

# Bennington Town Plan



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Prepared by the  
**Bennington Planning Commission**

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# TOWN PLAN

## Bennington, Vermont

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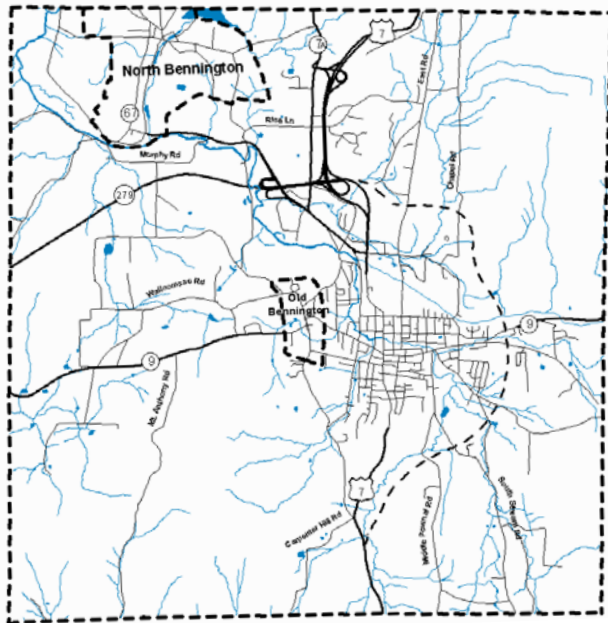
## Introduction

### Overview

The Town Plan provides a framework for decisions that will guide future growth and development in Bennington. Its statements, policies, and recommendations will help ensure that the town retains the attributes that residents value while promoting actions that enhance the town's character, prosperity, and overall quality of life.

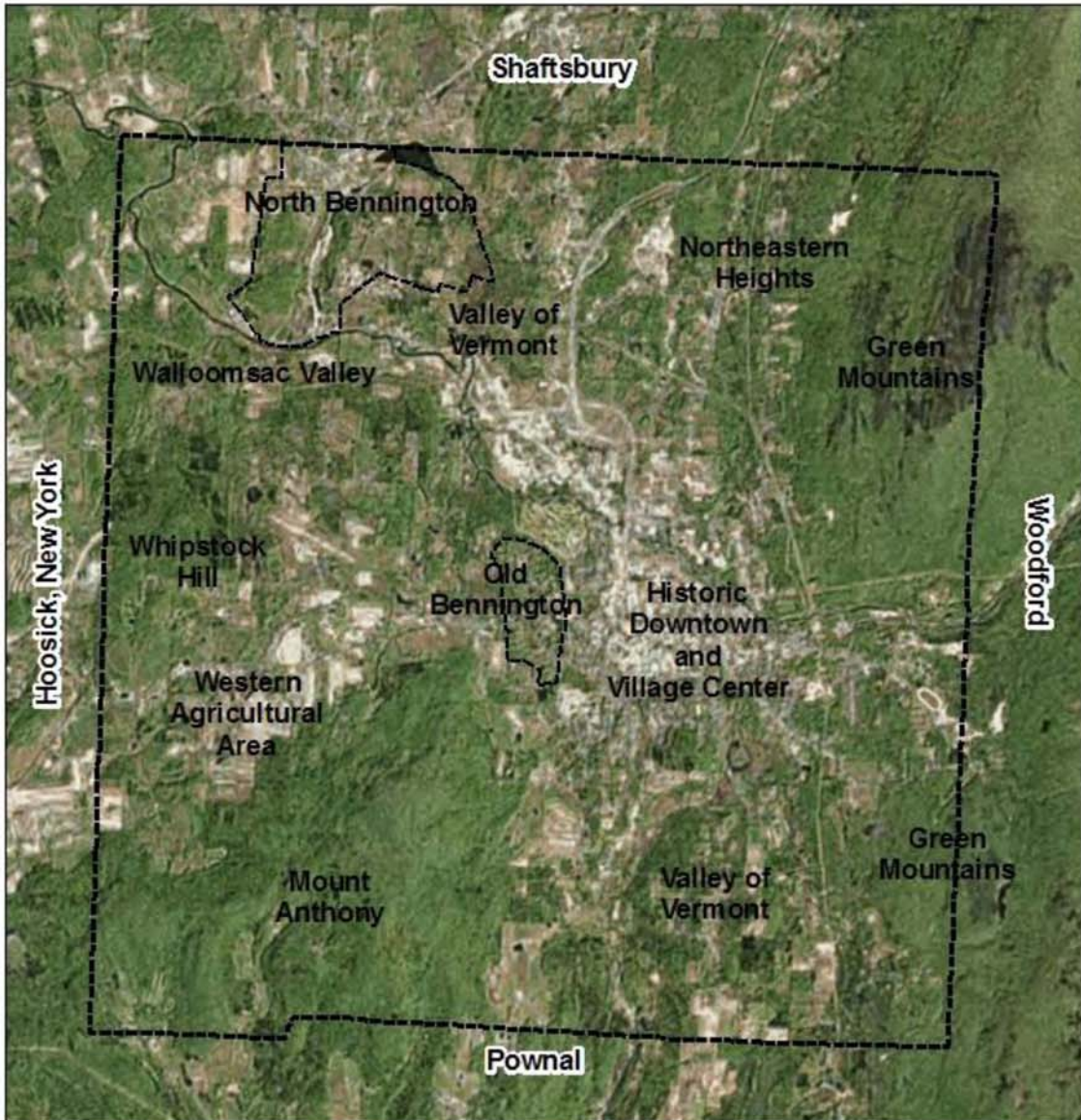
The Town Plan was prepared and adopted pursuant to Title 24 V.S.A. Chapter 117, the Vermont Municipal and Regional Planning and Development Act. It contains all of the required elements and is consistent with all of the goals enumerated in that statute. Moreover, while this Plan is guided by the needs and desires of the Town of Bennington, care was taken to ensure that it is compatible with the Bennington Regional Plan, with the plans of the villages of Old Bennington and North Bennington, and with the plans of neighboring towns.

Beginning in the summer of 2014, the Bennington Planning Commission gathered data, compiled background information, and held meetings to identify and analyze issues that are important to the community. The basis for this Town Plan was the plan developed and adopted by the town in 2010. An updated draft of the Town Plan was developed based on this planning process, and public hearings were held to assess the acceptance of the ideas presented in the document. After final revisions were made, the Town Plan was forwarded to the Select Board for final hearings and adoption. The Town Plan remains in effect for five years after which it will need to be updated once again.



This Plan covers the entire Town of Bennington, exclusive of the separately incorporated villages of Old Bennington and North Bennington. Issues involving facilities and services shared with one or both of the villages are addressed in the Plan.

Effective implementation of this document is, of course, critical to its success. It is therefore important that the Town Plan be referred to by local, regional, and state officials and organizations when undertaking actions that will affect the town. The Planning Commission and Select Board must consider the Plan when preparing amendments to municipal bylaws and



This aerial photo of Bennington clearly shows the forested mountains that line the town's eastern border and which cover much of the southwestern portion of the town. Agricultural areas are found in the southern and western valleys, and the most heavily developed areas lie in the center of town near the intersections of Routes 7 and 9. The US 7/VT 279 interchange is very evident toward the town's north as is the WH Morse Airport runway near Whipstock Hill.

ordinances, and when considering significant municipal expenditures and pursuing grant opportunities. Because the Plan provides the basis for many town regulations, it should be consulted by developers interested in investing in the town and by local and state regulatory boards when reviewing land use applications. The town also should insist that plans and projects advanced by state or federal agencies that affect the community be compatible with the Town Plan.

## **Physical Geography**

Bennington's character is shaped by its location among the mountains and valleys of southwestern Vermont. The escarpment of the Green Mountains lies near the town's eastern border, rising abruptly some 2,000 feet above the valley. Mount Anthony, a peak in the Taconic Mountain Range, dominates the landscape in the southwestern part of the town and Whipstock Hill lies near the state line at the town's western edge. These steep upland areas have supplied important natural resources to the town while remaining largely free from development due to poor access and unproductive soils.

Two major valleys intersect in Bennington: the north-south running Valley of Vermont and the Walloomsac Valley that follows its namesake river west toward New York State. As a result, Bennington contains extensive lowland areas that historically have supported important transportation corridors and have attracted significant agricultural, residential, commercial, and industrial development. Of Bennington's 26,700 acres (42 square miles) approximately 16,500 acres (61%) lie in these productive valley areas.

## **History**

The town was chartered in 1749 by Benning Wentworth, the governor of New Hampshire. A village site was planned for its center and was eventually established where Old Bennington Village is now located. The relatively level ground and abundant water power to the north and east of Old Bennington soon attracted considerable development. The downtown and village neighborhoods that surround it remain as important commercial and residential centers today.

Bennington became an important manufacturing center in the 19<sup>th</sup> century with mills and factories constructed in the area that is now downtown and along the Walloomsac River and Paran Creek. The textile industry developed into a particularly important component of the town's economic base. In the meantime, agriculture transformed the landscape as farms spread through the valleys and hillsides were cleared for pasture.

A network of roads soon connected the villages and outlying areas, and important highways leading to towns and cities to the west, north, and south were laid out and improved. Roadways also were established along different alignments up and over the mountains to the east until the current highway (VT 9), following the Roaring Branch into Woodford, became the principal route toward Brattleboro and the Connecticut River Valley.

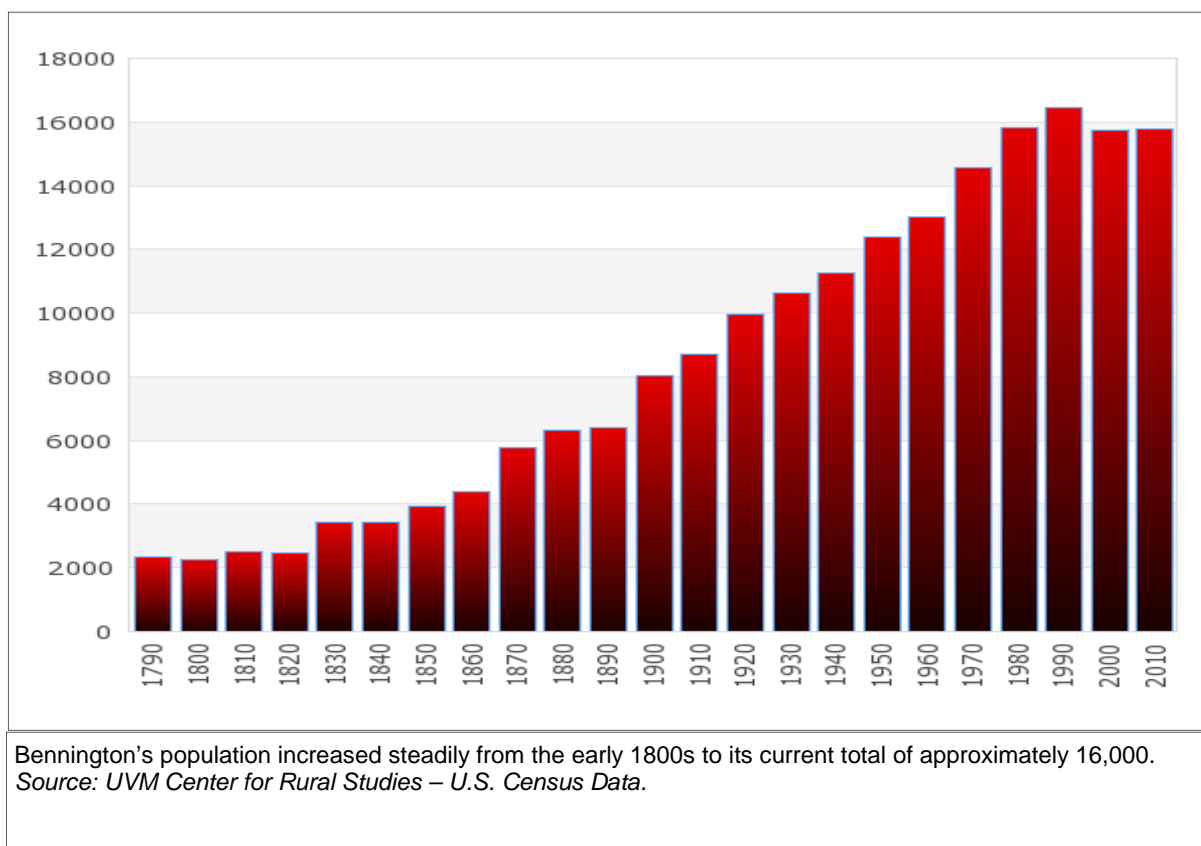
Trains came to Bennington in the mid-1800s and significantly impacted the town's growth and economic development for many years. The main line passed through North Bennington and a spur provided access to the downtown area where an important train station and rail yard were located. Other connecting rail lines included the "Corkscrew" line that entered town from the west and a line that reached from downtown into Glastenbury in the Green Mountains.



The first decades of the 20<sup>th</sup> century saw a number of important developments. An increasing reliance on automobiles led to a need to improve roads and most of the main roads through the area were paved by 1940. The first hospital, Putnam Memorial, now known as Southwestern Vermont Medical Center, was opened in 1918. The stock market crash idled many local industries in the 1930s, but new industrial enterprises began to take their place after World War II.

Bennington also began to develop as a center for education, culture, and recreation with the opening of Bennington College, improved access for tourism, and a growing interest in the arts. In recent years, the town has made an effort to preserve important historic and natural resources while encouraging new development that takes advantage of the area's rich history and an ever-improving transportation and telecommunications infrastructure. The town is now home to approximately 16,000 residents (including North Bennington and Old Bennington), a number that has remained relatively constant since 1980.

This population has dispersed somewhat as new homes have been constructed in rural areas which are not farmed as extensively as they once were. Agricultural operations are still important in Bennington, however, especially in the rich valleys in the southern and western



parts of the town. The mountainsides, to the extent that they were once cleared for timber resources and pasture, have largely reverted to forest and many of these lands have been conserved to ensure that they remain undeveloped.

Bennington remains the largest and most important center of population and economic activity in southwestern Vermont. It also contains important educational, governmental, health

care, and cultural institutions that serve Bennington County and surrounding rural areas in Vermont, Massachusetts, and New York.

### **Economic and Demographic Profile**

The 2010 US Census reported a total resident population of 15,764 for Bennington. Of that number, 1,643 were residents of North Bennington Village and 139 resided in Old Bennington Village. The population has stabilized showing a slight increase over the past few years following a slow decline in population after 1990. Bennington County includes 17 towns and has a total population of 37,125; Bennington being far and away the largest of those towns. The age-sex profile of the community is comparable to that of the county and state. Females outnumber males, 8,385 to 7,364, primarily because there are more women in the older age

<b>Population by Age Cohort – 2010 US Census</b>		
<u>AGE</u>	<u>BENNINGTON</u>	<u>COUNTY (%)</u>
Under 20	3,952 (25.1%)	23.5 %
20 - 34	2,963 (18.8%)	14.8 %
35 - 49	2,877 (18.3%)	19.4 %
50 - 64	3,132 (19.9%)	23.4%
65 and over	2,840 (18.0%)	18.9%

classes. The median age of the town's population is 40.8 years, an increase of almost three years from 2000, although lower than the county and state median age.

Bennington contains 3,716 families and 6,246 households (a household includes families as well as single persons living alone) within its borders (2010 US Census). The average family size of 2.88 persons and household size of 2.29 persons are nearly identical to the county averages.

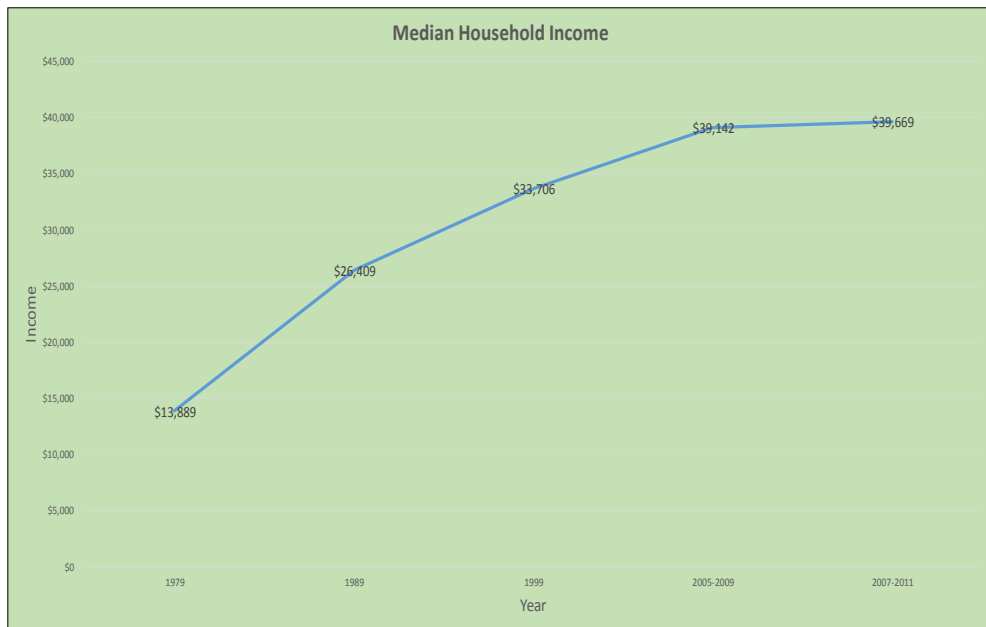
The town includes a total of 6,763 housing units. Of that number, 3,738 units are owner occupied, 2,508 are renter occupied, and 517 are vacant or used seasonally. Bennington contains the highest percentage of renter occupied units (over 37% of the total) of any town in the area.

The percentage of Bennington residents aged 25 and over with at least a high school degree (86%) is slightly lower than the total for the county as a whole (90%), and fewer Bennington residents hold a college degree (24% versus 33% for the county).

According to 2013 data from the Vermont Department of Labor, Bennington's total resident workforce was 7,807. The total number of jobs in Bennington at that time was 9,876 indicating that Bennington is a regional employment center. Most Bennington residents work in or near town, as their average commute is just 17 minutes. The average unemployment rate in 2013 was 5.8%, slightly higher than the countywide and state unemployment rates

Service industries are the major employers of Bennington residents, with manufacturing, retail, construction, and professional jobs also important economic sectors. The average wage

earned by a worker in Bennington has increased steadily over time to its current level of \$38,101, comparable to the county average, but lower than the average for the state.



The median household income in Bennington has risen over 60 percent since 1979, to its current level of \$39,669.

## Chapter 1 - A Vision for Bennington's Future

### 1.1 VISION STATEMENT

The Town Plan is part of a process that is intended to guide the community in a particular direction. For that process to be effective, it is imperative that a clearly articulated vision for its future be set forth and accepted by the town. The following statement is based on aspirations and values that are central to Bennington.

**As Bennington promotes its standing as an ever more important economic center, it will continue to provide opportunities for its residents to enjoy an outstanding quality of life by dedicating itself to its distinctive sense of place—a place characterized by its natural, scenic, cultural, and historic resources; its historic settlement pattern; its active and engaged community with a true sense of civic pride; an outstanding school system; efficient and responsive municipal services; an efficient, safe, and convenient transportation system; pleasant, efficient, and affordable housing—and a place where all citizens have the opportunity to participate in a diverse, sustainable, and resilient economy.**



Bennington as seen from the White Rocks lookout on Bald Mountain east of town.

## 1.2 GOALS

Specific goals provide focus and direction to the policy statements and recommended actions set forth in each chapter of the Town Plan.. These goals also are consistent with the 14 specific goals of 24 V.S.A. Section 4302.

1. **Support and strengthen Bennington's role as an economic center.** Continue to develop an economy that is based on businesses that provide satisfying and rewarding employment while maintaining high social and environmental standards. Provide public investment and support as appropriate to create a competitive business environment.

Promote the use of local products and resources in a manner that supports development of a sustainable local economy.

Recognize the importance to the community of a variety of economic enterprises. Support emerging new technology and service oriented businesses, traditional manufacturing, agricultural, and forestry-related businesses. Provide the infrastructure necessary to support desirable new technology-driven industries.

2. **Plan development to maintain the town's historic settlement pattern** of a well-defined urban growth center surrounded by rural countryside. Provide incentives for investment in the downtown and ensure that new development is consistent with the area's historic character and form. Support efforts to strengthen and revitalize existing residential neighborhoods near the town's center.

Development in rural areas shall respect the need to protect the town's natural resources and scenic landscapes. Sprawl—dispersed, auto-dependent development outside of compact urban and village centers, along highways, and in rural countryside—is costly, inefficient, and unattractive and will be strictly limited. The forest lands on the steep slopes of Mount Anthony, Whipstock Hill, and the Green Mountains must remain free from development and be reserved for forest and recreation related uses.

3. **Recognize the importance of significant natural, scenic, and historic resources.** Make use of public investment, regulation, and creative development techniques to protect open spaces, natural and fragile areas, scenic views, and historic sites, structures, and districts that are significant to the community.

Support appropriate utilization of local natural resources for economic and renewable energy development while ensuring that any resource extraction is accomplished in an environmentally sensitive manner.

4. Support policies, public investments, and projects undertaken by both private and non-profit developers that help **ensure the availability of an adequate supply of housing that is affordable and desirable** for all of the town's residents. Single and multi-family opportunities all must be available in sufficient quantity in the community. Efforts should focus on increasing the percentage of owner-occupied housing. Concentra-

tions of new housing will be located near employment and community centers. Promote rehabilitation and reuse of existing sites and structures near the town's center for housing development.

Housing development in rural areas must be carefully planned to protect the town's rural character and to avoid placing excessive demands on public transportation facilities and utilities.

5. **Provide a safe, convenient, and efficient transportation system** that includes a safe and efficient system of roads and bridges and facilities and services that encourage and accommodate other modes of travel, including bicycle/pedestrian and public transit.

Recognize the importance of convenient and well-planned parking and pedestrian facilities to the vitality of the town and provide support for their development.

Support expansion of freight and passenger rail service and bus service for the town and region and ensure that airport facilities and services are adequate to meet the needs of businesses.

6. **Ensure that community facilities and services are sufficient to support a growing resident population and the economic needs of the community.**

High quality educational, vocational, and child care opportunities must be available to meet the needs of all residents and businesses.

High quality medical services must continue to be available to meet the needs of all residents.

Municipal utilities shall be maintained in good condition and any extensions or expansions coordinated with the town's land use plan and growth objectives.

A variety of recreational facilities and services must be available for residents and visitors. Support efforts to maintain or provide public access to outdoor recreational opportunities - such as forests, trails, streams, and safe bicycling routes - that are important to the community.

Continue efforts to minimize solid waste generation and ensure that safe and cost-effective disposal methods are available.

7. **Promote the safe and efficient use of energy and utilization of renewable energy resources.** Support efforts to develop renewable energy facilities, a smart grid, and other technologies that will help the area meet a significant share of its energy needs. Pursue efforts to reduce overall energy use in all sectors and minimize the energy required to operate municipal buildings, vehicles, and other facilities and equipment.

## Chapter 2 - Economic Development

### 2.1 Overview

Bennington is an important economic center serving southwestern Vermont as well as nearby communities in New York and Massachusetts and is identified as a principal regional growth center in the Bennington County Regional Plan. Economic conditions in Bennington have changed over time, as they have in other parts of the state and the country. Although some industries have contracted and others have expanded, the economic strength of the town continues to lie in its diversity.

The Bennington Strategic Economic Development Plan, adopted in 2013, establishes economic development objectives and guidelines based upon the unique characteristics and assets of the Bennington region. Bennington can use that plan as a resource to promote a *diverse* and *sustainable* economy for the region that will support economic opportunity and a high quality of life for residents of the area. The plan stresses the importance of an economic development strategy that is, like Bennington's economy, diverse, with efforts focused towards three main goals:

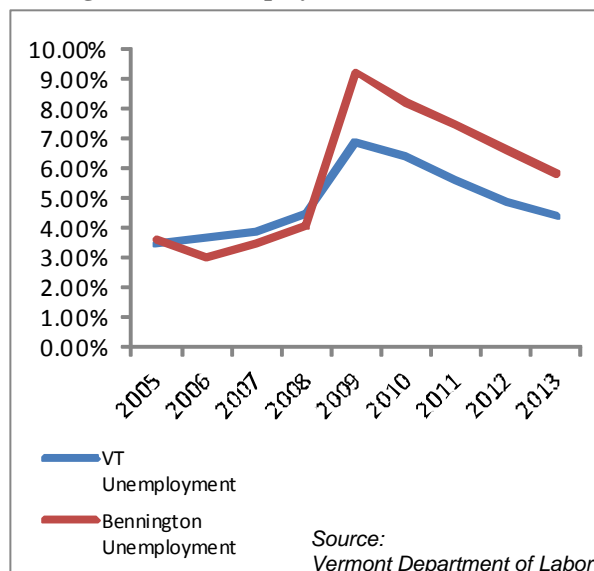
1. Increase job opportunities and the competitiveness and quality of the workforce to meet the needs of existing and new businesses in Bennington.
2. Develop and maintain critical infrastructure necessary to promote economic vitality.
3. Increase economic activity and improve the quality of life in Bennington by focusing on local businesses and existing assets.

Following the adoption of the Bennington Strategic Economic Development Plan in 2013, the Bennington Economic Development Partners (BEDP) agreed to support the town in its implementation of the strategies and recommendations contained in the plan. The BEDP includes representatives from the town, its economic development partners, the public school system, local colleges, Southwestern Vermont Health Care and Bennington businesses. The group meets regularly to discuss economic development issues, report on progress of priority strategies within the Strategic Economic Development Plan, and address through various committees other specific issues related to Bennington's economy.

### 2.2 Current Economic Conditions and Recent Trends

Since 2010, Bennington's economy, like most of the rest of Vermont, has been slowly recovering from the preceding period of recession. In that time, as you can see in Figure 2.1, the unemployment rate has remained high rela-

Figure 2.1 - Unemployment: 2005-2013



tive to the state average. In September of 2014, Bennington's unemployment rate was 5.6%, compared to Vermont's 4.2%. Most economic sectors have slightly declined over the previous decade, but diversity has allowed the economy on the whole to remain relatively strong (when compared to many other communities of similar demographics). That diversity can be seen in Table 2-1, which includes data from 2003, 2008, and 2013 from the Vermont Department of Labor.

As seen below in table 2-1, which includes a ten year span of employment and average wage by economic sector, health and social service, manufacturing, retail, and education jobs make up the majority of Bennington's Economy. Furthermore, in the instance of health and manufacturing, these jobs offer some of the highest average wages in Bennington. In fact, health and manufacturing generate more than half of the total wage earnings in Bennington—more than all other sectors in table 2-1 combined. However, while the average wages have consistently gone up in these sectors, the number of jobs has gone down in each.

**Table 2-1 - Bennington Employment and Average Wage by Sector: 2003, 2008, 2013**

Economic Sector	2003		2008		2013	
	Employment	Avg. Wage	Employment	Avg. Wage	Employment	Avg. Wage
Health and Social Services	2816	\$32,890	2846	\$41,334	2660	\$46,485
Manufacturing	1700	\$36,645	1835	\$42,162	1601	\$45,575
Retail Trade	1550	\$21,857	1561	\$24,438	1521	\$25,867
Government	1521	\$35,614	1454	\$37,218	1475	\$41,510
Education	1232	\$30,071	1328	\$35,468	1349	\$39,755
Leisure, Hospitality	805	\$11,872	812	\$13,601	741	\$16,295
Professional Services	372	\$26,317	447	\$35,013	581	\$31,234
Other Services	294	\$17,385	230	\$19,373	246	\$21,825
Information	264	\$30,487	261	\$39,868	219	\$42,271
Finance, Insurance, Real Estate	266	\$36,796	240	\$41,842	212	\$48,085
Construction	250	\$27,887	283	\$33,907	174	\$38,335
Transportation	148	\$27,519	150	\$34,018	99	\$29,833
Wholesale Trade	113	\$39,734	113	\$46,238	54	\$54,746
Natural Resources	46	\$17,024	15	\$23,323	23	\$29,089

Despite a few specific notable exceptions (such as education or government), most economic sectors have followed the trend of the overall economy—with the total workforce in Bennington decreasing around 1% since the beginning of the recession in 2008. During that same period, unemployment within the workforce in Bennington reached a high of over 9%, far more extreme than Vermont's unemployment spike in 2009 of around 7%. Figure 2.1 illustrates the impacts of the recession on unemployment in Bennington. Nonetheless, throughout this time, average wages in Bennington have continued to rise at rates almost identical to the state as a whole, each increasing 22% since 2005. Total, the overall average wage in Bennington is over \$38,000.



### 2.3 Key Economic Resources

The town recognizes the importance of maintaining a diverse and sustainable economy that provides satisfying jobs and good wages for residents. Key economic sectors that will be particularly important to the town in the future include:

- Materials-Related Light Manufacturing (examples: Abacus Automation, Plasan North America, Kaman Composites, NSK Steering Systems)
- Specialty Electronics and Metal Products Manufacturing (example: Eveready, Vishay/Tansitor)
- Natural Resource-Based Manufacturing (examples: Bennington Potters, Catamount Glass)
- Specialty Publishing and Printing (example: Hemmings Motor News)
- Education Services (examples: colleges, elementary and secondary schools – public and private)
- Health and Social Services (examples: Southwestern Vermont Health Care, United Counseling Service)
- High Value-Added Professional, Scientific, and Technical Services (example: Global-Z International)
- Tourism-Related Enterprises and Recreational Manufacturing (example: Bennington Battle Monument, Bennington Museum, specialty retail stores, restaurants, and accommodations)
- Retail and Professional Services

These businesses are well-positioned to capitalize on significant economic trends that have emerged in recent years. Bennington is part of a larger economic region and can benefit from ties to areas such as New York’s capital district. At the same time, markets are becoming much more global and businesses need to be able to interact in that broad marketplace. Technology is having profound effects on innovation and efficiency in business practices and products. Quality of life issues are of great importance in business location/relocation decisions. Support for the local workforce, including educational services, child care facilities, and housing availability, are more critical than ever. All of these factors must be recognized and acted upon for the local economy to thrive.

A number of resources in Bennington are available to businesses that are attempting to capitalize on these trends. The town should work to ensure that these resources are widely appreciated, utilized, and improved whenever possible:

- Availability of quality higher education in the area (there are over 35 institutions of higher education within a 50 mile radius of Bennington).
- An excellent quality of life including good health care services, and natural, cultural, and recreational resources.
- An attractive, historic, and vibrant downtown.
- Proximity to New York’s Capital District and the Berkshires of Massachusetts.
- Access to major tourism markets and location at a key gateway to Vermont.
- Highway and rail transportation infrastructure.
- WH Morse State Airport.

- Strong technology infrastructure.
- An adequate supply of available industrial sites.
- An active workforce investment board and technical education center.

Areas that should receive special attention to further the town's competitive economic position include:

- Adequate education and workforce training, with focus on targeted sectors of projected growth. This should include a comprehensive internship program and efforts designed to promote exposure to local employment opportunities to students at all ages.
- A mechanism of regular communication with businesses to monitor unmet needs and opportunities.
- Affordable and high quality housing for employees in all workforce sectors.
- Adequacy of transportation and telecommunications systems to meet industrial and personal demand. Especially important will be connections to regional rail systems.

There are a number of strategies that can help further strengthen the economy of the town and region. The six principal strategies include: strengthening regional collaboration between various governmental and business organizations (including entities in western Massachusetts and eastern New York) targeting strategic job sectors (retention, expansion, and recruitment), improving education and training for the workforce, further enhancing transportation (especially rail) and telecommunications infrastructure, strengthening housing supply and choice, and facilitating access to investment capital. The town should participate in ongoing efforts to support their effective implementation.

## **2.4 Economic Sectors**

A brief overview of the issues and opportunities facing the individual market sectors that comprise Bennington's economy will help the town identify policies and actions that will be most beneficial to the community.

### Manufacturing

Manufacturing has been a vital part of the local economy since shortly after the town's founding. Factories and mills were developed near the town's center and along streams and rivers to serve the needs of area businesses and residents. The products manufactured at those sites have changed over time and some of the buildings have been replaced or converted to alternative uses, but a number of important manufacturing enterprises continue to operate successfully in the town, such as the Eveready Battery Factory and Bennington Potters.

On the whole, between 2003 and 2013, manufacturing jobs in Bennington county decreased by 6%, following a national trend of decline. However, average wages in the sector rose by about 25%, meaning that the total wages created by manufacturing in Bennington has risen significantly (17% since 2003), and continues to rise.

Newer manufacturing businesses are primarily located in industrially zoned land northeast and northwest of the town center near the US 7/VT 279 interchanges. Some of Benning-

ton's largest manufacturing employers – NSK Steering, Abacus Automation, Kaman Composites - are located in these districts and available land and infrastructure exists to accommodate additional industrial growth in these locations. The town wants to ensure that these high quality businesses and employers remain in the community and grow, and that new manufacturing businesses are attracted to Bennington. Such businesses produce specialized high-value products, offer good wages, and are environmentally friendly. Factors crucial to the recruitment and long-term viability of these businesses are summarized below.



NSK Steering is an important local industry and major employer.

Given the significance of the manufacturing sector within the local economy, the following needs of manufacturing businesses should be considered in all related development and planning:

- An adequate amount of industrially zoned land with good access and infrastructure. There is currently a good inventory of available industrial land and buildings in Bennington. The town should work with the BCRC to identify and reclaim “brownfield” sites (unused or underutilized former industrial properties that may have some level of environmental contamination) and work toward industrial reuse of those properties where appropriate.
- Transportation facilities must be available to provide ready and efficient access to suppliers and markets. Completion of planned roadway improvements along Kocher Drive and Northside Drive, maintenance and improvement of the railway corridor, and air transportation services at the WH Morse Airport are all critical.
- Because of concerns over long-term cost and availability of energy for industrial processes and transportation, efforts must be made to establish reliable local energy from renewable sources and to ensure that alternative transportation to and within the region are available.
- An educated and capable workforce, trained in the new technologies that manufacturing concerns rely on, must be maintained and developed further. Educational facilities and programs must be responsive to the needs of these industries.
- Housing, child care, and related services must be available for workers.
- Public and private business development interests must ensure that adequate financial resources can be made available to ensure that the town is competitive for businesses seeking to locate or expand in Bennington.
- Maintain and enhance the town's unique quality of life by supporting important community services and recreational and cultural resources.

### Information and Technology

Businesses in this category include specialty publishing, graphic design, software engineering, internet/website design, and technology manufacturing and related services. Many of these businesses operate out of relatively small sites in and near the downtown and surrounding office, professional, and mixed use districts. Notable examples include Hemmings Motor News, a larger enterprise occupying a renovated building on West Main Street, and GlobalZ International, located in the industrial area northwest of the center of town.

Like manufacturing, information and technology businesses in Bennington have seen a decline in total employment numbers but an increase in average wages, which remain significantly higher than the overall average wage in Bennington or in the state of Vermont.

These technology-driven businesses also have specific requirements for success. Principal among those are an educated and skilled workforce, an adequate supply of conveniently located buildings to house their operations, and state of the art technology infrastructure. The town must be sure that light industrial and commercial/mixed use properties remain available for growth in this sector

It also is important that local educational and career development facilities offer courses and training in the technologies that are in demand by these businesses. Access to educational opportunities as well as internships among the local workforce will be critical to Bennington's future economic vitality in this critical sector.



Mount Anthony Union High School and the Career Development Center must provide effective training for the town's future workforce.

Because businesses of this type have a great deal of flexibility in where they can locate, quality of life issues are of extreme importance in recruitment and retention. The quality of Bennington's public schools, cultural and recreational opportunities, a vibrant downtown, and the beauty of the natural environment are key economic development factors for this reason.

### Health Care, Education, Social, and Governmental Services

This service sector is the town's largest employer, providing around 5000 jobs, about half of Bennington's work force. These facilities and the services they provide are of great importance to the town's residents and to the other economic sectors. Maintaining excellence in health care, education, and other services is fundamental to ensuring a high quality of life for current residents of Bennington and for attracting new business to the community.

The major regional hospital, Southwestern Vermont Medical Center (SVMC) is the town's largest employer. There also is an array of related medical offices, treatment centers, and residential care facilities, many located nearby SVMC in the southwest quadrant of town. A public high school, three public elementary schools, a vocational training center, a middle school, and several private schools serve the town and employ many professionals and support staff. Bennington is a center of post-secondary education as well, with Southern Vermont College lying on the lower slopes of Mount Anthony, Bennington College in North Bennington, and the Community College of Vermont maintaining a facility in the downtown. These colleges collectively represent around 1,700 students annually. There are also two smaller higher

education institutions that have recently opened in Bennington, a satellite campus of Vermont Technical College, which focuses on healthcare education, and Northeast Baptist College .

In addition to municipal government and state judicial facilities, several Vermont state offices serving the entire region are located in or adjacent to the downtown.

Many of these facilities and services rely directly or indirectly on the support of local, state, or federal governmental funding, programs, and initiatives. Such support must be at a level sufficient to maintain facilities and services that are as good as or better than that which can be found in other communities. Competitive wages and a high quality of life are needed to attract and retain the people that will make these enterprises successful.

These businesses and organizations also require good access to information and technology as well as a skilled workforce. Maintaining up-to-date technology infrastructure and education and training programs will support continued strength in this growing economic sector.

### Other Professional Services



Bennington's historic downtown is the center of commercial activity and a key economic development asset for the town.

Many professions offer services—financial, insurance, real estate, legal, and various administrative and technical functions—that are important to the town's economy. There are numerous small professional businesses located in and near the downtown, either in the central business district or in mixed residential/office districts. These businesses not only provide valuable services, but also add a great deal of vibrancy to the town center. A sizeable workforce in and near the downtown supports commercial businesses and reinforces the importance of the area to the community.

Persons employed in these businesses must be educated, skilled, and very familiar with the technology that allows for information sharing and analysis. Existing educational opportunities must be maintained and enhanced to ensure that the needs of the workforce are met. The town also should seek to develop and maintain a high level of technology infrastructure in and around the town center where many of these businesses are located.

### Retail Trade

Retail businesses—the stores where residents of Bennington and the surrounding area, as well as visitors to the town, purchase everything from food to automobiles—have always been an important part of the local economy. Historically, retail businesses were concentrated in the downtown and that area continues to support a significant number of stores today. There has been a tendency toward conversion to specialty shops, galleries, and specialized merchandise in the downtown as larger department stores and chain retail outlets have become established in the commercial districts and plazas along Northside Drive, VT 67A near the new VT 279 interchange, and Kocher Drive.

Employment within the retail sector has remained relatively consistent over the course of the previous decade. Wages have increased by almost 25% in that time, but still remain rela-

tively low compared to other employment sectors or the average wage for a retail sector job in Vermont, which in 2013 was over \$27,000.

The large department, grocery, home supply, and chain outlets in the planned commercial districts provide low-cost goods to consumers and employment for many residents. At the same time, over-development of this type of commercial use would have a negative impact on the vitality of other commercial areas, especially the downtown. The town has recognized that a balance must be achieved and has implemented regulations that require careful building and site design as well as community impact studies prior to establishment of major new retail outlets. These studies should also consider the quality of jobs being provided and seek to continue to increase the wages offered in this sector. The downtown and planned commercial area developments will together support Bennington's position as the retail hub for the region.

Because Bennington is an active regional shopping destination, it is important that transportation infrastructure be maintained in good condition and improved where necessary. Careful site planning and "access management" along highways and commercial corridors are necessary to ensure that traffic congestion and safety concerns do not discourage people from driving into the commercial areas of the town. Adequate parking and pedestrian facilities are equally important to providing a convenient and enjoyable shopping experience. With the completion of the east-west VT 279, it will be critical to promote and facilitate access to the downtown. Local business organizations and governments must continue efforts to enhance the downtown and provide amenities for residents and visitors. Ongoing streetscape improvements and new business development has led to increased investment, interest, and vitality in this important commercial center. Marketing programs and facilities, including the Molly Stark Byway, Shires Byway and tourist welcome centers will further enhance interest in the downtown.

Alternative transportation, including both walking and biking, should also be encouraged through all development and development policy. This has particular impact on retail enterprises because alternative transportation not only offers access to a greater percentage of the population, it has also been shown to increase the tendency of passersby to shop.

Careful planning and design of new or redeveloped retail properties in the planned commercial districts is needed to ensure that these areas remain attractive and successful. The Bennington Growth Center Plan demonstrated that an adequate amount of space for future retail growth exists in established commercial districts. The extension of retail development into areas not currently zoned for such uses is not appropriate.

Retail businesses also require a dependable skilled workforce. Educational and training opportunities should provide workers with the skills needed to succeed and advance in this field.

### Tourism and Recreation

Bennington is an important tourist destination because of its unique historic character and wealth of natural resources, and has the potential to significantly increase economic activity in businesses related to tourism and outdoor recreation. Attractions for tourists to Bennington include three historic districts, museums, covered bridges, the Bennington Battle Monument, scenery, and recreational opportunities available in town and the surrounding countryside.

In addition to the many in-town recreational facilities, Bennington lies next to the Green Mountain National Forest and close to ski areas, lakes, rivers, scenic highways, and other historic towns. Because Bennington contains the greatest concentration of lodging establishments,

restaurants, and retail stores in the area, it is a logical place for tourists to stop while visiting. Bennington should consider advocating for the conversion of a portion of the Green Mountain Forest to the Green Mountain National Park as National Parks generate a large amount of tourist activity .

Information and facilities for visitors to the area are critical to successful tourism and recreation related economic development. Marketing campaigns through the Chamber of Commerce, Better Bennington Corporation, and other organizations need to reach a wide market through print, radio/tv, and internet-based communications. Information on area attractions also should be readily available at local businesses.

The Bennington Visitors Center, located at the intersection of Route 7 and Route 279, north of downtown Bennington, provides information on a variety of tourist, retail, and recreation activities in the town and region. It has the potential to serve a large population of out-of-state tourists due to its location at the major vehicular entry point into southwestern Vermont. As such, it is critical that this tourism and recreation resource for our community is utilized to the greatest extent possible.

Clear directions need to be provided to attractions, and once there, tourists must be able to park and move about safely . Businesses and tourist attractions must provide desired amenities and visitor-oriented customer service. Technological resources, a skilled workforce capable of utilizing it, a well organized marketing and branding campaign, and funding for marketing programs are all necessary components in efforts to inform the public about Bennington as a tourist and recreation destination.

### Natural Resources

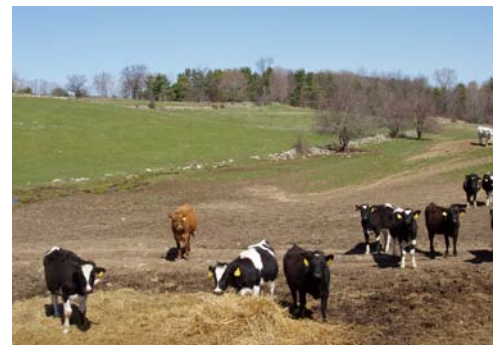
Bennington includes a number of businesses based on agriculture, forestry, and manufacturing of value-added products derived from local resources. Agricultural areas in Bennington are located primarily in the western and southern valleys. Forest resources are found in woodlots in rural areas of the town and in the Green and Taconic Mountains.

The working landscape of the town once emphasized dairy and grain production; recently, considerable diversification into specialty areas such as tree farms, maple products, orchards, and wood products manufacture has taken place. These businesses occupy a large portion of the town's rural lands. The retention of the traditional landscape and the employment provided by these economic sectors is very important to the local economy.

Development in important agricultural and for-



Bennington's unique scenic and historic resources support tourism-related businesses.



The working landscape is an important part of the town's heritage and its present day economy.

est areas should be planned to preserve the present and future viability of economic ventures that rely on the town's natural resources. Support for such businesses is available through state and federal technical assistance, purchase of conservation easements by land trusts, use-based property taxation, and other programs. It will be important that training in these fields remains available to ensure that existing businesses can continue to operate and grow in the future.

### Construction and Trades

Construction and related trades and services are very important to Bennington's economy. In 2013 there were 46 business enterprises in Bennington working within the construction sector. The availability of a skilled local workforce is absolutely vital to this market sector. If workers are not available locally, work in the community will be exported to businesses from other areas.

This is especially important given the existing condition of the town's housing and built environment infrastructure, which is considerably older than state averages. Opportunities for many renovation projects will coincide with economic expansion in Bennington, and a strong local workforce within the construction sector will be vital to these efforts.

Quality programs at the Career Development Center and other training and workforce development programs are important to these businesses. Sufficient land in industrially zoned areas will ensure that large and growing construction firms are able to maintain their businesses in Bennington. Access to information and communication technology will support these businesses as well.

## **2.5 Sustainable Local Economy**

Economic development always has relied on the availability of energy, and as pointed out in the energy chapter of this plan, the long-term cost and availability of energy is a serious issue that needs to be confronted when planning for the local economy. As abundant and relatively inexpensive nonrenewable energy sources are depleted, local, regional, and national economies will have to adjust to new models that do not rely on continued broad-based growth requiring expanded energy inputs. The reality is that within a very few years, energy constraints will require that our economies function with less energy than that which currently is being consumed. This realization has led to the formation of a number of organizations and efforts focusing on sustainable local economies. The premise of all such efforts is that economic systems must be developed that can function with less total energy. Such systems orient toward local production and markets, fueled by locally produced energy, and served by transportation modes that do not rely on gas and diesel fueled cars and trucks.

The economic sectors and needs identified earlier in this chapter will remain important to the community, but will need to be adapted over time to take advantage of opportunities offered by things such as local renewable energy resources, manufacturing of goods using locally available resources, and industries that support economic sectors that function with lower energy inputs.



Key points in the development of a sustainable local economy include:

- Conserving agricultural and forest land and supporting farm and forest product businesses. A strong emphasis on production of food for local markets significantly reduces energy use and keeps local money from being exported.
- When the community is faced with a particular need, the first methods considered for meeting that need should be those involving use of local resources.
- Develop properly scaled industries for local products that add value to those resources.
- Produce as much of the community's energy demand as possible using local resources (while working to significantly reduce total energy use through conservation measures).
- Ensure there are opportunities and incentives for money paid into the local economy to circulate within the community and decrease expenditures that lead to flows of money outside the community.
- Make sure the town invests in itself: maintaining its buildings, land, cultural, and recreational resources, as well as developing public transportation, rail infrastructure, and bicycle and pedestrian systems.
- Provide quality education for the town's children.
- Develop markets for local goods and manufactured products in nearby industrial areas.
- Retain and develop local human resources.
- Investigate possible uses of local currency, community-funded loan programs, or other systems of barter and exchange.

## **2.6 Economic Development Policies and Recommendations**

1. Using the goals and action steps laid out in the Bennington Strategic Economic Development Plan and working through the framework of the Bennington Economic Development Partners, maintain and enhance the role of Bennington as the region's principal economic center.
2. Support economic development that provides high-quality jobs while capitalizing on the town's strengths. Economic development activities shall occur in harmony with the town's historic character, attractive physical environment, and traditional development pattern of a densely developed center surrounded by rural countryside.
3. Develop and maintain a diverse and sustainable local economy that will thrive in changing regional, national, and international economic conditions. Support and strengthen the positive balance that currently exists between various economic sectors in Bennington.
4. Emphasize re-use of existing buildings and vacant commercial and industrial sites, including any brownfield sites that are identified in town.
5. Direct new growth and development to areas identified as appropriate for such development in the Land Use section of this Plan. Ensure that an adequate supply of

industrial land remains for future growth and that commercial development is focused in those areas currently planned for those uses.

6. Protect the long-term viability of natural resource industries by preserving rural open spaces and through good stewardship of the land.
7. Support programs that attract new business to the community while working to ensure existing businesses remain and expand locally.
8. Invest in programs that support workforce development outcomes that meet the needs of area employers.
9. Work to maintain and enhance natural, historic, cultural, and recreational resources that provide an outstanding quality of life to attract new businesses, employees, and tourists to Bennington.
10. Promote the creation of the Green Mountain National Park from a portion of the Green Mountain National Forest .
11. Ensure that an adequate supply of quality affordable housing is available for all people of all income levels, eliminating housing as a barrier to personal financial security or workforce expansion.
12. Maintain and improve the infrastructure that is necessary to support desirable economic development. Such facilities include municipal water and sewer, roadways, bike & pedestrian facilities, rail transportation, bus service, the WH Morse State Airport, electricity supply and transmission, and state-of-the-art telecommunication facilities.
13. Recognize the growing economic importance and potential of specialized service and manufacturing market sectors, health care and education, and of tourism and recreation, local construction and trades, and diverse retail. Actively support efforts to develop these and other emerging businesses within the town.
14. Work cooperatively with nearby towns and the broader economic region, including New York's Capital District, the Berkshires of Massachusetts, and the State of Vermont to further economic development opportunities.
15. Continue efforts to maintain and enhance downtown as the commercial, institutional, civic, cultural, and residential center of Bennington. Maintain the "Designated Downtown" status as established through the Vermont Agency of Commerce and Community Development.
16. Emphasize investment in ventures and activities that support a sustainable local economy, with particular consideration given to local foods and renewable energy.

## Chapter 3 - Land Use

### 3.1 Existing Land Use

Current development patterns in Bennington reflect the town and state goal of “maintaining the historic development pattern of compact village and urban centers separated by rural countryside.” The most densely developed part of town is located near its geographic center, in and around the historic downtown. Commercial, residential, cultural, and institutional uses are found in and immediately adjacent to this relatively small, but vitally important part of the community.

Additional concentrations of residential development are found along the traditional grid network of streets that surround the downtown. Newer residential development and subdivisions, at a moderately high density supported by municipal water and sewer services, lie further from the center, but within the town’s Urban Growth Area (Map 3-1).



Attractive homes and trees line many of the local streets in Bennington’s traditional neighborhoods.

Large scale commercial developments including department stores, grocery stores, car dealerships, and similar uses are found north of the town’s center, lying along the Northside Drive / Kocher Drive corridor.

A number of important industrial buildings are located in land zoned for such uses off East Road, Bowen Road, and near the VT 67A/VT 279 interchange. Other industrial uses occupy buildings located along the streams that were once used for power generation in the town’s historic industrial core.

Major public buildings and service facilities are found in and around the historic village center. The elementary schools and the high school are located just outside of the central business district. The middle school is slightly further from the town center, located on East Road adjacent to the alignment of the eastern segment of VT 279 and almost across the road from Willow Park. The Southern Vermont Health Care campus and many supporting personal service businesses are located southwest of the downtown.

Some areas adjacent to the downtown support a mix of uses that are transitional between the historic commercial district and residential or non-traditional commercial areas. Lower Elm Street, for example, includes many older homes that have been converted to offices, and Benmont Avenue includes a mix of historic, commercial, residential, and industrial buildings and uses. Special attention is needed to ensure that these areas retain their historic integrity as well as their economic viability.

All of the concentrated development referred to above is located within the Urban Growth Area. The town’s rural areas are located beyond the Urban Growth Boundary, where agricultural landscapes blend with forested mountainsides. Residential development in these areas is of a much lower density and the few pre-existing commercial uses are confined to limited sites along state highways. The Green and Taconic Mountain Ranges remain forested and free of development.

Land use policies and public investments shall be designed to promote new development, infill development, and redevelopment of existing properties within the Urban Growth Area.

Although development will occur outside of this area, it will be much less concentrated and shall not include new commercial uses because such uses are incompatible with the rural character of the area. These outlying rural areas also contribute important historic and scenic qualities to the town, and new development in these areas must be carefully planned to protect those resources.

As noted, the downtown is located in Bennington's historic business center. It is an important regional retail and service center as well as a civic center, with town, state, and federal offices. The town has made a commitment to maintaining a strong and vital downtown to preserve the community's unique character and to support economic development.

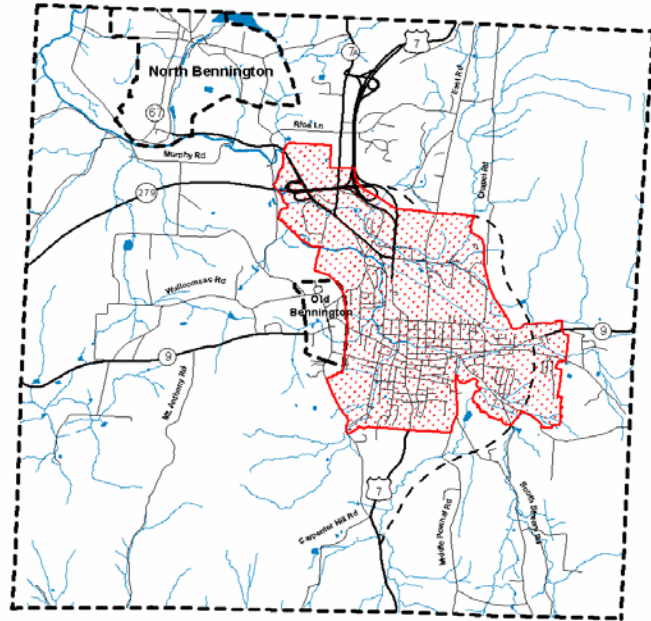
Bennington's downtown is recognized as a designated downtown and Bennington has established a designated growth center. Downtown designation provides tax credits, grants, training and technical services to help preserve and revitalize historic downtowns and create strong communities. Growth center designation recognizes municipalities that demonstrate a capacity to plan and invest in vital, walkable, mixed-use centers. Currently, Bennington is one of six municipalities with a state designated growth center.

These state designations, offered through a program of the Vermont Agency of Commerce and Community Development, provide regulatory, financial, and other incentives to encourage compatible development within their boundaries. Bennington's designated downtown and designated growth center are shown on Maps 3-3A and 3-3B.

The historic villages of Old Bennington and North Bennington are separately incorporated municipalities, but lie within the town's boundaries. Both of these unique villages add a mix of residential, commercial, and institutional uses at a smaller scale than found in Bennington's downtown.

### 3.2 Land Use Plan

The town seeks to direct growth and development in a way that reinforces the existing settlement pattern of a concentration of mixed uses within the Urban Growth Area surrounded by open rural countryside. A sufficient amount of land must be available to support new growth and economic development opportunities. At the same time, policies and regulations must be implemented to ensure that new development enhances the town's unique character and furthers this Plan's Vision Statement and Goals.



Map 3-1 The shaded area represents Bennington's Urban Growth Area. The greatest density and diversity of land uses are to be restricted to this area. A formally designated "Growth Center" has been approved and lies entirely within the Urban Growth Area.

The following **overall objectives** of this Land Use Plan will guide the specific policies and recommendations for each land use, or zoning, district:

- Encourage relatively dense and diverse development within the Urban Growth Area and ensure that there is a clear demarcation between urban and rural areas at the Urban Growth Boundary.
- Require new development to strengthen and support the town’s existing land use pattern and historic and scenic qualities.
- Provide development opportunities that allow for continued high quality economic development that will support Bennington’s position as the regional growth center.
- Support Bennington’s historic downtown as the commercial, civic, and cultural heart of the community. Necessary retail services, including groceries, should be provided within this area to serve surrounding residential areas.
- Expand opportunities to create an adequate supply of a variety of housing types.
- Maintain the rural character of the outlying countryside and support agriculture, forestry, and recreational uses in these areas as well as carefully planned low-density residential uses.
- Plan development in a manner that avoids commercial or residential sprawl and which is consistent with the efficient provision of municipal services and the protection of important natural, scenic, and historic resources.
- Maintain the integrity and quality of established residential neighborhoods.

These objectives are implemented through the municipal Land Use and Development Regulations (LUDR) which divide the town into a number of zoning districts. Each district has a unique set of allowed uses and dimensional requirements, and some have special design or resource protection standards. The LUDR also includes the regulations that govern the subdivision of land.

Although the LUDR has served the town well, it is rather lengthy and complex and relies on a traditional method of segregating uses and specifying density levels to achieve the planned community character and development type. It may be possible to achieve the town’s land use objectives with a simplified “form-based” land use ordinance.

A form-based ordinance such as the “Smartcode” model integrates zoning and subdivision regulations, public works standards, and architectural controls, much like the current LUDR, but with simplified land use districts. The form-based regulations focus on the physical form of buildings and areas while promoting a vibrant downtown, pedestrian-friendly neighborhoods, conserved rural open lands, housing diversity and alternative transportation options. The ordinance also can be used to restrict costly and inefficient sprawl and to promote redevelopment of areas that currently diverge from the town’s land use vision.

The Planning Commission should review ordinances like Smartcode, evaluate their effectiveness in communities similar to Bennington, and consider developing a comprehensive form-based ordinance to replace or complement the current LUDR.

## Land Use Districts

The Municipal Land Use and Development Regulations are based on the following land use district designations and descriptions. Those Regulations identify specific use and dimensional standards for each district. The lo-



cation of the districts are represented graphically in the land use maps that follow this section (Maps 3-2—3-4).

### Downtown and the Historic Central Bennington Design Review District

Bennington's downtown is the historic heart of the community. The character and vitality of this unique area must be retained to support the social, cultural, and economic goals set forth in this Plan. "Downtown" refers to the Central Business District and the relatively densely settled areas surrounding it. Map 3-4 shows the downtown area and the regulatory design review district.



Historic buildings and an attractive streetscape are critical to the success of Bennington's downtown.

The downtown includes a wide variety of commercial, civic, institutional, cultural, and residential uses. This mixed use environment is critical to maintain the vibrancy of the area and includes several zoning districts supporting this type of mixed use environment. Special site and building standards ensure high quality development.

The town has taken a number of actions to improve the quality of the downtown. Special funding is provided through a Downtown Improvement District and an organization, the Better Bennington Corporation, has been set up specifically to focus on downtown issues related to design, economic development, and marketing and promotion. Because of these efforts and the historic significance of the area to the community, Bennington's downtown is formally recognized as a Vermont *Designated Downtown* (Map 3-3B), providing special opportunities for state-sponsored funding and redevelopment initiatives.

Designation has supported revitalization of the downtown area through several key initiatives:

- Access to tax credits has supported rehabilitation and improvement of existing buildings, advancing this plan's goals of innovative reuse of existing downtown structures to maintain economic diversity and historic character.
- Implementation of traffic calming measures and erection of information signs has improved access to the downtown's historic district and businesses, in keeping with the plan's goal to support this area as a key economic center for the community and region.
- Coordinated state brownfield and municipal planning grants have been awarded to the town to complete and inventory of underutilized and vacant downtown properties, identify reuse opportunities, and to market the properties to businesses and developers. This ongoing project is expected to facilitate access to future public and private investment in the downtown, consistent with the plan's goals of increasing the density and diversity of development in the area.
- Ongoing funding for downtown programs and promotion is provided through the improvement district noted above. All of these programs contribute to coordinated efforts to achieve the plan's goals of ensuring that the downtown remains the economic and cultural center of the community.
- A recent state-funded planning project identified a need for renovated housing units

in and around the downtown area, consistent with this plan's objective of supporting a walkable community with residential development located convenient to stores, jobs, and essential services in the downtown. Preliminary plans for mixed-use housing at key downtown locations have been developed and are being pursued, supported by the downtown designation.

In addition to the designated downtown, Bennington's urban area is recognized as a designated growth center. The growth center program provides incentives for municipalities to plan for growth in and around downtowns and village centers, and to conserve the surrounding working landscape. Growth centers are defined as areas with concentrated, higher density, mixed-use developments.

Bennington's growth center contains the areas with the highest density of development in the town. It encompasses eleven land-use districts with a variety of development, which can be seen in Map 3-3A. The incorporated mix of land uses include retail, office and other commercial businesses, civic, recreational, industrial, and residential uses, including affordable housing, within a densely developed, compact area. It is important to the Town that the growth center support walking, public transit and alternative forms of transportation.

The Town recognizes that maintaining a compact urban center is an important planning element that is imperative to sustaining and improving the vitality of Bennington. It is important that Bennington retain the designated growth center status in the future. In maintaining the designated growth center status, Bennington is supporting Vermont's traditional land use pattern of compact centers separated by rural countryside, as well as smart growth principles.

The federal "Transportation Enhancements" program provides grants to communities for projects that enhance transportation facilities. Bennington has successfully pursued several Enhancements grants specifically to implement planned streetscape improvements that include historic lighting fixtures, signs, landscaping, and pedestrian facilities. Continued efforts through this and other programs are designed to enhance and maintain the physical character of the downtown.

In addition to continuing efforts to assist existing and new commercial enterprises in the downtown, the town will support projects that provide new and improved residential units in the area. A strong residential component to the area is an efficient way to provide housing and also keeps the downtown active throughout the day and sustains commercial, cultural, and recreational activities in the area.

Renovation and occupancy of upper-floors in downtown buildings by professional and residential uses will make the area more attractive and economically viable; this initiative has been actively supported by the Better Bennington Corporation.

The Historic Central Bennington Design Review District has been established to protect historic resources in a defined area and to encourage new construction that will reinforce the best qualities of the area through both traditional and innovative design approaches. The design standards outlined in the LUDR and those referenced in the report: Time and Place in Bennington: A Handbook for the Central Bennington Historic District (as amended and updated) shall guide design in this District. It also is critical that site design (e.g., location and orientation of buildings, parking areas, drives) be sensitive to the historic character of the area and that appropriate site features and amenities (e.g., signs, landscaping, street furniture) be provided.

### Central Business District (CB)

The Central Business District is located in the heart of the downtown, centered on the intersection of US 7 and VT 9. The purpose of the district is to promote sound economic growth through the preservation and continued development of Bennington's downtown as a major regional commercial, financial, service, governmental, cultural, and residential center.

A wide variety of uses are allowed in the Central Business District and dimensional standards are designed to encourage a traditional downtown streetscape of tightly clustered multi-story buildings closely fronting the sidewalks and streets. Adaptive reuse and mixed use of buildings is encouraged, and new construction or modifications to existing structures requires design review to ensure that the historic integrity of the area is preserved.

Certain uses which are incompatible with the district are specifically excluded, such as gasoline service stations and drive-through restaurants, as well as ground floor uses on Main Street and North and South Streets that do not contribute to a vibrant commercial streetscape. In addition, parking areas are not allowed between principal buildings and the street.

Public investments and initiatives should support private redevelopment efforts and reinforce the historic character of the district. Ongoing streetscape improvements—period lamp-posts, landscaping, benches, and pedestrian facilities—funded through Transportation Enhancements grants and fundraising efforts are an example of successful efforts to support the Central Business District.



Bennington's Central Business District is the heart of the town's busy and historic downtown.

### Office and Apartment Districts (OA)

The Office and Apartment Districts are located immediately to the east, south, and west of the Central Business District. These areas are transitional between the commercial downtown core and surrounding residential neighborhoods. Land uses in the OA District are intended to be appropriate to the fabric and historic character of the village and to be complementary to, but not in competition with, downtown commercial uses.



Much of the OA District retains a residential character.

A variety of residential, professional, service, institutional, and limited commercial uses (not including retail stores) are permitted in the Office and Apartment Districts. To ensure retention of the character of these areas, certain uses are restricted to existing historic structures and/or to parcels that front on Main Street. Building scale, landscaping, parking, and pedestrian standards are designed to encourage an attractive streetscape that supports the purpose of the district. Drive-through businesses and other establishments that are incompatible with the purpose of the district are specifically prohibited.

Preservation of existing historic buildings and re-



tion of the character of mixed use residential areas is of considerable importance in the Office and Apartment District. The minimum lot size in the district is larger than adjacent commercial districts to support these objectives. Portions of the district lie within the design review district and require design plan approval. Special attention also must be given to vehicular use and access to maintain safe and efficient traffic flow in these areas.

### Village Commercial Districts (VC)

The Village Commercial Districts extend north from the Central Business District along US 7 and east from the Office and Apartment District along VT 9. The purpose of the district is to provide for a mix of commercial and residential uses while maintaining the historic character that exists along these important entry roads to the town's commercial center.

A variety of residential, small-scale commercial, professional, and service uses are permitted in the Village Commercial Districts. Business development is intended to complement the downtown commercial area rather than compete with it. Drive-through restaurants, large retail establishments, and gasoline station canopies are among the uses that are not allowed in these areas to protect the character and function of these commercial gateways to the town. These objectives must be reinforced in response to expected development pressure along East Main Street associated with completion of work on the new VT 279 interchange.

Special attention must be given to front yard landscaping, street trees, pedestrian amenities, and building design. Parking and management of vehicular access to these properties must be carefully planned to ensure attractive site design and safe and efficient vehicular movements.

### Mixed Residential Districts (MR)

The Mixed Residential Districts are located adjacent to Village Commercial and Office and Apartment Districts north, south, east, and west of the downtown. The Mixed Residential Districts are intended to provide for compact residential development that may include one and two family dwellings as well as apartments, row houses, and similar types of housing. Planned developments with integrated designs are encouraged to promote the most appropriate use of the land and to ensure the most efficient use of municipal services.

Residential uses are permitted together with limited public and institutional uses, and very limited commercial uses such as bed and breakfasts and neighborhood groceries. The minimum lot area in the district should be 10,000 square feet, with relatively high densities allowed for development of multi-family housing. Properties in the Mixed Residential District are to be served by municipal water and sewer service.

The scale, design, and orientation of new buildings in the Mixed Residential Districts shall be consistent with historic structures and development patterns in the surrounding area. Front yards are to be attractively landscaped and should include appropriate pedestrian amenities. Whenever possible, neighborhoods shall be linked by pathways and sidewalks.



Historic row houses along Benmont Avenue in the MR District.

### Village Residential Districts (VR)

The Village Residential Districts consist of areas of existing and planned compact residential development located outside the core commercial and business zones, but within the Urban Growth Area. The purpose of this district is to provide attractive neighborhoods of relatively concentrated residential development, in one and two family dwellings—with high owner occupancy rates—supported by municipal water and sewer service. The emphasis in these areas is to maintain and enhance the appealing residential character of the neighborhoods.

Uses in the Village Residential Districts are restricted to single-family dwellings and uses accessory to them, including up to one accessory apartment per single-family dwelling. Historic structures may be converted to lodging establishments subject to specific design and use limitations.

Water and sewer service should be provided to all areas within these districts, allowing for minimum lot areas of 8,000 square feet. Front yard treatments, building dimensions and orientation, pedestrian facilities, and vehicular access shall be consistent with the compact residential character of these neighborhoods. The town should support provision of neighborhood parks and pedestrian linkages between neighborhoods to further enhance the attractiveness of these areas.

### Village Industrial District (VI)

The Village Industrial District is located just north of the downtown in an area of existing industrial use that is surrounded by a predominantly residential area. The purpose of the district is to provide for existing industries in an area that historically has supported a mix of residential and industrial uses. Continued industrial use and compatible development in this district will promote sound economic development and encourage the efficient use of land in central sections of the urban core.



Manufacturing facility located along a primarily residential street in the VI District.

Because of the mixed use nature of the area, nearly all development in the Village Industrial District, including residential development, requires approval by the Development Review Board. Manufacturing, health care facilities, offices, and various institutional uses—in addition to single-family, two-family, and multi-family dwellings—are permitted in the district.

Development in the district shall conform with specific performance standards to ensure that any potential negative impacts on surrounding properties are minimized. In addition, non-residential uses are required to provide screening for adjacent residential properties.

### Urban Mixed Use District (UMU)

The Urban Mixed Use District lies along Benmont Avenue north of County Street and west of North Street. The purpose of the district is to facilitate re-development of the area in a manner that is consistent with the historic character of the area recognizing, however, that retail development in the area should not rival downtown as the town's commercial core.

A variety of uses are permitted in the district, including one, two, and multi-family dwellings, manufacturing, retail establishments, professional offices, service businesses, art galleries,

and range of educational, cultural, and institutional uses. The historic Holden-Leonard Mill is a valuable community asset and presents an important redevelopment opportunity. The buildings and grounds should be retained and re-used to support a mix of uses that are permitted in the district, including manufacturing uses. Other former industrial buildings in the area may be redeveloped in similar ways.

Development standards for this district are intended to promote the objective of making this a vibrant area supporting a mix of appropriate uses. Buildings must be designed and sited to be consistent with historic development patterns, and landscaping and pedestrian and vehicular access implemented to promote attractive, safe, and efficient public spaces.

Additional and/or more intensive uses are permitted in historic structures to encourage site redevelopment, although incompatible uses such as drive through restaurants are specifically prohibited.



Reuse of historic buildings is a central objective of the UMU District.

### Institutional/Professional District (IP)

Institutional/Professional Districts are located in the vicinity of the Southwestern Vermont Health Care campus southwest of the downtown and the Vermont Veteran's Home and Mount Anthony Union High School north and east of the downtown. Because Bennington is and will continue to be the regional health care and education center, existing principal health care and educational uses, as well as a range of support services, in these areas must be supported with appropriate land use policies. The Institutional/Professional Districts are intended to facilitate synergistic groupings of health care, educational, and long-term care facilities and services.



The Southwestern Vermont Health Care Center is the focal point for one of the town's IP Districts.

Health care, educational, and support uses are appropriate in this district along with residential uses and certain limited public facilities. While the minimum lot area for a principal use should be 10,000 square feet, specific density standards are established for regular dwelling units as well as for elderly housing and community care facilities.

The portion of Dewey Street that passes through the Institutional/Professional District is characterized by residential-scale buildings. To preserve the character of this streetscape, standards for building scale and design are required for structures within 150 feet of Dewey Street. Additional standards are designed to limit adverse impacts between adjacent properties, keep parking areas out of front yards, and to buffer institutional land uses from residential land uses lying across Monument Avenue.

### Industrial Districts (I)

It is absolutely essential that the town maintain an adequate and diverse inventory of industrial land to support existing businesses and future economic development. Districts zoned specifically for industrial use are located in the north-central portion of the town. One area is



One of the several successful businesses operating in the Shields Drive industrial park.

located north and south of the VT 279 interchange on VT 67A and the other lies east of Park and East Streets and includes the Vermont Composites facility on Kocher Drive. These Industrial Districts are specifically designed to encourage the most efficient and productive use of land in locations suitable for industrial establishments.

All uses in the Industrial Districts require review and approval by the Development Review Board and uses within the Morse, Bowen, and Shields Drive industrial parks are also subject to approval as planned unit developments. A range of manufacturing, warehousing, trucking, research and development, and related uses are permitted in

the Industrial Districts. Professional and business offices are allowed only within an office park as part of a planned unit development. Buildings in these districts shall not include long, blank facades, and must be designed with varying roof height and lines. Landscaping and pedestrian facilities also must be incorporated into site design to provide an attractive and safe environment. All uses also must conform to specific performance standards and provide screening to avoid adverse impacts on neighboring properties.

Because the industrial zones located north of the VT 67A/VT 7A/Kocher Drive corridor are very visible from public highways, uses in these areas should be limited to manufacturing, research and development, and office facilities. Special design standards should be prepared for development in these areas.

### Planned Commercial District (PC)

The Planned Commercial District includes those lands along Kocher Drive, Northside Drive, and Route 67A that have experienced substantial commercial development. The purpose of the Planned Commercial District is to promote a mix of commercial uses in an area with convenient access to major transportation corridors. The existing and permitted uses in the Planned Commercial District



The town's Design Guidelines for Development in the Planned Commercial District contains detailed standards for the design of sites and buildings. Use of these Guidelines will greatly enhance the visual character of the District.

are to be compatible with each other while complementing the downtown's function as a regional commercial and employment center. Because sufficient land for development and redevelopment of commercial properties exists in this area to accommodate future growth, the boundaries of the district should not be expanded.

A wide range of uses are permitted in the Planned Commercial District, including retail stores, gas stations, lodging facilities, restaurants, car dealerships, hotels, multi-family dwellings, and a range of professional, service, and recreational uses. Special studies are required for any new stores larger than 50,000 square feet to ensure that any impacts on the community's infrastructure and economy are adequately considered prior to development. Because of the concentration of community interest in the area, new development must conform with the town's Planned Commercial District Design Guidelines. Special attention also must be given to access management to minimize traffic congestion and safety hazards along the busy roadways in the area.

Landscaping must conform with standards which require that special attention be given to creating attractive front yards and softening the appearance of large expanses of parking. Pedestrian access along the roadways and between the roadways and commercial businesses is critical; any new development shall include sidewalks along the full road frontage and to the building's primary entrance.

#### Route 7A Corridor Overlay District (CO)

The Route 7A Corridor Overlay District includes most of the Rural Residential District lying within 500 feet of Route 7A between one of the Industrial zones and the Shaftsbury town line. Although this corridor lies in a rural area, a few commercial businesses exist there, and allowance should be made for the existing commercial development subject to strict performance standards. Any form of commercial "strip" development in this area is not permitted.

Any commercial development in the Route 7A Corridor Overlay District must be compatible with the open, scenic, and agricultural character of the area while recognizing the architectural, historic, and cultural importance of this gateway to Bennington. Uses permitted in the district include those allowed in the underlying residential district plus antique sales, gift shops, restaurants, small-scale lodging establishments, and agricultural equipment sales, subject to standards that limit the density of development and which require provision of substantial green space along the highway corridor.

It is not appropriate to permit development of new types of retail stores (other than those which currently are permitted), gasoline stations, convenience stores, or similar uses in the Route 7A Corridor Overlay District. A proliferation of such uses along this rural highway corridor would be inconsistent with the town and state objectives of avoiding inefficient and unattractive commercial sprawl and strip development and would adversely impact existing commercial districts located closer to the town center. Consideration should be given to expanded design standards for this corridor, an important historic entryway to the town. Convenience services for through travelers on US 7 are not necessary at this location because they are available in the established commercial areas near the two exits just south of this corridor.



The WH Morse State Airport is located in a rural area on the west side of Bennington.

### Planned Airport District (AP) and Airport Approach Overlay District (AAO)

The WH Morse State Airport is located in the western part of Bennington, north of VT 9 and east of Whipstock Hill. This airport is an important general aviation facility serving the entire region. The purpose of the Planned Airport District, and the Airport Approach Overlay District, is to enable the continued economic use and enjoyment of the airport and to prevent encroachment of uses that are incompatible with the operation of the airport.

In addition to the primary airport use that is permitted within the Planned Airport District, professional, service, and warehousing uses that support or rely on proximity to the airport are allowed.

The Airport Approach Overlay District provides for the safe and convenient use of lands on the approach to the airport runways, allowing the airport to coexist with its neighbors.

### Rural Residential District (RR)

The town's Rural Residential Districts are located outside the Urban Growth Area, but in areas that support existing residential development and can accommodate low density residential growth because of the availability of good roads and soil conditions. These areas are intended to support limited growth while preserving the rural landscape and scenic and natural resources.

Appropriate uses in the Rural Residential District include agriculture, forestry, low density residential uses, limited commercial uses such as veterinary clinics and neighborhood grocery stores, golf courses, earth resource extraction, and certain educational and cultural uses. Community care facilities and multi-family dwellings are permitted in the district provided they are approved subject to the town's residential Planned Unit Development (PUD) regulations.

The residential PUD standards require development to be consistent with Vermont's traditional rural landscape of farmsteads and small clusters of dwellings surrounded by open space.



Two views of new residential development in a rural area near an existing cluster of buildings. By using effective residential planned unit development techniques, subdivisions with the same number of units can be achieved without consuming productive farm land and open space. This can allow agricultural land to stay in production, increase infrastructure efficiency, and lead to the creation of open spaces for community use. From Growing Smarter - Best Site Planning for Residential, Commercial, and Industrial Development, produced by the Smart Growth Vermont.

Significant open space shall be preserved in any PUD and the design must maximize preservation of important agricultural land and other natural resources. Density bonuses may be permitted to encourage open space preservation and provision of affordable housing.

The design of new subdivisions is especially important in ensuring the retention of an efficient and attractive land use pattern in these rural areas. Any new subdivision must be planned to preserve important agricultural land and natural and scenic resources, and all major subdivisions must meet standards for Planned Unit Developments.

### Rural Conservation District (RC)

Rural Conservation Districts are located in valley areas outside the Urban Growth Area which have retained their rural and open space character. Considerable acreages of agricultural land exist in these areas, along with extensive woodlands and low density residential development. The purpose of the Rural Conservation Districts is to preserve this distinctive rural character and working landscape while accommodating very low density residential development in a manner that avoids the need for public water supply and public sewer systems.

Agriculture, forestry, very low density single-family residential development, and certain limited uses that are suitable in rural areas are permitted in the district. Zoning regulations shall maintain large blocks of working agriculture land and productive forest lands. Additional standards apply to college buildings, cultural institutions, and the adaptive reuse of historic structures as bed and breakfasts. Subdivisions must protect important agricultural land, natural, and scenic resources; major subdivisions must meet the standards for residential Planned Unit Development.

Connections of any building to the municipal wastewater treatment system may only be approved if the Development Review Board finds a compelling public health threat, and such connection cannot be used to expand the use.

Specific design standards shall apply to new development in the Rural Conservation Districts in recognition of the existence of a concentration of agricultural and forest lands and to protect the extraordinary scenic resources such lands and uses provide. Any use in the Rural Conservation District, including single-family dwellings, shall require approval under those regulatory guidelines. Development in this area cannot be sited in prominently visible locations on hillsides or ridgelines, shall utilize earth tone colors and non-reflective materials on exterior surfaces of all structures, and must minimize clearing of natural vegetation.



A typical scene in one of Bennington's RC Districts; this view looks across Pleasant Valley.

### Agriculture District (A)



Valley farmland in the Agriculture District along Skiparee Road.

One Agriculture District has been established in the southwestern corner of town, along Mount Anthony and Skiparee Roads. This area is very remote from the town center and municipal utilities and includes extensive agricultural uses lying in steep-sided narrow valleys. The purpose of the district is to provide for all types of agricultural use while limiting nonagricultural uses. Agriculture, forestry, very low density (25 acre minimum lot size) single-family residential development, and a limited number of accessory uses are permitted in the district.

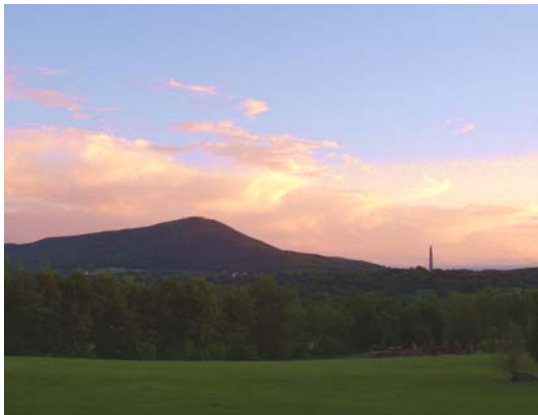
### Forest District (F)

The Forest Districts encompass Mount Anthony, Whipstock Hill, and the forested western flanks of the Green Mountains in the northeastern and southeastern parts of town. The land in these areas is characterized by steep slopes and the absence of development or improved roads. These forested mountains also provide an important scenic backdrop that is an integral part of the town's rural character. The purpose of the district is to provide for commercial forestry uses and the protection of timber and wildlife resources.

Permitted uses are restricted to forestry, small seasonal camps, appropriate open space based public recreational uses, and telecommunication antennas. Any building development must meet additional standards that are designed to limit their size, environmental, and aesthetic impacts.

Any development of telecommunications facilities must conform to standards which are designed to accommodate the communication needs of residents and businesses while protecting the public health, safety, general welfare, and scenic character of the town.

### Public Open Space Districts (POS)



Willow Park and the Bradford-Putnam Wetlands are two important public open space areas that offer diverse recreational opportunities for residents.



The Public Open Space Districts include the newly-created Walloomsac Headwaters Park as well as several existing public open spaces: Willow Park, Memorial Park, Beech Street Park, Stark Street Park, the “Y Woods,” the Leonard J. Black property, and the Bradford-Putnam Wetlands. The purpose of the district is to recognize the existence of the major community open spaces and to provide for their continuation. Permitted uses are restricted to public park, recreation, conservation facilities, and associated public utilities.

The town must maintain these properties and ensure their continued availability to the public, and should consider acquisition of additional lands for public open space as appropriate.

### 3.3 Land Use Policies and Recommendations

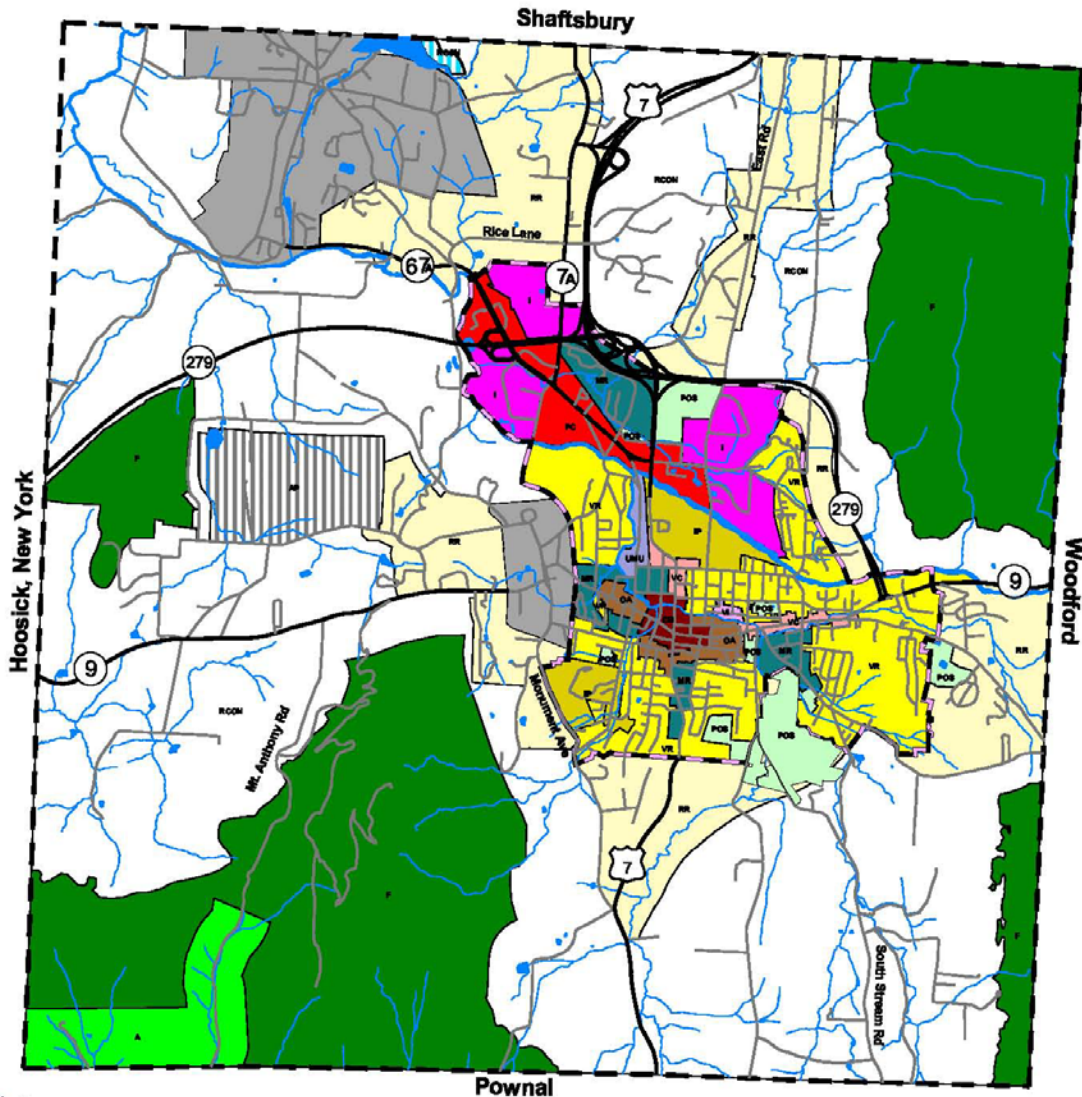
1. The overall land use policy of the Town Plan is to reinforce the existing pattern of compact development within the Urban Growth Area surrounded by rural countryside. To support this policy, the town should retain the designated growth center status for the urban area. Moreover, the historic character and central importance of the downtown must be preserved. The Municipal Land Use Regulations shall reflect the purposes of the individual land use districts as stated in this Plan and all development activity shall conform to the requirements and restrictions on uses, densities, and dimensional, design, and special standards as indicated in those Regulations.
2. The town shall ensure that municipal regulations and public investments support the land use policies of this Plan. Consideration should be given to developing a form-based land use ordinance to simplify implementation and further these policies.
3. **Downtown** will remain the commercial, civic, cultural, and residential heart of the community. The town should maintain the state designation for this area and continue to pursue investments and actions facilitated by this downtown program that will provide needed facilities and amenities to allow this area to prosper. Historic resources in the downtown shall be protected and new building and site development shall be compatible with the historic character of the area.
4. The **Central Business District** shall provide a variety of appropriate businesses and services in a concentrated area at the core of the downtown area. Residential uses are beneficial to the district and shall be encouraged in the upper stories of buildings. Public and private planning and development shall provide attractive landscaping, pedestrian facilities, street lighting, signs, and similar amenities.
5. Existing small scale buildings in the **Office and Apartment Districts** shall be retained and used as offices, single-family residences, apartments, and other compatible uses. New development shall be compatible with the residential character of these areas.
6. The **Village Commercial Districts** shall include a range of commercial and residential uses that reinforce the vitality of the nearby Central Business District. The scale of existing buildings shall be retained and new development shall be compatible with the residential origins of these areas and with adjacent residential neighborhoods. Site development shall maintain attractive entrances to the downtown and shall be planned for efficient and safe vehicular access. Development that would compete

- with the downtown, or extend the downtown along entrance corridors, shall not be allowed in the VC Districts.
7. A full range of residential uses, at relatively high densities served by public water and sewer, shall be provided in the **Mixed Residential Districts**. Neighborhoods shall be linked to each other and to nearby commercial areas by sidewalks or pathways.
  8. **Village Residential Districts** shall provide for moderately high densities of residential development, and other compatible uses, served by public water and sewer. Efforts should be made to enhance the desirability of these residential areas by providing amenities such as parks, pathways, and well-maintained sidewalk systems.
  9. The **Village Industrial District** will provide for industrial uses in a central location near the downtown. Industrial uses in the district shall be planned and operated in a manner that does not adversely impact nearby residential neighborhoods.
  10. Creative redevelopment shall occur in the **Urban Mixed Use District**. A mix of industrial, professional, retail, and residential uses shall be encouraged in this district. Building and site design shall preserve the historic character of the area. Public and private development shall provide an attractive streetscape, pedestrian amenities, and safe and efficient management of vehicular movements. This area should develop as a mixed use district, and not become dominated by retail uses, so that the downtown remains as the town's retail center.
  11. Bennington's **Institutional and Professional Districts** shall continue to support regionally important health care and educational facilities. Expansions to major institutional uses shall be based on approved master plans and shall not adversely impact the character of adjacent residential or mixed use neighborhoods.
  12. The town will work with the Bennington County Industrial Corporation and other organizations to ensure that uses in **Industrial Districts** shall have the infrastructure and resources they need to be successful. Industrial uses shall not have an adverse impact on the environment or residential properties.
  13. The **Planned Commercial District** provides for a wide range of businesses such as retail stores, restaurants, lodging establishments, and automotive uses. Commercial uses shall be planned to be compatible with adjacent uses and shall share parking, access, and pedestrian facilities whenever possible. Building and site design shall be consistent with the Planned Commercial District Design Standards.
  14. New development in the **Route 7A Corridor Overlay** shall retain the rural character of the area and not adversely impact traffic flow or safety on this historic approach to Bennington. Strictly limited commercial uses are permitted in accordance with design and dimensional standards that preserve open space, scenic resources, and the rural character of the area. Uses that would contribute to sprawl or commercial strip development shall be prohibited.
  15. The **Planned Airport District and Airport Approach Overlay District** provides the land that is necessary for continued effective operation of the WH Morse State

Airport and incidental commercial and professional uses. Development in the area shall not lead to unsafe conditions or inhibit effective use of the airport.

16. The **Rural Residential Districts** shall provide for relatively low density residential development just outside the area of more compact development. New residential development in the area shall be carefully planned to protect important agricultural land and other natural and scenic resources. Major subdivisions shall meet the standards of a residential Planned Unit Development (PUD) to protect Bennington's traditional rural and agrarian landscape.
17. **Rural Conservation Districts** shall continue to support traditional low density rural and agricultural uses. Extension of municipal water supply and wastewater disposal lines to these areas shall be prohibited. New residential development in the area shall be carefully planned to protect agricultural land, forest land and other natural and scenic resources. Subdivisions shall meet the standards of a Residential Planned Unit Development (PUD) to protect Bennington's traditional rural and agrarian landscape.
18. The rural character of the **Agriculture District** shall be maintained. Maintenance of agricultural uses in the area shall be supported and any residential development shall be of a very low density and carefully planned to avoid adverse impacts on agricultural potential.
19. The **Forest Districts** shall remain free of development. Forestry and recreational uses are appropriate in this area. Seasonal camps and telecommunication facilities are permitted provided adverse impacts on the environment and scenic resources are avoided. Conservation initiatives involving property tax relief for private owners or acquisition of important resource lands by the United States Forest Service shall be supported by the town.
20. The parks and open spaces of the **Public Open Space Districts** shall remain available for the enjoyment of the public in perpetuity. The town shall provide adequate maintenance of these properties and consider acquisition of new park and recreation lands if deemed appropriate.

### Map 3-2 LAND USE PLAN Bennington, Vermont

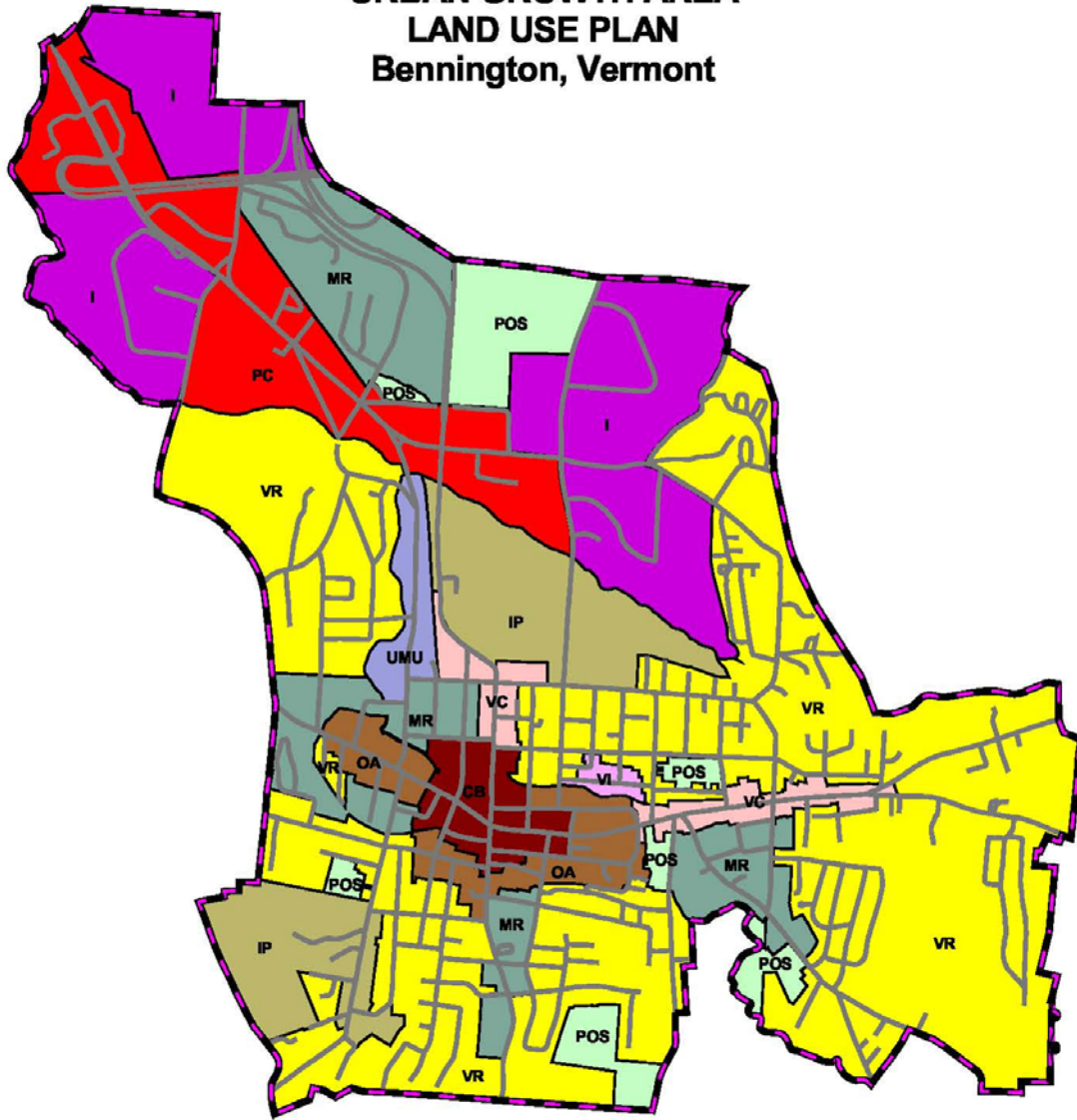


- Urban Growth Boundary
- Shoreland Protection Overlay
- Land Use Districts**
- Rural Conservation
- Rural Residential
- Village Residential
- Mixed Residential
- Office and Apartment
- Institutional and Professional
- Village Commercial
- Planned Commercial
- Central Business
- Industrial
- Village Industrial
- Urban Mixed Use
- Agricultural
- Forest
- Public Open Space
- Planned Airport
- North Bennington and Old Bennington



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### Map 3-3 URBAN GROWTH AREA LAND USE PLAN Bennington, Vermont



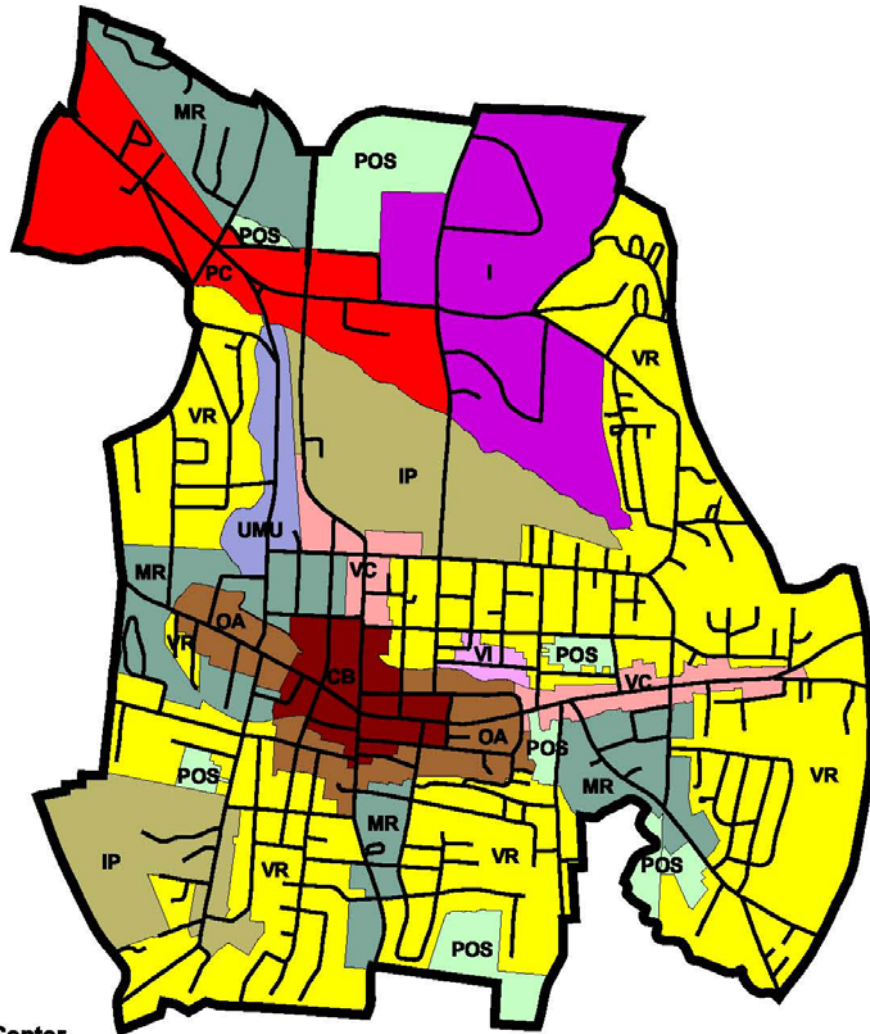
 Urban Growth Boundary

-  Mixed Residential - MR
-  Village Residential - VR
-  Office and Apartment - OA
-  Institutional and Professional - IP
-  Village Commercial - VC
-  Planned Commercial - PC
-  Central Business - CB
-  Industrial - I
-  Village Industrial - VI
-  Urban Mixed Use - UMU
-  Public Open Space - POS



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### Map 3-3A GROWTH CENTER LAND USE PLAN Bennington, Vermont



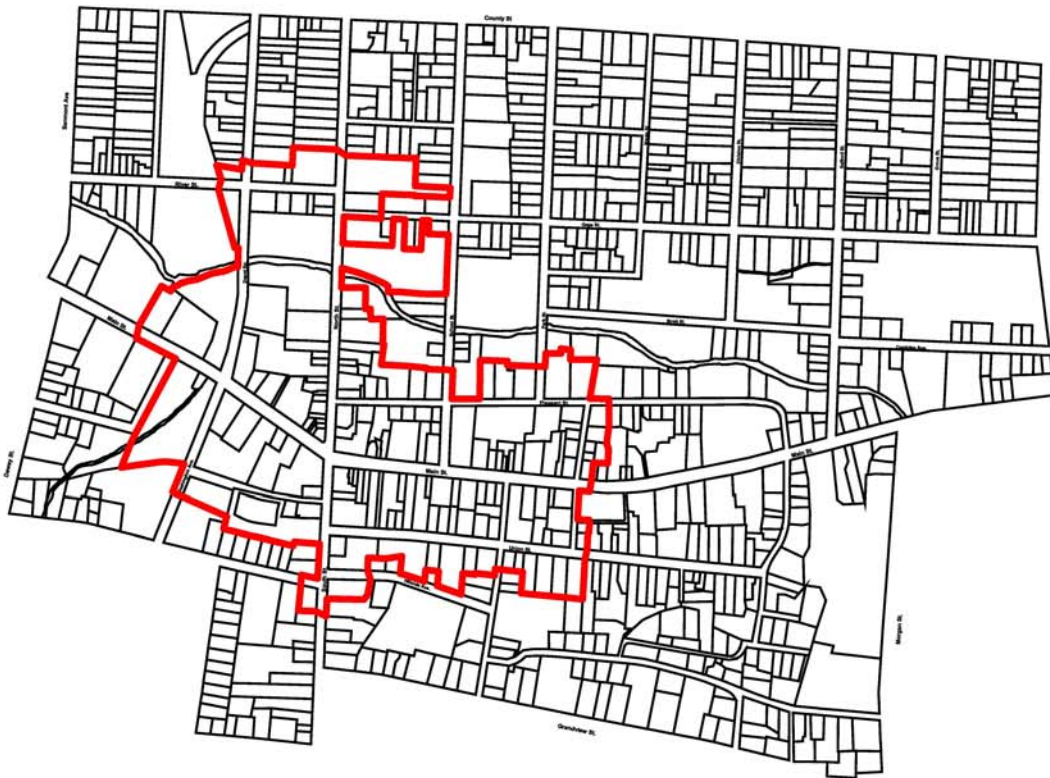
Growth Center

- Mixed Residential - MR
- Village Residential - VR
- Office and Apartment - OA
- Institutional and Professional - IP
- Village Commercial - VC
- Planned Commercial - PC
- Central Business - CB
- Industrial - I
- Village Industrial - VI
- Urban Mixed Use - UMU
- Public Open Space - POS



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**Map 3-3B  
DESIGNATED DOWNTOWN  
Bennington, Vermont**

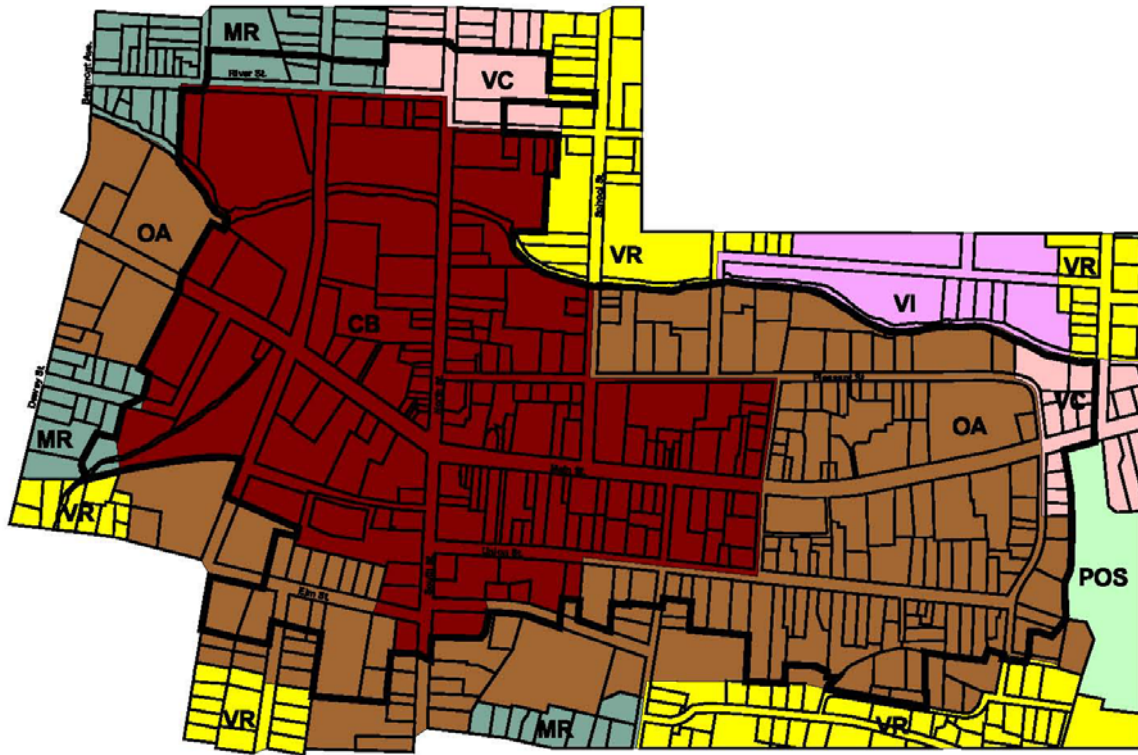


 **Designated Downtown**



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### Map 3 - 4 DOWNTOWN LAND USE AND HISTORIC DESIGN REVIEW DISTRICT Bennington, Vermont



-  Design Review District
- Land Use Districts**
-  Village Residential - VR
-  Mixed Residential - MR
-  Office and Apartment - OA
-  Central Business - CB
-  Village Commercial - VC
-  Village Industrial - VI
-  Public Open Space - POS



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## Chapter 4 - Natural, Scenic, and Historical Resources

### 4.1 Overview

Bennington's location and history have combined to create a community that is rich in a variety of resources. The town's natural resources are important to the area's economic vitality and have played an important role in shaping the character of the community. Many of those resources also now provide for exceptional outdoor recreational opportunities.

The scenic quality of the landscape, including both its natural and man-made features, is another important community resource. Views of rural fields and farmsteads, waterways, mountains, and historical structures enhance the quality of life for residents and are important for tourism and future economic development.

Settlement of Bennington began in the mid-1700s and the early pattern of relatively densely developed village centers surrounded by rural countryside is still evident today. The town's historic districts and their distinctive architecture represent irreplaceable resources that further define the community's character and support economic development.

This section of the Plan will identify and discuss the preservation and wise use of important natural, scenic, and historical resources.

### 4.2 Natural Resources

Bennington's natural resources always have played an important part in the life of the community. Early settlers in the area farmed the lowland agricultural soils and harvested trees from the mountainsides. Streams provided power for early industry, sand and gravel deposits were mined for roadway and building construction, and abundant wildlife roamed throughout the hills and valleys.

Those same natural resources continue to provide economic benefits to the community while also supporting important recreational activities for residents and tourists. Wise use and conservation of these resources will ensure that future generations will benefit from them as well. The objectives and specific policies set forth in this section should be read in conjunction with those of the corresponding land use districts.

#### Agricultural Land

Bennington contains some of the most extensive valley lands in southern Vermont and many of the soils lying in these lowland areas are very productive for agricultural use (Map 4-1). Because prime agricultural soils are often the same soils that are best suited for development, the potential for loss of much of this resource is considerable. Conserving agricultural land benefits the community in a number of ways, including:

- Support for a diverse economic base while ensuring the future viability of local agricultural production;
- Maintenance of the town's rural character and agricultural heritage;
- Preservation of open space, scenic vistas, and ecological resources.



Bennington's agricultural and forest lands provide numerous benefits to townspeople.

Although the number of active farms in Bennington has declined, there are still 30 farming operations in the community. Recent trends (county data, 2007 US Census of Agriculture) indicates a continuing reduction in the number and size of farms, although the value of products sold has increased substantially. There has been some diversification from traditional dairy and crop farming, as apple orchards, Christmas tree farms, and other specialty producers also are now found in rural areas. Public policies and private development shall seek to conserve prime agricultural soils and the potential for agricultural production in the town's rural areas. Because the town seeks to direct growth to the Urban Growth Area while protecting rural open space in outlying areas, loss of agricultural soils to alternative uses in the center of town is expected and appropriate.

Local agriculture will become increasingly important as energy constraints affect the supply and transport of food. A strong emphasis must be placed on preservation of productive soils and support for local farms. Initiatives such as the Bennington County "Farm to Plate" program and the Bennington Farmer's Market should be supported by the town.

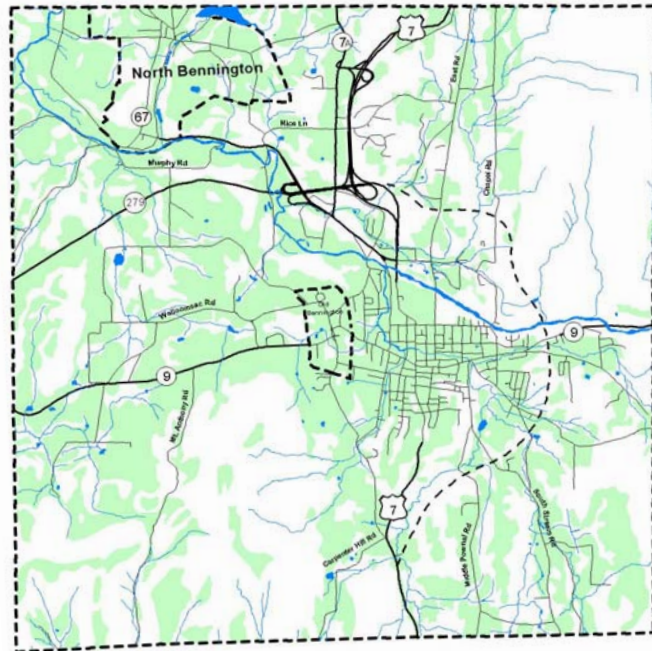
Agricultural land conservation will be encouraged by requiring that development remain at a relatively low density in rural areas and by requiring that new subdivisions be planned to preserve open space and the use potential of agricultural soils. When development is planned adjacent to an existing agricultural operation, the project shall be designed to minimize conflicts between the different uses.

Owners of agricultural land are encouraged to consider use of programs that reduce the property tax burden on open lands. Acquisition of agricultural land or the development rights to such land by organizations such as the Vermont Land Trust is an effective way to preserve these resources, often while providing considerable benefits to the landowners and enabling continued viability of the farming operation.

## Forest Land

Much of Bennington is covered in forests, particularly on the slopes of the Green Mountains and Mount Anthony. Numerous smaller woodlots are found throughout the valley areas. All of these woodlands help to prevent soil erosion and flooding, contribute to air and water quality, and support valuable timber, wildlife habitat, recreational, and aesthetic resources. Protection of forest resources is an important objective of this Plan.

The extensive forests covering the mountain slopes have not been developed because



Map 4-1. The shaded areas represent prime agricultural soils, as mapped by the Natural Resource Conservation Service. These areas cover much of the valley land in the town. With the exception of the Urban Growth Area, most of these areas retain the potential for supporting a variety of agricultural uses.

of their remoteness and limited access. With the withdrawal of agricultural uses from marginal hillsides and reduced demand for local timber in the 20th century, the amount of forest land in Bennington actually increased. However, experiences such as the unsuccessful effort to create residential lots over much of Mount Anthony serve as a reminder that active efforts to conserve these resources are necessary.

Most of Bennington's high elevation forest land is zoned to permit only forestry, recreation, and other uses that will protect the value of the resource. Property tax reduction programs, appropriate land use planning, and acquisition of land or development rights by a land trust or other conservation organization are appropriate techniques for preserving forest land.

The Green Mountain National Forest covers a large amount of land on the town's eastern side and in the nearby mountain towns. Its recreational resource base offers tremendous potential for attracting tourists from around the country and the world. Better information, directions, and facilities at trailheads and other access points would be helpful. A compelling suggestion was made recently that the establishment of a Green Mountain National Park, perhaps carved out of a portion of the national forest near a particularly scenic natural area, would be a sure way to promote interest in the area's natural beauty and recreational opportunities.

Lands acquired by the Forest Service remain accessible to the public; all of these properties should be actively managed for multiple uses including recreation, timber production, and wildlife. The town should participate in National Forest planning activities and should coordinate forest planning with other nearby towns, especially with Woodford. Particular attention should be given to planning for the wise and environmentally sound use of forest trails and roads. Unrestricted access by all-terrain vehicles, trucks, and other motorized vehicles can result in severe damage to these travelways and cause erosion and water quality degradation; consequently, use of these vehicles should be allowed only on public lands and trails when proper environmental safeguards are in place.

## Water Resources

Bennington contains a wide variety of water resources, including ponds, wetlands, rivers and streams, floodplains, and groundwater (Map 4-2). The quality of these resources is essential to the health of residents and to the local economy. Effective planning for water resource protection requires consideration of activities that occur throughout a watershed. Construction, stormwater runoff, road building and maintenance, and agricultural and logging activities all can increase the flow of sediments, nutrients, or other pollutants into waterways. Appropriate land use and environmental regulations (including Vermont state stormwater regulations), adherence to accepted best management practices and erosion control procedures, and public education contribute to protection of these vital resources. In addition, the Town should develop effective stormwater regulations to ensure the protection of water resources.

### Lake Paran

Lake Paran covers approximately 40 acres with a shoreline shared by Bennington, North Bennington, and Shaftsbury. The lake is an important recreational resource that is used for swimming, boating, and fishing. Because



Lake Paran is an important water resource in the northwestern part of town.

maintaining water quality in the lake is of such great importance, development within 200 feet of the shoreline shall be restricted to prevent sediments or nutrients from entering the water. Much of the northern shoreline of the lake has been protected through a cooperative venture with the Vermont Land Trust.

### Rivers and Streams

Streams flow into Bennington's valleys from mountains lying to the north, east, and south. A sizeable river, the Walloomsac, is formed from the convergence of these streams and flows westward from the center of town. These waterways always have been important to the community, first serving as a focus for settlement and development in both urban and rural areas and now providing important recreational and aesthetic benefits to residents and visitors. The Bennington municipal sewage treatment plant also discharges treated effluent into the river near the town's western boundary.

The Walloomsac and its tributaries tie together a diverse landscape in Bennington as they flow from forested mountains and rural fields through residential neighborhoods, the historical downtown, and past mills and factories. Efforts to protect water quality and direct interest and attention toward the river and streams have been effective and should be continued.

Environmental regulations that control discharges to these waterways are necessary to maintain the quality, function, and value of the resources. In addition to state and federal regulations, local zoning standards regulate development and vegetation clearing within buffer zones along all stream banks.

Preservation and rehabilitation of historical structures along the river and construction of pedestrian and bicycle pathways adjacent to the stream banks will promote appreciation of the waterways and enhance economic development opportunities. Special attention should be paid to preservation of the three covered bridges over the Walloomsac and development of adequate, safe, and attractive parking, public access, and pathways at these locations.



Restoration work along the Roaring Branch on the east side of town will improve water quality and floodplain management.

### Wetlands



Part of a large wetland complex located in the northwestern part of Bennington.

Wetlands are areas transitional between aquatic and terrestrial systems where the water table is usually at or near the surface or the land is covered by shallow water. Benefits provided by wetlands include: flood and storm water control, maintenance of surface and ground water quality, open space and aesthetic appreciation, fish and wildlife habitat, ecological research and educational opportunities, and sources of nutrients for freshwater food chains.

Concentrations of wetlands in Bennington are found south of the town's center along Jewett Brook and South

Stream, in the relatively flat areas to the west bounded by Whipstock Hill and Routes 9 and 279, and in the low lying areas south and east of Lake Paran.

The Vermont Wetlands Rules and federal regulations administered by the Environmental Protection Agency and the Army Corps of Engineers provide protection for wetland resources. Town regulations also prohibit incompatible development within 50 feet of Class 1 or 2 wetlands.

### Floodplains and Fluvial Erosion Hazard Areas

Floodplains are areas that are inundated during high water flows and are important for floodwater storage as well as for the role they play in supporting significant riparian wetlands and wildlife habitats. Substantial floodplain areas in Bennington are located along the Roaring Branch, the Walloomsac River, Furnace Brook, Jewett Brook, and South Stream. Development in floodplain areas is inherently dangerous and is subject to strict regulation under the town's Flood Hazard Area zoning regulations. No development other than agriculture and forestry is allowed in these areas without approval by the Development Review Board after showing that specific engineering and construction standards have been satisfied.

The town has mapped fluvial erosion hazard (FEH) areas and has implemented special regulations for those areas (Map 4-2(A)). These FEH zones recognize the fact that rivers' locations are not static, but change over time as a result of erosive forces.

Development in these areas is restricted to prevent damage from erosion in much the same way that development in flood hazard areas is restricted to prevent damage from inundation.

### Groundwater

A large amount of the water consumed by domestic, commercial, and industrial users in Bennington is derived from groundwater; of course, surface waters are fed from groundwater as well. A sufficient supply of clean groundwater is therefore crucial to residents and businesses and to future development. The Vermont Department of Environmental Conservation and the Vermont Department of Health have identified public water source protection areas covering areas that supply groundwater to municipal and private water systems of a certain size. These source protection areas are illustrated on Map 4-2 and include recharge areas for sources like the Morgan Spring and watersheds of surface water sources such as Bolles Brook.

State and federal environmental regulations provide standards for the collection and distribution of these water resources. Land use regulations shall limit the type and intensity of development in upland areas where important groundwater recharge occurs. In addition, because many residences and businesses rely on individual on-site wells to serve their water needs, strict adherence to local and state regulations is critically important.

### **Earth Resources**

Mineral, sand, gravel, rock, and other earth resources in Bennington have been utilized since colonial times. Iron ore was mined at one time and stone furnaces from this early industry are still visible near the Bennington-Woodford town line. Talc, limestone, and dolomite were extracted from small quarries from time to time in the past, and clay deposits were used in the

production of local pottery, brick, and in papermaking. At the present time, the only significant earth resource extraction operations involve sand and gravel deposits that are used for roadway construction and concrete aggregate.

Important earth resources should be identified and land development planned so that these deposits remain available for future use. In addition, because extraction operations potentially can have adverse impacts on the environment and nearby properties, any new or expanded quarrying and extraction is subject to special review by the Development Review Board. Any new extraction operation must demonstrate that it will not unduly impact the environment or the value of neighboring properties, and must include a plan for rehabilitation of the site once the operation is complete.

Earth resource extraction operations in adjacent towns also can affect Bennington, as is the case with the gravel pit off Burgess Road in Woodford. The town should participate in any appropriate environmental reviews of such projects to ensure proper resource management and site reclamation.

### **Air Quality**

The quality of the air in Bennington is generally excellent and efforts should be made to ensure that it remains clear and clean. Threats to air quality may come at a number of levels. A serious local environmental health issue involves the illegal burning of domestic refuse, so-called “backyard burning.” Such activities discharge dangerous amounts of airborne particulate and toxic and carcinogenic products of combustion. Local and state regulations that prohibit such practices must be strictly enforced.

Economic development in Bennington has emphasized “clean industries” that do not emit dangerous amounts of air pollution and this approach should be continued. Of course, airborne pollutants often originate from well beyond a municipality’s borders so the town must remain aware of potential pollution sites, especially to the west in New York State, and work with the state to make sure that local air quality is not degraded.

Emissions from motor vehicles can have significant local and regional impacts on air quality. Efforts to reduce vehicle miles traveled through efficient land use planning should be continued and opportunities for alternative transportation enhanced to reduce congestion and emissions. The town can also promote clean air by requiring planning for energy efficiency in new developments and by promoting the use of fuel-efficient vehicles.

### **Fish and Wildlife**

As noted in the earlier sections of this chapter, the diverse natural environments of the town provide habitat for a wide range of fish and wildlife species. Streams, ponds, and wetlands support popular sport fish such as rainbow and brook trout, as well as the invertebrate species they rely on for food. These water bodies also serve as critical habitat elements for waterfowl, amphibians, and many mammals (e.g., otter, beaver, bear, moose, and deer) that feed and travel along the shorelines. It is important to maintain natural vegetative covers along streambanks and to prevent the introduction into water bodies of sediments and harmful nutrients that encourage algal growth.



The black bear is one of several large mammals that live in and around Bennington.

The whitetail deer is an important part of the local ecosystem and is a popular game animal for resident and visiting sportsmen. While deer are found throughout rural areas of the town, certain wintering yards are particularly important to the health of the herd. These habitat areas are often associated with a high degree of softwood cover having a southerly or westerly aspect, and are free from human disturbance. Important deer yards have been identified on Mount Anthony and Whipstock Hill (Map 4-3) and shall be protected from development activities that would degrade them. The population of the deer herd does need to be carefully managed because an overabundance of deer can result in damage to natural vegetation and crops.

The black bear is another distinctive animal that requires specific habitat elements to thrive. Large tracts of undeveloped forest land, including the high elevation forests in the Green and Taconic Mountains in Bennington, are critical to the survival of a viable population of black bears. Large expanses of forest, and bear travel corridors that connect such forested areas, must be maintained. The Vermont Department of Fish and Wildlife has identified areas that are likely to support black bear populations (Map 4-3) and within these larger areas are “critical habitats” that must be preserved, including beech and oak stands, wetlands, and the aforementioned travel corridors.

### Unique Natural Areas

There are several unique natural areas in Bennington that deserve special mention and

Table 4-1	<u>Unique Natural Features in Bennington</u>
1.	<b>Whipstock Hill:</b> Exposure of the rock type Wildflysch Conglomerate, illustrating the development of the Taconic Mountains.
2.	<b>Everett Cave:</b> Solution cave with dripstone formations in Mt. Anthony.
3.	<b>Jewett Brook Marsh:</b> Scenic pen water marsh providing important habitat for many plants and animal species.
4.	<b>Tuliptrees:</b> Large two-stemmed tuliptree and several smaller ones on Mt. Anthony.
5.	<b>Mount Anthony:</b> Scenic landmark whose synclinal nature is well-exposed around its northern end.
6.	<b>Silk Road Alluvial Forest:</b> Canopy of elm, sycamore, and eastern cottonwood, also containing a shrub swamp.
7.	<b>Silk Road Woods:</b> Wooded area containing uncommon species.
8.	<b>Pit of Misery:</b> Open pit on the lower slopes of Mt. Anthony
9.	<b>Stratton Brook Falls:</b> Scenic falls along Stratton Brook descending from Bald Mountain.
10.	<b>Wetland Plant Community:</b> A rare sedge, <i>Carex schweinitzii</i> , growing in this wetland is found in fewer than 10 sites statewide.
11.	<b>Serendipity Fen:</b> Rich fen within a 100+ acre wetland.
12.	<b>McCullough Woods:</b> Mixed northern hardwoods forest of old growth white pine, sugar maple, beech, elm, and red oak.
13.	<b>Bald Mountain:</b> Boreal outcrop community with areas of talus.
14.	<b>Cemetery Meadows:</b> Meadow containing the rare plant, arrow-leaved aster ( <i>Aster sagittifolius</i> ).



Whipstock Hill Exposure



Jewett Brook Marsh



Talus slope on Bald Mountain

protection. The Vermont Natural Heritage Program has identified rare plant and animal species and unique natural communities in the area. Information on other significant natural areas, including geologic features such as caves, waterfalls, and rock outcroppings has been separately compiled by the Vermont Natural Resources Council and the Bennington Country Regional Commission. These areas and the lands immediately around them must be protected from incompatible development. The locations of the resources identified in Table 4-1 are displayed on Map 4-3.

In addition to these natural areas, a number of important individual tree specimens are found in Bennington. The Department of Natural Sciences at Castleton State College compiled a registry of Vermont's largest trees and five of those state champion trees are in Bennington. All of these trees are in residential areas and the owners have been made aware of their presence. Special efforts should be made to protect these trees and other attractive mature trees in the community. Site plans for new developments shall identify and preserve these important trees.

### 4.3 Scenic Resources

The scenic quality of the landscape is one of Bennington's most important assets. The visual appearance of the town's natural and built environment, and the quality of life that it represents, is important to residents, tourists, businesses, and to future economic development.

Bennington is characterized by its expansive valley that has been able to support a rich variety of rural and urban development. That development has occurred in close proximity to distinctive upland features which have themselves limited and channeled the direction of such growth. The varied nature of the valley landforms and built environment juxtaposed with wild and abrupt mountainsides gives Bennington its unique sense of place.



Bennington's natural and built environment combine to create a truly unique sense of place with outstanding scenic qualities.

Many individual factors come together to create Bennington's special visual landscapes. These "scenic elements" reflect both characteristics that are unique to Bennington and certain features that are widely recognized as adding visual interest to a landscape. The town's Scenic Resource Inventory (December 2004) discusses each of these elements in detail: open fields, mountains, water, distant views, gateways, scenic roads and public places, historical sites and districts, and the Bennington Battle Monument.

The Scenic Resource Inventory also discusses how those features are organized in the landscape to create pleasing views. The "visual qualities" of landscape contrast, order and harmony, focal points, spatial quality, and intactness that make a particular view special and unique to the community must be protected to retain the integrity of the resource.

The scenic quality of a landscape can be affected, positively or negatively, by change. A number of landscape features are particularly sensitive to change, among them: views across open fields, prominent ridgelines or hillsides, historical buildings and districts and gateways to those districts, and scenes that include important contrasting elements such as water.



The town's land use plan and regulations are designed to reinforce the scenic quality of the landscape by focusing development in historical village centers and preserving the rural character of the outlying countryside. Special regulations also have been adopted that preserve scenic resources by requiring aesthetically sensitive design of subdivisions and commercial buildings. In addition, zoning regulations establish very specific standards and review procedures for new and altered buildings in the town's designated historic design review district.

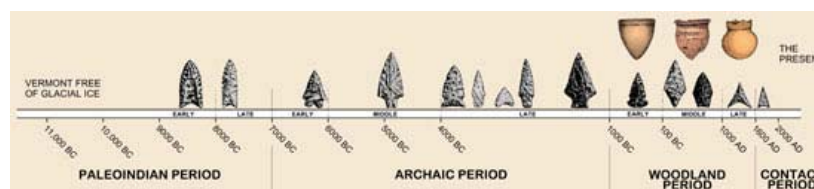
Nonregulatory tools also can be used to protect identified scenic resources. The town should work with conservation organizations such as the Vermont Land Trust to acquire properties, or conservation or scenic easements to properties, that have particular scenic significance to the community. Local and state designated scenic roads, such as Route 9, the "Molly Stark Byway" can help provide funding and impetus for preserving and promoting scenic roadway corridors.

Special attention should be given to visual gateways: points of transition along a public highway where it is evident that the traveler is arriving at a unique place. Gateways are located at entry points to the historical downtown and at places along rural highways where significant visual elements of the town's landscape first appear. These features can be improved through effective planning of adjacent land uses and integration of site features such as landscaping and careful placement of historic district signs.

Recent interest in development of renewable energy resources raises a number of important issues. Commercial-scale wind turbines will be highly visible and should be located only in locations approved by the community. Biomass (wood) heating and electric generation will involve significant tree harvesting and may include plants with smokestacks and visible plumes of steam; the environmental and scenic impacts of those operations must be considered. Small-scale hydroelectric generation can impact stream water quality, fish habitat, and aesthetics; restricting development to existing dam sites (Paper Mill Village) will greatly minimize any such concerns. Finally, the scenic impacts of commercial scale solar energy generation facilities must be considered.

#### 4.4 Historical Resources

Bennington's historical structures, districts, and archaeological sites are important resources that provide residents with a sense of their heritage and a link with the past, promoting a sense of community identity and pride. Those same resources add to the aesthetic qualities of the town and provide an interesting context that makes the community attractive to tourists



Native American artifacts uncovered in Bennington reveal a long history of settlement and activity in the Walloomsac Valley—U. Maine at Farmington Archaeology Research Center.

and to people and businesses seeking to relocate.

Details of some of the earliest human history of the Bennington area have been gleaned from archaeological sites excavated along the Walloomsac River. Careful inventories of prehistoric Native American sites adjacent to the river have revealed artifacts and evidence of 6000

years of human occupation and use of the area. These sites and others which are likely to contain materials from Native American and early colonial settlements should be protected from development that would destroy the artifacts. If development is to occur in these areas, professional archaeological investigations should be undertaken and any artifacts and findings should be documented and displayed in the area.

Bennington was chartered as a town in 1749 and evidence of its long history since that time exists in the layout of local roads, architectural styles of buildings identified with specific periods, and groups of buildings and structures in commercial, industrial, and residential districts. A comprehensive inventory is a necessary first step in understanding and protecting historical resources. Fortunately, several inventories and assessments of local historical resources have been completed. The most comprehensive is the Vermont Historic Sites and Structures Survey for the Town of Bennington which contains information on more than 3,000 properties in Bennington, Old Bennington, and North Bennington. Several historic districts and individual

**Table 4-2. Sites in Bennington Included in the National Register of Historic Places**

Downtown Bennington Historic District
Old Bennington Historic District
North Bennington Historic District
Furnace Grove Historic District
Carrigan Lane District
Ritchie Block
Silk Road Covered Bridge
Paper Mill Covered Bridge
Henry Covered Bridge
Bennington Railroad Station
William Henry House
Holden-Leonard Mill Complex
Frederick Squire House
U.S. Federal Building (current Bennington Police Station)
Everett Mansion
Park-McCullough House
Cora B. Whitney School (converted to affordable housing)
Shires properties on South Street and Benmont Avenue



There is a concentration of important historic structures in the Downtown Historic District; the former Federal Building is in the foreground of this photograph looking up South Street.

structures also have been placed on the National Register of Historic Places (Table 4-2).

Of particular interest and concern to the town is the Downtown Bennington Historic District. This area includes a concentration of historical commercial, civic, and residential structures at the center of the community that, more than any other area, gives the town its unique sense of place. A design review district (Map 3-4) has been established to ensure that the historical integrity of this important area remains intact.

Inclusion in the National Register of Historic Places may enable property owners to receive federal tax advantages for historically appropriate improvements. In addition, Bennington is a Certified Local Government (CLG) - under a program developed by the National Park Service to encourage preservation of locally important historical resources. As a CLG the town is able to access certain funding and technical support resources that facilitate stated preservation goals. The Bennington Historic Preservation Commission was established in response to requirements of the CLG program and this Commission now oversees many historic preservation activities and programs in the community.

The Historic Preservation Commission has developed preservation guidelines to protect the character of historic districts that it has identified. Many of those guidelines and recommended actions are contained in its publication, Time and Place in Bennington, A Handbook for the Central Bennington Historic District. This document is available, with its comprehensive set

of design guidelines, on the town’s website.

No single tool can ensure a successful historic preservation program. A combination of regulatory design controls, public funding for site and building improvements, and incentives for adaptive re-use of historical structures is necessary, and the town supports each of these techniques to achieve its historic preservation objectives, which can be summarized as follows:



Many of Bennington’s historic structures are located along its waterways, such as the three covered bridges over the Walloomsac River.

- Maintain the community’s special historical and cultural heritage and preserve a sense of place and pride for the town’s residents;
- Maintain those historical and aesthetic qualities that are economic assets to the community and promote the economically viable reuse of historical structures;
- Require that the renovation and alteration of existing structures, and the construction of new structures, is done in a manner consistent with the character of the historic district in which they are located;
- Achieve overall visual compatibility within each district through careful attention to architectural, landscape, and site structure details;
- Save historical structures whenever possible.

The town will continue to pursue funding opportunities that support these objectives. Ongoing historically appropriate streetscape improvements in the downtown funded through the Transportation Enhancements Program have been particularly effective in this regard. Development of historical properties in Bennington, or of any property in designated historic districts, shall comply with the town’s preservation guidelines and the applicable regulatory design standards. Consideration should be given to “landmark status” for especially significant historic buildings and sites and to preservation of unique and historically important interior spaces.

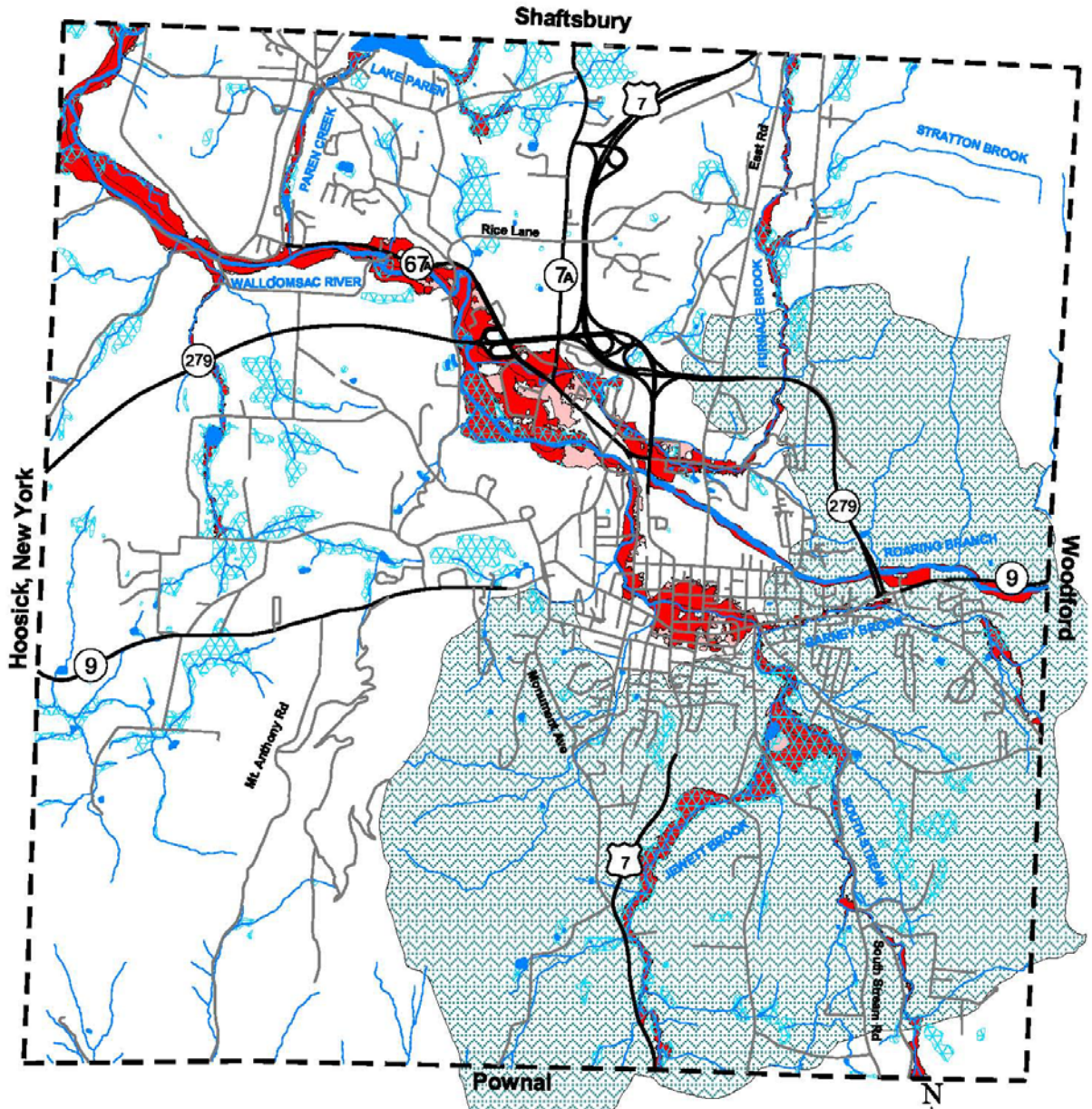
#### **4.5 Policies and Recommendations for Natural, Scenic, and Historical Resources**

1. The town should continue to work with conservation organizations and the Vermont Land Trust to preserve lands that contain productive agricultural soils and to support economically viable farming operations.
2. Land development in rural areas shall be designed to preserve as much prime agricultural soil as possible. Within the Urban Growth Area, preservation of agricultural soils is not required.
3. High elevation forest lands shall remain free from development and shall support appropriate uses as defined in the municipal zoning regulations. Conservation of important tracts of forest land through tax incentives or acquisition by conservation organizations or the Green Mountain National Forest is encouraged. The Town should promote the creation of the Green Mountain National Park from a portion of the Green Mountain National Forest.

4. Surface water resources shall be protected through comprehensive watershed planning that includes erosion and storm water control and by maintaining undisturbed buffers between development and stream banks and shorelines.
5. The town should seek opportunities to focus community interest toward and along waterways through development of linear parks, pathways, and safe and adequate public access and parking locations.
6. Development in regulatory floodplains and fluvial erosion hazard zones shall be strictly regulated according to the municipal flood hazard and fluvial erosion hazard regulations.
7. The quality and quantity of groundwater resources used for residential, commercial, and industrial consumption shall be protected through strict adherence to state and local environmental and health regulations.
8. Development planning shall consider the need for future extraction of important deposits of earth resources. Earth resource extraction operations shall be conducted in a manner that does not harm the environment, the value of nearby properties, or future development of the site.
9. Air quality must be maintained by prohibiting discharges of unhealthy pollutants from industrial, commercial, or residential sources.
10. Critical fish and wildlife habitat areas and unique natural areas shall not be damaged by incompatible development. The town should work with conservation organizations when opportunities arise to acquire such areas.
11. Development of renewable energy resources should consider both the need for locally produced energy and the need to protect natural and scenic resources.
12. New development shall be sensitive to scenic resources and shall be planned in a manner that preserves the visual integrity of critical scenic elements and visual qualities.
13. The town should work with conservation organizations to permanently protect important viewsheds through purchase of properties or scenic easements. The town should continue to participate in and support local and state scenic roads programs.
14. Protect and enhance existing visual gateways to the community and downtown, and seek opportunities to establish new gateways at appropriate locations.
15. Strict adherence to design guidelines and standards for additions or alterations to historical properties and for any construction or building alterations within the Historic Bennington Design Review District is required.
16. The adaptive reuse of historical buildings, rather than their demolition and replacement, is required whenever such reuse is practical and appropriate. Historical struc-

- tures shall be incorporated into site plans for new developments.
17. The Historic Preservation Commission shall continue to serve in an advisory role to the Planning Commission and the Development Review Board when regulations and development proposals affecting historical sites or districts are being considered.
  18. Explore and pursue opportunities for funding and financial incentives (Rehabilitation Investment Tax Credits, CLG, National Trust, etc.) that will support historic preservation efforts by the town and private property owners.
  19. Support efforts by the Historic Preservation Commission, the Chamber of Commerce, the Better Bennington Corporation, and other organizations to increase awareness of historical resources through displays, walking tours, and other means.
  20. The town should develop an inventory of irreplaceable natural, scenic, and historical resources - "Landmarks" - that must be protected. These landmarks include, but are not limited to, features such as the Bennington Battle Monument, the covered bridges, the Hotel Putnam, Mount Anthony, and similar features that are of fundamental importance in establishing Bennington's unique character.

### Map 4 - 2 WATER RESOURCES Bennington, Vermont

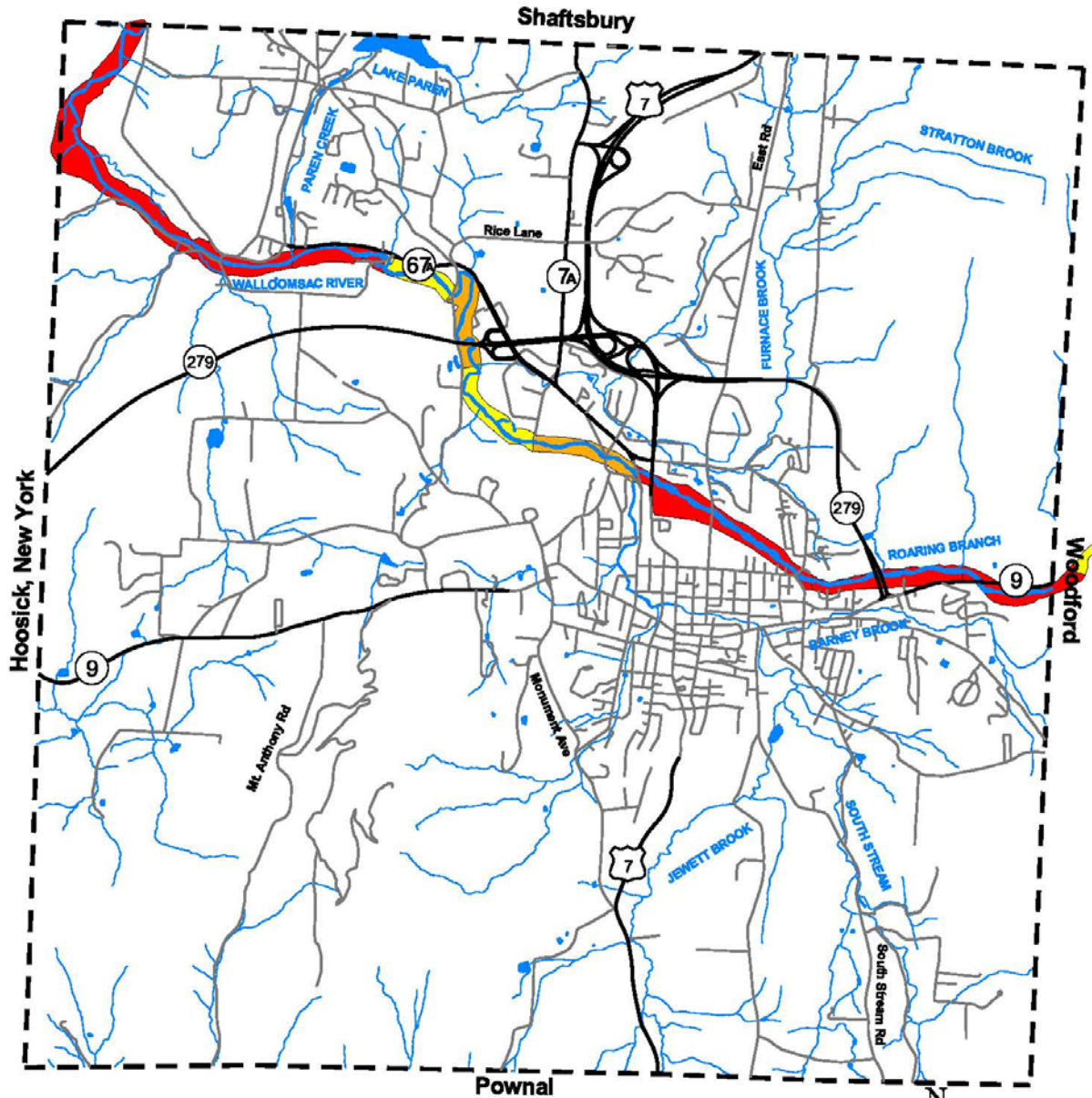


- Rivers and Streams
- Lakes and Ponds
- Vermont Significant Wetland Inventory
- Flood Hazard Areas (FEMA 2015)**
- 100 Year Floodplain
- 500 Year Floodplain
- Well Head Protection Area



Map produced January 21, 2014 by  
Bennington County Regional Commission  
111 South Street, Suite 203  
Bennington, VT 05201

### Map 4 - 2 (A) FLUVIAL EROSION HAZARD ZONES Bennington, Vermont



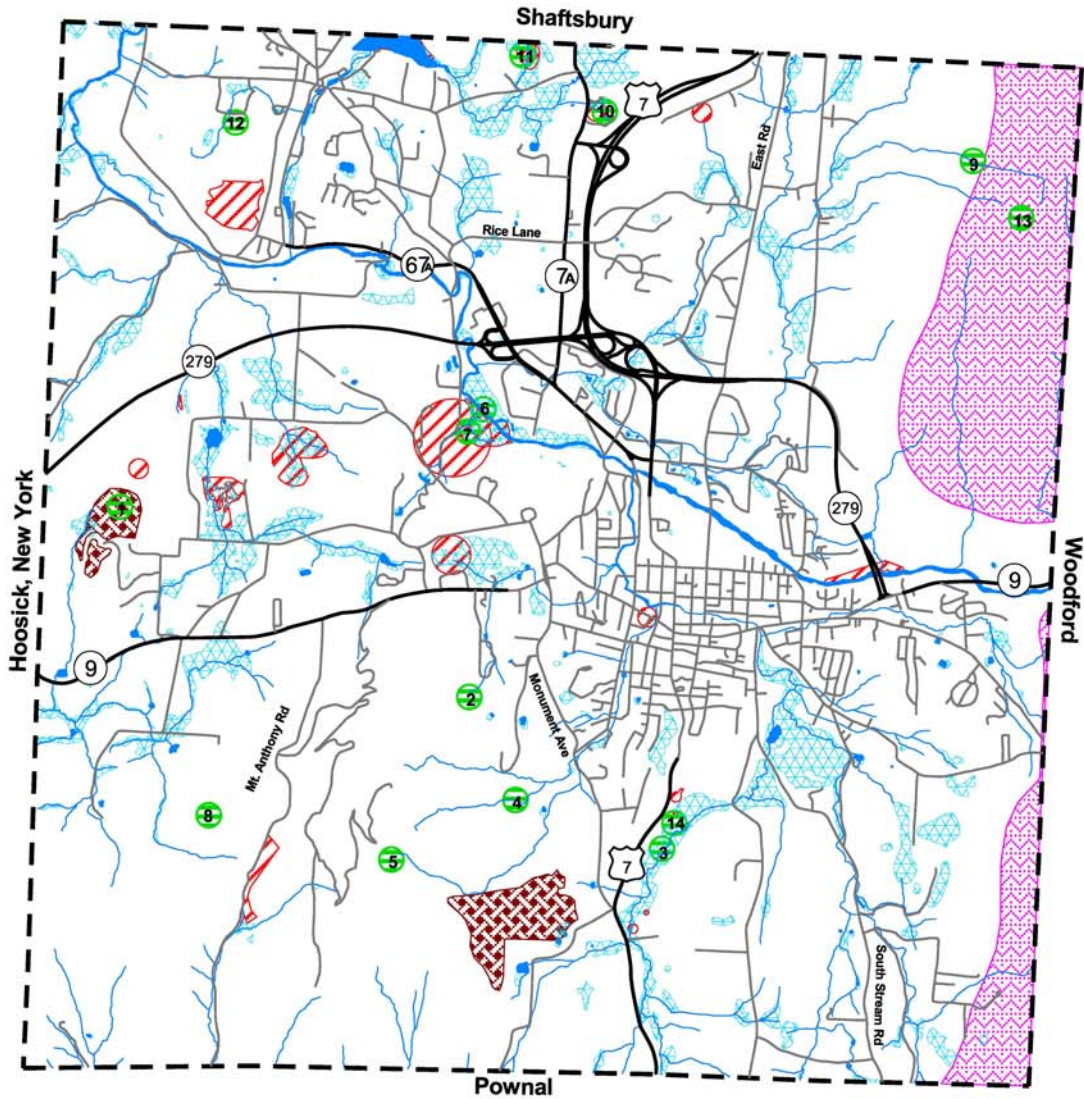
#### Fluvial Erosion Hazard Zones

- Extreme Risk
- Very High Risk
- High Risk



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### Map 4-3 FISH AND WILDLIFE HABITATS AND UNIQUE NATURAL AREAS Bennington, Vermont



- Rivers and Streams
- Lakes and Ponds
- Vermont Significant Wetland Inventory
- Unique Natural Areas
- Deer Wintering Areas
- Important Bear Habitat
- Rare and Endangered Species

1. Whipstock hill
2. Everett Cave
3. Jewett Brook Marsh
4. Tulip Trees
5. Mount Anthony
6. Silk Rd. Alluvial Forest
7. Silk Rd. Woods
8. Pit of Misery
9. Stratton Brook Falls
10. Wetland Community
11. Serendipity Fen
12. McCullough Woods
13. Bald Mountain
14. Cemetery Meadows



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## Chapter 5 - Housing

### 5.1 Overview

Bennington contains a variety of housing types in both urban and rural areas. The quantity, quality, and diversity of housing in the community must be maintained and improved to support current residents as well as future population and economic growth.

A majority of the town's existing housing stock is located in residentially zoned areas within the Urban Growth Area. Future residential growth should occur predominantly in this area, although some additional housing in rural areas is expected and appropriate. Both owned and rented housing are available in significant quantities in Bennington, and both fill important needs. It is very important that a supply of quality housing be available that is affordable for residents and prospective residents at a variety of income levels.

The State of Vermont has identified the need for "affordable housing" as a central goal for local, regional, and state planning efforts. Housing affordability is determined by two factors: the cost of a home or apartment and the ability of a household to pay that cost. A standard measure assumes that housing is affordable when a household pays no more than 30 percent of its income for rent and utilities or for mortgage, taxes, and insurance.



The Cora B. Whitney elderly housing project is a good example of rehabilitation of a historic property to meet the needs of a particular segment of the local population.

Many housing programs already exist that are targeted specifically for families and individuals with incomes at or below the poverty level and for individuals with special needs that are not adequately served by the private housing market. There also is a need for a greater supply of quality local housing for people in moderate to higher income categories.

Bennington is an employment center for the region and people who work in town should be able to find housing in town. If an adequate supply of houses and apartments at a range of price levels is not present locally, people looking for housing will be forced to move to outlying areas and towns, resulting in inefficient residential sprawl. A shortage of a diverse stock of quality local housing also discourages economic development because employers consider the availability of a local workforce—and housing for that workforce—to be a critical factor in selecting locations for establishing or expanding a business.

Planning for housing should consider the design of residential buildings and neighborhoods as well as the location and cost of that housing. It is important to ensure that existing and new residential areas provide pleasant places for people to live that are both efficient and compatible with the character of the town and adjacent land uses.

### 5.2 Housing Statistics and Identified Needs

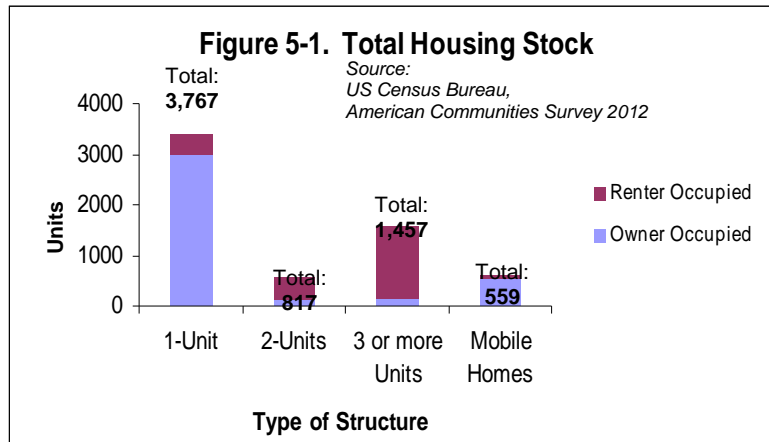
Bennington contains approximately 6,763 housing units of which 55 percent are owner-occupied units, 37 percent are renter-occupied units, and eight percent are listed as seasonal/vacant (2012 U.S. Census Bureau, American Communities Survey). This proportion of rentals is significantly greater than the countywide rate and statewide rates (26 and 23 percent, respectively). Most single-family dwelling units (including mobile homes) are owner-occupied while

two-family and multi-family dwellings are more often occupied by renters (Figure 5-1). Of the vacant units in Bennington, 247 were listed as being for sale or rent (less than 2 percent of the “owned” and about 7 percent of the “rented” units).

Residential property sales data from 2008 indicate that median home prices in Bennington are lower than in the county or state (Table 5-1). Renters pay a

higher percentage of their income in monthly housing costs than homeowners, and that amount in Bennington is, for many renters, more than what is considered affordable. Three in five renters in Bennington pay over 30% of their income in housing costs and over a quarter of renters pay more than 50% of their income for housing, statistics that are particularly significant given the large percentage of renters in the town.

A further analysis of income and housing costs provided by the Vermont Housing Finance Agency reveals more about housing needs in Bennington. The median value of owner-occupied housing unit in Bennington is \$162,000, which would be considered affordable for a household with an income of \$54,000, but the median household income in Bennington is less than \$42,000. A family with an annual income of \$42,000 can afford to own a home costing \$140,000. This might explain why the average sale price of primary residences in Bennington between January 2013 and April 2014 was significantly lower than county and state averages (22% and 25% less, respectively.)



**Table 5-1. Median Price of Primary Residences Sold in 2013**

	Bennington	Bennington County	Vermont
Single Family Houses	\$142,500	\$175,000	\$200,000
Condominiums	\$110,500	\$180,000	\$187,000
Mobile Homes (w/ land)	\$37,910	\$32,000	\$76,500

Several specific areas of housing concern and need have been identified, based on demographic data and input from human service and housing organizations:

- Housing that meets the needs of the town’s growing population of elderly residents. Additional housing is needed in and near the center of town because of the limited mobility of much of this population; in addition, housing options with few or no stairs to negotiate are needed, which should include considerations of ramps and other accessible entrances. Assisted living housing is another area with a growing demand that will need to be addressed, as is the need for housing for elderly residents on a limited income.

- Low and very low income residents currently have very few housing choices available to them in Bennington. Both the Bennington Housing Authority and Shires Housing, formerly the Regional Affordable Housing Corporation, attempt to find housing for low-income residents, but also must ensure that prospective tenants can afford the minimum rents needed to keep the units open and available. There also is a need for some type of transition program to help people move from subsidized to non-subsidized housing. In the same vein, expanded job opportunities are needed to provide the income that will allow people to progress in the housing market.
- Sufficient quality rental housing in Bennington is needed, particularly in and around the downtown. This was cited as the chief housing-related concern by area employers in a local survey conducted as part of the Bennington Housing Report in 2014.
- Housing options are needed to provide an entry into the home ownership market for people and families making 100% to 150% of median income. This income group comprises an important segment of the working population of the town and must be served to support the town's future economic progress. One model that should be explored is development of new or rehabilitated houses as duplex units, with one-half occupied by the owner of the building and the other half rented, with the rental income used to help pay the costs of ownership.

### **5.3 Location and Design of Residential Development**

Bennington's housing stock, is significantly older than the state average. The median year built for a housing unit in Bennington is 1956, compared with a county and state median of 1970 and 1972, respectively. Therefore, efforts to renovate older structures in Bennington will be critical. Where new development occurs, it should be concentrated in the Urban Growth Area where the town has specifically planned for a compact settlement pattern with a mix of land uses supported by public water and sewer facilities.

In addition to the vacant land available in the Urban Growth Area, there are opportunities for "infill" development on underutilized sites, rehabilitation of substandard housing stock, and redevelopment of nonresidential structures no longer utilized for their original purpose. Any such development that conforms to zoning regulations will be consistent with the Town Plan and meet significant market demands. Because of the higher densities permitted in these areas, proximity to the town center, and grant funds available to address identified regional housing needs, it is appropriate to locate housing for elderly or other less mobile persons in these areas.

A variety of housing types also is encouraged in and around the downtown. Maintaining a residential population in this area provides convenient and efficient housing for employees, helps support local businesses, and ensures a vibrant and active downtown throughout the day and week.

Certain characteristics should be common to all new residential development in Bennington. These features represent the best of the town’s traditional development pattern. All new residential or mixed-use planned-unit developments should include as many of the following elements as possible:

- Low density in rural areas, planned to protect open spaces and important natural resources; higher densities within the Urban Growth Area.
- Architecture that is compatible with the historic character of the town and surrounding neighborhoods, but that provides some variety in design among and between structures.
- Housing in walkable and accessible areas that have connections to public space and all basic amenities.
- Relatively narrow streets that slow traffic and form a connected network with existing streets, and with multiple neighborhood access points, to disperse traffic.
- Parking areas for cars and garages that are not prominent in building or site design.
- Buildings sited relatively close to the public street that include front porches with walkways connecting to the public sidewalks.
- Sidewalks and pathways that traverse the development and connect to public open spaces, adjacent neighborhoods, and any concentrations of public activity such as commercial areas or schools.
- Streets and sidewalks that are treated as public spaces and integrated with existing parks and new “pocket” parks to foster a sense of neighborhood and community.
- Landscaping that is carefully planned with appropriate trees and grass strips along streets and sidewalks.
- Whenever possible, a range of housing types (ownership, rental, one, two, or multi-family—as permitted in the zoning bylaws for the district) at a range of price levels are provided.

Any new or rehabilitated housing also should be made as energy efficient as possible. Adequate insulation, minimizing air infiltration, proper ventilation, efficient furnaces, appliances, and other structural features should be incorporated in residential developments. The town should require conformance to the Vermont Residential Building Energy Standards. State-level legislative initiatives should be pursued so that investments in energy conservation and renewable energy systems are affordable and do not result in increased tax burdens. Any measures of affordability must consider ongoing energy costs—poorly designed and insulated buildings and mobile homes may be inexpensive initially, but prove to be a poor investment and costly to maintain over the long-term.

#### **5.4 Housing Programs**

The town’s land use plan (as implemented through the zoning and subdivision regulations) provides for the development of an adequate supply of housing for the community. Relatively high residential densities and mixed uses are planned for the center of town. A large amount of rural land is available to support carefully planned low density residential development. In addition, the land use plan allows for multifamily housing in several districts as well as residential care homes for special needs populations and accessory dwelling units as required

by state law.

Shires Housing is a local nonprofit organization that develops and maintains affordable housing throughout Bennington County. Shires has completed a number of projects in Bennington ranging from rehabilitation of single family homes to construction of new multifamily housing projects and adaptive reuse of historic structures for residential use. The town should continue to work cooperatively with Shires, other organizations, and private developers and landowners to encourage development of affordable housing in the area with an emphasis on renovation of existing housing stock and creation of home ownership opportunities.



The Applegate Apartments on Orchard Road provide 104 units of affordable family housing.

The Bennington Housing Authority manages up to 207 Section 8 vouchers for rental subsidies in the community. The Bennington Housing Authority also owns and manages 195 public housing units in four different properties, serving both families and elderly tenants. The town should place representatives on the Authority's board of directors who take an active interest in furthering the town's housing goals. Efforts should be made to ensure that people who become financially able to relocate to non-subsidized housing are able to, so those subsidized units can then be made available to those most in need.

Two housing revolving loan funds are administered by the town's Community Development Department: the Housing Rehabilitation Loan Program and the Home Retention Loan Program. The Department also works closely with developers, industry, and local groups to foster economic development and related housing initiatives.

A considerable amount of Bennington's affordable housing is in the form of rental units in privately owned homes, many of which are located within the town's vibrant urban neighborhoods. The town should support landlords who provide quality rentals that meet demonstrated housing needs and support livable neighborhoods.

Statewide organizations that are involved in the development and maintenance of affordable housing include the Vermont Housing and Conservation Board, which provides funding for both housing development and land conservation efforts and Housing Vermont, a nonprofit organization that creates permanently affordable rental housing by working with local organizations and the private sector. The Vermont State Housing Authority provides rental subsidies and financing for the development of affordable housing projects. The town should continue to work cooperatively with all of these organizations to pursue opportunities that will expand the supply of quality affordable housing for existing and new residents with an emphasis on renovation of existing housing stock and creation of home ownership opportunities.

## 5.5 Housing Policies and Recommendations

1. Improve the existing housing stock to provide a variety of opportunities for rental and home ownership for people of all income levels.
2. Create infill housing opportunities, which like all residential development shall: inte-

grate into existing street networks; be compatible with the character of the town; provide safe, comfortable, and attractive neighborhoods for residents; and shall include amenities such as sidewalks, landscaping, and public open space.

3. Create financial incentives to encourage adaptive re-use of existing structures; actively encourage new housing development in and around the downtown, including residential use of the upper stories of commercial buildings.
4. Promote an adequate supply of code compliant and well-maintained rental housing at a variety of income levels to meet community need. This will be a critical step in generating the economic development necessary to support long-term home ownership.
5. Work with businesses to monitor employee housing needs and barriers, considering both rental and ownership.
6. Recognize and address the housing needs of professionals relocating to the area by supporting the renovation of existing dwellings and construction of new dwellings to serve this population.
7. Recognize and address the housing needs of elderly and disabled persons with limited mobility by working with local and state housing agencies and private developers. Support renovation of existing housing and development of new housing that meets the needs of these groups in and near the center of town.
8. Promote programs and development that provide needed amenities , such as community facilities and stores (especially food stores) for neighborhoods that currently lack access to such amenities.
9. Work with Shires Housing, other housing agencies, and private developers to develop an adequate supply of affordable housing and develop programs that encourage home ownership for people and families with incomes at or near the town median. Focus efforts on opportunities to increase owner-occupancy rates in and near the downtown area.
10. Energy conservation and efficiency shall be an important consideration in all housing. Incentives for investment in conservation and renewable energy systems should be supported.
11. Residential development shall be designed to be compatible with the character of the town, provide safe, comfortable, and attractive neighborhoods for residents, and shall include amenities such as sidewalks, landscaping, and public open space.

## Chapter 6 - Transportation

### 6.1 Overview

A safe, convenient, and efficient transportation system is essential to Bennington's residents, visitors, and businesses, and to achieve the economic progress and quality of life goals identified in this Plan. The transportation "modes" that form this system include: roadways, bridges, and vehicle parking areas; facilities for pedestrians and bicycles; railways; air transportation; and buses and other public transportation providers. Each individual mode is important and it also is important to recognize that the connections between the modes and the relationship between land uses and transportation facilities are critical to the effectiveness of the overall system.

### 6.2 Roadways, Bridges, and Parking Facilities

The first settlers to the area constructed roads that served as a framework for the town's future development. Ever since that time, roads, whether traveled by horse and wagon, trolley, bicycle, bus, car, or truck have been the most important element of Bennington's transportation system. The town's system of roadways provide access to homes, workplaces, schools, stores, parks, and virtually every other local destination while the state highways that traverse the town are the principal means of travel to and from locations outside of Bennington. Because of their role in addressing transportation needs, the public investment in the construction and maintenance of our highways is among the largest of any governmental program. It also is important to remember that these same roads are the most visited public places in Bennington, by residents and visitors alike, and as such their design and relationship with surrounding land uses contributes greatly to the town's sense of place.

It is important to recognize that cars, trucks, buses, bicycles, and pedestrians all must be accommodated on the Town's roadways and bridges. The Complete Streets policy was implemented by Act 34 of the 2011 Legislature. Complete Streets is an approach to planning, design, construction and maintenance of roadways to consider all users, including pedestrians, bicyclists and transit riders. Moreover, within the next few decades, gasoline and diesel powered vehicles may no longer be the most common users of the highway system, and consideration must be given to the eventual increased use by public transit vehicles, bicycles, and vehicles powered by alternative fuels such as electricity. Roadway design and infrastructure development must begin to consider this inevitable transformation in the use of our roads.

Bennington contains over 120 miles of public roadways (Table 6-1). Each of these roads

**Table 6-1. Miles of town and state Maintained Highways in Bennington.** Class 1 town highways are state system highways maintained by the town. Class 2 town highways support relatively high traffic volumes and serve as important collectors and/or connections between communities.

<u>Highways</u>	<u>Mileage</u>
<b>Town Highways</b>	<b>99.40</b>
Class 1	3.62
US 7	1.65
VT 9	1.97
Class 2	11.49
Class 3	84.26
<b>State Highways</b>	<b>27.93</b>
US 7	6.33
VT 279	6.05
VT 9	4.32
VT 67A	1.94
VT 7A	3.02

can be described according to a particular “functional class.” **Arterial highways** are State roads that are intended to focus on vehicle mobility, and limited access arterials such as US 7 (north of Bennington) and VT 279 allow access only at interchanges. **Collector highways** may be either state or town highways that move traffic between local roads and destinations, serving both vehicle mobility and access to adjacent land uses. **Local roads** are town highways that provide for relatively low speed traffic flow with an emphasis on provision of access.

The entire highway system is depicted on Map 6-1. There are many issues and needed improvements associated with each State highway and with the network of town highways. Those issues are presented below, arranged according to the functional classification of the roadways.

## State Highways

A principal arterial, **US 7**, connects Bennington with communities along the entire western side of Vermont and south into Berkshire County, Massachusetts. The limited access portion of the highway begins north of the downtown and passes through a set of traffic lights at the intersection of Northside and Kocher Drives. The highway is an obstacle to pedestrian movements between residential, commercial, educational, and recreational facilities. A bicycle/pedestrian path across US 7 is planned as part of an ambitious and important project to improve pedestrian mobility and safety in this area. The highway quickly gains elevation north of this intersection and functions effectively as part of the national highway system (NHS). The views



Entering Bennington from the North on US 7.

to the south from US 7 as travelers enter Bennington form an important gateway to the town, with striking views of Mount Anthony and the Battle Monument.

US 7 continues as an important rural arterial south of the downtown area. It provides connections to Pownal and on to Massachusetts. As such it is an important entryway to Southern Vermont and Bennington.

VT 279 diverts through east-west traffic around Bennington’s downtown, removing a considerable number of vehicles from VT 9 within the town’s center. Unlike the east-west VT 279 corridor (intended primarily to divert through truck traffic around downtown Bennington), the proposed north-south VT 279 corridor will have little impact on through truck traffic, but will divert passenger vehicles around the downtown. It’s important to ensure that the new intersections of VT 279 create gateways to the town and allow for easy access to the downtown to avoid adverse impacts on businesses in Bennington.

As it passes through the center of town, US 7 functions as an urban arterial with slower traffic movements and a greater emphasis on providing access to adjacent land uses. The design of US 7 as well as streetscape features along the highway are especially important as it passes through Bennington’s historic downtown area; all such features should be visually appealing and consistent with the historic scale and character of the town.

All sections of VT 279 are limited access arterials. Development in the areas of the interchanges between VT 279 and US 7 and VT 9 must be consistent with the land use plan to ensure that congestion does not compromise the function of the new highway or reduce safety in those



areas. These intersections, and the approaches to the town from them, should appear attractive and convenient to travelers because they will function as the principal gateways to the community.

The other NHS principal arterial that traverses Bennington is **VT 9**, a highway that includes both the downtown Main Street and scenic rural segments. Its historic and scenic values have led to designation of VT 9 as an official “Vermont Byway” through the National Scenic Byway Program. VT 9 is an important gateway to town as it passes through a scenic rural valley and historic Old Bennington Village. It is important to maintain and improve the condition of VT 9 and to continue to emphasize attractive highway and streetscape design, particularly in the historic downtown area. Informational and directional signs identifying VT 9 as the “Molly Stark Byway” have been installed in locations that direct travelers along this route. Additional byway signs are needed along NY Route 7 near the Route 279 intersection to direct travelers onto VT 9.

The **VT 67A** corridor provides an important arterial connection from Bennington’s Northside Drive commercial area to North Bennington Village and then to New York State. Large commercial, industrial, and institutional uses, as well as a linear residential area, access directly to VT 67A. This highway also includes a major interchange with VT 279. With its important arterial function, serving as a principal connection between communities, as well as its role in providing access to a variety of substantial land uses and connecting highways, careful highway design and control of driveway and roadway connections are necessary. The “Bennington VT 67A/7A Access Management Study” describes the existing condition of the highway and the challenges associated with accommodating new development and traffic growth along the corridor. That report should be reviewed by the town when considering improvements to existing intersections or roadway segments and when evaluating the appropriateness of new access drives along the highway.

Once the principal regional highway approach to Bennington from the north, **VT 7A** is now considered a collector highway because of the presence of US 7. It collects traffic from adjacent local roads, connects Bennington and Shaftsbury, and provides access to residential and commercial uses. The commercial uses are highly concentrated in the Northside Drive area and are interspersed among residential uses and open spaces in the Harwood Hill area.

Traffic volumes are very high along Northside Drive and congestion and safety have been serious concerns in this area. Several studies have focused specifically on Northside Drive:

- Bennington Access Management Guidebook (1997)
- Northside Drive Transportation Study and Plan (2003)
- Bennington VT 67A/7A Access Management Study (2004)
- Northside Drive Roundabout Conceptual Analysis and Design (2006).

Those studies contain recommendations for short and long term solutions to the traffic concerns and should be consulted when evaluating new roadway construction projects and proposals to develop or redevelop properties along Northside Drive. Possible improvements include such things as intersection improvements (roundabouts), consolidation and improved definition of driveways, interior connections between parking lots, and methods to restrict conflicting turn-



Route 279 will provides a useful east-west truck route around Bennington, improving traffic flow and enhancing the downtown.

ing movements. Stormwater drainage along this section of roadway is deficient and must be improved.



Suggested intersection improvements along the congested Route 7A/67A corridor include roundabouts at the intersection of those two highways and at the Monument Plaza intersection. (Northside Drive Roundabout Conceptual Design, 2006, by Resource Systems Group.) The proposed roundabout at the Monument Plaza intersection will be constructed as part of the Wal-Mart expansion.

Traffic volumes on VT 7A drop off considerably north of the VT 67A intersection. Additional commercial development in this area would lead to sprawl and an extension of the traffic problems currently seen along Northside Drive. Future development in this area should be restricted as described in the Land Use Plan so that necessary roadway improvements will be limited to pavement maintenance, shoulder widening, and eventual replacement of the railway bridge and the highway bridge that crosses a small stream, both at the base of Harwood Hill.

### Town Highways

The town's network of local roads provides access to adjacent land uses and to collector and arterial highways. The grid of local roads in the center of town provides numerous alternative routes for local traffic to move to destinations within and outside the area. Some town highways function as collector highways and some also provide connections to adjacent towns. Examples of town collector highways are: South Stream Road, East Road, Monument Avenue, Silk Road, and North Branch Street.

The main elements of Bennington's system of town-owned roads have been in place for a very long time. Early settlers and residents laid out the roads which formed the framework for subsequent development of the community. In recent years, decisions regarding the location of roads (and thus establishing a direction for new growth) have been undertaken principally by private developers. While many such private development roads have been well sited, there may be opportunities for the town to determine where new roads are located and, consequently, to encourage development in appropriate areas and ensure efficient movement throughout town.

The town can develop and adopt an “Official Map” (24 V.S.A. Section 4421) as a means of planning for new public facilities such as roads. By carefully considering where new local roads should be located, the town can preserve the opportunity to acquire the land necessary for construction of the road. Examples of situations where such an effort might prove effective include the need for an improved roadway connection between rural neighborhoods in the southeastern part of Bennington and US 7 as well as connections that would create small grid networks to improve local traffic flow through and between neighborhoods.

Whenever a new local road is constructed or the town acquires an existing right-of-way for use as a public road, the road must be named for addressing and public safety purposes. Any new road names should reflect the historic character of the town or the particular area where the road is located rather than a reference to a commercial entity that may be served by the road.

All new private or public road construction shall be accomplished in accordance with town regulatory standards. Proper roadway construction will enhance safety and convenience for users of the roads, including pedestrians and cyclists, reduce the cost of maintenance, and ensure that the town is not faced with excessive costs if a private road becomes public or if additional growth leads to a significant increase in the volume of traffic on a road.

## Bridges

Town and state bridges are critical links in the highway system. The Vermont Agency of Transportation conducts regular safety inspections of bridges and establishes priorities for funding and necessary improvements. Special financial assistance is available to towns for required repairs to town bridges and culverts.

Whenever a new bridge is constructed or an existing bridge is repaired or reconstructed, every effort should be made to maximize safety while providing an attractive design and accommodating pedestrians and bicycles by providing sufficient lane width and/or sidewalks.

Three historic covered bridges are located in Bennington, all spanning the Walloomsac River in the northwestern part of town: the Silk Road Covered Bridge, The Paper Mill Covered Bridge, and the Henry Covered Bridge. The town must maintain these important historic and scenic resources and utilize resources provided by the Vermont Historic Bridges Program. Adequate, safe, and attractive parking areas should be maintained near the bridges to allow people to visit and photograph the structures, but those parking areas, and any roadway signs near the bridges, must be carefully located so that they do not detract from scenic values.



The Henry Covered Bridge is one of three historic bridges spanning the Walloomsac River.

## Access Management

Access management deals with the relationship between the roadway network and adjacent land uses. The highway system needs to provide for safe and efficient through traffic movement as well as access to residences, businesses, and other uses located along the roadways.

Those two functions often come into conflict and access management is a set of principles and tools that can be used to minimize those conflicts. Specific benefits of access management planning include:

- Improved traffic flow by decreasing delays and occurrences of vehicle blockages;
- Improved vehicular and pedestrian safety by eliminating conflict points;
- Support for economic development through improved access;
- Support for local land use plans; and
- Improved aesthetics and community character by incorporating landscaping, sidewalks, and lighting into the design of intersections and driveways.

Appropriate access management elements shall be included in any roadway construction or reconstruction project. Specific recommendations are included in the “Bennington Access Management Guidebook” and the “Bennington VT 67A/7A Access Management Study.” In addition, the town shall require applicants for land use permits to include access management principles in their development site planning.

A wide range of regulatory options can be used by the town to maintain or improve access management conditions. The most basic methods involve zoning controls over the location, type, and intensity of development. Site plans for new developments or redevelopment or existing properties shall include appropriate site-specific access management options, which may include:

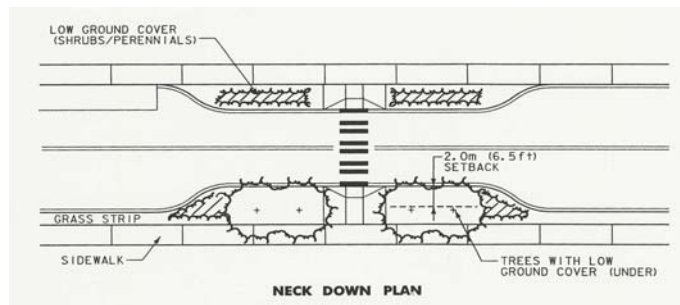
- Limiting the number, width, spacing, and alignment of curb cuts (which may involve closing or relocating existing curb cuts);
- Requiring connections between adjacent lots for both vehicles and pedestrians;
- Restricting parking to the side or rear of buildings;
- Constructing sidewalks from the public right-of-way to the storefronts;
- Providing safe access routes for bicycles and racks for bicycle storage;
- Allowing for planned unit developments and requiring submission of master plans to account for future parking and access needs;
- Requiring access drives to intersect existing side roads or new subdivision or service roads;
- Planning for roadway connections between adjacent developments and discouraging dead-end roads;
- Requiring traffic impact studies, paid for by the developer, for large-scale new projects as well as construction of necessary improvements identified in those studies.

### **Traffic Calming**

Traffic calming involves the use of physical changes in the roadway and enforcement to reduce vehicle speeds. In urban and village areas, these techniques can safely balance the needs of motorists, bicyclists, and pedestrians. Traffic-calming promotes safety while creating opportunities to enhance the aesthetic elements of a roadway by reducing pavement width and increasing landscaping.

A wide range of traffic calming techniques are available. Some of the most common techniques are:

- Installation of roundabouts at intersections, particularly at “gateways” to downtown or village center areas;
- Reduction of the motor vehicle travel lane width in village areas;
- Center islands and pedestrian refuges at crossing locations in roadways and raised and/or textured crosswalks;
- Bulb-outs at crosswalks;
- On-street parking;
- Pavement markings;
- Enforcement, especially a visible enforcement presence.



Detail of a “neck down” from the Agency of Transportation’s traffic calming manual.

The Vermont Agency of Transportation has developed a series of standard drawings for traffic calming devices. The town should consider utilization of one or more of these techniques wherever vehicle speeds might compromise safety and especially at approaches to the town center.

## Parking

Safe, convenient, and attractive vehicle parking areas are a necessary component of the transportation system. In most parts of the town, adequate parking can be provided through on-site facilities. The location of these parking lots on a site and the layout and design of the lots are important to their proper functioning and to the aesthetic values of the community.

Parking areas shall be well-landscaped and placed at the side or rear of lots to ensure that a sea of asphalt and vehicles are not prominently visible from public roads. Parking lots must include landscaped islands and sidewalk linkages that provide for safe pedestrian movements to and through these areas. It is important that parking lots provide adequate space for the number of vehicles that typically use the site, but lots with excessive parking spaces are not appropriate.

In the downtown area, due to space limitations and because of the town’s objective of maintaining a very compact development pattern, on-site parking is generally not available or appropriate. On-street parking provides for a significant amount of vehicle storage in the downtown and also contributes to traffic calming, as noted above. Public parking lots and parking garages should be located behind, but convenient to, the main business streets in the downtown. Those public parking facilities should include the same design elements as on-site private lots as well as clear and attractive sidewalk or pathway connections to commercial destinations. If sufficient public parking is developed behind Main Street, it will be possible to eliminate some on-

street parking and expand sidewalks and adjacent areas for additional public spaces that could be available for enhanced landscaping, outdoor dining, art displays, sitting areas, and similar uses.

### **Necessary Road, Bridge, Sidewalk, and Intersection Improvements**

The town has developed a list of intersection, roadway, sidewalk, and bridge needs that are included in the municipal capital plan and budget, and sidewalk infrastructure plan. These projects have been identified through the experience of municipal public works employees, town and regional planning studies, and VTrans scoping reports (the first step in the VTrans project development process). The list (Table 6-2, following page), excerpted from the capital plan, should provide a basis for identifying priorities for town and state funds.

### **6.3 Pedestrian and Bicycle Transportation**

Everyone spends at least part of their day as a pedestrian, even if that involves simply walking from a car to a residence, workplace, or store. Many people walk much further, of course, relying on the town's sidewalks, pathways, and roads to provide safe, convenient, and enjoyable travel routes. Bicycling is an extremely efficient transportation option that also is a popular recreational activity for residents and tourists to the area. Any type of human-powered transportation has the added benefits of promoting good health and reducing vehicle congestion and emissions. Bennington provides a beautiful natural and historic environment for walking and bicycling and the town should actively work to ensure that adequate facilities are available to encourage these activities.

The town maintains approximately 40 miles of sidewalks in the urban center. These sidewalks provide critical links between neighborhoods and to and throughout the central business district. A Sidewalk Infrastructure Plan was recently completed, including a detailed map/inventory of all sidewalks and their condition, to improve planning for this infrastructure (see map 6-2).

A sidewalk reaches Mount Anthony Union High School and has been extended as a multi-use path north along Park Street and East Road to the new Middle School. There is a need for new sidewalks along the Kocher Drive and Northside Drive commercial corridors as well as a connection to those areas along North Street. A sidewalk connection between Northside Drive and the Hannaford and Home Depot shopping plazas also should be established.

Sidewalks in the downtown area should be wide and include attractive design elements such as brick borders along the curb line. Amenities such as park benches, shade trees, and informational signs directed to pedestrians also should be available. In areas characterized by higher speed traffic and a lack of on-street parking, and in residential areas, the sidewalks do not need to be as wide, but should be separated from the street edge wherever possible by a vertical curb and landscaped strip.

Crosswalks should be provided at appropriate locations to facilitate pedestrian movements at street crossings. Most pedestrian crossings should occur at traffic signals or at locations where traffic speeds and sight distances will promote safe crossings. At traffic signals in areas of high vehicle traffic volume or where vehicle turning movements could endanger pedestrian safety, dedicated pedestrian signal phases should be employed.

A particularly difficult obstacle to pedestrians exists at the US 7-Northside/Kocher intersection. A conceptual design for a bicycle/pedestrian facility connecting the East Road pathway

**Table 6-2. Identified Intersection, Road, Sidewalk, and Bridge Project Needs.**

(Refer to Bennington Capital Plan and Budget, Sidewalk Infrastructure Plan and Active Transportation Guide for additional details)

<u>Bridges</u>	
VT 7A	Widening at RR underpass and bridge at base of Harwood Hill (with road widening)
Benmont Avenue Bridge	Reconstruct
Depot Street Bridge	Possible reconstruction
<u>Sidewalks</u>	
Townwide	Rehabilitate sections each year per sidewalk infrastructure plan and capital plan
North Street, County to Depot	Extend sidewalks to Kocher Drive
Kocher Drive	Construct sidewalks and crosswalks
VT 67A	Sidewalks from VT 7A to shopping plazas
Benmont Avenue	Add sidewalks and curbing, upgrade existing sidewalks, complete sidewalk connections, add crosswalks
Willow Road or railroad ROW	Sidewalk or pathway from Applegate Apartments to Molly Stark School
Pleasant Street	Sidewalk improvements per capital plan
Northside Drive/North Bennington Road	Fill in gaps in sidewalks between Kocher Drive and Bennington College entrance.
Franklin Lane	Pedestrian improvements
<u>Pathways</u>	
Bennington Pathway Extension	Extend pathway northward, possible connections to North Bennington
Bald Mountain Trail	Trailhead/parking improvements at North Branch Street access
Applegate to Willowbrook	Connect housing developments, provide access to Molly Stark School (BCRC Feasibility Study)
Ninja Trail	Connect downtown to Bennington College via on-road/off-road bicycle/pedestrian friendly route
<u>Intersections</u>	
Benmont Avenue/Hunt Street	Realignment
Benmont Avenue/Northside Drive	Various improvements ( <i>Scoping Report STPG TSIG(4)SC</i> )
Branch Street/East Main Street	Improve turning radius ( <i>Bennington Local Roadway Network Analysis (BLRNA—2003)</i> ).
Park Street/Kocher Drive/East Road/N. Branch St	Turning lane and other improvements <i>Scoping STPG TSIG(4)SC and BLRNA-2003</i>
Union Street/East Main Street	Possible signals
Rice Lane/College Drive/Silk Road/VT 67A	Possible roundabout
East Main Street/Burgess Road	Integrate with VT 279
Kocher Drive/US 7	Lane, signal, and pedestrian crossing improvements <i>2014 Scoping Study</i>
Dewey Street/Monument Avenue	Safety improvements
County Street/Park Street	Left-turn lane
Safford Street/East Main Street	Signal upgrade and lane realignment ( <i>BLRNA-2003</i> )
East Road/Houghton Lane	Realign intersection, reduce turning radius
Northside Drive/North Bennington Road Corridor	Possible Roundabouts (Northside Drive Roundabout Conceptual Plan)
<u>Roads</u>	
Walloomsac Road	Straighten and remove vertical curve at Pippin Knoll
Northside Drive	Curbs, drainage, sidewalks, lighting, paving, crosswalks, signals, landscaping, access management, possible intersection (roundabout) improvements
Benmont Avenue	Access management improvements, speed limit, signs, pedestrian improvements
Route 7A	Correct severe safety problem of longitudinal cracks in pavement



Downtown sidewalks should be wide and include attractive landscaping and streetscape features. It may be possible to expand these public spaces if some on-street parking is replaced with convenient off-street spaces behind Main Street.

to the sidewalks on Northside Drive was recently completed. It will be constructed after the final design is approved. Commercial stores and shopping plazas often have large parking lots—and no safe and comfortable way for pedestrians to move through the maze of vehicles from the street or their cars to the storefronts. Site planning for new or redeveloped commercial properties shall include convenient and safe pedestrian facilities connecting the storefronts to the street while providing opportunities for people to safely move through parking lots on foot. Developments also shall include sidewalk improvements along the street and between adjacent commercial sites.

### **Bennington Pathway System**

Bennington’s River Walkway is an attractive and popular pedestrian facility that follows the banks of the Walloomsac River through the town center. State funding has been obtained to extend the Walkway by constructing a “multi-use pathway” (designed for pedestrians, bicycles, and other non-motorized use) from its western end north along the idle railway spur to Orchard Road and the Molly Stark School (Map 6-1). This new “Bennington Pathway” should be designed to offer convenient access from either end, street crossings, and at appropriate locations along both North Street and Benmont Avenue. Attractive and informative signs should be erected at pathway access points and at roadway intersections.

Such multi-use pathways improve mobility options for residents and can serve as tourism resources as well. They also contribute to the quality of life appeal for a community and as such can be one important factor that attracts new businesses to the area. The town has explored options for several other multi-use paths (Map 6-1). Two possible routes would extend from the Bennington Pathway: one following the Walloomsac River all the way to the Henry Covered Bridge and the other following the rail spur into North Bennington Village. Another route, known as the Ninja Trail, is the subject of a feasibility study and portions are already being constructed. The path will connect the pathway along the river to North Bennington by employing on-road and off-road infrastructure and by passing through the Bennington College campus. A scenic and interesting pathway could be established along the old “Corkscrew” rail line from the Bennington Museum past the Battle Monument to the Bennington Center for the Arts, but that corridor is no longer in public ownership. The town should continue to explore each of these options and pursue development of those which are most feasible and for which funding can be obtained.

Numerous footpaths or woodland trails exist in Bennington, providing outstanding opportunities for recreation. Foremost among these is the Bald Mountain Trail, which extends from North Branch Street to the scenic White Rocks area in the Green Mountains. The parking area at



Bennington's River Walkway is an attractive and popular pathway that should be extended.



this trailhead should be expanded and improved. The town should inventory other important trails in the community, including the network on Mount Anthony and work to preserve public access to them. A cooperative effort between Southern Vermont College, the town, and the Vermont Land Trust has preserved several outstanding trails on Mount Anthony. A network of public-use trails, maintained by the Fund for North Bennington, has been developed in and around that village.



View from a trail on Mount Anthony on the grounds of Southern Vermont College.

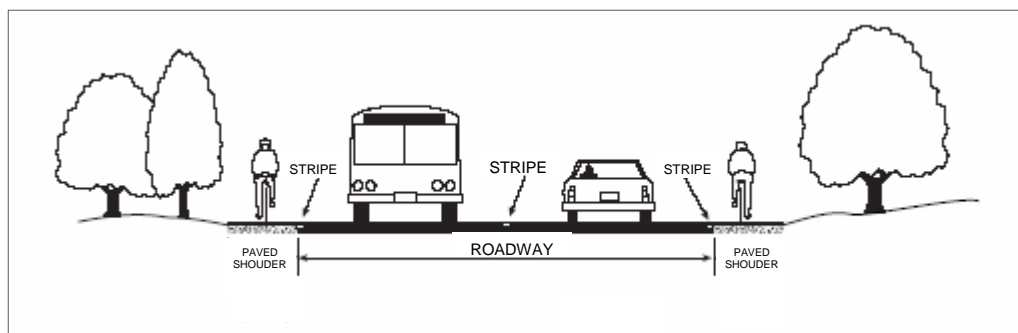
## Bicycle Transportation

Some bicycle travel will occur on the multi-use pathways that exist or will be developed in Bennington, but most bicyclists—other than young children—will rely on the same network of local and state highways used by motor vehicles. The extensive use of roads (and road shoulders, where present) by bicyclists is not surprising because these highways generally provide the most direct, and often the only, route to the greatest number of destinations. Unfortunately, many roads were not designed with bicycles and pedestrians in mind, and this fact has resulted in a number of functional and safety issues that need to be addressed.

Local roads with low volumes of vehicular traffic are natural bikeways. Because these roads are often winding, narrow, and tree-lined, they are suitable for only low-speed local vehicular traffic, making them ideal for bicycling. In general, these roads require little improvement to accommodate bicycle travel. If traffic volumes and speeds increase significantly, increased lane width and/or striping of shoulders may be necessary to assure safety.

A significant amount of bicycling occurs on state highways and Class I and Class II town highways (principal and minor arterials and major collectors) that often provide the most direct, and often the only, passable route for bicyclists traveling between Bennington and adjacent towns and other important destinations. Many of these roads are characterized by high vehicle volumes and speeds, as well as considerable truck traffic. Paved shoulders (in rural locations) or wider travel lanes (in more urban locations) should be provided along all such roads. The minimum width of the shoulders and lanes can be established by consulting the Vermont State Roadway Design Standards together with local and regional input concerning the importance of

the route for bicycling. Whenever a State road paving or reconstruction project is proposed, the town must aggressively advocate for inclusion of adequate paved shoulders or lane width. In general, shoulder width should increase with increasing traffic volumes and speeds. In addition, designation of bicycle lanes and reallocation of pavement width (narrower vehicle lanes and wider shoulders) should be considered on some roads. To be in accordance with Complete Streets legislature, all transportation projects and project phases managed by a municipality, including planning, development, construction, or maintenance, should consider Complete Streets principles. These are principles of safety and accommodation of all transportation system users, regardless of age, ability, or modal preference. Furthermore, it is important that pavement be maintained in good condition and that there be a smooth transition from the pavement edge onto the shoulder. In general, widened travel lanes are preferred in downtown areas because of slow traffic speeds and the presence of on-street parking.



Paved shoulders of adequate width will increase mobility and safety for bicyclists.

Roadway hazards, such as diagonal railroad crossings, poorly designed drainage grates, narrow bridges, and cracked or broken pavement should be corrected. When increased traffic compromises safety, it may be necessary to alter the travel lanes, reallocate pavement width, widen bridges, or construct a paved shoulder or a sidewalk.

To further promote bicycling as a means of everyday transportation, bicycle racks should be provided at convenient locations in the downtown area, at shopping centers, and at major employers. Adding “share the road” signs along important bicycling routes and adding bicycle racks to public buses and passenger trains will also be beneficial. The town should support educational programs offered by organizations such as the Vermont Bicycle and Pedestrian Coalition that inform people of how to safely enjoy bicycle transportation. The BCRC should update the regional bicycle road and route map it developed several years ago.

The Vermont Agency of Transportation includes a Bicycle and Pedestrian Section that is available to provide technical assistance to communities and to oversee grant funds that are targeted specifically for bicycle and pedestrian projects (sidewalks, pathways, or improvements to roadways). The Transportation Alternatives Program, also administered through the Agency of Transportation, is another source of funding for special bicycle and pedestrian projects.

## 6.4 Rail Transportation

An important railroad line passes through the northwestern part of Bennington (North Bennington Village), connecting to lines in New York State and continuing north to Burlington. The railway corridor is owned by the State of Vermont and leased to Vermont Railway. A his-

toric railroad station building is located along the rail line in North Bennington. A spur line that has been inactive since 1991 connects North Bennington and downtown Bennington.

In recent years Vermont has considered reestablishing passenger train service to the Bennington region from Albany (Rensselaer), New York. A federally funded “Track 3” planning study to support this effort has recently been completed. That study recommended initiation of a new service between Rensselaer and Rutland, with stops in North Bennington and Manchester. Federal funding will be needed for the over \$110 million in capital improvements to the rail lines and new station infrastructure. In addition, Vermont and New York will need to provide annual operating subsidies of over \$7 million. The town supports this effort, recognizing that such service would increase travel options for residents and advance economic development efforts by providing a convenient and enjoyable connection between the town and major metropolitan areas in New York State and along the east coast.



The historic railway station in North Bennington represents the past, as well as the future potential, of rail transportation in the region.

Many local residents already are accustomed to using rail transportation (out of the Albany station), and eliminating the drive to Albany would benefit those residents and provide convenient access to Bennington for tourists and business travelers from those major metropolitan markets. The track upgrades that would be necessary for passenger service to be initiated also would increase the potential for additional freight shipments by rail to and through the region.

Eventual extension of passenger service north through Manchester and Rutland to Burlington would establish another important connection along the western side of Vermont. The cost of track upgrades within Vermont is extremely high, and service times and projected fares not yet competitive with other transportation modes, so while this western corridor project should be pursued, initial efforts should focus on service between Albany and Bennington.

The high cost and extended timeframe required to begin passenger rail service to the region prompted state and regional transportation planners to examine the potential for an alternative means of connecting the town to the intercity passenger rail system. A dedicated Amtrak “Thruway Bus” service could be started at a total annual cost to the State of less than \$500,000. This service would provide two round trip buses per day to Bennington and Manchester, timed to



An Amtrak Thruway Bus connection is a cost-effective transportation improvement that would be a significant economic development asset for the town.

meet Amtrak's Empire Service trains in Rensselaer. A significant benefit is that Bennington and Manchester would be added to Amtrak's regular schedule, allowing people to purchase a single through Amtrak ticket to or from these destinations. Local efforts should be undertaken to identify an appropriate station stop for the bus in Bennington and to coordinate the service with the available public transit and rental car services. This cost-effective transportation improvement should be a high priority for the town and state.

The rail spur line between Bennington and North Bennington also is a valuable public resource. There currently are no specific plans for use of this line for freight or passenger rail service, but that option must be preserved through continued public ownership of the line. The spur line does give rail access to several industrial sites and should be improved if a desirable industrial use that requires rail access would like to develop one of those sites. Because of the cost of necessary track improvements and travel times, it is unlikely that passenger rail service will be reestablished on the spur.

The rail spur, or a portion of it, would make an ideal candidate for a multi-use "rail trail." The rail line could be resurfaced to provide a 10 to 12 foot wide pathway for pedestrians and bicycles. It also would be possible to operate a low-speed trolley over the line. The concept has been studied and determined to be both feasible and an ideal candidate for funding through the Vermont Bicycle and Pedestrian Program or the Transportation Enhancements Program. The pathway would provide a scenic and safe travel route between the village and the town and would benefit tourism and economic development efforts. Any such rail-trail project must include design elements that preserve, identify, and explain the historic rail use of the corridor. If dedicated rail use of the line is needed to support an industrial use in the future, the track should be reestablished at that time.

## 6.5 Air Transportation

The William H. Morse State Airport is a general aviation airport located north of VT Route 9 in the western part of Bennington (Map 6-1). Direct ground access to the airport is from Walloomsac Road. One asphalt runway, extended to 3,704 feet in 1980, serves all of the aircraft operations, and is home to the Bennington Civil Air Patrol wing, which serves the Southern Vermont region. The market area for the airport extends from Pownal in the south to the Bromley and Stratton Mountain resort areas in the north and into nearby towns in New York State. Although there is no commercial passenger or freight operator based at the airport, it is an important general aviation center and is used frequently by business travelers.

There currently are 37 aircraft based at the airport and approximately 5,000 operations per year. The airport is an extremely important component of the town's transportation infrastructure and a critical economic development resource.

A number of improvements at the airport have been identified and are supported by the town:

- Construction of new security fencing (complete);
- Rehabilitate Runway 13-31;
- Addition of Precision Approach Path Indicator lights (complete);
- Construction of a parallel taxiway;
- Runway Safety Area improvements (elevate grade of area west of the runway);
- Removal of obstructions;

- Rehabilitation and expansion of the airport parking apron;
- Construction of hanger development;
- Replacement of medium intensity runway edge lighting and NAVAIDs;
- Land or easement acquisition.

These improvements are discussed in detail in the Airport Layout Plan Update (September 2014).

In order to regulate and restrict the height of structures and objects, natural or manmade, in certain areas near the William H. Morse State Airport, it is declared that:

- The creation or establishment of an obstruction has the potential of being a public nuisance and may injure the region served by the airport;
- It is necessary in the interest of the public health, public safety, and general welfare that the creation or establishment of obstructions that may be a hazard to air navigation be prevented;
- The prevention of these obstructions should be accomplished, to the extent legally possible, by the exercise of the police power without compensation.

Therefore, zoning around the airport should conform to 14 CFR part 77 and require FAA Form 7460-1 no more than 45 days prior to construction in areas described in 14 CFR part 77.

Most Bennington residents rely on the Albany (NY) International Airport for regular passenger service. Albany International also serves business and tourist travelers to Bennington. It is important that good traffic flow be maintained along the VT 9/NY 7 corridor so that access between Bennington and that airport is not inhibited.

## 6.6 Public Transportation and Intercity Bus Travel

Public transportation provides a vital service to people who do not have access to a car and also can reduce fuel use and traffic congestion. The Green Mountain Community Network (GMCN), doing business as the Green Mountain Express, is the local public transportation provider, offering fixed route, demand responsive, and ride-match services. Funding to support these operations is provided by the Federal Transit Administration and the Vermont Agency of Transportation.



The *Green Mountain Express* provides a valuable transit option for Bennington residents.

Fixed route services operate throughout Bennington and the region. Some of the main destinations include large housing developments, shopping centers, the hospital, medical offices, schools and colleges, and downtown. It will be important to continually monitor these services to be sure that the destinations and times match local needs.

GMCN also provides door-to-door transportation to and from medical appointments, as well as special trips for elders, nursing home residents, and persons with disabilities. Other human service agencies in Bennington provide similar van-based services for their particular clien-

tele. These services are extremely important to the people served and the town should cooperate with GMCN and the other agencies to ensure their continuation.

A regional bus connecting Bennington to Manchester and to Williamstown, Massachusetts also is operated by GMCN. Connections can be made in Manchester to continue to Rutland, while connections with various intercity routes can be made in Williamstown.

The Green Mountain Express connects to The Bus out of Rutland to provide three daily trips along the Route 7 corridor. Yankee Trails offers two daily trips to Albany, New York.

With a grant from the Federal Transit Administration, the Vermont Agency of Transportation created a new intercity bus service, operated by Vermont Translines. The new service, which began in 2014, has two routes. The main route connects Burlington to Albany, NY via Bennington and Rutland, the other connects Rutland to White River Junction and Hanover, NH. The bus service makes one round trip per route per day.

Because of the importance of intercity bus service to residents and economic development, the town should continue to support appropriate north-south and east-west connections and an improved transit station and parking lot.

A renovated and expanded facility to house the GMCN fleet of vehicles, maintenance facilities and administrative offices was recently completed. This is a hub for connections between modes, including parking for cars and bicycles. Bus stop shelters, benches, and informational signs should be provided along existing bus routes.

## **6.7 Transportation Policies and Recommendations**

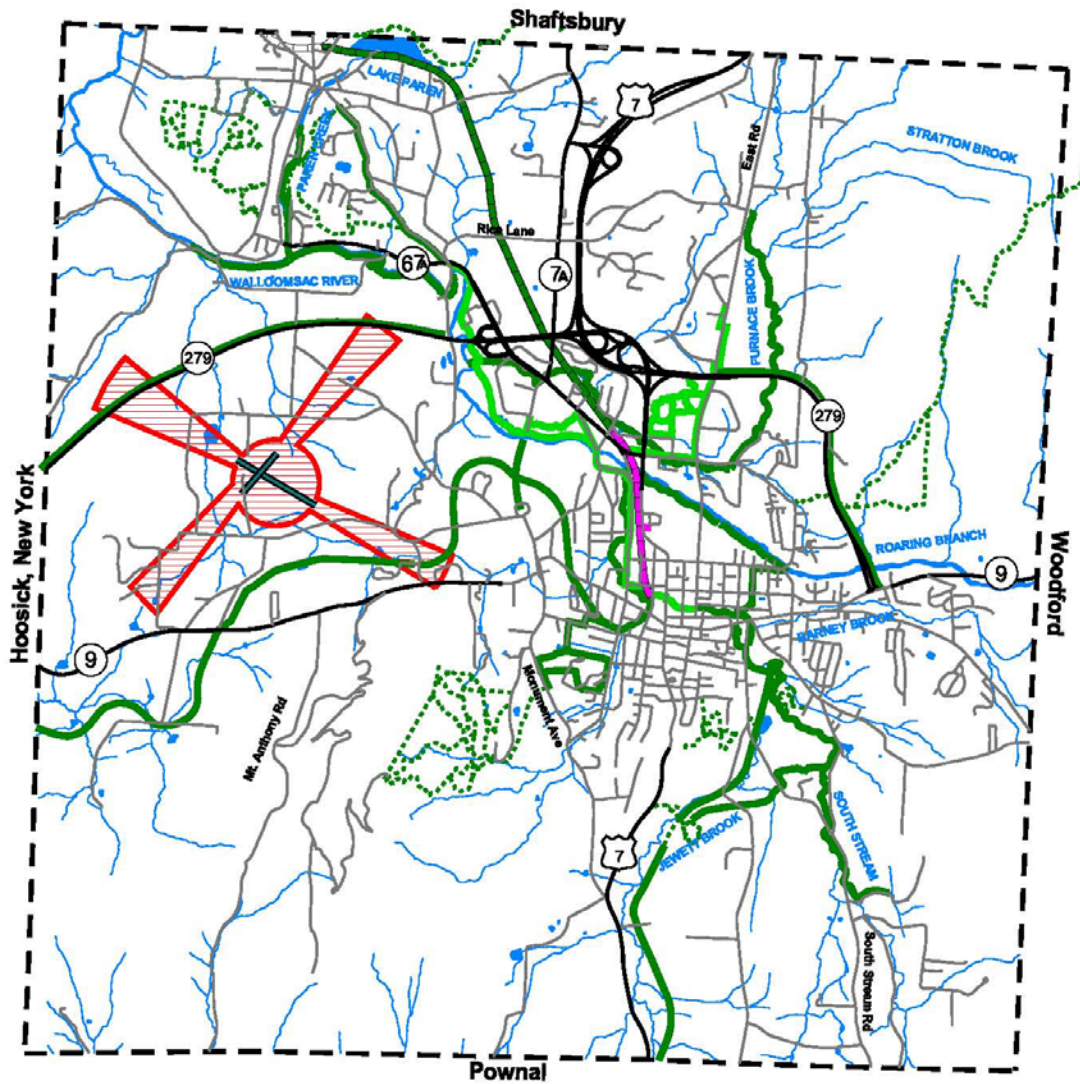
1. The safety and convenience of all users of the transportation system, including pedestrians, bicyclists, transit users, freight operators, and motor vehicle drivers shall be accommodated and balanced in all transportation and development projects so that each can efficiently use these travel ways.
2. Recognize the importance of quality multimodal transportation infrastructure to the downtown, including roads, parking, public transportation, sidewalks, and bicycle facilities. These facilities should be maintained and enhanced, in keeping with the historic character of this vital commercial center, and efforts should be made to improve the aesthetic quality of entrance corridors to the downtown.
3. Prohibit changes from rural/residential land use designations in the vicinity of the VT 279 interchanges because such changes would lead to sprawl or traffic congestion, and would detract from efforts to restrict commercial and industrial development to existing commercial and industrial zones.
4. Maintain traffic carrying capacity and safety on local and state highways through implementation of planned improvements and application of access management and traffic calming techniques.
5. Consider appropriate locations for new public roadways and development of an Official Map.
6. Require that new public and private roads and driveways be designed according to town standards and accepted access management principals. Such construction must

- also avoid adverse impacts to natural or scenic resources.
7. Road naming should reflect local historic content and not commercial entities.
  8. New or reconstructed bridges shall be consistent with the town's rural and historic character and shall include provisions for safe passage by pedestrians and bicyclists.
  9. Parking lots shall provide adequate, but not excessive, spaces for users of the site, include provisions for safe and efficient vehicular access and circulation, be carefully sited and fully landscaped to avoid adverse aesthetic impacts, and shall include safe and convenient facilities for pedestrians and bicyclists.
  10. The town, the Better Bennington Corporation, and their downtown economic development partners should work to improve the quality and supply of parking and related facilities in the downtown. Pursue funding through Transportation and Downtown programs to support development of parking lots and a parking garage.
  11. Consider expansion of sidewalk and public spaces along Main Street to further enhance the appearance and use of the downtown as an attraction that serves as a destination for both tourists and residents.
  12. Maintain and extend the town's system of sidewalks to serve areas of residential and commercial use. Implement the Sidewalk Infrastructure Plan. Ensure that provisions are in place for safe pedestrian crossings at all required locations.
  13. Complete the Bennington Pathway to the Molly Stark School and create extensions to the pathway system along the Walloomsac River and to North Bennington.
  14. Inventory and preserve public access to important recreational trails.
  15. Implement plans to develop new trails and pathways through town initiatives, cooperation with landowners and community groups, and by using available grant funds. Protect the feasibility of such routes by requiring easements and/or land dedications of development applications involving planned trails or pathway corridors, and by ensuring that roadway construction projects preserve the routes.
  16. Establish pedestrian linkages within and between residential neighborhoods.
  17. Highway paving and reconstruction projects shall include paved shoulders or wider lanes, as appropriate, consistent with need, Vermont's Complete Streets Legislation and the Vermont State Roadway Design Manual and the Pedestrian and Bicycle Facility Design Manual.
  18. Identify and eliminate roadway hazards for bicyclists and provide signs, bicycle racks, and other facilities to support bicycle use.
  19. Support railroad track upgrades and the reestablishment of passenger and freight rail

- service to Bennington. Improve rail connections between Bennington, Albany, and Burlington, including a Manchester/Bennington shuttle to Rensselaer Station.
20. Protect the airport environs from incompatible development and support safety and operational improvements at the airport that will provide economic development benefits without having undue adverse impacts on residents.
  21. Support existing public transportation services and extensions, including intercity bus service, to meet demonstrated demand, especially more frequent bus trips between Albany, Bennington and Burlington.
  22. Promote utilization of alternative fuel vehicles and other energy conservation measures in the transportation system.
  23. Require road, driveway, and pedestrian connections between adjacent developments.



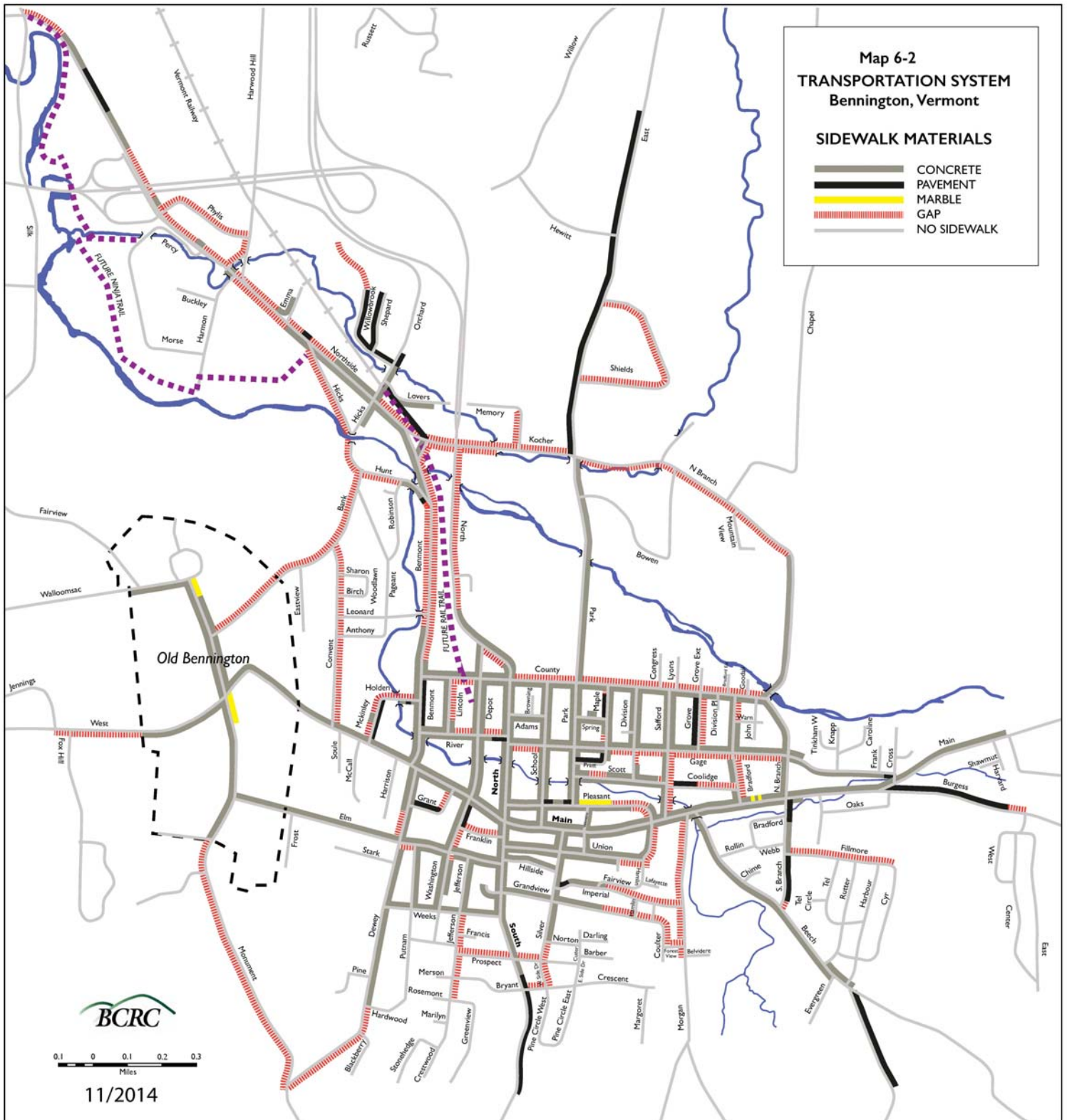
**Map 6-1  
TRANSPORTATION SYSTEM  
Bennington, Vermont**



-  Local Roads
-  State and U.S. Highways
-  Rail
-  Trails
-  Rail Trail
-  Pathways
-  Potential Future Pathways
-  Airport Runway
-  Airport Approach Zone



Map produced January 21, 2014 by  
Bennington County Regional Commission  
111 South Street, Suite 203  
Bennington, VT 05201



## **Chapter 7: Community Facilities and Services**

### **7.1 Overview**

A wide range of facilities and services essential to residents' quality of life and the economic vitality of the town are provided by public agencies and public service organizations. As the community grows and economic conditions and needs change, the type and quantity of services provided must change. Because considerable public and private investment is needed to ensure that needs are satisfied, it is important that existing conditions are well-documented and that planning for future improvements occurs on a regular basis. A Capital Budget and Program is updated and adopted by the town annually to aid in the planning and financing of such improvements. That document should be consulted during preparation of the annual municipal budget.

### **7.2 Water Supply**

The town of Bennington owns and operates a 4.0 MG/D (million gallons per day) water filtration plant with a 0.5 MG storage facility located near Bolles Brook in Woodford. Treated water is stored in a 3.0 MG tank on Chapel Road. Smaller storage tanks are located off Route 9 near Mount Anthony Road and off Burgess Road. The Morgan Springs source has been integrated with the municipal system and adds approximately 1.0 MG/D of capacity to the total supply when needed. Some of the Morgan Springs water also is sold to a commercial bottled water company. The town has an approved Source Protection Plan it follows to ensure the protection of the water supply.

The Bennington water supply system serves a residential population of approximately 13,000 and concentrations of non-residential development, primarily within the Urban Growth Area (Map 7-1, Water Service Area). The capacity of the municipal system appears to be adequate to meet the long term needs of the community, provided certain improvements and conservation measures are implemented, including complete metering of all system users (Bennington Infrastructure Committee Report, 2002). Extensions beyond the Urban Growth Area also should be strictly limited and undertaken only in the event of a severe public health problem.

The Bennington Water Department staff have identified and prioritized water system improvements with the assistance of a local engineering firm. Those needs are detailed in Table 7-1 of this document. Several other projects, some ongoing, are needed to continue to meet current and future water system demands and a growing list of Federal EPA's Safe Drinking Water requirements. Some of these improvements include: specific water storage tank maintenance and improvements as well as annual infrastructure improvements such as water main replacements.

Several smaller private sources have historically served a limited number of residences. Strict compliance with all local and state environmental regulations pertaining to water supply and wastewater disposal is necessary to ensure the continued quality of existing and future small private and on-site systems.

**Table 7-1. Water System Improvement Priorities****Highest Priority**

1. **The South Side Water Project:** Build a 750,000 gallons water storage tank, pump station and 4,600 feet of pipeline to upgrade and meet state pressure standards for the south section of town.
2. **Upgrade All Pressure Reducing Stations** in order to better control system pressures during high flow demands such as fire flows, water main breaks or drought.
3. **Chapel Road Water Storage Tank (3.0 MG):** Extensive repairs to the 3.0MG tank based on assessment report.
4. **Bolles Brook Water Storage Tank:** Interior concrete structure continually being monitored for repairs.

**Needed Pipe Replacements and Loops****Highest Priorities**

1. **Monument Avenue to Dewey Street:** Phase II of the South End Water Project.
2. **Benmont Avenue Bridge Water Line:** The existing water line on Northside Drive will be extended to the South end of the bridge.
3. **Main Street Loop Re-Connection:** Main Street water line loop between Washington Avenue and Grant Street was isolated due to severe water main leak. This loop needs to be re-connected for higher quality drinking water.
4. **Interconnection between Route 7A (Harwood Hill Road) to North Bennington Road:** This loop would allow a second water feed to the areas in case of a main failure or catastrophic event.
5. **North Street Water Line Replacement (Main Street to County Street):** This would upgrade water quality in this area and provide better fire protection.

### 7.3 Sanitary Sewer and Stormwater Disposal Systems

Bennington's Wastewater Treatment Facility is located along the Walloomsac River on Harrington Road in Bennington. The facility has a design capacity of 5.1 Million Gallons per Day (MGD) with an annual daily average of 3.5 MGD for the year 2014. Ongoing system improvements and the elimination of known infiltration and inflows sources have accounted for a 400,000 GPD reduction in daily average flows over the past 10 years.

The municipal sewage system serves approximately 14,000 persons within the sewer service area (Map 7-1). These services are located primarily within Bennington's Urban Growth Area, with some service to North Bennington, Old Bennington, and a small area in Shaftsbury. To preserve the capacity of the system and reinforce the town's land use plan of concentrated development in the town center surrounded by a lightly developed rural landscape, further extensions of sewage service beyond the



The municipal wastewater treatment plant includes an innovative sludge composting facility.

Urban Growth Boundary shall not be permitted except in the event of a severe public health emergency.

The capacity of the sewage disposal system can be strained when excess storm water flows into the system. A major separation project was undertaken in 1985, but further improvements are needed. In addition, a large number of homes and businesses discharge sump pumps and surface stormwater drains into the sewage system. The town must continue efforts to reduce infiltration and separate sources of stormwater discharge from the system to maintain and improve its capacity.

The Bennington Wastewater staff have identified and prioritized Sanitary Sewer system improvements with the assistance of a local engineering firm. Those needs are detailed in Table 7-2 of this document. Several other projects, some ongoing, are needed to continue to meet current and future sanitary sewer system demands and a growing list of Federal EPA's requirements for sanitary sewer and stormwater discharges.

The Town of Bennington's Stormwater system is currently in the process of identifying all of its structures and piping and prioritizing the needs for repair and replacement of the current inventory. Detailed mapping will follow with the system being put into a GIS system format that can be overlaid with other critical infrastructure for future planning. Significant problem areas with the existing system exist in the downtown and along Northside Drive where periodic flooding has occurred. New development projects must plan for adequate and environmentally sound stormwater discharges and may be required to participate in necessary upgrades of subsurface drainage facilities.

#### **7.4 Solid Waste Disposal and Recycling**

The town owns a solid waste transfer station at a former landfill site on Houghton Lane (Map 7-2) which is leased to a private operator. Over 3,000 tons of solid waste are handled annually at the transfer station, with an excellent volume-based recycling rate of nearly 40 percent. Household hazardous materials and waste oil are disposed of through use of a special collection facility at the transfer station. Continued incentives to encourage recycling will reduce long-term solid waste disposal and associated environmental costs.

Recycling in Bennington switched to Zero-Sort recycling in 2014. Zero-Sort makes recycling quick and easy by allowing all recyclables to be collected together in one bin without the need to separate. Another change in 2014 included the development of a composting facility at the transfer station. The facility collects food scraps and other organic wastes and processes it into compost.

The Universal Recycling Law, Act 148, was passed by the Vermont Legislature in 2012. The primary purpose of the law was to significantly reduce the amount of material going into landfills. The law is being phased in over time to allow for the creation of the systems for managing materials. In June of 2014, the Vermont Agency of Natural Resources (VT ANR) adopted a Materials Management Plan, as required under the Universal Recycling Law. Bennington is one of 13 towns in Bennington County responsible for implementing state materials management policies and the requirements of the Universal Recycling Law. Currently, Bennington is working together with the other towns to develop a new Solid Waste Implementation Plan that must be in conformance with the Vermont Agency of Natural Resources Materials Management Plan. The plan will focus on education and outreach to encourage schools, businesses and institutions to recycle, compost and properly dispose of hazardous materials, phar-

**Table 7-2. Priority Projects for Wastewater Disposal Systems****Highest Priority**

1. **Upgrade Wastewater Treatment Plant** to meet and comply with Federal and State standards mandated by our State of Vermont Permit to Operate.

**Wastewater Treatment Plant Priorities**

1. **RBC Structure Updates**
2. **Prescreening of influent at the Headworks Building:** This removes rags, plastic and solids that are unable to be reduced by the current grinder.
3. **Replace Digester Heat Exchanger**
4. **Headworks Upgrade:** Any and all replacement parts for the four main raw sewage pumps are now unavailable or obsolete.
5. **Grit Building:** The entire system is over 30 years old and in need of entire replacement.
6. **Control Building:** Additional space to allow for record storage and laboratory expansion.
7. **SCADA (Supervisory Control and Data Acquisition) System:** Provides optimum operational efficiency and maintenance planning.
8. **Sand Filter Upgrades:** This may need to be redesigned.
9. **Septage Receiving Station:** This will need to be redesigned.
10. **Combination Jet-Vacuum Unit:** This unit allows for increase ability and efficiency of cleaning sewer mains.
11. **Compost Storage:** Due to the fact that we are not composting at our facility at this time the priority had dropped until such time that we have a solution for our dust issues.

**Sanitary Sewer Line Replacement and Rehabilitation  
Priority**

1. **Replacements:** Corey Lane, Dewey Street and (East) Main Street.
2. **Rehabilitation:** Coulter Street, Crescent Boulevard, Cutler Street, Darling Street, Depot Street, Franklin Street, Grandview Street, Hall Street (North Bennington), Hamlin Street, Hunt Street, Imperial Avenue, Monument Avenue (Extension), Morgan Street, Norton Street, Oakes Street, Prospect Street, Soule Street, Water Street (North Bennington), Old Bennington (rural) sewer lines.
3. **Main Interceptor Joint Sealing and Slip-Lining:** The main line interceptor is a large source of inflow and infiltration, which reduces available capacity for the Town and increase treatment costs.
4. **Replacement of 6-inch Clay Tile Sewer Mains:** These lines cannot be slip lined and need to be replaced. Areas include Elm Street, Scott Street, South Branch Street, Imperial Avenue, Silver Street Prospect Street, Harrison Avenue, Putnam Street and Stark Street.

**Sanitary Sewer Pump Station Upgrades**

1. **Corey Pump Station:** New pump facility and holding tank to meet current needs and VOSHA Construction Standards.
2. **Beech Street Pump Station:** Most of the components associated with this station were installed in 1984. This station will require a total rehabilitation in the near future.
3. **Hildur Hill Pump Station:** The control panel has been upgraded and can now accommodate the Treatment Plant upgrades such as a SCADA system in the future. However, the actual pumps and collection system will need to be completely rehabilitated.

***Note:** Bank Street Pump Station's upgrade was completed in 2014.*

maceuticals and electronic waste. The plan must be adopted by Bennington, and the other towns, and approved by VT ANR by June 18, 2015.

Bennington's Solid Waste Plan includes detailed data on solid waste generation and disposal and should be updated to reflect current conditions and needs. Adequate facilities also must be available for disposal of construction and demolition debris.

## 7.5 Emergency Services

Critical emergency services are provided by the Bennington Police and the Village and Rural Fire Departments and the Bennington Rescue Squad. The emergency response system is coordinated through the Enhanced-911 service which operates a statewide dispatch that is able to direct responders to a caller's exact location.

Police protection throughout the community is the responsibility of the Bennington Police Department, with additional services provided by Vermont State Police patrols on state highways as well as contracted services through the County Sheriff. The Police Department occupies the historic former Federal Building on South Street and employs 25 full-time officers. These public safety officers are deployed to ensure the safety of the town's roadways, homes, and businesses.

The 60 volunteers of the Bennington Fire Department provide service throughout the central part of the community from the 24,000 square foot fire station located on River Street (Map 7-2). That building also contains a large room that is often used for public meetings and forums. The Bennington Rural Fire Department has over 52 volunteers operating out of fire stations on Beech Street, Orchard Road, and West Road. Both of the fire departments provide vital fire suppression, prevention, and education services and their efforts to maintain up-to-date equipment should be supported by the town.



The Bennington Fire Department operates out of this impressive facility on River Street.

The Bennington Rescue Squad has been providing emergency medical care since 1963. The squad is a nonprofit corporation providing 24-hour service to the greater Bennington area. It has grown considerably and now is staffed with 18 full-time employees and 5 volunteers. The Rescue Squad headquarters is located on McKinley Street in a building with eight ambulance bays, space for equipment storage, administrative offices, and meeting and training facilities. Recent additions include central air, ready room, three bunk rooms, and base station radio, and generator—allowing the building to serve as an emergency/disaster center. Rescue equipment currently in use includes six fully equipped advanced life-support ambulances, a paramedic quick response vehicle (not used for transport), a 20-foot mass casualty/command trailer that contains dispatch radios, field radios, and a substantial amount of emergency medical equipment. The Rescue Squad also owns a side-by-side ATV and snowmobile for off-road rescue in any season. Closer coordination between the Rescue Squad, town officials and staff, and local emergency planning committee would improve emergency preparedness in the community.

To facilitate local emergency response, all town officials and staff with a role in these activities should attend meetings of the local emergency planning committee. In addition, the

Rescue Squad would benefit from traffic signal controls (such as an opticom system) at signalized intersections and warning signals at the intersections of McKinley/Main and Benmont / Holden, since main response routes are through these two intersections.

It will be necessary to ensure that funding levels support continued full staffing and periodic replacement and upgrades of equipment for all the emergency service providers. The town should meet with representatives from each provider on an annual basis to consider the short and long term needs of each.

## 7.6 Education

Bennington’s elementary, middle, and high schools provide educational services for the youth who will become the town’s future workforce and business and civic leaders. It is crucial that the schools produce graduates with high levels of competency in core academic disciplines as well as specific skills that will support the needs of local employers and the future economic development needs of the community. Ongoing communication and coordination between the schools, local government, and business and industry groups, therefore, is essential.

The schools also serve as centers of activity for students, parents, and other residents of the town, and foster a sense of community and civic pride.

The Southwest Vermont Supervisory Union, with offices located on Beech Street, provides administrative, curriculum, and personnel support for a number of school districts, including those serving Bennington. Active consideration, at both the local and state levels, is currently being given to governance changes that may include consolidation of school districts. The town should support efforts that will lead to improved efficiencies and educational outcomes.

Bennington’s kindergarten through fifth grade educational program is housed in three elementary schools operated under the jurisdiction of the Bennington School District (Map 7-2).



Mount Anthony Union Middle School on East Road.

Those schools are the Molly Stark School, Monument School, and Bennington Elementary School. Total enrollment (Vermont Agency of Education, 2012-13) in the three schools was 786 students. The schools currently have adequate capacity but are nearing capacity and improvements are required at some of the schools to attain compliance with state standards. A comprehensive plan for facilities should be developed with input from all stakeholders.

The Mount Anthony Union High School District serves Bennington as well as the neighboring municipalities of North Bennington, Old Bennington, Pownal, Shaftsbury, and Woodford. The senior high school is centrally located at the corner of Park and County Streets and has a current (Vermont Agency of Education, 2014-15) enrollment of 950 students. The high school provides a full range of educational and interscholastic athletic programs and shares its site with the Southwest Vermont Career Development Center (CDC).

The CDC works with local businesses to provide youth and adults with the skills re-



quired to meet the needs of the local employment market. In addition, the CDC offers specialized training and re-training courses to groups of employees.

The middle school, located on East Road, serves Bennington students in grades six through eight, and students in grades seven and eight from other SVSU districts, in a well designed new building. The school site is surrounded by ample playing fields that can be used by students and other youth sports teams in the community. Current enrollment at the middle school is 572.

Per student spending at Bennington's public schools is lower than the statewide average, partly because of economies achieved in larger schools and partly because educational measures have been taken to minimize cost. Student-teacher ratios at Bennington's elementary schools, for example, are about one-third higher than the state average. Costs are increased, however, by the fact that Bennington School District has a higher than average special education student population.

Several private schools, including the Sacred Heart School, the Grace Christian School, and the Hiland Hall School also offer educational services for area youth. The Bennington School is a private residential school offering elementary and secondary school programs to students with special needs.

Bennington is home to six colleges: Bennington College, a highly regarded liberal arts college with a campus off VT 67A near North Bennington; Southern Vermont College, occupying a beautiful campus on the lower slopes of Mount Anthony, another liberal arts college offering a variety of degree programs and continuing education courses; the Community College of Vermont, operating out of its facilities in the downtown, offering associate degrees and certificates in accounting, early childhood education, criminal justice, and communications; the Vermont Tech satellite campus, offering a Nursing Associate of Science degree and a Practical Nursing Certificate; Johnson State College External Degree Program offering six majors through online and weekend courses, the Community College of Vermont advisors are available for students located in Bennington; and Northeast Baptist College, offering a Bachelor of Arts in Biblical Studies and a Bachelor of Science in Christian Counseling. These post-secondary schools provide unique educational, economic, and cultural benefits to the town and efforts to integrate their programs with community needs and interests should be pursued.

## 7.7 Child Care

The availability of safe and affordable child care services is important both to local residents and to the town's economy. Child day care facilities serving a limited number of full and part-time children are allowed in all districts where single family homes are permitted, in accordance with Vermont



The former Everett Mansion is at the heart of the Southern Vermont College campus on the slopes of Mount Anthony.

state law. Facilities serving a larger number of children are allowed with Development Review Board approval in most of those districts.

There are numerous registered home day care providers and licensed early education programs offered in Bennington. Additional information on these child care facilities as well as information on services for families, providers, employers, and people interested in opening a new facility can be found through the Child Development Division of the Vermont Department for Children and Families (Agency of Human Services) and the Bennington County Child Care Association (located in Bennington).

## **7.8 Health Care Services**

Bennington is a regional center for health services. Southwestern Vermont Health Care (SVHC) operates a 99-bed hospital (Southwestern Vermont Medical Center) that offers a full range of inpatient and outpatient services, a 150-bed long term care facility (the Centers for Living and Rehabilitation), a home health nursing organization (VNA and Hospice), a regional cancer care center, and clinics in Arlington, Manchester and Wilmington.

SVHC has a stated mission to provide care and comfort for patients and their loved ones while making the communities they serve the healthiest in the nation. With several hundred employees, SVHC is the town's largest employer. The town should cooperate with SVHC in efforts to achieve their health care goals and support the community.

There are numerous medical professional and technical offices located near the hospital that offer a wide range of specialized medical services to residents.

Mental health, substance abuse, and services for mentally handicapped residents are provided through the United Counseling Service of Bennington County, which also oversees the Head Start and Big Brothers-Big Sisters of Bennington programs.

Several nursing homes, assisted living, and independent senior housing facilities also are available in the community, including the 138-bed Vermont Veterans Home which serves veterans and their spouses at its facility on North Street. A Veteran's Administration outpatient clinic on North Street offers veterans access to physicians, electrocardiograms, x-rays, laboratory tests, medications and mental health services.

Because of the growing importance of health care to the local economy, the town should continue to work to ensure that adequate educational training is available locally and that municipal and technological infrastructure is available to support expansion of facilities and services within the areas where these facilities are located (Map 7-2).

The medical sector is facing a period of major transition as fundamental changes to reimbursement methodologies are taking place, moving away from a fee for service structure toward an outcome-based system. In addition, there is a major push toward implementing electronic medical records. These changes are being fueled by federal laws such as the Affordable Care Act and by Vermont's Blueprint for Health, as well as by health care providers themselves. The Blueprint for Health, for example, is designed to be a program that "integrates a system of health care for patients, improving the health of the overall population, and improving control over health care costs by promoting health maintenance, prevention, and care coordination and management" (18 V.S.A. Chapter 13). Many challenges remain as changes have yet to be implemented. Continued adequate state and federal support for systems implementation will be essential for a successful transition.

## 7.9 Electricity and Telecommunications

Electricity and telecommunications (including land and wireless telephone, cable tv/ internet, and wireless internet) are fundamentally important to local residents and businesses and are critical to future economic development in Bennington.

Electric service is provided through Green Mountain Power (GMP), the state’s largest electric utility company. Existing electric service to the community is adequate and GMP offers an Economic Development Incentive Program to support new and expanding industries. Siting of new overhead power lines, switching boxes, and maintenance of existing power lines should recognize the scenic and historic values of the community, and new service connections should be routed underground.

Implementation of a “smart grid” where supply can be more closely matched with demand as well as through development of a large number of small renewable-energy-based generating facilities distributed throughout the region can help address future electricity supply constraints.

High speed cable internet services—delivered to much of the area by fiber optic cable—are available in Bennington and the town should play an active role in planning for state-of-the-art communication technologies. Continuing efforts should be made to establish the best possible infrastructure to serve the information based economy.

Telephone and internet service is increasingly being conducted by wireless providers and good service is available throughout most of Bennington. The town should work with wireless companies to maintain and enhance these services, while remaining sensitive to scenic and environmental concerns. A visual proliferation of highly visible towers and antennas can be avoided through careful siting and co-location on single low visibility tower structures.

## 7.10 Library

The Bennington Free Library is located in the downtown on Silver Street. The library’s mission is to provide free and open access to information, computing facilities, and educational, cultural and recreational resources. It maintains an extensive collection of books and periodicals, affords access to internet resources, and hosts a variety of children’s and adult programs, lectures, concerts, and special exhibits. Several meeting rooms are used frequently by public and private organizations. The library is operated by a small professional staff and a large number of volunteers and is supported by public and private contributions and grant funds. The resources available through the library should be considered when evaluating the educational, cultural, and recreational resources of the town and should be identified as an important economic development asset.



The Bennington Free Library is an important community resource located in the downtown.

## 7.11 Governmental Services

Because of its role as a regional center, Bennington contains facilities housing a number of important state and county services. A recently reconstructed Vermont state office complex



This renovated historic building houses Vermont state offices and the Community College of Vermont.

located off North Street houses several social service agencies and the Bennington County District Court. Additional state offices are located in a renovated building in the downtown that also houses the Community College of Vermont. The town supports locating public service agencies and associated offices in the downtown where they are accessible to residents while adding business and vitality to the area.

The Bennington County Superior Court is located on South Street, adjacent to the town Office Building. The town clerk, assessor, planning, zoning, community development, and town manager’s offices are located in this historic building that has housed the municipal offices for many years.

The town Highway Department operates from three public works facilities: on Depot Street, Willow Road, and Grant Street. The delivery of services and overall efficiency of the Highway Department would be enhanced if operations could be consolidated at a single site.

### **7.12 Radio, Television, and Newspapers**

A daily newspaper, the Bennington Banner, serves the town and surrounding communities. The newspaper is an important source of local, state, and national news, provides a forum for public opinion, and is a useful advertising medium for local businesses. In addition to social media, the Banner has an on-line edition that provides ready access to local information from anywhere the internet can be accessed.

Vermont Public Radio (VPR) maintains an FM transmission facility in Bennington. VPR offers a variety of state and national public affairs programming. An AM station (WBTV) operated by a nonprofit organization provides an outlet for local news, information, and entertainment. Cable and satellite television services are available throughout most of the town, in addition to broadcast signals from commercial stations in Albany and Vermont public television.

Catamount Access Television (CAT-TV) is the local public access television station. It provides coverage of local events and public meetings as well as information on happenings and local organizations throughout the community. Residents can take courses in video production technology and produce their own programming for presentation to the community. The CAT-TV offices and studios are located in a historic building on Main Street.

### **7.13 Recreation and Open Space**

#### **Open Space Recreational Resources**

Bennington’s undeveloped open space—forests, fields, and parkland—are important natural and scenic assets and also support a wide range of recreational activities. Developed parks and other facilities add to the recreational opportunities available to residents and visitors. It is important that these open lands and facilities be maintained, expanded where appropriate, and properly managed. The Town’s Park and Open Space Plan, an inventory and assessment of

parks, recreation facilities, and open space resources, should be consulted when considering improvements to existing facilities, development of new facilities, and acquisition or preservation of open lands. An important objective of the plan is creation of a comprehensive pathway network that provides access to the town's natural and historic resources.

The town includes extensive publicly owned forest land, most notably the nearly 1,000 acres that are part of the Green Mountain National Forest on the slopes of Bald Mountain. These National Forest lands continue into adjacent towns, offering a vast reserve of public land for hiking, fishing, hunting, swimming, boating, skiing, and other sports. The Forest Service is authorized to purchase land anywhere in Bennington County, and additions to the National Forest in Bennington should be supported for contiguous lands that would ensure public access to important recreational areas.

Several other tracts of forest land and open fields are either publicly owned or provide for public access to natural resource based recreational opportunities. Southern Vermont College and the Mount Anthony Preservation Society each own substantial amounts of land on Mount Anthony that include a number of recreational trails. The McCullough Woods and Fields in the northwestern part of town (partially in North Bennington) is a large area of conserved land with well-maintained public use trails. The "Y-Woods" on Morgan Street and the Bradford-Putnam Wetlands off Burgess Road are town-owned properties that both include short trail systems through interesting woodlots. Much of Whipstock Hill is owned by the State of Vermont. Efforts to maintain these lands and ensure continued public access to them should be supported.



A trail through the Green Mountain National Forest.

The Norman and Selma Greenberg Reserve, south of the center of town, is owned by the New England Tropical Conservatory, which has developed a trail system, conducts outdoor educational activities, and plans to develop additional facilities. The lowland and upland portions of the reserve are bisected by the proposed southern leg of VT 279; a legal and safe pedestrian access between the two sections of the reserve should be secured, if the southern leg is constructed.

The Walloomsac River is an especially important recreational asset. The town should seek opportunities to provide secure public access to the river at appropriate locations and should pursue development of a pathway along the river that connects its three covered bridges.

Some important open spaces used for hiking, fishing, hunting, and other recreational pursuits are located on large tracts of private land that are accessible to the public through the generosity of the landowners. Recreational users should always obtain permission before entering these lands and must be careful to not cause any disruption or damage. If particularly important privately held recreational lands become available, acquisition of the land or easements by a conservation organization would allow continued public access to the land.

As noted in the Transportation chapter, the network of town and state roadways and the developing pathway system in the community are very important recreational, as well as transportation, facilities. Development and maintenance of these facilities shall recognize the needs of bicyclists and pedestrians as well as motorists. A pathway parallel to the eastern leg of VT 279 would be an outstanding resource for bicyclists and pedestrians while connecting existing sidewalks and trails. The town should ensure that rights-of-way along the highway/utility line corridor can be made available for such a facility.

## Parks and Recreation Centers

Several parks and recreation centers owned by the town or school districts contain facilities that support a wide variety of recreational activities. Willow Park, occupying 60 acres between East Road and US 7, has soccer, baseball, and softball fields, tennis and basketball courts, horseshoe facilities, playground equipment, BMX trails, a cross country running course, two pavilions, and picnic areas.

The recently renovated Municipal Recreation Center is located at Memorial Park on Gage Street. This centrally located facility on nine acres has an indoor pool, weight rooms, a multipurpose game room, locker rooms, outdoor playing fields, and houses the Recreation Department Office. Two smaller town-owned parks offer a variety of recreational facilities to residents. The 6.5 acre Stark Street Playground contains a basketball court and a softball field. The Beech Street Field has a baseball field and multi-purpose field on an 18 acre site.



Playground facilities at Willow Park

Recreational facilities located at the town's elementary, middle, and high schools are used by students as well as neighborhood residents and community sports teams. Playing fields created as part of the Middle School project have filled a demonstrated need and the gymnasium, playing fields, and track at the High School are very popular with residents and organized youth and adult sports leagues.

The town also contains a wealth of privately owned and operated recreational facilities. One of the region's premier golf courses lies at the base of the Battle Monument, a popular bowling alley is located in a busy commercial area, two fitness centers are easily accessible in the center of town, a tennis center with eight indoor courts is located at the former Leonard J. Black park and the Bennington Sports Center located between North and School streets is a comprehensive soccer center with an indoor soccer facility and dormitory. In addition, several retailers sell a wide variety of sports equipment and clothing.

The Park and Open Space Plan identifies maintenance of the facilities at Willow Park, expansion of recreational facilities at neighborhood parks, and development of additional indoor recreational space, especially for winter sports and activities, as priorities for the town (in addition to the pathway network mentioned earlier).

### 7.14 Policies and Recommendations for Community Facilities and Services

1. The town has developed a comprehensive capital improvement budget and program which should be updated annually. The capital program also should consider plans and anticipated expenditures by the Bennington and Mount Anthony Union School Districts.
2. Priority shall be given to maintaining and improving the existing public water supply, wastewater, and stormwater systems based on facility needs and sound fiscal planning. There shall be no extensions to the water and wastewater systems beyond the Urban Growth Area or existing service areas except in the event of a severe pub-

lic health problem.

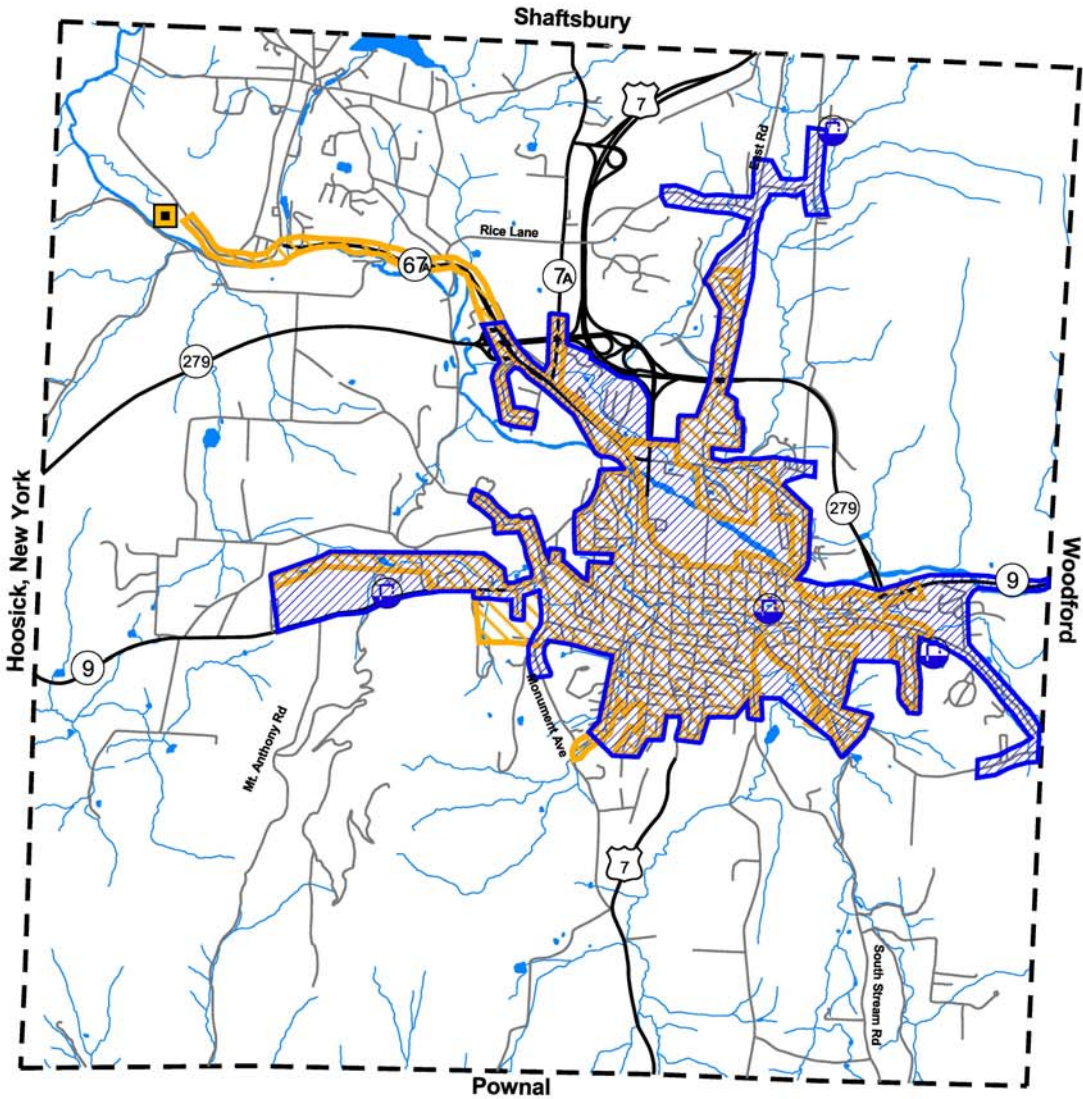
3. The town should consider metering for all users of the water system because tying usage directly to cost will encourage conservation.
4. A stormwater drainage improvement plan should be developed for the downtown and other areas where the current system is known to be inadequate. That plan should include recommendations for financing and phasing construction.
5. Water and sewer capacity allocation policies shall continue to be implemented to ensure wise use of the town's infrastructure. Efforts to reduce infiltration into the sewage system and to remove illegal drain connections also must be pursued by the town to maintain adequate capacity.
6. The town should continue to support efforts to reduce the generation of solid waste through recycling programs, composting programs and initiatives to reduce the use of wasteful packaging.
7. Maintain close communication with emergency providers to ensure that their staffing and equipment needs are met through careful and coordinated planning.
8. The town supports the development of a variety of quality child care services that meet the needs of residents and employers and which are compatible with the residential and commercial neighborhoods in which they are located.
9. High quality education must be available for residents at the local elementary schools, middle school, high school, and career development center. Strong support must be given to the educational programs and to maintenance of the school buildings and grounds. Cooperative planning is needed to ensure that educational programs meet the workforce development needs of local employers. The potential for cost savings and improvements in educational programming through consolidation or increased cooperating between school districts should be considered.
10. When planning for public school facilities, consideration shall be given to the town's land use plan, neighborhood needs, historic preservation, and available infrastructure. Maintenance, renovation, and/or expansion of existing school properties shall be given highest priority when evaluating new facility needs. If any school properties are closed, town and School District officials should work cooperatively to determine appropriate alternative uses of those buildings.
11. The six colleges located in Bennington are important educational resources and also bring students, economic activity, and prestige to the community. The town should continue to cooperate with these institutions to address their plans and needs and to further integrate the colleges into the life of the community.
12. Health care services are very important to residents and the local economy. The town should continue to cooperate with health care providers to ensure that high lev-





els of care are available and supported by state of the art technology. Efforts to improve the quality of life for residents through implementation of health care initiatives shall be supported.

13. The town should work with electricity and telecommunication service providers to ensure that the best available services are provided to residents and businesses at reasonable cost. Continuing efforts should be made to establish the best possible infrastructure, including fiber optic and broadband technologies, to serve the new information-based economy. New facilities, such as telecommunication towers, should be provided as necessary, but must be sited with sensitivity to environmental, scenic, and neighborhood concerns.
14. Public sector offices should be located in the downtown area. The town shall continue to pursue relocation of the municipal highway department to a single location.
15. High quality recreation opportunities shall be available for all residents of the town, including those with special needs, and for visitors to the area. Recognize the importance of both maintaining a high quality natural environment and of diverse developed recreation parks and facilities.
16. The town should refer to the Park and Open Space Plan when budgeting for new or improved park and recreational facilities and when developing priorities for land conservation and pathway development.
17. The Bennington Pathway should be extended northward to the Molly Stark School as planned, and strategies to complete further extensions along the Walloomsac River, including the Ninja Trail, pursued.
18. The town should develop additional indoor recreational space.
19. Continue to work cooperatively with the School Districts so that the recreational facilities at the schools serve the student population and the community at large.
20. The acquisition by conservation organizations of important recreational lands (or acquisition of easements to those lands) that will allow continued public access shall be supported.
21. Recognize the importance of open space for recreation in new residential developments, and require large-scale developments to provide open space in accordance with the town's land use regulations.



### Map 7-1 MUNICIPAL WATER AND SEWER Bennington, Vermont

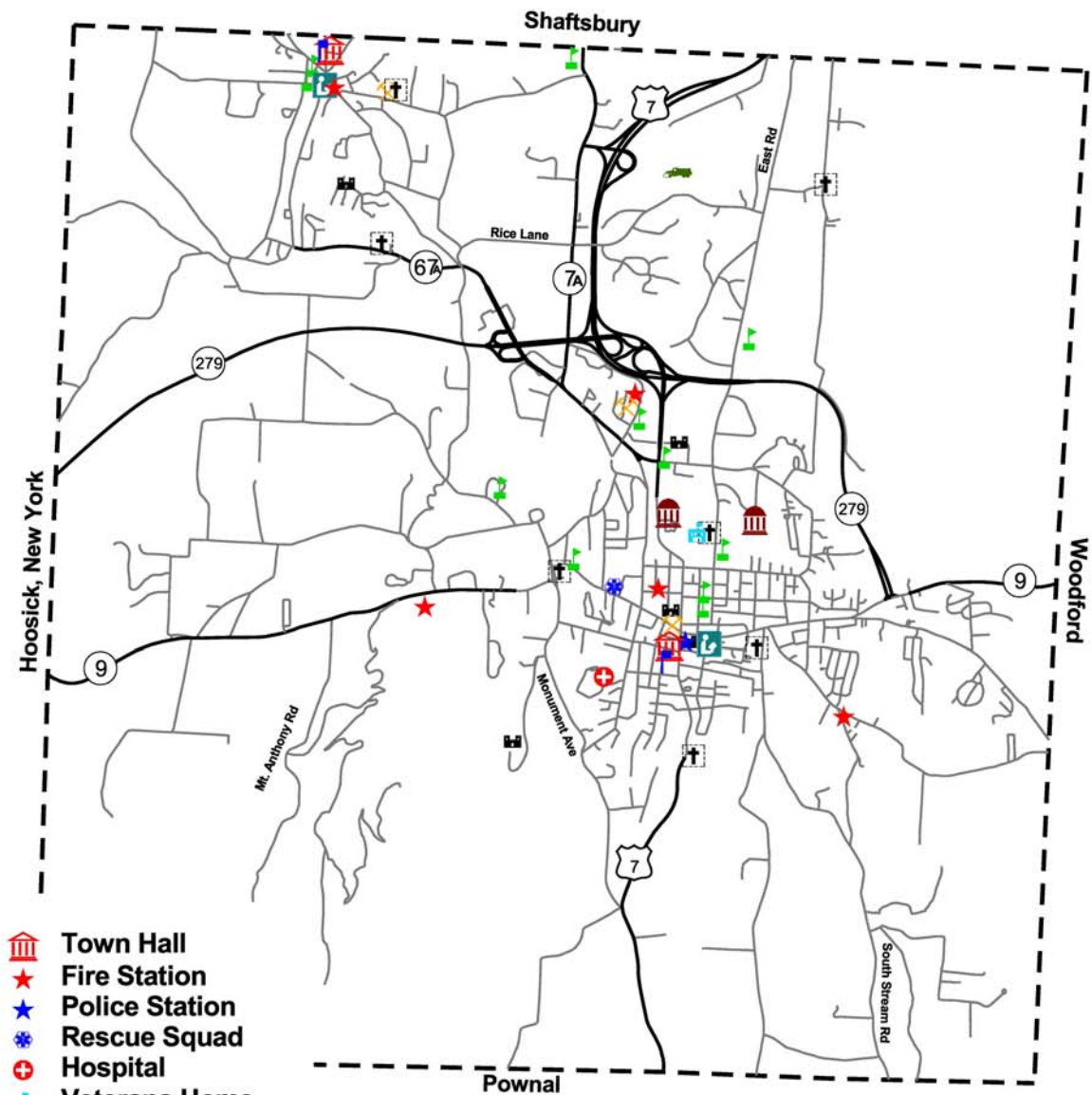














-  Sewer Treatment Plant
-  Water System Facilities
-  Water Service Area
-  Sewer Service Area



Map produced January 21, 2014 by  
Bennington County Regional Commission  
111 South Street, Suite 203  
Bennington, VT 05201

## Map 7 - 2 PUBLIC FACILITIES AND SERVICES Bennington, Vermont

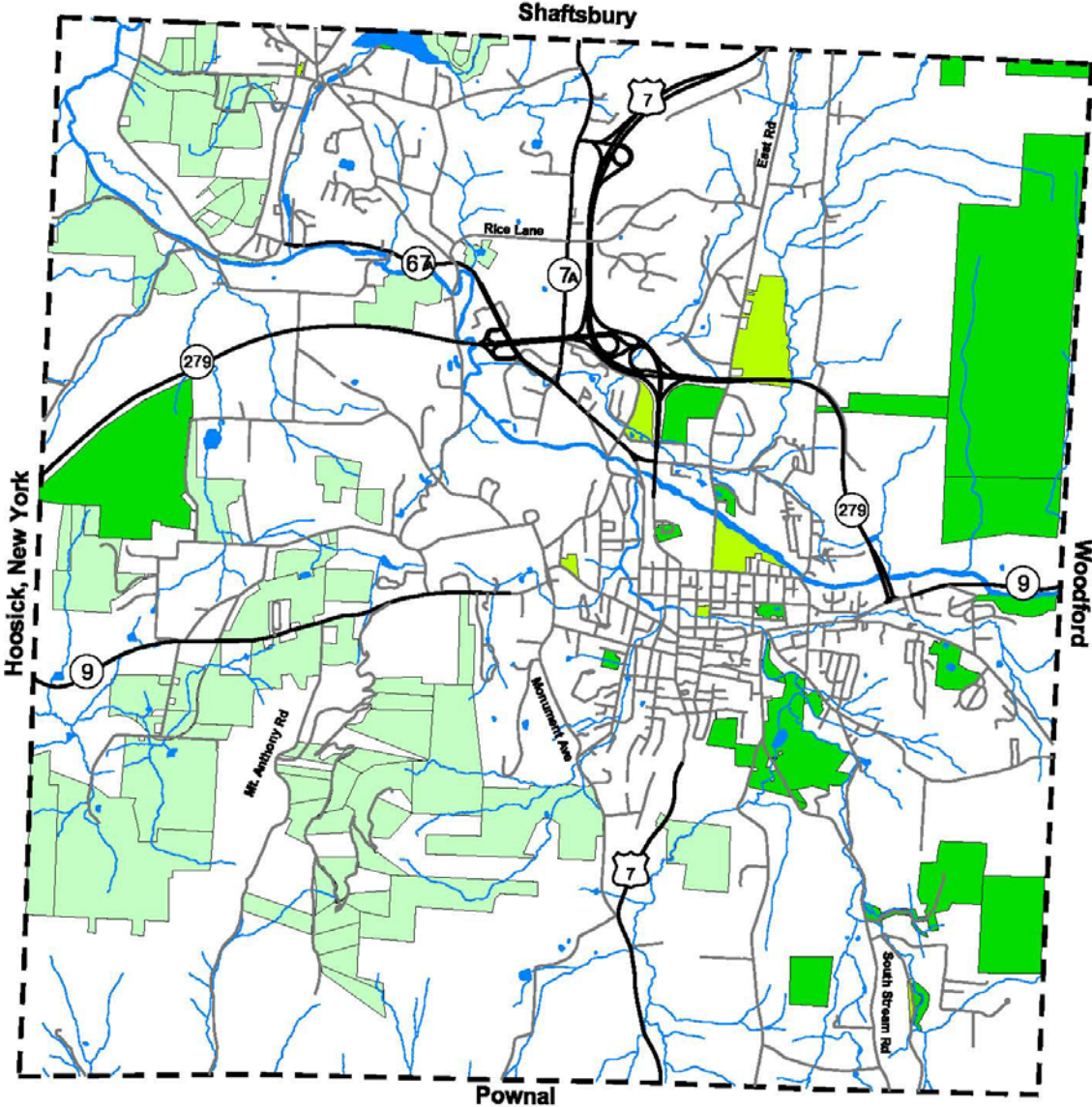


-  Town Hall
-  Fire Station
-  Police Station
-  Rescue Squad
-  Hospital
-  Veterans Home
-  Library
-  Post Office
-  Public Works
-  Solid Waste Facility
-  State Office
-  School
-  College
-  Cemetery



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### Map 7 - 3 PUBLIC PARKS, OPEN SPACE, AND CONSERVED LANDS Bennington, Vermont



- School Property
- Public Open Space
- Conserved Lands



Map produced January 21, 2014 by  
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## Chapter 8 - Energy

### 8.1 Introduction

The Town of Bennington recognizes that it is necessary to work toward a sustainable energy future in a manner that minimizes environmental impacts and supports the local economy. The purpose of this energy element is to further those goals and recommended actions by increasing public awareness of energy issues, assessing local energy use and conservation opportunities, reducing the number of energy-related dollars exported from the town, and evaluating the potential for utilization of various renewable energy resources to meet the town's stated goals of:

- Reducing our dependence on non-renewable and imported energy sources;
- Promoting energy conservation and efficiency in residential, commercial, and industrial structures and operations;
- Reducing energy consumption in all taxpayer funded buildings and operations; and
- Developing sustainable, local renewable energy resources.

These goals are consistent with Vermont's energy goals and policies, including:

- ◇ Obtaining 90% of energy for all uses from renewable sources by 2050;
- ◇ Reducing greenhouse gas emissions to 50% below 1990 levels by 2028 and 75% by 2050;
- ◇ Relying on in-state renewable energy sources to supply 25% of energy use by 2025;
- ◇ Improving the energy efficiency of 25% of homes by 2020;
- ◇ Meeting the Vermont Renewable Energy Standard through renewable generation and energy transformation.

A thorough understanding of energy and a plan to address future challenges is essential because energy is critical to every aspect of our lives. At the most basic level, we need the energy we obtain from food to survive. And it is the energy contained in oil, propane, and wood that heats our homes and the energy in gasoline and diesel fuel that moves our vehicles. Energy also generates the electricity that runs our appliances, machinery, computers, and telecommunication systems.

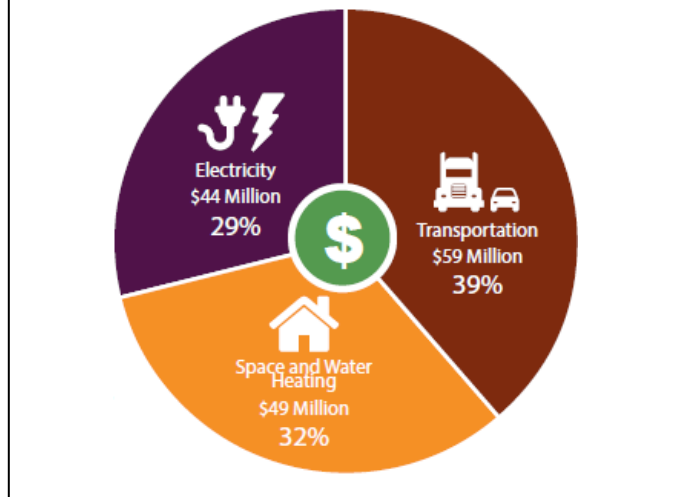
Most of the energy that we use, and have come to rely upon, is derived from “nonrenewable” fossil fuels and, to a lesser extent, nuclear fuels. This energy has been abundant and cheap, but supplies are becoming scarcer and oil, natural gas, coal, and uranium will become increasingly expensive to obtain. Moreover, serious and longstanding environmental concerns with coal mining, offshore oil drilling, acid rain, and other pollution resulting from fossil fuel use are now overshadowed by potentially catastrophic global climate change that is driven by the release of tens of millions of years of stored carbon in just a few decades.

Fortunately, alternative energy sources such as solar, wind, hydroelectric, and biomass-based fuels can provide significant amounts of clean energy well into the future. Developing these resources is extremely important, but the total amount of energy that can be extracted from such resources is markedly less than what we currently obtain from fossil fuels. To maintain a good quality of life, vibrant communities, and prospering economies, we will have improve energy efficiency and transition to the widespread use of renewable energy.

## 8.2 Energy Use in Bennington

Bennington County Regional Energy Plan contains a detailed review of regional and statewide energy data. It shows that total energy consumption in Vermont has risen over the past 50 years and that during that time, the transportation sector eclipsed the residential sector as the largest consumer of energy (Figure 1). Over \$150 million is spent annually in the region on energy for space and water heating, transportation, and electricity – with most of that money leaving the area to pay for imported fuels. The following section will provide estimates of current energy use by sector as well as projections illustrating the magnitude of conservation, efficiency, and transition to alternative fuels needed to meet Bennington’s energy goals.

**Figure 1.** Energy Use by Sector in the Bennington Region.  
Source: 2017 Bennington County Regional Energy Plan.



### Residential Sector Energy Demand

With over 6,000 residential units in Bennington, space and water heating and electricity usage for lighting and appliances consumes a large amount of energy and offers opportunities for considerable energy savings in the future. A majority of home heating in Bennington continues to rely on oil, although fuel switching to wood (particularly wood pellets in recent years) has been observed to occur with oil prices increase. Transportation energy demand also is influenced by the location of residential development, and that data will be presented separately in the discussion of the transportation sector.

The magnitude of residential energy consumption in Bennington can be estimated by considering the fuel usage of a typical Vermont home. An average single family home in the northeast requires approximately 60,000 Btu (British Thermal Units) of energy per square foot for annual space heating. A gallon of home heating oil contains approximately 140,000 Btu of energy. The average annual heating oil consumption of a Vermont home – 850 gallons – (based on an average house size of 2,000 square feet) is consistent with this data. An evaluation of the composition of Bennington’s housing stock and heating fuel and electricity usage provides an estimate of total residential energy consumption (Table 1).

It is useful to consider scenarios illustrating how this level of energy demand and accompanying mix of fuels may change over time in a way that would allow the town to meet its energy goals. The BCRC, working with the Vermont Energy Investment Corporation, made use of the Long-range Energy Alternatives Planning (“LEAP”) computer modeling tool to assess how the region’s energy demand profile might change over time based on a realistic trajectory toward achieving 90% of all energy from renewable sources by 2050.

The model first was run at the statewide level, and then adjusted based on regional conditions and the output customized for the Bennington Region. The resulting regional data was then used to provide town-level estimates (consequently, the data in Table 1 will not align perfectly with the LEAP data, but the trends and the magnitude of the changes are clear). Several key points become clear when looking at the overall residential energy demand for the

**Table 8-1. Estimate of Bennington’s annual residential energy use and cost.**

	Residential Units	Total Oil Use (gallons)	Total LP Gas Use (gallons)	Total Wood Use (pellet bags)	Electric Use for Heat (kWh)	Non-heat Electric Use (kWh)
Single Family	3,508	2,414,850	501,800	44,280	3,080,000	24,556,000
Two-Family	638	335,900	69,160	6,096	425,600	3,828,000
Multi-Family	1,722	627,750	130,221	11,448	797,650	8,610,000
Mobile Home	510	265,200	55,328	4,925	345,800	2,550,000
<b>Total</b>	<b>6,378</b>	<b>3,643,700</b>	<b>756,509</b>	<b>66,749</b>	<b>4,649,050</b>	<b>39,544,000</b>
Cost Factor		\$2.50/gal	\$3.50/gal	\$5.00/bag	\$0.15/kWh	\$0.15/kWh
<b>Total Cost</b>		<b>\$9,109,250</b>	<b>\$2,647,782</b>	<b>\$333,745</b>	<b>\$697,358</b>	<b>\$5,931,600</b>

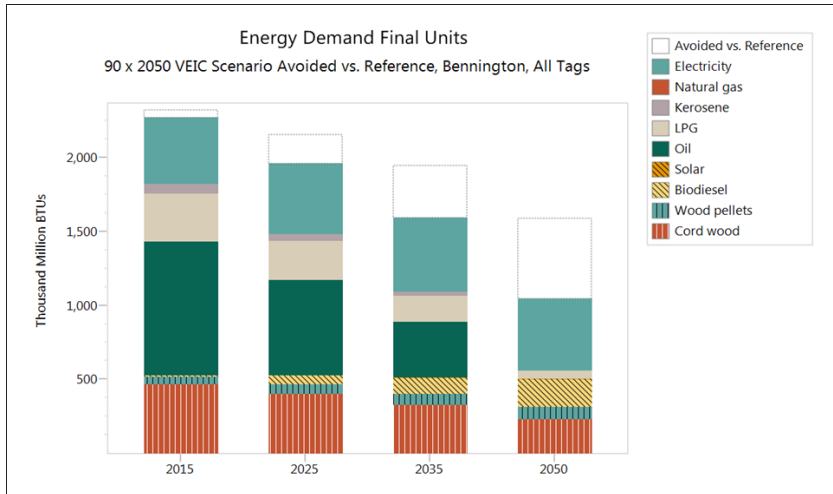
This data provides a rough estimate of total residential energy consumption and costs for Bennington. The combined total cost of residential purchases of heating oil, LP gas, wood/pellets, and electricity is \$18,719,735; with a population of 15,764, the per capita cost of residential energy use (not including transportation energy costs) is \$1,187. Data was obtained from the 2010 US Census, the Vermont State Data Center—Housing Statistics, and the US Energy Information Administration. The following assumptions were used in the calculations: average single-family house size of 2,000 square feet, two-family dwelling unit of 1,500 square feet, and multi-family dwelling unit at 1,000 square feet (estimates of fuel usage rounded to nearest 50 gallons of oil/lp gas and ratios used for wood and electric heating use calculations. Heating fuel usage for mobile homes were generated based on the two-family dwelling unit (larger than a typical mobile home) because of generally lower insulation values and inefficient heating geometry for mobile homes. Electric use estimated at 7,000 kWh per year for a single-family home, 6,000 kWh per year for a two-family dwelling unit, and 5,000 kWh per year for a multi-family dwelling unit and mobile home. Energy use for domestic hot water production assumed included in the space heating and/or electric usage data. “Wood” heat includes both cord wood and wood pellet fuel; for simplicity, quantities and cost are presented using only wood pellet data.

Bennington County region (Figure 2). Of particular importance is the significant reduction in the total amount of energy used. The reduction displayed on the graph assumes continuing and effective deployment of existing conservation and efficiency programs plus additional measures that result in a further increase in the number of existing homes that are weatherized and additional efficiency gains from advanced heating and cooling systems (the “Avoided vs. Reference” blocks on the chart). The transitions in fuel usage (for space and water heating; i.e., not including non-thermal electric use) within the Town of Bennington that correlate with the regional LEAP scenario are outlined in Tables 2 and 3.

Trends evident in the LEAP projections (Figure 2) include a large-scale reduction in total energy use driven by conservation and efficiency, an increased reliance on electricity and liquid biofuels (such as biodiesel), and a larger share of remaining energy use from renewable wood products (cord wood and wood pellets). Under this LEAP scenario, these changes result from development of much more efficient buildings, through construction that meets or exceeds energy codes and weatherization of existing buildings, and greater reliance on electricity and liquid biofuels for home heating and cooling in the residential sector (as well as in the transportation sector, discussed later in this chapter).

The transition in home heating anticipated by the LEAP model is dramatic; by 2050 oil will have been phased out as a heating fuel and propane use will have been reduced by about

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**Figure 2.** Total residential energy demand for the Bennington County Region, 2015 through 2050, based on one LEAP model scenario that charts progress toward the goal of achieving 90% of the state’s energy from renewable sources by 2050.

**Table 8-2 Total Residential Thermal Energy Demand By Fuel  
Town of Bennington—LEAP 90x2050 Model Projections  
Standard Fuel Measurement Units**

Fuel	2015	2025	2035	2050
Biodiesel (gallons)	35,691	191,434	347,177	590,525
Cord Wood (cords)	9,750	8,321	6,790	4,782
Wood pellets (tons)	1,179	1,656	1,907	2,158
Electric Resistance (kWH)	8,978,898	7,765,533	4,368,113	1,213,365
Heat Pump (kWH)	1,941,383	10,313,599	19,413,834	26,087,339
Kerosene (gallons)	196,267	138,000	82,800	-
LPG (gallons)	1,582,950	1,265,383	845,217	254,054
Oil (gallons)	2,723,466	1,944,043	1,134,527	-

**Table 8-3 Total Residential Thermal Energy Demand By Fuel  
Town of Bennington - Number of Households**  
Derived from Regional 90X2050 LEAP projections and adjusted to increase the number of households using heat pumps as a primary heat source.

Fuel	2015	2025	2035	2050
Biodiesel	35	199	432	1,144
Cord Wood	1,501	1,356	1,323	1,451
Wood pellets	150	223	307	540
Electric Resistance	236	216	145	63
Heat Pump	51	896	1,560	2,570
Kerosene	204	152	109	-
LPG	1,033	874	698	327
Oil	2,885	2,179	1,521	-
<b>Total</b>	<b>6,095</b>	<b>6,095</b>	<b>6,095</b>	<b>6,095</b>

Table 2 illustrates how the mix of fuels used to heat homes could change in Bennington consistent with meeting state energy goals and Table 3 shows how the number of households using each fuel source for heating changes over the same timeframe. Because of Bennington’s dense development, household heat pump use shown in Table 3 is increased beyond the level projected by the fuel comparison shown in Table 2.

70 percent. Inefficient electric resistance heating systems also will be phased out, but efficient air source heat pumps, and some geothermal source heat pumps for new construction, will become a primary heating and cooling technology used in over 40 percent of the town’s housing units. Heat pumps represent a particularly valuable technology because they are powered by electricity that can be generated from renewable sources such as solar, wind, and hydro. Existing houses and apartments also can be converted relatively easily, and at moderate cost, from fossil fuel based heating systems to heat pumps. Heat pumps may need to be supplemented with alternative heating systems in extremely cold weather, but when combined with thorough weatherization, heat pumps can provide for most of a residential building’s heat load.

Another fuel that may contribute to a relatively straightforward transition away from oil and propane based heating systems is biodiesel—with similar properties to petroleum diesel, but produced from oil crops such as canola, sunflower, and even algae. While efficiencies in production technologies are needed to make these fuels affordable and to meet renewable standards, once developed (an assumption built into this LEAP scenario), biodiesel powered furnaces and boilers can take advantage of existing fuel delivery infrastructure and in-home ductwork and plumbing.

Vermont has an abundant supply of wood that can be used for space heating. The LEAP scenarios project an increased reliance on wood as a thermal energy source for the residential sector, even though the total amount of wood energy use declines slightly (attributable to building efficiency improvements). The use of wood pellets, produced in or near the region, is expected to expand significantly, either as a primary home heating fuel or as a cold-weather supplement to air source heat pumps. Larger multifamily residential buildings and residential complexes such as apartment/condominium developments, dormitories, and even mobile home parks may convert to pellet or woodchip based heating systems. A recent example of this efficient and renewable energy based residential “district heating” is the replacement of 29 oil-burning boilers at the 104 unit Applegate Apartment complex with a single efficient biomass boiler (together with major weatherization improvements to the buildings).

### Commercial and Industrial Energy Demand

Bennington is an important center of business activity in southwestern Vermont so it is not surprising that energy consumption in those sectors is substantial. Annual expenditures on energy in the local commercial and industrial sectors are estimated to approach \$30 million (Table 4). In addition to on-site energy use, many businesses rely on shipments of raw materials to their facilities, exports of finished products to markets, and/or transportation of people to the region and to their establishments. Those energy demands are accounted for in the transportation sector—which has seen a very large increase in consumption of fossil fuels in recent years.

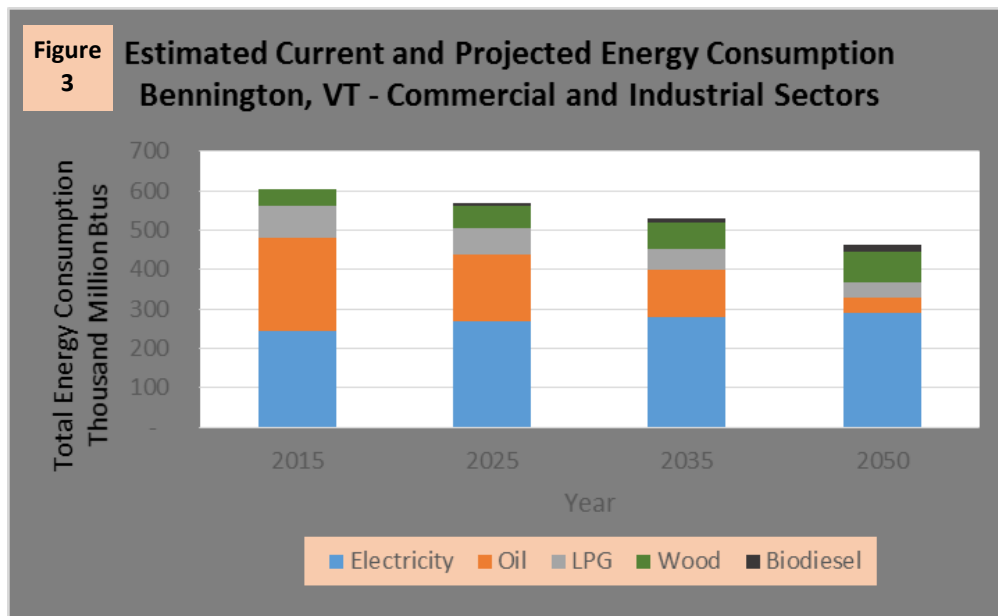
The LEAP energy forecasting models project a decrease of over 20 percent in overall commercial and industrial energy demand in Bennington through 2050 (Figure 3). This reduction is achieved through both conservation and deployment of more efficient systems, often utilizing alternative fuels. Use of petroleum oil is expected to decline by over 80 percent during this period, while propane (LPG) use is expected to fall by over 50 percent. On the other hand, use of woody biomass, a locally available fuel, is projected to nearly double, while biodiesel consumption is expected to begin to become a regionally significant fuel in these sectors. Electricity use will displace much of the current nonrenewable fuel demand in these sectors while contributing to the overall reduction in energy consumption through use of more efficient electrical systems.



**Table 8-4. Estimated commercial and manufacturing building energy consumption, Bennington, Vermont.**

	Estimated Floor Area (square feet) (1)	Annual Electricity Consumption (KwH) (2)	Annual Oil/Gas Consumption (gallons) (2)
Manufacturing	1,234,000		
Commercial	4,721,624		
<b>Total Consumption</b>		89,957,000	5,404,216
Cost Factor (3)		\$0.15/KwH	\$3.00/gallon
<b>Total Cost</b>		<b>\$13,493,550</b>	<b>\$16,216,390</b>

- (1) Floor area estimates were computed by multiplying the number of employees in each sector (2010 Vermont Department of Labor Covered Employment data) by 766 square feet (US EPA estimate of average commercial/industrial floor space per employee).
- (2) Total manufacturing sector energy consumption was calculated by multiplying total floor area by 450,000 Btu/square foot (average of low and high estimates for various types of industries—data developed by E Source Companies, LLC “Managing Energy Costs in Manufacturing Facilities). Total commercial sector energy consumption was calculated by multiplying total floor area by 90,500 Btu/square foot (average for all commercial uses, US Energy Information Administration). For Oil and LP gas were combined for the analysis and Btu content used in the calculations (125,000 Btu/gallon is an average weighted slightly toward the Btu content of oil).
- (3) Electricity consumption data obtained from Efficiency Vermont, based on actual metered usage. A cost factor of \$0.15 was used to be consistent with the residential rate, although varying commercial rates apply. Because oil and gas were combined, a conservative cost factor of \$3.00 was used in the calculations.



Municipal and Institutional Energy Usage

Local government, schools, colleges, and other institutional uses such as the Southwestern Vermont Medical Center all are major users of energy. The costs associated with energy use by those entities has a direct bearing on taxes and critical issues such as the cost of education and health care. Energy conservation and the use of alternative energy systems in this sector have the potential to produce significant savings and to promote economic development.

Municipal Government

The Town of Bennington relies on energy to provide services to the community. The town owns and operates several buildings, a large fleet of vehicles and equipment, and is responsible for other services such as the provision of water, disposal of wastewater, and street lighting. The town already has taken steps to reduce its energy use through use of more efficient lighting and equipment in office buildings, installation of a hydroelectric generator at the water treatment facility, and by pursuing other initiatives through Efficiency Vermont and other resources. An assessment of municipal energy use was conducted recently and is reported in this section.

Municipal Buildings and Infrastructure

Energy consumption data at five municipal buildings was gathered through a project coordinated by EPA’s Energy Star initiative. Those buildings support a variety of services and are used in significantly different ways, so opportunities for energy savings in each will differ. Each of the buildings requires energy for space heating (and in the case of the Recreation Center, pool water heating) and electricity for lighting, air conditioning, office equipment, and other functions. Information on energy use at the water and wastewater facilities was obtained from recent municipal records. Total energy use and estimated costs for these buildings and related infrastructure is presented in Table 5.

The Bennington Fire Station is a relatively new building, located on River Street. It houses the Bennington Fire Department’s vehicles, equipment, and support offices and facilities. A large meeting room on the third floor is used for public meetings by local government and other

<b>Table 8-5. Annual Energy Consumption (2012) — Bennington Municipal Buildings and Infrastructure</b>							
<b>Building</b>	Oil / Cost (gallons @\$2.50)	Propane / Cost (gallons @ \$3.50)	Electricity / Cost (kWh, rate specific to use)	<b>Total Cost</b>			
Fire Station	6,222	\$15,555	154	\$539	99,624	\$13,947	\$30,041
BBC/BCIC	1,150	\$2,875	-	-	12,432	\$1,492	\$4,367
Police Station	-	-	18,420	\$64,470	212,940	\$27,684	\$92,154
Recreation Center	-	-	54,000	\$189,000	173,400	\$36,414	\$155,677
Town Offices	2,961	\$7,403	<100	-	66,612	\$9,651	\$17,054
Water Department/ Filtration Plant	8,239**	\$20,598	1,196**	\$4,186	-	\$32,911	\$57,695
Water Infrastructure*	-	-	-	-	-	\$33,052	\$33,053
Wastewater Plant	6,216**	15,540	647**	\$2,265	-	\$171,671	\$189,476
Wastewater Infrastructure *	-	-	-	-	-	\$5,705	\$5,705
<b>Total</b>	<b>24,788</b>	<b>\$61,970</b>	<b>54,312</b>	<b>\$260,460</b>	<b>-</b>	<b>\$332,527</b>	<b>\$654,957</b>

\* Infrastructure includes facilities such as pumping stations and other equipment that utilize electricity.  
 \*\* Gallons imputed from cost information obtained from municipal records.

organizations. Although the largest of the town-owned buildings surveyed, much of the building is not used on a daily basis and it includes a large garage area that is not heated to the level of the rest of the structure. As a consequence, heating fuel use is relatively low, averaging 6,222 gallons of oil per year. Electricity use at the building is significant, although the total cost is below the space heating expense. The monthly average of 8,320 kWh is typically exceeded by 50 percent during summer months (and is generally consistently lower the rest of the year), indicating that air conditioning probably is driving a significant portion of the electricity demand during warm weather. The Fire Station also uses a small amount of propane (approximately 150 gallons per year).

The “Blacksmith Shop” at the corner of South and Elm Streets, is leased to the Bennington Downtown Alliance (BDA). It encompasses 3,600 square feet and includes offices for several people on the first and second floors, a meeting room, and a visitor welcome center/display area. As a renovated historic building with a high heating cost per square foot, it can be assumed that there exist significant opportunities for weatherization. Electricity use for the building averages approximately 1,036 kWh per month.

The Police Department is housed in the historic stone building on South Street that used to



The Police Station must remain active around the clock every day, contributing to a high rate of electricity usage.

serve as a federal building. It includes 10,360 square feet of space, numerous office and meeting rooms, and significantly—from an energy perspective—is occupied twenty-four hours per day. The structure is heated with a propane-fired system that consumes an average of 18,420 gallons of that fuel each year. Although from a cost standpoint, propane use is the most significant at the building, it is the electricity consumption at the building that is most striking. The Police Station uses twice as much electricity per square foot as the Town Office Building and far more than the Blacksmith Shop—attributable, in part, to its non-stop operation, but moisture, especially in the basement, requires constant use of pumps and dehumidifiers. The existing heating and air conditioning systems, and the design of the ductwork, results in further inefficiencies.

The Recreation Center, located on Gage Street, provides residents with access to a fitness center and an indoor swimming pool. The facility uses a considerable amount of propane, with demand highest in the winter months, but substantial year-round. Approximately 54,000 gallons of propane were used in 2012 (Table 5), but installation of two high-efficiency propane boilers and a high-efficiency propane pool heater has reduced propane use to 29,350 gallons.

The Town Office Building, located on South Street, includes the Town Clerk’s office and most of the administrative activities that support the full range of services offered by the municipal government. The offices are housed in a renovated historic house—with additions—that occupies 6,214 square feet. Space heating is provided by an oil-fired system that, during the sampling period, used an average of 2,961 gallons of oil per year. Electricity use at the building is fairly consistent year-round, averaging just over 5,000 kWh per month.

The town operates public water supply and wastewater disposal systems that cover defined areas, primarily in the state-designated growth center. This infrastructure is essential to allow the type of concentrated development pattern that is consistent with the Town Plan and which leads to long-term energy savings. Both functions require considerable energy inputs, both to heat buildings and to operate equipment (Table 5). The water system, for example, utilizes numerous pumping stations that require a considerable amount of electrical energy and the wastewater treatment plant uses more electricity than any other municipal facility. As noted earlier, the town has taken steps to limit energy consumption; the hydroelectric generator at the water filtration plant and the decision to compost biosolids at the wastewater treatment plant are two examples. Efficiency Vermont has assigned an energy efficiency expert to work on a range of municipal projects, including planned improvements to the wastewater facilities which are expected to significantly improve overall energy efficiency.

Municipal Vehicles and Equipment

The town operates a sizeable fleet of vehicles and heavy equipment that use gasoline and diesel fuel. Total expenditures on fuel in a recent 12-month period were over \$200,000 (Table 6), and with rising costs that number can be expected to increase significantly in the current and ensuing years. Several municipal departments (Fire, Recreation, Senior Center, Planning and Code Enforcement), use relatively little fuel for transportation and to operate their equipment, but others (Police, Highway, Water, and Wastewater) depend heavily on those fuels to accomplish their work.

<b>Table 8-6. Fuel cost - municipal vehicles and equipment.</b>		
Department	Inventory	Annual Fuel Cost
Police	9 vehicles	\$54,607
Fire	6 trucks and one sedan	\$3,348
Recreation	1 pickup truck and 2 mowers	\$3,350
Senior Center	2 vans	\$2,904
Highway	10 dump trucks, 9 pickup trucks 16 pieces heavy equipment	\$113,291
Water	6 pickup trucks, 1 dump truck, 2 pieces heavy equipment	\$16,293
Wastewater	4 pickup trucks 5 pieces heavy equipment	\$9,194
Planning and Code Enforcement	1 sedan	\$547
<b>Total</b>		<b>\$203,534</b>

The Bennington Police Department has specific requirements for the types of vehicles it operates. The department has indicated a preference for SUVs because of their capacity and greater durability; use of hybrid SUVs and battery systems that allow for reduced idling might

achieve significant fuel savings. Some limited patrols also are conducted on foot. The Highway Department, with its dump trucks, pickup trucks, and array of heavy equipment is the largest user of transportation fuel in the local government. Consequently, its costs will rise more rapidly than any other department as gasoline and diesel fuel costs increase. The Water and Wastewater Departments also rely on vehicles and heavy equipment, together spending over \$25,000 per year on transportation fuels.

### Streetlighting

The town recently took advantage of a program coordinated by Efficiency Vermont whereby it replaced all of its old (mostly 150W high pressure sodium) streetlights with new energy efficient LED streetlights (the town also has identified 12 streetlights that are not necessary and which were removed altogether). The new LED streetlights are much more energy efficient, with 52W units replacing the old 150W high pressure sodium units. The light from the LED units also is much more “natural” and is distributed evenly, with very little wasted light or areas of overlapping illumination between adjacent lights. This streetlight replacement program has reduced electricity use by approximately 50% while saving the town over 20% on its streetlighting bill. The electric distribution company, Green Mountain Power, also benefits because it achieves comparable savings on the amount of electricity it must purchase.



### Public Schools

The Bennington School District maintains three public elementary schools in town and the Mount Anthony Union District maintains the local public middle school and high school. The schools are of varying age and the relative energy efficiency of each is partially attributable to the original design and construction of the buildings (Table 7). Each of the schools has participated in at least one Efficiency Vermont and/or Vermont School Energy Management Program review, and a number of efficiency improvements have been implemented in the past, with major improvement projects being completed at the three elementary schools this year (summer of 2017). The transportation section of this plan considers the energy and health related benefits of walking, bicycling, carpooling, and use of school buses rather than personal vehicles.

One of the most obvious differences between the schools has been the cost of heating the buildings. The three elementary schools are older than the middle school and high school, and the elementary schools have relied solely on oil for space heating. The secondary schools, on the other hand, each derive a significant portion of their heat from wood chip (biomass) based boilers that greatly reduce the utilization of more expensive heating oil. Annual heating costs at both the middle school and high school average approximately \$0.63 per square foot, while annual heating costs at the elementary schools have ranged from \$1.04 per square foot at Molly Stark to \$1.63 per square foot at Bennington Elementary.

All of the schools have benefited from some lighting system upgrades, with older interior fluorescent lights being replaced with energy-saving T-5 and T-8 lights, and inefficient exterior floodlights replaced with highly efficient LED lights. Estimated energy savings from these

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upgrades amounted to 153,000 KWH, and \$25,000, annually between the three elementary schools and an additional \$18,000 in savings at the high school. The most recently constructed school building, Mount Anthony Union Middle School, also benefited from \$52,000 in energy conservation incentives (light and heating controls and other measures) during its construction several years ago.

**Table 8-7. Recent annual energy use at Bennington’s public schools (prior to current efficiency upgrades).**

School	Oil (gallons)	Oil Cost	Woodchips (Tons)	Woodchip Cost	Electricity (KWH)	Electricity Cost	Propane (gallons)	Propane Cost	Total Cost
Bennington Elementary	21,000	\$67,059	-	-	180,000	\$35,302	-	-	<b>\$102,361</b>
Molly Stark	14,000	\$54,238	-	-	380,000	\$59,911	-	-	<b>\$114,149</b>
Monument	9,000	\$29,250	-	-	120,000	\$19,429	-	-	<b>\$48,679</b>
MAUMS	13,000	\$43,137	810	\$52,555	958,000	\$114,476	3,500	\$5,100	<b>\$215,268</b>
MAUHS	20,000	\$76,590	1,100	\$65,924	1,600,000	\$185,686	6,900	\$11,843	<b>\$340,043</b>
<b>Total</b>	<b>77,000</b>	<b>\$270,274</b>	<b>1,910</b>	<b>\$118,479</b>	<b>3,118,120</b>	<b>\$414,804</b>	<b>10,400</b>	<b>\$16,943</b>	<b>\$820,500</b>

**Notes**  
 Square feet of floor space in each school: Bennington Elementary—41,200; Molly Stark—52,000; Monument—24,000; MAUMS—150,000; MAUHS 225,000.  
 Fuel and electricity consumption data obtained from the facilities director for each school district; in some cases consumption was averaged over more than one year. Cost data was obtained from annual reports using actual expenses.

The current energy efficiency work being completed at each of the three elementary schools involve a range of improvements, including:

- Installation of efficient LP boilers and elimination of oil boilers from the schools;
- Upgraded control systems and new energy recovery ventilators;
- Replacement of interior and exterior lighting with high efficiency LED fixtures;
- Air sealing and other weatherization work.

Total cost savings to be realized as a result of these improvements is expected to exceed \$107,000 per year.

Hospital Campus

The Southwestern Vermont Health Care’s (SVHC) main campus in Bennington includes a full-service 99-bed hospital, a 150-bed nursing facility, a medical office building, cancer treatment center, and smaller buildings housing additional administrative and medical functions. SVHC currently is in the final stages of developing a plan for modernization of its facilities, and those plans include replacement of the aging oil boilers, along with other improvements that will affect energy use on the campus. At the present time, SVHC consumes over 600,000 gallons of (# 6) heating oil per year and uses over of 12 million KWH of electricity—clearly, medical facilities are among the biggest energy users in most communities, and certainly in Bennington. Consider, for example, that SVHC annually uses as much oil as nearly 1,000

average houses and as much electricity as several thousand houses. Fortunately, SVHC recently has placed a strong emphasis on energy efficiency, having cooperated with Efficiency Vermont in conducting a comprehensive analysis of its facilities and considering alternative options for replacing its heating plant.

SVHC has commissioned several studies to evaluate alternative solutions for replacing the heating plant. That facility until recently was also used to provide energy for a large institutional laundry, but all laundering is now done off-site. In addition, the facility has converted to an electric chiller system, further reducing future need for energy derived from the heating plant. By removing the laundry function, converting to an electric chiller system, and installing more efficient boilers that utilize compressed natural gas (CNG) rather than #6 heating oil (currently planned and permitted), SVHC has significantly reduced its overall energy demand.

In planning for the new central boiler plant, it became clear that the most energy-efficient and cost-effect option, from an operational standpoint, is a system that uses a woodchip-based boiler with new CNG boilers as a backup. That option, however, is the most expensive to construct initially, even though an analysis completed for SVHC by the Biomass Energy Resource Center shows that, factoring in the cost of financing as well as expected rates of increase in both oil and woodchips, the annual savings associated with the woodchip/oil system exceed \$1 million annually.

SVHC has decided to install the new CNG-powered system, but to include a primary convertible boiler to allow for woodchip use should that option become preferable based on future fuel costs. The site plan and buildings have been designed to accommodate the future change with minimal disruption or additional expense.

### College Campuses

Bennington is home to two college campuses, Bennington College and Southern Vermont College (the smaller Community College of Vermont, the Vermont Technical College, and the Northeast Baptist College, are considered for the purposes of this analysis to be part of the



Forests cover most of Bennington County; the wood available from Bennington County and surrounding areas can provide energy for facilities such as this 400 horsepower wood boiler system at Bennington College, which has reduced oil consumption on the campus by more than 300,000 gallons per year.



commercial sector). Colleges use a considerable amount of energy for heating residential and academic buildings, and to power the lights, computers, and other special equipment required at such institutions.

Several years ago Bennington College installed a biomass heating system to serve as the primary heat source for most of the college's buildings. According to a study of that system conducted by the Biomass Resource Center, the college uses approximately 4,000 tons of woodchips annually (\$208,000 at current prices), displacing approximately 350,000 gallons of oil use. Oil boilers still are used as a supplement and back up to the primary biomass system. The college has reported that the biomass system has been reliable and has saved several hundred thousand dollars per year in fuel costs. The college's facilities director has reported that the campus uses approximately 3,186,000 KWH of electricity per year, at a total cost of \$552,000. Bennington College has worked with Efficiency Vermont to implement a wide array of measures to reduce electric usage, and, in addition to its biomass heating system, has constructed a new building that is highly energy efficient and which uses a geothermal heating system. Many of the older buildings on campus would benefit from air-sealing, insulation, and other weatherization work; projects that will be taken on as funding becomes available.

Southern Vermont College is a smaller campus (in terms of both student enrollment and buildings); with approximately half of the number of residential students, two main academic buildings, and a field house/gymnasium, so its energy consumption is significantly less than that of Bennington College. Because the campus does not have a biomass boiler system like Bennington College, its heat energy must be provided by oil and propane gas—and the campus uses approximately 16,000 gallons of propane and 15,000 gallons of oil per year. Annual electricity consumption amounts to 703,000 Kwh per year at a cost of \$130,000. Many of SVC's buildings are relatively new, although the main academic building (The Mansion) is a historic stone building that certainly could benefit from weatherization work—the design and historic nature of the building will complicate any such work, however.

Both colleges are interested in using local food in their dining halls, and both have considerable acreages of prime agricultural land on their campuses, suggesting the potential for cultivation and processing of food at appropriate locations on their campuses.

### Transportation Sector Energy Demand

The amount of energy used for transportation in Vermont has grown steadily and now accounts for more energy consumption than any other single sector. Although significant gains in the overall efficiency of the combined vehicle fleet have not been observed during this time period, improved technology has led to the production of some highly efficient vehicles. However, low fuel prices for gasoline and diesel (generally half to one-third of what consumers pay in many developed countries) have encouraged people to buy large fuel-inefficient vehicles; and even people with fuel-efficient vehicles are able to drive more miles so may not actually be conserving much energy relative to their SUV-driving neighbors.

Inexpensive energy in the transportation sector also has facilitated a land use pattern where people live relatively far from where they work, attend school, shop, and obtain other important services. Until the era of good roads and inexpensive fuel, most people lived in close proximity to urban and village centers where goods and services were close at hand. People who lived in the countryside had to be more self-sufficient, and indeed, most were involved in some type of agricultural activity. Some people have observed that cheap and easy personal transportation has allowed people to live an urban lifestyle in rural locations.



The personal automobile has come to be seen as an indispensable component of modern life, used to get to work, shopping, school, visiting friends, recreational and entertainment venues, and more. Consequently, the amount of fuel used—and dollars spent— to drive ourselves around has become an increasingly important issue for many people. The amount of money spent on gasoline by Bennington residents, for example, is approximately equal to the amount of money spent on all fuels for home heating and electricity (Table 8). According to the 2010 US Census, the average Bennington worker commutes a total of approximately 15 miles per day; with over 8,000 resident workers, mostly commuting in single-occupancy vehicles, commuting alone accounts for over 100,000 miles per day of travel, and over 1.1 million gallons per year (and \$3,000,000) of gasoline consumption.

<b>Table 8-8. Transportation fuel use (personal and commercial/industrial) estimates for Bennington.</b>				
		Annual Miles	Gallons Fuel	Total Fuel
		Driven (2)	Used (3)	Expenditures (4)
Number of Personal Vehicles	12,118	169,652,000	6,786,080	\$16,965,200
Commercial/Industrial Diesel Fuel Use			1,357,200	\$4,071,600
<b>Total</b>			<b>8,143,280</b>	<b>\$21,036,800</b>

(1) 6,378 housing units \* 1.90 average vehicles per unit (2010 US Census).  
 (2) Based on 14,000 miles per year per vehicle—current estimates, Federal Highway Administration.  
 (3) Personal vehicle fuel (gasoline) consumption based on 25 miles per gallon average (US EPA); commercial/industrial estimate based on 20% of personal vehicle fuel consumption (Vermont Department of Public Service data).  
 (4) Expenditures based on gasoline cost of \$2.50/gallon and diesel fuel cost of \$3.00/gallon.

A number of electric and “plug-in hybrid” electric vehicles recently have been introduced to the market and some area residents and businesses have purchased them, although relatively few are available from local dealerships. The Town has obtained grant funding to install several EV charging stations in the downtown area, and they receive considerable usage.

The composition of the fuel mix used for transportation in the region will need to change dramatically over time, according to the LEAP model scenarios, to attain the level of renewable fuel use required to support the “90x2050” statewide energy goal (Figure 4, Table 9). This LEAP model scenario for light-duty vehicles shows that gasoline and petroleum diesel powered cars and light trucks in the region will be largely replaced by vehicles powered by electricity (generated from renewable sources) and liquid biofuels by 2050. A comparable trend is expected in Bennington, to be consistent with the modeling criteria. An analysis of the LEAP projections show, for example, that the number of gasoline-fueled vehicles (including gas-ethanol mix fuels) in Bennington would decrease by over 90 percent



The Town has installed several new high-speed electric vehicle charging stations in municipal parking lots.

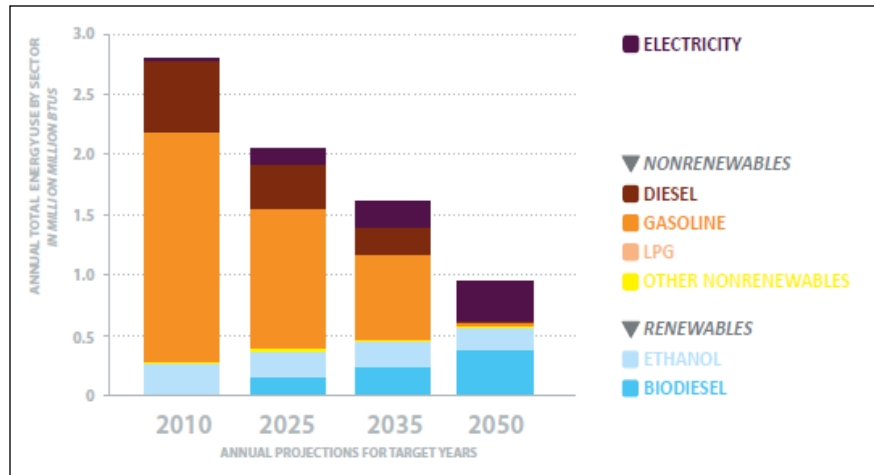


Figure 4. Change in the use of fuels in the regional transportation sector through 2050, based on LEAP model analysis.

Table 8-9. Fuel use and number of vehicles using each fuel as a primary energy source through 2050 LEAP model projections (Vermont Energy Investment Corporation).

Fuel Type	2015		2025		2035		2050	
	# Vehicles	Total Fuel Demand	# Vehicles	Total Fuel Demand	# Vehicles	Total Fuel Demand	# Vehicles	Total Fuel Demand
Gasoline (gallons)	7,177	3,444,902	6,859	2,743,563	3,913	1,381,050	334	108,427
Ethanol (gallons)	981	654,296	761	434,733	454	237,127	308	154,107
Electricity (KwH)	36	109,027	572	1,526,377	3,927	9,921,454	8,108	19,458,968
Diesel (gallons)	300	102,754	207	62,193	129	35,153	0	0
Biodiesel (gallons)	23	8,746	128	43,732	212	67,056	322	96,469

Notes: Although, vehicle numbers for base year differ from current estimates (Table 8) because projections are derived from statewide “LEAP” model data—trends are consistent. The model assumes no overall growth in total miles driven. Ethanol includes mix with gasoline and vehicle numbers can be combined for gas/ethanol.

to less than 1,000 vehicles by 2050. Corresponding growth in use of electricity as a primary fuel would lead to a dramatic expansion in the use of electric vehicles (over 8,000 EVs in Bennington by 2050) and vehicles that burn biodiesel fuel.

The town’s transportation infrastructure includes the system of local and state roadways, bicycle and pedestrian facilities, local and regional public transportation, and railway and airport facilities. These facilities and services are essential components of the transportation system and are discussed in more detail in the transportation section of this Town Plan. The town has been maintaining and expanding its bicycle and pedestrian facilities and has been working with local, state, and regional partners to ensure that other, non-automotive, modes of transportation are accessible to residents, visitors, and businesses—all key to reducing reliance on fossil fuels in this sector.

## Local Energy Production

The vast majority of energy used in Bennington is imported from outside the town (and generally from outside the state and nation) in the form of gasoline, oil, propane, and electricity. Some of the imported electricity is generated from renewable sources, primarily electricity obtained from hydroelectric generating facilities in Quebec and Labrador (via utility contracts with Hydro Quebec). Some energy production currently occurs in Bennington, all of which is electricity generated from renewable sources including a 360 KW capacity hydroelectric facility on the Walloomsac River and roughly 3 MW of solar capacity in small private and moderate-sized commercial photovoltaic systems. For current generation sites and capacities, refer to the Community Energy Dashboard:

<http://www.vtenergydashboard.org/my-community/bennington/statistics>.



A local energy entrepreneur re-established the hydroelectric generating capacity at the “Paper Mill” site along the Walloomsac River in Bennington. The facility is rated at 360KW generating capacity and produces electricity with greater consistency and reliability than solar or wind facilities.

This 6 KW residential scale solar array is fixed to a bi-directional tracking base so that it can orient the panels to take maximum advantage of solar radiation at any time of the day. Backyard and home rooftop solar arrays as well as larger array, both on the ground and on commercial rooftops, can generate significant amounts of electricity, although generation peaks in the summer and is limited in the winter months. Bennington has approximately 3MW of installed solar generating capacity in town—location and size of existing facilities can be viewed online at the Community Energy Dashboard, an energy resource and mapping tool currently maintained by the Energy Action Network.



### 8.3 Energy Conservation, Efficiency, and Renewable Energy Strategies

A diverse array of targeted policies and actions will be required to effectively advance the town toward its conservation, efficiency, and renewable energy goals and to support attainment of Vermont’s goal of obtaining 90 percent of all energy used in the state from renewable sources by 2050. The following strategies have been identified as most appropriate for the Town of Bennington to pursue at this time. Additional information on land use and transportation policies and recommended actions can be found in the land use and transportation sections of this Town Plan. More detail on many of the approaches can be found in the 2017 Bennington County Regional Energy Plan (*Bennington County Regional Commission, March 2017*) and in the Guidance for Municipal Enhanced Energy Planning Standards (*Vermont Department of Public Service, March 2017*).

#### Town Energy and Land Use Planning

1. The town should reestablish, maintain, and support its municipal energy committee. That committee should pursue implementation of this plan, advocate for energy conservation and renewable energy projects, and report on a regular basis to the Select Board.
2. Continue implementing land use planning policies that encourage efficient development with high density mixed-used development in the designated growth center and low density development that does not require extensive infrastructure or services in rural areas, consistent with the land use plan and policies set forth in this Town Plan.
3. Actively support investments in the downtown and surrounding neighborhoods, especially projects such as the Putnam Block Redevelopment, that bring new housing and essential businesses such as food stores and hardware stores, as well as employment opportunities, into the walkable center of the community.
4. All developments should be planned to take advantage of opportunities for utilization of solar energy.

#### Residential Sector Energy Conservation and Efficiency

5. The town should routinely provide information on the state mandated Residential Building Energy Standards to all building permit applicants, and take steps to require and verify that all new residential building meets those Standards.
6. The town should promote use of the “Energy Star” building performance rating system and related building practices that limit energy consumption in new and remodeled homes, and promote the use of Vermont’s residential building energy label/score.
7. Energy education programs sponsored by Efficiency Vermont, the Bennington County Regional Commission, and other organizations—particularly those that focus on home weatherization improvements and energy savings—should be supported and widely publicized.
8. Programs that provide funding for weatherization of the homes of lower-income residents, including the Weatherization Assistance Program offered through the Bennington Rutland Opportunity Council (BROC), should be supported.
9. Work with NeighborWorks of Western Vermont (NWWVT) to widely publicize their “Heat Squad” home energy improvement programs, including low-cost audits and assistance with construction and financing.
10. Efforts to assist homeowners to switch to alternative space heating systems, including stoves and systems that burn wood and wood pellets, as well as air source heat pumps,

should be supported. Woody biomass fuels can be sourced locally and heat pumps are highly efficient systems powered by electricity that can be generated from renewable energy sources.

5. A high percentage of Bennington’s housing stock are rental properties, and many of those in the center of town would benefit from energy audits, weatherization work, and installation of alternative heating systems, especially air source heat pumps. The town should work with the BCRC to organize and hold another walk-thorough and information session for owners of residential rental properties.

#### Commercial and Industrial Sector Energy Conservation and Efficiency

12. Obtaining feedstock for heating systems from local sources supports regional economic development and renewable energy goals. The town should work with the regional development corporation, the Bennington County Sustainable Forestry Consortium, and other organizations to support existing forest products businesses and new businesses involved in managing forest lands, transporting and processing woody biomass for home, business, or institutional applications, and should assist with locating sites for manufacturing facilities (especially production of wood pellets).
13. The town should cooperate in efforts to reach out to electrical contractors and others to provide information about opportunities to sell, install, and service heat pumps. Air source heat pumps are an efficient and cost-effective way to reduce reliance on oil and/or propane fuels in many homes and businesses. Bennington also is well-suited for new geothermal heat pump systems—an option that may be particularly viable for new construction and larger commercial/industrial projects. Developers of such projects should be made aware of the value of geothermal systems and efforts to support development of business that provide geothermal system and support (well drillers, excavators, etc.) and coordination between those businesses and electrical contractors should be supported.
14. All new commercial and industrial buildings must meet the state mandated Commercial Building Energy Standards. The town should encourage developers of commercial properties to consider using the “Stretch Codes,” mandated through Act 250, in any new commercial construction.
15. Commercial and industrial business owners should be encouraged to work with Efficiency Vermont and energy service companies to assess the potential for converting all or part of their space heating and cooling to efficient air source heat pumps.
16. Business owners should be encouraged to obtain the services of an energy auditor who can assist in identifying measures to adjust operations to minimize energy use.
17. Employees should consider alternative ways of commuting to work and employers should provide facilities to encourage bicycling, walking, and carpooling. Local business groups and the town should promote participation in the annual “Way to Go” commuter program.
18. Business should be provided information about electric vehicle charging stations and encouraged to install such facilities to support employees who would like to use electric vehicles for commuting.
19. The town should make sure that incentives offered through Efficiency Vermont are widely publicized to businesses.

#### Energy Conservation and Efficiency in the Transportation Sector

20. The town should continue to improve and maintain the town’s network of off-road bicycle and pedestrian facilities, identifying safety improvement needs, gaps between important

destinations, and other needs. The town should continue to seek funding through the VTrans Bicycle –Pedestrian and Transportation Alternatives programs, as well as from local funds and other sources to plan and implement those projects.

21. The town should ensure that local and state roadway construction and maintenance projects include accommodations for pedestrian and bicycle travel, incorporating “Complete Streets” principles whenever possible. The town should continue to work with the BCRC to plan and implement modifications to local streets to make them more bicycle and pedestrian friendly and to present more attractive streetscapes for all residents and users of the transportation system.
22. The town should work with the Green Mountain Community Network (GMCN) to support wider utilization of the local public transportation system. Employers, shopping centers, and service centers should be contacted and asked to provide information about GMCN routes and services to employees, customers, and clients.
23. Outreach should be conducted through the local school system to encourage greater use of school buses (rather than individual cars) and walking and biking to school.
24. Actively support expansion of intercity bus travel, including the new direct bus connection to the Amtrak rail station in Rensselaer. Work with the Bennington Area Chamber of Commerce and local businesses to ensure that the services are well publicized and that stop and transfer locations are convenient, comfortable, and attractive.
25. Continue to participate in rail planning projects to promote commercial and industrial development that can use rail for freight shipments. Support expenditure of transportation funds on projects to maintain and upgrade rail lines, bridges, crossings, and other critical infrastructure.
26. Actively promote electric vehicle use through cooperation with Drive Electric Vermont and other organizations. Encourage local auto dealers to supply electric and plug-in hybrid electric vehicles.
27. Install EV charging stations in public parking lots and encourage businesses, to install charging stations for their employers and customers. The Bennington Area Chamber and other organizations should highlight the availability and location of EV infrastructure in the community through their websites and other methods.
28. Promote the Go Vermont website to support carpooling, ridesharing, and other opportunities. Support efforts to broaden participation in the “Way to Go” alternative commuting program.
29. Large new commercial, industrial, and multifamily developments should be required to provide EV charging stations at convenient locations, and to provide a location for a public transportation stop.

#### Local Food Systems

30. Support efforts to develop a more robust local food and agricultural system; participate in efforts to match food producers with large institutional and other consumers.

#### Municipal Government Energy Practices

31. Pursue energy audits at municipal buildings focusing on weatherization work at older buildings such as the town office building and old blacksmith shop and heating and electrical upgrades at the police station.

32. Consider alternative energy systems such as a small biomass district heat project to heat public buildings in the downtown, solar hot water production at the recreation center, and a demonstration project with liquid biofuels for some town equipment. Assess the potential for deploying air source heat pumps for heating and cooling in all municipal buildings.
33. Consider purchase of more fuel efficient vehicles, including electric vehicles where practical, for all departments; hybrid sedans and SUVs might be particularly effective for the police department, as would new anti-idling technologies.
34. Publicize the successful LED streetlight conversion and encourage business owners to make similar changes on their external lights.

#### Energy Use in Schools and Institutions

35. The public schools should regularly participate in the School Energy Management Program reviews and continue to work with Efficiency Vermont to obtain incentives for weatherization and efficiency improvements.
36. All schools should promote and encourage the use of school buses and walking and biking to school—including participation in the Safe Routes to Schools program—to reduce reliance on single-passenger vehicle transport.
37. The Southwestern Vermont Medical Center should continue to work with Efficiency Vermont to improve energy conservation at its campus and should continue to move toward utilization of locally sourced woody biomass fuel for use in its new central boiler plant.
38. Southern Vermont College should investigate development of a central biomass based district heating system for its campus.

#### General Electricity Conservation and Efficiency Measures

39. Support integration of advanced energy storage in the area through cooperation with utilities and review of town plan policies and land use standards.
40. Support full integration of “smart grid” technology throughout the town and region and use of “smart rate” pricing plans.
41. Cooperate with Green Mountain Power and VELCO to ensure that areas planned for new renewable energy generation are consistent with the capacity of the grid infrastructure and to ensure that any upgrades needed are implemented.

#### Renewable Energy Development

##### **Biomass and Liquid Biofuels**

42. The town should support efforts to develop appropriate cost-effective biomass energy resources and help promote combined heat and power biomass projects.
43. The town should support efforts to help farmers produce oil seed crops and liquid biofuels that can be used to operate equipment and machinery on their farms, and potentially supply other businesses and the town with renewable fuels.

##### **Hydroelectric Generation**

44. The town has added hydroelectric generation equipment at its water supply facility and has supported development of the 350 KW hydro generating facility at the “Paper Mill” dam site on the Walloomsac River. The town should continue to look for opportunities to devel-

op small hydro projects to support efficient municipal operations. Additional commercial-scale hydroelectric generation is limited due to the fact that the only existing dam sites (other than the Paper Mill dam) are located on Paran Creek in North Bennington Village, between Lake Paran and the Walloomsac River (Figure 5). The town supports efforts by North Bennington, Bennington College, and involved property owners to develop the hydro potential at that series of small dams on Paran Creek.

### Generation from Wind Resources

45. Bennington has limited potential for utility-scale wind energy development, as areas with sufficient access to consistent wind are restricted primarily to higher elevations on Mount Anthony and adjacent ridgelines. These areas are relatively close to established residences, and Mount Anthony has been specifically identified as a critical scenic resource for the town in its Scenic Resource Inventory. Development in that area would have a profoundly negative impact on critical viewsheds throughout the community, as the natural profile of the mountain forms an iconic backdrop from both in-town and rural valley locations. The town has consistently objected to and testified against development, including construction of larger telecommunication towers, on and near the summit and ridgeline of Mount Anthony. Because no other locations in Bennington have suitable wind resource, infrastructure availability, or are free from significant environmental constraints (Figure 6), no utility-scale (100 KW capacity or greater) wind energy facilities should be located in the town. Smaller scale wind projects, including residential-scale turbines (generally less than 10 KW) and turbines that may be installed at farms, institutions (such as college campuses), or small businesses, up to 100 KW, may be appropriate as long as noise from the turbines does not adversely affect neighboring residential properties and as long as they are not prominently visible from any town-identified historic district.

### Solar Energy Generation

46. The town particularly encourages solar energy development, of any scale, on building rooftops.
47. The town strongly supports the development of small-scale (150 KW capacity or less) electricity generation from solar energy at homes, businesses, schools, and other institutions, as well as community solar projects.

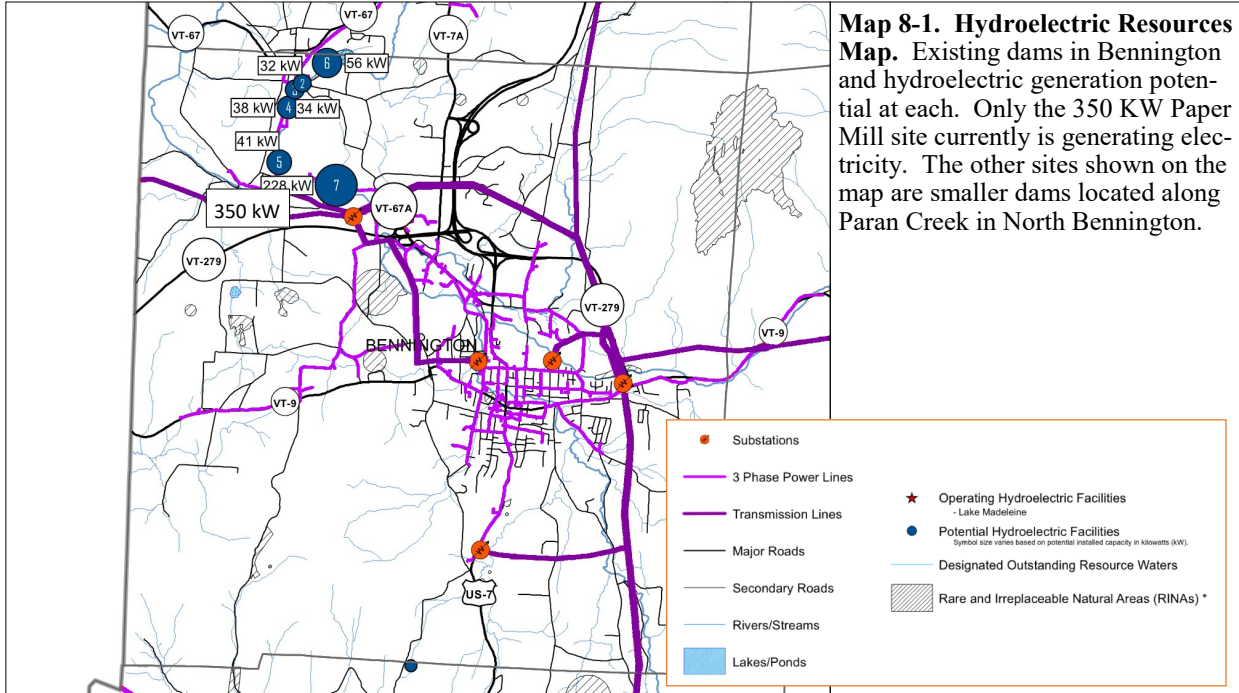
#### Community Solar Projects

Community solar projects offer an opportunity for a range of people, who might not otherwise have access to the benefits of solar energy generation, to participate in a clean energy project. These individuals may include people who do not own property themselves or those who own buildings with limitations caused by shading or the size, orientation, or structural stability of a roof. Moreover, community solar projects offer efficiencies of scale that make individual investments more viable for people of moderate incomes.

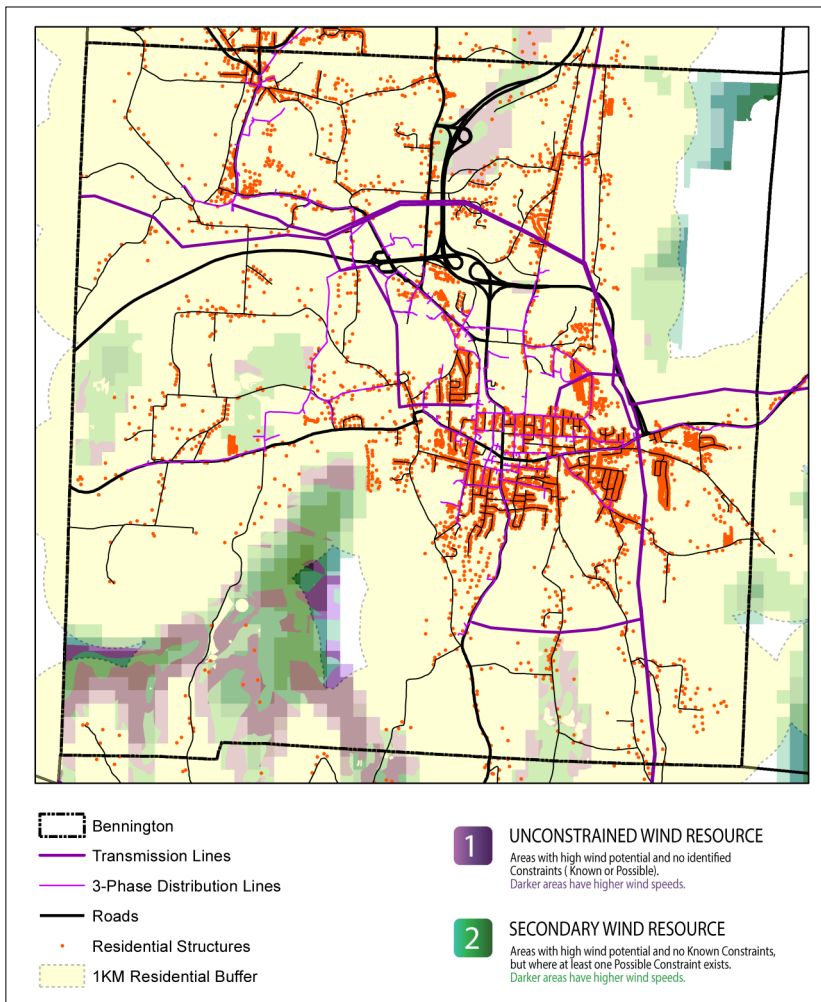
Community solar projects, as discussed in this section, are group net metered solar energy installations between 15kW and 150kW in size, with shares in the facility sold to the site owner, neighbors, community members, nonprofit organizations, and local businesses. These energy users buy shares in proportion to their annual electrical usage. When construction is completed, power is fed directly into the grid, and a group net metering document is filed with the utility showing the allocation of shares among the various members. The utility then splits the output



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**Map 8-1. Hydroelectric Resources Map.** Existing dams in Bennington and hydroelectric generation potential at each. Only the 350 KW Paper Mill site currently is generating electricity. The other sites shown on the map are smaller dams located along Paran Creek in North Bennington.



**Map 8-2. Wind Resources Map.** Wind energy resources sufficient for utility-scale generation are limited in Bennington by topography and existing homes and critical environmental resources preclude development in most locations. The summit of Mount Anthony and adjacent ridgelines are unsuitable for wind energy development because of impacts on identified scenic resources. Smaller scale wind turbines generating electricity for residences, small businesses, and institutions may be appropriate at suitable sites that do not violate state noise or environmental standards.

of the solar farm among the members in proportion to their share size, crediting their utility accounts.

Community solar projects, as described above, are encouraged and may be located anywhere in town not specifically identified as a “Prohibited (Exclusion) Area” in the Solar Facility Siting Criteria set forth in this section. Moreover, any community solar project located on a site that is not a prohibited/exclusion area shall be considered as being located on a preferred site and eligible for all of the regulatory and financial incentives associated with larger scale solar energy installations pursuant to Public Utility Commission Rule 5.100 and 30 V.S.A. Section 248. The town does encourage community solar projects to be located on sites identified as having high potential for electricity generation based on solar resource availability.

### Siting and Design of Large-Scale Solar Powered Electricity Generation Facilities

**Any larger scale solar development (greater than 150 kW capacity) shall be subject to the following Solar Energy Facility Siting Policy and Map, Solar Electric Facility Siting Guidelines, and the town’s solar facility screening ordinance.**

#### Solar Energy Facility Siting Policy and Map

The Solar Energy Resource Map (Figure 7) shall serve as a guide for developers wishing to identify land suitable for solar energy generation facilities within the Town of Bennington. This map identifies sites which have been determined by the Town of Bennington, through official action of the Select Board, to be suitable for solar facilities and sites which are preferred sites for solar energy generating facilities. Only sites identified as preferred sites on this map or located in a preferred area as defined in the Solar Facility Siting Criteria, below, may be developed with solar generating facilities in excess 150 KW of rated capacity.

The Solar Energy Resource Map (Figure 7) shall be used in concert with the Town’s Screening of Solar Facilities Ordinance and the Solar Facility Siting Guidelines (incorporating the Community Standards and Siting Criteria) included in this section of the Town Plan to direct the development and design of solar facilities. Although solar energy development at these preferred sites and locations is an appropriate land use, all such development shall be carefully planned to limit adverse impacts to neighboring properties and to public viewsheds, giving consideration to The Town’s Screening of Solar Facilities Ordinance and Solar Facility Siting Guidelines.

The sites indicated on this map as suitable for solar energy development were selected after a thorough analysis of available geographic data, including an assessment of access to solar energy as well as environmental, aesthetic, cultural, and related regulatory constraints. State-identified environmental constraints are discussed in more detail in the Bennington County Regional Energy Plan, and include the following resource areas:

- Class 1 and 2 wetlands, vernal pools, and hydric soils;
- Mapped river corridors and FEMA-defined floodways;
- Natural communities and rare, threatened, and endangered species;
- Federal wilderness areas;
- “Primary” and “Statewide” significant agricultural soils;
- FEMA-defined special flood hazard areas;
- Lands protected for conservation purposes;
- Deer wintering areas; and
- State-identified high priority “Conservation Design Forest Blocks.”

Lands with one or more of the above constraints were excluded from consideration as preferred sites, while areas that did not have any state-identified constraints were carefully analyzed by the Town, and sites most likely to comply with the Town Plan’s Community Standards and Siting Standards for Solar Facilities were identified as potentially suitable. Specifically excluded from consideration as sites suitable for development were land located in the Forest or Agriculture land use districts, privately owned land in the Rural Conservation land use district, land within 100 feet of public roads, land within 0.25 miles of any of the three covered bridges, Willow Park, and land within scenic viewsheds identified in the Scenic Resource Inventory of Bennington. Potentially suitable sites were determined to be appropriate for development only if they were likely to be developed with solar generating facilities based on property size, land-owner interest, proximity to infrastructure, and community benefit.

Approximately 540 acres of land are shown on the Solar Energy Resource Map as being suitable and preferred for development of these facilities. Of the land within those parcels, over 340 acres do not have constraints that would prevent development. This acreage, together with projected future development on rooftops and other preferred locations, far exceeds the acreage needed to meet the town’s solar energy generation target, 25 MW of capacity by the year 2050, identified in the Bennington County Regional Energy Plan. Moreover, that targeted level of generation includes residential, rooftop, and other small-scale generation that is expected to account for up to 10 MW of capacity by 2050. Therefore, all locations other than these mapped areas and land specifically identified as preferred areas in this Town Plan, are considered unsuitable for solar generating facilities in excess of 150 KW of rated capacity.

#### Solar Electricity Facility Siting Guidelines

The term “solar facility” shall have the following meaning: a solar electricity generation and transmission facility with a 150kW(AC) or greater capacity, including all on-site and off-site improvements necessary for the development and operation, and on-going maintenance of the facility.

The Town of Bennington has developed community standards and siting standards for the development of solar facilities for reference and use by facility developers and local property owners and for consideration in Section 248 proceedings (30 VSA §248). These standards are set forth below. In addition, The Bennington Planning Commission, in consultation with the Bennington County Regional Commission, has identified and mapped (Figure 7) those areas of Bennington that are most suitable for solar facility development based on facility siting requirements and municipal energy, conservation, and development policies and objectives set forth in the Bennington Town Plan, the Bennington Screening of Solar Facilities Ordinance, and the Bennington Land Use and Development Regulations.

Pursuant to 30 VSA Sec. 248, prior to the construction of a solar facility, the VT Public Utility Commission (PUC) must issue a Certificate of Public Good. A Section 248 review addresses environmental, economic, and social impacts associated with a particular project, similar to Act 250. In making its determination, the PUC must give due consideration to the recommendations of municipal planning commissions and their respective plan(s). Accordingly, it is appropriate that Bennington’s Town Plan address these land uses and provide guidance to town officials, regulators, and facility developers.

The Town of Bennington may participate in the Public Utility Commission’s review of new and expanded generation facilities to ensure that local energy, resource conservation, and development objectives are identified and considered in proposed utility development. This may include joint participation and collaboration with other affected municipalities and the Bennington County Regional Commission for projects that may have significant regional im-

pact. It is acknowledged that the PUC's primary focus is on administering state public policy and regulating actions that are directed at ensuring that utility services promote the general good of the state.

The Planning Commission, in consultation with the Bennington Select Board, should develop guidelines to direct local participation in Section 248 proceedings related to solar facilities located in Bennington or in neighboring communities which may affect the town. The guidelines should reflect levels of participation or formal intervention in relation to the type, location, scale, operation, and magnitude of a proposed project, and its potential benefits, detriments to, and impacts on the community.

**The following Community Standards and Solar Facility Siting Criteria apply to all solar generation projects exceeding 15 kW capacity in Bennington.**

### Community Standards

The following community standards are to be considered in undertaking municipal solar electricity projects and programs, in updating Bennington's Land Use and Development Regulations to address solar facilities subject to local regulation, and in the review of any new or upgraded solar facilities in excess of 15 kW capacity, by the Town of Bennington and the Public Utility Commission (Section 248 review).

- **Plan Conformance:** New solar facilities and proposed system upgrades should be consistent with the Vermont Comprehensive Energy Plan, the Vermont Long-Range Transmission Plan, and utilities Integrated Resource Planning (IRP).
- **Benefits:** A demonstrated statewide public need that outweighs adverse impacts to local residents and resources must be documented for municipal support of new solar facilities located within or which may otherwise affect Bennington. Facility development must benefit Town of Bennington and State residents, businesses, and property owners in direct proportion to the impacts of the proposed development.
- **Impacts:** New solar facilities must be evaluated for consistency with community and regional development objectives and shall avoid undue adverse impacts to significant cultural, natural, and scenic resources and aesthetic values identified by the community in the Bennington Town Plan and the Scenic Resources Inventory. When evaluating impacts of a proposed solar facility under the criteria set forth in this Town Plan, the cumulative impact of existing solar facilities, approved pending solar facilities and the proposed solar facility shall be considered. It is explicitly understood that a proposed solar facility which by itself may not have an adverse impact may be deemed to have an adverse impact when considered in light of the cumulative impacts of the proposed solar facility and existing solar facilities and pending already approved solar facilities.
- **Decommissioning:** All facility certificates shall specify conditions for system decommissioning, including required sureties (bonds) for facility removal and site restoration to a safe, useful, and environmentally stable condition. All hazardous materials and structures, including foundations, pads and accessory structures, must be removed from the site and safely disposed of in accordance with regulations and best practices current at the time of decommissioning

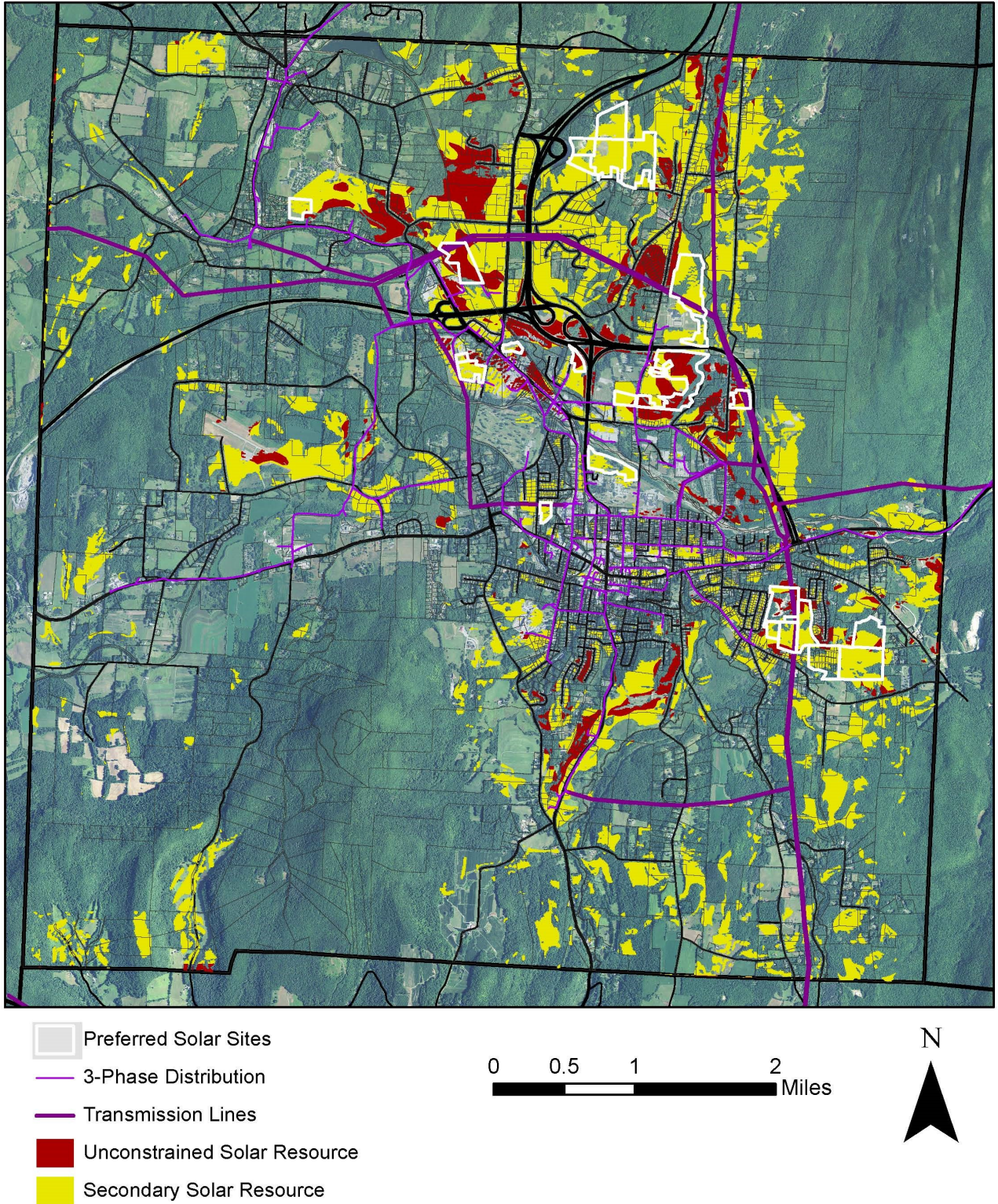
### Solar Facility Siting Criteria

Bennington supports development of solar energy generation facilities consistent with the policies and guidelines set forth in this plan. It recognizes that financial considerations require projects to be located in close proximity to electric power lines capable of distributing the load proposed to be generated and to have convenient access from major transportation networks for construction. However, the town desires to maintain the open landscape and scenic views important to Bennington's sense of place, tourism economy, and rural cultural aesthetic. Not all solar facilities proposed can meet this standard. Projects must meet the following criteria in order to be supported by this Town Plan:

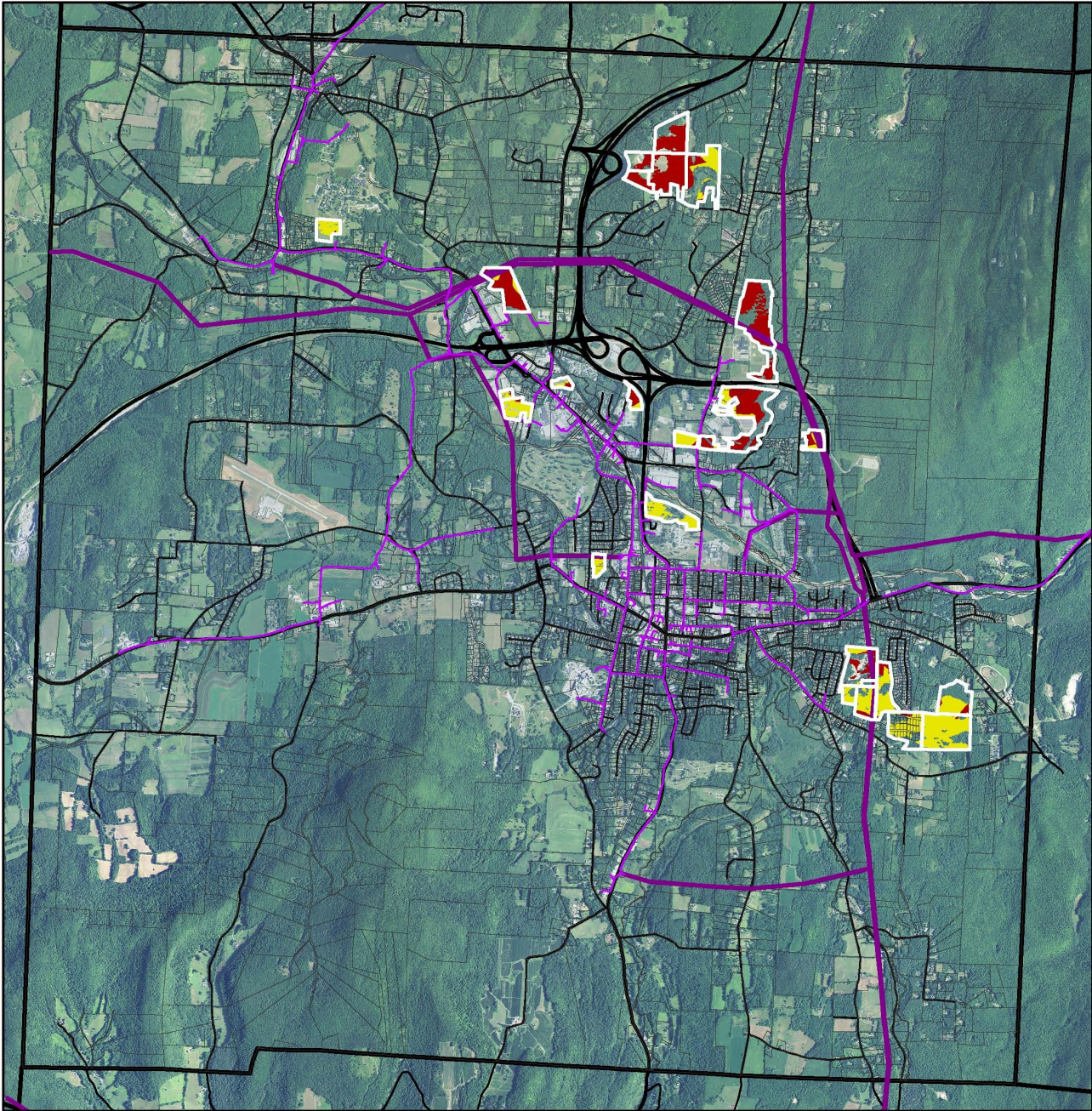
- **Siting Requirements:** New solar facilities shall be sited in locations that do not adversely impact the community's traditional and planned patterns of growth, of compact (downtown/village) centers surrounded by a rural countryside, including working farms and forest land. Solar facilities shall, therefore, not be sited in locations that adversely impact scenic views, roads, or other areas identified in the Scenic Resources Inventory, nor shall solar facilities be sited in locations that adversely impact any of the following scenic attributes identified in the Scenic Resource Inventory: views across open fields, especially when those fields form an important foreground; prominent ridgelines or hillsides that can be seen from many public vantage points and thus form a natural backdrop for many landscapes; historic buildings and districts and gateways to historic districts; and, scenes that include important contrasting elements such as water. The impact on prime and statewide agricultural soils currently in production shall be minimized during project design.
- **Preferred Areas:** The following areas are specifically identified as preferred areas for solar facilities, as they are most likely to meet the siting requirements:
  - ◊ Roof-mounted systems;
  - ◊ Systems located in proximity to existing large scale, commercial or industrial buildings;
  - ◊ Proximity to existing hedgerows or other topographical features that naturally screen the entire proposed array;
  - ◊ Reuse of former brownfields;
  - ◊ Facilities that are sited in disturbed areas, such as gravel pits, closed landfills, or former quarries;
  - ◊ Areas specifically identified as suitable for solar facilities on the Solar Energy Resource Map (Figure 7).
- **Prohibited (Exclusion) Areas:** In addition to those areas that do not meet the siting requirements set forth above, development of solar generating facilities shall be excluded from (prohibited within), and shall not be supported by the Town, in the following locations:
  - ◊ Floodways shown on Flood Insurance Rate Maps (FIRMs);
  - ◊ Fluvial erosion hazard areas (river corridors) as shown in the Town of Bennington Land Use and Development Regulations;
  - ◊ Class I or II wetlands;
  - ◊ A location that would significantly diminish the economic viability or potential economic viability of the town's working landscape, including productive forest land and primary agricultural soils (as defined in Act 250 and as mapped by the U.S. Natural Resource Conservation Service);

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- ◇ Rare, threatened, or endangered species habitat or communities as mapped or identified through site investigation, and core habitat areas, migratory routes and travel corridors;
  - ◇ Ridgelines: Mount Anthony, Whipstock Hill, Bald Mountain (Green Mountains);
  - ◇ Steep slopes (>25%)
  - ◇ Surface waters and riparian buffer areas (except for stream crossings);
  - ◇ Topography that causes a facility to be prominently visible against the skyline from public and private vantage points such as roads, homes, and neighborhoods;
  - ◇ A site in proximity to and interfering with a significant viewshed identified in the Scenic Resource Inventory;
  - ◇ A site on which a solar facility project cannot comply with Bennington’s prescribed siting and screening standards, including the screening requirements set forth in Bennington’s Screening of Solar Facilities Ordinance;
  - ◇ A site that causes adverse impacts to historical or cultural resources, including state or federal designated historic districts, sites and structures, and locally significant cultural resources identified in the municipal plan. Prohibited impacts to historical and cultural resources include:
    - \* removal or demolition;
    - \* physical or structural damage, significant visual intrusion, or threat to the use;
    - \* significant intrusion in a rural historic district or historic landscape with a high degree of integrity;
    - \* significant visual intrusion into a hillside that serves as a backdrop to a historic site or structure;
    - \* creating a focal point that would disrupt or distract from elements of a historic landscape;
    - \* a significant intrusion in a rural historic district or historic landscape that has a high degree of integrity;
    - \* impairing a vista or viewshed from a historic resource that is a significant component of its historic character and history of use;
    - \* visually overwhelming a historic setting, such as by being dramatically out of scale;
    - \* isolating a historic resource from its historic setting, or introducing incongruous or incompatible uses, or new visual, audible or atmospheric elements.
- Mass and Scale: Except for projects located on preferred sites, solar facilities larger than 10 acres, individually or cumulatively, cannot be adequately screened or mitigated to blend into the municipality's landscape and are, therefore, explicitly prohibited.



**Map 8-3. Solar Energy Resource Potential Map.** Solar energy facilities in excess of 150 KW of capacity shall be restricted to preferred sites and to building rooftops and other locations specifically identified in this section as preferred areas for solar energy development; other sites are considered unsuitable for solar energy development in excess of 150 KW of capacity. All facility siting is subject to the specific Siting Guidelines set forth in this section of the Town Plan.



-  Preferred Solar Sites
-  3-Phase Distribution
-  Transmission Lines
-  Unconstrained Solar - Preferred Parcels
-  Secondary Solar - Preferred Parcels



Preferred sites contain a total of 348 acres of prime and secondary solar resource (543 total acres in selected parcels)

Map 8-4. Preferred sites—suitable for development of small, community, and larger (utility) scale solar generation projects.



## Chapter 9 - Flood Resilience

### 9.1 Overview

The importance of preparing for, responding to, and recovering from serious flooding events was brought into sharp focus in Bennington, and throughout Vermont, when Tropical Storm Irene hit the area in August of 2011. Several inches of rain fell in a short period of time over the central Green Mountains and the torrents of water that poured down through streams, rivers, and other drainageways caused catastrophic levels of damage in many communities. Roadways, bridges, homes, and businesses were damaged in Bennington, and the huge amount of debris deposited along the Walloomsac River and its tributaries necessitated a costly cleanup and implementation of an extensive plan to provide a proper floodway for the river.

As serious as the damage was in the Bennington region, other parts of the state suffered even more severe losses, with entire downtown districts suffering major damage and business loss, several communities completely cut-off from outside road access for weeks, and entire riverside neighborhoods destroyed, unfortunately with some loss of life.

Changing climate conditions mean that extreme weather events and flooding are likely to occur with much greater frequency. It is imperative, therefore, that communities properly prepare to minimize future flood damage and to develop the capacity for post-flood resilience. The State of Vermont maintains a Flood Ready Website that provides comprehensive information for municipalities. Effective flood resilience requires several steps, including: assessing hazards, avoiding and reducing risks, preparing for an emergency, and insuring residual risk.

Once damage from a flood has occurred, it is important that communities have the capacity to effectively rebuild and recover. Following through on risk reduction strategies is critical at this stage, as is the ability to effectively access financial and other support from federal and state government agencies.

### 9.2 Assessing Hazards

The rivers and streams flowing through Bennington have been accurately mapped as have areas that are at risk from various types of flooding (Map 9-1). A floodway is defined as the channel of a river or other watercourse and the land immediately adjacent to it. Surrounding the floodway are the defined areas that are at risk from high water events.

Flood hazard areas (often described as the “100-year flood zone”) include areas that have been determined to have a one percent or greater chance of inundation from flooding in any given year. These are the areas referenced in the Federal Emergency Management Agency’s (FEMA’s) flood insurance program and shown on FEMA’s flood insurance rate maps. As a participating municipality in the FEMA flood insurance program, Bennington maintains land use regulations that control the type of development that occurs in these areas. A large number of existing structures are located in these areas, however, because the town is located on a level plain where several streams merge from various directions (Table 9-1).



Inspecting the section of the Route 9 bridge east of Bennington that was destroyed during Tropical Storm Irene.

River corridors and Fluvial Erosion Hazard (FEH) zones require special attention because of the potential for flood-related damage to buildings and critical infrastructure resulting from the erosive force of floodwaters. River corridors include the areas adjacent to rivers that are required to accommodate meanders and changes in course that are needed to

**Table 9-1. Structures in the Special Flood Hazard Area (SFHA, or “100-year floodplain”) and Fluvial Erosion Hazard Zone (FEH) in Bennington.**  
Source: BCRC GIS analysis.

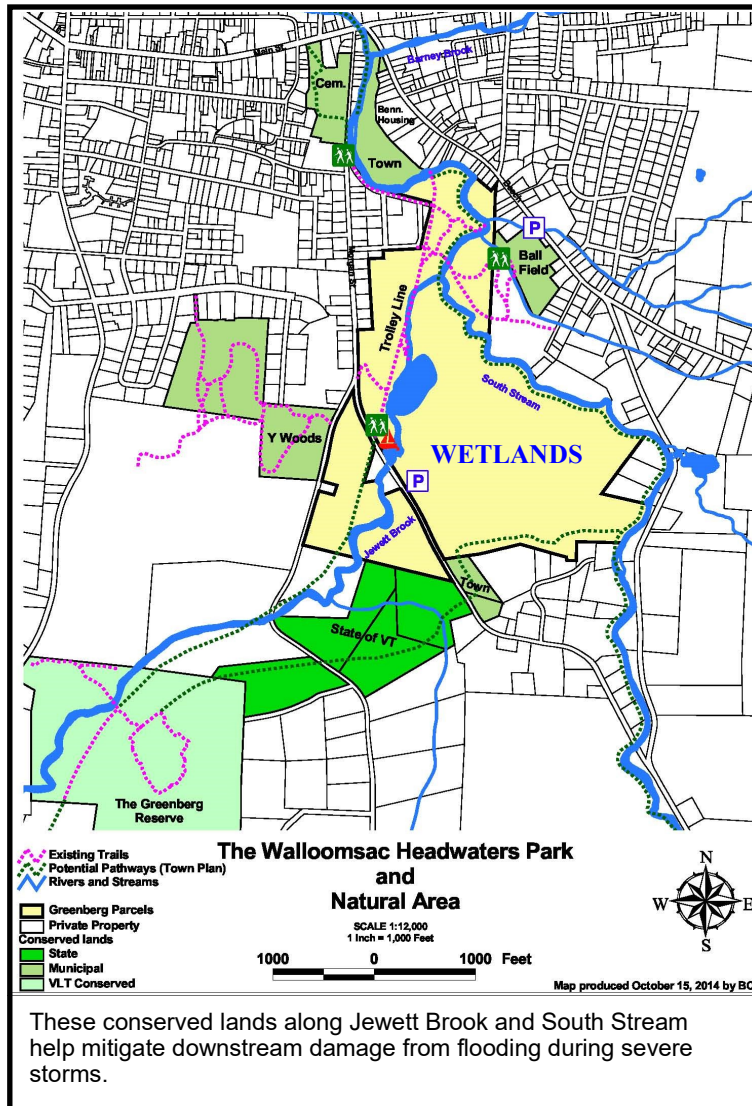
Type	SFHA	FEH
Single-family Dwelling	129	58
Multi-family Dwelling	115	
Mobile Home	15	8
Commercial	178	13
Commercial w/ Residential	3	
Industrial	4	
Development Site	1	
Government	2	
Fire Station	1	
Law Enforcement	1	
Health Clinic	1	
Education	4	
House of Worship	2	
Other	35	
<b>Total</b>	<b>491</b>	<b>79</b>

maintain dynamic equilibrium over time. River corridor maps have been developed based on scientific, location-specific assessment of the geomorphic condition of a river developed by the Vermont Rivers Program. The major river corridors in Bennington have been delineated by the Bennington County Regional Commission in cooperation with the Bennington County Conservation District and the state. The maps show corridors within which the rivers are likely to meander over time to find their most stable path while efficiently moving and storing sediment loads. The orientation and width of these meander belts varies with valley shape, surficial geology, and the natural channel length, slope, and width. With its broad and relatively level valley, some river corridors in the center of Bennington are quite sinuous.

As noted above, most flood-related damage in Vermont results from the erosive power of water causing damage to buildings and critical public infrastructure such as roads, bridges, and culverts (i.e., structures within FEH zones). Public water and sewer systems, parks, and important historic sites also have been damaged by flooding-related erosion. Where stream meanders are confined by human activity, the waterways lose their equilibrium and become steeper, straighter, and more powerful, significantly increasing the risk for damage.

### 9.3 Limiting Risk from Flooding

Elements of the natural environment play an important role in minimizing the extent of the risk from flooding. Upland forests help to retain water during storms and minimize the ero-



sive forces that would add sediment and debris to river channels. Wetlands, particularly those in floodplain areas, retain stormwater and protect water quality during and after heavy rains. The town has taken steps to preserve these important areas by supporting public land ownership and restricting permanent development on Mount Anthony and in the Green Mountains, and by acting to preserve key wetland complexes such as the Walloomsac Headwaters Park.

The town’s Flood Hazard Regulations control development in areas prone to flood inundation, enable Bennington to participate in the National Flood Insurance Program and, through that program, for property owners to have access to flood insurance. The regulations required by the insurance program set development standards that minimize adverse impacts on structures that would be caused by high water. The town also has adopted regulations to protect mapped FEH zones within river corridors. The most important reason to protect these FEH zones is to allow the river to adjust to changing levels of water, sediment, and energy, thereby dissipating

destructive potential prior to impacting concentrations of residential or commercial development or critical public infrastructure. New municipal and state infrastructure should be located outside any of these hazard areas, or when that is impossible (as with the case of some highway, bridge, and water treatment facilities) that it be properly designed and constructed. More information on protecting these investments can be found at the municipal planning section of the Flood Ready Vermont website.

Roads and stream crossing structures (culverts and bridges) are particularly vulnerable to damage from flooding. Many existing culverts are too small to carry flood waters and too narrow to accommodate the stream channel, causing a back-up of sediments and creating plunge pools that damage roads and imperil nearby properties. Consequently, the town is engaged in an ongoing assessment of the physical and geomorphic condition of its culverts and bridges and developing a plan for needed upgrades. Bennington’s roadway design standards should remain consistent with the most current “VTrans Orange Book” standards to correctly size replacement structures.

New Emergency Relief and Assistance Fund (ERAF) Standards took effect in 2014. This program provides state funds to communities after a declared disaster to cover a portion of the cost of repair and restoration work not covered by federal funds. Communities receive ad-

ditional state funding if they have taken specific steps to reduce the current risk (an extra five percent for steps 1-4, below, and another five percent for also implementing step 5):

1. Participate in the National Flood Insurance Program;
2. Annually certify that Road and Bridge Standards meet or exceed the standards in the current *VTrans Orange Book: Handbook for Local Officials*;
3. Annually update and adopt a Local Emergency Operations Plan;
4. Adopt a FEMA-approved local hazard mitigation plan (or, a draft plan has been submitted to FEMA Region 1 for review);
5. Protect River Corridors from new encroachment; or, protect flood hazard areas from new encroachment and participate in the FEMA Community Rating System.

Local hazard mitigation plans involve identification of local hazards while prioritizing the steps needed to mitigate risk and providing access to a funding source through the FEMA Flood Mitigation Assistance Program. To be effective the local hazard mitigation plan must clearly identify and prioritize specific projects. Funding to implement these mitigation projects may be available through the Hazard Mitigation Grant Program (HMGP) in Vermont or through other FEMA Flood Hazard Mitigation Assistance programs.

#### **9.4 Preparing for an Emergency**

Once a flood or other emergency situation occurs, it is imperative that municipalities have a consistent and reliable system for coordinating response. A Local Emergency Operations Plan (LEOP) is an effective way to coordinate local response and facilitate contact with other towns and agencies. The LEOP provides a list of local names, numbers and assigned roles, resources available in nearby communities and contact information, and provides a framework for coordination with support services available at the state and federal level. The LEOP should be updated annually and a copy submitted to the Vermont Department of Emergency Management and Homeland Security.

During large events multiple towns may collaborate, sharing staff, equipment, and other resources to achieve the most rapid and cost-effective response. Bennington County's Local Emergency Planning Committee (LEPC #7) provides an ongoing forum for intermunicipal communication and preparedness planning. Municipalities also can execute formal intermunicipal mutual aid agreements that specify how support services are requested, cost sharing, and other issues. Having formal agreements in place will not only assist in the response phase of an emergency, but also can help recover reimbursable costs through FEMA in the event of a federal declaration.

## 9.5 Insuring Residual Risk

Most homeowner's insurance policies do not cover damage from flooding. The National Flood Insurance Program (NFIP), however, offers flood insurance for properties anywhere in communities that participate in the program - including the high risk Special Flood Hazard Area. While lenders must assure that mortgages for structures in Special Flood Hazard Areas are insured for flood risk, many existing structures in these zones either do not carry flood insurance or are not fully insured to receive "replacement value" after a disaster.

Flood insurance information is available for consumers at [www.FloodSmart.gov](http://www.FloodSmart.gov). That site helps to identify properties in areas of defined flood risk, explains the FEMA map products, and outlines insurance options. Recent federal changes to the NFIP have resulted in an increased costs, but insurance for affected properties remains available through that program.

If a structure is not insured the owner assumes the entire risk of property loss. In the event of a flood disaster the owner may be eligible for FEMA's Individual and Households Program Assistance, but this funding will not cover any losses that could have been insured. At the time of Tropical Storm Irene, the maximum Individual Assistance grant was \$30,200 and the average grant in Vermont was \$6,752, while the average NFIP claim was \$43,078.

Bennington participates in the FEMA Community Rating System. Because the town has taken extra steps to reduce flood damage, flood insurance policies are discounted from 5% to 40%. Additional information about CRS and other flood hazard initiatives is available from the Watershed Management Division of the Agency of Natural Resources.

## 9.6 Recovery After a Flood

Following the immediate response to a flood, communities often are faced with significant costs, such as those incurred by Bennington after Tropical Storm Irene. Repairs to bridges, removal of debris, and armoring banks cost the town several million dollars. After a federally-declared disaster qualified losses may be reimbursed through the federal Public Assistance program and Vermont ERAF. It may take a considerable dedication of municipal resources to navigate the federal bureaucracy after a disaster, a process made somewhat easier when complete and accurate records of damage and repair are maintained by the town.

Effective long-term recovery from a flood requires that each of the steps outlined in this chapter are followed. Working to minimize risk and future damage, maintaining a current emergency operations plan, and insuring residual risk to the extent possible are the best ways to support recovery and ensure that the community is as resilient as possible.

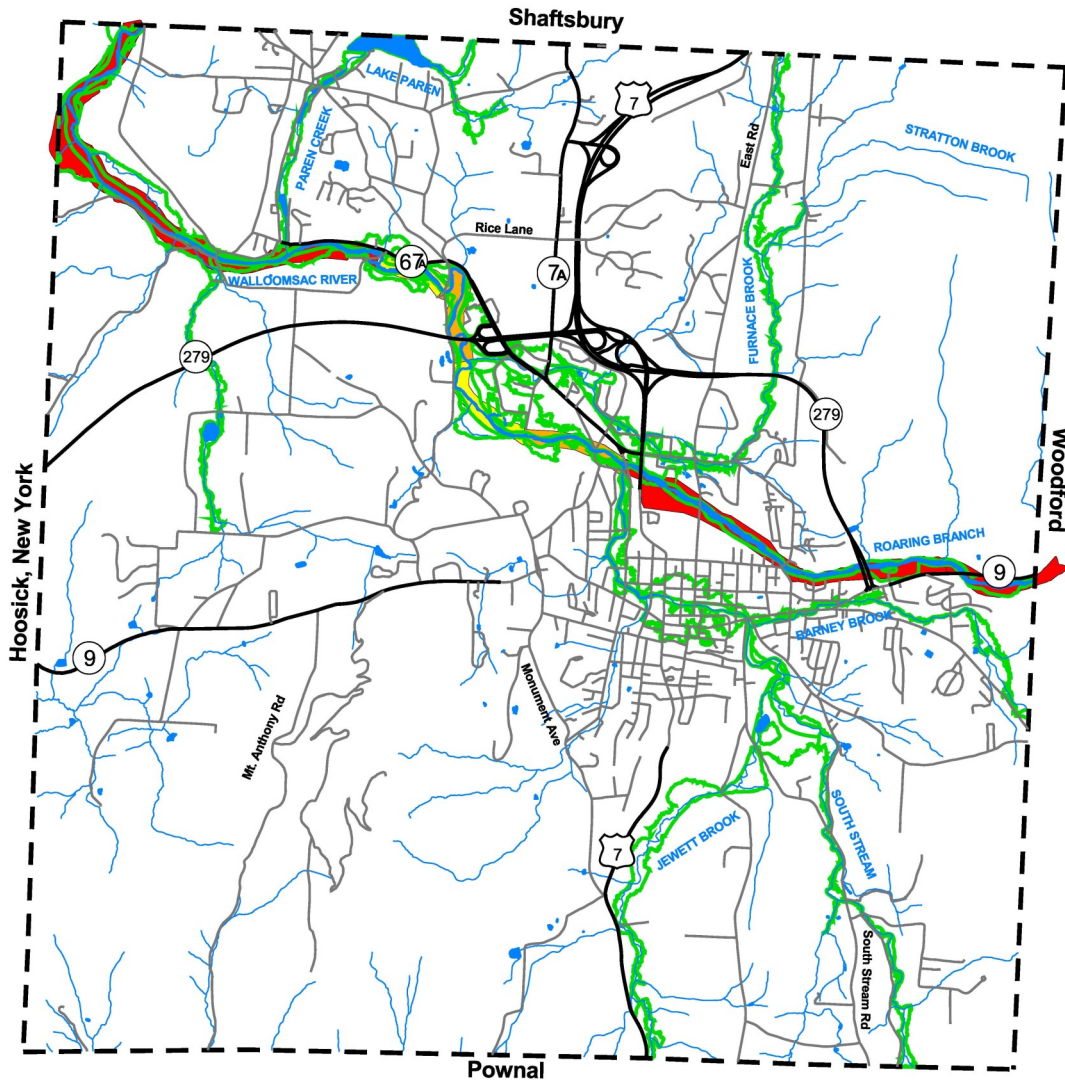
## 9.7 Policies and Recommendations for Flood Resilience

1. The town should work cooperatively with the BCRC and the Vermont Agency of Natural Resources to maintain accurate flood and fluvial erosion hazard maps and to identify specific areas of concern that should be targeted for mitigation actions.
2. The town should continue to work with state and federal agencies, and conservation and watershed organizations, to maintain and enhance the ecological integrity of rivers, streams, wetlands, and upland forests.
3. An undisturbed buffer of natural vegetation should be established and maintained between rivers, streams, and other waterbodies to maintain water quality and to attenuate overland flow. This buffer should be at least 50 feet wide for streams with minimal potential for lateral or vertical adjustment or 100 feet for streams with sig-

nificant potential for such adjustment.

4. The town should maintain up-to-date regulations to limit and control development in flood and fluvial erosion hazard areas. Any public infrastructure that must be located in these areas should be carefully planned and constructed to minimize the potential for loss and damage.
5. The town should remain current with the most recent Town Road and Bridge Standards and any updates as they are developed by the state. Bridge and culvert repairs and replacements should be designed based on hydraulic studies to avoid constrictions that would accelerate flow and cause damage to public infrastructure and private property.
6. Existing local and state bridges and culverts that would impede flow during flooding events should be reconstructed or replaced as part of regular scheduled maintenance or through special hazard mitigation initiatives.
7. The towns should support efforts to provide education and outreach to property owners within flood zones to encourage flood-proofing or buy-outs of structures subject to repeated flooding that are eligible for funding under the FEMA hazard mitigation grant program.
8. The town should maintain its involvement in the Community Rating System.
9. Owners of property in flood hazard zones should be encouraged to secure propane tanks, fire wood, boats and other items that could float away in a flood.
10. The town should maintain an up to date local emergency operations plan.
11. The town should develop and maintain a current hazard mitigation plan.

### Map 9-1 Flood Hazard Areas Bennington, Vermont

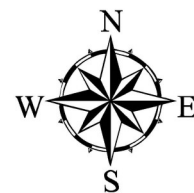


**Special Flood Hazard Areas (FEMA 2015)**

100 Year Floodplain

**Fluvial Erosion Hazard Zones**

- Extreme Risk
- Very High Risk
- High Risk



Map produced January 21, 2014 by  
Bennington County Regional Commission  
111 South Street, Suite 203  
Bennington, VT 05201

## **Chapter 10 - Consistency with State Planning Goals and Relationship to Town and Regional Plans**

### **10.1 Statutory Requirements**

The Vermont Municipal and Regional Planning and Development Act encourages towns to develop plans that are compatible with the plans of other municipalities in the region and with the regional plan, and which are consistent with the goals that are contained in 24 V.S.A. Section 4302. The following section (10.2) will detail this plan's consistency with those goals and Section 10.3 will include a brief discussion of the Bennington Town Plan in the context of the Bennington County Region and its other municipalities. The statute also requires that the plan include a recommended program for implementing the objectives of the plan. That requirement is met through the specific policies and recommendations that accompany each individual element of the plan. Furthermore, the Town Plan has met all statutory requirements and includes all of the required maps.

### **10.2 Consistency with State Goals**

The Planning and Development Act contains one set of goals that deals with the planning process—24 V.S.A. 4302 (b):

- To establish a coordinated, comprehensive planning process and policy framework;
- To encourage citizen participation;
- To consider the use of resources and the consequences of growth and development;
- To work with other municipalities to develop and implement plans.

Bennington has a long established planning program, implemented through several municipal boards and commissions, the Town Plan and implementing regulations, a professional planning and development staff, and active participation in the Bennington County Regional Commission (BCRC). Citizen participation is actively encouraged at all stages of the planning process; numerous public meetings and forums are held every year to discuss a variety of planning issues. A guiding principle of the town's planning effort is to manage growth so that it is directed to achieve the greatest benefit to residents while avoiding wasteful consumption of land and other resources. Through its active role in the BCRC and various inter-municipal and regional projects and studies, the town works on a regular basis with other towns in the region and the villages of Old Bennington and North Bennington.

Fourteen specific goals (24 V.S.A. 4302(c)) should be reflected in the Town Plan. Those goals are presented below with a discussion of how each is addressed in the Town Plan.

#### **1. To plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside.**

The Town Plan establishes a very clear Urban Growth Area. New growth, and the infrastructure to support that growth, is focused specifically in this area. The land use plan provides for high density development and a variety of uses in the Urban Growth Area while maintaining low densities and preserving open spaces in the outlying rural areas. Commercial development is strongly encouraged and supported in the town's center while strip development along rural highways and residential or commercial sprawl into the countryside is not allowed. Opportunities for infill development and redevelopment of underutilized properties within the Urban Growth Area are identified and encouraged. Land conservation measures for rural areas are



described and promoted. All of these policies are supported and enhanced through the recent establishment of Bennington's state designated Growth Center.

- 2. To provide a strong and diverse economy that provides satisfying and rewarding job opportunities and that maintains high environmental standards, and to expand economic opportunities in areas with high unemployment or low per capita incomes.**

The Town Plan contains an Economic Development section that identifies the various sectors that make up the local economy. Key market sectors and infrastructure and technology needs are discussed, and recommendations put forward to support high quality economic growth that will provide good employment opportunities for residents. Specific attention is given to the need for strong local educational services to support the workforce development needs of the town's businesses. A new section on sustainable local economies was added to the plan in recognition of changing conditions. Economic development activities are guided by the *Bennington Strategic Economic Development Plan*, which was duly adopted by the Bennington Select Board in 2013. The Bennington Economic Development Partners, a group of businesses and organizations involved in support of economic development in the region, assists the town with the implementation of development activities.

- 3. To broaden access to educational and vocational training opportunities sufficient to ensure the realization of the abilities of all Vermonters.**

All of the local public and private schools, including the vocational Career Development Center and the six colleges located in the town, are identified in the Town Plan. The need for coordination between municipal, educational and economic development professionals is discussed in detail, as is the need to maintain high quality physical facilities and technology at the schools.

- 4. To provide for safe, convenient, economic, and energy efficient transportation systems that respect the integrity of the natural environment, including public transit options and paths for pedestrians and bicyclers.**

The Town Plan's transportation section includes an extensive discussion of the existing and planned transportation system for the community. Focusing development within the Urban Growth Area will promote economy and efficiency in the transportation system. Highway designs are to encourage safe and efficient movement of people and goods through use of creative approaches such as traffic calming and access management. Strong support is given to improved rail transportation and expanded intercity bus and local public transit opportunities. Policies call for inclusion of pedestrian and bicycle facilities in all new highway projects and commercial and residential developments. Specific plans for new and expanded pathways are included, as are recommendations for energy efficient vehicles and transportation systems.

- 5. To identify, protect, and preserve important natural and historic features of the Vermont landscape.**

The chapter on Natural, Scenic, and Historic Resources includes an inventory of those resources and references other studies and initiatives that have been undertaken to protect these unique features of Bennington's landscape. Regulation (including historic preservation districts and guidelines), acquisition, and funding opportunities for resource protection are identified and discussed. Special programs and projects, such as the Molly Stark Trail Scenic Byway and co-

operative land conservation efforts on Mount Anthony, are described and supported. It is made clear that development activities must respect the need to preserve these resources.

**6. To maintain and improve the quality of air, water, wildlife, and land resources.**

The Town Plan contains sections dealing specifically with the protection of air quality, surface and subsurface water resources, fish and wildlife habitat, and land conservation. Threats to local and regional air quality are identified and protective measures discussed. Rivers, streams, wetlands, lakes, and groundwater resources are described in detail with recommendations for various regulatory and non-regulatory approaches to protection. A map and discussion of the town's fluvial erosion hazard area are included. Critical wildlife habitat areas are described and mapped and protection from incompatible development is required. The town's land use plan supports land conservation efforts by restricting high density development to the Urban Growth Area and prohibiting development in the mountainous areas of town. Individual rural subdivisions also must protect open space by using planned unit development techniques.

**7. To encourage the efficient use of energy and the development of renewable energy resources.**

The Energy element of the Town Plan has been considerably expanded and contains numerous recommendations to encourage energy conservation and the utilization of renewable energy resources. An efficient land use pattern and transportation network, greater reliance on energy efficient vehicles and appliances, and local development of wind, hydroelectric, and solar based energy sources are recommended approaches. A Municipal Energy Plan was recently completed and provides information on energy usage in the community and discusses opportunities and strategies for energy conservation and the development of local renewable energy resources.

**8. To maintain and enhance recreational opportunities for Vermont residents and visitors.**

Recreational resources throughout the town are identified and the importance of maintaining those lands and facilities emphasized. Activities that are supported by public access to rural open spaces are discussed as are developed recreational facilities such as parks and playgrounds. The importance of the Green Mountain National Forest and related resource opportunities in Bennington and nearby towns is noted. The establishment of a Green Mountain National Park, as a way to promote interest in the area's recreational opportunities, is discussed. Public hiking trails and other noncommercial recreational resources are included on Town Plan maps and preservation strategies presented. The Bennington Parks and Open Space Plan is referenced and provides additional inventory information and recommendations for improvements.

**9. To encourage and strengthen agricultural and forest industries.**

The land use plan permits only low-density development in rural agricultural areas and prohibits development on forested mountainsides. A specific objective of the land use plan is preservation of the working agricultural and forest landscape of the town. Extension of municipal water and sewer to outlying rural areas will not take place because of the potential for sprawl that would adversely affect the viability of agriculture and forestry. Several tax abatement, economic, and conservation programs designed to support agriculture and forestry are supported.

**10. To provide for the wise and efficient use of Vermont's natural resources and to fa-**

**Facilitate the appropriate extraction of earth resources and the proper restoration and preservation of the aesthetic qualities of the area.**

Natural resource based industries are encouraged and policies are established which protect the future availability of important earth resources. At the same time, requirements for environmental protection during extraction and processing of those resources and restoration of disturbed sites are set forth.

**11. To ensure the availability of safe and affordable housing for all Vermonters.**

The Town Plan recognizes the need to provide a variety of quality housing options for all segments of the local populations. The land use plan strongly endorses the development of additional quality housing units in and around the town center, in the vicinity of public services, employers, and commercial businesses. Redevelopment of existing buildings for housing and infill housing development are both supported by the plan. Locations for multi-family housing and manufactured housing are provided for and accessory dwelling units are permitted as required by state law. The plan also identifies various housing organizations and programs available to support the development and provision of housing for low and moderate income residents.

**12. To plan for, finance, and provide an efficient system of public facilities and services to meet future needs.**

Bennington contains extensive public facilities and services, all of which are described in the Town Plan. The condition of the facilities are described and needed improvements noted. The capacity of the facilities in relation to existing demand and anticipated future growth is discussed and ways of improving service provision are presented. The plan clearly states that public facilities should be concentrated within the Urban Growth Area to facilitate convenient and efficient access.

**13. To ensure the availability of safe and affordable child care and to integrate child care issues into the planning process, including child care financing, infrastructure, business assistance for child care providers, and child care workforce development.**

The need for quality child care—as both a necessity for residents and for economic development—is explicitly identified in the Plan. A variety of child care facilities are permitted in many land use districts and the need for effective workforce development is discussed. The Town Plan identifies service agencies and organizations that exist to provide financial and technical assistance to child care providers.

**14. To encourage flood resilient communities.**

The flood resiliency chapter discusses the importance of becoming flood resilient. Some of the topics covered in this chapter are: the Emergency Relief and Assistance Fund, Fluvial Erosion Hazard Zones, Special Flood Hazard Areas, River Corridors, Flood Hazard Zones, and the new flood hazard zone maps. Structures located in the Special Flood Hazard Area and Fluvial Erosion Hazard Zone are listed, and the importance of helping these structures become flood resilient is addressed. The plan also acknowledges that Bennington has flood hazard area regulations that are included as part of their zoning bylaws, and that the regulations allow Bennington residents to participate in the National Flood Insurance Program and property owners to have access to flood insurance.

### 10.3 Relationship to Town and Regional Plans

The town has been a member of the Bennington County Regional Commissions since its creation and has developed a working relationship with the BCRC that has assured that local and regional planning efforts are compatible. The Bennington County Regional Plan recognizes Bennington as a regional center for commerce, industry, institutional uses, and public services. It includes an “Urban Center” land use classification that is consistent in geographical extent and purpose with the town’s Urban Growth Area. The Regional Plan also encourages public and private investment to support growth and economic development activity in the town’s center.

The Regional Plan emphasizes the need to protect natural, scenic, and historic resources in very much the same way as the Town Plan. Bennington’s downtown and many regionally important natural resources located within the town are identified in the Regional Plan and strategies to ensure their protection are consistent with those proposed in the Town Plan. The outlying parts of Bennington lie in the Regional Plan’s Rural and Forest land use districts, where low density residential uses are allowed and agriculture, forestry, and recreation are emphasized in a manner comparable to the town’s objectives for those areas.

Infrastructure improvements that are advanced in the Town Plan are supported by the Regional Plan as well. Economic development planning efforts at the regional level have involved community development officials in Bennington and focus specifically on the types of industrial growth, technology development, and workforce issues that the town has identified as critical to success.

Bennington has a particularly close historic, geographic, and economic relationship to the villages of Old Bennington and North Bennington. The residents of the villages also are served by many Bennington municipal services. Both villages contain important historic districts that contribute to the overall character of the community and efforts to preserve and promote those resources are common to all three municipalities. North Bennington is a significant village center in its own right and the town will work with the village to improve transportation connections, by pathway, railway, and highway, between the town and village centers.

Other nearby towns in the region include Pownal, Stamford, Woodford, Glastenbury, and Shaftsbury, as well as White Creek and Hoosick in New York State. The Bennington County towns have developed land use and development plans that are structured around the general guidelines of the Regional Plan and consequently are also consistent with the Bennington Town Plan. Those towns are much more rural than Bennington and lack the infrastructure needed for more intensive growth. Although some growth will, and should, occur in those communities, it is recognized that Bennington must remain the regional service center for the southern part of the County. Adjacent land use districts in those towns provide principally for low-density and natural resource based land uses which are compatible with the rural land use districts in Bennington.

The area of New York State immediately to the west of Bennington is rural and agricultural in character and should remain that way. Residents of the area rely on Bennington as an employment and service center. Bennington supports the Town of Hoosick’s efforts to curtail the proliferation of billboards and commercial sprawl along NY Route 7, an important approach to Vermont and a critical arterial highway connection to the Albany, NY area and the interstate highway system.

# **Amendment to Town Plan**

## **Approved by Select Board on 4/11/16**

### **Solar Electricity Generation and Transmission Siting**

The term “solar facility” shall have the following meaning: a solar electricity generation and transmission facility with a 150kW(AC) or greater capacity, including all on-site and off-site improvements necessary for the development and operation, and on-going maintenance of the facility.

The Town of Bennington has developed community standards and siting standards for the development of solar facilities for reference and use by facility developers and local property owners and for consideration in Section 248 proceedings (30 VSA §248). These standards are set forth below. In addition, The Bennington Planning Commission, in consultation with the Bennington County Regional Commission, will identify and map those areas of Bennington that are most suitable for solar facility development based on facility siting requirements and municipal energy, conservation and development policies and objectives set forth in the Bennington Town Plan, the Bennington Screening of Solar Facilities Ordinance, and the Bennington Land Use and Development Regulations.

Pursuant to 30 VSA Sec. 248, prior to the construction of a solar facility, the VT Public Service Board (PSB) must issue a Certificate of Public Good. A Section 248 review addresses environmental, economic, and social impacts associated with a particular project, similar to Act 250. In making its determination, the PSB must give due consideration to the recommendations of municipal planning commissions and their respective plan(s). Accordingly, it is appropriate that Bennington’s Town Plan address these land uses and provide guidance to town officials, regulators, and facility developers.

The Town of Bennington may participate in the Public Service Board's review of new and expanded generation facilities to ensure that local energy, resource conservation and development objectives are identified and considered in proposed utility development. This may include joint participation and collaboration with other affected municipalities and the Bennington County Regional Commission for projects that may have significant regional

impact. H.40, passed in 2015 guarantees the host municipality automatic party status in the PSB's permitting process. It is acknowledged that the PSB's prime focus is on administering state public policy and regulating actions that are directed at ensuring that utility services promote the general good of the state.

The Planning Commission, in consultation with the Bennington Select Board, should develop guidelines to direct local participation in Section 248 proceedings for the review of solar facilities located in Bennington or in neighboring communities which may affect the town. The guidelines should reflect levels of participation or formal intervention in relation to the type, location, scale, operation, and magnitude of a proposed project, and its potential benefits, detriments to, and impacts on the community.

### **Community Standards**

The following community standards are to be considered in undertaking municipal solar electricity projects and programs, in updating Bennington's Land Use and Development Regulations to address solar facilities subject to local regulation, and in the review of new or upgraded solar facilities by the Town of Bennington and the Public Service Board (Section 248 review).

**Plan Conformance:** New solar facilities and proposed system upgrades should be consistent with the Vermont Comprehensive Energy Plan, the Vermont Long-Range Transmission Plan, and utilities Integrated Resource Planning (IRP).

**Benefits:** A demonstrated statewide public need that outweighs adverse impacts to local residents and resources must be documented for municipal support of new solar facilities located within or which may otherwise affect Bennington. Facility development must benefit Town of Bennington and State residents, businesses, and property owners in direct proportion to the impacts of the proposed development.

**Impacts:** New solar facilities must be evaluated for consistency with community and regional development objectives and shall avoid undue adverse impacts to significant cultural, natural, and scenic resources and aesthetic values identified by the community in the Bennington Town Plan and the Scenic Resources Inventory. When evaluating impacts of a proposed solar facility under the criteria set forth in this Town

Plan, the cumulative impact of existing solar facilities, approved pending solar facilities and the proposed solar facility shall be considered. It is explicitly understood that a proposed solar facility which by itself may not have an adverse impact may be deemed to have an adverse impact when considered in light of the cumulative impacts of the proposed solar facility and existing solar facilities and pending already approved solar facilities.

**Decommissioning:** All facility certificates shall specify conditions for system abandonment and decommissioning, including required sureties (bonds) for facility removal and site restoration to a safe, useful, and environmentally stable condition. All hazardous materials and structures, including foundations, pads and accessory structures, must be removed from the site and safely disposed of in accordance with regulations and best practices current at the time of decommissioning

### **Solar Facility Siting**

Bennington supports responsibly sited and developed solar facilities within its boundaries. It recognizes that financial considerations require projects to be located in close proximity to electric power lines capable of transmitting the load proposed to be generated and easy access from major transportation networks for construction. However, the town desires to maintain the open landscape and scenic views important to Bennington's sense of place, tourism economy and rural cultural aesthetic. Not all solar facilities proposed can meet this standard. Projects must meet the following criteria in order to be supported by this Town Plan:

**Siting Requirements:** New solar facilities shall be sited in locations that do not adversely impact the community's traditional and planned patterns of growth, of compact (downtown/village) centers surrounded by a rural countryside, including working farms and forest land. Solar facilities shall, therefore, not be sited in locations that adversely impact scenic views, roads or other areas identified in the Scenic Resources Inventory, nor shall solar facilities be sited in locations that adversely impact any of the following scenic attributes identified in the Scenic Resource Inventory: views across open fields, especially when those fields form an important foreground; prominent ridgelines or hillsides that can be seen from many public vantage points and thus form a natural backdrop for many landscapes; historic buildings and districts and gateways to historic districts; and, scenes

that include important contrasting elements such as water. The impact on prime and statewide agricultural soils currently in production shall be minimized during project design.

**Preferred Areas:** The following areas are specifically identified as preferred areas for solar facilities, as they are most likely to meet the siting requirements:

- Roof-mounted systems;
- Systems located in close proximity to existing large scale, commercial or industrial buildings;
- Proximity to existing hedgerows or other topographical features that naturally screen the entire proposed array;
- Reuse of former brownfields;
- Facilities that are sited in disturbed areas, such as gravel pits, closed landfills, or former quarries;
- Areas specifically identified as suitable for solar facilities on a map approved by the Select Board.

**Prohibited (Exclusion) Areas:** In addition to those areas that do not meet the siting requirements set forth above, solar facilities shall be excluded from (prohibited within), and shall not be supported by the town, in the following locations:

- Floodways shown on Flood Insurance Rate Maps (FIRMs);
- Fluvial erosion hazard areas as shown in the Town of Bennington Land Use and Development Regulations;
- Class I, II and III wetlands;
- A location that requires fragmentation of Bennington's working landscape, including undeveloped forestland and primary agricultural soils (as defined in Act 250 and as mapped by the U.S. Natural Resource Conservation Service);
- Rare, threatened, or endangered species habitat or communities as mapped or identified through site investigation, and core habitat areas, migratory routes and travel corridors;
- Ridgelines: Mount Anthony, Whipstock Hill, Bald Mountain (Green Mountains);
- Steep slopes (>25%)
- Surface waters and riparian buffer areas (except for stream crossings);



- Areas specifically identified as unsuitable for solar facilities on a map approved by the Select Board.
- Topography that causes a facility to be visible against the skyline from common vantage points from public and private vantage points such as roads, homes and neighborhoods;
- A site in proximity to and interfering with a significant viewshed identified in the Scenic Resource Inventory;
- A location where a site cannot be screened from the view of neighbors and thus prohibits them from exercising the peaceful enjoyment of their property;
- A site on which a solar facility project can not comply with Bennington's prescribed siting and screening standards, including the screening requirements set forth in Bennington's Screening of Solar Facilities Ordinance;
- A site that causes adverse impacts to historical or cultural resources, including state or federal designated historic districts, sites and structures, and locally significant cultural resources identified in the municipal plan. Prohibited impacts to historical and cultural resources include:
  - removal or demolition;
  - physical or structural damage, significant visual intrusion, or threat to the use;
  - significant intrusion in a rural historic district or historic landscape with a high degree of integrity;
  - significant visual intrusion into a hillside that serves as a backdrop to a historic site or structure;
  - creating a focal point that would disrupt or distract from elements of a historic landscape;
  - a significant intrusion in a rural historic district or historic landscape that has a high degree of integrity;
  - impairing a vista or viewshed from a historic resource that is a significant component of its historic character and history of use;
  - visually overwhelming a historic setting, such as by being dramatically out of scale;
  - isolating a historic resource from its historic setting, or introducing incongruous or incompatible uses, or new visual, audible or atmospheric elements.

### **Mass and Scale**

Except for solar facilities located in preferred areas, solar facilities larger than 10 acres, individually or cumulatively, cannot be adequately screened or mitigated to blend into the municipality's landscape and are, therefore, explicitly prohibited.