franklin Regional Council of Governments (FRCOG) Planning Department conducted a development analysis for four scenic roads in Shelburne. The purpose of the study was to graphically depict the impact on these scenic roads from ANR development using existing zoning requirements. As stated in previous sections of the chapter, Approval Not Required (ANR) development is the most common form of residential development in Shelburne.

The four roads were chosen based on their considerable scenic value as noted in the FRCOG Planning Department's inventory of historically significant landscapes accomplished in the early fall of 1998. They are: Reynolds Road, Little Mohawk Road (north of its intersection with Reynolds Road), and Zerah Fiske and Bardwell Ferry Roads (both south of their intersections with South Road).

The method for this analysis involved two main steps. A field survey of all existing buildings on these roads was used to update existing USGS topographical maps of the area. Shelburne's minimum lot size requirements were then used to create a template. The template represents the minimum frontage of 250 feet and the minimum lot size of 86,000 square feet, since all four roads are located within the Rural Area District. Using an enlarged copy of the USGS map as a base map, new "house lots" were drawn in as squares containing approximately the amount of acreage required by zoning. The squares were not placed within 200 feet of streams and existing residential lots were considered to have the same frontage. Squares were not located in areas where slopes were excessive (greater than 25%) or in permanently protected open space. The numbers of squares is a rough approximation of the number of ANR residential units that could be developed on these four roads under the existing zoning in Shelburne.

The results can be seen both graphically (see Figure 7-2 and Figure 7-3) and in tabular form (see Table 7-10). New ANR "house lots" are shown by the larger squares, existing houses and groups of buildings are left as they appear on the base map, usually small solid black squares. Each ANR lot is depicted by a rectangle with at least 250 feet of frontage. Some of the existing buildings have a larger lot size. Given the current zoning, residential development of farm,

pasture and forestlands could produce a relatively dense pattern of ANR lots. As shown below, the total number of houses, on these four road sections, could potentially increase by 480%. These four sections of roads, although some of the more sparsely populated, are in no way unique in Shelburne.

Table 7-10: Results of the Development Analysis for Selected Roads in Shelburne

Road Name	Approximate Number of Existing Houses	Approximate Number of Additional ANR House Lots	Total Potential Number of Houses
Reynolds Road	12	25	37
Little Mohawk Road	5	15	20
Bardwell Ferry Road	10	39	49
Zerah Fiske Road	3	35	38
TOTALS	30	114	144

Both Shelburne and Buckland should consider adopting alternative zoning bylaws that might prevent the cookie-cutter development of their prime farm and forestlands. The Land Use subcommittee is interested in encouraging development strategies that respect landowners' equity and reduce or eliminate dispersed residential development. Back Lot Development with Open Space Set-Aside provides an alternative to ANR Development. In addition, Cluster Development and Transfer of Development Rights can also be used to modify the development pattern to create more compact development patterns. A Transfer of Development Rights Bylaw can be used to encourage traditional development patterns with dense centers of mixed residential and commercial uses while protecting farmland and open space in the outlying rural areas. These zoning options are discussed below. However, they are only part of the answer and additional permanent protection of open space is needed.

Figure 7-2

Figure 7-3

Potential Zoning Options

Back Lot Development with Open Space Set Aside

The Back Lot Development with Open Space Set Aside Bylaw provides an alternative to Approval Not Required (ANR) development. Buckland's zoning bylaws currently allow Back Lot Development with Farmland Set Aside. A Back Lot Development with Open Space Set Aside provision within the Zoning Bylaws allows a landowner to develop areas of his/her property without any road frontage in exchange for permanently prohibiting development of roadside land that is being actively farmed, forested or used recreationally. The maximum number of lots that can be developed as back lots can not exceed the number of lots allowed on the same tract using the ANR (Approval Not Required) subdivision and zoning requirements: buildable 2-acre lots with 200 or 250 feet of frontage depending on the zoning requirements of each town. Buckland already has a Bylaw that allows Back Lot Development with Farmland Set-Aside which can be used in areas with prime farmland such as the Clesson Brook Valley.

Cluster Zoning

A Cluster Zoning Bylaw is an alternative to standard subdivision development. Cluster development bylaws can be mandatory, mandatory in certain defined sections of town, or optional. Cluster Development refers to residential development in which lots for buildings and accessories are grouped together in one or more clusters within the boundaries of a larger parcel of land. The building lots are reduced in size and concentrated together, taking up only a portion of the parcel of land. Land not included in building lots is shared by the development's residents as permanently preserved agricultural or forested land or can remain the property of the original landowner if a permanent conservation restriction preventing future development is placed on the land. The permanently protected land is usually required to be at least 40% of the total parcel. In Buckland, 65% of the respondents to the Community Survey were in favor of Cluster Development. The town has since adopted a Cluster Bylaw. In Shelburne, 53% of the survey respondents favor Cluster Development. Shelburne zoning bylaws contain a limited provision for allowing cluster development. This Bylaw should be reviewed and modified to provide more guidelines to landowners and to encourage its use.

Village Center Districts

Both Buckland and Shelburne currently have village overlay districts in the Shelburne Falls area. The overlay district, in both cases, is defined by areas served by sewer and public water. Both towns allow reduced acreage and frontage requirements within the village area to 100 feet of frontage and 20,000 square feet minimum lot size.

Using the service infrastructure to define permitted dimensions will lead to an expansion of the high-density zone as the infrastructure expands. It would be appropriate to determine suitable extents of sewer and water lines. The water lines currently serve a larger area than the sewer

system. The Potential Zoning Districts Map shows Shelburne Falls divided into Village Center Residential A and Village Center Residential B districts based on existing infrastructure. Village Center District A is the area served by both sewer and public water. It is proposed that this be a residential district requiring 1/4 acre minimum lot area. The Village Center Residential B district is also proposed as a residential district, and is defined as the area served by public water supply, but not the sewer lines. The minimum lot size in this district would be 1 acre. The district lines may be reconsidered in the future, if warranted by growth needs.

Transfer of Development Rights and Shelburne Falls Parcel Level Analysis

A transfer of development rights bylaw allows property owners in one area of town (sending zone) to transfer development rights to a property owner in a different area (receiving zone) of town. For example, a property owner in a rural agricultural area (sending zone) might sell their development rights to a landowner in a village center in order to permanently protect their farmland while realizing value for the development rights. The landowner in the village center (receiving zone) might purchase these development rights in order to increase the square footage of a commercial development or decrease the lot size requirements for residential homes beyond what is currently permitted under existing zoning. Transfer of development rights facilitates the protection of prime agricultural land and open space by allowing development to be concentrated in designated areas of town. In Buckland, 68% of people who responded to the Community Survey felt that Shelburne Falls village center is a suitable area to direct future development. In Shelburne, 40% of the respondents favored directing future commercial development to the Shelburne Falls village center. In August 1998, FRCOG Planning Staff conducted a parcel level analysis of vacant parcels of land within Shelburne Falls to determine where development could be directed. The results of this study are discussed below.

A parcel level analysis of Shelburne Falls' village was conducted in July, 1998 in order to assess development opportunities. This was done to determine whether a Transfer of Development Rights (TDR) zoning bylaw would be appropriate for consideration by one or both towns.

The analysis was accomplished in three stages. First, assessors' records and maps for all parcels within the Towns' village district were obtained. These records included parcel identification numbers, the parcel's State land use code, and the acreage of the lot. For the Town of Buckland, this list also identified the parcel's use with notes such as "Colonial" or "Yard Items" which further described the parcels current use. Parcels that appeared potentially developable were identified based on this data. This category included parcels identified as vacant and large parcels with a residential structure that could be further subdivided. Next, a windshield survey of the parcels identified was conducted to verify the results of the initial analysis. Finally, a detailed analysis of all these parcels began with their organization into three sub-categories within each zoning district, for each Town (Parcels That Appear Developable, Parcels Requiring Further Investigation, and Parcels With Low Probability of Being Developed). Then, frontage lengths were identified for each parcel from the assessors' maps. Finally, the information was tabulated and total acreages were calculated. The detailed results of this study are listed in Table 7-11 through 7-16 and are summarized in Table 7-17.

Table 7-11: Land Available for Development – Buckland (General Industrial Zone)

Map No.	Parcel No.	Land Use Code*	Frontage (in feet)	Area (in acres)	Comments
<i>Parcels That Appear Developable</i>					
3 - 1	1	101	None	27	Approximately 1/3 of this 80 acre lot is zoned industrial.
3 - 1	3	132	74	2.18	Camping/Recreational Land.
3 - 1	4	801	360+	2.03	Camping/Recreational Land.
3 - 1	17	101	1270	13.8	Total area is 14.8 acres. Take out 1 acre for house on the property.
3 - 1	19	901	270	4.25	Total area is 5.25 acres. Take out 1 acre for office on the property.
6 - 2	118	903	543	0.7	This is vacant municipal lot.
6 - 2	120	322	165	1.9	Most of the lot is vacant w/ a Trolley Museum at the back.
6 - 2	121	392	200	0.13	This is a small rectangular vacant lot in back of the museum.
<i>Total</i>				51.99	

Table 7-12: Land Available for Development – Buckland (Residential Zone – Rural)

Map No.	Parcel No.	Land Use Code*	Frontage (in feet)	Area (in acres)	Comments
<i>Parcels That Appear Developable</i>					
3 - 1**	1	101	None	52	Approx. 2/3 of this 80 acre lot is zoned residential, and 1 acre is C. V. District.
3 - 1**	6	801	325	2.64	Notes in Assessors list states this land is used for Camping/Recreation
3 - 1**	7	132	150	2.1	
3 - 1**	8	101	None	48.9	With 1 acre taken out for the existing house on the property.
3 - 1**	14	104	980	6.35	With 1 acre taken out for the existing house on the property.
3 - 1**	15	101	286	22.32	
3 - 3	20	101	67	24	With 1 acre taken out for the existing house on the property.
6 - 7	1 - 1	106	730	25.69	Coded as Accessory Land w/ Improvement. Woodland.
<i>Total</i>				184	
<i>Parcels Requiring Further Investigation</i>					
3 - 3	10 - 1	132	None	5.17	See Assessors Maps for connection with 3 - 3 - 20.
3 - 3	10 - 2	132	None	16.23	Wooded parcel behind residential lots off of North St. with no frontage.
6 - 4	52	106	360	8.2	Coded as Accessory Land w/ Improvement. Woodland.
6 - 4	3 - 1	101	100	10.7	Most of property is located within residential zoning.
6 - 4	65	101	140	10.07	
6 - 6	16	132	50	15.84	Vacant woodland at end of Dungarvin Road.
<i>Total</i>				66.21	
<i>Parcels With Low Probability of being Developed</i>					
6 - 3	18	392	None	0.5	Considered undevelopable. Located abutting B & M Railroad.
6 - 3	21	392	120	0.37	Considered undevelopable. Located abutting B & M Railroad.
<i>Total</i>				0.87	

** Note: These parcels fall within the area proposed to be rezoned 'Industrial.' If rezoned, these parcels would not be available for Transfer of Development Rights.

Table 7-13: Land Available for Development – Buckland (Residential Zone – Village District)

Map No.	Parcel No.	Land Use Code*	Frontage (in feet)	Area (in acres)	Comments
<i>Parcels That Appear Developable</i>					
3 - 3	12	131	90	6.6	Wooded parcel behind residential lots off of North St. 90' frontage only.
3 - 3	40	130	170	0.75	Used as a parking area for cars on grass.
3 - 3	49	131	70	0.5	Used as a yard between State St. and the Deerfield River.
6 - 1	18	130	132	0.52	Wooded parcel at corner of Wall St. and Crittenden Hill. Has barn on it.
6 - 2	107 - 1	130	66	0.2	Lawn or yard of lot 107.
6 - 4	35	132	220	2.2	Vacant lot off of Elm Street in residential area.
6 - 6	14	132	245	0.48	Vacant lot at the corner of Dungarvin Drive and Elm Street.
6 - 6	1 - A	130	175	1.33	Located off of Elm Street with 170' frontage.
<i>Total</i>				12.58	
<i>Parcels Requiring Further Investigation</i>					
3 - 2	10 - 2	(not listed)	327	3.5	This lot is identified on the Assessors maps as # 10 - 2.
3 - 2	8	310	500	1.5	Near abandoned 'Old State Street'. Explained as 'Yard Items'
6 - 1	77 - 1	132	50	0.13	Part of yard to house lot # 77.
6 - 2	147	131	100	2	Steep wooded slope north of Hillside Ave, southeast of Crittenden.
6 - 2	34 - 1	130	Unknown	1.44	Not on Assessors map. Subdivided portion of lot # 34.
6 - 2	75 - 2	130	Unknown	0.6	75-2, 3, and 5, subdivided portions of parcel # 75, not on Assessors maps.
6 - 2	75 - 3	130	Unknown	0.6	75-2, 3, and 5, subdivided portions of parcel # 75, not on Assessors maps.
6 - 2	75 - 5	130	Unknown	0.69	75-2, 3, and 5, subdivided portions of parcel # 75, not on Assessors maps.
6 - 4	58 - 1	132	Unknown	0.43	Probably a separated parcel from lot # 58. Vacant.
6 - 5	5	131	120	5	Abuts B & M Railroad and has 120' of frontage on South Street.
<i>Total</i>				15.89	
<i>Parcels With Low Probability of being Developed</i>					
3 - 3	31	132	105	0.07	Wooded slope between railroad and Old State Street. Floodplain.
3 - 3	33	132	1000 ±	1	Riparian edge between State St. and the Deerfield River. Floodplain.
3 - 3	38	131	95	0.26	Used as a yard between State St. and the Deerfield River. Floodplain.
6 - 3	12	905	700	3.5	This is exempt land owned by VFW and is a playground.
6 - 5	4	390	None	1	Abuts B & M Railroad.
<i>Total</i>				5.83	

Table 7-14: Land Available for Development – Buckland (Commercial Zone)

Map No.	Parcel No.	Land Use Code*	Frontage (in feet)	Area (in acres)	Comments
<i>Parcels That Appear Developable</i>					
3 - 2	13	131	220	0.57	At end of accessible Old State Street.
3 - 2	14	131	140	0.53	Has outbuildings on it now. Abuts previous parcel.
6 - 1	35	130	66	0.13	This is a dirt lot behind a retail business possibly used as parking.
<i>Total</i>				1.23	
<i>Parcels With Low Probability of being Developed</i>					
3 - 2	10	132	none	0.21	Near railroad, inaccessible except from Old State Street
3 - 2	16	106	900+	0.6	Sliver of vacant land between railroad and Old State Street.
<i>Total</i>				0.81	

Table 7-15: Land Available for Development – Shelburne (Residential Zone – Central Village District)

Map No.	Parcel No.	Land Use Code*	Frontage (in feet)	Area (in acres)	Comments
<i>Vacant Parcels That Appear Developable</i>					
40	22	130	75	0.23	Level vacant lot adjoining home site off of Pleasant St.
43	13	132	109	0.23	Vacant lot off of Mechanic Street.
43	47	131	100	0.49	Vacant Lot off of Route 2.
43	48	131	100	0.49	Vacant Lot off of Route 2.
<i>Total</i>				1.44	
<i>Parcels Requiring Further Investigation</i>					
40	49	130	100	0.24	Steep vacant lot off of High Street.
<i>Total</i>				0.24	
<i>Parcels With Low Probability of being Developed</i>					
41	10	130	47	0.07	Riparian zone between Deerfield River and Water Street.
41	11	130	90 ±	0.11	Riparian zone between Deerfield River and Water Street.
41	13	130	60 ±	0.06	Riparian zone between Deerfield River and Water Street.
41	14	130	90 ±	0.09	Riparian zone between Deerfield River and Water Street.
41	15 - 1	130	50	0.06	Riparian zone between Deerfield River and Water Street.
<i>Total</i>				0.39	

Table 7-16: Land Available for Development – Shelburne (Commercial Zone)

Map No.	Parcel No.	Land Use Code*	Frontage (in feet)	Area (in acres)	Comments
<i>Vacant Parcels That Appear Developable</i>					
41	4	130	30	0.09	This land connects the Bridge of Flowers to Water Street.
41	88	132	66	0.16	Vacant lot between "main street" buildings on Bridge St.
<i>Total</i>				0.25	

* Land Use Codes: 101, Single Family; 104, Two-Family; 106, Accessory Land with Improvement; 130, Developable Land; 131, Potentially Developable Land; 132, Undevelopable Land; 310, Tanks holding oil and fuel products; 390, Developable Commercial Land; 392, Undevelopable Commercial Land; 801, Hiking trails and paths for hiking; 901, Exempt- Commonwealth of Mass; 903, Exempt- Municipalities; and 905, Exempt- Charitable Organizations.

Table 7-17: Shelburne Falls Parcel Level Analysis

	Area (in acres)	
	Shelburne	Buckland
Village District		
Parcels That Appear Developable	1.44	12.58
Parcels Requiring Further Investigation	0.24	15.89
Parcels with Low Probability of being Developed	0.39	5.83
Residential Zone		
Parcels That Appear Developable	0	184
Parcels Requiring Further Investigation	0	66.21
Parcels with Low Probability of being Developed	0	0.87
Commercial Zone		
Parcels That Appear Developable	0.25	1.23
Parcels with Low Probability of being Developed	0	0.81
General Industrial Zone		
Parcels That Appear Developable	0	51.99
Total	2.32	339.41

Based on the results of the parcel level analysis it appears that a Transfer of Development Rights (TDR) Bylaw would be feasible for Buckland given available acreage in the Shelburne Falls area. Limited acreage is available for development on the Shelburne side of the village, hence a TDR bylaw would be worthwhile only if an alternative 'receiving zone' is identified. The Land Use Subcommittee is considering the rural village center, Shelburne Center, as this is an area where traditionally residential and civic activities have been concentrated. However, additional analysis will be required to determine the suitability of this area as a 'receiving zone' for TDR in Shelburne.

Protection of Community Character and Scenic Landscapes

The historic character of Buckland and Shelburne is one of the main attractions of the area, both for residents and visitors. Shelburne Falls, Buckland Center, and Shelburne Center have so far managed to retain their traditional character. This is partially because most new development in the towns has occurred in the outlying forested areas. However, as structures begin to need renovation, and if additional growth is directed to these historic centers, it is important that tools be in place to ensure that the traditional character is maintained. Overall, 57% of the residents of Shelburne who responded to the Community Survey, would like to see future commercial development along Route 2 that is consistent with the historic character of Shelburne. Voluntary or mandatory design guidelines are possible tools to protect community character.

Personal Communication Services Antenna Siting

The Route 2 corridor is a major regional east-west link, and as such a potentially desirable corridor for telecommunications tower siting in the future. The siting of towers and antennas for Personal Communications Systems (PCS) may have a tremendous impact on ridge lines in Buckland and Shelburne. Creating a Bylaw to control the siting of PCS is an important issue to think about when considering preservation of the community character. This may be used to give the town some control over the appearance and visibility of the towers to lessen impacts on surrounding properties. The towns could also attempt to minimize the number of towers by requiring the maximum amount of hardware to be accommodated on each tower as is technologically feasible. The Federal Communication Act of 1996 has mandated that municipalities may not prohibit the siting of PCS equipment or do anything that has the practical effect of banning them. In other words, communities may not invoke Height Restriction Bylaws to prohibit the setup of PCS antennas within their town boundary. Towns do, however, have the right to regulate the siting of these towers. A **Ridge Protection Bylaw** could be used to ensure that the antennas are not located in highly visible parts of the town. Buckland has recently adopted a Telecommunications Bylaw and the Planning Board has expressed an interest in creating a Ridge Protection Overlay District and associated Bylaw. Shelburne has also recently adopted a Telecommunications Bylaw.

Site Plan Review

The purpose of Site Plan Review is to protect the natural resources and historic rural character of a site and adjacent areas. Site Plan Review establishes criteria for layout, scale, appearance, safety and environmental impacts of residential, commercial or industrial development. Site Plan Review shapes a project and focuses on location and height of structures, parking, traffic, drainage, roadway construction, signage, utilities, landscaping, lighting and types of building materials in order to arrive at the best possible design for the location. Site Plan Review also addresses the natural resources of the site including prime farm and forest land, prime soils, slope, and critical habitat areas. Site Plan Review often operates in conjunction with a special permit process which authorizes uses and structures. However, Site Plan Review can also be attached to uses not requiring a Special Permit by the imposition of reasonable conditions before

the issuance of a building permit. Respondents to the Community Survey in Buckland and Shelburne expressed strong support for Site Plan Review. In Buckland, 72% supported Site Plan Review for multiple-lot residential developments and 79% favored Site Plan Review for large commercial and industrial developments. In Shelburne, 67% supported Site Plan Review for multiple-lot residential developments and 69% favored Site Plan Review for large commercial and industrial developments.

Design Guidelines

The towns can adopt voluntary or mandatory design guidelines to ensure that future development in designated areas is consistent with the traditional character of the area. Design guidelines can provide information to landowners about suitable design elements such as roof pitches and building materials to help make their structures consistent with the local character. In their responses to the Community Surveys 45% of the respondents from Shelburne were in favor of voluntary architectural design guidelines in the village district and 42% were in favor of voluntary guidelines along Route 2.

Protection of Natural Resources

Respondents to the Community Surveys in both Buckland and Shelburne strongly supported the protection of natural resources. In both towns 66% of the respondents felt that zoning should be used to protect important land such as wetlands and farmland. The Natural Resources Subcommittee recommended a number of zoning and non-zoning strategies to the Land Use Subcommittee for consideration. These were approved by the Master Plan Committee. The Land Use Subcommittee determined the following strategies to be important for adoption in the short term (1 to 3 years):

Aquifer Protection

The adoption of Aquifer Protection Overlay Districts and associated zoning bylaws was recommended by the Natural Resources Subcommittee. This will ensure the protection of surface and ground water quality in those areas that have the potential to serve as future public water supplies for the towns (see Chapter 1 - Natural Resources for detailed discussion).

Ridge Protection

The adoption of Ridge Protection Overlay Districts and associated zoning measures was recommended by the Natural Resources Subcommittee. This will help to direct telecommunications and other towers away from highly visible ridges in town, to protect important scenic and natural resources, and to prevent erosion (see Chapter 1 - Natural Resources for detailed discussion).

Floodplain Bylaw

The National Flood Insurance Program has established guidelines for towns to incorporate into their Floodplain Bylaws in order to maintain their eligibility to receive Flood Insurance. The towns should review their Floodplain Bylaws and ensure that they provide the required protection of these areas and comply with the National Flood Insurance Program for flood insurance purposes.

Recommendations

The recommendations of this chapter incorporate many of the recommendations identified in previous sections. In many ways, this chapter represents a synthesis of the previous work as it relates to land use and zoning. The strategies have been divided into two categories: short term and long term strategies. The intention is to implement the short term strategies within three years and to implement long term strategies within three to five years.

Short Term Strategies (1-3 years):

- Pursue zoning amendments that encourage the protection of open space and farmland.
 - a) Update the Cluster Development Bylaw in Shelburne and encourage use of the Cluster Bylaws in Buckland and Shelburne to support open space protection. Consider strengthening incentives for use of the Cluster Development Bylaws such as a density bonus.
 - b) Evaluate the adoption, in Shelburne, and expansion, in Buckland, of the Back Lot Bylaw with Open Space Set-Aside as an option for landowners to protect roadside farmland and open space where appropriate without fragmenting important forest and wildlife habitat.

- Pursue zoning amendments that encourage the protection of the rural and historic character of Buckland and Shelburne.
 - a) Adopt a Ridge Protection Bylaw in Buckland that would serve to regulate development on the top of a ridge to control erosion and to ensure that uninterrupted views are protected.
 - b) Support the Telecommunications Bylaws that address the siting of cellular and telecommunication towers.
 - c) Adopt Voluntary Design Guidelines for commercial and industrial development in the Village District, along Route 2 and Route 112 and provide for density bonuses or parking reductions to encourage use.
 - d) Consider variable front setbacks in the Shelburne Falls Village District to maintain consistency in historic neighborhoods with respect to new construction.

- Improve compliance with existing town bylaws and state regulations through public education and regular meetings between the Building Inspector, the Planning Board, the Board of Health, the Conservation Commission, and the Zoning Board of Appeals.
- Encourage the use of alternatives to Approval Not Required (ANR) development to protect the natural environment and the rural character. Some of the strategies that may be used are Scenic Easements, Conservation Restrictions and Back Lot Development with Open Space Set-Aside.
- Conduct a Scenic Byway Study and create a Corridor Management Plan for the historic Mohawk Trail (Route 2), which addresses protection of the scenic character and creates a strategy for commercial development that is consistent with the historic and scenic integrity of Shelburne.
- Revise allowed uses in industrial zones to prevent additional residential development.
- Revise allowed uses in commercial districts to eliminate drive-through restaurants and gas stations. Residential development and commercial uses such as offices, retail establishments, and restaurants without drive-through windows would be suitable for these districts.
- Create Aquifer Protection Overlay Districts and associated zoning bylaws for the protection of surface and ground water quality in those areas that have the potential to serve as future public water supplies for the towns.
- Rezone districts in Buckland to ensure that they include sufficient buildable area to accommodate future growth and to determine that they are appropriately located in areas with minimal environmental constraints (see Existing & Potential Zoning Districts Maps).
 - a) Rezone Buckland's industrial zone in the floodplain along Depot road near Route 112 to Rural/Agriculture zone.
 - b) Evaluate expanding the existing industrial zone north of Route 2 in Buckland. Preliminary reviews show that this area is not located in the floodplain, soils are acceptable, and topography is not excessively steep although some regrading would be required. Upgrades to the road would be needed to allow access by truck traffic beyond the aqueduct. Establish minimum 100-foot setbacks and buffer requirements as needed to maintain the scenic character of the Deerfield River.
 - c) Convert existing Village Center Overlay district to Village Center Residential A & B Districts to delineate extension limits for water and sewer lines, therefore concentrating dense development within the Village Center and reducing sprawl.
 - d) Consolidate the three commercial districts along Route 112 in Buckland to one mixed-use district and expand it to both sides of the road. Revise the existing Commercial Districts in Shelburne Falls to match the residential and commercial land use patterns that already exist. Residential development and commercial uses such as offices, retail establishments, and restaurants would be suitable for the proposed Commercial Districts.

- Rezone districts in Shelburne to ensure that they include sufficient buildable area to accommodate future growth and to determine that they are appropriately located in areas with minimal environmental constraints (see Existing & Potential Zoning Districts Maps).
 - a) Rezone Shelburne’s small industrial zone along Deerfield Street in the floodplain to Commercial and expand the existing Commercial zone further east along Bridge Street. Residential development and commercial uses such as offices, retail establishments, and restaurants would be suitable for this area
 - b) Consider rezoning an area of the commercial zone along Route 2 for a planned eco-industrial park with minimum 100-foot setbacks and buffer requirements as needed to maintain the scenic character of Route 2.
 - c) Convert the existing Village Center Overlay district to Village Center Residential A district to delineate extension limits for water and sewer lines, thereby concentrating dense development within the Village Center and reducing sprawl.

- Maintain the agricultural character of the area by creating a Farm Structure Reuse Bylaw that would allow the reuse of abandoned farm structures for artisans and appropriate businesses that are compatible with agricultural operations and the rural character of the area.

- Improve the existing Floodplain Bylaw to provide protection of these areas and to comply with the National Flood Insurance Program for flood insurance purposes.

- Give highest priority to open space protection and land conservation efforts in identified Wildlife Habitat Corridors to protect important habitat areas and facilitate the movement of species between them. Encourage the use of Back Lot Development with Open Space Set-Aside and Cluster Development to concentrate development in less sensitive parts of a site and protect important habitat areas, prime forest resources, and prime agricultural land.

- Consider applying to the Massachusetts Historic Commission to expand the existing Shelburne Falls National Historic District to include residential, civic, and industrial structures, and sites adjacent to the current district as defined in the Historic Resources section.

- Consider applying for a TEA-21 Enhancement grant to obtain funding for scenic easement acquisition with willing landowners for historic landscapes and Scenic Roads identified in Chapter 2 – Historic Resources.

- Consider applying to the Massachusetts Historic Commission to create a new National Historic District in Buckland Center.

- Consider adopting a Demolition Delay Bylaw to protect historic properties.

- Consider the adoption of a Phased Growth Bylaw to ensure that development occurs at a suitable pace and does not result in overburdening the service infrastructure such as sewer and water services.

- Revise subdivision regulations for new roads and encourage the reconstruction of existing roads according to standards which will maintain the rural and scenic character of roads and which will minimize widening or straightening of roads.

Long Term Strategies (3-5 years):

- Consider designating the scenic roads identified in the Historic Resources section as local scenic roads to protect roadside trees and stone walls and to permanently protect the significant viewsheds. Use scenic easements with willing landowners who are interested in permanently protecting their land.
- Evaluate creating a Site Plan Review process for new commercial and industrial development and residential subdivisions (multiple lots) that would set guidelines so that new development blends harmoniously with existing development and the surrounding landscape. Establish appropriate thresholds where Site Plan Review would apply such as commercial or industrial development in excess of 5,000 square feet and residential subdivisions having five house lots or more.
- Create a Wetlands Bylaw to protect vernal pools and other critical wetland areas.
- Consider using techniques such as siting and design guidelines, site plan review, transfer of development rights, and cluster/open space zoning to ensure that new development in historic areas is consistent with existing development patterns.
- Identify areas in town with existing infrastructure and minimal environmental constraints such as Shelburne Falls village center and land immediately around it that can support additional development and identify them as designated growth areas or receiving zones for a TDR Bylaw. Consider providing incentives for development to locate to these areas such as the reduction of lot size and frontage requirements.
- Adopt a Transfer of Development Rights (TDR) Bylaw in Buckland that would allow development rights to be transferred to designated areas such as Shelburne Falls where development is desirable (receiving zone) from significant natural resource and prime farmland areas identified by the towns (sending zone) and evaluate alternative receiving zones for Shelburne. A parcel level analysis of Shelburne Falls revealed that a Transfer of Development Rights (TDR) Bylaw would be feasible for Buckland given available acreage in the Shelburne Falls area. Limited acreage is available for development on the Shelburne side of the village, hence a TDR bylaw would be worthwhile only if an alternative "receiving zone" is identified.
- Conduct a detailed analysis of buildable land in the commercially zoned section of the Route 2 corridor in Shelburne. Identify suitable development patterns such as commercial development concentrated in nodes separated by permanently protected open space. Encourage such growth patterns through the use of zoning strategies such as a TDR Bylaw and non-zoning strategies such as Scenic Easements.

LAND USE AND ZONING 1
 Use of Land in Buckland and Shelburne..... 1
 Existing Patterns of Development..... 4
 Future Patterns of Development 7
 Build-out Analysis 8
 Development Scenario for Selected Roads in Shelburne under Existing Bylaws 10
 Potential Zoning Options 14
 Protection of Community Character and Scenic Landscapes 21
 Protection of Natural Resources 22
 Recommendations..... 23