

Brattleboro Town Plan

BRATTLEBORO | VERMONT | 2013
Amended June 2, 2015





Brattleboro Town Plan

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Acknowledgements

Selectboard

Richard DeGray
David Gartenstein
Dora Bouboulis
Christopher Chapman
Ken Schneck

Planning Commission

2013 COMMISSIONERS

James Valente (Chair)
Mark Ethier
Timberly Hund
Elizabeth McLoughlin, AICP
Karolina Oleksiw
Gary Stroud
James Verzino

PAST COMMISSIONERS

Gary Goodemote (Chair 2009 – 2012)
Kevin Maloney (Chair 2007 – 2009)
Joe Bushey
Dart Everett
Roger Miller
Todd Murchison
Dana Ruppert

Town Plan Advisory Group

Drew Adam
Kate Anderson
Maggie Bartenhagen
Sadie Fischesser
Betsy Gentile
Gary Goodemote
Chris Grotke
Larry Hames
Prudence MacKinney
Dan Normandeau
Robin Renzoni-Sweetapple
Kirtley Righi
Jerelyn Wilson

Planning Services Staff

Rod Francis
Sue Fillion
Brian Bannon
Julia Perks
Sarah Brennan (2008 – 2009)

Consultant

Roger Hawk, Hawk Planning Resources LLC

GIS Cartography

Jeff Nugent, Windham Regional Commission

Design and Layout

Amie Walter Design

Table of Contents

INTRODUCTION	7	EDUCATION	55
Quality of Life	9	Goals, Policies, and Actions	56
Purpose	9	Public Schools	57
Legal Basis	10	Early Education	61
Links to Past Plans	10	Independent Schools	61
User’s Guide	10	Higher Education	62
Public Input Process	11	Workforce Training	63
ECONOMIC DEVELOPMENT	13	HOUSING	64
Goals, Policies, and Actions	14	Goals, Policies, and Actions	65
Current Conditions	18	Current Conditions	67
Child Care	25	Land Use and Housing	78
Economic Development and Land Use	25	Housing Needs	78
Community Development	28		
ENERGY	31	TRANSPORTATION	81
Goals, Policies, and Actions	32	Goals, Policies, and Actions	82
Current Conditions	36	Existing Transportation Network	84
Siting Renewable Energy and Local Impacts	42	Planned Road Improvements	86
Energy Conservation and Efficiency	42	Transit Network	87
Energy and Transportation	43	Freight System	90
Energy and Land Use	44	Complete Streets	91
AGRICULTURE	46	ARTS & CULTURAL RESOURCES	96
Goals, Policies, and Actions	47	Goals, Policies, and Actions	97
Current Conditions	48	Current Conditions	99
Farmland Protection	51	Investing in the Future	101
Local Infrastructure Supporting Area Farmers	52		
		HISTORIC & SCENIC RESOURCES	103
		Goals, Policies, and Actions	104
		Historic Resources	105
		Historic Preservation	106
		Scenic Resources	107
		Protection of Historic and Scenic Resources	108

Table of Contents *continued*

MUNICIPAL FACILITIES & SERVICES	110	TOWN PLAN COMPATIBILITY	167
Goals, Policies, and Actions	111		
Municipal Administration	114	IMPLEMENTATION	171
Public Safety	119	Implementation Matrix	174
Public Works Department	121		
Brooks Memorial Library	125	APPENDIX A:	186
Recreation and Parks Department	127	Demographic Profile	187
Parking System	130		
Cemeteries	131	APPENDIX B:	191
Solid Waste and Recycling	131	Arts and Culture Inventory	191
NATURAL RESOURCES	133	APPENDIX C:	195
Goals, Policies, and Actions	134	Historic Sites and Districts Listed on the	195
Water Quality	136	State and National Register	
Air Quality	137		
Invasive Species	138	APPENDIX D:	196
Flood Hazards	139	Natural Resource Inventory	196
Riparian Corridors	139		
Wildlife and Wildlife Corridors	140		
Resource Lands	141	PHOTO CREDITS	204
Open Space	142		
Trail Network	143		
LAND USE	145		
Goals, Policies, and Actions	146		
Existing Land Use	148		
Future Land Use	154		
Future Land Use Areas	159		

*The real voyage of discovery and change
does not consist in seeking new landscapes,
but in having new eyes.*

– Marcel Proust



CHAPTER 1

Introduction

Introduction

Brattleboro, Vermont, is located in Windham County in southeastern Vermont. Brattleboro is the first town in Vermont accessible to travelers approaching from the south on either I-91 or Amtrak rail, and from the east (over the Connecticut River) on State Route 9. Brattleboro can be reached by car from Boston within 2½ hours and from New York City within 3½ hours.

Brattleboro has a strong sense of place, a rich heritage, and a diverse economy. It is home to a vibrant downtown, walkable neighborhoods, a quality school district, preserved natural areas, and great access to shopping, recreation,

and the arts. Brattleboro hosts a significant portion of the region's retail activities and several of its largest employers. These attributes along with many others contribute to the high quality of life in Brattleboro.

As shown in Figure 1.1, our quality of life in Brattleboro is defined by more than just physical and cultural characteristics. This Town Plan—through its goals, policies, and recommended actions—envisions Brattleboro continuing as a major population and employment center. The Plan seeks to retain and build on the quality of life we enjoy.

Figure 1.1 Quality of Life



Source: Hawk Planning Resources LLC

Quality of Life

Brattleboro faces challenges to its quality of life, however, such as negligible growth in total population (which over time is becoming older on average—see [Appendix A](#) for a detailed profile of the community) and shifts in the structure of the local economy, including how it relates to the wider New England and national economies. Brattleboro, a small town in a rural state, is not alone in confronting these challenges, which are commonplace across the country. Although there are few outward signs of growth, such as new residential or commercial development, Brattleboro is in fact changing in other more subtle ways, and our opportunities for protecting and extending our quality of life are also changing. To ensure a continued high quality of life, Brattleboro needs to plan for the impact of long-term demographic change and plan for future development to enhance and protect the character of the community. Therefore, it is important to evaluate where in town growth makes the most sense, and to identify the community's vision for the type of growth desired.

Planning is a dynamic process consisting of recognizing the past, and anticipating and preparing for the future. This Town Plan seeks to set goals that are aspirational, pushing the community to aim high, while at the same time being realistic given the community's capacity (financial and people) and trends (historical and future). It also strives to be environmentally sound, such that the community can meet the needs of the 21st century with assets that can continue to be built on in future generations.

Purpose

The basis of this Town Plan is to communicate a vision of growth for Brattleboro by steering public and private sector initiatives, and investment in facilities, infrastructure, and programs. The Plan serves as a guide for the Selectboard, Planning Commission, Development Review Board, and other town and state boards and commissions in reviewing development proposals. This Plan also identifies current conditions and gathers public input as a resource for future public spending on community facilities, roads, utilities, parks, housing assistance, economic development, and other municipal programs and services.

The Town Plan policies and recommendations will be implemented over time through many distinct actions, including capital improvements, zoning amendments, and changes to other municipal regulations and documents. The Town Plan provides the policy platform for the integration and coordination of these decisions and actions. This Town Plan also provides guidance on how the Town's land use development regulations should be updated and enhanced to facilitate plan implementation. Vermont State Statute requires that the Town's land use regulations be consistent with the adopted Town Plan.

The State's planning statutes require the Town Plan be updated every five years. This revision and update is needed to respond to changing conditions, unforeseen events and trends, and changing objectives.

SUSTAINABILITY

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Brundtland Commission, 1987



Legal Basis

Under the Vermont Municipal and Regional Planning and Development Act (Chapter 117, Title 24, V.S.A.), the Planning Commission has the duty to make and approve a Town Plan and then recommend its adoption to the Selectboard. State Law requires that a Town Plan be composed of a number of interrelated elements that address the following areas: land use, transportation, energy, economic development, utilities and facilities, educational facilities, natural areas, and plan implementation.

The Act also requires that town plans promote goals set forth by the legislature related to both process and planning content. The process goals are designed to ensure that there is coordination across all levels of government, the development of the Plan involves citizens, the Plan considers the consequences of growth, and the Plan encourages towns to work together. The 13 planning goals help to ensure that all town plans are coordinated and reflect the legislature's vision for how land in Vermont will be developed.

Finally, the Act requires that a town plan study present conditions and trends, anticipate future internal and external influences that will affect the town, and formulate policies and actions that will ensure the health of the town in the coming years.

Links to Past Plans

This Town Plan is the most recent in a series of community plans for Brattleboro and builds on many themes established in prior plans. The first Town Plan for Brattleboro was adopted in 1963. This was supplemented in 1973 with a new Plan, "Options for Development" which expired in 1978. In 1981, the Selectboard adopted a new Town Plan, which was readopted in 1986. It was replaced in 1992 with a Town Plan that was again readopted in 1996. The last substantive Town Plan was adopted in 2003. Since that time it has been further amended by the incorporation of

the Putney Road Master Plan in 2006 and the West Brattleboro Master Plan in 2008.

The 2013 Town Plan takes precedence over all previous plans and is the authoritative statement of current Town planning policy.

User's Guide

The Town Plan focuses on a wide variety of interrelated planning areas. Each of these areas is dealt with separately in a Plan chapter. Each chapter includes the following elements:

- **Principle Statements:** Each chapter begins with a statement of the principle that is to guide or influence thought or action, indicating what direction should be taken on a matter. The statement is overarching, designed to serve as a foundation for the chapter.
- **Goals, Policies, and Actions:** These are the core beliefs that form the Plan. They are located at the front of each topic chapter for ease of reference. They move from the broadest (Goals) to the most specific (Actions).
- **Chapter Text:** The chapters are mostly self-contained examinations of specific issues. An introduction provides an overview of the chapter topic, background that informs it, and an assessment of current conditions (including an inventory where applicable) from which needs and options are identified. The body of the chapter details how the statement of Goals, Policies, and Actions applies to the chapter topic.

Chapter 14 "[Implementation](#)" consolidates the proposed action items from each chapter to help facilitate the plan's implementation. This chapter offers strategies that can be refined to determine budget priorities, plan for capital improvements, or develop a work plan.

Several appendices provide useful additional information.

STATE OF VERMONT PLANNING GOALS

- *Compact villages and urban centers*
- *Economy*
- *Education and training*
- *Transportation*
- *Natural and historic features*
- *Air, water, wildlife, and land resources*
- *Energy*
- *Recreation*
- *Agricultural and forestry industries*
- *Natural resources*
- *Housing*
- *Public facilities*
- *Child care*

The Town Plan is a lengthy document, and generally it is not expected that all users of the plan will read it front to back. While chapters may be read independently, given the interrelated nature of the information there are some overlaps of information; wherever necessary, readers are guided in making links with other relevant chapters.

The Town Plan is key to the activities of various groups that influence development in Brattleboro. Below is a guide to how various groups should use the Town Plan:

Planning Commission

While the Selectboard has the ultimate responsibility for adopting and amending land use regulations, they do so based on recommendations of the Planning Commission. Vermont Statute requires that land use regulations be compatible with the Town Plan. Therefore, the Planning Commission should use this document to guide their future work on drafting land use regulations.

Land Use Decision Makers

The Town Plan is often used by the Brattleboro Development Review Board, the Act 250 District Commission, and the Public Service Board when evaluating a proposed development. Decision makers should refer to the Town Plan to justify and explain their decision(s). They can point to the research and maps or refer to the input of the public, whose opinions helped shape the Plan's goals and policies.

Developers

Developers seek predictability from legislative decision makers. This Plan spells out the community's preferred future—where it wants housing, industrial, and commercial development to go. It highlights aspects of site development (e.g., stormwater management, building design, site amenities, etc.) that are important to the community. While the Land Use chapter is central to a developer's interest, all chapters should be referred to, as development is multifac-

eted and has multiple potential impacts (e.g., on the transportation system, municipal facilities and services, natural resources, scenic resources, etc.).

Citizens

The Town Plan is not just a policy document for municipal staff; it is the community's vision for its future, and the blueprint for achieving that future. Citizens should refer to the plan to ensure that the decisions being made on their behalf are consistent with stated community desires.

Public Input Process

In 2008, the Planning Services Department initiated a community planning process to update the Town Plan. From 2010 to 2011, the Planning Commission sponsored or supported several public outreach activities. These activities included the Kickoff Meeting, a visioning session with Brattleboro Union High School students, the Sustainability Forum, small group meetings, and the Active Living Workshop. Recurring concerns and aspirations voiced in these meetings included:

1. Improving pedestrian and bicycle infrastructure
2. Preserving agricultural land for local food production
3. Encouraging growth in areas already developed, or where infrastructure exists
4. Accessing the waterfront
5. Maintaining and enhancing the natural environment

A key component of these outreach activities was to compile Brattleboro's assets—the human, social and cultural, institutional, built and natural environmental attributes that make Brattleboro strong and give it its identity. This served two purposes: (1) documenting community values, and (2) identifying resources that can be leveraged to address the important issues impacting Brattleboro.



The assets defined by the public, as well as the ones that emerged based on data and analysis, are discussed in the individual chapters of the Plan.

In addition to public meetings, there were extensive discussions at regular Planning Commission meetings from 2010 to 2012. The general public, interested individuals, and community groups and organizations participated and provided direction and feedback on draft chapters.

Notable components of the public input process that were integral to the writing of this Plan were:

- **The Town Plan Scoping Group (TPSG):** Prior to commencing work on the Town Plan, a group of 35 leading community members gathered to generate a wealth of insight about the challenges and opportunities facing Brattleboro in the coming years. This group met once to assist the Planning Commission with a broad-based identification of plan priorities; from that work, the economy and energy were identified as priority areas for the Town Plan to address.
- **The formation of the Town Plan Advisory Group (TPAG):** TPSG participants and the Planning Commission recommended a smaller group to support the Planning Commission in drafting the Town Plan. In 2009, the Selectboard appointed this group to identify major issues and goals for the Town Plan, identify and engage with stakeholders, recommend strategies for structure of the Town Plan, and review draft chapters. During 2009 and 2010, TPAG met with planning staff monthly to carry out their charge.
- **The Commercial Land Use Study:** In 2010, the Planning Commission was awarded a Municipal Planning Grant from the Vermont Department of Housing and Community Affairs. The purpose of the grant was to create a coherent vision for the development of the four commercial districts in Brattleboro (Downtown, Canal St/Exit 1, Rt 9 West Brattleboro, and Putney Rd), making sure that each district com-

plements the others while providing for residents', workers', and visitors' needs over the next 5 to 20 years. Hawk Planning Resources, LLC was hired to conduct the study. A series of five community meetings were held as part of this study. The first meeting solicited opinions on the direction of the existing plans—the Putney Road Master Plan, West Brattleboro Master Plan, and Canal Street Gateway Plan. The second meeting involved a presentation of the current conditions of Brattleboro's economy and economic market area. The remaining three meetings involved focused discussions of the Canal Street, West Brattleboro, and Putney Road areas. There was broad consensus about the need to develop a master plan for Downtown, improve the pedestrian and bicycle infrastructure, slow down traffic, and improve building and commercial site design. This study features prominently in the [Land Use](#) and [Economic Development](#) chapters.

- **Town Sustainability Forum:** The Planning Commission held a Forum to discuss Sustainability and the Town Plan in 2011. With close to 60 people in attendance, participants were given the opportunity to provide suggestions on how Brattleboro could increase its commitment to pursuing sustainability within the context of the Town Plan. In addition to providing several avenues to pursue, this Forum helped to direct the Town Plan to evaluate policies that are “no-regrets”—policies that don't overrely on one thing when the future is uncertain.

This Town Plan also draws on a wealth of past planning exercises, charettes, and reports that have informed people's experience, and are a resource for this Plan.





CHAPTER 2

Economic Development

Brattleboro celebrates our Town's current assets, and understands the need and responsibility to develop planning actions which will foster appropriate development for overall community benefit.

Economic Development

Goals

- A. To pursue local economic development strategies to increase prosperity and economic opportunity so as to ensure a healthy community that respects the physical environment
- B. Revise land development regulations to encourage growth that enhances Brattleboro's cultural and physical assets, and protects private property and public assets from natural hazards
- C. Foster the growth of industry clusters in creative industries, arts, postsecondary education and knowledge creation, food, forestry, transportation and logistics, precision manufacturing, green energy, and heritage and cultural tourism
- D. Obtain adequate provision of infrastructure vital for economic growth, including broadband internet access
- E. Support industry sectors through postsecondary education and job training
- F. Increase the community's commitment to community development, using available grant opportunities and town controlled funds

Policies and Actions

Policy 2.1 Strengthen and enhance Brattleboro's commercial land use districts (Downtown, Exit 1/Canal St, West Brattleboro, and Putney Rd) to intensify commercial land use, encourage more mixed use (where appropriate), and achieve higher utilization of existing public infrastructure

Actions:

- 2.1.1 Complete a Master Plan for the downtown
- 2.1.2 Revise the Zoning Ordinance and Subdivision regulations in accordance with Chapter 12 "Land Use," to foster viable, quality development in all commercial districts, including downtown
- 2.1.3 Consider increasing the minimum lot size in industrial districts to ensure opportunities for larger-scale developments
- 2.1.4 Extend and improve bike and pedestrian facilities in keeping with Complete Streets policies, including completing the Whetstone Pathway and ensuring a safe bike and pedestrian environment on Putney Rd and Canal St (Rt 5) and in West Brattleboro (Rt 9)

continued on next page

Policy 2.2 Link people of all ages and abilities to appropriate education and job training opportunities in the region so that they can meaningfully participate in the community's economic life

Actions:

2.2.1 Participate in neighborhood community development projects.

Policy 2.3 Support access to high-quality, affordable, appropriate child-care services in Brattleboro so that parents may participate in education, training, and employment opportunities

Actions:

2.3.1 Provide information to child-care providers about resources to help grow their businesses

Policy 2.4 Build partnerships with public and private stakeholder groups to capitalize on significant development opportunities

Actions:

2.4.1 Participate in regional economic development planning activities

2.4.2 Participate in efforts to create a Comprehensive Economic Development Strategy (CEDs)

2.4.3 Support organizations doing work on economic and community development

2.4.4 Develop a neighborhood plan for the New Market Tax Credits (NMTC)–eligible census tract

2.4.5 Align policies of the Small Business Assistance Program (SBAP) to focus on supporting clusters

2.4.6 Publicize the SBAP by updating brochures, featuring it on the Town website, and speaking to community groups and organizations

2.4.7 Create an Economic Development Officer position for the municipality

Policy 2.5 Work with state entities and private providers to increase access to affordable business infrastructure

Actions:

2.5.1 Identify potential business opportunities along existing railroad spurs

2.5.2 Identify utility and access constraints for parcels in the Industrial districts

2.5.3 Support the development of flexible, short-term business incubator space with access to the fiber optic network

The purpose of economic development is to ensure a thriving community capable of supporting a range of high-quality public services, community development programs, social services, and municipal infrastructure. Brattleboro wants to retain existing businesses and attract new business activity. Additional business growth can provide additional tax revenue, potential employment for town residents, and growth opportunities for other town businesses. The more the grand list grows, the less the Town has to tax each property owner to raise the same amount of money.

The level of economic activity in Brattleboro is a function of the existing resident population, the total number and type of jobs located here, and the level of regional activity (i.e., education, housing, services, etc. located in Brattleboro). State law requires all municipal plans to include an economic development element that describes present economic conditions and the location, type, and scale of desired economic development, together with policies, projects, and programs necessary to foster economic growth. State planning law was amended in 2003 to add a goal addressing child-care provision—demonstrating how the plan will support the financing, infrastructure, business support, and workforce needs of child-care providers.

This chapter focuses on how we can make the most of our present and future opportunities. Brattleboro has many prominent place-based assets that contribute to a high quality of life and thus make the town attractive to small- to medium-size business enterprises and relocating households linked to the knowledge-based economy and creative sectors. These include:

- **Vibrant downtown:** Our well-preserved historic downtown overlooking the Connecticut River links us to our industrial past, and offers fresh opportunities for work-live space, unique retail and restaurant experiences, and an impressive number of cultural institutions.
- **Walkable neighborhoods:** Within 1.5 miles of downtown there are several distinctive neighborhoods with a variety of housing types within easy walking distance of schools, stores, employment, and the outdoors.
- **Rich arts and cultural offerings:** Brattleboro enjoys a well-earned reputation for being an arts town, and is listed as one of the ten best small arts towns in the USA, with a variety of festivals, gallery spaces, live performance venues, and arts education, including the New England Youth Theater, River Gallery School of Arts, Vermont Jazz Center, and New England Center for Circus Arts (see [Appendix B](#) for an inventory).¹
- **Plentiful outdoor recreation opportunities:** Stunning natural beauty and the working landscape have been preserved through careful land stewardship. A multitude of public access trails on privately held conserved land, the Connecticut and West Rivers, and the Whetstone and Crosby Brooks provide abundant opportunities for individuals, families, and groups to enjoy outdoor recreation year round.



- **Gateway to Vermont:** Brattleboro is the first town in Vermont encountered by travelers approaching from the south on either I-91 or Amtrak rail, and from the east (over the Connecticut River) on State Route 9. Located at the intersection of a major east-west road (Rt 9) and north-south interstate highway (I-91) Brattleboro is a 3½ hour drive from New York City and is within 2½ hours from Boston. The region is serviced by Amtrak rail and Bradley International airport (1½ hours south of Brattleboro). This places us on the outer edge of the northeastern megalopolis (Boston to Washington DC) which represents approximately 14.5% of the national population² and the second biggest market area in the U.S. In addition, Brattleboro is located on the northern tip of the “Knowledge Corridor” (named for the number of higher education institutions, and research and development) stretching along the Connecticut River from New Haven Connecticut through the Pioneer Valley in Western Massachusetts.
- **Educational opportunities:** Brattleboro hosts a number of postsecondary and higher education institutions, such as Union Institute & University, Marlboro College Graduate Center, and World Learning SIT.
- **Strong local agriculture:** As discussed in more depth in Chapter 4 “Agriculture,” Brattleboro has a growing local food system that is creating jobs and providing new markets for local producers.

Ensuring that our community remains welcoming and attractive to new business enterprises and households, and supportive of all existing residents, will require continued commitment to improving our quality of life, communications, and transportation infrastructure. The most direct role this Plan can play in economic development is to ensure land use controls are effective in promoting long-term, viable development. To this end, the Town Plan

process undertook an external review of the four commercial districts in Town (downtown, Exit 1 Canal St, West Brattleboro, and Putney Rd) to guide changes in land development for these districts. The overall aim is to encourage high-quality development that meets contemporary standards and market needs to preserve Brattleboro’s regional center function and enhance our quality of life. Two other districts have a prominent role in present and future economic activity; the industrial districts and the New Market Tax Credits (NMTC)–eligible census tract (which takes in part of downtown and the southern residential, commercial, and industrial districts).

The program attracts investment capital by permitting individual and corporate investors to receive a tax credit against their Federal income tax return when they make equity investments in specialized financial institutions. The NMTC statute requires that investments be located in census tracts where the individual poverty rate is at least 20% or where median family income does not exceed 80% of the area median. The first project to take advantage of NMTC in Brattleboro was the Commonwealth Dairy venture, using NMTC arranged through the Massachusetts Housing Investment Corporation. This Plan takes the NMTC program into account when future land use is considered (see Chapter 12 “Land Use”) to ensure opportunities for future development discussed further in this chapter.



NEW MARKET TAX CREDITS

New Market Tax Credits (NMTC) is a federal program designed to spur new or increased investment in operating businesses or real estate projects in communities where high rates of poverty and unemployment are present.

The housing market is an important gauge of economic activity in town, and provision of adequate workforce housing is a necessary prerequisite for business growth. Nearly 73% of all housing units in Brattleboro were built prior to 1980, with almost 50% constructed prior to 1950. This raises concerns with regard to condition, energy efficiency, and suitability for small households. Only about 24% of the Town's single-family units were affordable to households earning the median income for the region or less. Households earning more than the median income had greater housing choice. About 87% of single-family units were affordable to those earning up to 180% of median income. Lastly, it is estimated on any given night, there are 217 people homeless in Windham County. These data confirm that the need for affordable housing is not being met, and that there is a growing mismatch between the available stock and contemporary needs. Perhaps of greatest concern is that the most recent large-scale housing developments are now 20 to 30 years old—suggesting that private developers cannot respond to contemporary market needs. These issues are covered in more detail in the Chapter 6 “Housing.”

Location remains an important factor in determining business enterprise success. Using occupation and industry data, we can identify higher-than-average concentrations of certain skilled workers and the industries that employ them (i.e., food processing) as industry clusters (a critical mass of enterprises and institutions in related fields employing skilled workers). Contemporary economic development practice develops strategies to spur industry cluster growth. The Town, region, and state can benefit by pursuing coordinated policies to develop industrial clusters. These strategies will be developed in the Comprehensive Economic Development Strategy (CEDS), a project of Southeastern Vermont Economic Development Strategy (SeVEDS), a regional group that includes private industry, municipal leaders (including Brattleboro), the Brattleboro Development Credit Corporation (BDCC), and the Wind-

ham Regional Commission (WRC). The CEDS is a program of the federal Economic Development Administration (EDA), which involves a broad array of stakeholders (business, education, government, social services) in developing policies that foster entrepreneurship, capacity building, and productivity. Such policies can then be supported through targeted EDA investments in infrastructure development, capacity building, and business development so that private investment is encouraged and higher skill, higher wage jobs are created.³

CURRENT CONDITIONS

Increasingly, Brattleboro's future—like the rest of the country—is tied to trends and events occurring in the world economy. The majority of the world's population now lives in cities. Driven by regulatory changes and technological innovations, investment capital is now highly mobile across the globe, resulting in global supply chains for manufactured goods, and services frequently being performed for consumers from offshore locations. This greater level of interconnectedness has changed the map of world economic activity. Within the U.S., most of the growth in population and economic activity has occurred outside the Northeast and New England. This pattern was well established by the mid-1970s and has only slowed since the Great Recession (2007–2009), when household mobility plummeted due to the residential real estate crash. Residential mobility is negatively impacted by homeowners with negative equity in their homes, and increases with mortgage defaults. Nationally, the level of residential mobility in 2009 was the lowest since the Census Bureau be-



gan collecting this data in 1948.⁴ This trend suggests the number of households able to contemplate moving to Brattleboro, or away from Brattleboro, is now lower. Slower population growth and loss of residents to other parts of the country in the past decade present serious challenges for New England in terms of recovering from the recession and in the longer term being able to sustain the current number of jobs once those currently aged 55–64 retire. It is predicted that New England may have the largest shortfall of workers in the country (while yet other regions will continue to experience a surplus of workers).⁵

The demographic profile for Brattleboro shows very little population growth (4.5% increase over 40 years, with very little increase since 2000). This pattern is somewhat unusual when compared to surrounding towns (in NH, MA, and VT) and the state. Brattleboro’s population base has aged over time, with the share of working-age people and school children declining between 2000 and 2010 (Brattleboro’s median age is 42.3 years; Windham County’s is 43.2 years—both slightly higher than the state at 41.5 years). In broad terms, most of the population gains at the state level have been in communities in the Northwest and Central



part of the state. Vermont is one of the oldest states in the country; its population profile can be readily explained by its northern climate and rural nature. National patterns reveal a general pattern of aging but also stronger long-term population growth in large metropolitan areas and warmer climates. Consistent with trends observed across northern New England and rural parts of the country, young people raised in Brattleboro have increasingly found economic opportunity in more populous and faster growing areas out of state. Brattleboro’s static population profile may be explained by the gradual transition away from manufacturing to the service sector (contributing to outmigration) and the fact that the housing stock in surrounding communities coincides more closely with current consumer preferences. Long-term residents and new arrivals often prefer more rural residential settings while commuting to Brattleboro for employment, education, and access to services (this is suggested by the steady population growth in surrounding towns and commuter data). The effective age and condition of many homes in Brattleboro may also contribute to households choosing to live in newer homes in smaller communities surrounding Brattleboro. Additional demographic data can be found in [Appendix A](#), and additional housing data can be found in Chapter 6 “Housing.”

Labor Market Area Profile

The Great Recession of 2007–2009, like the national boom before it, has had little apparent impact on employment in Windham County and Brattleboro. While unemployment in Windham County is just over half the national rate (4.7% compared to 8.3% nationally, and 5.1% for VT), this figure taken together with our age profile suggests limited economic opportunity here for those of working age. While Vermont led the region in employment growth in 2010, the gains were mostly in the leisure and hospitality industries, and were outside Windham County. Population forecasts developed by SeVEDS estimate that there may be a workforce shortage of approximately 8,000 by 2015, combined with an over 30% decrease in the proportion of the age



0–19 and age 20–44 demographic categories. The implications of this forecast are grave: there will be more demand for senior services, the atmosphere for innovation and risk taking will suffer, and existing jobs will either disappear or be filled by commuters.⁶ Increasingly, job seekers' skill sets don't match employer's requirements, contributing to increasing economic insecurity. As discussed above, the Great Recession will impact the national housing market for some time, and thus reduced household mobility may increase the challenges for employers searching for appropriately skilled and experienced workers.

Many factors such as our role as a regional center, type and quality of housing stock, and opportunities for advancement (education, training, and employment) also help explain the presence of persistent poverty in our community. While there has been little wage growth for most workers for the past two decades, Windham County residents are more likely to depend on transfer payments than other regions of the state, and nationally. This suggests that a higher proportion of residents live on fixed incomes that are not connected to the local workforce. Windham County and Brattleboro lag behind the state and neighboring regions in average wages. In 2011, the average wage in Brattleboro was \$38,472 and in Windham County was \$37,872, compared to the national average of \$45,961, NH \$45,220, MA \$54,740, and VT \$43,080.⁷

Employment trends are generally observed through changes in the occupational composition of the "covered employment" measure collected at different geographical scales. The data is collected from employers who make contributions to unemployment insurance for each "covered" position. Approximately 98% of all jobs in the U.S. conform to the definition of 'covered employment'.⁸ The main categories of employment not included in this collection are the self-employed, railroads, and small-scale agriculture activities.⁹

As shown in Table 2.1, Brattleboro had 10,924 jobs in 752 different establishments in 2010. Between 2000 and 2010, the number of manufacturing establishments declined by 17.4% and 33% of all manufacturing jobs were lost.¹⁰ Job loss was significantly higher here than in surrounding communities. Many of these jobs were lost as branch plants in the paper manufacturing and printing sectors closed

in response to shifts in global competition, and as multinational corporations consolidated their operations. Without targeted federal or state support, the competitive advantage (labor, materials, and other operating costs) that Brattleboro once had in these sectors has been mostly lost. Despite such losses, Brattleboro still has a slightly higher share of workers in manufacturing than the national economy (9.75 versus 9%). The local impact of job loss in manufacturing has been significant; nevertheless, it is important to note that manufacturing output in the U.S. (and Brattleboro) has meanwhile increased. Put differently, surviving manufacturing establishments have become much more productive over time; this wealth generation continues to be important to the local economy. To ensure the continued success of the manufacturing sector, we need to make every effort to provide a highly trained, productive workforce.

Of the manufacturing enterprises present in the region, several are headquartered here; this offers an important opportunity to work with business owners to ensure both their success and continued growth in Brattleboro and the wider region.



Table 2.1: Brattleboro Covered Employment and Wages

INDUSTRY	ESTABLISHMENTS		EMPLOYMENT		TOTAL WAGES		AVERAGE WAGE	
	2010	% change from 2000	2010	% change from 2000	2010	% change from 2000	2010	% change from 2000
Total covered—all ownerships	752	-1.2	10,924	-11.4	\$	8.6	\$37,454	22.5
Private ownership	717	-1.4	9,668	-14.2	\$	3.9	\$37,256	21.1
Goods producing	83	-10.8	1,605	-30.1	\$	-18.3	\$45,395	16.8
Natural resources, mining	2	-33.3	(c)	(c)	(c)	(c)	(c)	(c)
Agriculture, forestry	2	-33.3	(c)	(c)	(c)	(c)	(c)	(c)
Construction	43	-2.3	(s)	(s)	(s)	(s)	(s)	(s)
Manufacturing	38	-17.4	1,272	-33	\$	-23.2	\$45,468	14.7
Wholesale trade	38	15.2	944	-29.1	\$	-28.6	\$43,664	0.7
Retail trade	121	-7.6	1,367	-26.1	\$	-14.5	\$25,366	15.9
Truck transportation	8	60	198	-32.4	\$	-16	\$48,290	24.4
Publishing industries, except Internet	9	50	106	(c)	\$	(c)	\$31,908	(c)
Broadcasting, except Internet	3	0	25	25	\$	83.9	\$29,246	47.1
Telecommunications	4	-33.3	32	-11.1	\$	23.8	\$48,308	37.3
Financial activities	58	-19.4	630	-11	\$	23.1	\$50,903	38.3
Real estate	29	-17.1	179	19.3	\$	69.3	\$34,706	42
Professional, business services	101	-1	624	-6.6	\$	56.1	\$51,622	67.1
Education, health services	119	11.2	2,562	14.7	\$	58.4	\$39,600	38.1
Leisure, hospitality	93	14.8	1,065	6	\$	34.5	\$15,150	26.8
Accommodation and food services	84	16.7	985	3.7	\$	31.3	\$15,144	26.7
Other services, except public administration	71	0	382	7.9	\$	44.3	\$23,001	33.8
Government	35	2.9	1,256	19.3	\$	62.9	\$38,985	36.6

(c) Data is confidential

(s) Data is suppressed to protect confidential information

Source: Covered Employment and Wages for Town of Brattleboro, Base Time Period 2010, Change from 2000, Covered Employment, ELMI Data Tools, Economic and Labor Market Information, Information Center, website of the Vermont Department of Labor, available at www.labor.vermont.gov/Default.aspx.

Industry Cluster–Based Economic Development

Industry clusters are formed when many historical, cultural (i.e., migration patterns), and natural assets (i.e., forests, minerals, water) combine, leading to a concentration of certain industries and occupations. These factors are place based, and contribute to the distinctiveness of communities and regions. In many instances, there are linkages between specific businesses and workers developing specialized skills that may not be immediately apparent. Firms can hire from a skilled labor pool, and workers can build career paths and acquire new skills by moving between jobs in the same region, thus minimizing disruption to their households. In this way, networks of firms and skilled workers are simultaneously competing and cooperating with each other—even forming strategic alliances and encouraging entrepreneurial behavior, such as registering patents and starting new businesses that strengthen a regional economy. One enterprise or industry does not dominate, allowing the region to weather unfavorable conditions in individual markets. The relatively small size of many enterprises in Brattleboro and the surrounding region is consistent with the state profile of private enterprise, and may offer some advantages in terms of flexibility and low cost structures. However, very small businesses have limited access to venture capital and skilled labor pools and, thus, struggle to offer competitive wages and benefits.

These data also suggest the presence of occupational and industry clusters. Brattleboro’s strongest industry cluster is **Arts, Entertainment, Publishing, and Broadcasting**—consisting of businesses involved in the management, sale, distribution, and production of visual and performing arts and communications media. This is reflected in the existence of the *Brattleboro Reformer* and the *Commons*, other media, including BCTV and local radio stations, and also an impressive number of arts management organizations and nonprofit institutions with an educational mission (e.g., New England Youth Theater [NEYT] and New England

Circus Arts [NECCA]). While many of these organizations are well known and their buildings are integral to the character of downtown (e.g., Brattleboro Museum & Art Center, Latchis, NEYT) many more artists and creative workers are less visible, and many struggle to pursue their calling, while surviving economically. Nationally, the impact of the Great Recession on this sector has been significant, reducing the economic security of many employed in it. Nonetheless, Brattleboro can build on the growing economic contribution of the broader creative sector.

The **Postsecondary Education and Knowledge Creation sector**—the private and public K–12 educational institutions, private nonprofit arts education organizations, and variety of small higher education institutions (World Learning, Marlboro College, Community College of Vermont, Vermont Technical College, Union Institute and University, etc.)—represent the next biggest occupational cluster. Brattleboro is in a region with a large commitment to education—including the Austine School, Landmark College, the Greenwood School, the Grammar School, and the Putney School, as well as higher education and postsecondary institutions such as Keene State College, Antioch University, and Greenfield Community College. These institutions collectively employ large numbers of educated workers, and provide educational options to local residents. They also attract students to the region, many of whom stay and contribute strongly to the community. There are informal and formal links between these institutions and the creative sector that can be further developed.



The third most significant cluster is **Agribusiness and Food Technology**.¹¹ This sector aligns closely with both the values identified in statewide visioning exercises and the policies and goals of various state departments, and builds on notions of the Vermont 'brand'.¹² The vital role played by agriculture in the identity of Brattleboro and the strong local food sector are discussed in more detail in Chapter 4 "**Agriculture**." Activities rooted in the natural resources, built environment, and cultural traditions of the area can be exploited in an intentional way to grow businesses that add value, provide meaningful, well-paying employment, and provide for stewardship of the natural environment (as opposed to exhausting natural resources for short-term gain).

Brattleboro has many existing local businesses and organizations in this cluster. These include long-standing organic farmers, renewable energy dealers, and trade organizations such as the Organic Trade Association. Recent start-up businesses in this sector have made use of innovative financing tools such as New Market Tax Credits and have chosen Brattleboro for its high level of amenity including proximity to major markets, transportation infrastructure, and quality of life.

The **technology-based knowledge** cluster accounts for approximately 7% of total employment, but this is somewhat lower than the national average. The creative industries are also represented by occupations classified as "Professional and Technical Services," which accounts for just less than 3% of the local workforce.¹³ Some of the creative sector is also associated with heritage and cultural tourism (including culinary tourism). Brattleboro encourages high-tech, information-sector enterprises. This type of employment offers "clean," high-wage and skilled employment opportunities. Brattleboro can be attractive for such businesses because they have fewer locational constraints

than many other industries, relying on remote telecommunications instead of geographic proximity to their customer base.

Data is suppressed for confidentiality reasons for the agriculture, forestry, and forestry support sector, due to the dominance of a handful of larger enterprises. Nevertheless, the wood and forestry sector is well established and is a significant local employer (Cersosimo Industries and Allard Lumber are the two largest local mills). A large proportion of Brattleboro's land area is forested, and forestry (as discussed in Chapters 4, 3, 11, "**Agriculture**," "**Energy**," and "**Natural Resources**") provides high-value saw logs as an export commodity, large amounts of so-called low-grade growth suitable for biomass products, and a market that makes it profitable for landowners and workers to steward forest production for long-term economic and ecological gain. There are opportunities for high-value-added furniture and traditional wood crafts to take advantage of this significant local asset.¹⁴

A further illustration of how industry clusters straddle occupational categories is the evolution of Strolling of the Heifers, which now collaborates with BDCC in awarding grants to Farm/Food Business Plans of the year, supporting family farms (including apprenticeship programs with the WRCC) and the Slow Living Summit.

WHAT IS ASSET BASED COMMUNITY DEVELOPMENT?

Asset Based Community Development is a planned effort to improve residents' quality of life. Assets include physical, human, social, financial, environmental, political, and cultural capital.

G. P. Green and A. Haines, *Asset Building & Community Development*, 2nd Edition, Los Angeles, 2008, p. xi

Brattleboro's Role as Regional Hub

The broad provision of regional public services in education, health, social services, and retailing contributes strongly to Brattleboro's employment base. Brattleboro's regional center function is illustrated by occupational clusters (job categories). Here the significance of the Brattleboro Retreat can be observed; the **Health Care and Medical Science (Therapy, Counseling, and Rehabilitation)** cluster accounts for 3.6% of all employment.¹⁵ Brattleboro is established as a center for healthcare in southern Vermont, a rapidly growing sector nationwide. Medical employment offers many higher-wage and skilled job opportunities in an industry that brings few environmental impacts to a community. **Primary/Secondary and Vocational Education** is another regional activity strongly represented in Brattleboro. It is important to view the occupational and industry data together to verify the existence of industry clusters and potential for growth.

Approximately a third of all jobs in Brattleboro are filled by local residents (see Table 2.2). Hinsdale, NH, is home for another 7% of the Brattleboro workforce. Interestingly, more people commute to work in Brattleboro from Keene than from Putney. These data illustrate a pattern of economic and social transactions across a broad area (taking in three states) that is typical of rural areas generally. Brattleboro is part of a three-state region, and while state policies (i.e., taxes, access to education, social services) may influence discrete business and household decisions, it is also true that Brattleboro's success depends on growth in the broader region. So while competition for new residents, customers, workers, and federal support exists, there is scope for fostering a regional identity, crossing state boundaries and cooperating to deliver real benefits to all businesses and residents of the region. Examples of crossborder regional cooperation can include lobbying for rail transportation

enhancements, construction of a new bridge between Brattleboro and Hinsdale, NH (on VT route 119), maintaining and extending municipal and emergency services mutual aid, and supporting higher education institutions that service the three-state region. Each community can pursue growth strategies that capitalize on its unique combination of assets, while producing community development outcomes that enhance the quality of life for all residents of the region.

Table 2.2: Home origins for Brattleboro workers

LOCATION	2009	
	Count	% Share
Brattleboro town	3,471	32.9
Hinsdale, NH	724	6.9
Vernon	466	4.4
Guilford	438	4.1
Dummerston	360	3.4
Keene, NH	326	3.1
Putney	300	2.8
Westminster	240	2.3
Rockingham	201	1.9
Newfane town	188	1.8
All other locations	3,848	36.4

Source: U.S. Census Bureau, On the Map Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002–2009)

Child Care

Given the high proportion of working parents in Brattleboro and Windham County, the availability of affordable, quality child care is important to the economy. Table 2.3 shows data estimates on the number of employed people with children.

Table 2.3: Employed people with children

	Brattleboro	Windham County
Own children under 6 years old	659 (+/- 162)	2,485 (+/- 126)
All parents in family in labor force	550 (+/- 165)	1,987 (+/- 163)
Own children 6 – 17 years	1,599 (+/- 207)	6,090 (+/- 186)
All parents in family in labor force	1,352 (+/- 216)	4,702 (+/- 282)

Source: 2006–2010 American Community Survey, 5-Year Estimates

As of July 2012, there were 34 registered home and licensed providers operating in Brattleboro, according to the Vermont Department of Children and Families [Bright Future Child Care Information System](#). This database included 13 registered home child-care providers, generally offering care for infants, toddlers, preschoolers, and school-aged children. Each of the three elementary schools offers after-school programs for students. There are six preschool-only programs at licensed providers. The remaining programs are licensed providers offering infant, toddler, and preschool programs in a facility setting.

Brattleboro is home to the only evening-time child-care program licensed in the State of Vermont, Windham Evening Care, which is open from 2:00 PM to midnight. This important program, run by the Windham Child Care Association, affords parents an opportunity to attend school or work second-shift jobs while providing their children with appropriate care.

Brattleboro’s Zoning Ordinance considers family child-care homes (serving not more than 6 children full-time and 4 part-time in the caregiver’s own residence) a permitted use in all zoning districts. Licensed child-care facilities are conditional uses in all zoning districts. Licensed child-care homes (serving not more than 12 children in the caregiver’s own residence) are either permitted or conditional use according to district. These regulations are compatible with state law.

Low wages, poor benefits, and lack of training are common in the child-care industry and contribute to the severe shortage of child-care workers and, consequently, of child-care facilities. This Plan recommends promoting the Town’s Small Business Assistance Program to child-care providers as a way for them to grow or improve their businesses.

Economic Development and Land Use

Effective land use planning is the strongest contribution this Plan can make to economic development: by seeking to provide adequate space for growth, by avoiding mismatches between development and infrastructure provision, and by ensuring that development meets community expectations.

A key insight of the Commercial Districts Study is that the Town has ample land zoned for commercial and retail activity, given the population forecasts for both primary and secondary market areas. Long-term changes in the retail sector, including the impact of online sales and the opening of a Walmart Super Store in nearby Hinsdale, NH, reduce the likelihood of large-scale retail development in Brattleboro. This Plan suggests reducing and simplifying the number of zoning districts in the Putney Road area, and includes planning both for a mixed-use neighborhood center just north of the Veterans Bridge and for allowing large-scale residential development in adjacent areas (using the PUD process). These changes are made in



recognition of the large number of undeveloped parcels in the Putney Road vicinity, and the limited public resources available to develop a network of side streets or other public infrastructure. It is hoped that by focusing future growth along a north-south axis that (re)development of these commercial and mixed-use areas will increase. Traditional residential neighborhoods adjacent to downtown should also attract a degree of redevelopment, resulting in greater densities while achieving well-accepted “smart growth” goals and reducing exposure to future flood damage along the Whetstone/Rt 9 corridor.

The review of zoning districts has revealed that the median size of parcels in industrial districts is 6.9 acres but nearly 80% of the industrial parcels are less than 1 acre in size. This plan calls for considering increasing the minimum lot size to ensure that there are parcels suitable for future medium- to large-scale development. A parcel of 5 acres can accommodate truck and car circulation, staff and customer parking, and on-site stormwater management needs for a workforce of approximately 65 people—which may still be considered a small business.

One vital task of the Commercial Districts Study was to review the existing neighborhood plans for Canal Street/Exit 1, West Brattleboro, and Putney Rd that have been undertaken in the past 10 years. Common themes in each of these plans were improvement of the public realm (streets and sidewalks) and design standards to enhance the streetscape, improve the safety and efficiency of access ways, and foster greater pedestrian and bicycle activity. The purpose of these changes is to reinvigorate the commercial districts through a combination of public and private investments to make each neighborhood distinct, and to better service residents, workers, and visitors. The absence of a Downtown Master Plan was also noted in this study; this Plan recommends that such a plan be undertaken, and implementation steps be commenced within 5 years. The downtown is a major asset for the wider community, and is a key feature attracting new residents and

businesses. As more people are able to make broad locational decisions and telecommute, a vibrant, distinctive downtown is crucial to spur more development.

One factor that potentially limits build-out of existing commercial and industrial districts is the adequate provision of water and sewer. Industrial districts to the north and south must have these essential services in place to encourage rational development. When completed, the new Waste Water Treatment Plant will be a significant public asset, essential for continued private commercial and industrial development throughout town. It will be important to ensure, through forward planning, that enterprises located in industrial and commercial districts can connect to this system and potable water.

This plan outlines how to reform land use regulations to protect natural assets and promote land development that enhances the quality of life while encouraging economic development. Amending the zoning and subdivision regulations to ensure that they encourage improvements consistent with community values is discussed at length in Chapter 12 “Land Use.” Capital projects such as sidewalks, walkways, and trails and parks with river access should be identified in the Capital Improvement Plan as crucial economic development commitments.

In 2011, real estate taxes paid on residential property accounted for approximately 63% of all real estate property taxes collected. The trend of residential property taxes

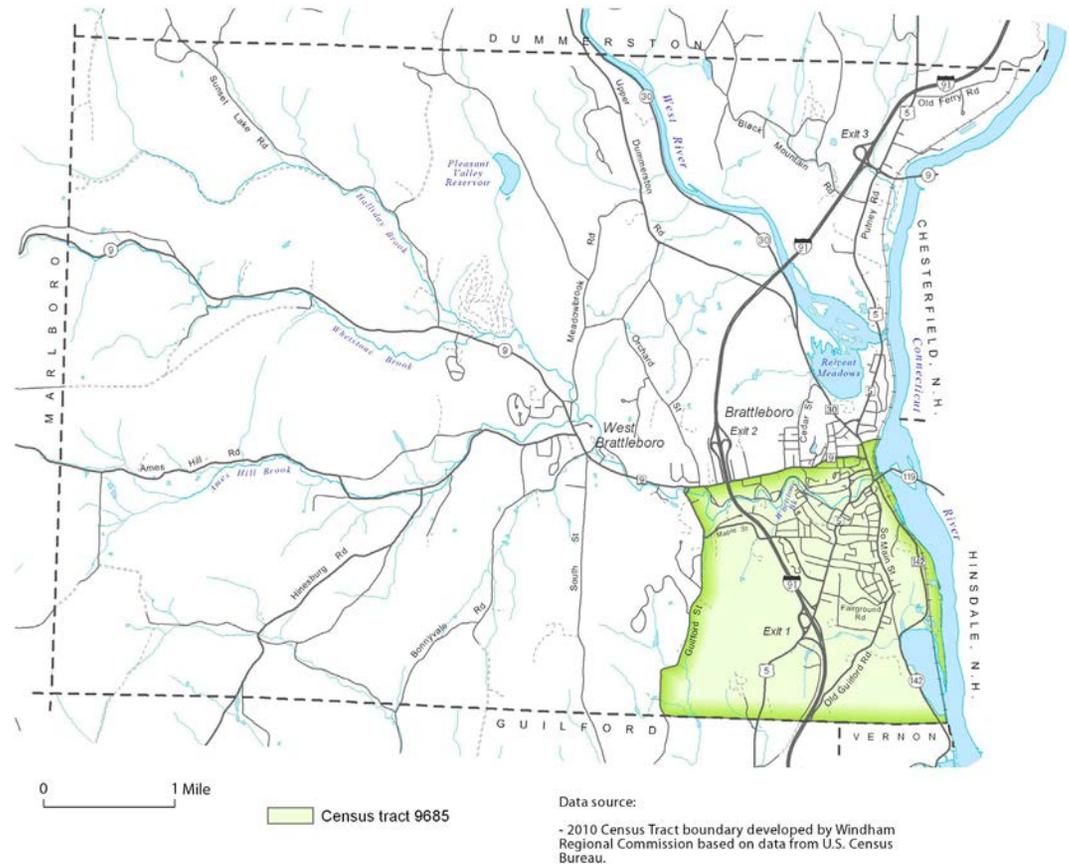


A simulation of an improved Exit 1 Gateway

assuming an increasing proportion of total taxes has been under way for some time in Brattleboro and many other communities. A long-term goal of land use planning is to promote growth in land values consistent with the community's broader goals. This plan seeks to promote local economic growth in the commercial and industrial areas of town, thus reducing the burden of property taxes falling on residential tax payers.

New Market Tax Credits are a tool for existing neighborhood redevelopment and increasing the value of residential, commercial, and industrial property through more intensive investment. The smallest project suitable for this form of financing is approximately \$3 million; thus, there are many opportunities for the redevelopment of neighborhoods (including parts of downtown). The eligible census tract follows the Town line, with Guilford to the south, South Street to the west, and Route 9 to the north, following Grove Street and Harris Place to the Connecticut River eastern boundary (see Figure 2.1). This area takes in a large section of the downtown, including the Brooks House (damaged by fire in 2010) and the area of Flat Street with anchor arts organizations. This financing tool could be of great benefit in providing a high-quality, energy-efficient workforce and affordable housing, or new mixed-use developments, making the most of our compact walkable neighborhoods with access to outdoor recreation and the historic downtown.

Figure 2.1: Census tract eligible for New Market Tax Credits



Community Development

Community development is an important goal of economic development. There is a relationship between the economic conditions in a community and other community elements such as housing, education, and poverty. Through capacity building and learning and engagement, community development seeks to strengthen communities and improve economic opportunity and social conditions.

An example of a community development agency is Southeastern Vermont Community Action (SEVCA). SEVCA serves low-income people in Windham and Windsor counties. It was founded on the belief that poverty need not be a permanent condition and that: (1) people can be empowered to rise out of poverty, and (2) the strength of communities is measured by the quality of life of everyone in them. SEVCA offers a wide range of programs to address a variety of poverty-related needs including but not limited to housing, education, economic development, energy, family support, and crisis intervention.

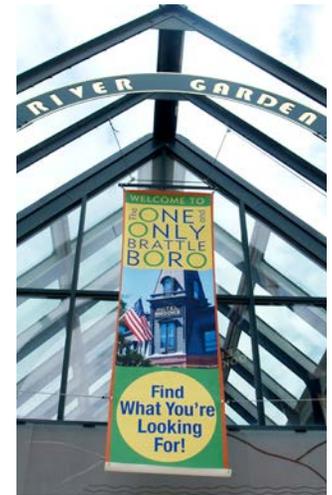
Brattleboro has a long tradition of providing essential services to a rural region in the areas of education, health, emergency, and affordable housing. When other factors, including housing stock and access to public transportation, are accounted for, it is apparent that Brattleboro as a community has a large proportion of people in need who access these services. Many of the institutions delivering these services have long and proud histories and depend on local community support through tax relief, volunteer involvement, and direct fundraising. Sustained growth and wealth generation is needed so that these institutions can fulfill their missions and treat residents and clients with dignity.

Demographic data also reveal that poverty is increasing in Brattleboro. Fully 18% of those under age 8 are in poverty. All of the elementary schools have two-thirds of the

school population receiving free or reduced price lunch (high school participation is lower due to the stigma). In the census tract eligible for New Market Tax Credits (NMTC) the median family income is \$41,293 or 65% of the state median family income (\$62,982); the eligibility threshold is 80%. Other neighborhoods outside this tract also exhibit extreme hardship. All these residents are more likely to endure increased exposure to other risks such as environmental hazards (indoor air quality, flood, etc.) due to limited choices. One strategy to expand the target populations' opportunities is to utilize Asset Based Community Development (ABCD) initiatives. It may be more effective to develop collaborations between Community Development Organizations (CDOs) and the Town to achieve these goals.

Because Brattleboro has an aging population and significant levels of hardship in the community, it is important to pursue strategies that will increase the population—especially of younger households. By increasing the population and the level of economic activity, we can broaden the burden currently placed on residential property taxpayers to support the Town's services and facilities, and still meet commitments to support CDOs and other social service agencies. The demographic profiles of neighboring communities reveal divergent trends (Bennington and Greenfield have lost population over the past 20 years; Keene has gained population.). A population growth target of over 1.5% by the Census of 2020 is attainable.

Recently, the actual measurement of economic activity and its relationship to social values, norms, and quality of life has been drawn into question. Measurements such as Gross National Product (GNP) and Gross Domestic Product (GDP)¹⁶ have become familiar as default measurements of our standard of living, despite the very serious limitations of these data because they exclude from measurement such things as income distribution, nonmarket transactions (household work, volunteer work, development of open source software etc.), the underground economy



(cash transactions not recorded for taxes, crime, illegal trade), asset values, bartering, and subsistence production.¹⁷ Significantly, the rate of nonrenewable resource use and negative impacts such as pollution and environmental degradation are also not included. For all these reasons, there has been a growing experimentation with alternative measures.

The United Nations and the Organization for Economic Cooperation and Development have both begun exploring alternative measures of well-being such as Gross National Happiness (GNH), an index deployed in Bhutan to facilitate policy-making that pursued happiness, not wealth.¹⁸ And the Vermont Legislature has passed a bill calling for the use of a Genuine Progress Indicator (GPI), on the basis of work undertaken by the Gund Institute for Ecological Economics at the University of Vermont.¹⁹ Notably, the Institute's research suggests that Vermont ranks well on alternative measures, in large part due to more environmentally conscious development. The state of Maryland was the first state to adopt this new set of indicators that describes the larger ecological and social dimensions of human communities and the sustainability of their activities. Locally, the Strolling of the Heifers has sponsored the Slow Living Summit to explore ways in which one's quality of life can be improved and measured without depending on traditional measurements of increased consumption, resource depletion, and environmental degradation as analogues for real growth.

From a community development perspective, this re-evaluation of what constitutes work, increased value, and a happy, meaningful life are important conversations to have. It is hoped that using alternate measures will provide more effective guidance on economic development policy through the life of this Plan.

FOOTNOTES

¹ Jo Villani, *100 Best Art Towns in America*, 4th ed. (Countryman Press, 2005).

² See "Age and Sex Composition," www.census.gov/prod/cen2010/briefs/c2010br-03.pdf, (U.S. Census Bureau, May 2011); "Population Distribution and Change," www.census.gov/prod/cen2010/briefs/c2010br-01.pdf (U.S. Census Bureau, March, 2011).

³ Code of Federal Regulations, (CFR), chapter 3, part 300.1. Franklin County, MA, and Cheshire County, NH, are both implementing CEDS.

⁴ Fernando Ferreira, Joseph Gyourko, and Joseph Tracy, *Housing Busts and Household Mobility*, (Federal Reserve Bank of New York Staff Reports, no. 350, October 2008). "Residential Mover Rate in U.S. is Lowest Since Census Bureau Began Tracking in 1948," press release, (United States Census Bureau Newsroom, April 22, 2009).

⁵ A. Modestino, *Mismatch in the Labor Market: Measuring the Supply of and Demand for Skilled Labor in New England*, New England Public Policy Research Center, Research Report 10-2 (Federal Reserve Bank of Boston, November 2010).

⁶ Frank Knott, Mark Madsen, Jim Haguewood, *SeVEDS Phase 1 Foundation and Discovery Milestone Project Review*, (May 26 2011).

⁷ See U.S. Dept. of Labor, Bureau of Labor Statistics, www.bls.gov/oes/home.htm.

⁸ See www.bls.gov/cew/.

⁹ See VT Department of Labor, www.vtmi.info/faq.cfm.

¹⁰ 1997–2007 is chosen because it takes in most of the time since the research and writing of the last Town Plan (2004) but avoids distortion in the data from the Great Recession (2007–2009).

¹¹ See www.statsamerica.org/innovation/anydata/. Using a combination of 2007 and 2010 data comparing Windham County (the smallest geographical unit available) to State data on Establishments by NAICS category and Occupations by NAICS category). Agribusiness is the term used by the U.S. Economic Development Agency for data collection purposes.

¹² See Council on the Future of Vermont, Vermont Council on Rural Development, *Imagining Vermont: Values and Vision for the Future*, (Spring 2009).

¹³ D. DeNatale, *Creative Economy Research in New England: A Re-examination*, (Convening of the New England Research Community, 2006).

¹⁴ Biomass Energy Resource Center, *Vermont Wood Fuel Supply Study* (Montpelier, 2007), p. 4. Report on the Council on the Future of Vermont, *Imagining Vermont: Values and Vision for the Future* (Vermont Council on Rural Development, 2009). Regional Technology Strategies, *Growing Jobs, Vermont-Style: Skills and Knowledge for Vermont's "Sustainable Food System Cluster" and Natural Resources* (Vermont Department of Education, 2010), p. 12. Verdana Ventures, *Farm Energy Innovation in Vermont: A Report to the Vermont Sustainable Agricultural Council* (Randolph, 2008).

¹⁵ See www.statsamerica.org/innovation/anydata/. Using a combination of 2007 and 2010 data comparing Windham County (the smallest geographical unit available) to State data on Establishments by NAICS category and Occupations by NAICS category.

¹⁶ Gross National Product (GNP): a measure of the value of goods and services that the country's citizens produced in a particular year, regardless of their location. Gross Domestic Product (GDP): a measure of the value of goods and services produced within the geographic boundaries of the U.S., regardless of the producer's nationality. <http://www.bea.gov/glossary/glossary.cfm>

¹⁷ Duncan Ironmonger calculates that the value of household work (outside the market) is roughly equal to work performed in the market (measured formally by GDP), "Counting Outputs, Capital Inputs and Caring Labor: Estimating Gross Household Product," *Feminist Economics*, 2, 3 (1996), pp. 37–64.

¹⁸ J. Helliwell, R. Layard, and J. Sachs (eds.), *World Happiness Report*, (Earth Institute, Columbia University, 2012).

¹⁹ S.237, "An Act Relating to the Genuine Progress Indicator was signed into law by Governor Shumlin May 2, 2012.





CHAPTER 3

Energy

Brattleboro values energy conservation and efficiency in conjunction with the expanded use of renewable energy as a means to save money and protect the environment.

Energy

Goals

- A. Reduce carbon emissions in Brattleboro to 30% below 2010 levels by 2030
- B. Increase locally generated electricity from renewable sources to 10% of Brattleboro's total electricity consumption by 2030
- C. Increase the percentage of housing units supplied with solar domestic hot water to 10% by 2030
- D. Increase the share of Brattleboro commuters carpooling to 10% of all commuters by 2030
- E. Reduce emissions from municipal and school district buildings and operations 20% below 2010 levels by 2030
- F. Increase the percentage of weatherized homes to 50% of all units by 2030

Policies and Actions

Policy 3.1 Measure and analyze community energy use so that elected officials, community leaders, and consumers can make informed decisions and celebrate meaningful progress in energy reductions

Actions:

- 3.1.1 Maintain a baseline inventory of energy use for the whole community and specifically municipal and school buildings and operations, to ensure goals are being met
- 3.1.2 Maintain membership in ICLEI – Local Governments for Sustainability
- 3.1.3 Report annually to the Selectboard on progress toward energy reduction goals for the community as a whole, and specifically municipal and school buildings and operations
- 3.1.4 Review the Town Procurement Policy Manual to ensure energy conservation and efficiency are key purchasing criteria

Policy 3.2 Assist energy consumers to take advantage of incentive programs for energy conservation and efficiency

Actions:

- 3.2.1 Organize participation in programs to increase energy efficiency and renewable energy use in homes and commercial buildings
- 3.2.2 Consider implementing Property Assessed Clean Energy (PACE)—a state program establishing the ability of a municipality to lend property owners funds for the installation of energy-related improvements—in Brattleboro

continued on next page

- 3.2.3 Maintain a local link to Efficiency Vermont and other resources
- 3.2.4 Improve the energy efficiency of municipal and school district buildings and operations, by means such as converting street lights to LED fixtures
- 3.2.5 Review existing land use regulations for barriers to efficiency and conservation efforts

Policy 3.3 Promote use of renewable energy in institutional, commercial, and residential settings

Actions:

- 3.3.1 Conduct a solar energy access inventory of public and commercial buildings' rooftops and/or parking lots
- 3.3.2 Explore alternative financing of renewable energy projects on municipal and school district properties
- 3.3.3 Work for greater cash incentives from federal and state agencies and utilities
- 3.3.4 Encourage contractor training for weatherization and green building technologies at Windham Regional Career Center (WRCC), VT Technical College, and Community College of Vermont (CCV) and support existing offerings at Greenfield Community College (GCC)
- 3.3.5 Support the provision of energy audit training to be available at WRCC, the VT Technical College, and CCV
- 3.3.6 Encourage the Town to purchase electricity from renewable sources
- 3.3.7 Upgrade and promote the charging station for Plug-in Electric Vehicles (PEVs) in the Municipal Transportation Center
- 3.3.8 Establish a collective purchasing program for solar panels in Brattleboro

Fossil fuels are the predominant source of energy in Brattleboro, as in the rest of the U.S. Fossil fuels are a finite resource. Emissions from their widespread use have had significant negative impacts on the environment, including climate change, air quality, natural habitat, and land use. Public policy (including energy market regulation, and community and land use planning) from the mid-twentieth century to the 1980s assumed an abundant supply of cheap fossil fuels. This assumption and the failure to incorporate the cost of the negative impacts into the price of fossil fuels is behind many of the most vexed issues that we now confront, including (but not limited to): climate change, sprawl, isolation, loss of 'place,' obesity, and reduced economic self-sufficiency.

Evidence has been accumulating for more than 40 years on the negative environmental and public health effects of an economy built on cheap fossil fuel supplies. The physical land use dimension of this problem has come into sharper focus in the U.S. in the past decade. Much of the focus of planning practice is intended to correct or mitigate the impacts of fossil fuel use—most clearly manifested in North America by suburban sprawl and auto dependency.

State statute requires that the Planning Commission consider energy through required goals and elements. Under Chapter 117, the energy element of a Town Plan must include:

- An analysis of energy resources, needs, scarcities, costs, and problems within the municipality
- A statement of policy on the conservation of energy, including programs, such as thermal integrity standards for buildings to implement that policy
- A statement of policy on the development of renewable energy resources
- A statement of policy on patterns and densities of land use likely to result in conservation of energy

Taken together, these requirements focus on measuring and analyzing current supply and distribution, current demand, and existing and proposed commitments to energy conservation and renewable energy sources. The purpose is to minimize exposure to any potential future energy shocks, while reducing the environmental impacts associated with fossil fuel use. Regrettably, the lack of data at the municipal level (particularly for energy sources other than electricity) makes meaningful analysis difficult.

Energy production, distribution, and consumption are overwhelmingly undertaken through market mechanisms that are mostly regulated through the VT Public Service Board (PSB) and/or federal agencies (i.e., the Nuclear Regulatory Commission [NRC] and Federal Energy Regulatory Commission [FERC]). A new Comprehensive Energy Plan (CEP) prepared by the VT PSB was released in December 2011 under VSA Title 30, Section 202b. The CEP includes analysis and state-level projections for usage, supply, cost, and environmental effects for all sectors of energy usage: electricity, thermal energy, transportation, land use, and efficiency. The CEP makes recommendations for state implementation through legislation and regulation that



covers both public and private activity. The CEP draws on data from the federal Energy Information Administration (EIA). Because of the central role of energy in all aspects of life, there are many interconnections between energy use and planning, including land use, natural resources, transportation, and even public health. Many of these interconnections are developed through education and outreach, advocacy, identifying opportunities for collaboration, and support of private and nonprofit initiatives. Brattleboro has a strong record in many of these areas.

The key to moving from a fossil-fuel-based society to one fueled by renewable energy involves reducing demand—through conservation and efficiency strategies—while increasing renewable energy supply. This transition will impact individual, household, and organizational behaviors. There is a complex interaction between global, national, and regional markets, changing regulation regimes (including incentive programs), technological innovation, and consumption patterns. The purpose of this chapter is to describe the commitments Brattleboro has made to addressing climate change and reducing dependence on fossil fuels, and to lay out achievable goals that all of us can strive for. In 2008, Brattleboro Climate Protection (BCP) (a nonprofit collaborating closely with the Town) facilitated an Energy Performance contract with Honeywell, Inc. for lighting, heating, and efficiency upgrades in municipal and school buildings. In 2009, the Town's Energy Committee was formed; currently they sponsor and organize workshops, provided free energy assessments, support business and home weatherization projects through finance mechanisms, such as PACE, and conduct renewable energy workshops. They are also investigating solar-electric arrays on municipal properties, have established an online gallery of renewable energy homes, and support Brattleboro Thermal Utility, a community group. Further, they organized a no-idling campaign, a Business Transportation Roundtable, and local participation in the

Way to Go! Commuter Challenge. The committee also supports energy education for K–12 students, and has assisted with the writing of this Plan.

At the request of the Selectboard, the Planning Commission held a Forum to discuss Sustainability and the Town Plan on July 25, 2011. The meeting was held at the Marlboro College Graduate Center; 59 people attended. All members of Town Boards, Committees, and Commissions were invited to attend the Forum. Representatives from the Selectboard, Planning Commission, Conservation Commission, Solid Waste Committee, Finance Committee, Development Review Board, Agricultural Advisory Board, Energy Committee, Town Plan Advisory Group, Transportation and Traffic Safety Committee, Citizens Police Communications Committee, and Brattleboro Housing Authority were present. Several other Town appointees were present including the Energy Coordinator. Attendees were asked to circulate between four stations—Development & Conservation, Energy, Community Development & Housing, and Municipal Operations & Transportation. Each station addressed a topic area or several related topics addressed in the Town Plan. This meeting provided a great deal of the data considered in this chapter and other parts of the Plan.



CURRENT CONDITIONS

Brattleboro has a long and impressive record in the field of climate change action and energy awareness. The Town Energy Coordinator was first appointed by Town Meeting in 2007. The Town was one of the first communities in New England to join the International Council for Local Environmental Initiatives (ICLEI, now known as ICLEI – Local Governments for Sustainability) and continues to use models developed by them to establish baseline energy use and chart changes over time. Brattleboro Climate Protection was formed in 2002 and produced its first Climate Action Plan in 2003 (updated in 2009). The Selectboard passed a resolution recognizing the significance of Climate Change in 2002. Through the work of the Energy Coordinator and the Energy Committee, valuable local data have been collected over a long period of time, along with extensive programs of outreach, technical advice to the Town, local residents, and businesses. This forms an important base to build on.

Energy Use

Many factors influence energy demand, including population patterns, the growth and structure of the economy, and travel patterns of residents and visitors of the area in question.¹ Broadly, the aim of the energy element required of VT Town Plans is to achieve reductions in fossil fuel energy use through efficiency measures (controlling demand) while increasing the supply of renewable energy sources, without negatively impacting social and economic activity. This section primarily relies on state-level data collected by the Planning Service Board (PSB) on energy use, production, and distribution. Where Brattleboro-level data is available, it is presented here.

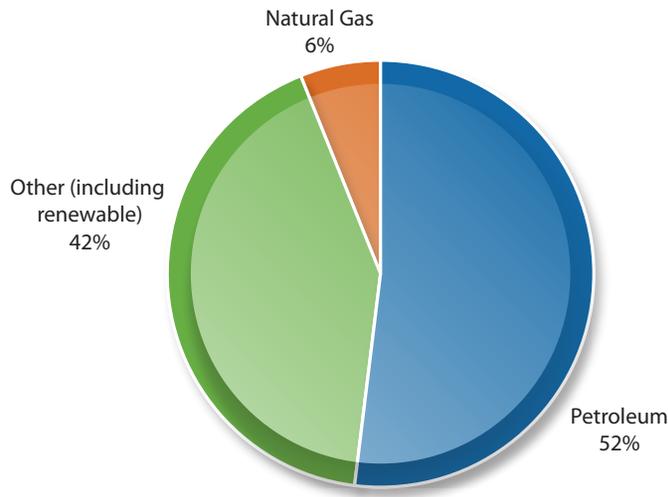
Key Statewide Findings:

- Total energy consumed in VT increased by 17% between 1990 and 2009. Real gross domestic product increased 51%, population 11%, and vehicle miles driven 31%.²
- Residential energy demand has increased a total of 14%; since 1990, demand per household has declined 0.28% annually.
- Commercial energy demand increased by 22% between 1990 and 2009, or 1.07% per year. On a per-employee basis, using employment in the non-agricultural, nonmanufacturing sector, the trend in energy demand was slightly negative; -0.4% between 1990 and 2009.
- Industrial sector energy demand has decreased 3.2% since 1990, or -0.2% per year, most of the decline occurring in the 2007–2009 recession years. The absolute decline in energy demand coincided with declines in the number of establishments and industrial employment (manufacturing and mining). Still, energy demand per industrial employee has increased 1.5% annually since 1990.
- Real GDP (2005 dollars) increased 51% between 1990 and 2009, yet energy consumption for all end uses increased by only 17%—representing a reduction in energy intensity of 1.4% per year.
- The transportation sector shows the largest increase in state energy demand—1.3% per year from 1990 to 2009, or 24.7%.
- Vermont residents and businesses spend a higher portion of their income on transportation than the rest of the country (an aspect of our rural character).
- Total emissions in VT have declined by approximately 3% per year since 2004.

- Energy consumed for transportation, space heating, and electricity generation accounts for more than 80% of Vermont’s statewide GHG emissions annually.

Natural gas is available currently in the Chittenden County market, and there are plans to extend this service south along the western border of the state. Thus, it is expected that this energy source will increase as a proportion of the total over time (displacing petroleum primarily). Nevertheless, the high proportion of petroleum in the total energy mix is explained by high vehicle miles traveled (VMT) in Vermont, consistent with rural development patterns.

Figure 3.1: Total VT Energy Use by Source



Source: U.S. Department of Energy Information Agency, 2009

Table 3.1: Total Energy Consumption, Vermont, 1990–1999

YEAR	Total BTU	% Change	YEAR	Total BTU	% Change
1990	135.4	-4.90	2000	164.3	3.1
1991	141.3	4.40	2001	161.8	-1.5
1992	149.1	5.50	2002	157.2	-2.8
1993	149.7	0.40	2003	155.3	-1.2
1994	149.1	-0.40	2004	168.8	8.7
1995	149.8	0.50	2005	169.6	0.5
1996	155.7	3.90	2006	166.2	-2.0
1997	161.4	3.70	2007	165.5	-0.4
1998	154.1	-4.50	2008	158.3	-4.4
1999	159.3	3.40	2009	158.1	-0.1

Source: VT Comprehensive Energy Plan, 2011, vol. 2 p. 31 based on EIA data, http://publicservice.vermont.gov/sites/psd/files/Pubs_Plans_Reports/State_Plans/Comp_Energy_Plan/2011/2011%20CEP_Volume%202%5B1%5D.pdf

Table 3.1 shows 10 years of energy use. Energy demand increased at 1.8% annually in the decade from 1990 to 2000; thereafter, it has been close to 0%. 1990 was a recession year, as were 2007–2009. Energy efficiency programs may have played a role in the reduced growth in the past decade.³

At the local level, electricity use has declined between 2005 and 2009 (see Table 3.2). The changes are attributed to a reduction in commercial activity, changing household composition (smaller households), increased conservation awareness (avoiding energy use), and some improvements in efficiency (machinery and equipment, appliances, and better insulated building envelopes).

Table 3.2: Electricity Use in Brattleboro

Account Type	2005	2009	Change
Residential	5,342	5,464	122
Total kWh	34,787,804	33,074,507	-1,713,297
Average Customer Use kWh	6,512.131	6,053.167	- 459
Commercial	1,425	1,444	19
Total kWh	145,185,525	126,819,613	-18,365,912
Average Customer Use kWh	101,884.579	87,825.217	-14,059.362

Source: CVPS Personal Communication, January 2011

Energy Use in Brattleboro Schools and Municipal Facilities

The focus of much of the work undertaken by the Town Energy Coordinator to date has been on improving the energy efficiency of fixed assets owned and operated by the Town and the Windham South East Supervisory Union (WSESU). These conservation and efficiency measures have contributed to the overall reduction in electricity use in Brattleboro. Table 3.3 compares Energy Use in the municipal and school buildings and facilities in 2000 and 2010.

Table 3.3: Energy Use: Brattleboro Municipal and School Buildings and Facilities

(Million BTUs/calendar year, fuel and electricity combined)

Facility	MMBTU 2000	MMBTU 2010	% Change
Brooks Memorial Library	1,509	1,089	-28
Central Fire Station	834	782	-6
Gibson-Aiken Center	2,320	1,567	-33
Skating Rink	2,049	1,894	-8
Municipal Center	3,228	2,124	-34
Public Works Garage	1,737	1,125	-31
Water Treatment Plant	2,364	1,633	-31
Wastewater Treatment Plant	9,736	6,924	-29
West Brattleboro Fire Station	364	311	-15
Town streetlights	2,809	2,381	-15
Academy School	2,605	2,064	-21
Canal Street School	630	1,378	54
Esteyville School	206	147	-29
Green Street School	2,544	1,536	-40
Oak Grove School	2,421	1,382	-43
Powers House	485	300	-38
Brattleboro Union High School	9,832	10,806	9
Total	45,673	37,443	-18

Sources: CVPS, Barrows & Fisher Oil Company, Suburban Propane, Merrill Gas Company; compiled by Brattleboro Climate Protection and Brattleboro Energy Coordinator, 2010.

The Transportation Center opened in 2003. In 2011, the Town undertook efficiency improvements to it that included replacing existing lighting with LED and adding photo-cell lighting control. This project has reduced electric consumption in the building by approximately 36%—from an average of 190,000 kWh per year in 2004–2009 to 119,063 kWh in 2011.

The Town’s vehicle fleet experienced a 22% increase in energy used from 2000 to 2010 (see Table 3.4). The energy used by the town fleet is wholly based on fuel usage. Factors that can influence fuel usage include the number of vehicles, their fuel efficiency, and the number of miles traveled.

Table 3.4: Energy Use: Town Fleet

	MMBTU 2000	MMBTU 2010	% Change
Town fleet	7,113	9,055	22

Source: Brattleboro Public Works Department, 2010

ENERGY SOURCES

Two-thirds of all energy used in Vermont is devoted to transportation and heating and, thus, is almost entirely provided by fossil fuels. States do not have strong regulatory control over the supply of gasoline, fuel oil, or liquid petroleum gas (LPG). Supplies of these energy sources are subject to price volatility and potential disruptions at the global, national, and regional levels. The focus of the CEP is on electricity and renewable energy sources.

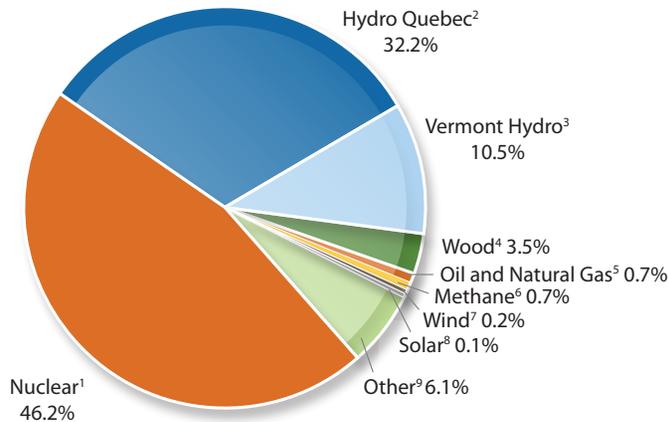
Electric Power

Green Mountain Power (GMP) is the regulated monopoly electrical utility servicing Brattleboro. Figure 3.2 shows the mix of fuel types that contribute the energy GMP produces. State electricity utilities have negotiated a new contract with Hydro Quebec. In effect from 2012 to 2038, the initial price under the new contract will be 12% lower than the final price under the old contract in 2012. This contract represents an increase in the volume of power purchased from Hydro Quebec. Under current contracts, 54.5% of GMP energy is generated by nuclear power from Entergy Vermont Yankee, located in Vernon. The NRC recently extended the operating license for Entergy to 2032, after a U.S. District court ruling on January 19, 2012, concluded that the state had preempted federal powers when the Legislature denied an application for the renewal of the operating license. The state of Vermont has appealed the ruling. Brattleboro is one of 18 towns in three states located in the Emergency Planning Zone for the operation of Entergy VY.

WHAT IS ICLEI – LOCAL GOVERNMENT FOR SUSTAINABILITY?

It is an international non-profit membership that supports local government efforts to take action against climate change and improve the local environment. The membership provides support through information sharing, consulting, training, and information services.

Figure 3.2: GMP and Central Vermont Power Service Energy by Fuel Type, 2011



Source: Green Mountain Power

Notes:

1. Nuclear includes Vermont Yankee and Millstone 3
2. Hydro Quebec output is made up of an estimated 94% hydro, 2.5% nuclear, 1% wind, and 2.5% other
3. VT Hydro includes GMP-owned and VEPPI, utility direct, and SPEED purchases
4. Includes McNeil and Ryegate
5. Includes Stonybrook, Wyman Station, and BMP producers
6. Methane is from Moretown, Cow Power, and other (SPEED) farm and landfill methane
7. Wind is Searsburg and part of HQ VJO; Solar includes GMP-owned SPEED facilities
8. Solar includes SPEED plus GMP-owned
9. Other includes about 59% bilateral purchases, 38% ISO purchases, and 3% NYPA

Renewable Energy

Recent changes in regulations, incentive programs, and technology have made small-scale renewable energy projects more viable than in previous years. Other innovations, in areas such as private financing of solar arrays on public buildings, have been explored by Town officials. The Windham Solid Waste Management District (WSWMD) has arrangements with a private entity that burns methane off-gassing from the closed landfill and sells the electricity generated onto the grid. The new Town Wastewater Treatment Plant uses methane generated by the treatment process to reduce the plant’s conventional energy consumption.

Biofuels

Small power plants fueled by biomass (woodchip, grasses, or other sources) are part of the State’s strategy to achieve higher levels of renewable energy generation. Brattleboro has appropriately zoned land, rail, and road access and forest lands nearby to potentially host such a facility. Cersosimo Industries has recently received a certificate of public good for a combined heat and power facility associated with their kiln-drying operations on Rt 142. For some years, Windham Southeast Supervisory Union (WSESU) has operated a woodchip-fired furnace to provide heat to the Windham Career Center, Brattleboro Middle School, and BUHS buildings, reducing the release of GHG per year by 70%–80% per year. Many businesses and residences in Brattleboro supplement fuel oil, electric, and propane heat with wood or wood pellets burned in stoves or furnaces. The popularity of wood heating is partly illustrated in state data that shows little growth in fuel oil use in the past decade.

There have been efforts by local community groups (most recently Brattleboro Thermal Utility) to explore the establishment of a district energy system for downtown Brattleboro using a combined heat and power (CHP) generation

facility using woodchips as the fuel source. A 2010 feasibility study concluded that such a project was not currently financially feasible.

The Energy Coordinator and Energy Committee monitor developments in the biomass market and relevant state regulations. While Windham County has a well-established saw log market, it is too far from existing pulp markets in northern New Hampshire and eastern New York. Therefore, a large supply exists of low-grade material (a byproduct of higher value forestry activity) suitable for biomass energy production close to Brattleboro. Trees and grasslands form part of our working landscape as crops and are expected to have a larger role in supplying local energy needs as technologies improve and market prices for fossil fuels increase. Dairy farms also have the ability to produce renewable energy on the farm with methane digesters and local biodiesel efforts.⁴ Renewable energy is discussed as part of the Agribusiness and Food Technology industry cluster in Chapter 2 “Economic Development” and in Chapter 4 “Agriculture”.

Solar

Some of the most dramatic growth in renewable energy has taken place in solar power at the household or small business scale. This growth is due to constant reductions in the price of photovoltaic (PV) cells—the basic component of solar panels; recent regulatory changes for net-metering contracts in the Vermont; and recent state and federal incentive programs.⁵ Since 1980 there has been, on average, a 7% annual reduction in dollars per watt for solar photovoltaic cells. The terms of net-metering agreements for all forms of renewable energy (solar, wind, hydro, farm methane) in Vermont are overseen by the PSB. All electric utilities in Vermont are now required, as a condition of operation, to buy up to 4% of their total electric supply through net metering. All Vermont utilities are required to pay a 6 cent per kWh bonus to each seller, giving a current total price of 20 cents per kWh paid to small producers. In

conjunction with various incentive programs, the payback period on installing solar panels has now been significantly reduced.

A further step in reducing the cost of installing solar panels, while increasing the rate of adoption that has been pioneered in other communities is the use of neighborhood organizations or similar small community groups by solar advocates to act collectively to take advantage of bulk purchase discounts on components, to package federal and state incentive programs, and to preselect certified professional installers to encourage more customers (who may have been reluctant given higher individual prices and the technical nature of the purchase). As a result the take-up rate of installing solar panels has dramatically increased. In some instances, the cost of a 3kW installation was reduced to under \$3,000, resulting in a 400% increase in installations in one year.⁶

Wind

There are limited opportunities for large-scale wind energy development in Vermont due to few appropriate sites with constant strong winds and low turbulence (200–450’ above ground). No such site is available in Brattleboro. At the household/farm/small business scale, small wind turbines (60–140’ above ground) offer a relatively affordable means of harvesting energy that may complement solar power generation, which is impacted by seasonal variations (it is windier in winter, when solar power is harder to harness, and wind is available at night). There is strong growth in this sector nationally, and it may play a larger role in renewable energy generation in Brattleboro in the future.



Siting Renewable Energy and Local Impacts

As with any other land use, the installation of renewable energy systems can have adverse impacts on property abutters. Under existing arrangements, when property owners install renewable energy systems that are grid tied through net-metering, they seek permits from the PSB. Municipalities are advised when the permit is issued. Municipalities cannot directly review such installations through Site Plan Review or other sections of the Zoning Ordinance for potential impact on abutters. While Brattleboro encourages the installation of renewable energy systems, it should be recognized that offsite glare from solar arrays, smoke and particulate releases from wood burning appliances, and hazards associated with small wind turbines all constitute nuisances typically addressed through local zoning measures. Brattleboro should ensure as far as practicable that traditional land-use amenity issues are adequately addressed through state permits, and that local renewable energy projects are designed and installed to a high standard with minimal negative impacts. Larger scale industrial projects such as woodchip processing, wood-pellet production, or biomass CHP would need to demonstrate that impacts associated with development are adequately mitigated, such as heavy truck traffic and specifically the release of particulates and/or smoke plumes under conditions of temperature inversions that occur from time to time at lower elevations on the banks of the Connecticut River.

As solar panels become more popular, the risk of development on abutting parcels that could shade and reduce the performance of neighboring panels will increase. Solar access raises complex issues and will need further study. While Brattleboro encourages wide use of alternative energy sources, it is also important that the interaction between solar panels and neighboring properties be considered, so that the property rights of all interested parties are adequately protected.

ENERGY CONSERVATION AND EFFICIENCY

Through the work of Efficiency Vermont and private commitments, Vermont already makes significant electric efficiency investments. In recent years, electricity consumption has been reduced by more than 2% annually. According to the CEP, a single year of efficiency investments under current programs yields an economic benefit to the state of \$5 for every \$1 spent.⁷ The gains from efficiency can be thought of as a source of energy “supply,” in that investments in efficiency reduce the rate of increase in energy consumption and so push off the time when expensive capital upgrades or new power generation facilities are required.

A broad measure of efficiency is “energy intensity,” where some readily used measure of economic activity (Gross Domestic Product in dollars) is divided by the energy consumed (i.e., BTU in thousands) to achieve such economic activity.⁸ In 1990, Vermont consumed 9,100 BTU to generate \$1 of GDP. By 2009, that \$1 of goods and services consumed only 7,000 BTU. This amounted to an annual decline of 1.4% in energy intensity. Vermont ranked 19th in the U.S. for energy intensity (consumed fewer BTUs per dollar of GDP) compared to other states, putting Vermont behind Connecticut (second), Massachusetts (third), Rhode Island (seventh), and New Hampshire (ninth).

The local approach to reducing energy intensity has been through the work of the Energy Coordinator and Energy Committee. In 2009, the Selectboard appointed the first Brattleboro Energy Committee and continued to support the Town Energy Coordinator. The Energy Committee participated in the Vermont Community Energy Mobilization Program (VCEM) of Efficiency Vermont in 2009 and 2010. Over those two years, 60 volunteers completed free energy consultations in 175 homes and apartments in the Brattleboro area, resulting in a potential 49,226 kWh of annual savings in 2009. In 2011, the Energy Committee participated in the Efficiency Vermont Ambassadors Program,

EFFICIENCY VERMONT

Efficiency Vermont is the nation's first ratepayer-funded energy efficiency utility. They provide technical assistance and financial incentives to help Vermont households and businesses reduce their energy costs with energy-efficient equipment, lighting, and approaches to construction and major renovation. They operate as a private nonprofit organization, the Vermont Energy Investment Corporation, under an appointment issued by the Vermont Public Service Board.

providing free energy consultations to small businesses. Brattleboro continues to participate in ICLEI – Local Governments for Sustainability programs.

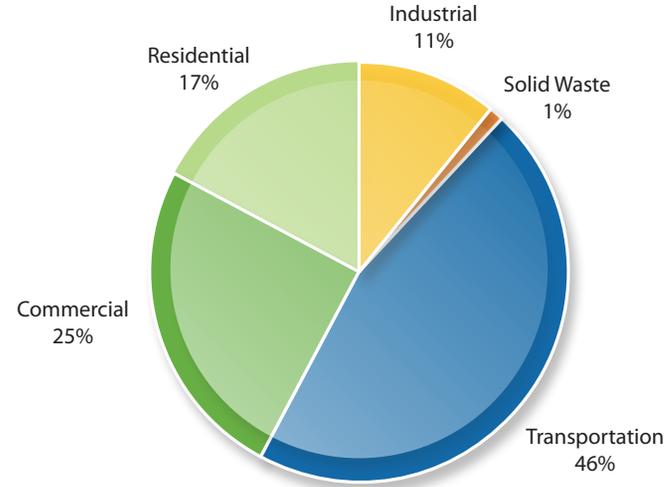
The age and condition of much of Brattleboro’s housing stock (see Chapter 6 “Housing”) makes achieving ambitious goals for thermal performance of residential structures challenging. Brattleboro residents have taken advantage of a long-term commitment to weatherization projects by the Energy Coordinator and Efficiency Vermont, reducing energy use and greenhouse gas (GHG) emissions; this will need to continue. Increasing educational and employment opportunities in town may also reduce the need for existing residents to drive out of town to gain access to these necessities.

Energy and Transportation

Reliable data is not available for calculating vehicle use (vehicle miles traveled; VMT) by Brattleboro residents and businesses, nor the VMT by residents of surrounding towns accessing Brattleboro as a regional center for employment, schooling, medical services, retail, or cultural events. Available data on vehicles traveling on State Routes 5, 142, and 9 all show declines of over 5% in 2008, with only minor increases in 2010. A similar pattern is observable for Interstate Highway 91. Bus ridership of the Bee Line and Connecticut River Transit (CRT) showed increases in 2008 associated with high fuel prices, and a modest decline since.

The burden of GHG emissions measured in Brattleboro needs to account for the historic role of Brattleboro as a regional center located on a major east-west corridor (State Route 9), connecting New York to northern New England, and Interstate 91 connecting New England to Canada. The recession of 2007–2009 has contributed to reductions in vehicle activity in Brattleboro, and the trend was flat or mildly negative prior to the recession. The major concern associated with energy consumed by transportation is that it comprises 46% of the GHG emissions (see Figure 3.3).

Figure 3.3: 2010 Greenhouse Gas Emissions by Sector



Source: 2010 Brattleboro Greenhouse Gas Emissions Inventory, Brattleboro Climate Protection and Brattleboro Energy Coordinator 2010

Vehicle operator behavior is most likely to change in response to market forces (i.e., high fuel prices result in decline in VMTs travelled). Because Vermont is rural, and employment and other activities are dispersed over a wide area, public transit options are more challenging to provide than in more densely settled metropolitan regions. Bus ridership on the in-town bus is high compared to the state median but is still dominated by users who have limited options for accessing personal vehicle transportation. It is hoped that the in-town bus will expand its routes (including servicing Hinsdale and Algiers Village) while improving other service parameters (such as waiting time).

The Complete Streets legislation passed in 2010 demonstrates the state’s commitment to ensuring equal treatment for all road users. As the implementation of this legislation develops, it should become clearer how local transportation projects will contribute to reducing fossil

fuel energy use. Improving walkability and bicycle accommodations have been among the most often requested improvements at Town Plan public outreach efforts. The consultant work on commercial districts and the AARP-funded one-day workshop on Canal St in 2011 also pointed out areas for improvement consistent with Complete Streets policies. Increasing pedestrian and bike activity has multiple public health as well as energy use benefits and is an area where thoughtful planning can facilitate benefits in neighborhood feel, public health, and energy.

The Town has reviewed its fleet needs and worked to improve efficiency through reviewing operations and replacing existing vehicles with more fuel-efficient vehicles where applicable. The major motivation is reducing operating costs.

Park and Ride lots are a tool to increase carpooling; lots are designated and signposted (with online maps showing their locations). Park and Ride facilities are intended to encourage bicycle use by connecting to the in-town bus service (buses are fitted with bike racks), thus reducing overall car use. The Town has completed a Park and Ride lot at the Book Press lot on Brown Court (off Putney Rd). Further work should be done on the feasibility of Park and Ride lots in the south and west of Brattleboro.

The Brattleboro Energy Committee is working to promote alternative transportation through programs such as the Way to Go! Commuter Challenge, which encourages commuters to walk, bike, carpool, or take the bus to work. Go Vermont, a program sponsored by the Vermont Agency of Transportation, provides a free carpool matching service and information on vanpooling.

If, as predicted, Plug-in Electric Vehicle (PEV) use increases, Brattleboro will need to update its existing single recharging station in the Transportation Center and expand the number of locations where recharging is possible. While major technology improvements are predicted in this area, as use increases, it is expected



that there will be viable private market-based responses soon and/or employers will upgrade parking lots to accommodate demand. As the use of PEVs increases, the capacity of the electrical grid at the local level will likely need to be reviewed.

Energy and Land Use

Brattleboro has a compact core (roughly bounded by the West River to the north, the Connecticut River to the east, and I-91 to the west) with a narrow corridor of development along Rt 9 to the west. Given the very steady population of Brattleboro, there has been little obvious sprawl in the past 20 years. However, as is common in the Northern New England region, very low-density sprawl in semirural and rural settings persists.

In Chapter 12 “Land Use,” future land use is addressed in terms of enhancing a walkable community through compact development, and preserving the working landscape, which is a natural and scenic amenity. These objectives conform broadly to smart growth principals, and are consistent with energy-wise land use planning. Through the use of a revised Zoning Ordinance (recommended by this Plan) Brattleboro could facilitate more intense (re)development of its core and an orderly build-

out of areas serviced by existing town roads, public transit, and water and sewer systems. If new large-scale areas of residential development are deemed necessary in the future, they should be appropriately planned as compact neighborhoods, or even new village centers, ensuring that build-out mitigates the energy impact of development (i.e., integrate efficiency and community renewable energy systems into the design) and achieves adequate densities so as to ensure that daily services and activities such as education, shopping, and employment can take place without reliance on personal vehicles. Such subdivisions should ensure that lot layouts take advantage of passive and active solar gain and, where feasible, include other renewable energy installations.

FOOTNOTES

¹ Comprehensive Energy Plan (CEP), VT Department of Public Service, (December 2011).

² Comprehensive Energy Plan (CEP), VT Department of Public Service, (December 2011), vol. 2, p. 18.

³ CEP, VT Department of Public Service, (December 2011), p. 19.

⁴ Report on the Council on the Future of Vermont, *Imagining Vermont: Values and Vision for the Future* (Vermont Council on Rural Development, 2009). Verdana Ventures, *Farm Energy Innovation in Vermont: A Report to the Vermont Sustainable Agricultural Council* (Randolph, 2008).

⁵ Under net-metering, a system owner receives retail credit for at least a portion of the electricity the owner generates.

⁶ U.S. Department of Energy and Solar America Communities, *Solarize Guidebook*, prepared for NREL Subcontract No. AGG-0-41034-01, (January 2011).

⁷ Vermont Comprehensive Energy Plan, (December 2011), vol. 2 sec. 4.

⁸ There is no necessary correlation between GDP and energy intensity; see L. Shipper and A. J. Lichtenberg, "Efficient Energy Use and Well-Being: The Swedish Example," *Science*, 194, (December 3, 1976).



CHAPTER 4

Agriculture

Brattleboro values agriculture as both a source of local food that is integral to food security and as an important economic driver, and strives to protect, preserve, and expand existing agricultural businesses and lands.

Agriculture

Goals

- A. Preserve the land and other environmental resources critical to the long-term success of the local agricultural economy
- B. Maintain and enhance the local agricultural sector and its capacity to respond to market trends in agriculture
- C. Build public support for the community's farms and farmers, and promote, protect, and assist agriculture as a functional sector of the local economy

Policies and Actions

Policy 4.1 Improve access to viable and affordable agricultural land

Actions

- 4.1.1 Support the efforts of the Vermont Land Trust, Vermont Housing and Conservation Board, Earth Bridge Land Trust, and other farmland conservation organizations to preserve farmland
- 4.1.2 Create an agricultural lands inventory that provides information on soil type, current land use, and food production
- 4.1.3 Review the policies of the Farmland Tax Stabilization program

Policy 4.2 Maximize opportunities for local producers to access necessary equipment to support their farm operations

Actions

- 4.2.1 Amend the policies governing the Agriculture Land Protection Fund to allow it to be used for projects that enhance the viability of farming

Policy 4.3 Implement initiatives to strengthen the community food system

Actions

- 4.3.1 Support community-led initiatives to strengthen the food system, including the development of necessary infrastructure, such as dry and cold storage, commercial food-processing kitchens, distribution outlets, slaughterhouses, and community gardens

Agriculture is valued as working open land and for its intrinsic contribution to Vermont’s environment, community character, health, history, culture, economy, and quality of life. State Planning Statute requires town plans to strengthen agricultural industries. Planning for agriculture involves coming up with strategies to protect the long-term viability of agricultural lands, encouraging locally grown food products, and supporting other activities to make farming a successful economic enterprise.

By discussing agriculture in a stand-alone chapter of the Town Plan, Brattleboro is making a strong statement about its importance to the community—both for its economic potential and its cultural value. The working landscape affords Brattleboro the opportunity to strengthen its food, energy, and economic future, and to attract new residents who value this lifestyle.

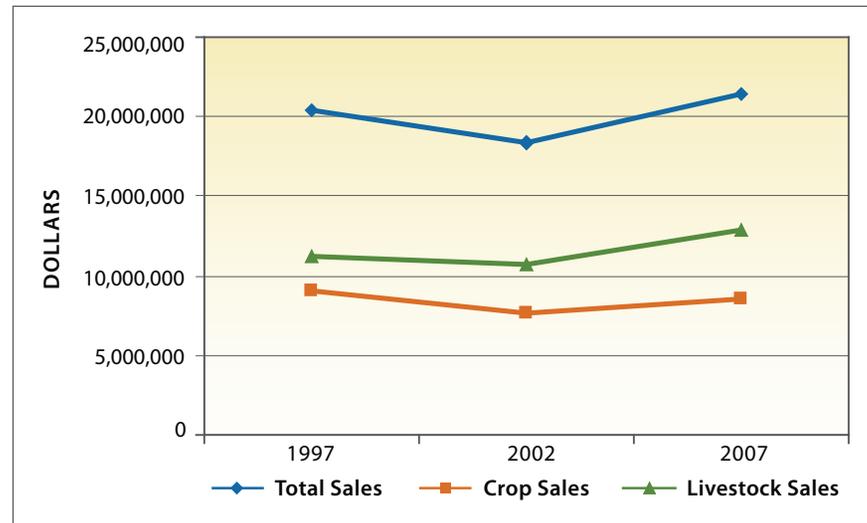
CURRENT CONDITIONS

Agricultural Data

The most recent data available for local agricultural conditions is from the 2007 U.S. Census of Agriculture. Local data is collected by zip code. The Brattleboro zip codes include parts of Guilford, Dummerston, and Marlboro. In 2007, there were 108 local farm operations. The majority of farm operations (64%) were owned by the farm operator. Agricultural activity in Brattleboro is primarily concentrated in West Brattleboro.

The local farming community is comprised of smaller, diversified farms. Operations include vegetables, fruits and berries, corn, maple syrup, hay, Christmas trees, horticulture, poultry, cattle, dairy, sheep, goats, and hogs. Of the 63 cropland farm operations accounted for in the 2007 Agriculture Census, 53 were smaller than 50 acres.

Figure 4.1: Windham County Agricultural Sales, 1997–2007



Source: U.S. Department of Agriculture, Census of Agriculture, County Summary Highlights, 1997, 2002, 2007

Figure 4.1 shows the agricultural sales in Windham County from 1997 to 2007. At the County level, farms experienced an 8% increase in sales from 2002 to 2007. The market value of products sold increased from \$18,321,000 in 2002 to \$21,408,000 in 2007, slightly above the rate of inflation. In 2007, the market value of crop sales accounted for 40% of products sold, while livestock sales accounted for 60%.

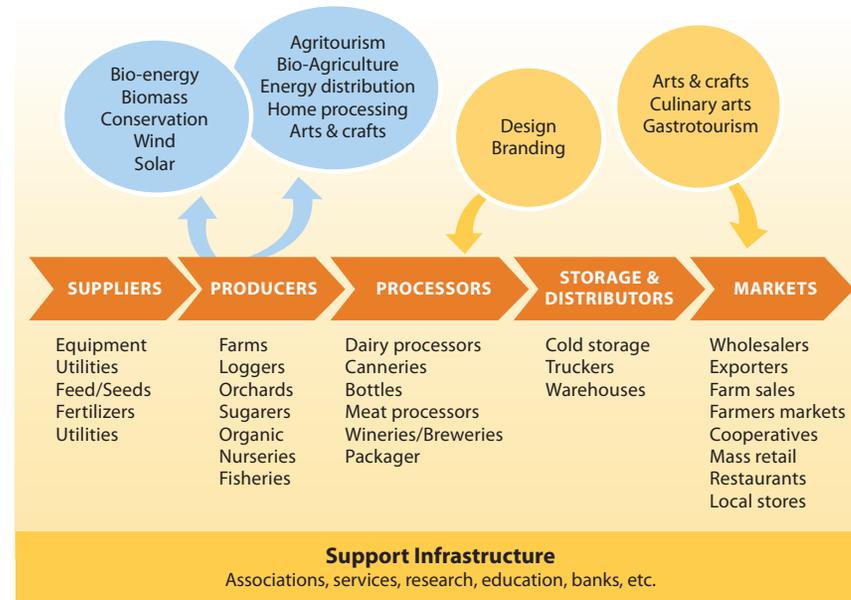
Throughout Vermont, direct sales from farms to consumers are increasing. The 2002 Census of Agriculture ranks Vermont 27th out of all states in this category, well above the state’s ranking of national agricultural output (43rd).¹ The increase in number of farmstands, community-supported agriculture entities (CSAs), and farmers’ markets, as well as programs such as Farm to School and Vermont Fresh Network, are assisting farmers in growing direct sales.

Fifteen of the local farm operations reported having organic sales. According to the U.S. Department of Agriculture Economic Research Service, organic farming has been one of the fastest growing segments of U.S. agriculture for over a decade. In 2008, Vermont ranked 8th in the nation for the number of certified organic operations, with 537 certified operations (totaling 91,639 acres of land). The number of statewide certified organic operations more than doubled from 2002 to 2008, when there were 235 operations (totaling 29,170 acres).²

Agriculture and the Economy

Statewide, Windham County’s production of fruit, particularly apples, is an important contributor to the state’s agricultural economy. Despite ranking 11th out of Vermont’s 14 counties for the market value of agricultural products sold in 2007, Windham County ranked 2nd both for vegetables and for fruit and berries. According to the USDA, Vermont’s top agriculture commodities in 2009 (ranked in importance) were dairy products, cattle and calves, maple products, greenhouse/nursery, and apples. It is important to note that Vermont’s agricultural products comprise a very small percent of total U.S. output, with the exception of maple syrup. The saw log market is strong in Windham County; forestry accounts for a significant portion of our working landscape, and is a large employer in Brattleboro (Cersosimo Industries and Allard Lumber).³

Figure 4.2: Sustainable Food Systems Cluster



Source: Regional Technology Strategies, Growing Jobs, Vermont-Style: Skills and Knowledge for Vermont’s “Sustainable Food System Cluster” and Natural Resources (Vermont Department of Education, 2010, p. 12). Verdana Ventures, Farm Energy Innovation in Vermont: A Report to the Vermont Sustainable Agricultural Council (Randolph, 2008).

When measuring the significance of agriculture to the economy, it is important to consider farms in a broader context. The listening tour conducted by the [Council on the Future of Vermont](#) (2007–2009) revealed that Vermonters feel that agriculture and forestry are essential to the State’s character and working landscape, and that they are important foundations for many other external values and benefits.⁴ Looking at agriculture as part of an industry cluster related to the food system helps to provide this broader context. The concept of industry clusters is discussed further in Chapter 2 “[Economic Development.](#)” A 2010 report to the Vermont Department of Education modified the concept of the food system cluster, reframing it as a “sustainable food system” (see Figure 4.2). Sustainable food systems and natural resources “include all of the economic activities necessary or desirable to support the production and consumption of food and plants as sources of household income and business revenue.”⁵ Some examples of the sustainable food systems cluster in Brattleboro include:

- **Commonwealth Dairy:** a dairy processing facility accepting milk from the open market, including local and organic milk
- **Grafton Cheese:** a cheese-making facility (utilizing raw milk from Vermont farms) and retail shop, including a petting farm and education center, located on the site of a former dairy farm
- **Strolling of the Heifers:** an annual celebration connecting people with the farmers and producers of healthy local foods

Opportunities exist for the further development of core agricultural activities, such as dairy farming, organic produce, and forestry. Effectively targeted support of enterprises related to these sectors, in fields such as trade organizations, education and training, gastronomic tourism, renewable energy technologies (both on the farm and using crops for renewable energy production), and furniture production would likely support growth in this industry sector as

a whole. Long-term growth in the sector could then spur more interest in Brattleboro over time, as a destination for tourism, investment, and new families to make their home.

Agriculture Support Resources

There are a number of organizations located in Brattleboro that play a vital role in the success of local farming by providing educational and technical assistance. These include the University of Vermont Cooperative Extension, the USDA Rural Development, Natural Resources Conservation District, Windham County Farm Service Agency, and Windham County Conservation District. The Strolling of the Heifers, a locally organized nonprofit organization, offers grants to farmers for educational training and operates a microloan program for Vermont and Massachusetts farmers.

There are several organizations that help connect farmers and food producers to other markets. The Windham Farm and Food Network is a nonprofit, farmer-owned produce delivery service for wholesale buyers in Windham County. The Vermont Fresh Network (VFN) helps promote partnerships between farmers, producers, and chefs so that they can work together to strengthen the local community and economy. There are several members in VFN from Brattleboro, including farms, the Brattleboro Food Co-op, producers, institutions, and chefs.

Important statewide resources for farmers include the Vermont Agency of Agriculture and the Northeast Organic Farming Association (NOFA). The Agency of Agriculture provides technical, financial, and regulatory assistance to farmers. NOFA provides educational and technical services in support of organic agriculture, local food systems, and consumer education.



The Next Generation of Farmers

Brattleboro students are exposed to local agriculture beginning at a young age. Farm to School programs support local farms, educate children about food, and provide opportunities for classroom fieldtrips to farms. At the secondary level, the Windham Regional Career Center offers an Agriculture and Sustainable Food pathway that includes courses in forestry, land management, machine operations and maintenance, culinary arts, horticulture, contracting, and hydroponic and greenhouse operations, as well as apprenticeship opportunities. This new curriculum was implemented in 2011 in support of efforts to attract more students to the field by broadening the curricula to encompass the broader thinking of agriculture and forestry as part of a sustainable food system cluster. For those pursuing degree programs, Vermont Tech in Randolph offers a wide variety of two- and four-year degrees related to agriculture, landscaping, and horticulture, and the University of Vermont offers several degree programs in their College of Agriculture and Life Sciences.



Farmland Protection

The pressure to convert farmland to nonagricultural uses in Brattleboro appears to be low overall. The population in Brattleboro has been decreasing, and residential development rates have been low. However, by preserving agricultural lands, Brattleboro continues to support traditional agriculture, and provides opportunities for newer agricultural markets such as agri-tourism and organic foods.

Land is an essential asset for farming. Therefore, it is essential to retain the land base by identifying and prioritizing key parcels for preservation. Once these critical agricultural areas are identified, efforts can be made to steer development away from them and into areas with existing infrastructure, or to marginal lands where infrastructure can be provided. The preservation of farmland was the primary focus of Brattleboro's Agricultural Advisory Committee in the 1980s and 1990s. Since that time, there has been limited agricultural land preservation and no update to the land evaluation and site assessment that was compiled back in the 1980s. Prioritizing the importance of agricultural lands allows for the coordination of farmland preservation and agricultural retention. This Plan supports the creation of an agricultural lands inventory to identify critical agricultural lands.

There are several methods/programs available to assist Brattleboro farmers in protecting their farmland:

Conservation Easements

The purchase of conservation easements has been a successful method of protecting farmland in Brattleboro. This is a voluntary program whereby local, county, or state agencies purchase the surface development rights from willing landowners. In exchange, a conservation easement is placed on the land that prohibits non-agriculture-related future development in perpetuity. Since the conservation easement dramatically limits the future uses of the property, property tax assessments take into consideration

PUBLIC BENEFITS OF CONSERVATION EASEMENTS

- *Protects productive agriculture and forestry land*
- *Protects wetlands*
- *Protects wildlife habitat*
- *Preserves open spaces*
- *Maintains character of rural community*
- *Land under easement remains in private ownership and on local tax rolls*

the impact of the easement on the property's value. The Vermont Land Trust holds conservation easements on 13 parcels totaling 637 acres of agricultural land in Brattleboro. Earth Bridge Land Trust has easements on 2 parcels totaling just over 136 acres. Action item 4.1.1 of this Plan supports the preservation of farmland by these organizations.

Current Use

Since 1980, Vermont's Use Value Appraisal Program (commonly referred to as Current Use) has helped to keep farm and forest land managed and in production. This program taxes farm and forest land according to use value, instead of fair market value. According to the Vermont Department of Taxes, the primary objectives of the program are to keep Vermont's agricultural and forest land in production, help slow the development of these lands, and achieve greater equity in property taxation on undeveloped land. The State of Vermont reimburses communities for municipal property tax revenue that is lost due to enrollment of land in the program. Participating landowners must pay the balance of property taxes due to the community. The program includes a Land Use Change Tax as a disincentive to develop land.

According to the Vermont Tax Department, there were 1,396.65 acres of agricultural land enrolled in the Use Value Appraisal Program in Brattleboro in 2010. This amounts to 6.7% of the Town's 20,800 acres.

Town Assistance

The Town of Brattleboro established the Agricultural Land Protection Fund, a revolving loan fund, in 1983 for the purpose of purchasing interests in threatened farmland from residential, commercial, and industrial development. The Fund has been used several times since its establishment.

Farmland tax stabilization programs provide financial assistance to farmers and farmland owners through a reduction in real estate property taxes. In Brattleboro, this

is accomplished through reducing the assessed value of the land. Only the municipal portion of the property tax is stabilized; property owners wishing to have the state education tax stabilized must apply to the Use Value Appraisal Program. The Selectboard sets the contract terms and criteria for the tax stabilization program. In 2010, there were 9 participants in the farm stabilization program. A total of 990 acres, representing approximately 7.7% of the total land area of the town, is tax-stabilized. The average discount for properties in the program was 57% of the municipal tax rate.

Local Infrastructure Supporting Area Farmers

While Brattleboro residents depend on out-of-state agricultural products for the majority of their food needs, local farming provides access to seasonally fresh farm products. To some this is a coveted amenity, while to others it is an opportunity to keep local dollars within the community, and support local farms. And for others, the availability of fresh food is critical to food security and the creation of a self-sufficient community that has the ability to feed itself. Brattleboro is fortunate to have a growing local food infrastructure that includes the following:

- **Farmers' Markets:** The Brattleboro Area Farmers' Market operates two farmers' markets from May to October, providing a venue for farmers to sell their products directly to the public. From November to March, Post Oil Solutions operates a Winter Farmers' Market. Farmers' markets in several nearby towns also provide an opportunity for farmers to directly access a market.
- **Market Basket:** The Market Basket is a farmers' market designed by Post Oil Solutions to give people who qualify for the federal Supplemental Nutrition Assistance Program (formerly known as food stamps) access to fresh produce. Post Oil Solutions is currently operating two Market Baskets at Westgate and Elliot Street.





- **Farmstands:** Several farms offer direct sales of seasonal fruits, vegetables, meat, eggs, and other products to consumers at farmstands in Brattleboro: Cortland Hill Orchard, Dutton Farmstand, Fairwinds Farm, and Lilac Ridge Farm.
- **Community Support Agriculture (CSA):** In Brattleboro and neighboring towns, there are a variety of CSAs offering fresh vegetables, fruits, herbs, and flowers.
- **Community Gardens:** All of the public elementary schools and St. Michael School have gardens. Post Oil Solutions has been active in establishing community gardens, including one on Upper Dummerston Road and several at housing complexes and nonprofit businesses in Brattleboro. The Town Recreation and Parks Department offers plots in a community garden located on Stockwell Drive.

- **Gleaning:** The Vermont Food Bank has partnered with several volunteers, including Post Oil Solutions and the School for International Training's 2-Acre Farm, to create a gleaning network. Gleaning harvests otherwise excess or unmarketable farm produce. According to Post Oil Solutions, 76,000 pounds were gleaned in Windham County from October 2009 to October 2010. Most of the gleaned food was donated to food shelves and meal sites serving Vermonters in need.
- **Farm to School:** This program promotes and connects schools and local farms with the objectives of serving healthy meals in school cafeterias; improving student nutrition; providing agriculture, health, and nutrition education opportunities; and supporting local and regional farmers. In Brattleboro, the Farm to School program started in 2007 in the three elementary schools. It has since expanded to the middle and high schools, and has facilitated more than 6,000 pounds of local food being served in the schools. The program also educates students in agriculture, and in 2010 Farm to School funded a total of 13 field trips for 249 Brattleboro students.
- **Strolling of the Heifers Parade and Festival:** This annual celebration of agriculture, featuring a heifer parade in downtown Brattleboro, has become a signature event for the community and Vermont.

Brattleboro and the county lag behind many other parts of the state in access to resources for food processing, manufacturing, and storage and distribution facilities for farmers and value-added producers. The Vermont Department of Agriculture designed and purchased a mobile poultry processing unit, operated by a farm out of Morrisville, in 2009 to allow on-site slaughter, cleaning, inspection, and packaging, saving farmers the expense of having their birds processed out of state. The northern part of the state also has access to a flash freezer and more refrigerated storage facilities. In Southern VT, the only food processing

WHAT IS A CSA?

A CSA consists of a community of individuals who pledge support to a farm operation, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Typically, members or "share-holders" of the farm or garden pledge in advance to cover the anticipated costs of the farm operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season.



facility available is Westminster Meats, a USDA inspected slaughter house and meat processing plant; there is no commercial processing space available to area producers or entrepreneurs. Improved access to such services may improve the agricultural output for Brattleboro and Windham County, and would present valuable economic development opportunities. Action 4.3.1 of this Plan supports initiatives that will bring needed infrastructure to Windham County. For further discussion refer to Chapter 2 [“Economic Development”](#).

While the protection of agricultural land remains important, land protection is now only one of several strategies needed to improve the vitality of local agricultural enterprise. Obstacles facing farmers today include obtaining capital for on-farm projects, farm land purchase, and support for agricultural services. Action 4.2.1 in this Plan is to amend the policies governing the Agricultural Land Protection Fund so that it can be used to overcome these types of obstacle.

FOOTNOTES

¹ Vince Bolduc and Herb Kessel, *Vermont in Transition: A Summary of Social, Economic, and Environmental Trends* (Center for the Future of Vermont, 2008).

² In 2002, the USDA implemented national organic standards.

³ Biomass Energy Resource Center, *Vermont Wood Fuel Supply Study* (Montpelier, 2007), p. 4.

⁴ Report on the Council on the Future of Vermont, *Imagining Vermont: Values and Vision for the Future* (Vermont Council on Rural Development, 2009).

⁵ Regional Technology Strategies, *Growing Jobs, Vermont-Style: Skills and Knowledge for Vermont’s “Sustainable Food System Cluster” and Natural Resources* (Vermont Department of Education, 2010, p. 12). Verdana Ventures, *Farm Energy Innovation in Vermont: A Report to the Vermont Sustainable Agricultural Council* (Randolph, 2008).





CHAPTER 5

Education

Brattleboro understands the importance of a strong, diverse, and rich educational environment and values access to educational and vocational training opportunities for all ages.

Education

Goals

- A. Strive for the highest quality education for the children of Brattleboro
- B. Establish a strong cooperative relationship between the Town and higher education institutions located in Brattleboro
- C. Foster an environment that stimulates lifelong learning
- D. Encourage youth to pursue higher education, specialized, or advanced skills that will make them an asset to Brattleboro as adults

Policies and Actions

Policy 5.1 Maximize resources for the provision of a full and rich education for all students

Actions:

- 5.1.1 Provide opportunities for students to participate in civic life by including student representatives on Town boards, committees, and commissions; investigate whether such participation can count toward a student's community service requirement
- 5.1.2 Continue to provide financial support for early education
- 5.1.3 Work with the colleges to support collaboration efforts

Policy 5.2 Promote healthy and safe school environments

Actions:

- 5.2.1 Work to provide students with safe ways to walk or bicycle to school
- 5.2.2 Participate in community health and wellness initiatives

Policy 5.3 Strengthen job training and workforce development

Action:

- 5.3.1 Develop and build relationships between the business community and other community organizations for workforce development

Quality education is essential to the health of a community. State statute not only requires that town plans address the present and projected needs of the local public school system, but also requires that municipalities broaden educational and vocational training opportunities for all Vermonters. It is not the municipality's responsibility to make policy or spending decision for the schools—those are made by the school district, with the budget voted on annually by citizens. However, as both the municipal and school budgets are financed by property taxpayers, the impacts of the combined budgets must be considered, and large capital projects should be coordinated.

Addressing education as a chapter in the Town Plan signals the Town's commitment to work cooperatively with the local school districts, colleges, and other education providers, including homeschoolers, in meeting facility needs, fostering a safe and healthy school environment, and recognizing the critical role that all types of education play in Brattleboro's vitality and character. Brattleboro's public and private educational facilities are shown on the Public Safety, Municipal Facilities, and Educational Facilities Map in Chapter 10 "Municipal Facilities and Services".

PUBLIC SCHOOLS

School District Overview

School districts in Vermont are organized in supervisory unions. The Windham Southeast Supervisory Union (WSESU) has administrative responsibility for the town school districts in the region. Brattleboro is a part of two school districts, each of which is responsible for establishing policy and presenting an annual spending plan for voter approval. The Brattleboro Town School District, comprised of five elected school board members, oversees the elementary schools in Brattleboro. Brattleboro Union High School (BUHS) District #6 is comprised of nine elected members, five of whom are from Brattleboro. BUHS#6 over-

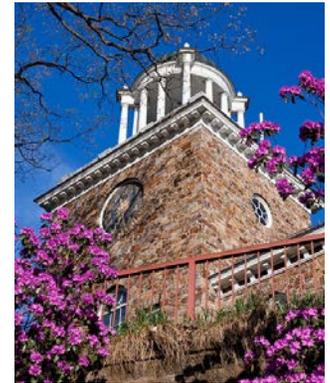
sees Brattleboro Area Middle School, Brattleboro Union High School, and the Windham Regional Career Center.

Public School Facilities

There are three elementary schools located in town. Students do not necessarily attend the school located closest to them; instead the elementary school population is divided by the number of students in each grade level who are placed in one of the following schools:

- Academy School was built in 1956 and is located in the Village of West Brattleboro on 10.6 acres of land. Academy School is the Town's largest school, with 47,200 square feet. In 1995, a 7,700-square-foot addition of classrooms, a library, and an art room was constructed. In 2008, a 1,456-square-foot modular classroom unit containing two classrooms and a bathroom was added to the site.
- Green Street School was built in 1924 and is located on 2.5 acres of land. Green Street School is 28,700 square feet. The most recent addition to the school was a 3,500-square-foot gym in 1995.
- Oak Grove School was built in 1912 and is situated on 2.4 acres of land. As a result of a 1995 addition, the school now contains 32,000 square feet, which include nine classrooms (two of which are dedicated for Special Education) and a library, art/music room, cafeteria, gymnasium, support service rooms, and office.

In 2007, Brattleboro Union High School District completed the largest high school renovation project in Vermont: a \$55.7 million renovation and addition to the Brattleboro Union High School, Brattleboro Area Middle School, and Windham Regional Career Center. At this time, there are no further renova-



tions or additions planned. Funding of ongoing maintenance is expected.

The Brattleboro Town School District has a capital planning committee that evaluates future space needs. There are no new space needs projected for the next five years. School district officials have identified maintenance to the grounds, facilities, and building systems as the capital needs in the coming years. Improving energy efficiency, where possible, through minor upgrades is a stated goal of the School Board.

Brattleboro Union High School is complemented by the Windham Regional Career Center (WRCC), which provides state-approved career and technical education. The Career Center serves all of the public schools in Windham County. Students in grades 9 and 10 can attend WRCC on a part-time basis, while those in grades 11 and 12 have the option of attending full time.

Canal Street School is also owned by the Brattleboro Town School District, although it is no longer used as an elementary school. Several Head Start classrooms operated by Early Education Services are housed in the building. The Evening Child Care program operated by Windham Child Care Association is located at the Canal Street School. The Association contributes funding to offset the cost of utilities and operation.

The schools in Brattleboro are used for a variety of community activities in the off-school hours. The Recreation and Parks Department utilizes both indoor gyms and outdoor fields for several of their sports programs, including volleyball, basketball, soccer, and tee ball. Academy School and BUHS are also used for Representative Town Meeting and elections.

Student Enrollment

From 2005 to 2010, there was a slight decline in the number of students from Brattleboro attending the town's public schools (see Tables 5.1 and 5.2). This decline has mirrored the statewide trend in public school enrollment. While no formal projections have been done for the elementary schools, best guess estimates from Supervisory Union staff and principals indicate that enrollment will remain fairly steady over the next five years.

Table 5.1: Elementary school enrollment: 5-year comparison and compounded annual growth rate (CAGR)

School	2005	2006	2007	2008	2009	2010	CAGR
Academy	373	359	355	383	365	354	-1%
Oak Grove	153	149	162	160	147	154	0%
Green Street	264	270	270	277	275	260	0%
Brattleboro School	790	778	787	820	787	768	-1%

Source: Windham Southeast Supervisory Union Enrollment Data, 2010

Table 5.2: BUHS #6 enrollment: 5-year comparison and compounded annual growth rate (CAGR)

	2005	2006	2007	2008	2009	2010	CAGR
Brattleboro Area Middle School							
Brattleboro students	235	204	231	206	213	214	-2%
Remaining towns	79	79	72	81	85	75	-1%
Total	314	283	303	287	298	289	-2%
Brattleboro Union High School							
Brattleboro students	470	512	499	473	457	425	-2%
Remaining towns	517	526	517	517	545	504	-1%
Total	987	1038	1016	990	1002	929	-2%

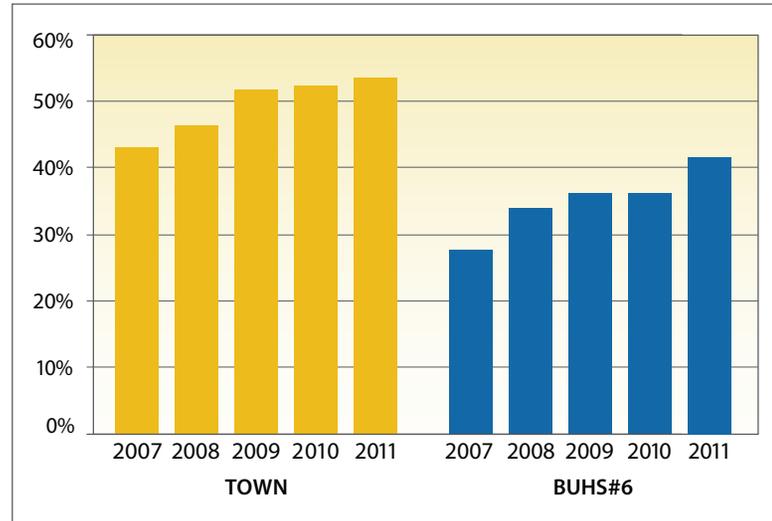
Source: Windham Southeast Supervisory Union Enrollment Data, 2010

Based on projections from BUHS #6 School District, the Middle School and High School expect a very small decline in student enrollment to continue until 2014, at which point it will begin to increase again.

Windham Regional Career Center's (WRCC) enrollment has been steady at around 500 seats (approximately 200 full-time-equivalent students), with approximately 360 seats from students who attend BUHS.

The number of students eligible for free and reduced-price school meals is increasing. Figure 5.1 shows the increasing rates of poverty among the school district's population. The poverty data for Brattleboro reached over 50% for both the Town School District and BUHS #6 for the first time in 2011. This far exceeds the statewide average, which was 37.93% in fiscal year 2011 (counted as of October 1, 2010). All of Brattleboro public schools and St. Michael School (included in the Town School District count) participate in free and reduced-price school meal programs for eligible students. In order to be eligible for the programs, a student must be qualified as low-income. The determinations are based on the Family Size and Income guidelines published by the U.S. Department of Agriculture. To be eligible for free meals, a family's income must be at or below 130% of the federal poverty line. If the family income is between 130% and 185% of the federal poverty line, a student qualifies for reduced-priced meals. Participation in this program is a social indicator for a community.

Figure 5.1: Percent of students eligible for free and reduced price school meals by school district



Source: VT Department of Education, Child Nutrition Programs, Annual Statistical Reports

Special Education

Windham Southeast Supervisory Union (WSESU) Support Services administration supports all district schools with oversight of referral, eligibility, and instruction of individualized special education in the least restrictive learning environment. Support Services provides compliance oversight for federal and state regulations, and WSESU policies and procedures.

Some students require intensive accommodations and instruction that cannot be provided within the typical education setting for part or all of their school day as a result of a child's disability. WSESU provides a continuum of services from K to 12 to assure that these students progress successfully, including opportunities to participate with their same-age peers in general education.

Healthy School Communities

Increasing attention has been paid to improving the health and wellness of adults and children. Federal initiatives such as Safe Routes to School, Farm to School, and the Let's Move campaign have focused attention on improving the health of children by promoting healthy foods and physical activity. The Vermont Department of Health, Fit & Healthy Kids Coalition of Windham County, and Meeting Waters YMCA have been involved in local efforts to build and support a healthy environment. This Plan recognizes these efforts, and supports healthy school environments through a policy and actions.

With community partners, Brattleboro schools have been very active in working to raise community awareness and improve child fitness and nutrition. The Town has participated in some of these efforts, and Action 5.2.2 of this Plan continues participation in such initiatives. As members of the Fit & Healthy Kids Coalition of Windham County, WSESU has been involved in efforts to measure the existing levels of support for physical activity and healthy eating using a variety of tools. Assessments performed by all schools within the WSESU identified the need for a research- and skills-based sequential comprehensive K-12 health education curriculum. Canal Street Head Start participated in the YMCA's Community Healthy Living Index process and through a self-assessment process identified the need for more vigorous play and for drinking more water.

Other important initiatives that the schools have been, or are currently, involved in to promote healthy lifestyles include:

- **Safe Routes to School:** Green Street School participated in the Safe Routes to School (SR2S) program from 2006 to 2010. Academy School participated in the program for one year in 2009. Both schools recorded good participation at program events, and Green Street reported an increase over the years in the number of children walking and biking to

school. As a result of collaboration with the Town, the schools were able to make some safety improvements in the school zones. At Academy School, the SR2S team worked with the Town Department of Public Works to install blinking lights in front of Academy School. At Green Street School, new crosswalks and a permanent solar-powered speed sign were installed to address high traffic volume and speed on Green Street, using grant funding from Safe Kids. Priority projects to further improve school zones include:

- Intersection improvements at Union Street so that it is safer for pedestrians
- Sidewalk improvements on Whipple Street and School Street
- Improved circulation for Academy School

Action 5.2.1 of this Plan is for the Town to be involved with providing students with safe ways to walk or bicycle to school. This is consistent with discussion of Complete Streets and policies promoted in Chapter 7 "Transportation."

- **Farm to School:** The Brattleboro Farm to School program began in 2007, and has expanded to all Brattleboro schools. The program helps to serve healthy meals in schools; improve student nutrition; provide



agriculture, health, and nutrition education opportunities; and support local and regional farmers. It is a program of Post Oil Solutions that, through grant funding, community donations, and school district contributions, supports a Program Coordinator who works with the schools and food-service providers to expand nutrition and farm education in the schools.

- **Fresh Fruits and Vegetables Program:** The elementary schools also participate in the Fresh Fruits and Vegetables Program, which provides funding to serve fresh fruits and vegetables at snack times. Part of the reason the schools participate in this program is the high number of students who are eligible for free or reduced-price meals. The schools have established a partnership with the Brattleboro Food Co-op and local farmers for the purchase of food.

Early Education

Early education in Brattleboro is provided in a wide variety of settings. In addition to childcare facilities that offer pre-K services, the school district supports limited, publicly funded (through available State aid) pre-K education by partnering with programs in the community. In Brattleboro, these partners are: Brattleboro Nursery School, Hilltop Montessori, Mulberry Bush Early Learning Center, Sue's Family Childcare, and the Winston Prouty Center. Early Education Services (EES) operates six Head Start (ages 3–5) and two Early Head Start (birth–3) classrooms at the Canal Street School, BUHS, and the Birge Nest. They have also partnered with the West Bee and Brattleboro Nursery Schools to provide some Head Start services. These programs are offered for low-income children. The demand for these programs well exceeds the existing capacity, which is limited due to funding. The Town has made an annual contribution to EES since its inception in 1987. This contribution is highly leveraged with other federal and state funding. Action 5.1.2 of this Plan is for the Town to continue to make this valuable contribution.

The Vermont Department of Education and Supervisory Union recognize the importance of quality early childhood education as the foundation for school success and lifelong learning. Since 2000, the Vermont Department of Education and Agency of Human Services have collected information from kindergarten teachers about the “readiness” of their students. This data is important in understanding the needs of children as they enter school, where to target program improvements, and early educator professional development planning.

In 2009, the State stopped analyzing the data at the supervisory union level. The WSESU took on this task, compiling the results for kindergartens in its member towns. Of particular note in the 2010–2011 survey is that 32% of kindergarteners’ ability to learn is sometimes, or often, inhibited by illness, fatigue, or hunger. This is an increase from 26% in the 2009–2010 survey.

Independent Schools

In its role as a regional provider of services, Brattleboro continues to benefit from a variety of independent schools that offer different learning environments. These schools include: St. Michael Catholic School (PK–8), Hilltop Montessori (PK–8), Austine School for the Deaf (PK–12), Neighborhood Schoolhouse (PK–6), Christian Heritage School (K–12), and the Community School House (2–8). There are also many other independent schools within commuting distance of Brattleboro.



HOW DOES VERMONT DEFINE KINDERGARTEN READINESS?

Through a multi-faceted approach that measures a child's competency in:

- social-emotional development
- communication
- physical health
- cognitive development
- knowledge
- approaches to learning

Under Vermont law, parents can provide home schooling. This provision allows for home-school students to be affiliated with a school, and receive assistance where appropriate.

Higher Education

Brattleboro has a broad complement of higher education resources, both undergraduate and postgraduate, that are assets to the community:

- Community College of Vermont (CCV) offers an undergraduate liberal arts education at their facility off Putney Road.
- The SIT Graduate Institute, a program of World Learning, has their campus on Kipling Road. SIT offers master's degrees and certificate programs for graduates and professionals.
- Marlboro College Graduate Center offers graduate degrees and certificate programs.
- Union Institute & University offers bachelor's, master's, and doctoral programs from the Academic Center at the Vermont Agricultural Business Education Center, located on Old Guilford Road.
- The Thompson Campus of Vermont Technical College, also located at the Vermont Agricultural Business Education Center, offers nursing classes.

These higher education institutions are small and are dispersed throughout town. Only the SIT Graduate Center has dormitories. Thus, Brattleboro does not benefit from the identity that comes with more traditional college towns where the presence of an educational institution anchors economic and cultural life. Nonetheless, Brattleboro does enjoy many benefits from having these institutions, including jobs, undergraduate study opportunities at lower tuition rates, opportunities for established workers and professionals to continue and enhance their education,



opportunities for cultural enrichment, and students from outside the area adding to diversity in the local population.

According to CCV Brattleboro, enrollment figures have been steady. The growth from Fall 2010 to Spring 2011 was 2%, matching the growth experienced by all CCV campuses statewide. They currently lease their educational facility located off Putney Road, which presents them with some challenges. While this space has been adapted to meet their needs, it was not built specifically for educational purposes. It has limited art and science capacity.

In May 2012, the Vermont Legislature appropriated funding for a combined downtown campus for CCV and Vermont Technical College. In October, the Vermont State Colleges Board of Trustees announced that the downtown location would be in the Brooks House building. This downtown location offers many community benefits that are consistent with the values of this Plan including: convenient access to education and training programs; an improved downtown landscape; the Brooks House building is returned to



productive use; continued economic development in the downtown; and the potential for increased customer traffic to downtown businesses.

Brattleboro is also well situated in that residents have access to several other colleges and universities within a short commuting distance, including Keene State College and Antioch New England Graduate School in New Hampshire, and Greenfield Community College, University of Massachusetts Amherst, and several other smaller liberal arts colleges in Massachusetts.

Adult Learning

Adults in Brattleboro and Windham County who need assistance with learning basic reading, writing, math, and English (as a second language) can receive instruction through Vermont Adult Learning (VAL). Other programs offered by VAL include:

- High school equivalency exam or adult diploma program
- Career support for qualified Vermonters
- Worker readiness programs
- High School Completion Program as an alternative path to a high school diploma for Vermonters age 16–21

Brattleboro has a wealth of resources that foster a sense of lifelong learning in the community. Brooks Memorial Library, the colleges, and several other organizations in town offer periodic programs that enrich learning in the community. Osher Lifelong Learning Institute, located on Route 5 in neighboring Dummerston, offers learning opportunities for people age 50 and older.

Workforce Training

An important component of the community's educational system is the ability to provide the labor force with appropriate job skills for future careers. This is also important for the continued economic success of the community. (See Chapter 2 "Economic Development" for further discussion.) Several educational institutions located in Brattleboro offer workforce training, including the WRCC, Vermont Adult Learning, and Vermont Technical College. This Plan supports job training and workforce development through policy 5.3 and action 5.3.1.

WRCC offers career and technical training. For high school students, the WRCC helps prepare students for various career options by offering learning experiences that allow students to develop academic skills, technical knowledge, and other skills needed for employment or advanced education. The WRCC also offers classes for adult learners both online and in the class or shop.

The Windham Workforce Investment Board (WIB) is a state-sponsored, community-driven group that strives to address critical workforce challenges in the region. It is comprised of a volunteer Executive Committee and aided by a coordinator. The WIB provides a forum for stakeholders to identify critical workforce challenges and to plan and coordinate the delivery of effective employment and training solutions. In 2011, the WIB conducted interviews with employers and released a report identifying the workforce needs for Windham County. The report identified three challenges: employment change (growing and declining occupations), workforce change (looming workforce shortages, middle-skill worker gap, low wages), and workforce development (hiring, retaining, and training).



CHAPTER 6

Housing

Brattleboro recognizes the value of housing that meets the needs of different households at a variety of life stages and that is environmentally and economically sustainable.

Housing

Goals

- A. Improve the quality of the existing housing stock and the neighborhoods in which it is located
- B. Increase the supply of housing opportunities to serve residents of all income levels, age groups, and special needs
- C. Balance the need and provision of housing in the community with the impacts on the environment and on public facilities and services
- D. Provide equal housing opportunities for all residents of Brattleboro

Policies and Actions

Policy 6.1 Promote the use of all available resources for the rehabilitation and conservation of the existing housing stock

Actions:

- 6.1.1 Develop a process to monitor land and buildings in existing neighborhoods to help identify threats to neighborhood stability and opportunities for new development
- 6.1.2 Continue to support programs that preserve and upgrade the existing housing stock
- 6.1.3 Conduct research and analysis of the benefits and impacts of implementing a building code enforcement program

Policy 6.2 Direct any new residential development to areas where services are readily available and efficient, and cost-effective development is most likely. Avoid adding residential development in areas vulnerable to natural hazards such as flooding and/or with limited access

Actions:

- 6.2.1 Rezone parts of lower Putney Road to permit residential development
- 6.2.2 Provide incentives for the construction of residential units in conjunction with new or substantially renovated commercial structures

Policy 6.3 Encourage residential development that promotes energy efficiency, universal design (designing residences so that they can be used by people of all abilities), and sustainable building

Actions:

- 6.3.1 Provide density bonuses for energy-efficient siting and construction

continued on next page

- 6.3.2 Investigate and establish development standards to promote solar energy access for all new residential development, including community solar
- 6.3.3 Promote the incorporation of energy-efficient features in new and existing construction by making information available on programs and resources for energy-efficient building materials and techniques
- 6.3.4 Permit conservation subdivision to reduce infrastructure and other development costs, preserve and enhance important environmental resources, and maintain important areas as quality open space
- 6.3.5 Consider joining the Property Assessment Clean Energy (PACE) program
- 6.3.6 Support regional nonprofit rehabilitation loans

Policy 6.4 Continue to support affordable housing for low and moderate income households

Actions:

- 6.4.1 Continue to support efforts to develop new homeownership and rental opportunities that are affordable to low and moderate income households
- 6.4.2 Work with the Southeastern Economic Development Strategy and the Workforce Investment Board to evaluate the housing needs of local businesses and industries

Policy 6.5 Encourage and implement residential development practices that result in more innovative housing options for diverse populations, while fostering sustainable development

Actions:

- 6.5.1 Provide regulations that allow affordable and more diverse housing such as cluster housing, cottages, mixed-income housing, shared residences, and single-room occupancy development (SRO)
- 6.5.2 Work cooperatively with property owners to explore solutions that result in residences being accommodated outside flood hazard areas

Policy 6.6 Encourage and support the enforcement of laws and regulations prohibiting discrimination in the sale and rental of housing

Action:

- 6.6.1 Disseminate information on fair housing law and regulations through the Town's public facilities

Housing plays a major role in defining Brattleboro’s sense of place, is a dominant category of land use, and contributes strongly to the character of neighborhoods and the Town as a whole. Public infrastructure investments are influenced by the location of existing and new housing. Housing is predominantly a private market activity; the purpose of this chapter is to guide and direct for the long-term preservation and improvement of residential neighborhoods, as well as the development of new housing units in mixed-use commercial settings (including Downtown) and other areas in town where physical infrastructure is readily accessed and natural hazards are minimal. Brattleboro has a long and proud history of supporting local initiatives to address affordable and special needs housing. This chapter provides some background on key initiatives in the affordable housing market.

CURRENT CONDITIONS

The residential land development market in Brattleboro has proved uncompetitive. Brattleboro has not sustained an active residential subdivision or condominium development market since the early 1990s. Several recent subdivision developments have failed as business ventures, burdening the Town (and taxpayers) with the costs of subsequent infrastructure construction and maintenance. Moreover, Brattleboro’s outdated housing stock (most of which is dated pre-1940s) often fails to meet contemporary market demands in terms of amenity, size, energy efficiency, and other expectations. Current market demands partially reflect long-term demographic changes, including household type, size, income, and special-needs populations. Overarching demographic trends, such as substantial growth in seniors, single-person households, and single-parent households, indicate a need for greater diversity in the housing stock.

Demographic Conditions

Brattleboro’s population growth has remained stable for over 50 years, with no appreciable growth or decline. This stagnation, despite land use capacity, is the opposite of trends at the county level and in neighboring towns. Table 6.1 provides a snapshot of demographic data.

Table 6.1: Demographic profile

	1990	2000	% Change	2010	% Change
BRATTLEBORO					
Population	12,241	12,005	-1.93%	12,046	0.34%
Housing units	5,551	5,686	2.43%	5,998	5.49%
Households	5,092	5,364	5.34%	5,562	3.69%
Persons per household	2.3	2.15	–	2.09	–
WINDHAM COUNTY					
Population	41,588	44,216	6.32%	44,513	0.67%
Housing units	25,796	27,039	4.82%	29,735	9.97%
Households	16,264	18,375	12.98%	19,290	4.98%
Persons per household	2.49	2.35	–	2.23	–

Source: U.S. Census Bureau, Profile of General Population and Housing Characteristics

The average number of people per household has declined from 2.3 in 1990 to 2.09 in 2010—noticeably smaller than the county average of 2.23 and the Vermont average of 2.34. This statistic reflects a relatively high percentage of people living alone. It also conforms to the national trend to having fewer children per household.

Other Brattleboro household characteristics, according to the 2010 Census, include:

- 25% of all households have individuals under age 18, lower than the state average of 28.9%
- 25.9% of households have individuals age 65 and above, almost identical to the state average of 25.4%
- 51.5% of total households are family households;¹ 48.5% are nonfamily. Statewide, 62.5% are family households, and 37.5% are nonfamily.

13.6% of all households have a female householder with no husband present; 9% have a female householder and her own children younger than age 18 (no husband present).²

Over one-third (38.7%) of householders live alone, and in 13.4% of all households the householder lives alone and is age 65 or older. Only 11.6% of all households are made up of married-couple families with their own children under age 18. Without significant numbers of new young families, household size may remain steady or decrease further as the population ages.

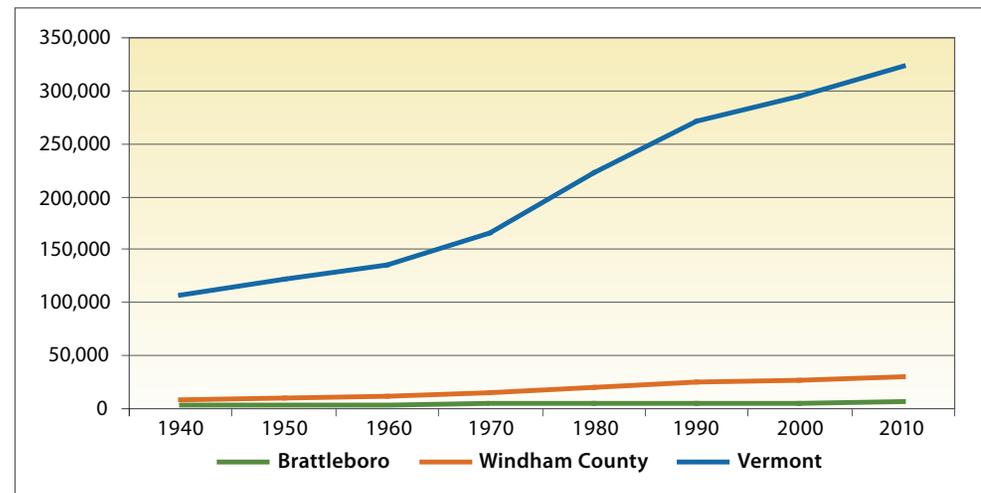
Housing Growth

The 2010 Census reports a total of 5,998 housing units in Brattleboro. This is actually a 5.4% increase (310 units) since the 5,686 units reported in 2000. This increase in dwelling units was not accompanied by a corresponding population increase, as Brattleboro's population only increased by 39 people over the same time period.

Brattleboro has experienced slow growth in its housing stock, never experiencing the housing boom that other parts of Vermont and Windham County experienced in the 1970s and 1980s, nor the housing boom that other parts of New England experienced in the 1990s (see Figure 6.1). However, according to the American Community Survey 2010 data, Brattleboro's slow growth is consistent with that of neighboring towns. Windham County's housing growth can largely be attributed to vacation or seasonal home development associated with the expansion of the ski resorts from 1980 to 1990.

2011 was a particularly difficult year for Brattleboro because of the loss of approximately 76 housing units. A massive fire at the Brooks House resulted in the loss of 59 apartments, and Tropical Storm Irene resulted in 17 housing units lost and many residents displaced for a long period of time.

Figure 6.1: Total housing units



Source: U.S. Census 2010

Types of Housing Unit

As shown in Figure 6.2, less than half of Brattleboro’s housing units are contained in free-standing, single-unit structures (approximately 44%) while nearly half of the units (49%) are classified as multifamily units. The remaining 7% of units is made up of mobile homes.

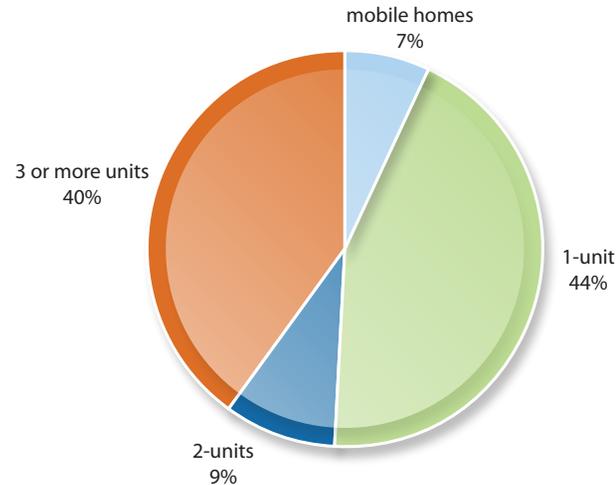
According to the Brattleboro Assessor’s data, there were 388 mobile homes as of August 2011. In Vermont, mobile homes are protected from exclusionary zoning practices, except on the same terms and conditions as conventional housing is excluded. Nonetheless, there has not been growth in mobile homes in Brattleboro. All but six mobile homes are located in one of four parks (Mountain Home, Glen Park, Black Mountain, and Deepwood Mobile Home Park).

As of the end of 2011, the Planning Services Department had issued demolition permits for 17 mobile home units that were substantially damaged as a result of flooding from Tropical Storm Irene. Most of the units will not be replaced in the same location, given their location in the floodway. The Planning Services Department has identified an additional 26 mobile home units that sustained damage in the flooding. Their viability as housing units in the long term is questionable.

Brattleboro’s diversity in housing options is enhanced by the presence of “accessory dwelling units,” commonly defined as “an efficiency or one-bedroom apartment that is clearly subordinate to a single-family dwelling, and has facilities and provisions for independent living.” Accessory dwellings are treated as permitted uses in Brattleboro.

There is a variety of housing size in Brattleboro, but most does tend to be smaller; 58% of the housing units contain 5 rooms or less (see Table 6.2). This is largely due to the large number of apartments.

Figure 6.2: Housing units by type in Brattleboro



Source: American Community Survey, 5-year Estimates 2005–2009

Table 6.2: Number of rooms in units

Bedrooms	Total Housing Units	% of Housing Units
1 room	281	4.59
2 rooms	445	7.27
3 rooms	733	11.98
4 rooms	1199	19.59
5 rooms	905	14.79
6 rooms	917	14.99
7 rooms	710	11.60
8 rooms	410	6.70
9 rooms or more	519	8.48

Source: American Community Survey 5-year Estimates 2005–2009

ACCESSORY DWELLING UNITS

An accessory dwelling unit (ADU) is a second dwelling unit created on a lot with a house, attached house, or manufactured home.

The second unit is created auxiliary to, and is smaller than, the main dwelling. ADUs can be created in a variety of ways, including conversion of a portion of an existing house, addition to an existing house, conversion of an existing garage, or the construction of an entirely new building. In Brattleboro, a Zoning Permit is required to build an ADU.

Housing Tenure

“Housing tenure” refers to the terms or conditions under which housing is occupied. Tenure characteristics illustrate the range of housing options available in a community, as well as suggesting the degree of household stability. A significant feature of Brattleboro’s housing picture is that the large amount of multiunit housing results in a high number of renters. According to the 2010 U.S. Census, the proportion of households renting in Brattleboro is 49%, much higher than the national average of 35%. Windham County (32%) trends closer to the national and state (29%) pattern of having nearly twice as many homeowner as renter households. Given the rural nature of Windham County and the type of much of the housing stock in the older Brattleboro neighborhoods, and given that the town serves as a regional center for jobs, shopping, and other services, it is reasonable to expect Brattleboro to have a high concentration of rental housing.

Age of Housing

The age of Brattleboro’s housing stock plays a role in the vitality of the community, as well as the overall cost of living. According to the Brattleboro Assessor’s data, nearly 73% of all housing units in Brattleboro were built prior to 1980, with almost 50% constructed prior to 1950 (see Table 6.3). The age is significant, because after three decades, it is more likely that maintenance and major component replacement are needed, and that desired features of modern housing may be missing. Often older homes have high operational costs (e.g., older homes that are not sufficiently insulated may have higher heating bills).

An aging housing stock also raises concerns as to the quality of Brattleboro’s rental housing supply. Health and safety codes applicable to rental housing are enforced by various state and local agencies, including the Vermont Department of Labor and Industry, the Brattleboro Fire Department, and the Town Health Officer. Generally, issues related to electrical codes, plumbing rules, and handicapped

Table 6.3: Age of housing in Brattleboro

Decade built	Housing units	Cumulative housing units	Rate of growth by decade
Prior to 1950	1,730	1,730	N/A
1950 to 1959	259	1,989	1.6%
1960 to 1969	311	2,300	1.6%
1970 to 1979	367	2,667	1.7%
1980 to 1989	463	3,130	1.8%
1990 to 1999	306	3,436	1.0%
2000 to 2009	185	3,621	0.6%
2010 to present	11	3,632	

Source: Brattleboro Assessor’s Data 1950–2009, Planning Services Department 2010 to present

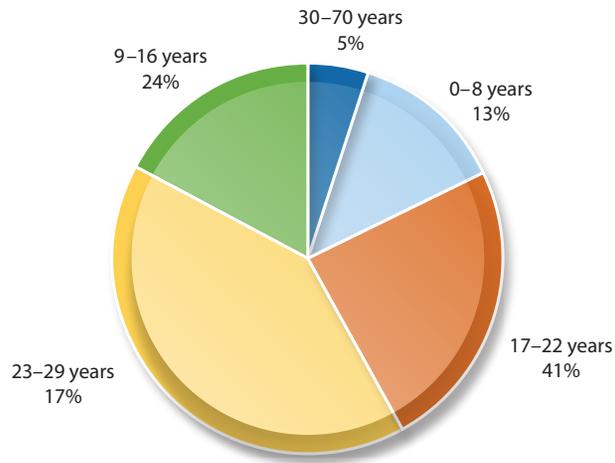
accessibility are referred to the state. Fire safety codes are addressed at both the local and state levels, and issues involving sewage disposal, water supply, and rodent and insect control are handled at the local level.

Housing Condition

The physical condition of housing is a key issue for maintaining the overall health of the Town and its neighborhoods. The physical depreciation value assigned by the Brattleboro Assessor’s Office in determining the assessed value was reviewed to measure the Town’s housing quality. This value helps establish the effective age of the structure, which is an indication of its condition and utility. Figure 6.3 shows that 5% of Brattleboro’s housing units have been depreciated between 30 and 70 years. An additional 17% have been depreciated between 23 and 29 years. The age of Brattleboro’s housing stock could have a negative impact on housing conditions, particularly due to deferred maintenance, as homes approach obsolescence in today’s market.



Figure 6.3: Housing unit physical depreciation



Source: Brattleboro Assessor's data

Affordability

Cost of Homeownership

Median income and housing values indicate the trend that home ownership is becoming more and more difficult for people in Brattleboro. For example, in 2000, households at the median household income could afford dwellings priced around the median home value in Brattleboro. By 2010, the same households could afford no more than dwellings priced at \$61,000 below the median value. This affordability gap precludes many homeowners from buying their first home and will also put additional demand on the rental housing market, contributing to higher rents. Alternatively, households will relocate to where their income is more in line with house prices.

A generally accepted standard used to define affordability is that monthly housing costs should not exceed 30% of household income. According to the Department of

Housing and Urban Development (HUD), families who pay more than 30% of their income for housing may be “cost-burdened” and have difficulty affording necessities such as food, clothing, transportation, and medical care.³ It should be noted that the term “affordable housing” is relative, since it depends on the income of the household. Affordable housing is not the same thing as subsidized housing for persons of low and/or moderate income, although subsidized housing is one type of affordable housing.



Vermont defines “affordable housing” as housing that is owned by its inhabitants, or rented by its inhabitants, whose gross income does not exceed 80% of the county median income, and whose household costs are no more than 30% of the household’s gross income.⁴ For those households below the county median income, the terms “low-” and “moderate-income levels” are used. The Vermont Community Development Program, based on data from HUD defines low- and moderate-income levels as below 50% and 80% median household, respectively.

To determine the affordability of homes, it is necessary to estimate the maximum price of a home that a person/family can afford if they spend no more than 30% of their income on housing costs, including mortgage payments, property taxes, and insurance. This calculation depends on many factors, including interest rates, the length of the mortgage, and the amount of the down payment. Based on assumptions for a typical home buyer, a family earning the estimated median household income for Windham County of \$46,465 (ACS 2005–2009) could afford a home costing approximately \$154,500.⁵ This is \$32,740 less than

the 2010 median assessed value for single-family homes in Brattleboro of \$187,240. Housing affordability for other income ranges and the number of single-family units in each price range in Brattleboro is shown in Table 6.4.

Table 6.4: Approximate cost of homeownership units, 2010

Assessed value	Affordability range	Single-family homes		Condominiums	
	Median county income \$46,465	Units	%	Units	%
\$76,000 or below	Less than 50%	22	1	9	3
\$76,000–\$123,500	50%–80%	148	7	69	26
\$123,500–\$154,500	80%–100%	322	16	98	37
\$154,500–\$186,000	100%–120%	512	25	55	21
\$186,000–\$280,500	120%–180%	785	38	27	10
over \$280,500	180% and over	265	13	7	3

Sources: Median Home Value, Assessed Value, and Number of Units: Town of Brattleboro Assessor's Database. Assessed Value is assumed to be 96% of actual value. Median Home Value and Household Income: 2005–2009 U.S. Census, American Community Survey.

As shown in Table 6.4, approximately 24% of the Town's single-family units were affordable to households earning the median income or less for the region. Households earning more than the median income had greater housing choice. About 87% of single-family units were affordable to those earning up to 180% of median income. Also shown in Table 6.4, condominium units remained more accessible to a range of income levels. Two-thirds of the units (66%) were affordable to households earning 100% or less of the median income.

Cost of Rental Housing

There is constant strong demand for rental apartments in Brattleboro; vacancies are low. Good-quality, affordable units are hard to find. Market prices vary significantly, given the variable quality in units on offer. While rental housing costs in Brattleboro have increased, it is difficult to measure the increase due to differing data methodologies. The 2000 U.S. Census indicated that the median gross rent in Brattleboro was \$546 per month.⁶ This information is now collected based on a sample basis through the American Community Survey (ACS), so it is not possible to get an accurate count. However, the estimate does indicate that median gross rent has increased (the ACS 2005–2009 estimate was \$665). The 2011 Housing Needs study prepared for Windham & Windsor Housing Trust notes that the ACS

may have underestimated Brattleboro's rents, given that a survey of units on the market for rent showed that Brattleboro's rents were higher than those of other large communities in the area.

The 2005–2009 ACS estimated that nearly half of renter households (48%) spent more than 30% of their household income on housing costs. Of owner-occupied households, it was estimated that approximately one in three (34.8%) spent more than 30% of their household income on housing costs.

The number of renter households in Brattleboro has inched closer to 50% from 2000 (48%) to 2010 (49%). Many renter households are sensitive to price increases, particularly those in the lower income category. For instance, seniors on fixed incomes or families earning a minimum wage are likely to be the first to get squeezed out. In addition, the vacancy rate is significantly lower in Brattleboro (5.8%) than



that in the state as a whole (7%). Given the recent losses of rental housing in Brattleboro, this market is likely even tighter than the numbers suggest.

Housing Resources

Meeting the needs for housing in Brattleboro is dependent on a shared commitment by public agencies, nonprofit organizations, and the private market.

Public and Assisted Housing Opportunities

The Brattleboro Housing Authority (BHA) owns and operates Federal Public Housing within the Town (see Table 6.5 for a listing of their properties). HUD subsidizes the rent in these developments through an annual operating subsidy to the BHA. Residents pay no more than 30% of their adjusted gross income for rent, regardless of the size of the apartment. BHA has 5 public housing developments and 1 tax credit affordable housing rental and commercial building, for a total of 304 units. BHA also administers the local Housing Choice Voucher program, which makes up to 187 rental vouchers available for use in the private and nonprofit housing market. Landlords who accept these vouchers receive the difference between fair market rent and the actual rent paid by the qualified low-income individual or family.

The nonprofit Windham & Windsor Housing Trust (WWHT, formerly Windham Housing Trust) has been an active developer of affordable housing opportunities for both renters and homeowners in Windham and Windsor counties. It is involved in acquisition, rehabilitation, sale, and management of affordable housing, including mobile home parks. WWHT has completed projects resulting in 227 units of affordable housing in Brattleboro, ranging from rehabilitation of single-family homes and multifamily housing units to adaptive reuse of historic structures.

Table 6.5: Brattleboro Housing Authority properties

Property	Units	Target	Unit size
Ann Wilder Richards	21	Tax credit property*	One- and two-bedroom and studio
Samuel Elliot Apartments	62	Elderly and disabled	One-bedroom
Hayes Court	72	Elderly and disabled	One- and two-bedroom and studio
Ledgewood Heights	41	Primarily family	Two-, three-, four-, and five-bedroom
Melrose Terrace	80	Elderly and disabled	One-bedroom
Moore Court	28	Primarily family	Two-, three-, and four-bedroom
Total	304		

*A tax credit property provides a reduction in federal tax liability over a 10-year period for owners of qualifying rental housing who agree to conform to certain operating restrictions for at least 15 years.

Source: Brattleboro Housing Authority

Housing Programs

In addition to the services of BHA and WWHT, a number of local housing programs are available to help individuals with lower incomes, special needs, and/or housing maintenance needs (see Table 6.6). Action 6.1.2 of this Plan continues support for programs that preserve and upgrade the existing housing stock.



Table 6.6: Local housing programs

Program	Agency	Description
Homeownership Center	Windham & Windsor Housing Trust	Program dedicated to expanding homeownership opportunities and helping local homeowners remain in their homes. Services include homebuyer workshops, prepurchase counseling, financial assistance for home purchase, affordable homeownership through the Homeland program, home repair loans, delinquency intervention, foreclosure prevention, and credit repair assistance
Rehab Loan Fund	Windham & Windsor Housing Trust	Helps income eligible homeowners access funding for needed repairs
Apartments in Homes	Brattleboro Area Affordable Housing Corporation	Offers technical and financial assistance for homeowners wishing to construct an apartment in their home
Save Our Homes	Brattleboro Area Affordable Housing Corporation	Makes small no-interest loans (maximum of \$400) to those with housing emergencies
Windham County Heat Fund	Windham County Heat Fund, Inc.	Home heating assistance for those in need
Rental Housing Improvement Program	Town of Brattleboro	Low-interest loan program managed by the Brattleboro Area Housing Coalition to help landlords make basic repairs or improvements
Transitions to Housing	Brattleboro Housing Authority	Limited rental assistance for hard-to-house (individuals and families on Reach Up*, youth leaving foster care, women with family leaving prison) combined with case management and service coordination
Shelter Plus Care	Brattleboro Housing Authority	Housing and support services on a long-term basis for homeless persons with disabilities—primarily those with serious mental illness, chronic problems with alcohol or drugs, or acquired immunodeficiency syndrome (AIDS or related diseases)
Seniors Aging Safely at Home (SASH)	Brattleboro Housing Authority	Coordinated services to support seniors living at home
Weatherization Assistance Program	Southeastern Vermont Community Action (SEVCA)	No-cost weatherization services (energy audits, insulation and air sealing, heating system improvements, and other energy-saving measures) to low-income residents owning or renting homes
Helpfund	SEVCA	Provides small grants to individuals and families who have urgent financial needs of any type, and who have sought help from usual sources without success
Emergency Home Repair Program	SEVCA	No-cost emergency home repairs to address immediate health and safety risks for low-income households in crisis
Crisis Fuel and Utility Assistance	SEVCA	Provides low-income individuals assistance to heat homes and prevent utility disconnection
Housing Stabilization Program	SEVCA	Intervention to stabilize households with significant and constant barriers to maintaining housing

*Temporary Aid to Needy Families (TANF) is known as Reach Up in Vermont.

Special Needs Housing Opportunities

Special needs populations include the elderly, frail elderly, people living with disabilities (mental, physical, developmental), youth at risk, persons in need of transient housing to avoid or alleviate homelessness, and other populations where a combination of housing and supportive services will enhance their quality of life. In general, a high quality of supportive services is provided to populations with special needs in Brattleboro. However, an extensive analysis of existing housing supply and gaps has not been conducted for this Plan.

Elderly and Frail Elderly

As Brattleboro's 65+ senior population grows, so will the need for smaller units with rents affordable to those on fixed incomes. Table 6.7 lists the existing senior housing, including 230 units of housing for low- and moderate-income seniors. BHA manages 205 of these units.

Table 6.7: Senior housing in Brattleboro

Property	Fully handicapped accessible	Elderly only	Elderly/disabled only
Samuel Elliot Apts.	7	0	55
Fairview Village	0	0	25
Hayes Court	1	0	70
Melrose Terrace	0	0	80
Total	8	0	230

Brattleboro has several housing options for seniors needing some level of assistance, but there is a shortage of this type of housing. Currently, Holton Home and Hilltop House offer licensed residential care, Pine Heights offers rehabilitation services and long-term care, and Thompson House

Nursing Home offers nursing home services and short-term rehabilitation. There are no licensed assisted-living facilities in Brattleboro. According to the Vermont Department of Disabilities, Aging & Independent Living, assisted-living facilities are state-licensed residences that combine housing, health, and supportive services to support resident independence and aging in place. At a minimum, assisted-living residences offer, within a homelike setting, a private bedroom, a private bath, living space, kitchen capacity, and a lockable door.

According to the Department of Disabilities, Aging, and Independent Living's Publication [Shaping the Future of Long Term Care, 2007–2017](#), roughly 90 units of assisted-living and/or residential care will need to be built in the Brattleboro area in the next 5 years to meet projected demand. Over the same period of time, the number of seniors who may benefit from service-enriched housing (e.g., homemaker services, transportation, meals) will increase by over one quarter, or from 397 to 500.



Transitional and Emergency Housing

It is estimated on any given night, there are 217 people homeless in Windham County.⁷ This figure is comprised of both the chronically homeless as well as people who are precariously housed (doubling up, couch surfing, etc.). At the local level, the Brattleboro Winter Overflow Shelter sees an average of 25 people per night and has served over 80 separate homeless adults; Morningside Shelter remains full all the time, serving an additional 25–30 people; and an estimated 5–7 people remain on the streets.⁸ The Overflow Shelter has had a 49% increase in population served from the winter of 2010–2011 to 2011–2012.⁹



Figure 6.8: Homelessness by the numbers

 217	Estimated number of homeless people on any given night in Windham County
 25	Average number of homeless adults at the Overflow Shelter per night
 25 – 30	Average number of homeless people served nightly at Morningside Shelter
 2	Number of permanent shelters in Brattleboro
 1	Number of seasonal shelters in Brattleboro
 43	Number of emergency shelter beds in Brattleboro

Sources: Homeless people: State of Vermont 2011 Point-in-Time Survey. Average number of homeless served: Melinda Bussino, E-mail message to author, 2012. Shelter beds: 2011 Housing Inventory.

There are many causes of homelessness, including, but not limited to, poverty, unemployment or underemployment, lack of affordable housing, mental illness, substance abuse, and domestic violence.¹⁰ Some people are homeless for a short period of time while others experience chronic homelessness.

For those facing an acute housing crisis, there are 25 beds and 2 apartments (providing transitional housing) at Morningside Shelter, a year-round homeless shelter that also provides an outreach program and case management to shelter residents and community members. There is also an emergency shelter operated by the Women’s Freedom Center, serving women and their children who are victims of domestic and/or sexual abuse. The Brattleboro Area Drop-In Center provides a day shelter with a community food shelf, support services, and a place for homeless and lonely people to come. They also operate an overnight homeless warming shelter with the First Baptist Church of Brattleboro during the winter months.

There are also transitional housing programs in Brattleboro that provide a combination of housing and support services to help transition people to permanent housing in a specified period of time. Youth Services, Inc., a nonprofit based in Brattleboro, provides short-term emergency housing and follow-up mediation and/or counseling for teens who threaten to, or have, run away or are pushed out of their home. Youth Services, Inc. provides support to local 16- to 21-year-old youth who lack stable living alternatives through two programs that provide transitional housing—Transitional Housing Toward Independence (THTI) and Transitional Living. THTI is a six- to nine-month program designed to help youth move toward full independence, which includes maintaining a job, affording an apartment or room, and having life skills so as to require minimal support. The Transitional Living program helps support youth by teaching them the skills necessary to live on their own. The program is Medicaid funded and can provide rent stipends to landlords to help pay for housing costs.

BHA operates two programs to help the homeless and hard-to-house. The Shelter Plus Care Program provides rental assistance for hard-to-serve homeless persons with disabilities in connection with supportive services, funded from sources outside the program. This program primarily serves those with serious mental illness, chronic problems with alcohol and/or drugs, and acquired immunodeficiency syndrome (AIDS) or related disease. The Pathways to Housing program provides limited rental assistances for hard-to-house (individuals and families on TANF/Reach Up, youth leaving foster care, women with family leaving prison) combined with case management and service coordination.

Meadowview, located at the Brattleboro Retreat, is the only licensed residential care home in Brattleboro. It serves as a transition from the Vermont State Hospital to the community.

WWHT has a Life Skills Housing Program that provides affordable apartments and supportive services for single (or expectant) mothers and their children. The program, targeted to women receiving, or about to receive, welfare provides a stable environment where women can enhance their independent living skills as well as their job readiness.



LAND USE AND HOUSING

Brattleboro's current zoning regulations include several measures to encourage affordable housing development. These include:

Incentives: Developers proposing a Planned Residential Development (PRD) can take advantage of a 15% density bonus if the developers make a substantial contribution to the objectives of the PRD.

Accessory Dwelling Units: In accordance with State law, accessory dwellings are a permitted use within or appurtenant to an owner-occupied single-family dwelling. Accessory dwellings are generally defined as small apartments, subordinate to the main dwelling, with separate living facilities. In addition, home occupations are an allowed as-of-right in all residential areas, as long as they create minimal impacts.

Multi-unit Housing: Multi-unit housing is a permitted or conditional use in the majority of zoning districts.

The Zoning Ordinance does not take full advantage of various market-based and other tools to promote additional housing. Despite the tight rental market, new housing development has been slow in Brattleboro, so the inclusion of various tools will not likely yield dramatic increases but they are actions that should be considered:

- Offer density bonuses for the use of renewable energy sources or for the construction of smaller homes
- Promote housing in areas that have been typically dominated by commercial uses (see the Land Use chapter for more information)
- Streamline the Planned Unit Development process by specifying the districts in which this tool is available for use (see the Land Use Chapter for further discussion)

- Permit conservation subdivisions to reduce upfront infrastructure costs (roads, water, and sewer lines) associated with creating a subdivision by allowing homes to be sited on smaller lots

Housing Needs

Improve housing quality

The general condition of the housing stock and neighborhoods are of critical importance to the continued economic vitality of Brattleboro. Housing can contribute to household wealth (through accumulating assets), create jobs, and boost local revenues and contribute to the tax base. Given the age of the housing stock in Brattleboro, a large number of housing units have already or soon will reach the limit of their useful lives if they are not rehabilitated. Therefore, this Plan supports the continuation of regional nonprofit rehabilitation loans and the adoption of the PACE program (see the Energy chapter for more information on PACE). Quality housing directly impacts the town's ability to finance needed improvements to support the economy through receipt of property taxes.

Improving energy efficiency is one way to improve the housing stock. Brattleboro's homes are old and expensive to heat. There are many opportunities for conserving energy in new and existing homes. Home energy audits and weatherization programs can help retrofit existing homes with energy-conserving features that will also help reduce operational costs and improve quality. This Plan recommends several actions related to housing and energy efficiency, including density bonuses for energy-efficient siting and construction and development standards to promote solar access. It also recommends continuing to make information available about various state and local programs and resources for energy-efficient building materials and techniques.

WHAT IS UNIVERSAL DESIGN?

Universal design is an approach to improve accessibility in the built environment through products and environments designed to be usable by all people without the need for adaptation. Examples include lower countertops, wide doorways, and lever faucets and door handles.

Another way to improve the housing stock is to incorporate universal design features into new and existing homes. This is an important way to improve the safety and utility of housing for all people, especially in a time when health and long-term care policies are shifting toward aging in place. While Brattleboro does not have building codes that require universal design features, voluntary or incentive-based programs could be developed.

The aging housing stock in Brattleboro indicates that there could be a benefit to adopting and implementing a local building code. Currently, life-safety and plumbing inspections for commercial buildings (including apartments) are performed by the Vermont Division of Fire and Safety. While there is a state building code that applies to all other construction, there is no inspection system in place. Further exacerbating this problem is the absence of state licensure of building contractors. In years past, Brattleboro did have a code enforcement program. Building codes establish predictable, consistent minimum standards that are applied to the quality and durability of construction materials. Inspection during construction is the only way to independently verify that the builder and building contractors have complied with the codes. Code adoption reduces risk exposure, helps underpin assessed values, and reduces owner's insurance costs. Action 6.1.3 of this Plan is to investigate the benefits and impacts of implementing a local building code enforcement program so that these can be reviewed locally for both owner- and renter-occupied units.

Cohesive neighborhoods provide the desired setting for quality homes. A high proportion of renters can result in higher turnover of residents, which may undermine neighborhood stability and discourage potential homeowner interest. Building a strong neighborhood identity can bring stability to a neighborhood and increase homeownership levels. Action 6.1.1 of this Plan is to collect information on housing condition and use it to monitor neighborhood stability.

Locate and design housing development to use infrastructure resources more efficiently

Housing needs should be addressed through infill development and the rehabilitation and redevelopment of existing stock. Focus should be placed on providing market rate housing choices that meet the needs of young professionals, retiring seniors, and smaller households. There are many possible ways to incorporate new housing development housing styles (i.e., apartments, senior housing, duplexes, condominiums, cottage housing, etc.). The first priority when considering new housing development should be to ensure that units are adequately served with water, sewer, and other basic infrastructure needs. Therefore, it will be necessary to locate housing in areas that can be served by municipal water and sewer. New housing development should be considered as an infill housing opportunity in Downtown or on Canal Street and as a planned development on Putney Road. Actions 6.2.1 and 6.2.2 in this Plan are to direct housing to Putney Road (Veterans Bridge north to Exit 3) and to encourage mixed-use commercial/residential buildings.

The flooding in 2011 has underscored the need to locate housing away from high-risk areas and areas where natural events can cause repeated disruption. 159 units of housing are located in the mapped, special flood hazard area, including several properties that contribute substantially to the Town's stock of affordable housing (Tri-Park, Hayes Court, and Melrose Terrace). It is in the Town's best interest to diligently work with property owners to explore solutions that result in residences being accommodated in safer, more appropriate locations. Several property owners have begun exploring options, either by working with the Town to explore Hazard Mitigation projects or initiating a planning process. As expressed in action 6.5.2 in this Plan, the Town will continue to encourage these actions and work cooperatively where appropriate.

KEY FEATURES FOR NEW HOUSING DEVELOPMENT INCLUDE:

- *Street connectivity*
- *Mixed uses and/or mixed housing types*
- *Energy efficiency*
- *Community spaces*
- *Contiguous open spaces and protected natural resources*
- *Avoidance of environmental hazards (e.g., steep slopes, special flood hazard areas, etc.)*

Continue to strive to meet the needs of all

There is also a need for affordable housing in Brattleboro that supports and attracts a variety of households. Housing in various forms (condominiums or townhouses, cottages, etc.) should be sought to meet the needs of various households, including:

- Residents who have raised their families and want to continue to live in Brattleboro in a smaller housing unit
- Retired people and other residents wishing to remain in the community and nearby residents wishing to move into the community to be close to services
- New couples, young families, or single adults who have grown up or come to work in Brattleboro
- People who work in town

Action 6.4.1 addresses these needs through the following actions: providing land use regulations that allow for a diversity of housing arrangements; evaluating workforce housing needs; and supporting efforts to develop new homeownership and rental opportunities that are affordable to low- and moderate-income households.

Brattleboro has a sizable share of the region's publicly assisted rental housing. The Town should continue to work with nonprofit organizations and state agencies to maximize the effectiveness of scarce public resources to maintain these housing opportunities.

FOOTNOTES

¹ According to the Census Bureau, "Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples, even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couple

households are included in the family households category if they include at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. "Nonfamily households" also include people who live alone or non-relatives living together, such as unmarried partners or roommates.

² The U.S. Census has collected data on single-parent households since at least the 1950s. The data on "female householder with own children (no husband present)" are often referenced as indicator of economic security.

³ U.S. Department of Housing and Urban Development, Community Planning and Development website, "Who Needs Affordable Housing?" www.hud.gov/offices/cpd/affordablehousing/index.cfm, (May 2012).

⁴ 24 Vermont Statutes Annotated §4303(1).

⁵ This calculation is based on Vermont Housing Data's Home Mortgage Calculator. It assumes a 5% down payment, 30-year mortgage, interest rates based on an estimated 0-point loan based on Freddie Mac's Primary Mortgage Market Survey for each quarter of the current calendar year, estimated average monthly premiums for Private Mortgage Insurance provided by Mortgage Guaranty Insurance Corp., property tax rates at the statewide average for the prior calendar year, property insurance based on estimated average monthly premiums for a detached, single-family home in Vermont from the Vermont Dept. of Banking, Insurance, Securities, and Health Care Administration and the Insurance Information Institute, and estimated Vermont Property Transfer Tax and average additional closing costs in Vermont. It should be recognized that changing any of these assumptions would affect the amount that a household could afford.

⁶ Census 2000 Summary, File 3 (SF 3) Sample Data, H063 Median Gross Rent (Dollars).

⁷ 2011 Point in Time Survey, www.helpingtohouse.org/documents/resources/140_2011%20VT%20BoS%20CoC-PIT%20Count.pdf.

⁸ Melinda Bussino, E-mail message to author, (February 1, 2012).

⁹ *Ibid.*

¹⁰ APA Policy Guide on Homelessness, www.planning.org/policy/guides/adopted/homelessness.htm.



CHAPTER 7

Transportation

Brattleboro values a multimodal transportation system that is inclusive of all users—drivers, cyclists, public transit users, and pedestrians; is strongly linked between modes locally and regionally; and is environmentally responsible as a way of enhancing our quality of life.

Transportation

Goals

- A. Integrate Complete Streets infrastructure and design features into street design and construction to create safe and inviting environments for all users to walk, bicycle, and use public transportation
- B. Maintain Brattleboro as the hub for regional goods movement via truck and rail

Policies and Actions

Policy 7.1 Create streets that are safe for travel by all users of all abilities

Actions:

- 7.1.1 When undertaking road projects, design improvements so that pedestrians, bicycles, and motor vehicles have adequate width; manage driveway access points; and moderate traffic speeds through the use of a variety of traffic calming devices
- 7.1.2 Stripe high-visibility crosswalks on major streets
- 7.1.3 Evaluate the adequacy of safe pedestrian crossings; convene neighborhood meetings when each street is considered for redesign and repurposing so that public input can help the Town staff determine the most appropriate locations for crosswalks
- 7.1.4 Install and maintain the proper design and illumination levels of lighting on public streets and private property to ensure adequate illumination for public safety but not excessive spillover onto adjacent residential properties or to cause urban skyglow, light trespass, glare, or clutter
- 7.1.5 Consider 3- to 4-foot buffer strips between the road and sidewalk to accommodate snow load

Policy 7.2 Promote bicycle and pedestrian mobility

Actions:

- 7.2.1 Develop a priority-ranked sidewalk upgrade program focusing on major arterial routes
- 7.2.2 Develop a “shared road” route system (and accompanying map) to encourage bike and pedestrian travel along such routes with signs to mark the route
- 7.2.3 Improve bicycle storage in the downtown
- 7.2.4 Work with federal, state, regional, and local agencies and any other available public or private funding sources to secure funding for the bicycle and pedestrian systems

continued on next page

- 7.2.5 During the update of the land use regulations, promote the integration of all transportation modes within office and residential parking areas, such as transit stops, additional sidewalks, and bicycle parking design in appropriate locations
- 7.2.6 Conduct bicycle and pedestrian audits to identify concerns for pedestrians and bicyclists related to the safety, access, comfort, and convenience of the walking and bicycling environment

Policy 7.3 Promote alternatives to the single-occupant vehicle

Actions:

- 7.3.1 Support in-town bus service operated by Connecticut River Transit
- 7.3.2 Continue to actively work with the State of Vermont, Windham Regional Commission, and transportation providers to maintain and, where possible, increase the number and frequency of transportation modes to and in Brattleboro
- 7.3.3 Encourage the use of passenger train service through continued efforts to enhance the town's rail station and better connect it to downtown and other local attractions
- 7.3.4 Support state initiatives to improve the rail infrastructure
- 7.3.5 Continue to educate the community about transportation alternatives to single-occupancy vehicles among area businesses through events and initiatives that promote the health benefits and availability of environmentally sustainable transportation options

Policy 7.4 Work with local, regional, state, and federal agencies to address regional freight needs and to mitigate local impacts

Policy 7.5 Ensure that all new transportation improvements do not adversely impact the Town's neighborhoods

Actions:

- 7.5.1 Work with the state and local jurisdictions on streetscape designs that minimize impacts on Brattleboro's neighborhoods, aesthetics, vistas, and bicycle/pedestrian facility connections for all users

Transportation has always played a large role in everyday Brattleboro, as it is situated on the Connecticut River, is flanked by a major railroad, and lies at the intersection of major north-south routes (Interstate 91, state Route 5), and the east-west Route 9. As a regional center with significant warehousing and transportation activity, Brattleboro depends on maintaining vital intermodal links to the region and further afield while preserving a traditional pedestrian-oriented downtown and quiet safe local streets. This plan responds to commitments made in the state Legislature in the Complete Streets bill (H.198) designed to reduce dependency on the private automobile by improving the experience of other road network users and public transit users. The plan seeks to improve traffic flow on major arterial roadways and promote traffic calming in residential neighborhoods. Finally, the plan encourages more walking and biking by improving the pedestrian and bike infrastructure in Brattleboro.

Existing Transportation Network

Road Network

Brattleboro has a total of 84.25 miles of town roads¹ and approximately 22 miles of state and interstate highways. Table 7.1 shows the road classifications and surfaces. The following is a description of some of the major highways and roads that serve Brattleboro.

- **Interstate 91** runs in the north-south direction through Brattleboro. With three exits on the interstate, local traffic can use the interstate as an alternate route to avoid local traffic on Route 5. Brattleboro’s historic development pattern is concentrated east of I-91.
- **U.S. Route 5** travels north-south through the eastern edge of Brattleboro, along the Connecticut River Valley. It is referred to as Putney Road north of the Downtown, Main Street through the Downtown,

Table 7.1: Brattleboro road classification and surface

Class	Miles paved	Miles gravel	All miles
Class 1	6.42	0	6.42
Class 2	10.87	3.03	13.90
Class 3	41.79	22.14	63.93
State highways	12.5	–	12.5
Interstate	9.69	–	9.69
Totals	81.27	25.17	106.44

Source: Brattleboro Public Works Department

and Canal Street south of the Downtown. Development along Route 5 consists primarily of commercial uses.

- **State Route 9 (Marlboro Road/Western Avenue/High Street)** is the main east-west arterial road serving Brattleboro. It is a well-traveled road that serves as a gateway to the Town for those entering from the west as well as those exiting I-91 at Exit 2.
- **State Route 30** connects downtown to the West River Valley. This highway has increased traffic volume during the winter, as several ski resorts are located in towns along Route 30.

The Highway Division of the Brattleboro Public Works Department is responsible for over 30 bridges and large-diameter culverts, approximately 35 miles of sidewalk, 560 culverts, 1,800 drainage basins, and all the connecting drainage pipe. This division also maintains all road signs and street markings along with the roads. For more information on the responsibilities of the Highway Division, see Chapter 10 “[Municipal Services and Facilities](#)”.



Impacts of the Road Network

Brattleboro's transportation network is significantly limited by topography. Steep grades and rolling hills are two characteristics of the local terrain that present barriers to highway design improvements. The Town lacks a continuous street network and has a multitude of poor roadway sight distances.

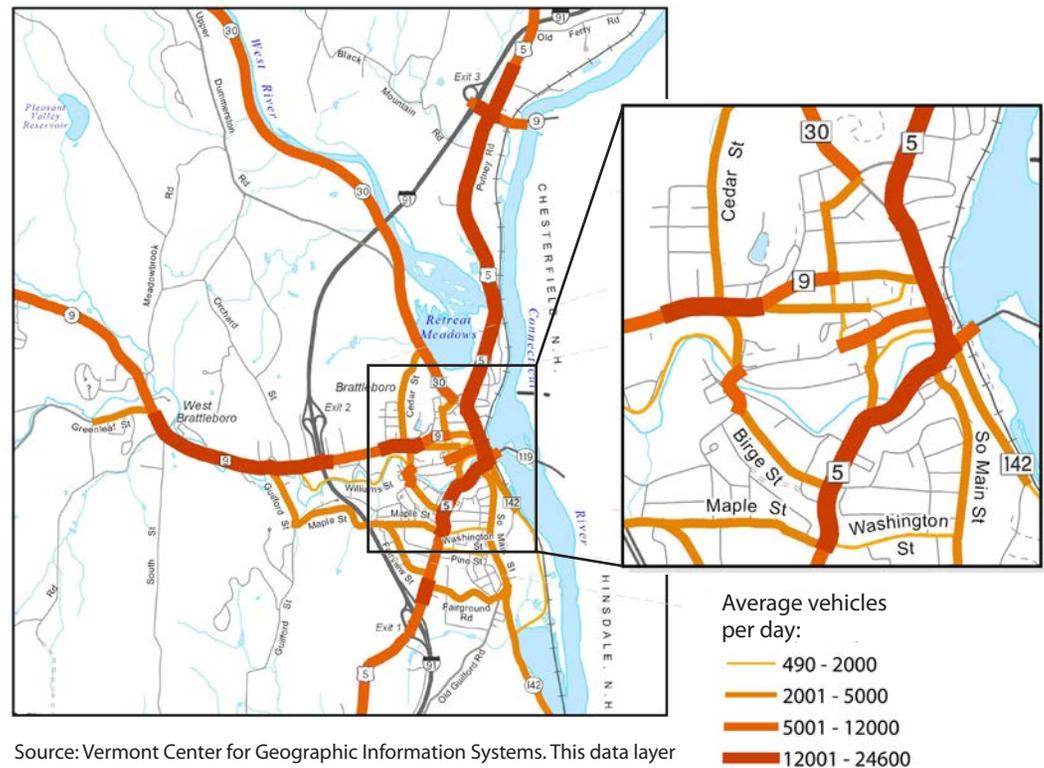
The existing development patterns present a particular challenge for Downtown. Main Street is situated at the confluence of five State Roads: Routes 5, 9, 30, 119, and 142. It is the only direct north-south route in the downtown area. Indirect, parallel routes to and around Main Street do exist and serve as local bypasses, but they are not designed to carry high traffic volumes or larger vehicles, both of which would impact the residential neighborhoods.

The impact of having state highways as main arterial roads in town is large, and therefore actions 7.2.4, 7.3.2, and 7.5.1 of this Plan direct the Town to work with state officials to make sure that Brattleboro's interests are properly served on these state routes and that impacts are minimized. The State is primarily responsible for upgrades. In 2010, the State repaved Route 5. Bicycle lanes were added on the Putney Road portion of the route. In Downtown, a sidewalk and resignalization project was undertaken that included installing a traffic signal at the intersection of Routes 5, 142, and 119. While several improvements have been gained from the project, including ADA-accessible sidewalk ramps, traffic congestion is still heavy at certain hours of the day. The Town should ensure that the Downtown provides a safe, pleasant environment for pedestrians when attempting to improve the situation for cars and trucks.

Traffic Volumes and Level of Service

Traffic volumes identify existing travel patterns and assist in determining the transportation system's ability to serve the area travel demands. Traffic volume data are measured as Average Annual Daily Traffic (AADT), which is the average number of vehicles per day that use a road in both directions at a given point. AADT in 2007 is shown in Figure 7.1

Figure 7.1: AADT in 2007



Source: Vermont Center for Geographic Information Systems. This data layer includes Average Annual Daily Traffic (AADT) data collected by the Vermont Agency of Transportation for the years 1990 to 2007. The dataset includes AADT data for Interstate, U.S., and VT highways. It also includes Federal Urban Area (FUA) routes and Major Collectors (MC).

Table 7.2: 2010 AADTs State Highways

Station	2006	2008	2010
I-91 between Exits 1 and 2	18,000	19,900	19,800
I-91 between Exits 2 and 3	24,600	23,800	24,500
Route 5 (Canal Street: Fairground–Fairview)	11,600	11,100	9,600
Route 5 (Putney Road: Vermont Ave–roundabout)	16,700	15,400	15,100
Route 5 (Putney Road: roundabout–Browne Court)	14,600	11,900	11,100
Route 9 (Town Line–Sunset Lake Road)	5,700	5,300	5,200
Route 9 (Greenleaf St–Bonnyvale/Glen Rd)	13,400	11,400	12,000
Route 30 (Town Line–Upper Dummerston Rd)	6,300	6,000	5,400

Source: VT Agency of Transportation Policy, Planning and Intermodal Development Division, Traffic Research Unit, May 2010

Data available on average daily traffic for the state, the region, and locally indicate a five-year trend of reduced activity and a slowing down of this trend over 20 years.² Traffic congestion in Brattleboro is limited; several intersections currently have notably reduced levels of service. Downtown, Canal Street, and Putney Road experience varying levels of congestion during peak commuting hours. Table 7.2 presents available traffic counts for major routes in Brattleboro. The data indicate that although Routes 5, 9, and 30 are heavily traveled roads, they are not experiencing an increase in traffic volumes. Traffic volumes are not recorded consistently for local roads.

Planned Road Improvements

The Town works with state, regional, and local officials and agencies; Town departments; and private developers to plan and implement improvements to its transportation system. New streets planned for residential subdivisions or commercial and industrial developments are typically built and paid for by private developers.

The Town has a number of street paving and other improvements currently planned. The Capital Plan also anticipates the following bridge projects: Stark Road Bridge (2013) and Elliot Street Bridge (2014). Sidewalk repair and replacement, intersection improvements, and retaining wall projects are also planned. Action 7.5.1 of this Plan is to balance transportation needs with the unique character and quality of life of the neighborhoods affected as transportation projects are undertaken.

The following two projects involving the Vermont Agency of Transportation (VTrans) have been discussed for several years. Whether or not they will be initiated during the life of this Plan is unknown.

Putney Road

In 2005 VTrans hired a consultant to develop solutions that address the transportation and public safety needs along Putney Road from the West River Bridge to just south of the Exit 3 roundabout. The engineering firm Vanasee Hangen Brustlin worked with stakeholders to evaluate three alternatives designed to improve traffic mobility and safety, bicycle and pedestrian accommodations, and aesthetics and community character. The end result of the project was the Selectboard endorsement of Alternative 3, which includes:

- Two-lane roundabouts at the following locations: Aubuchon Plaza Drive, Technology Drive, Hannaford Plaza Drive, and Black Mountain Drive
- Raised landscaped medians to prohibit left turns into and out of adjacent businesses
- Bike lane, grass strip, and sidewalk



Pedestrian median in Keene, NH

Planned improvements to Putney Road are in an early stage, and preliminary design work has not begun. The high cost of construction and the extent of right-of-way acquisition needed for Alternative 3 are just 2 of the variables that could delay the project. It is in the best interest of Brattleboro for the following items to be discussed or revisited early in the process:

- Traffic projections on Putney Road
- Maintenance expectations
- Consideration of the design in light of Complete Streets legislation

Problems with pedestrian safety on Putney Road, however, have not abated, so short-term improvements at a more easily borne cost should be considered by the Town to facilitate the safety of pedestrians in both walking along and crossing Putney Road.

Hinsdale Bridge

The replacement of the bridges that connect Brattleboro and Hinsdale remain on the State of New Hampshire’s Long Range Transportation Plan. The existing bridges have been classified as functionally obsolete and will eventually be replaced by a single-crossing bridge built south of the existing crossing (which enters Brattleboro on Bridge Street). Due to funding challenges, when the actual work on the project may commence is not known, but it could happen within the life of this Plan. When a new bridge is finally constructed, traffic flow through this 5-way intersection (Bridge Street/Route 119, Route 142, Main Street, Canal Street, and Co-op parking lot) will likely change, as major traffic will no longer use Bridge Street.

Transit Network

In-Town Bus

Owned by the Town of Brattleboro and operated by Connecticut River Transit (CRT), the bus has two in-town routes, the Red Line and Blue Line. The Red Line offers the most frequent service (4 morning and 5 afternoon trips, 6:30 AM–6:30 PM) on weekdays. The Brattleboro Transportation Center on Flat Street serves as a hub for both in-town and regional bus routes. Table 7.3 lists the bus routes operating in Brattleboro as of July 2012.

Ridership showed steady growth from fiscal year 2006 to 2009³ as shown in Table 7.3. This period coincides with the recession that began in late 2007. From FY09 to FY10, there was a 9% decrease in bus ridership, but the levels still remain higher than pre-recession levels.

Table 7.3: In-town bus ridership

	FY06	FY07	FY08	FY09	FY10
Ridership	50,047	57,800	63,030	69,180	62,797

Many residents express a desire for greater transit coverage with more frequent service at the various stops. Transit provision for many parts of town is difficult. Buses must travel long distances to pick up few people at each stop. This can make travel prohibitively long for riders and prohibitively costly for the transit provider. In addition, state and federal funding is limited for new startup bus routes. In 2012, CRT completed a Transit Planning and Feasibility Study. The study looked at ways to enhance the existing service and ways to provide regional connections and examined transit needs and alternatives so as to better serve Brattleboro. Action 7.3.2 of this Plan is to continue to work with partners on maintaining existing service and, where possible, increasing service.

In-town bus routes are an important service for transit-dependent individuals. CRTs study compiled data on the elderly, disabled, those without vehicles available, and low-income populations.⁴ These individuals are less likely to have their own means of transportation and more likely to depend on public or private transit service. Table 7.4 shows the estimated population characteristics of these groups in Brattleboro using the American Community Survey 2005–2009 and U.S. Census data.⁵

Access to transit is a quality-of-life issue, as residents who can access transit are able to participate more fully in the community, access services, and have transportation to work. Youth are less likely to have access to vehicles for transportation to after-school jobs, educational and extracurricular activities, recreation, shopping, and the like, so are likely to at least occasionally need public or other means of transportation. For these and other reasons, this Plan recommends the continued support of in-town bus service.

Regional Bus Connections

Brattleboro has connections to other parts of Windham County via CRT and the Deerfield Valley Transit Authority’s (DVTA) MooVer. CRT operates a commuter route from Brattleboro to Bellows Falls with stops along Route 5. Connections further north (Springfield, Chester, Ludlow, White River Junction, Hanover, and West Lebanon) exist but are not timed so as to allow efficient travel. The DVTA operates a shuttle from Brattleboro to Wilmington with stops along Route 9 and in Marlboro. This service is geared more for commuters coming into Brattleboro from Wilmington and then returning, on a traditional 9–5 work schedule.

Table 7.4: Estimated population characteristics of transit-dependent individuals in Brattleboro

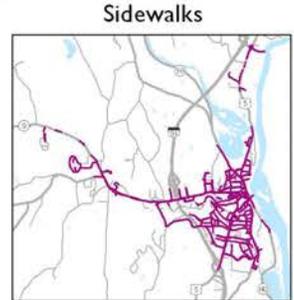
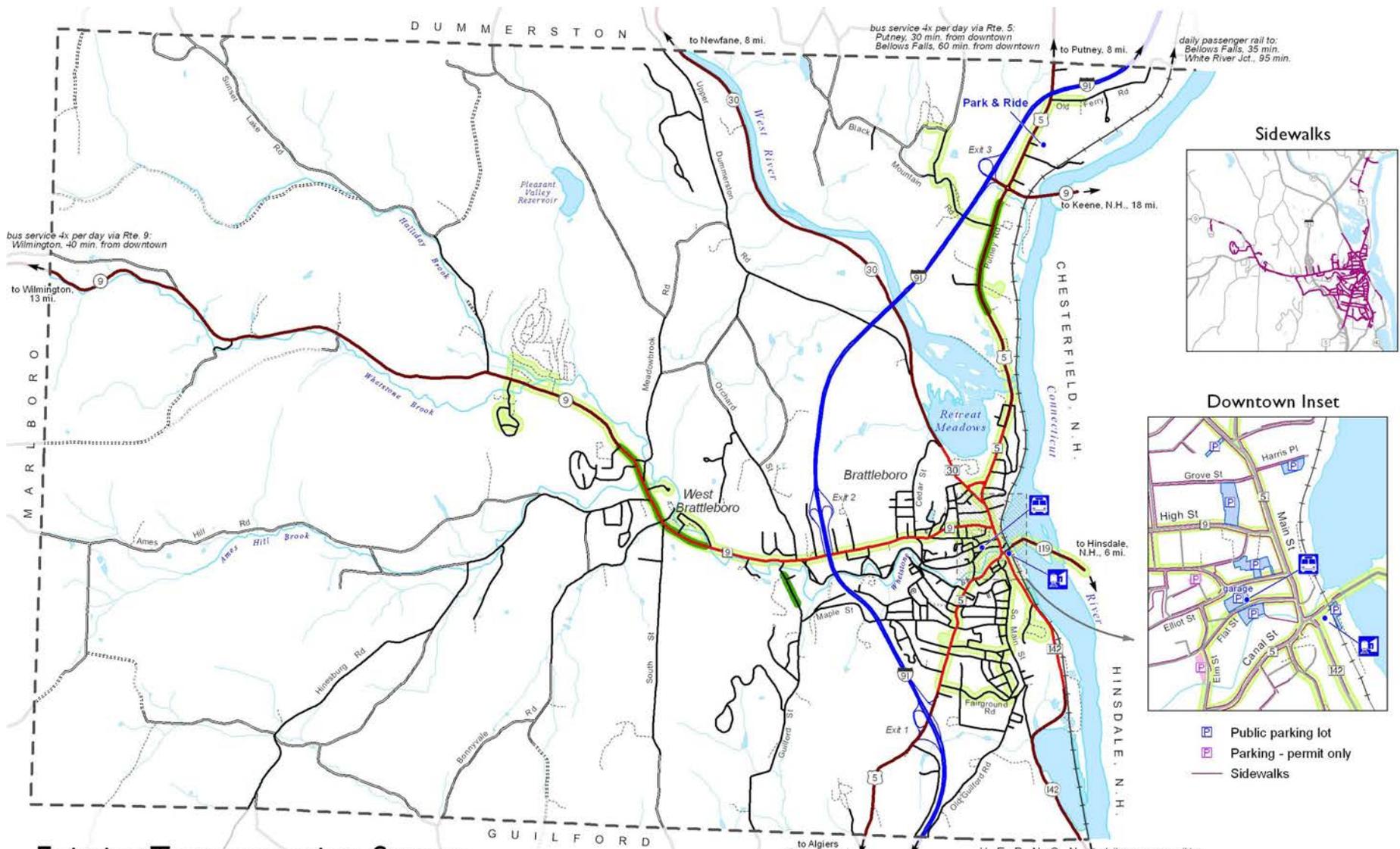
	Zero-vehicle households 2009 ACS	Youth population 10–19 2009 ACS	Adults 65 and over 2009 ACS	Mobility-limited population est. 2011*	Low-income population est. 2011*
Total	16.5%	11.9%	17.2%	5.5%	12.7%

*Mobility-limited population and low-income population are not currently available in the 5-year ACS data by block group level, hence the 2000 U.S. Census data were used and projected to 2011.

Source: LSC Transportation Consultants Inc., Enhancing Transit Service in Brattleboro. February 2012

Intercity Bus

Currently one private company, Greyhound, offers intercity bus service in and out of Brattleboro. Routes go north to White River Junction (via Keene, NH) and south to Springfield, MA, with the option of making transfers to go on to other destinations. The service runs once a day in each direction and is oriented toward occasional trips rather than a daily commuter service. In 2012, Greyhound announced termination of the service. They reversed this decision when VTrans agreed to subsidize the route. This subsidy has been extended through 2013. VTrans has indicated that they will put the route out to bid in July 2013. The bus is an important part of Brattleboro’s multimodal transportation system, ensuring that Brattleboro has access to other regional destinations.



Existing Transportation System

a detailed road map, with road names, is available at windhamregional.org/gis/road-name-maps



- Federal/State highway
- Interstate highway
- Class 1 town highway
- Class 2 or 3 town highway, paved
- Class 2 or 3 town highway, unpaved
- - - Class 4 town highway, passable
- - - Class 4 town highway, impassable

- bus station
- rail station
- bike lane
- in-town bus route
- + + + railroad

Data sources:
 Brattleboro Public Works Department:
 roads, sidewalks, parking
 Windham Regional Commission:
 roads, bus routes, bike lanes, public transit

Passenger Rail

Presently, Brattleboro's Union Station is served by Amtrak, which enables passenger rail travel along the New England Central Railroad (NECR) lines. It operates seven days a week, with one northbound and one southbound train each day. Amtrak's Vermonter originates in St. Albans and travels the Northeast Corridor to Washington, DC. Vermont provides a subsidy to Amtrak to support this service north of Springfield, MA.

According to NECR, Amtrak ridership grew by about 4% from 2009 to 2010. Brattleboro saw a 13.3% increase in ridership. Much of the growth in ridership at the Brattleboro station is attributed to a combination of lower rates for in-state travel and aggressive marketing. Actions 7.3.3 and 7.3.4 of this Plan encourage the use of passenger service and support initiatives to improve the rail infrastructure.

In 2012, the Town undertook improvements designed to enhance Union Station. These included the creation of a short-term/kiss-and-ride parking lot for use by passengers traveling on the Vermonter, and safety improvements for people crossing over the train tracks from the parking lot to access the train. As part of this project, riverfront green space was added on the eastern side of Depot Street.

Making improvements to the physical train station remains important and therefore Action 7.3.3 of this Plan is to improve the train station, with projects such as improving the station entrance, providing an inside waiting room, and installing a platform canopy. The train station is a gateway to town for many visitors and therefore welcoming people to town and providing them with information is desired. A user-information kiosk that orients visitors to the downtown setting and directs them to the town's attractions would help achieve this.

Freight System

Trucking accounts for the majority of freight movement in the state of Vermont with Interstate 91 as a major north-south corridor. According to the Vermont State Freight Plan, I-91 in Brattleboro has the highest percentage of truck traffic of all the I-91 segments in Vermont.⁶ And of all State-owned highways, Route 9 supports the largest percentage of truck traffic, particularly near Brattleboro.⁷ A significant number of businesses that are involved with interstate commercial transportation are located in Brattleboro. Many have chosen to locate in close proximity to the Interstate due to ease of Interstate access.

Heavy truck traffic does create difficulties along Brattleboro's roads and highways, particularly in the Downtown. There is a fair amount of truck traffic on Main Street, as trucks come and go to industrial areas south of Brattleboro, and tourist areas to the north on Route 30. This is compounded by federal weight limits on I-91. In January 2010, Vermont was part of a pilot project that waived the federal weight limit of 80,000 pounds on interstate highways. The pilot has since expired, but efforts to ease restrictions permanently continue. Trucking activities, while providing a lifeline for local business, can damage quality of life by exacerbating noise and air pollution.

Freight is also moved over the NECR rail lines, which were upgraded in 2012 to handle the national standard railcar weight (286,000 pounds). When combined with a recent improvement to the tunnel in Bellows Falls to allow for double-stacked trains, freight trips are expected to increase by 5,000 per year. Only two active rail spurs exist in Brattleboro (FiberMark and Cersosimo). These are important transportation assets and must be protected when considering future land uses.

This Plan recognizes the importance of freight movement to the community's economy and includes a policy to support state initiatives to improve the freight network and mitigate local impacts.



Complete Streets

The ability for people of all abilities and in various modes to move safely throughout the community is heavily influenced by land use and transportation planning, design, and policies. With the increase in the use of automobiles post-World War II, transportation policies focused on accommodating the demands of traffic. Contemporary planning and transportation policies are now focusing on design of roads to safely and efficiently move all users, accommodating both motorized and nonmotorized users. Known as Complete Streets, this approach provides citizens with choices as to how they travel. Vermont passed Complete Streets legislation in 2011. It is a sustainable approach to transportation planning, as it will increase capacity of the road network, reduce traffic congestion by promoting mobility options, limit greenhouse gas emissions, and promote healthy living.

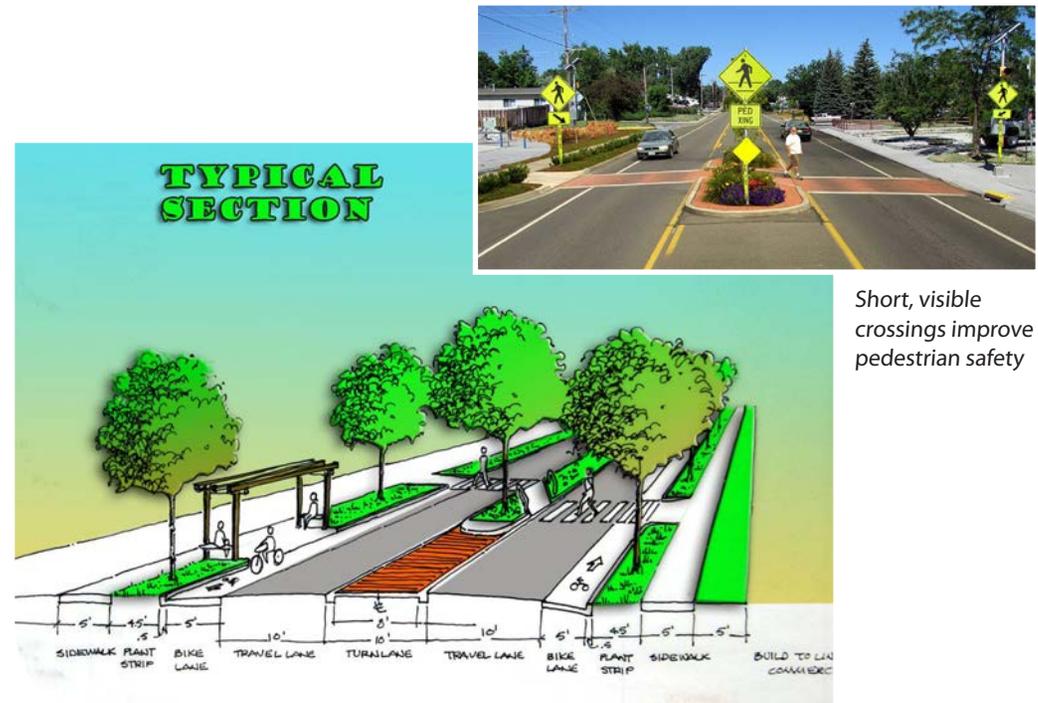
The policies and recommendations of this chapter are designed to support Complete Streets. Several actions of this Plan focus on improving safety for bicyclists and pedestrians. Roads in Vermont are traditionally the purview of selectboards and public works departments; these recommendations also seek to include the planning commission and planning staff in the planning of road projects so that the link between land use and transportation can be strengthened. This Plan recommends several actions to address the issue from the land use perspective, including minimizing curb cuts and promoting shared driveways. Previous planning efforts identified areas suitable for traffic calming measures. The Putney Road Master Plan discussed a major upgrade of Putney Road (Route 5) that would include sidewalks and streetscape improvements in conjunction with the establishment of secondary streets to facilitate more dense development, improved traffic control, and pedestrian safety. The West Brattleboro Master Plan included discussion of a long-standing idea of an expanded Village Green near Academy School. This would improve vehicle, bicycle, and pedestrian safety and pro-

vide a more effective public space as a focal point in the Village. Whenever state transportation funds can be combined with available Town capital, such projects should be supported.

In September 2011 the Town was awarded a grant from AARP Vermont to conduct an [Active Living Workshop](#). The interactive workshop, facilitated by Dan Burden of the Walkable and Livable Communities Institute, included a walking audit of Canal Street (Maple Avenue to Fairground Road) that identified areas of concern and potential improvements to slow traffic—all with the goal of improving pedestrian and bicycle conditions. The Town has also begun pursuing audits in various parts of town to solicit citizen input on the current conditions for cyclists and pedestrians. Recent experiences in Brattleboro (an increase

WHAT DOES COMPLETE STREETS LOOK LIKE?

Complete Streets is a transportation policy and design approach encouraging safe travel for all road users: vehicles, pedestrians, bicycles, and public transit. Tools that can be used when retrofitting or designing roads include bike lanes, median islands, pedestrian amenities, curb extensions, accessible pedestrian signals, and more.



Short, visible crossings improve pedestrian safety

Elements that support a complete street

in pedestrian–motor vehicle accidents, including three pedestrian fatalities) have underscored the need to pursue this work, and action 7.2.6 of this Plan is to continue to collect this information through audits.

Brattleboro has approximately 36 miles of sidewalks in varying condition, and at several vital points on arterial roads, missing sections of sidewalk severely impact pedestrian safety. In public outreach efforts for this Plan, sidewalk improvement was most commonly cited by residents as a priority. In 2006, DPW created a sidewalk inventory which has been continuously updated. Some privately owned sidewalks are not included in this inventory.

Key missing, or too-narrow, sections of sidewalk on arterial roads reduces pedestrian mobility and the ability to access extensive retail and employment activity. Many actions of this Plan focus on pedestrian improvements in high-activity pedestrian areas. Table 7.5 identifies road segments (listed alphabetically, not priority ranked) whose condition dictates the need for improvement.

In order to improve the sidewalk network, investment and innovative solutions are required. This Plan acknowledges that current annual funding levels for sidewalks in the annual budget are not adequate to make dramatic improve-



Table 7.5: Sidewalk condition assessment of road segments

Segment	Services	Bus service	Notes and recommendations
Canal Street (Fairground to Maple Street)	Stores, residences, schools, hospital, restaurants	No	High traffic and speed. Left turns are difficult. Many driveways. Traffic congestion associated with schools. Improve crossings. Create access management plan. Enhance streetscape.
Marlboro Ave (west of Edward Heights to Sunset Lake Road)	Stores, affordable housing complexes, restaurants	Yes	High traffic and trucks. Sidewalks or multi-use path recommended. Lower speed limit.
Putney Road	Stores, residential, restaurants	Yes	Difficult pedestrian crossings—no crosswalks. Multiple lanes. High traffic and speed. No continuous sidewalk connecting to downtown. Area of minimal shoulder. Traffic calming needed. Fill sidewalk gaps. Improve crossings. Enhance streetscape.
Vernon Street (intersection with Bridge St to Royal Road)	Residential housing complex	Yes (to Morningside Commons)	Gateway to downtown from south. High truck traffic. No continuous sidewalk connecting residences to downtown. No crosswalks. Extend sidewalk. Improve crossing at Royal Road.
West Brattleboro Village	Stores, churches, housing, park, school, restaurants	Yes	High traffic and trucks. Traffic calming needed. Sidewalk extensions. Improve crossings.
Western Ave (Exit 2 to Village)	Residences, park, Farmers' Market, stores	Yes	High traffic and trucks. High speeds. Poor access control at some driveways. Crossing lacking. No continuous sidewalks. Low shoulder. Obstructions in sidewalk. Variable condition of sidewalk. Improve crossings. Fill in sidewalk gaps.

ments to the pedestrian infrastructure. Therefore, any increase in sidewalk funding will likely mean a decrease to another part of the budget. The Town will need to continue to leverage other grant funds, and should begin including specific sidewalk projects that are known to be very expensive in the Capital Improvement Plan. This Plan includes a recommendation to continue seeking public or private funding sources to improve the pedestrian and bicycle infrastructure.

Bicycle Facilities

Over the past several years, Brattleboro has begun adding striped bike lanes on several high-traffic roads—Putney Road (introduced in 2010), Western Avenue in West Brattleboro Village, and on Guilford Street in the vicinity of Living Memorial Park. Many streets in Brattleboro are wide enough to accommodate bicycle travel along with motorized vehicular travel. Route 30, with its wide paved shoulders, gentle gradient, and views of the West River, is a popular route for bicyclists (although motor vehicle speed is observed as an issue). In most parts of town, it is impractical to provide dedicated bicycle facilities in the road corridor; instead, paved roadway shoulders take the place of bike lanes.

The suitability of bicycling on most roads is dependent on the size of the shoulder, pavement conditions, gradient, and traffic volume and speed. Brattleboro’s major thoroughfares are inadequate and need improvement. The areas listed in Table 7.6 have been identified as important trip generators (employment centers, commercial centers, schools and colleges, and/or more densely settled development).

The placement of bicycle storage in the Downtown and Village areas and at retail and employment locations throughout Brattleboro is important. There is a need to provide a safe location for bicycles to be secured. Action 7.2.3 of this Plan is to improve bicycle storage.

Table 7.6: Bicycle access conditions

Segment	Conditions
Downtown	<ul style="list-style-type: none"> Busy on street parking Lack of bicycle storage Heavy peak-hour traffic flow
Putney Road	<ul style="list-style-type: none"> Limited bicycle lane Narrow shoulders (from Main Street over the Veterans Bridge) High volume, high speed Lots of traffic entering and exiting road Faded bicycle lanes
Canal Street	<ul style="list-style-type: none"> High volume, high speed Narrow shoulders Lots of traffic entering and exiting road
West Brattleboro	<ul style="list-style-type: none"> Limited striped bicycle lanes Narrow shoulder from I-91 to West Brattleboro Village High volume, high speed
Vernon Road	<ul style="list-style-type: none"> Narrow shoulders Heavy truck traffic High speed

Bicycling is a viable form of transportation that provides health and environmental benefits to individuals and the region as a whole. It is important that bicyclists and motorists know how to safely coexist. This Plan recommends developing a “shared road” system to identify and mark preferred travel routes for nonmotorized modes of transportation. Education of cyclists and motorists is also important as the Town improves bicycling infrastructure.

A SHARED-USE PATH

“A shared-use path is a path physically separated from motorized vehicle travel by an open space or a barrier either within an existing highway right-of-way or within an independent right-of-way. Shared use paths typically permit more than one type of user such as pedestrians, joggers, people in wheelchairs, skaters, bicyclists, cross-country skiers, equestrians and snowmobilers.”

VTrans Pedestrian and Bicycle Facility Planning and Design Manual



Shared-Use Paths

Brattleboro has numerous trails, both Town and privately owned (see Chapter 11 “Natural Resources”). However, these trails are unimproved and generally serve a recreational purpose. There are currently two shared-use paths in Brattleboro—the West River Trail and a small portion of the Whetstone Path.

In 2011, 3.7 miles of old railroad bed was acquired by the Friends of the West River Trail. This serves as the lower section of the West River Trail and is a public trail for both recreation and alternative transportation. The ultimate goal of the Friends of the West River Trail is to connect 36 miles from Brattleboro to Londonderry, using the old railroad bed.

The Whetstone Pathway, which would connect downtown to Living Memorial Park and on to West Brattleboro, is a path that has long been identified as desirable to the community. There is a pathway connection and bridge from Main Street to Flat Street constructed in 2005. Since that time, there has been no formal activity (e.g., right-of-way planning, acquiring easements, or construction) to further the pathway.

In the early 2000s, the Windham Regional Commission studied the feasibility of creating the Connecticut River Rails-with-Trails, a path to connect Brattleboro with Belows Falls adjacent to the active rail line. This project has also been inactive at both the Town and regional level. With the Town’s acquisition of lands to make improvements to Union Station and for the Wastewater Treatment Plant improvements, there has been some renewed interest in a shared-use path from Bridge Street to Hinsdale.

Water Transportation

Brattleboro is fortunate to have access to the Connecticut and West Rivers, both navigable rivers within town, for the pleasure of boating. There are several public boat landings, a private marina (West River Marina), and a canoe and kayak touring center that offers guided tours or individual rentals. No water trails have been designated at this time.

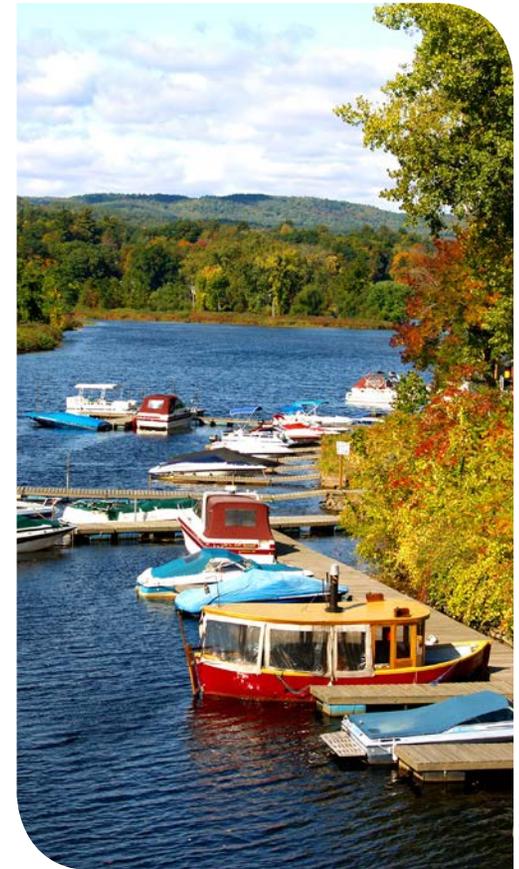
Public Parking

Brattleboro operates a parking system in the Downtown. A discussion of the system is in Chapter 10 “Municipal Facilities and Services”.

To encourage carpooling, the Town created a 21-space park-and-ride lot in 2007, a commuter lot located at Browne Court off Putney Road. It was constructed with financial assistance from VTrans.

Traffic Safety Committee

The Selectboard appoints a Traffic Safety and Control Committee to help promote Chapter 16 of the Brattleboro Code of Ordinance. This Committee meets monthly and is comprised of the Police Chief, Fire Chief, Superintendent of Schools, Planning Director, and Town Manager (or their authorized designees) and one representative from each the Selectboard, the Brattleboro Area Chamber of Commerce, and the community at large. The Committee has the authority to make recommendations to the Selectboard on a variety of components of the transportation system including, but not limited to, on-street parking, loading and unloading areas, pedestrian crosswalks, street markings, metered parking, traffic speeds, and street sweeping.⁸



FOOTNOTES

¹ Excluding Class 4 and Legal Town Trail Mileage.

² Vermont Agency of Transportation, 2010, *Continuous Counter Grouping Study and Regression Analysis Based on 2010 Traffic Data*, www.aot.state.vt.us/Planning/Documents/TrafResearch/Publications/Redbook2010.pdf.

³ The State fiscal year begins on July 1 and ends June 30 the following calendar year. For instance, Fiscal Year 2006 begins July 1, 2005, and ends June 30, 2006.

⁴ The Brattleboro Study Area consisted of the following Census block groups: 968400 1, 968400 2, 968400 3, 968400 4, 968600 1, 968600 2, 968600 3, 968500 1, 968500 2, 968500 3, 968500 5.

⁵ The American Community Survey (ACS) is based on a sample survey and intended to describe the characteristics of the population, not to provide population counts.

⁶ *Vermont Freight Plan Draft Technical Memorandum*, www.aot.state.vt.us/planning/Documents/Planning/VermontFreightPlanTask3_19032010.pdf.

⁷ *Ibid.*

⁸ A complete listing of what is the purview of the Traffic Safety and Control Committee is available in Chapter 16 of the Brattleboro Code of Ordinances. A copy of the ordinances can be found at www.brattleboro.org.



CHAPTER 8

Arts & Cultural Resources

Brattleboro values the arts and our cultural resources, and recognizes the need to sustain and build on our environment of social vitality and artistic endeavors, both for its intrinsic benefits and as an important economic driver.

Arts & Cultural Resources

Goals

- A. Promote public appreciation, participation, dialogue, and support for the invaluable contribution that arts and culture makes to Brattleboro's economic vitality and quality of life
- B. Create a sense of community through the expansion of arts and cultural opportunities in the community
- C. Strengthen arts organizations
- D. Nurture the integration of art, architecture, and landscape architecture in Brattleboro
- E. Build a strong and viable arts and creative industries sector

Policies and Actions

Policy 8.1 Collect information regarding the cultural community's role in the economic vitality of Brattleboro

Actions

- 8.1.1 Measure the economic impact of arts and creative industries in Brattleboro
- 8.1.2 Collect data on all artists, arts organizations, and art resources in the Brattleboro area and make the information public online as well as in a published directory

Policy 8.2 Support the creation of prominent art activities, events, and art installations

Actions

- 8.2.1 Maintain the Town Arts Policy
- 8.2.2 Use various media to increase awareness of the Arts in Brattleboro (i.e., brochures, self-guided walking and studio tours, banners and signs, web, mobile applications, etc.)
- 8.2.3 Continue to collaborate with the Town departments to integrate art into infrastructure work
- 8.2.4 Discuss the potential for an annual municipal contribution to the arts

Policy 8.3 To strengthen the arts sector, support the creation of a comprehensive information-sharing network of artists, art organizations, and art resources in the Brattleboro area

Actions

- 8.3.1 Create opportunities for artists and cultural groups to network
- 8.3.2 Create an online, interactive posting website for arts and cultural services

continued on next page

Policy 8.4 Establish opportunities for the participation of Brattleboro youth in public art projects

Actions:

- 8.4.1 Investigate ways to have youth representation on the Town Arts Committee
- 8.4.2 Plan with local educators to integrate youth into Town arts opportunities

Policy 8.5 Address the economic, social, cultural, educational, physical, and age-related factors that limit accessibility to the arts in Brattleboro

Actions:

- 8.5.1 Gather pertinent data describing the current accessibility of art (activities, exposure, performance, instruction) in Brattleboro and use the data to identify gaps



For the purposes of this Plan, the terms “arts and culture” are defined in the broadest context, to include the visual, literary, performing (music, dance, and theater) and media (film, video, sound recording, animation) arts. Brattleboro recognizes the importance of arts and culture in defining the character of the community; promoting economic vitality; creating rich educational opportunities; and sparking innovation. Both the tangible and intangible benefits of arts and culture help make Brattleboro a desirable community in which to live and work. Therefore, the fostering of arts and culture is important to our quality of life.

CURRENT CONDITIONS

Brattleboro has a rich and diverse range of cultural resources, including a wide array of performing, literary, and visual arts organizations, performance venues, galleries, and museums, and a strong community of independent artists and craftspeople. An inventory of these assets is included in [Appendix B](#). Brattleboro projects a lively cultural image, as demonstrated by the town’s designation as “One of America’s 20 Best Small Towns” in 2012 by Smithsonian magazine.

The activities offered by the Arts and Culture community include classes and workshops for adults and children, concerts, theatre performances, and art and historical exhibits. Brattleboro is home to numerous festivals, such as the annual Brattleboro Literary Festival and Women’s Film Festival and the monthly Gallery Walk, that provide opportunities for residents and visitors to experience the arts and culture.

Arts and cultural facilities are primarily centered in three locations: Downtown, Cotton Mill Hill, and West Brattleboro Village.

- **Downtown** is an active center that capitalizes on cultural resources. It serves as a major entertainment center for both Brattleboro and Windham County, with a museum, live entertainment venues, galleries, a movie theater, performance spaces, and arts and culture educational programs. It also hosts ongoing cultural activities and festivals such as Gallery Walk and the Women’s Film Festival. There have been ongoing efforts on behalf of several arts-related organizations to create an Arts Campus at the corner of Flat Street and Elm Street. The site is currently anchored by the New England Youth Theater.
- **Cotton Mill Hill** is a 3-story, 145,000-square-foot mill building dating to 1910 that offers business incubation space. It has attracted a high number of artists and creative businesses, serving as an important hub for arts industries in Brattleboro.
- **West Brattleboro**, both the historic village and extending west, is home to a museum, an art gallery, and several artist and artisan studios.

Performance, exhibition, and rehearsal space for the community is provided by private nonprofit organizations. The availability and affordability of these spaces are subject to the policies of each organization. This can prove challenging for struggling artists and fledgling arts groups. The general public and artists’ community have indicated the need to improve the handicapped-accessibility of existing performance spaces and to create additional performance space, in particular for youth.



Economic Contribution

Measuring the impact of the arts and cultural institutions is difficult, as there are numerous methodologies with which to study it. A recent study, Economic Footprint of the Arts in Vermont, looked at the economic contribution of employment (including self-employment), compensation (including wages and benefits), and tax impact of the arts sector in Vermont.¹ The study revealed that art industries employ an estimated 4,342 people and generate \$19,438,480 in state and local tax impacts.² The employment figures indicate that the arts provide more direct employment than many well known Vermont industries such as food manufacturing (4,227), machinery manufacturing (2,900) and wood product manufacturing (1,992). More detailed information on covered employers and employees as well as a discussion of arts and creative industries clusters is available in Chapter 2 “Economic Development.”

In 2011, several arts organizations in Windham County participated in a nationwide study conducted by Americans for the Arts. The study found that the 39 participating nonprofit arts organizations in greater Brattleboro spent roughly \$7.6 million in 2005 and leveraged an estimated \$3.2 million in additional spending by arts audiences.³ The report found that nonprofit arts and culture event attendees spend an average of \$20.94 per person per event, excluding the cost of admission. This is spending that affects the revenues of restaurants, hotels, retail stores, and other businesses.

The economic impact of cultural industries becomes even more significant if one includes for-profit groups such as independent artists, craftspeople, filmmakers, musicians, writers, and photographers, whose contributions are not included in this report.

Municipal Commitment

The Town has demonstrated support for the arts in Brattleboro. In 2008, the Town Arts Committee was formed. This Committee has been an important bridge between the arts and cultural community, the community-at-large, and town government. They have been active in promoting opportunities for art in the public realm. A collaborative effort with DPW and local artists resulted in the replacement of portions of sidewalks already in need of repair with Horizontal Art—sidewalk slabs with art installations in them. Efforts to consider artistic design in street furniture (bus shelters, trash cans) have also been explored. This Plan includes an action to continue finding ways to integrate arts with infrastructure.

The Selectboard adopted a public art policy in 2009. According to the policy, public art is “publicly accessible original art that enriches the town and evokes meaning. It may include permanent visual art, performances, installations, events, and other temporary works. Public art should consider the site, its context, and audience. Public art may possess functional as well as aesthetic qualities; it may be integrated into the site or exist as a discrete work.” This Plan supports the maintenance of this policy.

The Town owns Union Station, now home to the Brattleboro Museum and Arts Center (BMAC) for the operation of an arts center and museum. BMAC (a nonprofit organization) is responsible for the operation and maintenance of their space. Recent improvements include renovating the gallery space and the addition of a sculpture garden.

TOWN VALUES AND GOALS FOR PUBLIC ART

- *Stimulate excellence in urban design and public arts*
- *Enhance community identity and place*
- *Contribute to community vitality*
- *Involve a broad range of people and communities*
- *Value artists and artistic process*
- *Use resources wisely*

INVESTING IN THE FUTURE

Brattleboro has a rich and vibrant cultural community, and many organizations and individuals offer activities and facilities in the arts. Growth must involve the nurturing and strengthening of existing organizations, developing new cultural amenities, and focusing on gaps in service. To this end, the following needs have been identified:

- **Accessibility of the Arts:** While there is a high quality of cultural offerings in Brattleboro, they are not accessible to everyone. The community must continue to work to ensure that all residents, regardless of age, income, or ability, have access to the arts as participants and/or audience members. This requires partnerships between municipal and school entities as well as nonprofit and for-profit organizations. To understand what gaps exist, action step 8.5.1 of this Plan is to gather data from arts groups to identify accessibility issues.

Research shows that the arts are an important tool for developing an attachment to place, nurturing creativity, building critical thinking skills, and developing intellectual capacity and sensory function. Brattleboro's youth have repeatedly stressed the importance of arts to their educational experience. Ensuring high-quality arts education in the public schools is critical to enriching and enabling children's lives. Policy 8.4 in this Plan encourages youth participation in the arts. Actions 8.4.1 and 8.4.2 of this Plan are to encourage youth representation on the Town Arts Committee and to work with educators to get youth involved when there are art opportunities.

Brattleboro's youth and adults have identified Brattleboro's strong arts community as an asset and have expressed appreciation for the variety of cultural opportunities that result (this is also noted in Chapter 2 "Economic Development" as an asset to

be built on). In addition, maintaining and enhancing the cultural community in Brattleboro is important because arts and culture industries can play a vital role in attracting people, business, and investment, and in distinguishing Brattleboro as a dynamic and exciting place to live and work.

- **Administrative Structure:** There is a need to build the administrative and financial structure to support the arts. Creating a structure dedicated to building organizational capacity through education and mentoring, creating an information-sharing network, marketing and business development, and increasing public and private support for the arts will help artists feel less isolated.
- **Information Sharing:** Currently, there is little formal coordination among Brattleboro's arts organizations. There is no sole source for ticketing, programming,



promotion, marketing, or management, though some institutions do plan certain events to coincide with events or programs of other venues. In most cases, each arts venue sells tickets, advertises, plans, and promotes events individually. In addition, the organizations all raise funds separately, competing for the same funding allocations and foundation donations. To strengthen the arts sector, actions 8.3.1 and 8.3.2 of this Plan are to create artist networking opportunities and to create an online, interactive posting website for arts and cultural services.

- **Better understanding of the financial contribution of the arts to the area's economy:** The social and economic impact of arts and cultural industries is yet to be fully understood in Brattleboro. The quantification of these impacts can help establish the importance of the industries for policy and planning purposes. Action 8.1.2 of this Plan is to collect this information on the local level and publish a directory of arts resources, artists, and arts and cultural organizations.
- **Public Art:** Public art can convey visual interest and reinforce the community's identity as a vibrant arts community. Over the past several years, there have been great advances to integrate public art into the Downtown. The creation of a stronger cultural presence throughout Brattleboro through the creation of specific physical spaces and new initiatives that showcase arts and culture is desired. Actions included in this Plan to increase public art include the continuation of integrating arts into infrastructure and using different type of media to promote arts in the community. This Plan also supports discussions of a potential annual municipal contribution to the arts in order to expand public art.

FOOTNOTES

¹ This study looked only at artists, museums and historic sites, arts promoters and agents, and performing arts companies.

² Main Street Landing, *The Economic Footprint of the Arts in Vermont*, (November 2010).

³ *Arts & Economic Prosperity IV: The Economic Impact of Nonprofit Arts and Culture Organizations and Their Audiences in Windham County*. For more information about this study or about other cultural initiatives in Windham County, visit the Arts Council of Windham County's website at www.acwc.us.





CHAPTER 9

Historic & Scenic Preservation

Brattleboro values our historic and scenic resources as important contributions to the economic, social, cultural, and physical welfare of Brattleboro.

Historic & Scenic Resources

Goals

- A. Recognize and protect the significant historic, architectural, and cultural heritage of Brattleboro
- B. Protect the visual quality of scenic resources throughout Brattleboro

Policies and Actions

Policy 9.1 Support organizations and property owners that enhance citizen awareness of Brattleboro's history and numerous artifacts

Actions

- 9.1.1 Expand the collection, organization, and preservation of records of historical value related to the town's history, governance, commerce, individuals, and organizations
- 9.1.2 Maintain an inventory of Brattleboro's historic resources
- 9.1.3 Support expansion of the National Register Downtown Historic District to include side streets (such as Flat and Elliot Streets) making tax credits available to more downtown properties

Policy 9.2 Review development projects to ensure minimal negative impact on historic and/or scenic resources

Actions

- 9.2.1 Consider establishing a local historic district with historic preservation regulations for Downtown, encompassing the buildings around the Common and extending south to the southern boundary of the National Register Downtown Historic District
- 9.2.2 Consider subdivision standards for conservation development such that scenic views are protected to the greatest extent possible
- 9.2.3 Consider guidelines in the Subdivision Regulations and Zoning Ordinance to preserve trees both on hillsides with steep slopes and in scenic areas
- 9.2.4 Assist applicants with permitting processes and directing them toward financial assistance for historic renovation projects

Policy 9.3 Encourage the adaptive reuse of historic properties

Actions

- 9.3.1 Promote tax incentives, loans, and grant programs to encourage the adaptive reuse of historic structures to meet community and market needs

Brattleboro enjoys the presence of many historically important structures. These resources enrich and enhance our community, build civic pride, and help define our identity. Maintaining, restoring, and re-using historic properties can preserve neighborhood character, help protect the tax base by maintaining value, and attract businesses and households that are looking for communities with a high quality of life, a sense of pride, character, and historic and cultural richness. Brattleboro's outstanding scenic resources include natural landscape features—rolling topography, water features, forests, and wildlife—and cultural landscape features such as farm buildings and historic architecture. Brattleboro's scenic resources are highly valued by residents and visitors alike and therefore merit special attention and consideration. It is important that these historic and scenic resources are considered in land use decision-making. This chapter identifies Brattleboro's historic and scenic resources and the protection and preservation policies in place today, and looks at how to protect and preserve them for the future.

Historic Resources

Downtown

The heart of Brattleboro remains its downtown, one of the best preserved 19th-century downtown areas in Vermont. Most of the downtown was entered into the National Register of Historic Places in 1983. Main Street showcases approximately 170 years of architectural styles, shapes, and ideas. It is anchored at each end by small parks. From the Wells Fountain at the north end to the former railroad station at the south end, the downtown area includes many well-preserved and visually interesting 19th- and 20th-century buildings. The area was first developed some 200 years ago, and as the buildings were constructed primarily of wood, most were subsequently destroyed by fire. While the present downtown is only 70–150 years old, a majority of the buildings are included in the National Register of Historic Places.

A number of important houses dating from as early as the 18th century can be found in town. A complete listing of buildings, structures, and districts listed on the National Register of Historic Places is in [Appendix C](#). The Planning Services Department maintains a binder with all of the Town's National Register applications for historic buildings and districts that are included on the National Register of Historic Places. This binder includes detailed information on each asset and its significance. This Plan recommends that the Planning Services Department maintain this information, as it is an important resource for the community.

West Brattleboro

In 2002, the West Brattleboro Green Historic District was listed on the National Register of Historic Places. The district is comprised of a cluster of well-preserved 19th-century buildings around a small triangular green. In 2006, when the West Brattleboro Master Plan was developed, the Village's traditional architecture was identified by residents as the single most important physical resource in West Brattleboro. The Village's traditional residential architecture is largely characterized by versions of Federalist, Italianate and Colonial Revival, Greek Revival, and Gothic Revival architectural styles. Modestly steep, gabled roofs on top of two-and-a-half-story wood-framed and clapboard-sided structures are the norm.

Other Historic Resources

Brattleboro contains many historic neighborhoods and sites, all of which contribute to the Town's character. The Clark-Canal Neighborhood, Swedeville, and Esteyville have strong, identifiable characteristics. Although these neighborhoods have changed over time, many of the aesthetic qualities that made these areas special remain in place today, and merit continued recognition and protection.

Brattleboro's industrial heritage is well documented, with numerous historic structures and buildings relating to industry and technology throughout town. Originally, many

NATIONAL REGISTER OF HISTORIC PLACES FUNDAMENTALS

To be considered eligible for National Register listing, a property must meet National Register Criteria for Evaluation. This involves examining the property's age (generally at least 50 years old), integrity (does it still look much the way it did in the past?), and significance. The State Historic Preservation Office has National Register information, research materials, and forms to begin the nomination process.

of the downtown buildings were used for industrial purposes, but they have since been converted to commercial and residential uses. Some historic buildings outside downtown include the Estey Organ Factory, Berkshire Fine Spinning Associates (Cotton Mill Hill), and Daly Shoe Factory.

With an abundance of water resources and productive soils, Brattleboro was inhabited by prehistoric and Native Americans. As a result, present-day Brattleboro holds several treasures of the past. The Vermont Division for Historic Preservation has identified several significant archaeological sites in Brattleboro: one in the Fort Dummer Park; petroglyphs in the West River (Indian Rock); one on the Connecticut River behind Adair Heights; and along the West River where an old cement bridge was once located.

Recreational sites also serve as important resources. The Brattleboro Common has a long history of being a social gathering spot. Presidents have spoken here; concerts have been given, plays performed, and other social activities held here. The Common includes a Civil War monument and a memorial to all who served in wars. Harris Hill's first ski jump was built in 1922, and soon afterward state and national championships began being held at the site. The original jump has been replaced, but ski jump competitions are still held and are the highlight of the annual Winter Carnival.

Historic Preservation

Historic preservation activities in Brattleboro not only promote an increased appreciation of the past, they are a key feature of successful community planning and economic development because of the benefits in improving neighborhoods, attracting investment, and supporting tourism. Brattleboro's property owners have proved their interest in, and commitment to, preservation. In recent years, it has been the private sector that has provided the necessary support to ensure that the Town's historic resources remain an integral part of everyday life.

Several property owners have taken advantage of both federal and state rehabilitation tax credits for use on income-producing buildings. Recent examples of properties that have used these tax credits include rebuilding of the Wilder Block after a fire, rehabilitation of the Cutler Block with office and retail space, and the creation of rental housing units at several properties developed by the Windham & Windsor Housing Trust.



Several properties—Latchis Theater, Retreat Farm, and the Goodenough and Cobblestone Houses—have taken advantage of preservation easements. The easement, which is held by an outside organization, ensures that the features are protected regardless of who owns the building.

The Town continues to participate in state programs that result in “designations.” The benefit of these programs is that a variety of tax credits, grants, training, and technical services are made available to help revitalize downtowns and village centers. West Brattleboro Village is a Designated Village Center and the downtown is a Designated Downtown. Building a Better Brattleboro is the local Downtown organization that works to preserve and revitalize the historic Downtown. Commercial buildings in these designated districts are eligible for state tax credits for general rehabilitation, code compliance, and exterior improvements.

BENEFITS OF DOWNTOWN AND VILLAGE CENTER DESIGNATION

- 10% historic tax credits
- 25% façade improvement tax credits
- 50% code improvement tax credits
- Priority consideration for HUD, CDBG, and Municipal Planning Grants
- Priority consideration by State Buildings and General Services
- Special Assessment Districts

Scenic Resources

While some of Brattleboro's scenic resources are built or natural landmarks, others are scenic vistas encompassing private land, and these are also a prominent amenity. Thus, there is no guarantee that all of the remaining scenic vistas will remain so in the future. The Natural Assets map included in Chapter 12 "Land Use" identifies scenic areas that are particularly noteworthy. This is not intended to be a comprehensive list of such areas, though it includes those most often mentioned.

Community conveys character best when dense settlement is clearly delineated against a backdrop of open space of natural interest, rather than when patchy, low-density sprawl diminishes the natural amenity. Brattleboro can help to protect the scenic views that serve as gateways to the Town. As people enter Brattleboro, the scenic quality of the immediate surroundings greatly influences the observer's impression of the Town as a whole. Travelers on Route 30 are treated to beautiful views, including the agricultural setting of the Retreat Farm and the open waters of the Retreat Meadows. The rolling fields straddling Interstate 91 just south of the bridge over the West River provide scenic vistas of open fields and forested lands. Farther north on I-91, views of the rolling farmland off of Old Guilford Road provide a similar agricultural context. Entering Brattleboro from the west on Route 9, views from the valley floor of the wooded hillsides, consisting of mixed hardwood and softwood trees, form a backdrop and give a sense of scale to both resident and visitor.

Other areas recognized as important include: the Connecticut River; the West River and the forested western edge visible from I-91 and along the Route 30 corridor; open lands along the Whetstone Brook; and views of Round Mountain and Ginseng Hill. An often-cited scenic resource visible from Downtown is the forested view of Mt. Wantastiquet. Viewsheds are vistas that can be delineated and protected through land use regulation.

Scenic Byways

Brattleboro is situated along two scenic byways. The Connecticut River Byway was designated a National Scenic Byway in 2005. This designation recognizes American roads and places known for their scenic, historic, recreational, cultural, and archeological qualities. The Byway consists of 498 miles of roads in Massachusetts, Vermont, and New Hampshire and includes Route 5 in Brattleboro.

The Molly Stark Byway stretches 48 miles along Route 9, anchored by Brattleboro and Bennington. It was designated a Vermont State Scenic Byway in 2003. Obelisks featuring local history were installed along the Byway, with two located in Brattleboro.



Protection of Historic and Scenic Resources

Most historic resource protection programs in Brattleboro have been accomplished through voluntary efforts. Interested citizens and the Town have initiated certain programs, such as historic site and district nominations, and rehabilitation programs. Local voluntary efforts have resulted in the plaques seen on many historic houses on Western Avenue. Voluntary acts of preservation are encouraged and action 9.2.4 of this Plan directs the Planning Department staff to both assist applicants with pertinent permitting processes and direct applicants toward financial resources.

Preservation groups are actively involved in historic inventory, education, and protection efforts. The Brattleboro Historical Society, founded in 1982, has been involved in a number of activities, including collecting and organizing historical artifacts, researching historical records, sponsoring educational programs and tours, and making contributions to the Town Plan. The Estey Organ Museum (EOM) was formed in 2002 to preserve and interpret the legacy of the special contributions of the Estey Organ Company (EOC). EOM sponsors events; serves as a reference center for information about the EOC; and has a collection of organs and related materials, some of which are on view at the EOM, located at the Estey Organ Factory Complex.

As noted, Brattleboro has several historic structures listed on the [National Historic Register](#). This listing primarily acknowledges the historic and/or cultural significance of a property or district—it does not afford protection from actions such as demolition, incompatible additions, or changes to the façade when they are funded by a private property owner. Brattleboro’s rich inventory of largely intact buildings remains and is worthy of protection. One such area is the buildings around the Brattleboro Common. This area is currently zoned to preserve the residential character of areas next to Downtown and to provide for residential/office mixed-use development. If the goal is to

preserve the residential character, regulations could protect the structures, as the large, stately residential-looking buildings are what define the character, not the use (because that is primarily as offices). No current regulations exist in Brattleboro to protect such buildings, so there is nothing preventing a property owner from tearing one down and replacing it with something that does not respect the design character of the nearby properties.

The delicate balance of preserving historic structures and individual property rights can be a challenge; a local historic district is designed to balance the two. Establishing a local historic district demonstrates that there is a public purpose in preserving the exteriors of privately owned buildings. The cultural value extends beyond the district. Property owners within the district obtain an assurance that their sensitive stewardship of an important building will not be undermined by the actions of other private property owners.



Enacting a local historic district would provide protection by providing a framework for review of certain types of exterior alterations, additions, and demolitions. This Town Plan recommends consideration of a local historic district for Downtown. The establishment of historic preservation regulations and a local historic district would be an extension of the Zoning Ordinance. The regulations would only apply to those buildings that have been identified as having historical significance. The following are commonly addressed in local historic district regulations and the Planning Commission will need to address and resolve the following issues:

- The extent of development that triggers review
- How and under what circumstances demolition will be permitted
- What constitutes historically sympathetic renovation and rehabilitation
- How to ensure historically sympathetic additions and alteration
- How to ensure new construction is compatible with existing historic structures

Brattleboro's Land Use Plan and regulations should be designed to reinforce the scenic quality of the landscape by focusing development in the Downtown and Village Center and by preserving the rural character of the outlying areas. Consideration of scenic and historic resources is incorporated in the development review process in a number of ways. Site Plan criteria govern exterior lighting to ensure that it is shielded and not projecting off-site; ensure proper landscaping and screening; and require consideration

of building design and siting in certain Zoning Districts. Additional regulatory tools that are worthy of consideration include conservation subdivisions, additional design guidelines, and the preservation of trees on steep hillsides. In the Land Use chapter of this Plan, the scenic resources noted in this chapter have been considered in determining the desired future land use scheme (see Chapter 12 "[Land Use](#)").





CHAPTER 10

Municipal Facilities & Services

Brattleboro values essential services to protect public safety, promote sanitation, health and welfare, and the provision of accessible, cost effective services that improve the quality of life and support the citizens' vision and values for affordability and livability.

Municipal Facilities & Services

Goals

- A. To provide municipal facilities and services to ensure the public’s health and safety, and to improve the quality of life in Brattleboro
- B. To foster orderly and fiscally sound development of Brattleboro

Policies and Actions

Policy 10.1 Provide effective police and fire services throughout town

Action:

- 10.1.1 Address the facility needs of the Police and Fire Departments in the most effective manner

Policy 10.2 Maintain a public water and public wastewater system that meets state and federal standards, and provides for the future development needs of the town

Policy 10.3 Improve stormwater management

Actions:

- 10.3.1 Evaluate the feasibility and options for establishing a separate stormwater-services enterprise fund or program
- 10.3.2 Work with property owners to address stormwater issues and infrastructure needs

Policy 10.4 Use extension or new construction of the municipal water and/or wastewater systems to remedy existing problems, promote orderly and timely land development, and carry out the purpose of the land use plan

Policy 10.5 Require that land use practices and development projects are consistent with the Town’s vision and future planning strategy

Actions:

- 10.5.1 Adhere to the goals and policies of the Town Plan—particularly those that address land use and development, transportation, and municipal facilities and services
- 10.5.2 Develop a process to coordinate the adoption of future Capital Improvement Plans (CIPs) with consideration of the Town Plan

continued on next page

Policy 10.6 Utilize developer agreements to ensure that private developers pay for any burden their development places on the Town's public service and infrastructure; agreements shall identify how the development will assist the Town to finance, develop, and maintain new and existing facilities and services, such as:

- Passive and active parks and public spaces
- Potable water, sanitary sewer, and stormwater infrastructure systems
- Transportation infrastructure, including roads, sidewalks, and/or bicycle infrastructure
- Public safety infrastructure required for a development (e.g., fire hydrants, extensions of the municipal fire alarm system, etc.)

Policy 10.7 Locate and maintain public facilities and services to support the goals of compact growth, neighborhood revitalization, and sustainable new neighborhood design

Policy 10.8 Support efforts to maintain and enhance the library

Actions:

- 10.8.1 Continue to explore grant opportunities to enrich the library's collections
- 10.8.2 Explore ways to maximize the benefits of the fiber optic network

Policy 10.9 Provide a variety of recreational opportunities for residents of all ages and abilities

Actions:

- 10.9.1 Promote recreational activity with appropriate and adequate access by all age and user groups
- 10.9.2 Foster continued cooperative use of facilities and fields with the school districts

Policy 10.10 Encourage pride and sense of ownership of parks and miniparks through facilities that are well maintained, landscaped, and programmed

Actions:

- 10.10.1 Develop a Parks Master Plan to provide a long-term vision for future development and programming of park space
- 10.10.2 Support civic and garden clubs/organizations in beautification projects

Policy 10.11 Use parking technologies that offer customers and policy-makers the maximum flexibility

continued on next page

Policy 10.12 Continue efforts to reduce waste generation and provide environmentally sound waste disposal opportunities

Actions:

- 10.12.1 Provide outreach to citizens, businesses, and organizations emphasizing the importance of the solid waste collection and recycling programs
- 10.12.2 Increase capacity for composting by establishing more collection points for Project COW (Composting Organic Waste)
- 10.12.3 Increase the number of recycling bins on streets and in parks
- 10.12.4 Develop a town-wide bulky waste collection program



Brattleboro provides a wide variety of services to residents and visitors alike. These include public safety, water, sewer, roads, parks, and libraries. As a regional center, many people from outlying towns rely on Brattleboro for access to work, recreation, education, healthcare, and social activity. As a result, our infrastructure and services respond to the needs of residents, commuters, and tourists. A core function of local government is to provide services, facilities, and infrastructure to meet community needs. An important function of the Town Plan is to review accessibility, availability, condition, and capacity of municipal facilities, services, and infrastructure to meet the current and projected needs of the Town. The purpose of this chapter is twofold: (1) identify the facilities and services that underpin civic life in Brattleboro, and (2) provide an assessment of existing community facilities and programs, and their impact on the community. The Public Safety, Municipal Facilities, and Educational Facilities Maps and the Parks and Recreation Map show the location of these facilities.

MUNICIPAL ADMINISTRATION

A Town Manager directs the day-to-day operation of local government, oversees the administration of town services, and appoints most town employees. The Town Manager is appointed by and reports to the Selectboard. Town employees and elected and appointed boards, commissions, and officers provide a variety of local government services. The position of Assistant Town Manager was reinstated in the Fall of 2011. This position reports directly to the Town Manager.

Municipal Center

The Municipal Center serves as the administrative offices for much of [Town government](#). Situated on Main Street, the building houses the offices of the Town Manager, Town Clerk, Treasurer, Tax Collector, Assessor, Finance Department, Planning Services Department, Police Department,

Brattleboro Community Justice Center, and Emergency Operations Center. It provides meeting spaces for various boards and committees. Several offices on the second and third floors are rented to other agencies. Other municipal facilities are located in several other locations, and the services they provide are discussed later in this chapter.

Issues and Needs: Due to the building's age, several building improvements are accounted for in the Capital Improvement Plan (CIP): FY 2014—sidewalk stairway from Main Street, handicap bathroom, and repointing the building; FY 2015—electric system upgrade, roof coating, and slate roofing around the edges.

The work that will be done to improve the Police Station (which is located at the Municipal Center) will include a 10,407-square-foot addition and 5,216-square-foot renovation to the Municipal Center. This work will create separate entrances for police and municipal functions.

Municipal Finance

The ongoing challenge of funding municipal services is currently heightened by the demographic profile (aging population with no growth), negative impact of national and regional economic cycles on municipal revenue growth, rising costs of delivering quality services, and recovery from Tropical Storm Irene. These budget drivers are discussed further below, as they set the context for decisions made on municipal services and infrastructure:

- From 1950 to 2010, [Brattleboro's population](#) has increased from 11,522 to 12,046. This represents a change of only 4.5% in 60 years. For the last two decades this growth has been particularly slow. While population growth can bring its own costs, a static (aging) population limits local market growth (including real estate), which in turn means little or no growth in commercial and residential property tax revenues.¹ Between 2005 and 2011, a total of 91,318 square feet of commercial building space was add-

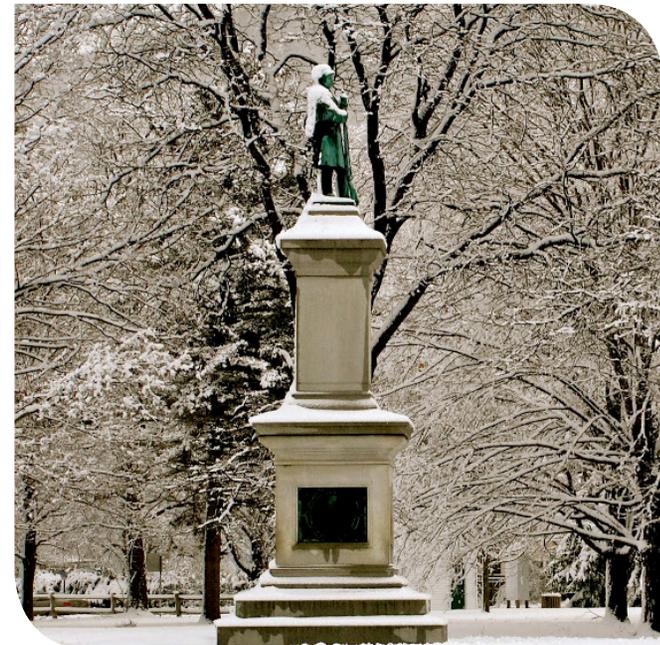


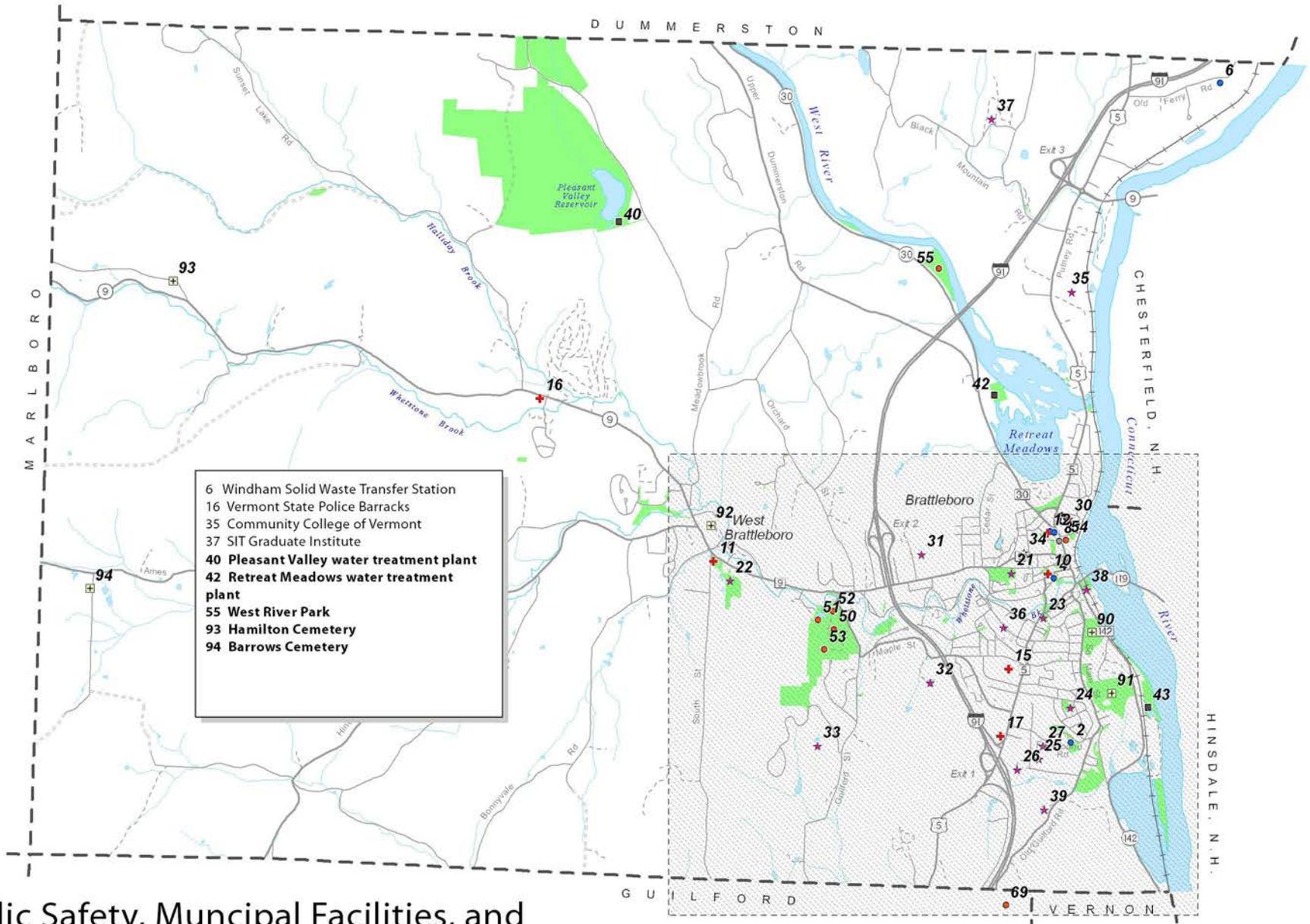
ed—a 1.05% increase in six years. The number of residential properties increased by only 19 parcels from 2005 to 2006, for a total of 3,123 parcels.

- Infrastructure and utilities are in constant need of maintenance and, in some cases, upgrading (to meet new regulatory standards or community expectations). In a low-growth environment there is little impetus to comprehensively plan infrastructure expansion and little fiscal ability to take on large-scale projects. This low level of activity can become self-reinforcing over time, so it remains critical to comprehensively plan for the maintenance of the quality of the existing infrastructure. While difficult to avoid, constantly deferring capital investments in infrastructure is not a prudent way to manage assets. Projects that are currently being undertaken include an upgrade to the Wastewater Treatment Plant (WWTP) and the construction of the West River Playing Fields. In 2012, a bond was passed to upgrade the Police and Fire stations.
- Over the past several years, Brattleboro has made a concerted effort to increase the General Fund's unassigned fund balance. This balance was \$1,627,966 as of June 30, 2012, which represents 11.5% of the General Fund's 2012 fiscal year expenditures. An adequate undesignated fund balance is important because, apart from prudently setting aside funds for unforeseen expenses, an appropriate reserve can reduce the cost of borrowing.
- Brattleboro's property taxes are currently the fifth highest in the state. A previous [study from 2002 by Vermont Natural Resource Council and Vermont League of Cities and Towns](#) shows that Vermont's traditional centers do have higher taxes than the surrounding rural communities. Investments in upgrading and maintaining infrastructure to serve residents, commuters, and visitors from surround-

ing towns appear to be one of the contributing factors to somewhat higher property tax burdens. Vermont's regional centers serve a unique role in sustaining the traditional settlement pattern of the state—small villages surrounded by rural working landscapes—by containing sprawl and facilitating commerce and social activity in accessible well-served centers. Updating past investigations of the fiscal burden confronting regional centers in the state is needed to inform policy actions designed to sustain communities such as Brattleboro.

- Consideration should be given to developing mechanisms to evaluate the burden that economic development causes on the need for municipal services, and to developing tools that will enable the Town to raise additional revenues to pay for municipal services in a manner that does not unduly burden Brattleboro's residents and taxpayers.

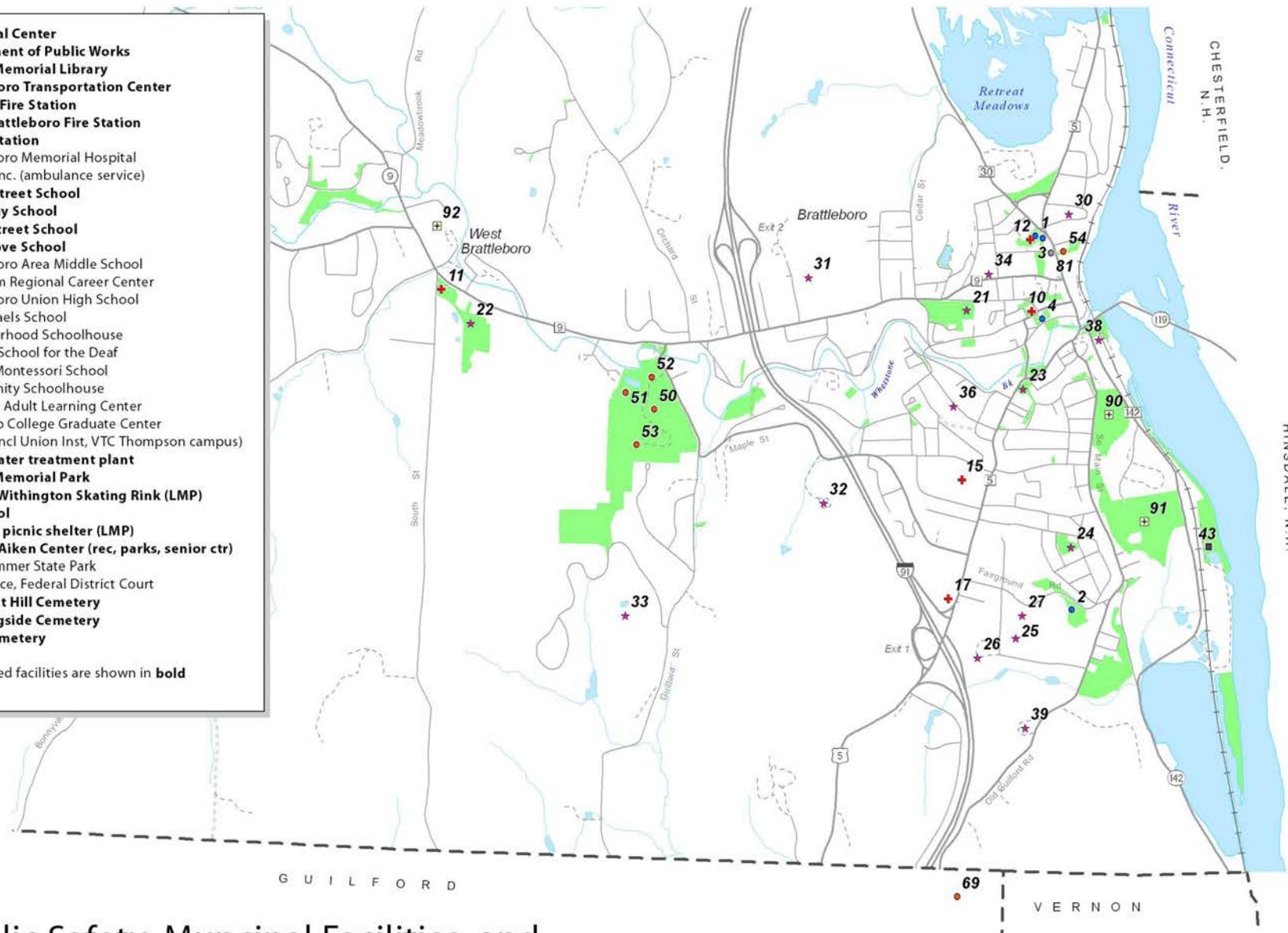




Public Safety, Municipal Facilities, and Educational Facilities - Map 1

0 1 Mile

- 1 Municipal Center
 - 2 Department of Public Works
 - 3 Brooks Memorial Library
 - 4 Brattleboro Transportation Center
 - 10 Central Fire Station
 - 11 West Brattleboro Fire Station
 - 12 Police Station
 - 15 Brattleboro Memorial Hospital
 - 17 Rescue Inc. (ambulance service)
 - 21 Green Street School
 - 22 Academy School
 - 23 Canal Street School
 - 24 Oak Grove School
 - 25 Brattleboro Area Middle School
 - 26 Windham Regional Career Center
 - 27 Brattleboro Union High School
 - 30 St. Michaels School
 - 31 Neighborhood Schoolhouse
 - 32 Austine School for the Deaf
 - 33 Hilltop Montessori School
 - 34 Community Schoolhouse
 - 36 Vermont Adult Learning Center
 - 38 Marlboro College Graduate Center
 - 39 VABEC (incl Union Inst, VTC Thompson campus)
 - 43 wastewater treatment plant
 - 50 Living Memorial Park
 - 51 Nelson Withington Skating Rink (LMP)
 - 52 LMP pool
 - 53 Kiwanis picnic shelter (LMP)
 - 54 Gibson Aiken Center (rec, parks, senior ctr)
 - 69 Fort Dummer State Park
 - 81 Post Office, Federal District Court
 - 90 Prospect Hill Cemetery
 - 91 Morningside Cemetery
 - 92 Glen Cemetery
- town-owned facilities are shown in **bold**



Public Safety, Municipal Facilities, and Educational Facilities - Map 2

- municipal services
- parks/recreation
- + public safety/health services
- utility
- ★ education
- other
- ⊠ cemetery
-
 Town-owned land

Data sources:
 Windham Regional Commission:
 facilities, as identified by Brattleboro's
 Planning Service Department
 Cartographic Associates, Inc;
 parcel boundaries of town-owned land

All these factors will challenge Brattleboro in the coming years. Tough decisions will need to be made on capital expenditures and on whether or not existing service levels can be maintained. Commitments made to municipal services have long-term financial implications. The link between the municipal service provision and property tax rates needs to be better understood by all stakeholders and voters.

Issues and Needs: Capital Planning is a tool that links long-term development plans with municipal budgeting to avoid sharp increases in the tax rate from one year to the next. Brattleboro currently maintains a Capital Plan that lists building, infrastructure, and equipment needs. This Town Plan contains a series of recommendations designed to address critical challenges and needs and wherever possible improve livability in Brattleboro. Some of these goals can be achieved at little or no cost, but others may require significant investments and/or shifting of priorities. To effectively plan for the future, the Town needs to think broadly about the future of its municipal facilities and give priority to critical projects that can be advocated because either they have direct positive economic development dimensions (i.e., wastewater treatment plant) or improve the quality of life in Brattleboro in ways that promote growth (i.e., bicycle and pedestrian improvements have consistently ranked as very important to residents).

Expanding the Town's capital planning process so that there is greater commonality between the Capital Improvement Plan (CIP) and the Town Plan will ensure more coherence between policies and actions contained in the Town Plan and long-term capital commitments. For these reasons, this Plan recommends developing a process that links capital planning and the Town Plan. One way to do so is to use decision criteria to prioritize capital projects. Communities use various types of criteria—from broad categories of need, urgency of need, and weighted rat-

ings (usually based on program/service goals established by the Selectboard and other officials). Making the Town Plan a part of the decision criteria can help strengthen the relationship between the two plans.

Towns across the country are taking various actions to address sustainability, energy conservation, climate change, emissions reductions, and similar concerns. These actions involve supporting a range of initiatives from policies to plans, to citizen committees, and to dedicated staff. The Town has pursued sustainability measures and fiscal prudence by initiating energy conservation projects in municipal facilities, incorporating sustainable features into new construction projects (e.g., Wastewater Treatment Plant), and upgrading infrastructure (e.g., street lights). Chapter 3 “Energy” of this Plan has more information on the results of the Town's efforts to improve energy efficiency. The Town currently has a policy giving preference to local purchasing. Decision-making criteria could be expanded beyond just cost and quality to consider environmental, economic, and social considerations.



PUBLIC SAFETY

The Brattleboro Police Department and Fire Department are the principal agencies addressing public safety needs in the Town. Both departments depend on the Central Dispatch center to answer emergency calls and dispatch the appropriate department. Rescue, Inc., a private nonprofit agency, provides ambulance service.

Police Department

The [Brattleboro Police Department](#) is open 24 hours a day, seven days a week. The Department consists of 28 sworn officers, 8 full-time dispatchers, and 4 support professionals (including an animal control officer). Aside from traditional law enforcement and investigation functions, the Department also addresses social service needs such as homelessness, substance abuse, and mental illness and offers several community service programs, such as Brattleboro Cadets, for youth interested in pursuing law enforcement.

The Police Department has been located in the Municipal Center since 1953, with no expansion and only internal rearrangement of offices and areas since then. The current Police Station is inadequate to meet the needs of the Department. Issues requiring attention include:

- Lack of a Sally Port to provide for the secure transfer of prisoners
- Inadequate space for the storage of evidence and long-term records
- Accessibility challenges for the cell block
- Lack of separate locker rooms for men and women
- Interview rooms close to public spaces
- Division of the workspace by a central hallway in the Municipal Center
- Lack of secure parking for cruisers and trailers

Brattleboro Central Dispatch handles dispatch services for all public safety calls, including Police, Fire, Rescue, Inc.



(ambulance), and the Public Works Department. Located within the Police Department and on the first floor of the Municipal Center, Central Dispatch has eight full-time and four part-time employees. It also provides the infrastructure for a mass communication system ([Brattleboro Emergency Notification System](#)) that allows the town to transmit emergency notifications to residents and businesses by telephone and email.

Issues and Needs: For decades, the Police Department facility has been identified as inadequate for efficient police operations. Security and safety concerns are the most urgent and will be first to be addressed. A feasibility study was completed that examined options for effective and cost-efficient solutions to facility problems for both the Fire and Police Departments. The study recommended an addition to the Municipal Center to address the police station needs. In October 2012, Town Meeting representatives approved a \$14.1 million bond to do work to the police and fire facilities. Action 10.1.1 of this Plan addresses the facility's needs.

Fire Department

The [Brattleboro Fire Department](#) provides 24-hour coverage with 25 full-time employees, supplemented by 15 on-call staff. All the full-time firefighters are certified Emergency Medical Technicians (EMT). The Fire Department's duties range from fire suppression and prevention to fire and health code inspections, issuing burn permits, hazardous material response, public education, intervention for juvenile fire setters, investigations, and water and ice rescue operations. Several department personnel serve as part of Brattleboro's Emergency Management Team.

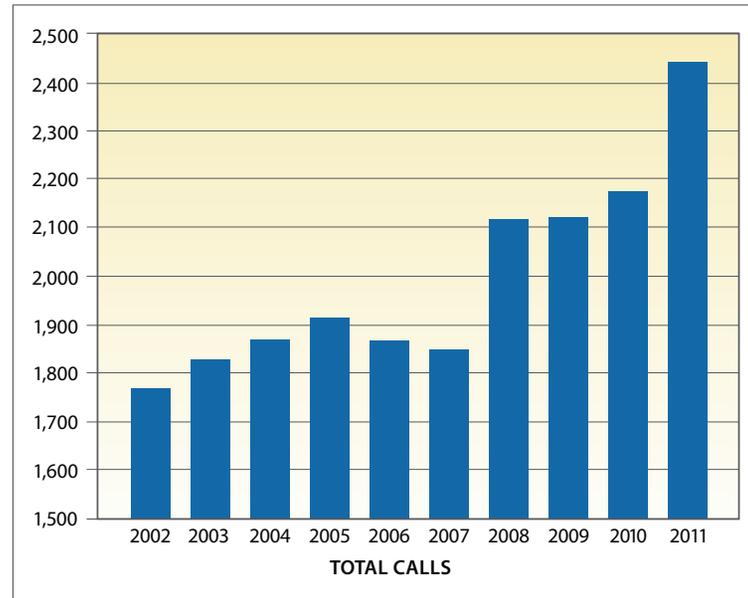
The Department operates out of two stations. The seven-bay, 10,288-square-foot Central Fire Station, located on Elliot Street, serves as the Department's headquarters and main facility. The station was originally built in 1947 and was added onto in the mid-1980s. The West Brattleboro Station is located on South Street in West Brattleboro Village. Personnel are dispatched from there as first responders for emergencies in West Brattleboro. The 3,000-square-foot, two-bay station was built in 1966 and was expanded with a second floor in the mid-1970s.

Issues and Needs: The current fire stations are inadequate to meet the needs of the Fire Department. Deficiencies in the Central Fire Station include: deterioration of cinder block in the hose tower; an inadequate exhaust removal system; and the inability to fit apparatus in the bays. The West Brattleboro bays are also too small to fit apparatus.

Town Meeting representatives voted in support of a \$14.1 million bond to finance improvements to the two fire stations and the police station. These facility improvements will take place during the life of this Plan. Other expected capital expenditures include total replacement of air packs. Action 10.1.1 of this Plan addresses the facility's needs.

Figure 10.1 shows that the number of calls the Brattleboro Fire Department responds to is increasing.

Figure 10.1: Total calls



Source: Brattleboro Fire Department

Rescue, Inc.

This nonprofit organization provides emergency medical and ambulance services for Brattleboro residents. It operates from an ambulance facility on Canal Street, near Exit 1. Rescue, Inc. is overseen by a Board of Trustees comprised of one representative from each community in the service areas (Rescue Inc. currently provides service to 12 Vermont towns and 2 New Hampshire towns) and 6 additional representatives. Support for Rescue, Inc. comes from Town allocations, subscription memberships, and fundraising. Services are paid for by either insurance or self-pay.

PUBLIC WORKS DEPARTMENT

Public Works comprises three divisions: Utilities, Highway, and Maintenance. The Highway Division is responsible for maintaining and overseeing Town roads, parking lots, bridges, dams, and sidewalks. The Utilities Division is in charge of repair and maintenance of both the water delivery and sewer collection systems. The Maintenance Division is responsible for the upkeep of the heavy machinery that is used by the Public Works Department. This Division is staffed by employees trained in truck maintenance and welding who primarily work out of the Public Works facility.

The Public Works Department facility is located on Fairground Road. The 18-bay facility was built in 1950 and is located on a 4.9-acre parcel. There are approximately 27 people working out of this site, including administrative employees. The facility contains administrative offices, equipment and vehicle repair spaces, storage facilities, a salt storage shed, and a fuelling station.

Issues and Needs: The Public Works Department describes a need for more administrative office space and storage space at the Fairground Road site. The Capital Improvements Plan (CIP) FY 2016 includes an engineering evaluation and design of the current site. This is necessary to address the working conditions in the maintenance facility as well as to file and map storage needs.

A 2010 assessment of six municipal roofs identified the Public Works facility as having usable space for a solar panel array. At that time, the roofs were evaluated based on a private investor paying for the system, selling power to the Town at a pre-agreed price, and eventually selling the system to the Town after 5 years. At that time, the state and federal incentives did not make the project financially viable for the private investor. Planning for renovations to the facility should include reevaluating the viability of a solar array installation.

The salt shed at the site is a remaining structure from the fairground. Despite efforts to reinforce the structure over the years, it is deteriorating. The CIP includes replacement of the shed in FY2014.

HIGHWAY DIVISION

This Division is responsible for 85.32 miles of road, 30 bridges and large-diameter culverts, approximately 35 miles of sidewalk, 560 culverts, 1,800 drainage basins, and the entire system of connecting drainage pipes. This Division also maintains all road signs and street markings along with the roads (see Chapter 7 “[Transportation](#)” for a discussion of the road system).

Brattleboro’s infrastructure—roads, sidewalks, stormwater drainage system—is old. The costs of maintenance, repair, and upgrade must be balanced with those of new construction. The challenge is to make appropriate and timely spending for maintenance before repair is expensive because it is too late. The Town also makes every attempt to leverage supplemental state and federal funds with town investments. The Public Works Department uses the computer program Road Surface Management System to assist in determining the road maintenance schedule. Each road section is surveyed and rated on several criteria about once every two years. The goal is to keep the best ratings on the roads at the lowest cost.

Since 2004, the Public Works Department has been working to fit street lights with energy-efficient bulbs.² These efforts are continuing. The Department is working with the Town Energy Committee to upgrade to LED lights and to come up with a strategy for street lighting that balances reducing the environmental impact of street lighting with providing lighting for the safety of roads and for the community in general.

The maintenance of the stormwater drainage system is a responsibility of the Highway Division. Brattleboro's existing pipe system is undersized in many parts of Town, especially in the older sections of Canal Street, South Main Street, and northern parts of Main Street.

The Highway Division also has responsibility for maintaining the Town's numerous stormwater management systems. This maintenance is labor and equipment intensive. (See below).

Issues and Needs:

Stormwater Management

Increasingly, state and federal regulations are requiring that stormwater be treated prior to outfalling into a water source. Brattleboro's stormwater drainage system is separate from the sewer collection system. Therefore, anything that goes down a storm drain outfalls directly to the nearest stream or river with no treatment. In the late 1990s, the U.S. Environmental Protection Agency (EPA) began requiring cities to institute separate stormwater systems to prevent harmful pollutants from being washed or dumped into the stormwater system. Due to its size and population density, Brattleboro was not required to comply with the federal regulations. However, the threats to waterbodies are real and deserve attention. Crosby Brook has been listed on Vermont's 303(d) List as an impaired stream. The EPA requires that states develop a Total Maximum Daily Load, or TMDL, for each stream segment on the 303(d) list. While the TMDL process is a state responsibility, local governments and property owners will be significantly affected when it comes time to implement load reductions by source.

Over the last several years, the Town has been supportive of efforts by the Vermont Agency of Natural Resources and the Natural Resources Conservation District to improve locations where stream bank erosion results in sedimentation of the Crosby Brook. Highway stormwater discharges

must also be addressed to prevent the Crosby Brook from being designated a stormwater impaired stream.

Maintenance of the Town's stormwater drainage system is important to avoid public safety hazards (e.g., preventing standing water and flooding of roadways), health risks, and environmental hazards. Maintenance includes cleaning catchbasins and clearing clogged underground pipes. Maintenance is getting increasingly expensive and requires specialized equipment. Currently, this maintenance is financed from funds allocated to the Highway Division but the funding is not adequate to keep up with necessary maintenance. Therefore, this Plan includes a policy 10.3 to improve the stormwater management system and it recommends managing and financing it in another way. Several Vermont communities have formed stormwater utilities. In this system, all owners of developed properties that contribute stormwater runoff and pollution to the system are charged a fee for service, much like utility fees for water and sewer. These fees are then used to support the maintenance of the stormwater system in a sustainable way.

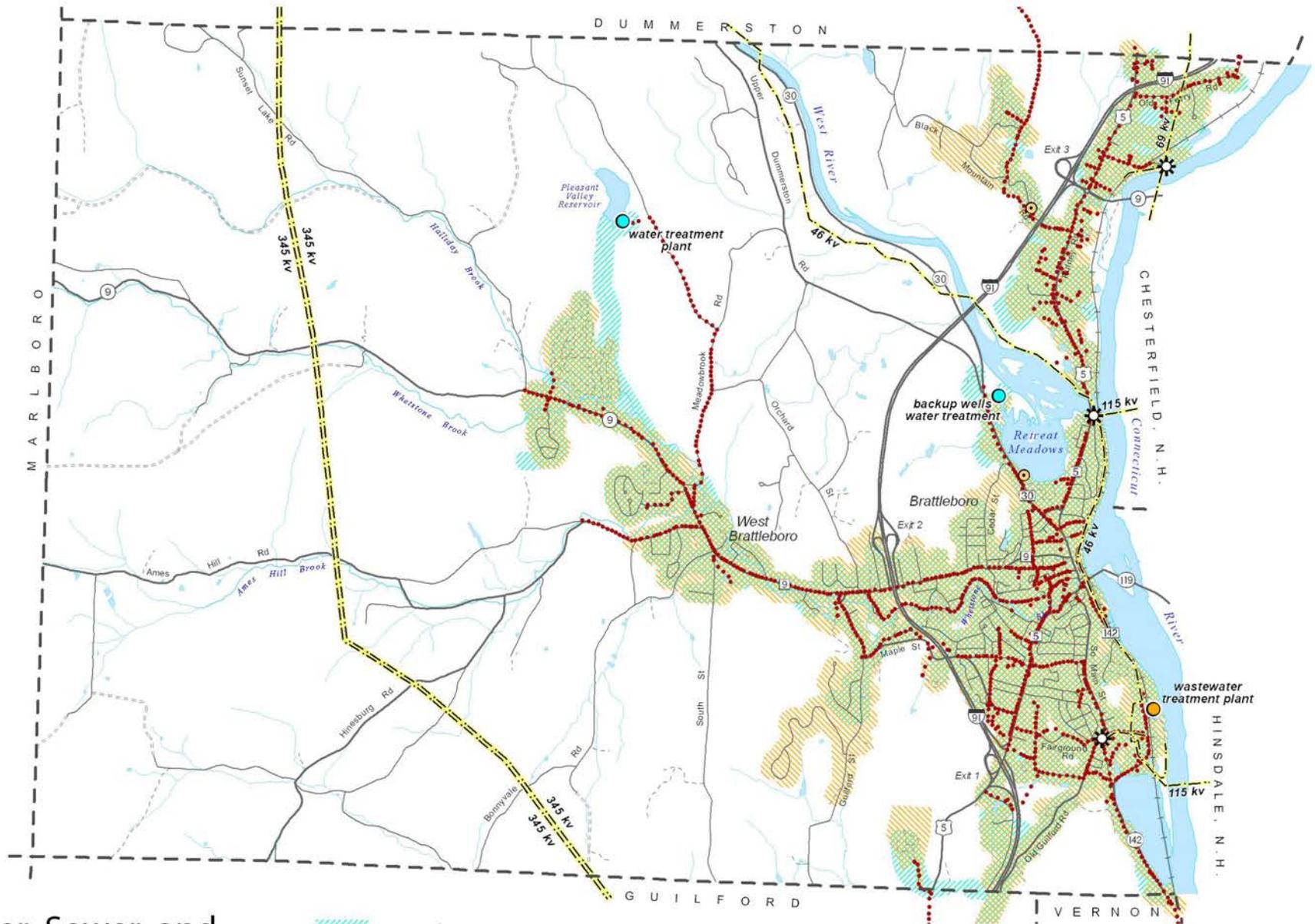
Sidewalks

Maintaining, improving, and expanding sidewalks is a constant challenge, given budget constraints. The Public Works Department makes every effort to leverage funds so that more work can be accomplished. The Department does prioritize sidewalk projects but could benefit from a Sidewalk Master Plan that would serve as the primary guide in the allocation of capital, maintenance, administrative, and matching funds. Such a plan would need to be designed to provide staff and the public with flexibility, as opportunities and needs arise. This action is discussed further in Chapter 7 "Transportation" of this Plan.

IMPAIRED WATERS AND TOTAL MAXIMUM DAILY LOADS

Under section 303(d) of the Clean Water Act, states are required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the water quality standards set by the state. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop a total maximum daily loads (TMDLs) for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.





Water, Sewer, and Electric Utilities

0 1 Mile

- water service area
- sewer service area
- area served by both water and sewer
- water treatment facility
- wastewater treatment plant
- sewer pumping station
- electric substation
- electric transmission line
- three-phase power (distribution)

(the above are all town managed utilities)

Data sources:

- Brattleboro Public Works Department: water & sewer service areas
- Windham Regional Commission: water & sewer facilities, electric substations
- Vermont Center for Geographic Information: electric transmission lines
- Central Vermont Public Service: three-phase power

UTILITIES DIVISION

The Utilities Division of the Public Works Department is responsible for the repair and maintenance of both the water delivery system and the sanitary sewer collection system. They also maintain the fire hydrants and water meters of the Town. The water and sewer services are available within approximately the same geographic area. The utilities generally follow the Route 5 and Route 9 corridors north to the Dummerston town line, south into Guilford, and west to Sunset Lake Road (see the Water, Sewer, and Electric Utilities Map). Expansions of the water and sewer systems are generally paid for by either a developer or user. More recent line expansions include extensions to Commonwealth Dairy and Algiers Village in neighboring Guilford.

Water Supply

Brattleboro's public water supply sources include wells and the Pleasant Valley Reservoir. Water is provided through a fee-based water rate. Funding for the public water supply system is through an enterprise fund, which is funded entirely by water receipts.

The municipal water supply infrastructure consists of two systems: the Water Treatment Plant and 3-million-gallon water storage tank located on the Pleasant Valley Reservoir and three backup wells with a filtration plant at the Retreat Meadows. The water treatment plant is designed to process 3 million gallons per day (MGD) and on average it is currently serving 1.2–1.3 MGD.

The Water Treatment Plant at Pleasant Valley Reservoir came online in 1990. The most recent improvement to the system was a major upgrade to the Retreat Well Filtration Plant on Route 30 in 2002. In addition to the water storage tank at the Water Treatment Plant, a 125,000-gallon tank serves Sherwood Circle, and the Exit 1 Industrial Park and Black Mountain Road are each served by 1-million-gallon water tanks. The Zoning Ordinance includes a Public Water Supply overlay district that encompasses the Pleasant Valley Reservoir area.

Issues and Needs: There is adequate water supply to meet demand. However, the water treatment plant at Pleasant Valley Reservoir is aging. As a condition of the state permit to operate a water treatment facility, the facility must be evaluated every 20 years. The evaluation has been completed, and this Plan recommends that upgrades be done to the filters and the alum sludge lagoons. The Public Works Department expects that this work will need to be undertaken within the next 10 years.

In addition, it is expected that the water tank on Black Mountain Road will either need to be refurbished or replaced. The tank is made of metal and was constructed in the 1960s. An evaluation of the structure was undertaken in 2012.

Wastewater Treatment

The Wastewater Treatment Plant is an activated sludge, or secondary treatment, facility located on Route 142, south of downtown. This facility is currently operating at about 50% of its capacity and has the potential to operate at 3 million gallons per day (MGD). Originally built in 1967 as



a primary treatment facility, this facility was upgraded to a secondary treatment plant in 1984. State permitting requires that wastewater treatment plants, like water treatment plants, be evaluated every 20 years. This evaluation was completed in the early 2000s and resulted in the Town undertaking a major upgrade to the facility. The \$32.8 million project was financed through a combination of state revolving loan funds and municipal bonds.

The main components of the project, which began in late 2010, include a new headworks building, primary clarifiers, pump gallery, thermophilic digester tank, sanitary pump station, and plant water pump station. The project also includes modification work to the existing secondary clarifiers, dewatering building, digester complex, control building, chlorine building and contact channels, and selector building with a Moving Bed Biofilm Reactor (MBBR) system. The design of the facility provides for using renewable energy from a solar hot water system for the offices, recapturing methane to heat the boilers, and utilizing thermal energy for heating and cooling the wastewater.

When completed, the facility will be able to produce Class-A biosolids acceptable for use as fertilizer. This ability will also allow the facility to accept waste that is not currently accepted, such as septic and waste from certain industrial processes that cannot currently be handled, producing new revenue streams for the utility fund.

Issues and Needs: Once completed, the upgrades to the Wastewater Treatment Facility are expected to be sufficient to serve future demand for at least an additional 20 years. The Public Works Department issues permits for new users. Certain users are required to provide pretreatment, as their waste may pose problems to the operating system (e.g., too many metals, high alkaline, etc.). This permitting will continue to ensure that discharges into the system are compatible with what the facility can handle.

CULTURAL AND RECREATIONAL SERVICES

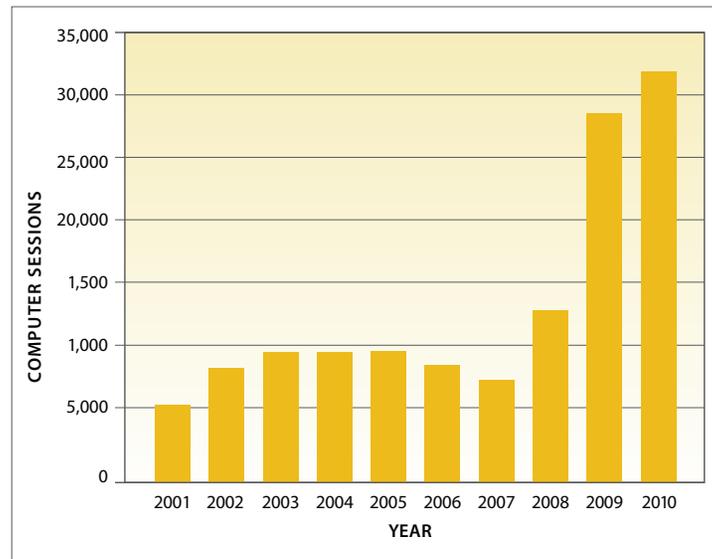
Brooks Memorial Library

The [Library](#) is located on Main Street in the downtown. Opened in 1967, the facility is 17,600 square feet and has three floors. The library is handicapped accessible and features a Children’s Room, a genealogical room, and a meeting room.

The library is currently staffed by six full-time employees, eight regularly scheduled part-time employees, and many dedicated volunteers, operating the library 50 hours per week. The library has a board of nine trustees who are elected annually at Town Meeting. They establish library operating policies and manage an endowment fund. A separately incorporated organization, the Friends of Brooks Memorial Library, supports special library projects through fundraising.



Figure 10.2: Annual public computer sessions



Source: Brooks Memorial Library, Strategic Planning Information

The Library currently has about 7,536 registered borrowers. Its collections include books, periodicals, digital media (DVD, CD, video, audio books), and databases with a total of 72,770 (79,568 including nonprint media) volumes and an annual circulation of nearly 176,632. The Library also offers Internet access for the public, with 20 computers. This public access is an important service offering high-speed connection to the Internet for people in the community who are underserved, and for the economically disadvantaged. Public-access computer sessions increased at the library from 2009 to 2010 by 18%, to 34,862.³ Figure 10.2 shows the annual public computer sessions.

In response to rapid technological changes, the Library has been expanding its collection of resources in various digital formats. Between 2009 and 2010, digital media downloads more than doubled from 1,097 to 2,590.⁴ The Library added a collection of eBooks that can be downloaded to a variety of digital devices in 2010. This Plan supports the use of grants to continue to enrich the Library's collection.

In addition to meeting circulation needs, the Library fosters community cultural life by hosting public meetings and exhibits with outside organizations. In 2010, the Library sponsored 443 public programs for a total attendance of 10,160.

The Library recently underwent a strategic planning initiative and identified the following service priorities for 2012–2016: support young readers in early literacy and beyond; satisfy the curiosity of library users through lifelong learning; connect to the online world to help users find, evaluate, and use information; stimulate the imagination of library users through resources for reading, viewing, and listening; and provide access to welcoming physical and virtual spaces for Library users.

As part of the Vermont FiberConnect Project,⁵ Brooks Memorial Library will become a “community anchor institution” and receive a high-speed fiber-optic data transport

service. This expansion will allow for increased opportunities at the library that could include video conferencing and the ability to take online courses. This Plan includes an action to explore ways to maximize the addition of the fiber optic network.

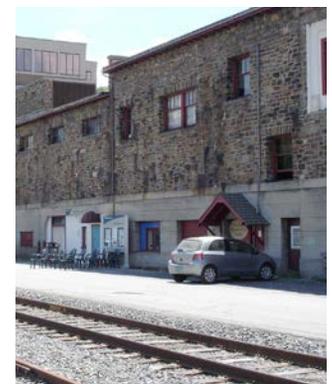
Issues and Needs: The library has an extensive collection of many different formats (e.g., DVD, digital, print, etc.). This is in keeping with contemporary libraries. However, this addition of formats is creating overcrowding. Since 2000, the Library has been forced to restrict its volumes to 75,000. Although the Library has no plans for expansion at this time, the building could accommodate a third-floor addition. The CIP has identified the following maintenance needs for the coming years: replacing the air handling/air conditioning system and replacing floor coverings.

Union Station

Located on the corner of Vernon Street and Bridge Street, Union Station is a historic structure under long-term lease to the Brattleboro Museum and Arts Center (BMAC). The Town is responsible for maintaining the building; the day-to-day management and use of the space is overseen by BMAC.

The property also houses the Amtrak train station. In 2012, a first phase of improvements to the train station was completed. They include a new bus turnaround on Depot Street and a parking lot. Plans to include improvements to the passenger platform, including covering it, had to be scaled back due to funding challenges.

Issues and Needs: The CIP anticipates upgrades to the Union Station building in FY14 (windows) and FY16 (slate roof work). The train station is currently located in the back of the building, on the lowest floor. The Town is committed to improving and covering the passenger platform.





Recreation and Parks

The [Recreation and Parks Department](#) is responsible for the planning, organization, direction, and evaluation of a comprehensive recreation program for all ages. This programming includes youth and adult sports leagues, day camps, youth and adult activities, special events, and senior center activities. In addition, this department coordinates activities and schedules facilities with 13 different community organizations. Policy 10.9 of this Plan supports the continuation of providing recreational opportunities for people of all ages and abilities. This department also maintains public parks, recreational facilities, and Town cemeteries.

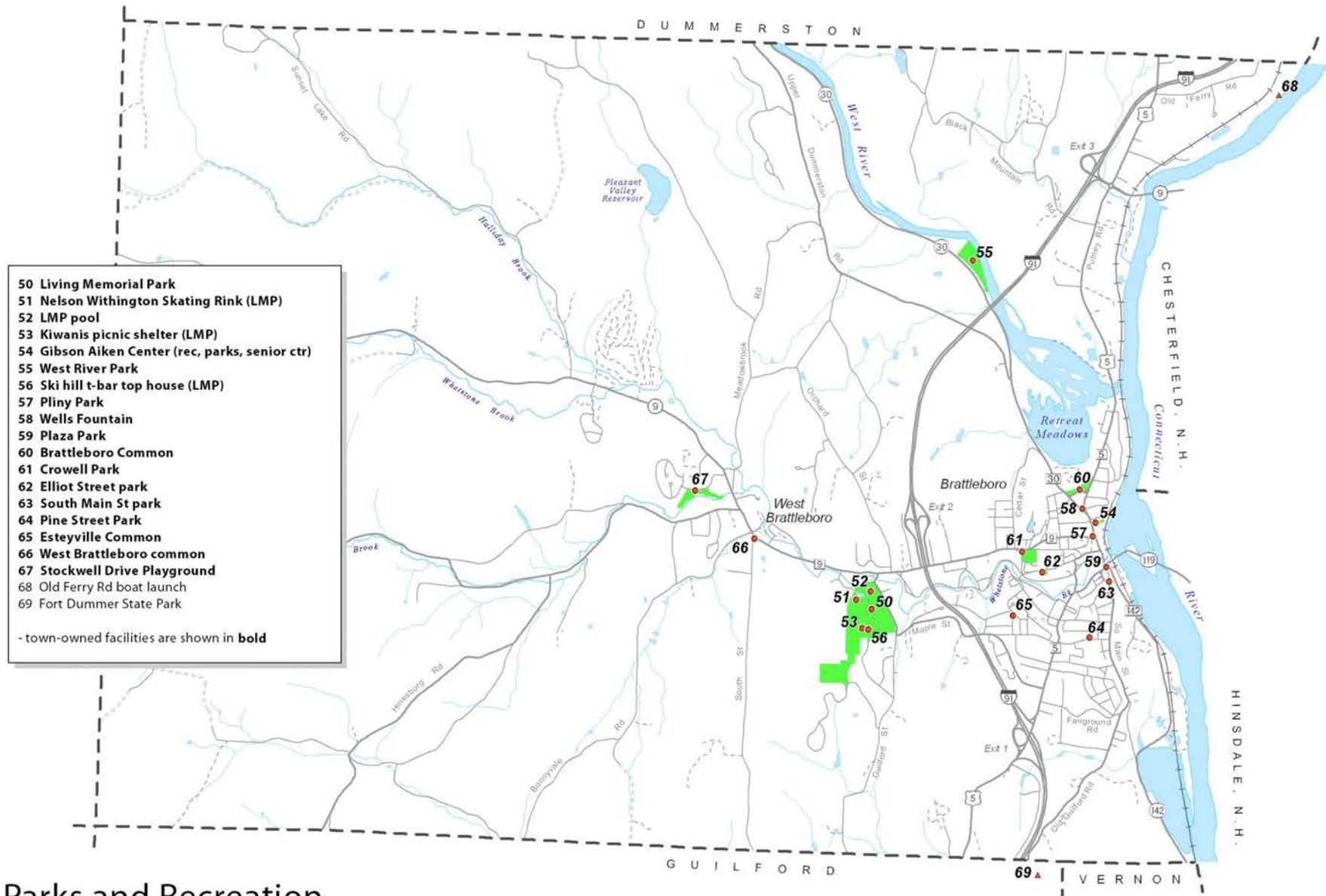
The Department is staffed by 9 full-time and 40 seasonal employees. In addition, volunteers and program instructors support the Department year round. Its offices are located in the Gibson-Aiken Center on Main Street. This facility includes two gymnasiums, the Senior Center, activity rooms, meeting rooms, and offices.

The Recreation and Parks Committee consists of seven members who are appointed by the Selectboard. It is an advisory board to the Department, helping to set policy and goals as well as overseeing the parks, programs, and facilities.

Brattleboro has a variety of lands and facilities that are used for recreation. The Recreation and Parks Department maintains all of the public-owned lands and facilities in the Town (see Table 10.3).

Table 10.3: Public-owned park and recreation land

Site	Location	Acres	Current facilities
Brattleboro Common	Putney Road	3.50	Bandstand
Crowell Park	Western Avenue	4.90	Basketball courts, Ball field, Playground
Esteyville Common	Estey Street	0.19	Bandstand
Floral Arts Club Park	Western Avenue	0.38	Park
Gibson-Aiken Center	Main Street	0.73	Gymnastic room, Gymnasium, Game rooms, Senior Center
Living Memorial Park	Guilford Street	66.74	Playgrounds, Basketball courts, Swimming pool, Water playground, Ball fields, Kiwanis shelter, Trail system, Volleyball courts, Skating rink, Ski/sled hill
Pine Street Park	Pine Street	0.17	Playground
Plaza Park	Main Street	0.15	Park
Pliny Park	Main Street	0.08	Park
South Main Street Park	South Main Street	0.22	Park
Thomas Lynch Park	Elliot Street	0.50	Playground
Wells Fountain Park	Main Street	0.67	Park
West Brattleboro Village Green	Western Avenue	0.31	Open space
West River Park	Route 30	11.03	Ball fields, Canoe/kayak launch, Picnic areas



Parks and Recreation

0 1 Mile

Parks and recreation facility:

- town-owned
- ▲ other

■ Town-owned parks and recreation land

Data sources:

Windham Regional Commission:
 parks & recreation facilities, as identified by
 Brattleboro's Planning Service Department
 Cartographic Associates, Inc;
 parcel boundaries of town-owned land

Brattleboro has 14 miniparks in its current inventory. These can be an important amenity to neighborhoods, especially in areas where open land is scarce, because they provide green space for neighbors to gather and socialize, and in some places for children to play. Maintaining and programming of these spaces can be challenging, given budget limitations. Community involvement is needed to help beautify these spaces. Presently, service organizations and other groups have taken on projects to improve public spaces. This Plan is appreciative and supportive of these voluntary efforts. The Town and local community groups should work toward creative solutions to make these projects happen.

Beautification matters because the physical beauty of amenities in town is a reflection of a community's pride and commitment to mutual benefit. The appearance of a community's environment is a good indicator of a community's health. Visible signs of neglect such as overgrowth and disrepair communicate a lack of interest in keeping a community strong and an unwillingness to accept responsibility for doing so. Signs of care and attention such as well-maintained trees, sidewalks, medians, and public areas show the town's commitment to maintaining a strong community.

From a business perspective, a clean, well-maintained environment speaks of an active and stable community. These are qualities that attract new business investment. Businesses look for places that show signs of growth, active community, and a safe opportunity to make money. Beautification can improve Brattleboro's competitive position to attract and retain more business. From a residential perspective, a clean, well-maintained community increases opportunities. It attracts new residents to the area, increasing property values. It also brings in new businesses with local jobs and a greater range of local services.

The Recreation and Parks Department has continued to make improvements and additions to their facilities. Since

the last Town Plan was adopted, two new recreation and parks projects have been approved. Scheduled to open in 2013, the West River Recreational Area will provide opportunities for both active and passive recreation, with the addition of playing fields as well as trails and a canoe/kayak launch. A skate park has been approved by the Development Review Board for the Crowell Lot. Funds are still being raised for construction. Other improvement projects, made possible through a combination of sources (Capital Fund Drives, user fees, donations, grants), included upgrades to the skating rink, improvements and upgrades to the Senior Center, and infrastructure and safety improvements at Living Memorial Park.

Issues and Needs: With the addition of the West River Recreational Area, the field space needs for the community will be adequate for the next 5–10 years. Several Town programs use fields or facilities owned by the school districts. Changes in arrangements for use of these facilities could have an impact on programs. Therefore, this Plan recommends the continued cooperative use of school district facilities and fields to meet programming needs.

There are ongoing facility and refurbishment needs at several of the recreational facilities. The Capital Plan lists replacing windows at the Gibson-Aiken Center, increasing the size of the maintenance building at Living Memorial Park, replacing the roof at the skating rink (2014), and upgrading the Living Memorial Park Pool and Filter Plant (2017).



The Recreation and Parks Department could benefit from a Recreation and Parks Master Plan, so this Plan recommends that one be done. Park master plans assist the public to determine the best uses for a specific site and the best ways to optimize management of its resources. Such a plan would provide a long-range vision for future development and programming. Issues typically addressed include planned park elements, natural and cultural resources management, general design concerns, and changing public needs.

Brattleboro Senior Center

Brattleboro has a large senior population. In 2000, the 970 people in the 75+ age group represented 8.1% of the Brattleboro population; those 65 and older represented 16.3% of the town's population. To serve the needs of the senior population, the Recreation and Parks Department provides daily activities and special events at the [Senior Center](#) in the Gibson-Aiken Center. The Recreation and Parks Department continually adapts its programming to meet the needs of its participants. Consistent with the demographic shift of the community, more recently retired people are utilizing the Senior Center and looking for more active recreation. This has resulted in some additional programming to address their needs.

Services at the Senior Center are enhanced by the presence of Brattleboro Senior Meals, a nonprofit food service organization. They prepare meals for both congregate dining 5 days a week at the Center and for delivery through their Meals on Wheels Program.

Issues and Needs: Recent improvements and upgrades to the facility have involved upgrading equipment in the kitchen for the meals program, new furniture, a new television, and renovations to the rest room. No large capital expenditures are projected for the next 5 years.

PARKING SYSTEM

Nearly all of Brattleboro's public parking is located Downtown. The Town manages 7 parking lots and the Brattleboro Transportation Center parking garage, with a combination of pay-and-display ticketing and meters. In addition, there is on-street metered parking on Main Street, High Street, Elliot Street, Flat Street, Elm Street, Church Street, Walnut Street, and Grove Street. The locations of municipal parking lots are identified on the Transportation Facilities Map located in Chapter 7 "[Transportation](#)" of this Plan. The parking system derives funds for maintenance and improvements from parking fees and fines.

The parking system is currently overseen by the Assistant Town Manager. There are three parking enforcement officers, who operate out of the Parking Office on the first floor of the Transportation Center.

The parking system is currently overseen by the Assistant Town Manager. There are three parking enforcement officers, who operate out of the Parking Office on the first floor of the Transportation Center.

Issues and Needs: Over the years, Brattleboro has made adjustments to the downtown parking system. Most recently, Smart Cards were introduced. Policy 10.11 of this Plan is to use parking technologies that offer customers and policy-makers the maximum flexibility. Consideration of ways to improve the current system and add convenience for motorists should be ongoing. Some options for this purpose include: portable time (receipts purchased at pay boxes are good until expiration at any pay box with the same rate, allowing people to take payment with them to visit many different stores); extended free parking for holi-



days; rates that adjust after the first hour or two, thereby changing those who overstay meter times from violators into higher paying customers.

CEMETERIES

Brattleboro has 5 cemeteries, which are maintained by the Town. A Cemetery Committee advises the Selectboard on care and maintenance of the cemeteries. Only Morning-side Cemetery has plots available for purchase. It is not expected that additional burial grounds will be needed in the near future, given the space that is currently available and the increasing trend to cremate.

SOLID WASTE AND RECYCLING

The Town of Brattleboro is a member of the Windham Solid Waste Management District (WSWMD). Membership in this district provides Brattleboro with comprehensive solid waste management in cooperation with other towns. WSWMD is headquartered on Old Ferry Road at Brattleboro's closed landfill. The facility consists of administrative offices, a materials recycling facility, pole barn, hazardous waste depot, transfer station, and swap shop. All of the solid waste is disposed of outside the district.

Currently the Town provides weekly curbside collection of trash and recyclables to all residents except those living in apartments with five or more units (landlords are responsible for managing both trash and recycling in these buildings). The Town contracts with a hauler to provide the service. The collected trash is hauled to their privately owned transfer station on Vernon Street. From there, it is disposed of at various licensed and certified disposal facilities throughout the Northeast. In addition to curbside collection of recyclables, people can use the drop-off facilities provided by WSWMD at Old Ferry Road or at the Public Works facility on Fairground Road. Through the WMSMD, and at composting container locations at the drop-off

facilities, Brattleboro participates in Project COW (Composting Organic Wastes).

Brattleboro continues to be active in trying to reduce the amount of waste that is disposed of by encouraging recycling and composting. From December 2010 to November 2011, the Town hired co-recycling coordinators to increase the recycling rate. They undertook efforts ranging from research to enforcement, to training and education, to meetings with landlords. As part of their work, these coordinators collected monthly data on trash and recycling tonnages collected by the curbside program and at the recycling drop-off sites on Fairground Road (assuming 75% of recycling deposited here is from Brattleboro residents) and Old Ferry Road (assuming 28% is from Brattleboro residents). The data indicate that recycling rates in 2011 ranged from a low of 24.62% of the total waste stream in February to a high of 32.62% of the total waste stream in November.⁶ In 2012, the Town conducted a three-month curbside composting pilot program. The program was successful and the Selectboard expanded the program to serve the entire town in 2013.

Issues and Needs: Waste disposal has high energy costs, so the more we can do to reduce, reuse, and recycle, the lower the community's financial (reducing tipping fees) and environmental costs. The expansion of curbside composting is great step in this direction. Other efforts to expand composting should be investigated, including the expansion of Project COW to additional locations, and a program to compost restaurant food waste. In addition, the Solid Waste Committee has identified the need to develop a town-wide bulky waste collection program. This Plan's actions 10.12.1, 10.12.2, 10.12.3, and 10.12.4 are to continue educational outreach, establish more collection points for Project COW, increase recycling bins in public places, and develop a town-wide bulky waste collection program.



THE “ARCHERY BUILDING”

In 2006, the Town acquired 2 adjacent properties on Depot Street as part of improvements to the train station. The auto garage on one of the parcels was demolished in 2010. A 1½-story timber structure remains. The building was found to have historic significance by an Environmental Assessment conducted as part of the Multimodal Transit Facility improvement project. Since the property was purchased using federal FTA funds, any action to demolish the structure will require further study. The building is currently vacant and in need of rehabilitation if it is to remain.



FOOTNOTES

¹ Hawk Planning Resources, “Rethinking Brattleboro’s Commercial Districts,” (2011).

² W. Carhart and C. Fish, On the Job: The Brattleboro Public Works Department (Brattleboro Area Chamber of Commerce, 2009).

³ Brooks Memorial Library, Strategic Planning Information.

⁴ *Ibid.*

⁵ A public-private partnership between the Vermont Telecommunications Authority and Sovernet.

⁶ M. Kahler and C. Sterling, Program to Increase Recycling Participation in Brattleboro, VT. Recycling Action Team Strategies (R.A.T.S.) (December 2011).





CHAPTER 11

Natural Resources

Brattleboro values the natural environment and recognizes its connection to the health, well-being and economic vitality of the region.

Natural Resources

Goals

- A. Preserve and enhance Brattleboro's natural resources and environmental features, and protect these features from the impacts of development
- B. Enhance the appreciation of Brattleboro's natural environment
- C. Encourage enjoyment and participation of open space
- D. Protect and enhance the ecological integrity of the Town's natural communities¹ and wildlife habitats

Policies and Actions

Policy 11.1 Encourage preservation and restoration of wildlife corridors, wetlands, and riparian habitats

Actions:

- 11.1.1 Maintain any Class I designated wetlands in their natural condition; ensure that any permitted alterations to Class II and Class III wetlands do not significantly diminish their functional, ecological, or aesthetic values; comment on applications submitted to the Vermont Wetlands Offices as necessary to ensure the above
- 11.1.2 Adopt Fluvial Erosion Hazard regulations for all watercourses where the VT Agency of Natural Resources has mapped the fluvial erosion hazard
- 11.1.3 Consider the inclusion of riparian buffer zones in an amended Zoning Ordinance for the protection all surface waters
- 11.1.4 Consider the inclusion of conservation, zoning, and subdivision tools in amended land use regulations, such as conservation subdivision design or cluster development, that provide incentives for protecting critical resource lands, including habitat, wetland, and riparian areas
- 11.1.5 Support federal, state, and conservation group acquisition of land and/or conservation easements to protect wildlife corridors, wetlands, and riparian habitats
- 11.1.6 Conduct a natural resources inventory that compiles existing data and gathers new field data in order to better understand Brattleboro's natural heritage

Policy 11.2 Prevent the spread of invasive species

Actions:

- 11.2.1 Educate residents and visitors regarding the identification, threats, and control of invasive species
- 11.2.2 Cooperate with private, local, state, and federal groups to address the threat of invasive species
- 11.2.3 Remove existing nonnative species in coordination with Town-initiated work projects
- 11.2.4 When possible, involve Town personnel to eradicate nonnative species on Town properties and road rights-of-way

continued on next page

Policy 11.3 Maintain and enhance the urban forest cover

Actions:

- 11.3.1 Complete the tree inventory
- 11.3.2 Develop a comprehensive plan for street trees to ensure an increase in tree stock, species diversity, and appropriate plantings
- 11.3.3 Ensure that the revised Zoning Ordinance and Subdivision Regulations recognize the benefits of street trees and urban forest cover in controlling stormwater runoff, protection from ultraviolet radiation, temperature moderation, and placemaking²
- 11.3.4 Encourage Town capital projects to include appropriate consideration of the benefits of street trees and an enhanced urban forest cover
- 11.3.5 Continue participation in the Tree City USA program
- 11.3.6 Seek grants to fund public tree planting

Policy 11.4 Promote best management practices to reduce stormwater runoff and control erosion

Actions:

- 11.4.1 Educate developers on Low Impact Development (LID) site design practices, including:
 - a. Reducing paving area (i.e., reduced parking widths and shared parking resources)
 - b. Preserving on-site natural areas
 - c. Using drought-tolerant landscaping
- 11.4.2 Consider regulating areas of earth disturbance by means such as grading and vegetation clearing on slopes greater than 15%

Policy 11.5 Participate in FEMA's Community Rating System (CRS) to lower floodplain insurance costs for the community

Policy 11.6 Coordinate a community trail system that accommodates a variety of trail users and creates trail linkages

Actions:

- 11.6.1 Develop trail alignments that promote aesthetic views and safe conditions and that minimize negative impacts to any environmental areas
- 11.6.2 Coordinate trail alignment to provide linkages to parks, schools, the downtown, regional trail systems, and other amenities
- 11.6.3 Work with nonprofit and volunteer organizations and private landowners to improve recreational opportunities and enhance existing open space areas

Policy 11.7 Promote, sponsor, and organize events that connect residents to the natural environment

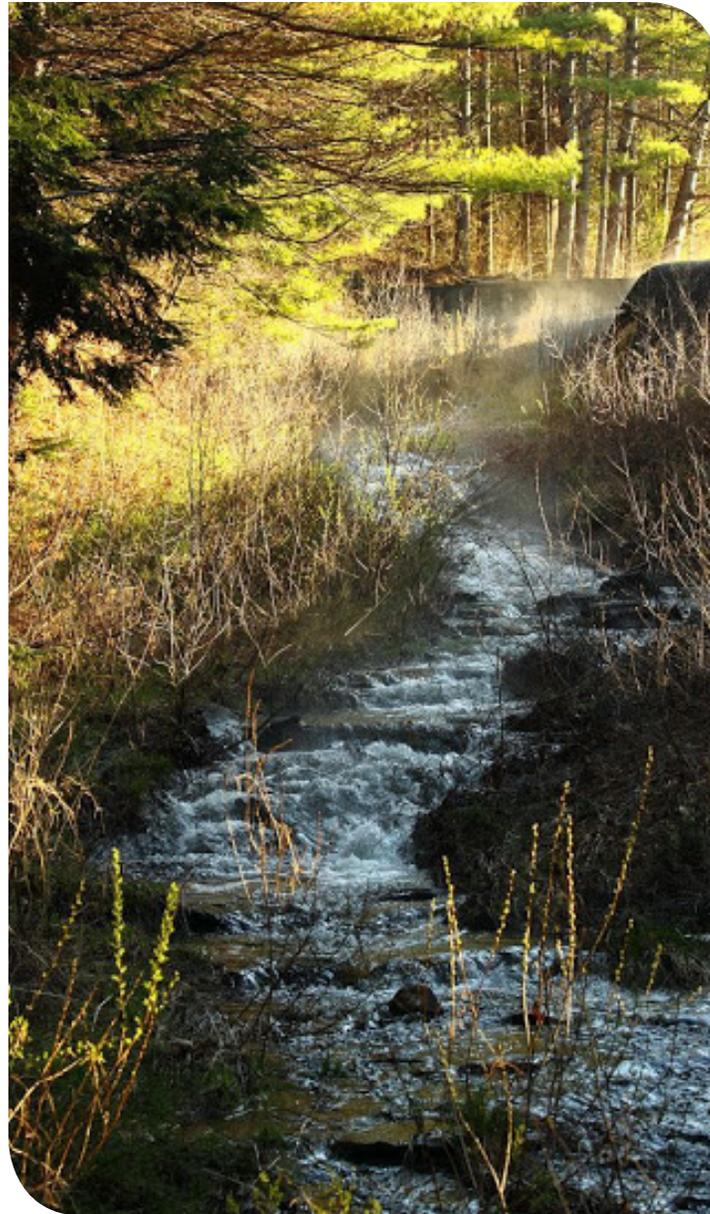
Brattleboro features a diverse landscape with forested lands, streams, scenic rivers, open farmland, and wooded parcels, providing an equally diverse habitat. These natural resources and open spaces support the integrity of the local ecosystem, provide residents with a healthy and enjoyable environment in which to live, and safeguard land-based economic resources, such as agriculture and forestry. This Plan seeks to strike a balance between regulatory and nonregulatory tools to preserve forest and farmland, manage air quality, and protect water quality.

CURRENT CONDITIONS

Water Quality

Surface Waters

Vermont has established water quality standards to classify all surface waters into classes and management types. Now classified, the waters must be managed to maintain their designated classifications. The West River, Connecticut River, Whetstone Brook, Crosby Brook, and most streams in Brattleboro are classified as Class B waters. This classification means “suited for bathing and recreation, irrigation and agricultural uses; good fish habitat; good aesthetic value; acceptable for public water supply with filtration and disinfection.” Pleasant Valley Reservoir and all waters in its watershed and the portions of the Sunset Lake watershed located in Brattleboro are classified as A2. Class A2 waters are to be managed for public water supply purposes. The stretch of the Connecticut River, from Downtown south to the town line, is classified as a Waste Management Zone, a Class B water that is designated by permit to accept the discharge of properly treated wastes, which prior to treatment contain pathogenic organisms. Throughout the receiving waters, established water quality criteria must be achieved, but increased health risks exist in a waste management zone due to the (authorized) discharge.



The impact on the water quality of untreated stormwater discharges into Brattleboro's rivers and streams is a great concern. State and Federal stormwater treatment requirements are applicable to developments that construct over 1 acre of impermeable surfaces. Typically, this requires construction and private maintenance of on-site stormwater retention and treatment ponds. However stormwater discharges from existing developed areas needs to be addressed. This is particularly true for the area of commercial development on Putney Road with stormwater draining into Crosby Brook. For more information on how stormwater is currently managed, see Chapter 10 "Municipal Facilities and Services."

Impaired Waters

In accordance with Federal law, Vermont is required to list waters that are impaired by point and/or non-point sources of pollution. Two stream segments have been listed on the State of Vermont 2010 Impaired Water List. A portion of the Crosby Brook is classified as polluted with sediment on the Federal Clean Water Act 303(d) Impaired Waters List by the Vermont Department of Environmental Conservation (DEC). Stormwater runoff from the Route 5 corridor, Interstate 91, and I-91 Exit 3 has been shown to contribute to the impairment of the brook. A portion of the Whetstone Brook is impaired with *E. coli* from unknown sources.

Groundwater

Groundwater provides the primary supply of potable water for approximately 2,500 homes in Brattleboro. Groundwater accumulates in two general hydrogeologic settings: bedrock and unconsolidated aquifers. As groundwater moves through these materials, the organic and mineral substances that are dissolved or adsorbed dictate the quality of water. Although groundwater quality in Vermont is generally very good, it is not well understood. Brattleboro has not mapped, classified, or protected its groundwater. Land use activities that potentially result in the contami-

nation of groundwater resources are an important natural resource concern, since once pollutants enter an aquifer, they are not easily or quickly removed.

Brattleboro also has a municipal drinking water well next to the Retreat Meadows that serves as a backup source to the Pleasant Valley Reservoir. The wellhead protection area (the surrounding area where water recharges the well) includes lands on both sides of Route 30 and is fairly undeveloped. One nontransient, noncommunity public water system and one noncommunity system also rely on Brattleboro's groundwater supply.

Air Quality

There are not good data on air quality in Brattleboro. The 2006 Windham Regional Plan stated that "air in the region generally meets the National Ambient Air Quality Standards (NAAQS), although for the pollutant ozone, the standard sometimes is met by a slim margin." Pollutants from distant sources, including acid precipitation originating in other states, do have an effect on the region's air quality.

The Connecticut River valley is known to experience temperature inversions, particularly in the winter, on cold, calm days. In temperature inversion, the coldest air remains at the surface, and milder air is aloft. This inversion traps pollutants from vehicles, fireplaces, and industry that are emitted into the air and results in poor air quality.

The closest air monitoring station in Vermont is in Bennington, which is not affected by temperature inversion, since it is not located in a valley. The State of New Hampshire has an air quality monitoring station in Keene. Due to its geography, Keene also experiences temperature inversion. Data from the Keene station revealed that air quality was exceeding the NAAQS set by the EPA for particulate matter smaller than 2.5 microns (PM2.5) in the years leading up to 2009.³ Children, elderly, and people with asthma, cardiovascular, or lung disease are particularly sensitive to PM2.5.



Invasive Species

Invasive species are nonnative plants, animals, aquatic species, or other organisms that disrupt the environment and threaten economic and/or environmental harm. Invasive woody plants of particular concern in Brattleboro are glossy buckthorn, Japanese barberry, and Oriental bitter-sweet. Foresters are also concerned about Asiatic honeysuckles, as they are currently thriving in Windham County. Purple loosestrife and Japanese knotweed are also pervasive in Brattleboro's wetlands and along waterways and will continue to spread absent use of bio-control, which does not yet exist for Japanese knotweed.

Vermont Agency of Natural Resources is carefully monitoring for three invasive pests that have either already been identified in Brattleboro or are moving closer to the area:

- Since 2008, citizens and foresters have identified several areas of hemlock trees infested with hemlock woolly adelgid in Brattleboro and neighboring towns.
- The emerald ash borer (EAB), an Asian beetle that preys on all types of ash trees, has spread through flight and the movement of firewood. Fourteen states and two Canadian provinces are now infested with EAB. It was most recently found in southwest New York, including the Catskills, and in Canada only 28 miles from the northeastern Vermont border. The EAB is able to fly at least one-half mile.
- The Asian longhorned beetle destroys deciduous hardwood trees and has been found in the neighboring states of New York and Massachusetts.

Invasive species that are threatening our water bodies include didymo (freshwater algae) and Eurasian watermilfoil. The first milfoil infestation in the Connecticut River was discovered in Springfield, VT, in 1995. It has since spread to Brattleboro, where there is a thick growth in the Retreat

Meadows. Didymo was first discovered in 2007 in Bloomfield, VT. It is present in the Upper Connecticut River and the White River. The Connecticut River is considered to be susceptible to the zebra mussel due to the chemistry of the water.⁴ The zebra mussel is present in Lake Champlain, and larvae can be transferred via humanmade objects, such as buckets or boats.

Aquatic plant growth is quite extensive in the Retreat Meadows due to shallow depths and other conditions. In 2002, two submerged invasive species, Eurasian watermilfoil and curlyleaf pondweed, were found growing in the Retreat Meadows. Some years the milfoil has been so extensive that it has been visible on the surface. An invasive species aquatic plant management project funded by the Vermont Department of Conservation has been taking place in the Retreat Meadows since 2003.



hemlock woolly adelgid



emerald ash borer



Asian longhorned beetle



Eurasian watermilfoil



curlyleaf pondweed

Flood Hazards

Floods are a natural and normal occurrence in an area of high rainfall. During normal stream flow, water is carried in a river channel. But in times of high runoff, water rises over the banks and flows onto the floodplain. Areas susceptible to flooding present obvious hazards to life and property, and the continued protection of these areas from development is an important responsibility. Brattleboro participates in the National Flood Insurance Program (NFIP). An important benefit of this program is that property owners are able to obtain federally insured flood insurance at affordable rates and flood disaster assistance.

FEMA has mapped [Special Flood Hazard Areas \(SFHA\)](#)—areas with a 1% chance of flooding in any given year (commonly referred to as the floodplain). Generally, most of the mapped flood hazard areas follow the Connecticut River, the West River, the Whetstone Brook, and parts of Ames Hill Brook. There are approximately 378 structures in the special flood hazard area, of which 111 are in the floodway. The majority of these structures are located along the Whetstone Brook, and many were built in the downtown or West Brattleboro area prior to floodplain development controls.

Structures that are located in the floodway are at risk. The Town should be working with the affected property owners to relocate these structures. This is a complex task. Some view the proximity to the brook as a natural amenity. Many property owners own their home and have a long-term connection to the land and are thus challenged by the effect of these regulations.

The potential for flooding damage outside of the NFIP mapped areas is great. Historically, efforts to control rivers have included moving, straightening, hard armoring (i.e., rip-rap), and dredging. These actions have caused ongoing management concerns and exacerbated the very problems they were trying to correct. Today, river science in Vermont has shifted, and Vermont Agency of Natural

Resources (ANR) is evaluating Act 250 development proposals on the basis of geomorphic assessments of the stream and stream bank erosion hazards within the river's meander belt width.

VT Department of Environmental Conservation (DEC) has performed stream geomorphic assessments in both the Whetstone Brook and Crosby Brook watersheds and provided maps identifying fluvial erosion hazard areas. These are areas where there is active stream channel movement and therefore risk of catastrophic erosion damage from flooding. These maps are currently used to review and regulate development under Act 250 proceedings.

The Whetstone Brook is subject to frequent, severe, and unpredictable flooding, often due to rain on snow, spring runoff, and ice jams. Its steep headwaters results in a high volume of water with increased velocity transporting large amounts of sediment and deposition into and through the section of West Brattleboro where it runs.

Riparian Corridors

Riparian corridors, or buffers, are undisturbed, naturally vegetated areas contiguous with and parallel to rivers and streams. Riparian buffers protect water resources by improving water quality through: filtering pollutants and sediments, stabilizing stream banks and river beds, and improving wildlife habitat by providing travel corridors and improving aquatic habitat. In establishing a buffer, the recommended buffer width varies depending on the goal—keeping water clean, stabilizing the bank, or protecting fish and wildlife habitat. Currently, Brattleboro's Zoning Ordinance has imposed a shoreland overlay district only to areas along the West River and Connecticut River (at either 50 or 100 feet, depending on the location). However, there are several other watercourses where establishing a riparian corridor would benefit the watercourse, as well as aquatic and wildlife habitat, particularly along the Crosby Brook.

WHAT IS THE FLOODWAY?

The floodway is the land immediately adjoining the river channel that is the natural conduit for flood waters. The floodway must remain open in order to allow flood waters to pass. When the floodway is obstructed by buildings, structures, or debris, flood waters will be dammed up and will flood even greater areas.

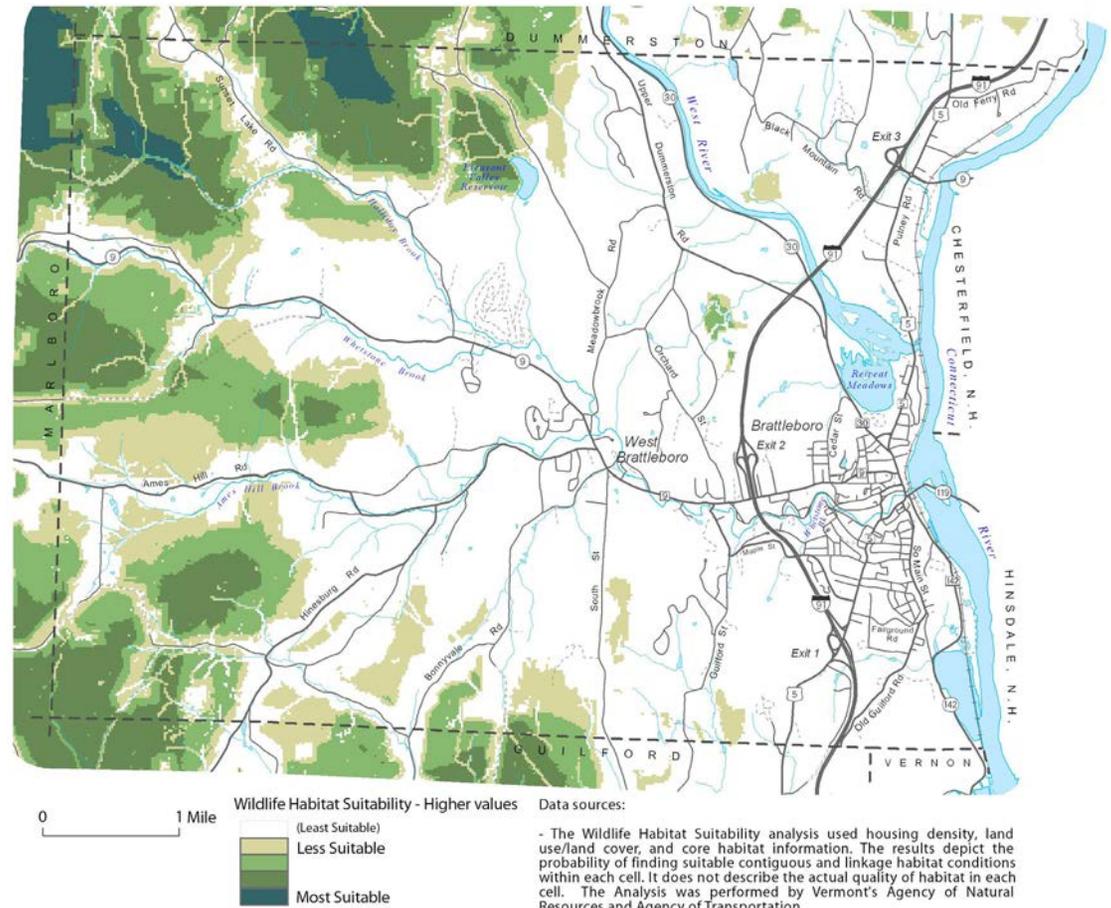
Wildlife and Wildlife Corridors

The varying terrain of Brattleboro (from rugged and wooded slopes to open fields) provides wildlife habitat for a great diversity of species. Deer can be found in a variety of habitats but are known to prefer forest edges that feature large woodlots and agricultural openings. Ruffed grouse are present where habitat is varied and in early stages of succession where stands of poplar can be managed to encourage them. Waterfowl and woodcock nest on or frequent the natural ponds, beaver ponds, and wet areas throughout the Town. Wild turkey, mink, and coyotes are now well established, and moose and bear sightings are increasing. The viability of these habitats is due to their interconnectedness.

The ANR has mapped wildlife habitat suitability based on development density, land use/land cover, and core habitat information. The remote, wooded, rugged, and unpopulated sections of Brattleboro (shown in Figure 11.1) contain excellent habitats for bobcat, black bear, and moose, which require large contiguous tracts of land for survival. All of these lands connect to large, unfragmented lands in neighboring towns. In addition, several lands in trust or lands on which development rights have been sold or donated offer additional protection for wildlife habitats.

A limitation of the State's mapping is that it relies on development density as one of the qualifiers for suitable habitat. Therefore, it does not evaluate the more densely developed areas of Brattleboro, including the Route 9 corridor and areas east of I-91. Large open spaces such as the Retreat Meadows, Retreat Trail system, and Living Memorial Park are important habitat areas to support deer, turkeys, gray squirrels, eastern cottontails, porcupines, chipmunks, birds, and a variety of other small animals.

Figure 11.1: Wildlife Suitability Map



Resource Lands

Forest Resources

There are several major associations or groupings of trees which naturally occur locally. These include the northern hardwoods (sugar maple, hemlock, yellow birch), white/red pine, oak/hickory, and oak/pine.

Brattleboro owns 73.64 acres of land comprising the Living Memorial Park Town Forest. Approximately 39.14 acres of the Town Forest is forested. Common tree species in the park include white pine, hemlock, red oak, black birch, and sugar maple.⁵ A management plan is in place, with the main goals of providing recreational opportunities and maintaining ecosystem and forest health.

The Town also has management plans in place for the Richardson Forest and Pleasant Valley Reservoir. Both of these are selectively harvested for an economic return.

The forest resources in Brattleboro have a direct economic value as both a product and a fuel source. Unlike other parts of Windham County, no industrial-scale timber harvesting is occurring in Brattleboro. However, smaller-scale timber harvesting does occur. The extensive forested landscape also provides indirect economic benefits in terms of recreation, maple sugaring, wildlife habitat, and sense of place.

Just as important as the economic asset represented by forested lands are the ecological benefits. These include the forest acting as a carbon sink (where the trees absorb more carbon than they release), watershed protection, wildlife habitat, and temperature control.

The only current regulation on timber cutting in Brattleboro is compliance with Vermont's regulations for heavy cuts of 40 acres or more. Growing concerns over erosion and sedimentation that can occur from tree clearing, whether for forest management or land development, has led to many towns adopting local regulations. Chapter 12

"Land Use" of this Plan discusses how unregulated practices can exacerbate erosion and flooding, and recommends regulating tree clearing—something that is not currently done at the local level.

Urban Forestry

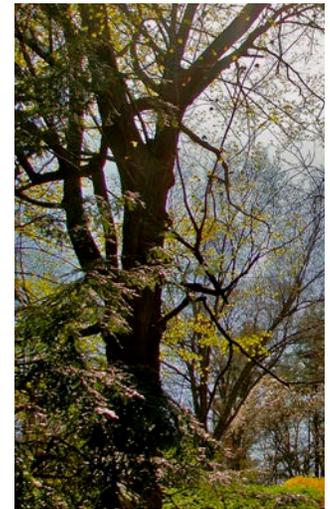
The public trees in parks, along roadways, and around public buildings are part of Brattleboro's urban forest. These trees have social, economic, and environmental benefits for neighborhoods and the community at large. They enhance the streetscape, create gateways, and define a sense of place. From an environmental perspective, trees mitigate erosion and water runoff, enhance visual aesthetics, moderate temperature, dampen noise, provide shelter from the wind, and are a source of food and shelter for urban wildlife.

Brattleboro's urban forest should be considered as a valuable resource to the town and be given proper attention. The Town has a Tree Advisory Committee that works with the Tree Warden to promote improvement and preservation of a healthy environment of the Town as it relates to public trees. Challenges to Brattleboro's urban forest include new development, invasive species, lack of long-range planning and investment, and ample resources to maintain the current tree stock.

Sand and Gravel Resources

Maps indicate that sand and gravel deposits are scattered throughout Brattleboro, primarily located near the rivers and large tributaries. However, there is no detailed inventory of the quality and quantity of these sand and gravel deposits. Commercial excavation operations are currently conducted on Mercury Drive and Cider Mill Hill Road. Both facilities are operating with State permits.

The Brattleboro Zoning Ordinance currently permits excavation/quarry operations in Industrial zoning districts, and conditionally permits them in Rural and Rural Residential



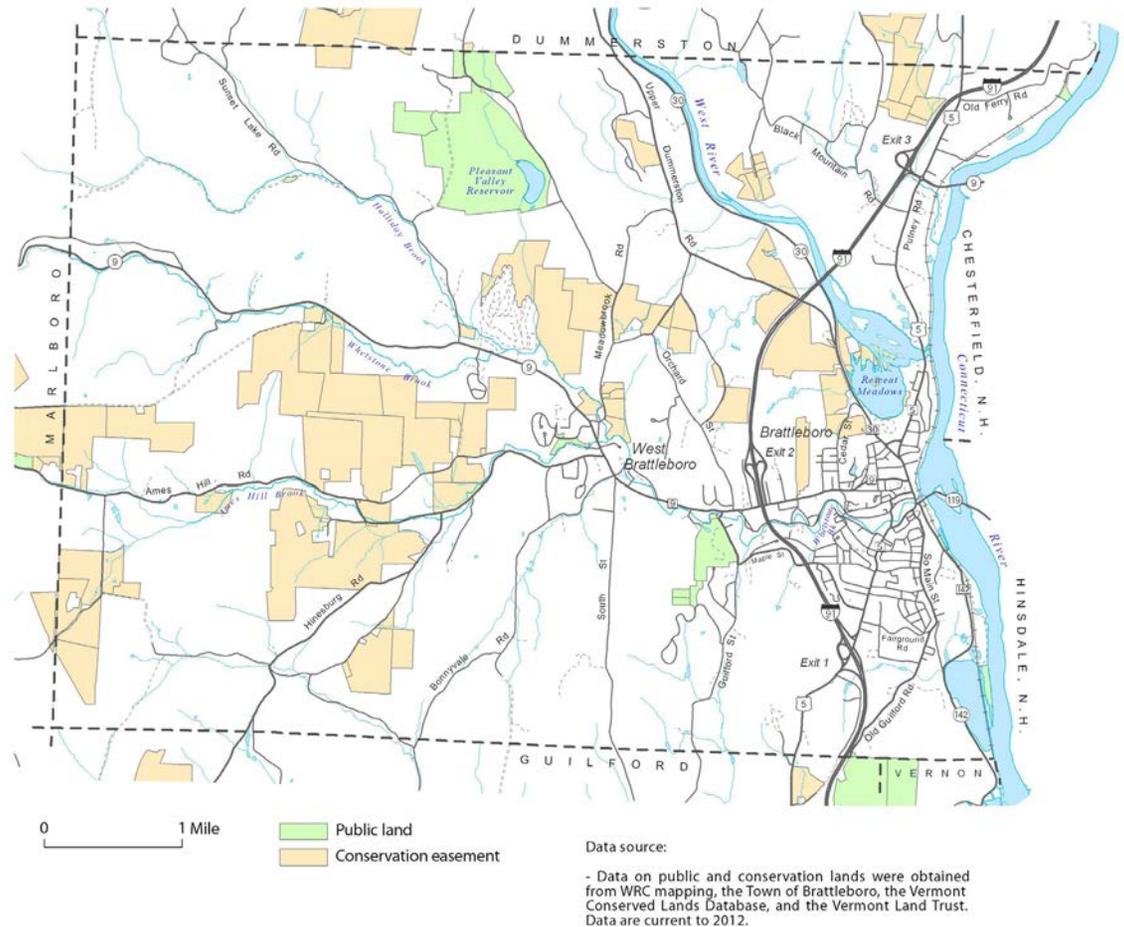
zoning districts. The Ordinance does have specific regulations governing earth extractions. Compliance with these regulations is part of the site plan review process for proposed operations. During this review, the Development Review Board considers concerns such as impacts to road and traffic conditions, groundwater recharge, and soil erosion.

Open Space

Brattleboro is fortunate to have an existing open space system⁶ that is in relatively good condition, well distributed geographically, and diverse in types of uses accommodated. Figure 11.2 shows public and conserved lands in Brattleboro. In looking toward the future, it would serve the community well to identify additional locations as open space. In order to assist in this effort, it will be necessary to develop a set of criteria to evaluate whether a property will enhance Brattleboro's open space network and provide a significant benefit to the community. The following is a list of objectives that can be utilized for focusing future conservation efforts, by considering whether the identified location:

- Links existing parks and open spaces together to form interconnected greenways within Brattleboro, or on a larger regional open space network
- Is adjacent to and complementary with existing parks and/or open spaces owned by the Town, neighboring municipalities, or the State
- Preserves natural drainage areas, including waterways and surrounding wetlands and floodplains
- Protects existing and potential public drinking water supplies, including groundwater
- Protects unique and significant natural features, including critical threatened habitat
- Preserves agricultural land
- Has multiple values for recreational or open space use

Figure 11.2: Public and Conservation Lands



The number of conservation easements on private lands has grown since 2000. While many easements are modest in acreage, this reflects a county trend of land being conserved by easement instead of public acquisition. Since 2000, Brattleboro has also experienced another trend in land conservation—the purchase of land by conservation organizations. Region-wide, such purchases generally involve parcels of local interest. One such example in Brattleboro is the purchase of the Locke Farm field by the Vermont River Conservancy working with the West Brattleboro Association and the Windham Natural Resources Conservation District for agricultural and recreational use.

Trail Network

Brattleboro is fortunate to have several hiking trails easily accessible to the public. In 2006 and 2007, the Windham Foundation and Brattleboro Retreat worked with the Vermont Youth Conservation Corps to revitalize the 9-mile Retreat Trail network on their lands, making the trails more environmentally sound and easier to follow. In 2010, the Round Mountain Trail opened to the public, and a trail connection between Memorial Park and Highpoint Development was also completed.

The Town-owned trails in Living Memorial Park are maintained by the Parks and Recreation Department. Until recently, there was little formal maintenance, and the trails were unmarked and unmapped. Renewed interest in the Town Forest portion of the Park (that area beyond the open, developed portion) began with the work of Town of Brattleboro Tree Advisory Board, who commissioned a property boundary survey, a forest management plan, and a trails management plan. The Recreation and Parks Department, Brattleboro Area Trails Committee, and the Brattleboro-Keene New England Mountain Bike Association have all worked together to improve, expand, and map the Living Memorial Park trail system. Trails on private lands are maintained by either the owners or volunteer groups.

The trail system is a major quality-of-life amenity. However, the existing trails are not well publicized or, in some cases, marked. Kiosks, trail maps, directions, and clearly marked trails are some of the improvements that would help residents and visitors access this natural amenity. The Brattleboro Conservation Commission continues to identify, map, and publish many of the existing hiking trails in Brattleboro so that residents and visitors can take advantage of them. Town-owned trails should be planned for in the Capital Improvement Program and budgeted for annually.

The existing trails, coupled with other local trails and sidewalks, provide a solid foundation toward achieving an interconnected and accessible greenways and trail system. As efforts are undertaken to expand the trail system, greenways that link existing parks and open space areas with neighborhoods and community facilities, such as schools, and provide a pedestrian-friendly environment to serve residents, should be a priority.



FOOTNOTES

¹ A natural community is defined as an interacting assemblage of organisms, their physical environment, and the natural processes that affect them. See [Appendix D](#) for more information on identified natural communities in Brattleboro.

² Placemaking involves capitalizing on the community's assets to create public spaces and streets that are pleasurable or interesting.

³ New Hampshire Department of Environmental Services. *Keene Woodstove Changeout Campaign 2009-2010 Final Report*, (2010). <http://des.nh.gov/organization/divisions/air/cb/ceps/npsap/documents/keene-woodstove-final-rpt.pdf>.

⁴ Connecticut River Management Plan, Water resources, Wantastiquet Region, (2009). <http://www.crjc.org/river-plan/water-resources-management-plan/>.

⁵ Andrew Sheere, *Management Plan for the Town of Brattleboro Living Memorial Park Town Forest, 2007–2017* (2006).

⁶ An open space system is a complex of public and privately owned lands.



CHAPTER 12

Land Use

Brattleboro values land use settlement and development that most efficiently uses existing public infrastructure and community resources; respects the natural constraints of the land; and fosters a distinctive, attractive community that respects the unique qualities of place.

Land Use

Goals

- A. Promote development of a future land use pattern that promotes public health and safety against floods, ensures the viability of agricultural and forestry economies, protects natural resources, promotes transportation accessibility, and reinforces a compact development pattern
- B. Reduce the impact of flooding and erosion
- C. Promote development patterns that include walkable streets; compact, mixed-use development; public spaces; and context-sensitivity to historic design and development
- D. Increase and improve public access to waterfront areas

Policies and Actions

Policy 12.1 Simplify the land use regulations

Actions:

- 12.1.1 Establish and maintain zoning districts consistent with the Future Land Use Plan adopted as part of this chapter
- 12.1.2 Clarify development regulations to increase certainty and predictability for development
- 12.1.3 Utilize flexible zoning mechanisms such as overlays, bonuses, and performance standards
- 12.1.4 Consider revising the Planned Unit Development process, to reduce complexity and the length of time for review

Policy 12.2 Provide the highest degree of flood protection at the least cost, through the identification and accommodation of natural flooding and channel migration processes posing hazards to life or property

Actions:

- 12.2.1 Continue to participate in the National Flood Insurance program and, when feasible, take advantage of preferential ratings that will lower costs to policy owners
- 12.2.2 Adopt fluvial erosion hazard regulations for all watercourses where the VT Agency of Natural Resources has mapped fluvial erosion hazards
- 12.2.3 Prohibit the placement of structures in the floodway
- 12.2.4 Consider requiring vegetated setbacks from streams
- 12.2.5 Preserve areas for natural storage in the floodplain

continued on next page

Policy 12.3 Implement strategies within the watershed that reduce the environmental, health, and welfare hazards associated with flooding

Actions:

- 12.3.1 Consider regulating development on steep slopes
- 12.3.2 Improve existing street connectivity
- 12.3.3 Propose development regulations to address stormwater management directly
- 12.3.4 Integrate green infrastructure best-management practices into both public infrastructure and private development that protects water quality and helps prevent flooding and erosion
- 12.3.5 Review and update road design standards
- 12.3.6 Consider increasing minimum lot sizes in the Rural District
- 12.3.7 Consider regulating tree clearing

Policy 12.4 Ensure that new and existing commercial developments are attractive in appearance

Actions:

- 12.4.1 Consider using design guidelines as a tool for achieving desired development patterns
- 12.4.2 Create a Downtown Master Plan to articulate the many improvements that need to be envisioned, designed, prioritized, and implemented to maintain and grow Downtown

Policy 12.5 Enhance public access and views to the waterfront

Actions:

- 12.5.1 Designate a pedestrian and bicycle path that connects Depot Street to the railroad bridge to Hinsdale
- 12.5.2 Secure easements to create trails along the Connecticut River
- 12.5.3 Support improvements to the West River Trail
- 12.5.4 Site, design, and orient development or redevelopment to the river
- 12.5.5 Enhance the greenspace on Depot Street to encourage programming of activities and integrate the park into community life fully

Policy 12.6 Provide land for more intensive industrial uses that typically generate heavy demands on the transportation system

Actions:

- 12.6.1 Consider increasing the minimum lot size in the Industrial zoning district
- 12.6.2 Review commercial and retail uses in Industrial zones
- 12.6.3 Consider establishing performance standards to permit light industrial uses in the Urban Center and Commercial zoning districts

The Land Use Chapter is a core component of the Town Plan and is mandated by Vermont Statute. It consists of two parts: Existing Land Use and Future Land Use. The Existing Land Use Plan provides a summary of existing land uses and development patterns. This sets the context for the way land in the community is currently being used and sets the foundation for future development. The Future Land Use Plan serves to coordinate public and private decisions that affect the physical development of the Town. By establishing a scheme for the future, this Plan strives to create a desirable pattern of future development toward which present activities can be directed.

In designating areas as suitable for various land uses, consideration is given to natural features, existing land uses, existing and proposed public improvements, and the transportation system. Overall, the Land Use Plan is intended to foster a well-organized, cohesive community that functions efficiently. The purpose of this plan, and in particular this chapter, is to provide a framework for growth that reinforces and enhances the desired development pattern of Brattleboro.

EXISTING LAND USE

Generally, Brattleboro’s land use character has followed the pattern of many other New England Towns—a long tradition of tightly knit multiuse areas (i.e., downtown and West Brattleboro) followed by a more recent pattern of commercial strip development and suburban development. The “Buildings by Use Map” shows a rendering of land use in Brattleboro as it existed in 2012.

Over the past 10 years, Brattleboro has had very little growth in any major land use category. This is consistent with the flat population growth the Town has experienced. The Grand List has been changing. Between 2000 and 2011, residential uses¹ increased from 56% to 65% of the

total, when measured in terms of relative contribution to the tax base (see Table 12.1). As shown in Table 12.2, commercial property decreased from 26% to 22% of the total tax base, and industrial property decreased from 14% to 9%. Thus a larger portion of the tax base is now shared by residential taxpayers—a pool that has not been growing and is seeing increasing [poverty rates](#).

Table 12.1: Changes in Commercial and Industrial Grand List (GL)

Year	Commercial			Industrial			Residential		
	No.	\$ million	% GL	No.	\$ million	% GL	No.	\$ million	% GL
2000	413	165.0	26	91.4	256.4	14	3,500	709.6	56
2005	397	230.2	24	81	311.2	8	3,619	645	66
2011	403	243.6	22	95	338.6	9	3,645	709.6	65

Source: Brattleboro Grand List, 2000–2011



Residential

As is the case with most towns, the majority of Brattleboro's land area is occupied by residential land use. The Zoning Ordinance provides for high-, medium-, and low-density residential development. The residential neighborhoods located east of the Interstate are mature neighborhoods. In general, the most densely developed residential land is close to Downtown. These are older neighborhoods with interconnected streets, mature landscaping, and homes (single and multifamily) located on small lots.

Brattleboro has several suburban-style subdivisions with curvilinear street systems. These are generally located near Route 9 west of I-91 Exit 2 (e.g., Stockwell Drive, Sherwood Circle, Quails Hill, and High Point). Due to low market demand, recent efforts to build multi-lot subdivisions have resulted in projects that were not completed by the original developer, and consequently development is both piecemeal and slow.

The area west of I-91 and north and south of Route 9 remains largely rural in character, with large areas of agricultural land, open spaces, and sensitive environmental resources. While certain areas are accessible, that is, linked to improved public highways with easy access to public facilities, other areas are remote, with more difficult roadway access, topographic constraints, and no public water and sewer service. Residential development has generally been single-lot development occurring slowly over time.

Commercial

Downtown remains the heart of the community, serving as the central business district. It has a lively and eclectic mix of uses, including residential, retail, office, governmental, and municipal parking. It is fully serviced by public water and sewer and is a hub for public transportation. There are three character areas within the downtown:

- **Commercial Core:** The traditional commercial core is located along Main Street from Canal Street to just north of High Street. Commercial storefronts define this area, with multi-story, multi-use buildings aligned at the sidewalk edge to create a solid building wall along Main Street.
- **Wells Fountain:** The area just north of High Street to the Brattleboro Common is characterized by lower-density development with institutional, commercial, and residential buildings set back from the edge of the road.
- **Waterfront:** There are several buildings along Depot Street on the Connecticut River. These are generally modest, utilitarian structures, some with potential historic value, that are oriented to the railroad rather than the waterfront.

West Brattleboro Village is also a historic, mixed-use center. The Village contains several public buildings including a school and post office, several small retail stores, and a densely settled residential neighborhood around a small triangular green at a main crossroads of three streets: South Street, Bonnyvale Road, and Western Avenue. The Village is served by public water and sewer as well as the Brattleboro in-town bus.

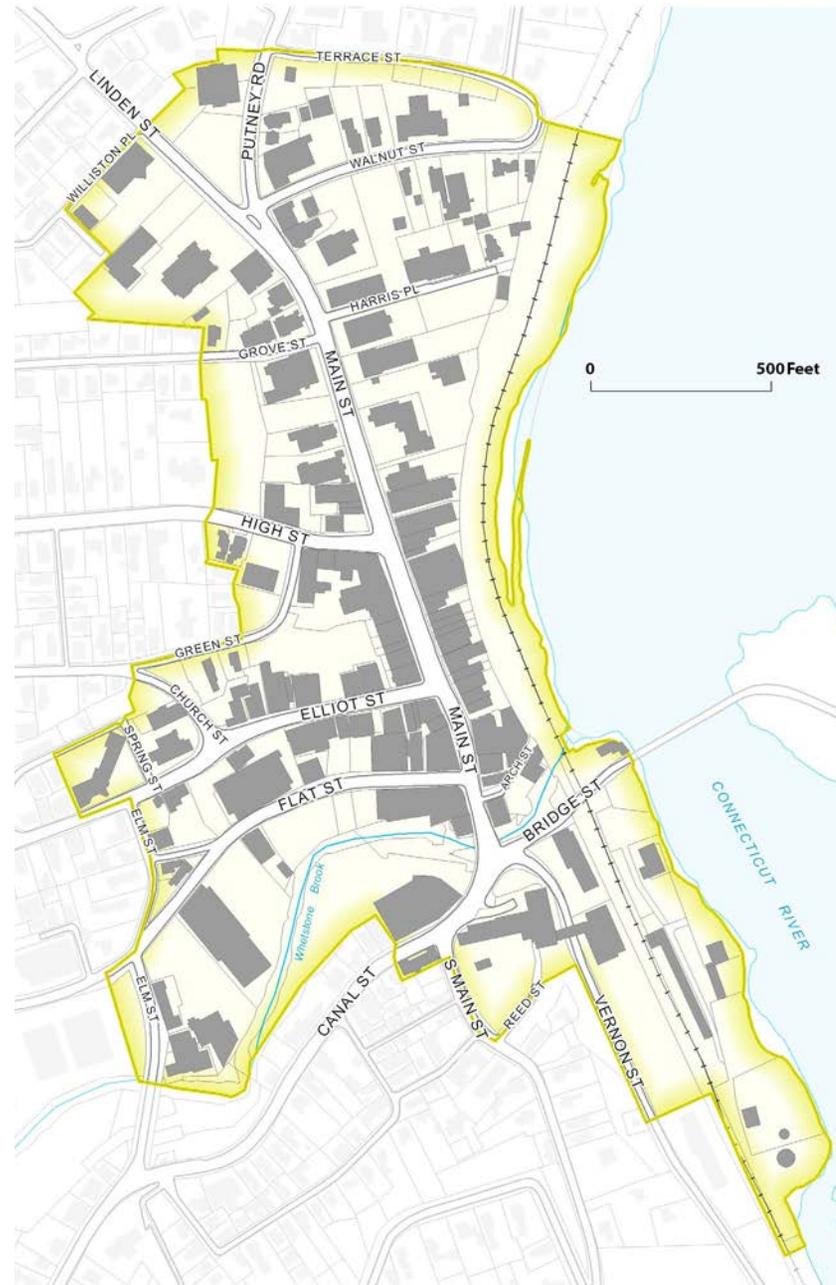


The broad land use pattern in Downtown is fairly well established, but there are opportunities for redevelopment and infill growth. To support Downtown's viability and livability, the Town participates in Vermont's Downtown Program. This enables the Town to receive grants for improvements within the designated area, gives priority consideration for some state-funded grants, and allows owners of income-producing buildings to be eligible to receive tax credits for building improvements (historic, façade, code, and technology). Downtown Designation was first received in 1998 and has been renewed several times, expiring next in 2018. The boundary of the designated downtown is shown in Figure 12.1.

Building a Better Brattleboro (BABB) is the organization responsible for undertaking revitalization efforts in the Designated Downtown. In recent years, the organization undertook a Retail Market Analysis, secured grant funding for directional and wayfinding signage, and participated in a charrette held by the Vermont Downtown Action Team to identify opportunities to improve the physical infrastructure and economic recovery of downtown post-Tropical Storm Irene. Over \$1.4 million has been accessed by property owners in the downtown since 2005 to improve buildings. Recent Town investments include reconstructing sidewalks, repaving Main Street, and making improvements at Union Station and Depot Street. BABB receives a substantial part of their funding from a special assessment tax on properties in the Downtown Improvement District (DID). Future revitalization activities will include increasing beautification efforts, continuing the façade improvement program, and participating in a downtown master plan process.

A Designated Village Center district in West Brattleboro was first awarded in 2005 and is due for renewal in 2015. The district boundary is shown in Figure 12.2. Village revitalization efforts have focused on community and economic development and improving bicycle and pedestrian safety. In 2014, the Town conducted a bicycle and pedestrian

Figure 12.1 Designated Downtown District



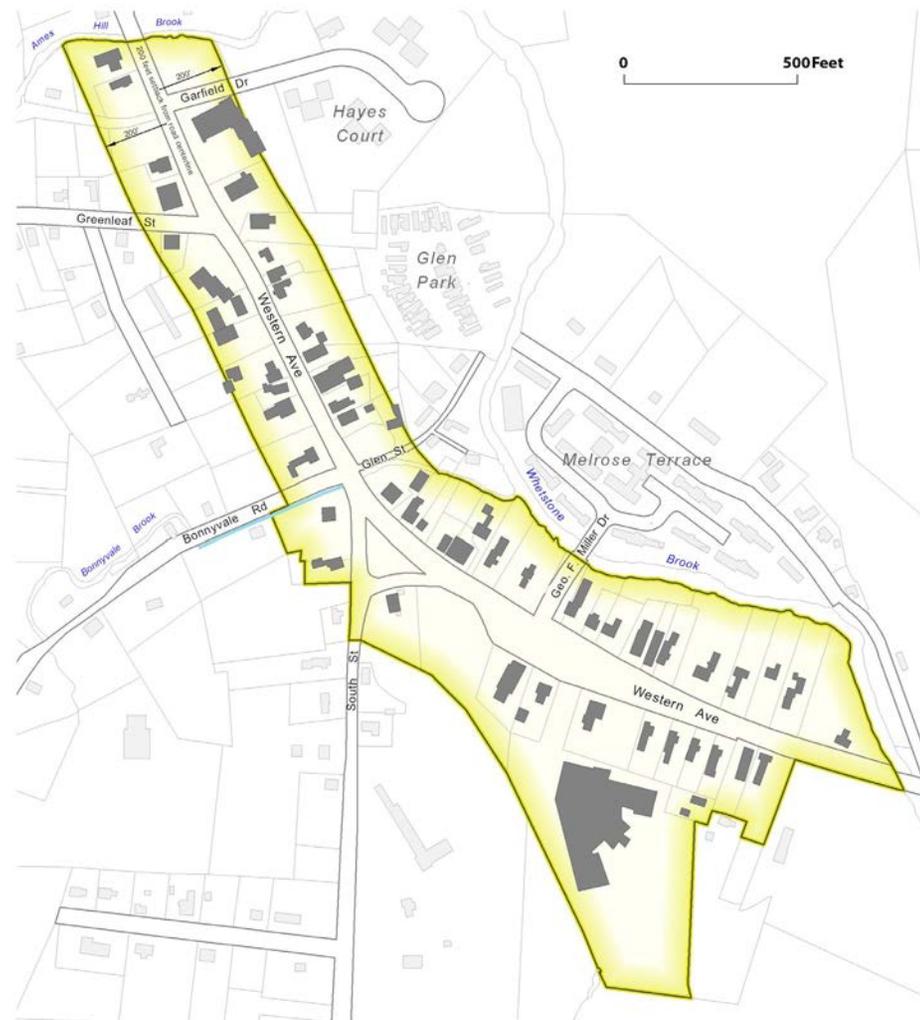
scoping study with funding from the Vermont Agency of Transportation. Community members also met with the Windham Regional Commission and Brattleboro Development Credit Corporation to discuss opportunities for village revitalization. Future revitalization efforts will include implementing the scoping study report and continuing to support stakeholders. The Town will also continue to support property owners and businesses in the Village through the existing Small Business Assistance and Rental Housing Improvement programs. There are several income producing buildings in West Brattleboro Village eligible for tax credits if and when redevelopment opportunities arise.

Downtown and village center designations achieve the following goals:

- Furthering the intent of the Land Use Chapter – Downtown and West Brattleboro Village are important mixed-use districts. The Town Plan identifies the need to make public and private physical improvements in these areas. Continued designation will focus additional resources to help these areas thrive, including the ability to have a special tax assessment in the DID and priority consideration for several grant programs.
- Preserving significant historic, architectural, and cultural heritage – The access to historic tax credits and code improvement tax credits will support redevelopment of older and historic properties, preserving the historic character of the Designated Downtown and Village Center districts.
- Create safe streets and inviting environments for all road users – The Town has benefited from the Downtown Transportation Fund to make improvements in the Downtown and will continue to seek improvements as necessary.

Putney Road north of the Veteran’s Bridge continues to serve regional and local shopping needs, as does Canal Street near I-91 Exit 1. Land uses in these areas consist of

Figure 12.2 Designated West Brattleboro Village Center



large grocery stores, auto sales and service, and traveler services, such as fast-food restaurants, gas stations, and motels. There is a noticeable lack of housing in the Putney Road commercial area. The result is a very automobile-dominated area.

Outside of these core commercial areas, there has been a spread of commercial businesses along arterial routes. The area extending along Route 9 west from Edward Heights to Sunset Lake Road has several commercial establishments that service both nearby neighborhoods and the traveling public. There are also several commercial businesses fronting Canal Street, downhill from the hospital to the intersection of South Main Street. This area had historically been residential in nature.

Commercial growth in Brattleboro has been slow. Data gathered from zoning permits indicate about a 1.5% increase in commercial square footage from 2005 to 2011, and some of these permits were obtained to replace or rebuild buildings that had burned down.

The traffic function of both Putney Road and Canal Street has been diminished in these commercial areas by an excessive number of driveways with direct access to the main road. In addition, the overall appearance of the development along these corridors leaves room for improvement.



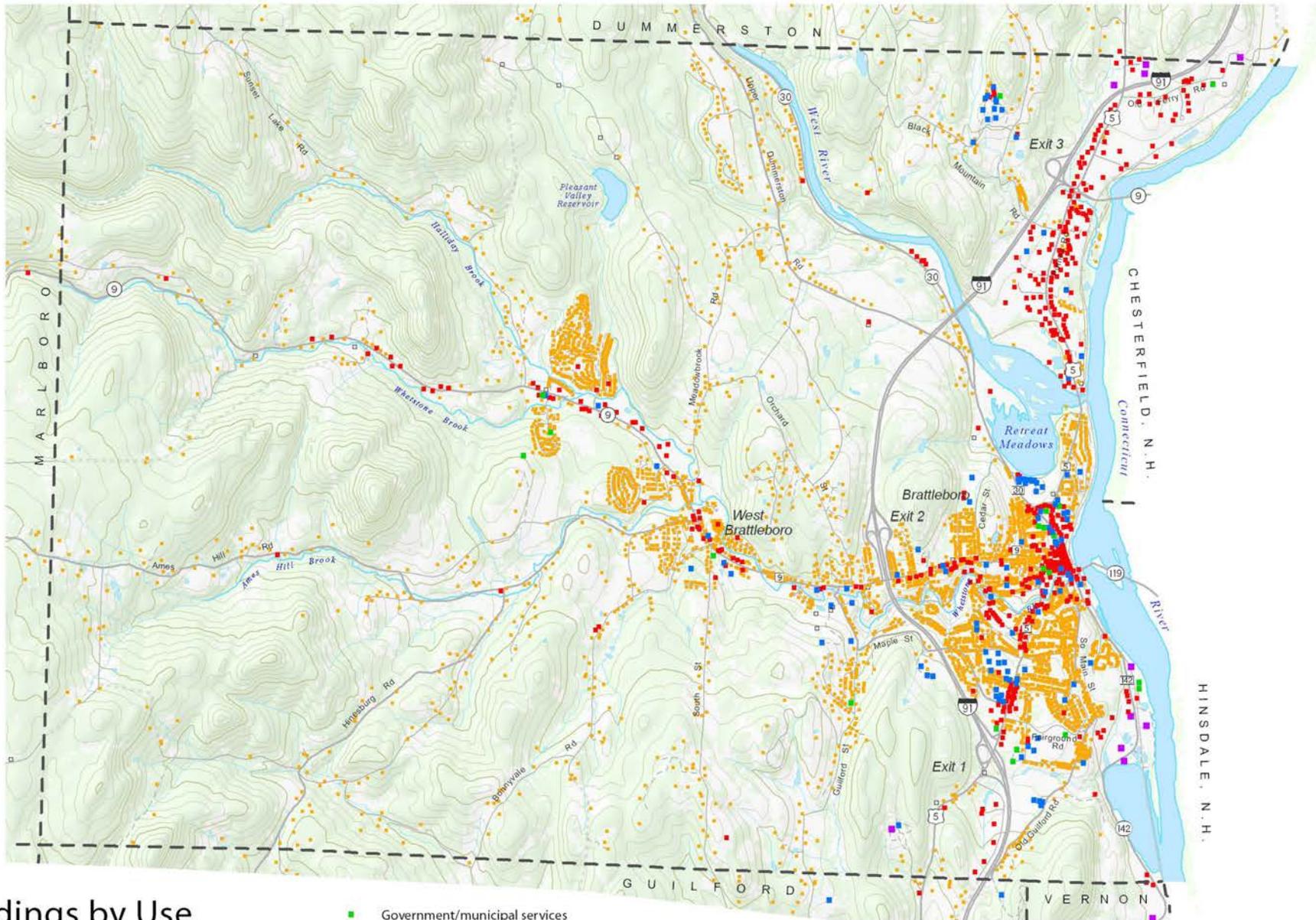
Industrial

Brattleboro has numerous characteristics that make it attractive for industries, including interstate highway access, railroad, the availability of local public transportation, and municipal water and sewer systems. Industrial uses are generally concentrated in six areas: north of I-91 Exit 3 (including Old Ferry Road), along Route 142, at Cotton Mill Hill, in the Exit 1 Industrial Park and Delta Business Campus located off Route 5 south of I-91 Exit 1, and in the Southern Vermont Industrial Park on Technology Drive off Putney Road. Other areas with industrial uses include Frost Street, the Estey Organ Complex on Birge Street, and the Zaluzney gravel pit off Mercury Drive.

From a zoning perspective, Brattleboro has designated zoning districts for industrial land uses. For the most part, these isolated districts are the legacy of Brattleboro's past manufacturing uses. Today, industrial uses are rarely manufacturing, and are mostly light industrial uses, together with distribution and warehousing facilities. Office uses and retail sales are also common within the industrial parks.

While Brattleboro does have vacant lots available for industrial development, the amount of land readily available for use in industrial parks is small. This can be both positive and negative. On the positive side, Brattleboro does not have a lot of vacant industrial buildings. On the negative side, developing these sites may require preparing the land and extending infrastructure (including roads, water, and sewer), all of which adds to the cost of a project.





Buildings by Use

0 1 Mile

- Government/municipal services
- Cultural, educational, health
- Commercial
- Industrial
- Residential
- Unknown/other

Data sources:

Vermont E911 Board:
building locations
Town of Brattleboro Lister's Office:
building use

FUTURE LAND USE

The central idea of the Future Land Use Plan is that Brattleboro should grow by investing in established areas rather than in fringe locations. There is an abundance of available land throughout town to accommodate development and a history of low growth, yet it more likely presents hazard challenges ([steep slopes](#), fluvial erosion, etc.). Therefore, topography and infrastructure costs limit the viability of many areas for new development. This Plan seeks to direct development and redevelopment opportunities to areas where growth will minimize expensive new infrastructure, revitalize the area, and help manage the cost of services for town residents.

This Plan focuses future growth along a north-south axis. To achieve this development pattern, this Plan calls for reducing and simplifying the number of zoning districts in the Putney Road area and includes planning for both a mixed-use neighborhood center just north of Veterans Bridge and allowing for large-scale residential development in adjacent areas (using the Planned Unit Development (PUD) process). This recognizes the large number of



undeveloped parcels in the Putney Road vicinity and the limited public resources available to develop a network of side streets or other public infrastructure. Traditional residential neighborhoods adjacent to downtown should also attract a degree of redevelopment, resulting in greater densities while achieving well-accepted “smart growth” goals and reducing exposure to future flood damage along the Whetstone/Rt 9 corridor. This strategy is compatible with smart growth policies supported at both the state and national levels.

Having land use regulations that are clear, concise, understandable, and accessible is an important tool in facilitating orderly and productive land development. Brattleboro’s land use regulations are outdated and overly complex and this Town Plan encourages a complete overhaul of Brattleboro’s Zoning Ordinance and Subdivision Regulations. As part of this overhaul, the Town Plan also encourages consideration, through the Zoning Amendment process and related public hearings, of land use regulations in the following areas:

- Potential increase to minimum lot sizes in rural, rural residential, and industrial zones
- Restriction of permitted uses in industrial zones
- Amendment of regulations requiring economic impact studies as part of development exceeding 65,000 square feet
- Creation of a local historic district in the downtown area
- Adoption of design standards
- Adoption of regulations to protect natural resources, including steep slope development restrictions, riparian buffer zones, conservation subdivisions, and clustered development design ordinances
- Revisions to PUD regulations and process

LAND USE REGULATIONS

*In accordance with 24 V.S.A. §4411, **Zoning Regulations** “govern the use of land and the placement, spacing, and size of structures and other factors specified in the bylaws related to public health, safety, or welfare.” These regulations primarily deal with development at the site level.*

***Subdivision Regulations** control the pattern of development—the way that the land is divided up to accommodate uses and supporting infrastructure, such as roads and utilities.*

The Future Land Use Plan has also been developed under the assumption that there are specific land use needs for the Town that are set forth herein, and that these land use needs will inform zoning revisions. These needs are:

Reduce the Impact of Flooding and Erosion

In August 2011 Brattleboro experienced historic flooding due to Tropical Storm Irene. The flood damage highlighted the importance of making land use decisions that protect public health and safety and prevent loss. A primary goal of this Future Land Use Plan is to minimize the effects of natural hazards: injuries and loss of life; property and environmental damage; and the social and economic disruption caused by an extreme event. The Town's flood control strategy must include directing land development to areas that are best equipped to handle it.

Floods occur when there is an imbalance in the hydrological system. This imbalance can occur due to heavy rainfall, snowmelt, ice jams, and/or human activity. Due to its topography, several locations in Brattleboro are susceptible to flash flooding when a large amount of rain falls over a short amount of time. This is the most dangerous type of flooding because a wall of water quickly sweeps over an area. The primary emergency response is to rescue people.

In the last 10 years there have been at least 3 evacuations of residents along the Whetstone Brook. Each evacuation results in substantial costs borne by the taxpayers of opening the emergency shelter, arranging transportation, and paying for Town personnel to direct the evacuation. In addition, Town emergency personnel are often put in harm's way. Damage to bridges, culverts, and road infrastructure as a result of flooding is also a problem. In 2004, the Route 9 Bridge east of Westgate Drive was damaged by flooding, and in 2011 several bridges and culverts serving remote parts of Brattleboro were damaged, including Stark Road, Halladay Brook Road, Sunset Lake Road, and Melchin Road.

In 2008, the Selectboard adopted an interim amendment to the Zoning Ordinance for a Fluvial Erosion Hazard Area. This section of the ordinance and the maps delineating the area of hazard were developed in conjunction with the River Management Program of ANR/DEC. The mapping and scientific assessment of risk were undertaken subsequent to the completion of the Stream Geomorphic Assessment Study, a project undertaken by Windham County Natural Resource Conservation District / Windham Regional Commission. In 2010, the Selectboard voted down a motion to permanently amend the zoning ordinance by including a section on Fluvial Erosion Hazard (FEH). The affected area proposed under that amendment was Halladay Brook and Whetstone Brook from Sunset Lake Road to the covered bridge at Maple Street. FEH mapping has been completed for a reach of Ames Hill Brook (just upstream from where it meets the Whetstone), Crosby Brook, and the West River. Despite the fact that local regulations have not been enacted, ANR/DEC does review Act 250 developments for fluvial erosion impact.

This Land Use Plan considers the relationship of development to the natural geographic and geologic systems. It considers the critical and sensitive areas, and areas vulnerable to natural hazards, and recognizes that human development can exacerbate flooding. It accounts for the following in determining appropriate types and density of development:

- Floodplain areas are critical to floodwater storage during an event. Development in these areas can greatly reduce the ability of the land to handle the extra volume of water, resulting in serious implications for flooding, both locally and downstream.
- Development on steep slopes leads to increased soil erosion and sedimentation of water bodies as the soil is carried downslope into streams and rivers. It can also result in the removal of vegetation necessary to maintain the soil's ability to absorb water,

thereby increasing stormwater runoff into water bodies. Access roads and driveways also contribute to road hazards; erosion from driveways can cause premature culvert failure.

- The amount and location of increased impervious surface development can alter runoff rates and prevent infiltration of water. When runoff is increased in volume or speed, it results in increased erosion rates, and places extra pressure on flood storage areas downstream.

Increase Public Access to the Waterfront

From the first white settlement on the Connecticut River in 1724, Brattleboro turned its attention away from the waterfront; buildings turned their backs on the water, and waterfront access was restricted, given the river's function in moving waste materials and the location of the rail. As waste became regulated and large-scale industries relocated to take advantage of road networks, cities and towns all over the world realized that rivers are economic and natural assets. There are many successful examples of redeveloped waterfronts to encourage people to come back to the water for entertainment, recreation, and quality-of-life amenities.

Public feedback gathered for the development of this Town Plan reinforced the community's desire for public access to rivers. As of the writing of this Plan, many important improvements have been undertaken, including the creation of waterfront greenspace on Depot Street; the acquisition and improvement of the West River Trail by the Friends of the West River Trail; and the construction of the West River Playing Fields on Route 30, which include public boat access to the West River and other recreational facilities.

The development of this Future Land Use Plan has acknowledged this community need and recommends [4 key areas](#) where the waterfront should be accessed to provide economic, recreational, and social benefits to the town. These areas are connected to the Downtown; along the



West River; around the Retreat Meadows (including the confluence of the West and Connecticut Rivers); and along Route 142.

Improve the Quality of Commercial Areas

Brattleboro has four major commercial districts, including the vibrant Downtown. As of this writing, three separate master plans are in effect to address each commercial area outside the Downtown. Each master plan was written and adopted over a 7-year period (2001–2008), independent of each other and without consideration of each area as a part of the whole Town. An important element of this Town Plan has been to engage a consultant to review each commercial area, in conjunction with a renewed community engagement process, to formulate a coherent and unified strategy to guide the development of all commercial districts in a complementary fashion to benefit the whole Town.

This plan, [Rethinking Brattleboro's Commercial Districts Report](#), has as its focus realizing the goals of each existing

Commercial Master Plan through planned revision to the Town's regulatory structure, thereby producing the visual and economic transformations envisioned by each of the plans. An analysis of the economic and demographic trends points to the fact that the slow local and regional growth rate will likely remain slow in the near future. The report points out that from a retail perspective this means that the Town does not need much, if any, added retail acreage for new development, and cautions against providing too much land for retail, as "it will encourage sprawl by making undeveloped land more attractive to developers than the reuse or redevelopment of vacant commercial spaces."²

This Town Plan identifies the need to make public and private physical improvements in the commercial districts in combination with regulatory changes. These improvements are important, as they help improve the visual character and enhance the quality of life. Market forces are beyond the control of the Town, but implementing physical improvements will heighten visual character and quality of life, with the ultimate goal of attracting investment or reinvestment in properties.

The Planning Commission has identified several strategies to improve commercial districts:

- A set of Town-produced design guidelines with a significant number of graphic examples is a way to illustrate the community's intentions. The guidelines could also address how large building frontages should be treated architecturally so that they are consistent with the "traditional design" qualities that are desired. These guidelines would be a significant benefit to property owners, their designers, and the DRB in deciding how best to achieve the community's vision. They will also assist property owners in making appropriate building and site design decisions that are in keeping with the character and history of particular areas of the Town.

- There are currently 9 zoning districts along the stretch of road north of Veterans Bridge. Reducing the number of zoning districts to 3 would provide property owners with greater flexibility for use of their property.
- Supporting residential infill development
- Reduce the amount of impervious surface allowed in the Commercial Zoning District (currently 90%) and/or reduce the amount of stormwater that is not mitigated on site by a low-impact development technique

Support the Rural Landscape

Brattleboro's landscape is integral to the character of the community. Public outreach for the Plan demonstrated strong public support for maintaining and enhancing the Town's farmland, forests, and natural areas. The majority of farmland, forests, and natural areas are zoned Rural in the current Brattleboro Zoning Ordinance. This zoning district has a 3-acre minimum lot size (that is, each newly created parcel must be a minimum of 3 acres). It is generally acknowledged that in order to provide a land base large enough for sustainable, economically viable farming and forestry, or to protect the important natural functions or amenities of land, it is important to promote large lot sizes.³ A low minimum lot size such as 3 acres puts the land at risk for fragmentation by residential development.

There are creative tools to protect the rural, working landscape such as conservation subdivisions that should be considered. A conservation subdivision is designed to protect water quality, retain wildlife, and preserve rural character by clustering housing and thus preserving open space and other natural features of the site.

Accommodate Future Industrial Uses

Industrial development is an important component of strengthening the Town's and County's economic base.

WHAT IS A CONSERVATION SUBDIVISION?

The subdivision design starts from an inventory of landscape and natural features—identifying ecologically important and sensitive features that then inform the designation of permanent, open space prior to road design, building parcels, and lot boundaries being established. Generally, homes are clustered close together to minimize disturbance of the landscape.

Some industrial development has special locational requirements, including transportation needs (e.g., air, rail, and highway), industrial levels of water, sewer, fire protection, and other urban services in locations that are convenient for employees to reach. Buildings such as the Book Press, Georgia Pacific, and Cotton Mill Hill are examples of this style of industrial development that demanded large buildings with easy access for employees. These buildings are challenging to repurpose due to their size. The Brattleboro Development Credit Corporation (BDCC) has been successful in dividing up several of these buildings to offer smaller leasable “incubator” space.

This Plan recognizes that consideration needs to be given to the uses and lot sizes in the Industrial districts to ensure they meet current and future needs. Due to technological advances, new industries do not necessarily have the same environmental impact or potential conflicts that the larger ones sometimes present. The incorporation of light industrial uses and flex industrial⁴ activities into other commercial and mixed-use zoning areas should be considered based on the recognition that contemporary industrial uses make fewer direct impacts than traditional “heavy industry.” Specific zoning measures, such as performance standards, can properly guide development to ensure that these industrial uses are compatible with the other uses in the district.

Revising the Planned Unit Development (PUD) Regulations

A Planned Unit Development (PUD) is an alternative development tool that allows for flexibility in response to explicit dimensional and other siting requirements in zoning and subdivision regulations. The purpose of the PUD procedure is to grant the developer greater flexibility where it can be demonstrated that the public benefits are greater than traditional subdivision and zoning approaches. It is particularly useful where multiple structures are proposed on a single parcel or across adjacent parcels. The term PUD

refers to both a set of standards to allow deviation from the strict dimensional standards of the zoning regulations and a review procedure under which the Town reviews the application. Potential benefits of developing a project as a PUD include more efficient site design; preservation of amenities, such as open space; lower costs for street construction; utility extension for the developer; and lower maintenance costs for the municipality.

The existing PUD process in Brattleboro (as of January 2013) has drawn widespread criticism for being cumbersome, unclear, and slow—leading to added expense and uncertain outcomes. The process treats every PUD application as a zoning amendment; in fact, it actually creates a new “one-off” zoning district in the process. Despite the length and complexity of the process (including the Selectboard adopting an amendment to the Zoning Ordinance), the approval process is still vulnerable to claims of ‘spot zoning,’ limited public review, and outcomes at odds with the intent of the Town Plan.



The current Brattleboro PUD permit procedure conflicts with statute and is unique in Vermont. The current process reduces the power of this effective development tool to promote clustering, open space protection, and other valuable planning goals. This Town Plan directs the Planning Commission to develop an amended PUD process as part of a complete overhaul of the Zoning Ordinance and Subdivision Regulations. Any proposed amendment must be consistent with state law and best practice followed by other municipalities in Vermont. In redrafting the PUD section, the Planning Commission will need to address and resolve the following issues:

- How to streamline the review process to reduce time, cost, and uncertainty
- How the proposed PUD relates to the underlying uses in the zoning district
- How Master Plans fit into the PUD process
- How to preserve the policy-making role of the Planning Commission and clarify the policy implementation role of the Development Review Board
- How to balance the rights of the developer with the interest of the wider public
- How to ensure consistency with the Town Plan
- How amendments to existing PUDs fit into a revised process

FUTURE LAND USE AREAS

The overarching role of the Future Land Use Plan is to manage and guide the intensity and location of development in Brattleboro. Based on analysis of current land use conditions and development trends, market attractiveness (including such features as access to water, sewer, streets, and highways), and natural assets (such as scenic, resource, and environmental, many of which appear on the Natural Assets map), this Plan provides for meeting the development needs of the next 5 years with sufficient public facilities and utilities. The Future Land Use Map and the Future Land Use Overlay Map graphically represent the proposed land use in this Town Plan.

Those who consult this Plan should keep in mind the following considerations:

- Boundaries of areas designated for specific land uses should be considered as general and approximate
- The plan is a statement of long-range goals for achieving land use change. Current uses that are in conflict with the Plan must be changed over time.
- Revision of the land use regulations will include reviewing existing zoning district boundaries for compatibility with the Future Land Use Plan. The Future Land Use Map provides direction to the Planning Commission.

Urban Center (UC)

This designation consists of Brattleboro's Downtown. Civic uses, offices, retail and lodging, theaters, restaurants, and service retail for surrounding residents and visitors are all encouraged uses. A variety of residential uses are also encouraged and could include reuse of existing buildings, new construction of multifamily residential over ground-floor retail or office uses. Light industrial uses that can meet specific standards for this area are also appropriate. In order to provide and accommodate preservation of



the Town's historic character, development should be designed in accordance with *Design Guidelines for Downtown Brattleboro*.⁵ Pedestrian and bicyclist amenities should be enhanced. Public investments that ensure that the Urban Center remains a centralized activity center, with public, cultural, and recreational uses, are encouraged.

Commercial (C)

This designation will provide a full range of commercial and retail to serve area residents and visitors. Uses may include retail, wholesale, service, and traveler services. This designation can also provide opportunities for low-impact business areas. These would include office, light industrial, technology, and research and development centers. Large-scale residential development, utilizing the PUD process, is also appropriate. Visual impacts of developments will be minimized by requiring buffers, landscaping, and architectural controls. Parking areas will be designed or retrofitted to reduce impervious cover and increase stormwater infiltration, while optimizing parking needs and opportunities through the use of landscaping and low-impact design practices.

Neighborhood Center (NC)

The purpose of this designation is to transform existing commercial areas into higher-density, mixed-use settlements through infill and redevelopment. The intent is to avoid predominantly single-use developments by incorporating a variety of retail, office, and residential uses. Non-residential uses in these areas tend to be smaller in scale and provide goods or services that people typically should not have to travel far for and need regularly. Employment opportunities for those living in the neighborhood are encouraged.

Developments need to incorporate high-quality architectural design and materials and thoughtful site design to ensure quality of place and should also incorporate con-

nectivity with adjacent uses and attractive landscaping. Development will be designed and scaled to be pedestrian oriented rather than dominated by the automobile. Ways to achieve this include buildings that front the street, vertically mixed-use buildings with retail on the ground floor, offices or residences above, and parking behind the building. Supportive and proportional public and/or quasi-public spaces and places such as plazas and outdoor gathering areas will be included in the development. Particular attention will be given to improving street connectivity to allow traffic to disperse, ease congestion, slow traffic, and make the streets safer for residents.

Streetscape projects—such as an expanded village green in West Brattleboro—that combine various aspects of traffic safety, neighborhood identity, economic development, recreation, and beautification bring a multitude of benefits to the neighborhood.

Industrial (IND)

This designation supports large-scale growth and development of industrial activities and the development of areas with sufficient access to existing services. Light industrial uses may include warehouses, storage units, light manufacturing, and incidental office uses. Heavy industrial uses may include processing, manufacturing, warehouses, storage units, and industrial support activities. In all cases, screening, landscaping, and adequate access must mitigate the scale of development.

Rural Commercial (RC)

This designation provides for a transition area between the more compact and urban areas in the east and the more rural areas to the north, south, and west. A mix of residential, commercial, and light industrial uses is encouraged. Exposure to natural hazards limits the scale and intensity of development that can be accommodated. Site planning must include the protection and enhancement of the sig-



nificant natural features in this area: open fields, forested backdrops, and the stream functions of the Whetstone and Halladay Brooks. Building design that is evocative of New England farm architecture (typically timber-framed structures with roofs in gable or cross-gable form) is desired.

Residential

The purpose of this designation is to provide a variety of housing types. Uses will include a range of densities varying from single-family homes on large lots to multifamily homes. Residential designations are as follows:

- **Rural Residential** allows for the development of predominantly residential uses while retaining the rural character of the outlying areas of Town. This area is generally not served by municipal utilities but does have easy road access to the more compact areas of Town. Wholesale and retail sales for agricultural products grown on the premises, forest product and food processing, and limited tourist commercial uses (e.g., inns, bed and breakfasts, camps, etc.) may be considered if they are carefully designed so that their development does not have an undue impact on traffic, noise, and light pollution. The use of conservation subdivisions is encouraged for new subdivisions in this area so that the rural landscape is preserved. Density bonuses may be considered, with the provision of public amenities such as open space or pathways.
- **Residential** allows for the development of a mix of relatively dense residential housing types, including single-family homes, duplexes, townhouses, condominiums, and apartments. Residential densities range from 7 to 17 dwelling units per acre, and dimensional standards reinforce existing neighborhood development patterns. These are relatively compact areas within the context of larger neighborhoods and are typically located around or near commercial or employment areas to provide conve-

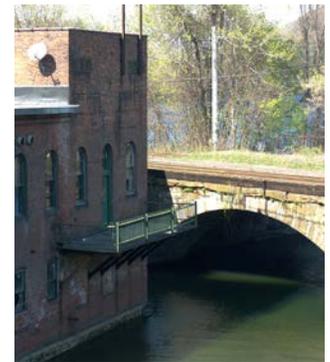
nient access to services and jobs for residents. New subdivisions will connect to existing street networks and will provide more than one built means of access.

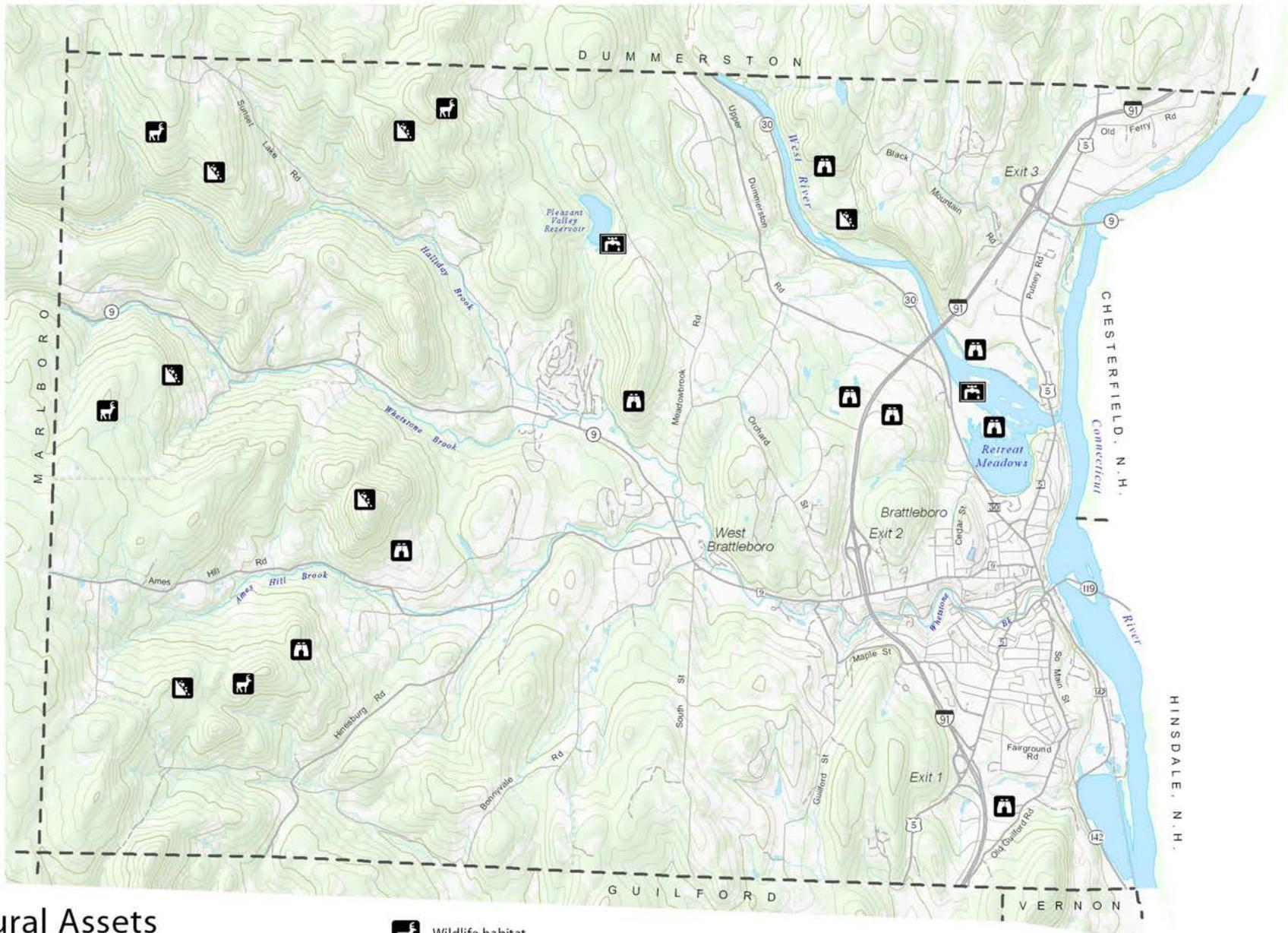
- **Multiple Residential** allows for the development of multifamily homes adjacent to the Urban Center. Residential densities may exceed 15 dwelling units per acre. Dimensional standards should reinforce existing neighborhood development patterns. Development might include duplexes, apartment buildings, townhouses, and other multiunit structures.

Offices are appropriate along Canal Street, High Street, and Western Avenue, if they are done in a manner that preserves the residential character of the area. No retail uses shall be permitted.

Rural (R)

The purpose of this designation is to protect Brattleboro's more remote and relatively inaccessible areas from fragmentation, development, and undue environmental disturbance. The lands identified for this area include agricultural land, woodlots, scenic areas, and lands with significant environmental constraints such as steep slopes, erodible soils, significant headwaters, and aquifer recharge areas. New residential development should be designed to be sensitive to the general character of the rural district and natural environment. The use of conservation subdivisions will be required for new subdivisions in this area.





Natural Assets

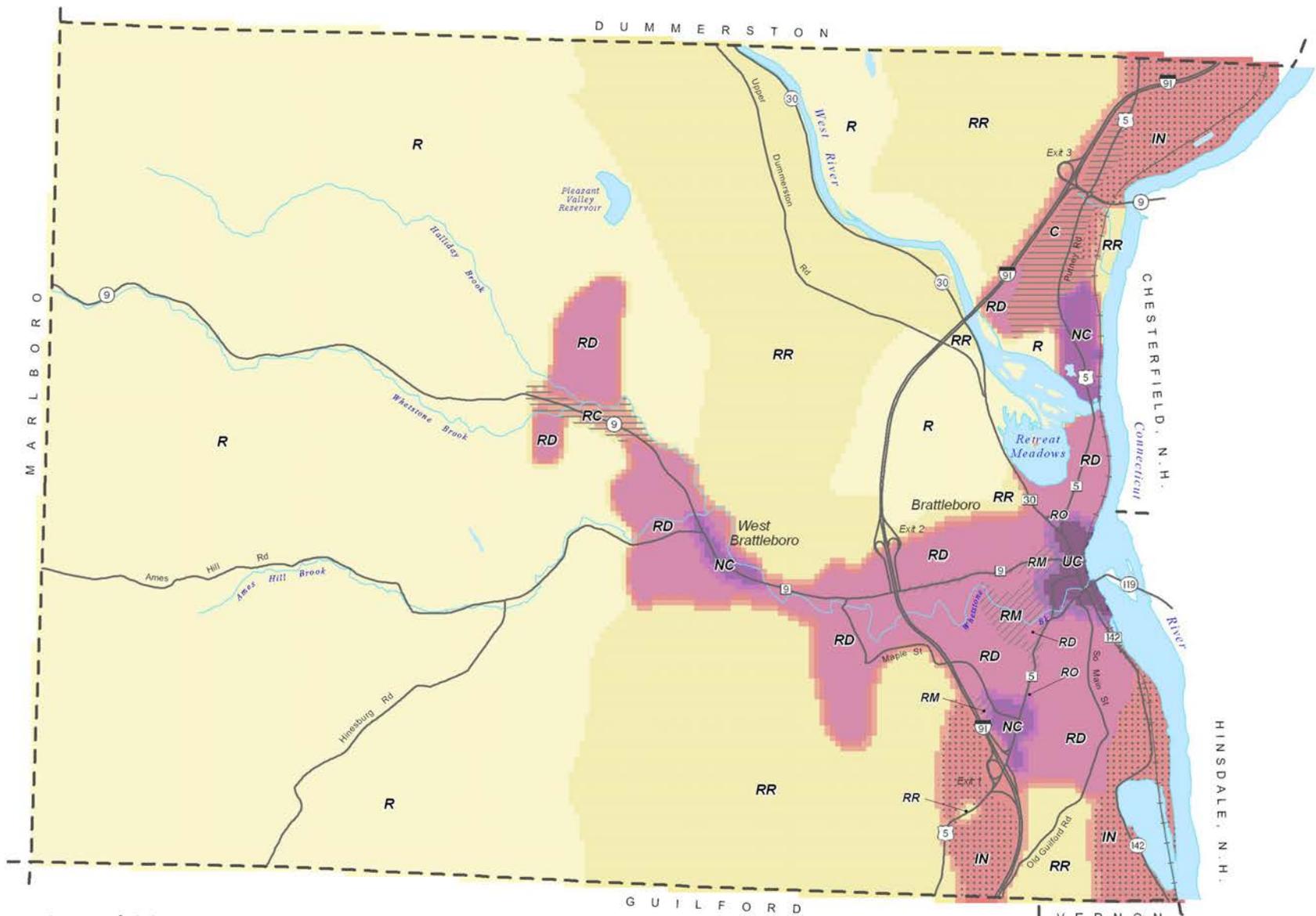
0 1 Mile

-  Wildlife habitat
-  Drinking water resource
-  Steep slopes
-  Scenic viewshed

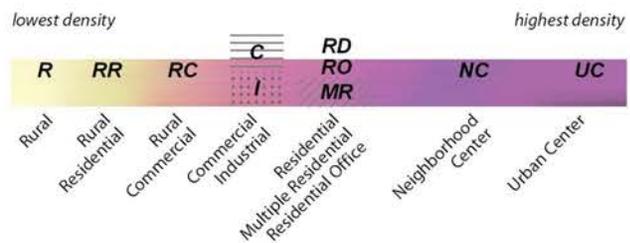
Note: icons represent the existence of a natural asset in a particular area; they do not imply a specific, precise location. For land development purposes, the more specific maps found in the Natural Resources chapter and Appendix D should be used.

Data sources:

Town of Brattleboro Planning Services Department:
identification of natural assets



Future Land Use



Data sources:
 Windham Regional Commission:
 future land use areas and overlays illustrating
 future land use areas and overlays described in
 the Land Use Chapter

Overlay Districts

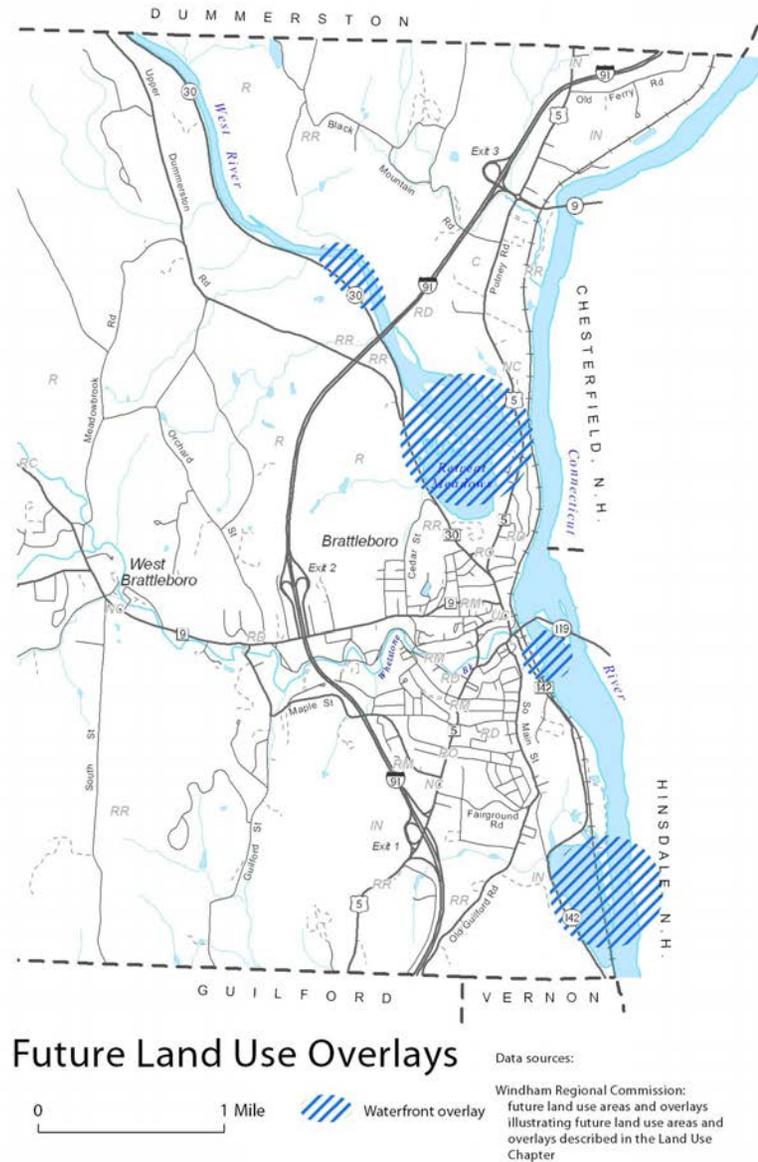
The Town Plan uses several overlay districts that identify special considerations for development or preservation activities as they relate to Brattleboro's physical form and physical assets. The overlay districts require that the underlying land uses must address special opportunities and risks identified by the overlay.

Waterfront Overlay

The purpose of this designation is to recognize the unique physical, economic, and social attributes of waterfront properties and to promote access to the waterfront. Development should incorporate public access either to or along the waterfront and should be oriented toward the riverfront.

The Waterfront Overlay is shown in Figure 12.1. Lands along Depot Street on the Connecticut River should be developed as an "urban waterfront" with hardscapes (e.g., railings, benches, lighting, and walkways made of hard material) that are consistent with the built landscape. Land along the West River should be kept in its naturally vegetated condition: amenities would include natural trails, wooded lots, and naturalized open spaces. Land along existing boat launch areas should be further promoted as the most suitable locations for water-dependent uses within Brattleboro. Bicycle parking facilities should be considered at appropriate locations.

Figure 12.3 Waterfront Overlay

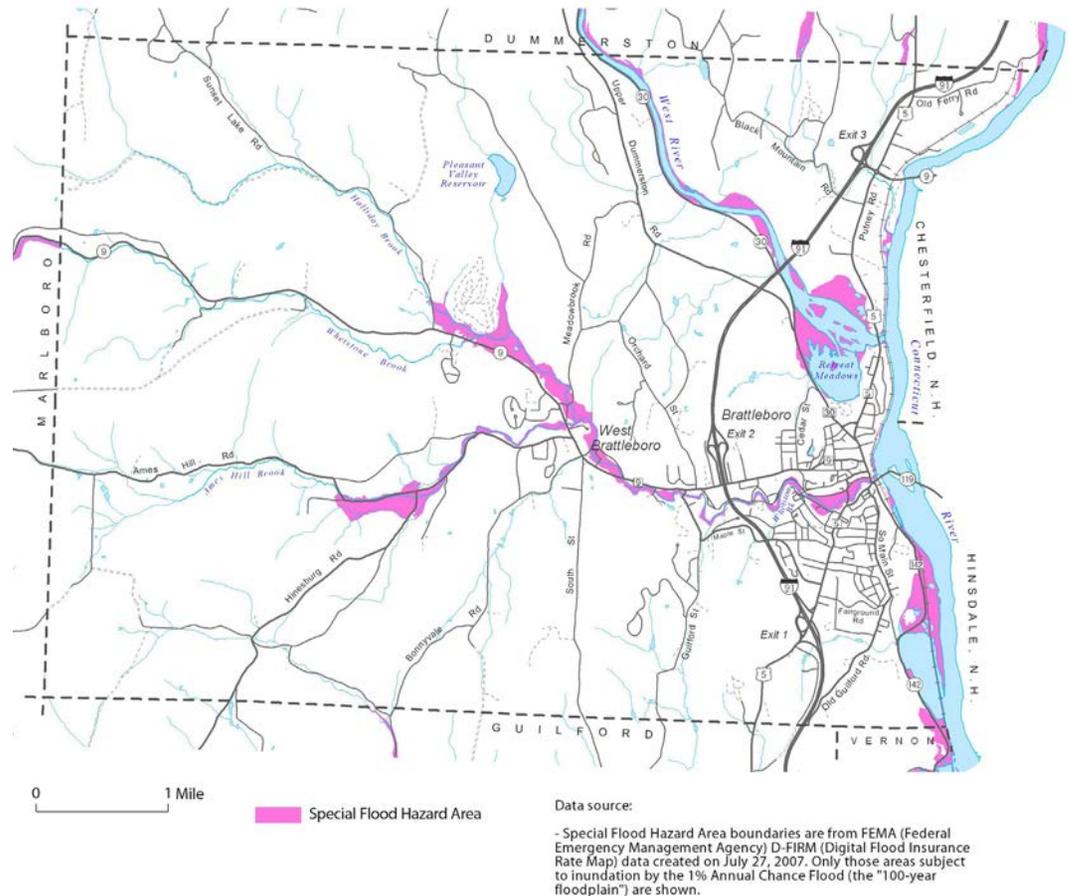


Flood Hazard Overlay

The purpose of this designation is to protect public health, safety, and welfare by preventing or minimizing hazards to life and property due to flooding, and to ensure that property owners within designated flood hazard areas are eligible for flood insurance under the National Flood Insurance Program (NFIP). Regulations consistent with guidance from the Federal Emergency Management Agency (FEMA) will be implemented in the Flood Hazard Overlay, which applies to all areas in Brattleboro identified as special flood hazard areas in and on the most current flood insurance studies and maps published by the Department of Homeland Security (DHS), FEMA, and NFIP, as provided by the Secretary of the VT Agency of Natural Resources (ANR) pursuant to Vermont Statute.⁶ These areas are depicted in Figure 12.2.



Figure 12.4: Special Flood Hazard Area



FOOTNOTES

¹ For the purposes of this analysis, Residential consists of Residential I and II, Mobile Homes U and L, Vacation I and II, Commercial Apartments (buildings with 5 or more rentals), and Other (which are condominiums).

² Hawk Planning Resources, LLC, Rethinking Brattleboro's Commercial District, (2010), p.13.

³ Vermont Natural Resources Council, Community Planning Toolbox, www.smartgrowthvermont.org/toolbox/tools/largelotzoning/.

⁴ Flex industrial space is space that is designed to easily convert to another use—whether warehouse, office, or light industrial.

⁵ Winter, Nore V. Design Guidelines for Downtown Brattleboro, Vermont. (2003). This document is available in the Town of Brattleboro Planning Services Department.

⁶ See 10 V.S.A. sec. 753.



CHAPTER 13

Town Plan Compatibility

TOWN PLAN COMPATIBILITY

Existing conditions and planned changes can have considerable impact on bordering communities, particularly near the municipal boundary. Therefore, Vermont planning statute requires that town plans evaluate development trends and plans in adjacent municipalities as well as how the plan fits in the regional context. The Brattleboro Town Plan has been drafted with consideration to town plans of Vernon, Guilford, Marlboro, and Dummerston, as well as the Windham Regional Commission Plan. As defined in 24 VSA §4302, compatibility is judged on whether the plan, if implemented, will significantly reduce the desired effect of the other. This chapter provides a summary of the land use plans implemented for each of the communities and considers the compatibility of such efforts. It also addresses how Brattleboro works with other municipalities to develop and implement plans.

Vernon

The Town of Vernon shares a small portion of Brattleboro's southeastern border. The two towns are linked by State Route 142. Vernon adopted its Town Plan in October 2009. The Plan has two policies governing growth: (1) preventing commercial strip development and dense development that does not use a single access to the town or state highway; and (2) allowing land capability and preservation of rural character to govern where various types of land development occur. This plan does not set forth a future land use classification in the text or by way of a map. Therefore, it is difficult to evaluate the compatibility of Brattleboro's proposed land use with Vernon's. Based on the fact that Brattleboro is not proposing a change to the types of uses that are currently there and Vernon's Town Plan does not discuss any compatibility issues, there is not a perceived compatibility issue between the town plans.

Guilford

Guilford is located to the south of Brattleboro. Their most recent Town Plan was adopted in July 2010. Guilford's Plan calls for a variety of land use designations along Brattleboro's border. Route 5 serves as the major route connecting the two towns. Guilford has designated the area along Route 5 to accommodate the highest density of uses and to encourage a mix of commercial and residential activities. On the Brattleboro side of the boundary, Brattleboro has some industrial uses located in Industrial Parks so they do not have a visual impact. Past the Exit One Industrial Park, Brattleboro is planning for development that is residential in nature. Part of the reasoning is to preserve a gateway to Guilford's Algiers Village as well as to prevent commercial uses from lining Route 5. Guilford asserts that their designation is compatible with Brattleboro because there is an existing Planned Unit Development (PUD) in Brattleboro on the boundary. While this is true, the PUD is not located in a linear fashion along Route 5.

In other border areas, Guilford is planning for residential development along Hinesburg Road and Bonneyvale Road, both roads which continue into Brattleboro. Large lots that are set back off these roads have a Conservation designation which acknowledges their relative remoteness from infrastructure and services. Brattleboro's Future Land Use Plan is compatible with Guilford's Plan.

Halifax

Halifax is located to the southwest of Brattleboro. The corners of the two municipalities touch. Halifax's Town Plan was adopted in March 2010. Halifax has designated the border near Brattleboro as Rural Residential lands. These are lands capable of accommodating a major proportion of the expected growth of Halifax because they generally have slight or moderate physical limitations and are easily accessible by roads. Brattleboro's designation of the land as Rural is compatible with Halifax's proposal. While Halifax's

designation appears to be more permissive than Brattleboro, the overall density desired by both towns is similar.

Marlboro

Marlboro shares Brattleboro's western boundary. Marlboro adopted its most recent Town Plan in June 2008. Low-density residential development currently exists along the roads that run east/west across the shared boundary (VT Route 9, Hamilton Road, Ames Hill Road, and Barrows Road). Marlboro's proposed land use recommends rural residential uses in the area around Ames Hill Road. This is an area designated to accommodate growth of new housing units, while not interfering with viewsheds and critical wildlife corridors. The remainder of the boundary area is designated as a Conservation Priority. This designation recognizes that the existing land has values related to water resources, wildlife habitat, and/or open space and recreation. The goal of this designation is to retain large, contiguous blocks of undeveloped land by discouraging development. This effectively mirrors Brattleboro's proposal for the shared boundary.

Marlboro's Town Plan notes that one of the most pressing compatibility issues with its neighbors is watershed protection. The Brattleboro Town Plan recognizes fluvial erosion hazard along the Whetstone Brook and seeks to address the flooding issues at a watershed level. Marlboro is within the watershed of the Whetstone Brook. The Marlboro Town Plan supports maintaining vegetated buffers along watercourses and water bodies. Marlboro is also regulating development on steep slopes. Brattleboro's Town Plan is compatible with strategies that Marlboro is implementing.

Dummerston

The Town of Dummerston shares Brattleboro's entire northern border. Dummerston's most recent Town Plan was adopted in September 2010. Currently, on the Dummerston side of the boundary, there is primarily a mix of undevel-

oped land and low-density residential development. There is a lumber yard that is located over the border in Dummerston but it is accessed via Old Ferry Road in Brattleboro which is zoned for industrial uses.

Dummerston and Brattleboro share two major state routes: Routes 5 and 30. Dummerston's proposed land use supports Rural Commercial development in the Route 5 corridor. Right over the border in Brattleboro there are existing industrial land uses. Given that these land uses are designed to perpetuate existing land uses, there is not a conflict. Along the municipal boundary on the Route 30 corridor, both towns are planning for residential development. Brattleboro's description of the type of residential development desired is more restrictive than Dummerston, as Dummerston is encouraging the most intensive use of land with a wide variety of housing types and retail and service establishments in scale with the neighborhood. However, given the scale of the neighborhood being low-density, this should not be too much of a conflict. The remainder of the boundary area is compatible in that they either support land conservation due to special natural resource values or encourage low-density rural residential development.

Of particular concern for Brattleboro is that the headwater to the town's drinking water supply lies within the Stickney Brook watershed in Dummerston. Dummerston's Town Plan acknowledges this and has designated this as a Conservation area.

Windham Regional Commission

The Windham Regional Commission serves a 27-town region that covers Windham County and towns in Bennington and Windsor counties. The most recent regional plan was adopted in October 2006. The purpose of the Windham Regional Plan is to provide guidance for change in the Windham Region that reflects the shared values and concerns of the member towns.

The Brattleboro Town Plan is consistent with the Windham Regional Plan. Brattleboro's Plan demonstrates strong consistency around several key principles. These principles include: preserving and protecting heritage and the natural landscape, revitalizing downtowns, developing livable communities, creating a sustainable economy, promoting energy conservation, and meeting housing needs for all people.

Intergovernmental Cooperation

Brattleboro has a long history of working cooperatively with neighboring municipalities. There is already a close relationship among the various fire departments and the police departments. The educational facilities, especially the Brattleboro Union High School and the Windham Regional Career Center, require articulation among the various elementary and secondary schools. As the extension of the sewer service to Algiers in Guilford shows, Brattleboro's infrastructure can enhance that of its neighbors. Brattleboro's participation with organizations such as the Windham Regional Commission, Brattleboro Development Credit Corporation, and the Connecticut River Joint Commission, demonstrates the Town's commitment to work for the betterment of the region.



CHAPTER 14

Implementation

IMPLEMENTATION

Planning is a continuous process. Adoption of the Town Plan is the first step in achieving the vision articulated in the Plan. The Implementation chapter provides a direction forward with recommendations on ways to implement the Town Plan and for continued planning.

The Town Plan is intended to encourage consistent public and private decisions that will result in coherent and sustainable development. To do this, several implementation measures will be used:

Revisions to Land Use Regulations

The Zoning Ordinance is one of the principal means of implementing the Town Plan. The purpose of the Zoning Ordinance is to protect the health, safety, and general welfare of the public by addressing issues such as traffic, types of land use, density, water supplies, wastewater treatment, and environmental protection. The Zoning Ordinance establishes the regulations to reflect and implement the land use plan.

The Subdivision Regulations is another key document for the implementation of the Town Plan. These Regulations establish the procedures to subdivide property in order to establish a usable lot for its intended purpose. By providing reasonable regulations relating to development, both prospective owners and the Town are protected from the adverse impacts of unmanaged development.

The Zoning Ordinance was last rewritten in 1988 and the Subdivision Regulations were last rewritten in 1981. Although both have had a number of amendments, both are in need of a complete review and revision to bring them up-to-date with contemporary planning practices. This should be accomplished as soon as possible after the adoption of the Town Plan.

Capital Improvement Plan

The Capital Improvement Plan (CIP) represents a guide for financial decisions, annual budgeting, and the coordination of major public investments in the preservation and expansion of the Town's fixed asset infrastructure. The CIP and Town Plan are integrally related and mutually supportive. Capital projects identified in the CIP are designed to support the goals and objectives of the Town Plan. The Town Plan provides a strong basis for making long-term decisions. The CIP should continue to be reviewed and updated annually, with continuous efforts to improve the document and the process to update it.

Annual Budget

The Annual Budget looks at the general operations and maintenance of municipal facilities and the repair of street and highway rights-of-way improvements. Special programs and new initiatives may be used to put recommendations into action.

Grants

This Plan calls on Town staff, and volunteer boards and commissions to be active in implementing projects. Many boards and commissions do not have budgets, and department budgets are tight; therefore, obtaining grants will be an important way to fund projects. For volunteer boards and committees, it can be particularly challenging to research grant opportunities, as this work can be time consuming. Staff liaisons should work with the boards and committees to determine appropriate grant opportunities to pursue.

Flood Protection

Comprehensive flood protection is a major focus of this Town Plan. Flood events are a part of nature and they pose a significant threat to Brattleboro's public safety, economic stability, and environmental quality. This Plan recognizes that the flood protection strategy must be approached at the watershed level and that mitigation and non-structural measures are often more sustainable solutions to flood hazards. When this Plan is in effect, the Town will continue to work with property owners, the State, and other organizations to prevent, protect, and mitigate the adverse impact of floods on human health and safety, on valuable goods and property, and on the aquatic and terrestrial environment.

Updates to the Town Plan

At a minimum, the Town Plan should be updated every five years. These updates will ensure renewal and continued utility of the Town Plan at the state and local level. Plan updates can be a significant undertaking and can result in the identification of new goals, policies, and actions.

The Plan should be reviewed annually by the Planning Commission to make sure the goals, policies, and actions still reflect the community's needs and attitudes, and continue to be responsive to current conditions in the Town. A good time to undertake this annual review is at the organizational meeting that occurs each July, when new commission members begin their terms.



Implementation Matrix

The matrix on the following pages represents a condensed presentation of all the action items from each of the individual topic chapters. By placing all of the action items in one place, it is much easier to target projects and track progress over time. The following matrix contains an abbreviated description of the policies and actions in the individual topic chapters. It assigns a responsible party and identifies actions in terms of importance by assigning a priority. This matrix also helps to illustrate that just about every action has financial implications, and so it attempts to highlight which resources will be required. If the grant column is checked, it indicates that there may be public or private grants available to undertake the recommended action—not that a grant is the only way to accomplish the project. When an action has no commitment of resources checked, it is anticipated that support will be in the form of letters and via other non-financial commitments. Many actions specifically pertain to updating the land use regulations; the final columns illustrate which regulations are at play.

This matrix is meant to serve as a guide. The boards, committees, and municipal departments involved in implementing it will need to consider the actions and their importance, achievability, and financial feasibility. As such, this document is dynamic and the priority and commitment of resources may change over the life of the Plan.

The following abbreviations are used to indicate responsible parties:

- Ag. Adv.—Agricultural Advisory Committee
- CC—Conservation Commission
- DPW—Public Works Department
- EC—Energy Committee
- En. Coord.—Energy Coordinator

- PC—Planning Commission
- PSD—Planning Services Department
- R&P—Recreation and Parks Department
- R&P Comm.—Recreation and Parks Committee
- SB—Selectboard
- SBAP—Small Business Assistance Program Committee
- SWC—Solid Waste Committee
- TAC—Town Arts Committee
- TM—Town Manager
- TSC—Traffic Safety Committee

MATRIX CHART TABLE OF CONTENTS

Economic Development	173
Energy	174
Agriculture	175
Education	175
Housing	175
Transportation	176
Arts and Cultural Resources	177
Historic and Scenic Resources	177
Municipal Facilities and Services	178
Natural Resources	180
Land Use	182

Town Plan Implementation Matrix

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
ECONOMIC DEVELOPMENT									
2.1 Commercial Districts	For actions to enhance Commercial Districts, refer to the Land Use Chapter								
2.2 Education and job training	2.2.1 Participate in neighborhood community development projects	PSD	long	✓	✓		✓		
2.3 Child care	2.3.1 Provide information to childcare providers about resources to help grow the business	SBAP	short	✓					
2.4 Build partnerships with public and private stakeholder groups to capitalize on significant development opportunities	2.4.1 Participate in regional economic development planning activities	Town Manager	ongoing	✓	✓				
	2.4.2 Participate in efforts to create a Comprehensive Economic Development Strategy (CEDS)	Town Manager	short	✓					
	2.4.3 Support organizations doing economic and community development	SB	ongoing		✓				
	2.4.4 Develop a neighborhood plan for the New Market Tax Credit eligible Census Tract	PSD	short	✓	✓		✓		
	2.4.5 Align policies of the Small Business Assistance Program (SBAP) to focus on supporting clusters	SBAP	short	✓					
	2.4.6 Publicize the SBAP by updating brochures, featuring it on the website, and speaking to community groups and organizations	SBAP	short	✓	✓				
	2.4.7 Create an Economic Development Officer position for the municipality	SB	short		✓				
2.5 Affordable business infrastructure	2.5.1 Identify potential business opportunities along existing railroad spurs	PSD	long						
	2.5.2 Identify utility and access constraints for parcels in the Industrial Districts	PSD	long		✓				
	2.5.3 Support the development of flexible, short-term incubator space with access to the fiber optic network	PSD	long						

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
ENERGY									
3.1 Measure and analyze	3.1.1 Maintain a baseline inventory	EC	ongoing		✓				
	3.1.2 Maintain membership in ICLEI	EC	ongoing		✓				
	3.1.3 Report annually to the Selectboard	EC	short						
	3.1.4 Review Town Procurement Policy and make suggestions on energy conservation and efficiency criteria	EC	short	✓					
3.2 Energy conservation and efficiency	3.2.1 Organize program participation to increase residential and commercial energy efficiency and renewable energy	EC, En. Coord.	ongoing	✓			✓		
	3.2.2 Consider implementing PACE	EC, En. Coord., SB	ongoing	✓	✓				
	3.2.3 Maintain local link to Efficiency Vermont and other resources	EC, En. Coord.	ongoing						
	3.2.4 Improve efficiency in municipal and school district buildings	En. Coord.	ongoing		✓				
	3.2.5 Identify land use regulatory barriers to efficiency and conservation	PC	short	✓					
3.3 Renewable energy	3.3.1 Conduct a solar energy access inventory	PSD, EC	short	✓	✓		✓		
	3.3.2 Explore alternative financing of municipal and school renewable energy projects	EC	short	✓					
	3.3.3 Work for greater federal and state cash incentives	EC	short						
	3.3.4 Encourage contractor training	EC	short						
	3.3.5 Support energy audit training at local colleges	EC	short						
	3.3.6 Encourage purchase of electricity from renewable sources	EC, SB	short						
	3.3.7 Upgrade and promote charging station at the Transportation Center	SB	short		✓		✓		
	3.3.8 Establish a collective purchasing program for solar panels	EC, En. Coord.	long						

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
AGRICULTURE									
4.1 Access to farmland	4.1.1 Support conservation organizations preserving farmland	SB	ongoing						
	4.1.2 Inventory agricultural lands	Ag. Adv.	long	✓			✓		
	4.1.3 Review polices of Farmland Tax Stabilization program	SB	long	✓					
4.2 Access to funding	4.2.1 Expand policies for use of the Agricultural Land Protection Fund	Ag. Adv.	short	✓					
4.3 Community food system	4.3.1 Support community-led initiatives	Ag. Adv.	ongoing						
EDUCATION									
5.1 Educational Resources	5.1.1 Provide opportunities for student engagement on Town boards	SB	short	✓					
	5.1.2 Continue financial support for early education	SB	ongoing		✓				
	5.1.3 Work with colleges to support collaboration efforts	TM or designee	ongoing	✓					
5.2 Healthy and safe school environments	5.2.1 Work to provide students with safe ways to walk or bike to school and town	DPW, PSD	ongoing	✓	✓	✓	✓		
	5.2.2 Participate in community health and wellness initiatives	PSD, PC, SB	ongoing	✓			✓		
5.3 Strengthen job training and workforce development	5.3.1 Develop and build relationships with business community and workforce development organizations	TM	ongoing	✓					
HOUSING									
6.1 Existing housing stock	6.1.1 Develop a process to monitor land and buildings to identify threats to neighborhood stability	PSD	long	✓	✓		✓		
	6.1.2 Support programs that preserve and upgrade housing stock	SB	ongoing						
	6.1.3 Research building code enforcement programs	PSD	long	✓	✓				
6.2 Location of new housing	6.2.1 Rezone lower Putney Road to permit residential development	PC	short	✓				✓	

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
HOUSING continued									
	6.2.2 Provide incentives for creating residential units in new or renovated commercial structures	PC	short	✓				✓	
6.3 Housing redevelopment	6.3.1 Establish density bonus incentives for energy efficient siting and construction	PC	short	✓				✓	✓
	6.3.2 Adopt development standards to promote solar access and community solar	PC	Short	✓				✓	✓
	6.3.3 Disseminate information on energy efficient resources and programs	En. Coord.	ongoing	✓	✓				
	6.3.4 Permit clustered residential development	PC	short	✓				✓	✓
	6.3.5 Consider joining PACE program	SB	short	✓	✓				
	6.3.6 Support regional nonprofit rehabilitation loan programs	SB	ongoing						
6.4 Affordable housing	6.4.1 Support efforts to develop affordable home ownership and rental opportunities	SB	ongoing						
	6.4.2 Evaluate workforce housing demand of local businesses	PSD	long	✓	✓		✓		
6.5 Support innovative housing that is sustainable	6.5.1 Provide regulation that allows affordable, diverse housing	PC	short	✓					
	6.5.2 Work with property owners to explore solutions for housing outside of the flood hazard areas	PSD	ongoing	✓	✓		✓		
6.6 Housing discrimination	6.6.1 Disseminate information on fair housing law	PSD	short	✓					
TRANSPORTATION									
7.1 Complete Streets	7.1.1 Design improvements when undertaking road projects	DPW	ongoing	✓	✓		✓	✓	✓
	7.1.2 Stripe high-visibility crosswalks on major streets	DPW	short	✓	✓				

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
TRANSPORTATION continued									
	7.1.3 Get public input by having neighborhood meetings when undertaking road projects	DPW, PSD	ongoing	✓	✓				
	7.1.4 Install and maintain proper design and illumination levels of public streets	DPW	ongoing	✓	✓				
	7.1.5 Consider 3- to 4-foot buffer strips between road and sidewalk	PSD	short	✓					✓
7.2 Promote bicycle and pedestrian mobility	7.2.1 Create a priority-ranked sidewalk plan focusing on arterial roads	DPW, PSD	short	✓	✓		✓		
	7.2.2 Develop a “shared road” route system	PSD	long	✓	✓				
	7.2.3 Improve bicycle storage	DPW	short	✓	✓		✓		
	7.2.4 Secure funding for bicycle and pedestrian system improvements	DPW, PSD	ongoing	✓	✓		✓		
	7.2.5 Plan for all transportation modes within parking areas	PC	short	✓				✓	
	7.2.6 Conduct bicycle and pedestrian audits	PSD	short	✓	✓		✓		
7.3 Promote alternatives to single-occupancy vehicles	7.3.1 Support the in-town bus	SB	ongoing	✓	✓				
	7.3.2 Maintain or increase the number and frequency of transportation modes to and in Brattleboro	SB	ongoing	✓					
	7.3.3 Enhance the train station connection to Downtown and other attractions	SB, TM, PSD	short	✓	✓		✓		
	7.3.4 Support state initiatives to improve rail infrastructure	SB	ongoing						
	7.3.5 Educate the public about single-occupancy alternatives	EC	ongoing						
7.4 Freight	7.4.1 Address regional freight needs and mitigate local impacts	SB	ongoing						
7.5 Protect neighborhoods	7.5.1 Use streetscape design to minimize impact	DPW, PSD, PC, SB	short	✓	✓				

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
ARTS & CULTURAL RESOURCES									
8.1 Economic contribution	8.1.1 Measure the economic impact of arts and creative industries	TAC	short				✓		
	8.1.2 Publish a directory of arts resources, artists, and arts organizations	TAC	short						
8.2 Support creation of prominent art activities, events, and installations	8.2.1 Maintain a Town Arts Policy	SB	ongoing	✓					
	8.2.2 Promote awareness of arts	TAC	short	✓	✓		✓		
	8.2.3 Integrate arts into Town infrastructure	TAC, SB	ongoing	✓	✓		✓		
	8.2.4 Discuss potential for an annual municipal contribution	TAC, SB	short		✓				
8.3 Find ways to grow and strengthen the arts section	8.3.1 Create artist networking opportunities	TAC	short						
	8.3.2 Create an online, interactive web posting site	TAC	short				✓		
8.4 Youth participation	8.4.1 Investigate opportunities for youth representation on the Town Arts Committee	TAC	short						
	8.4.2 Plan with local educators to integrate youth into arts opportunities	TAC	short						
8.5 Accessibility of the arts	8.5.1 Identify gaps to the accessibility of arts	TAC	long						
HISTORIC & SCENIC RESOURCES									
9.1 Support organizations and property owners	9.1.1 Expand the collection, organization, and preservation of records	PSD	ongoing	✓					
	9.1.2 Maintain inventory of historic resources	PSD	ongoing	✓					
	9.1.3 Support expansion of the National Register Downtown District to side streets	PSD	long	✓	✓		✓		
9.2 Ensure minimal impacts	9.2.1 Consider a local historic district for Downtown	PC	short	✓	✓			✓	

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
HISTORIC & SCENIC RESOURCES <i>continued</i>									
	9.2.2 Consider standards for conservation subdivision	PC	short	✓					✓
	9.2.3 Consider guidelines for tree preservation and development on steep slopes	PC	short	✓					
	9.2.4 Assist applications with permitting processes and directing towards financial assistance	PSD	ongoing	✓					
9.3 Adaptive reuse of historic structures	9.3.1 Promote tax incentives, loan, and grant programs	PSD	ongoing	✓					
MUNICIPAL FACILITIES & SERVICES									
10.1 Police and Fire	10.1.1 Address facility needs	Town	short			✓			
10.2 Maintenance of municipal utilities	10.2.1 Maintain systems to meet state and federal standards	SB, DPW	ongoing	✓	✓	✓	✓		
10.3 Stormwater management	10.3.1 Evaluate feasibility and options for establishing a stormwater services enterprise fund or program	DPW	long	✓	✓		✓		
	10.3.2 Work with property owners to address stormwater and infrastructure needs	DPW, PSD	long	✓			✓		
10.4 Municipal water/wastewater system extension	10.4.1 Use extensions to remedy problems, promote orderly development, and carry out purposes of Land Use plan	SB	ongoing						
10.5 Consistency with land use practices and development and Town's future planning	10.5.1 Adhere to goals and policies of the Town Plan	SB	ongoing	✓					
	10.5.2 Coordinate the CIP and Town Plan	SB	short	✓					
10.6 Developer agreements	10.6.1 Developer agreements to help pay for impacts to public service and infrastructure	SB	ongoing	✓					

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
MUNICIPAL FACILITIES & SERVICES continued									
10.7 Location of public facilities and services	10.7.1 Support compact growth, neighborhood revitalization, and sustainable new neighborhood design	SB	ongoing	✓					
10.8 Library services	10.8.1 Pursue grant opportunities to enrich the collection	Library	ongoing	✓			✓		
	10.8.2 Maximize the benefits of fiber optic	Library	ongoing	✓	✓		✓		
10.9 Recreational opportunities	10.9.1 Promote recreational activity	R&P	ongoing	✓	✓				
	10.9.2 Continue cooperative use of facilities and fields	R&P	ongoing	✓					
10.10 Parks and mini-parks	10.10.1 Create a Parks Master Plan	R&P	long	✓	✓		✓		
	10.10.2 Support civic and garden clubs/organizations in beautification	R&P, R&P Comm.	ongoing	✓			✓		
10.11 Use parking technologies that offer customers and policy makers maximum flexibility	10.11.1 Use parking technologies that offer flexibility	TSC, SB	ongoing		✓		✓		
10.12 Solid waste disposal and recycling	10.12.1 Provide outreach on solid waste collection and recycling	Town	ongoing	✓	✓				
	10.12.2 Establish more collection points for Project Cow	SWC	short	✓					
	10.12.3 Increase recycling bins on streets and parks	SWC	short	✓	✓				
	10.12.4 Develop a town-wide bulky waste collection program	SWC	long		✓	✓			
NATURAL RESOURCES									
11.1 Wildlife corridors, wetlands, and riparian habitats	11.1.1 Maintain Class I wetlands in natural state; comment on applications for state permit	CC, PC	short	✓				✓	
	11.1.2 Adopt Fluvial Erosion Hazard Regulations	PC	short	✓				✓	
	11.1.3 Consider requiring riparian buffers for all surface waters	PC	short	✓				✓	

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
NATURAL RESOURCES continued									
	11.1.4 Provide incentives for protecting wildlife corridors, wetlands, and riparian habitats	PC	short	✓				✓	
	11.1.5 Support land acquisition or conservation easements	CC, SB	ongoing	✓			✓		
	11.1.6 Conduct a natural resources inventory to better understand Brattleboro’s natural heritage	CC	long	✓			✓		
11.2 Invasive species prevention	11.2.1 Educate on identification, threats, and control of invasive species	CC	short				✓		
	11.2.2 Cooperate with other groups to address threats	CC	ongoing				✓		
	11.2.3 Remove existing invasive species, in coordination with Town-initiated work projects	Town	short	✓	✓				
	11.2.4 Involve Town personnel in removing invasives on town properties and road rights-of-way	DPW, R&P, CC	long	✓	✓				
11.3 Maintain and enhance urban forest cover	11.3.1 Complete the tree inventory	Tree Board	long				✓		
	11.3.2 Develop a plan for street trees to increase stock, species diversity, and appropriate plantings	Tree Board, CC	long		✓		✓		
	11.3.3 Implement regulations that recognize benefits of street trees and urban forest cover	Tree Board, CC, PC, SB	short	✓				✓	✓
	11.3.4 Encourage capital projects to include consideration of the benefits of street trees and an enhanced urban forest cover	Tree Board, CC, SB, TM	long	✓					
	11.3.5 Continue participation in the Tree City USA program	Tree Board	ongoing	✓					
	11.3.6 Seek grants to fund public tree planting	Tree Board	ongoing	✓			✓		
11.4 Stormwater and erosion control	11.4.1 Educate developers on Low Impact Development	PC	short	✓			✓		

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
NATURAL RESOURCES continued									
	11.4.2 Consider regulating development on slopes greater than 15%	PC	short	✓				✓	
11.5 Participate in FEMA's Community Rating System (CRS)		SB, PSD	ongoing	✓					
11.6 Community trail system	11.6.1 Develop trails that promote aesthetic views, safe conditions, and minimize negative environmental impacts	CC	ongoing				✓		
	11.6.2 Provide trail links to destinations	CC	long				✓		
	11.6.3 Work with nonprofits and land-owners	CC	ongoing	✓					
11.7 Promote, sponsor, and organize events to connect residents to the natural environment		CC	ongoing	✓					
LAND USE									
12.1 Simplify land use regulations	12.1.1 Delineate zoning districts consistent with the Future Land Use Map	PC	short	✓				✓	✓
	12.1.2 Revise the zoning and subdivision regulations	PC	short	✓	✓		✓	✓	✓
	12.1.3 Use flexible zoning mechanisms	PC	short	✓				✓	✓
	12.1.4 Consider revising the Planned Unit Development regulations	PC	short	✓				✓	✓
12.2 Flood hazard protection	12.2.1 Continue to participate in NFIP and take advantage of preferential ratings	PSD	ongoing	✓				✓	
	12.2.2 Adopt Fluvial Erosion Hazard regulations	PC	short	✓				✓	
	12.2.3 Prohibit structure in the floodway	PC	ongoing	✓				✓	
	12.2.4 Consider requiring vegetated setbacks from streams	PC	short	✓				✓	
	12.2.5 Preserve areas for natural storage in floodplains	PC, CC	long	✓				✓	

Town Plan Implementation Matrix *continued*

Chapter Policy	Actions	Lead responsibility	Priority	Commitment of Resources				Land Use Regulations	
				Existing staff	General Fund, operating	Capital	Grant	Zoning Ordinance	Subdivision
LAND USE continued									
12.3 Watershed approaches to flood hazard reduction	12.3.1 Consider regulating development on steep slopes	PC	short	✓				✓	✓
	12.3.2 Improve street connectivity	PC	short	✓				✓	✓
	12.3.3 Propose development regulations to address stormwater management	PC	short	✓	✓		✓	✓	✓
	12.3.4 Require the integration of infrastructure best-management practices into public and private development	PC	long	✓				✓	
	12.3.5 Review and update road design standards	DPW, SB	long	✓	✓				✓
	12.3.6 Consider increasing the minimum lot size in Rural Districts	PC	short	✓				✓	
	12.3.7 Consider regulating tree clearing	PC	short	✓				✓	
12.4 Attractive commercial appearance	12.4.1 Consider creating design guidelines	PC	short	✓	✓		✓	✓	
	12.4.2 Create a Downtown Master Plan	PSD	short	✓	✓		✓		
12.5 Public access and views to the waterfront	12.5.1 Designate a path connecting Depot Street, railroad bridge, and Hinsdale	CC	short	✓			✓		
	12.5.2 Secure easements to create trails	PC	long	✓				✓	✓
	12.5.3 Support improvements to West River Trail	SB	ongoing						
	12.5.4 Site, design, and orient development to the river	PC	short	✓				✓	
	12.5.5 Enhance Depot Street greenspace	R&P	short	✓	✓		✓		
12.6 Provide land for more intensive industrial uses	12.6.1 Consider increasing the minimum lot size in the Industrial zoning district	PC	short	✓				✓	
	12.6.2 Review commercial and retail uses in Industrial zones	PC	short	✓				✓	
	12.6.3 Consider establishing performance standards to permit light industrial use in Urban Center and Commercial zoning districts	PC	short	✓				✓	



APPENDICES

Appendices

Demographic Profile

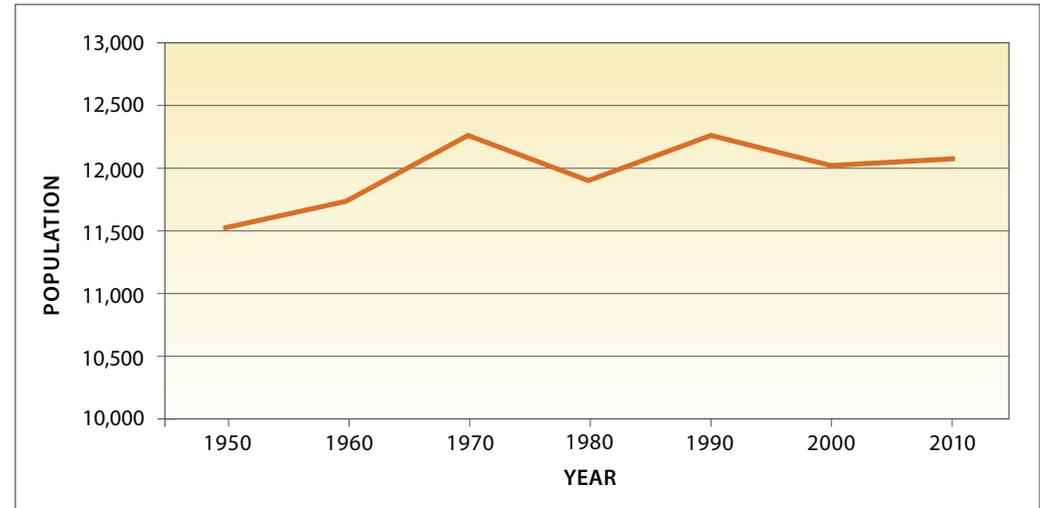
Most of the demographic data available for Brattleboro in 2012 is based on U.S. Census data from 2010. The Census Bureau conducts their official population census of the United States every ten years, called the decennial census. The most recent survey was taken in April 2010. The 2010 Census only collected information on population, race, age, educational attainment, relationship status, and housing. All other statistical information such as income, poverty, employment, etc. is now estimated through the American Community Survey (ACS), which releases information in five-year estimates, even for rural areas. The American Community Survey is an ongoing statistical survey that samples a small percentage of the population every year—it is not an accurate count. Therefore, it should be relied on as an indicator, and where feasible, the margin of error has been indicated. Other sources of data used to compile the demographic profile of Brattleboro include the Vermont Department of Education School Reports.

Specific data pertinent to individual chapters (e.g., housing data and labor characteristics) are located in those chapters.

Population

In 2010, the total population of Brattleboro was 12,046. This was an insignificant change in population from 2000 with only 41 additional people. Since 1950, Brattleboro’s population has been static, fluctuating by only 719 people (from a high of 12,241 people in 1990 to a low of 11,522 people in 1950). Figure A.I shows the 60 year population trend.

Figure A.1: Brattleboro Population, 1950–2010



Source: U.S. Census data, 1950–2010

The population is relatively evenly distributed between the sexes. In 2000, men accounted for 45.6% of the population and in 2010 that rose to 46.4%.

Population Projections

While current population data from the 2010 Census is available, no current population projections exist. The population growth trends for Brattleboro and surrounding areas indicate there has been slow growth:

- Brattleboro had a growth rate of 4.5% from 1950–2010
- Windham County grew by only 0.7% from 1990–2010
- Franklin County, MA declined by 0.2% from 1990–2010
- Cheshire County, NH grew by 4.5% from 1990–2010

Given this historical growth and the economic conditions (discussed in detail in Chapter 2 “Economic Development”) it is reasonable to plan for continued slow growth.

Age

The median age in Brattleboro rose from 40.2 in 2000 to 43.2 in 2010 (see Table A.1). The Town’s population remains older than Vermont’s overall median age of 41.5.

Table A.1: Median Age 2010

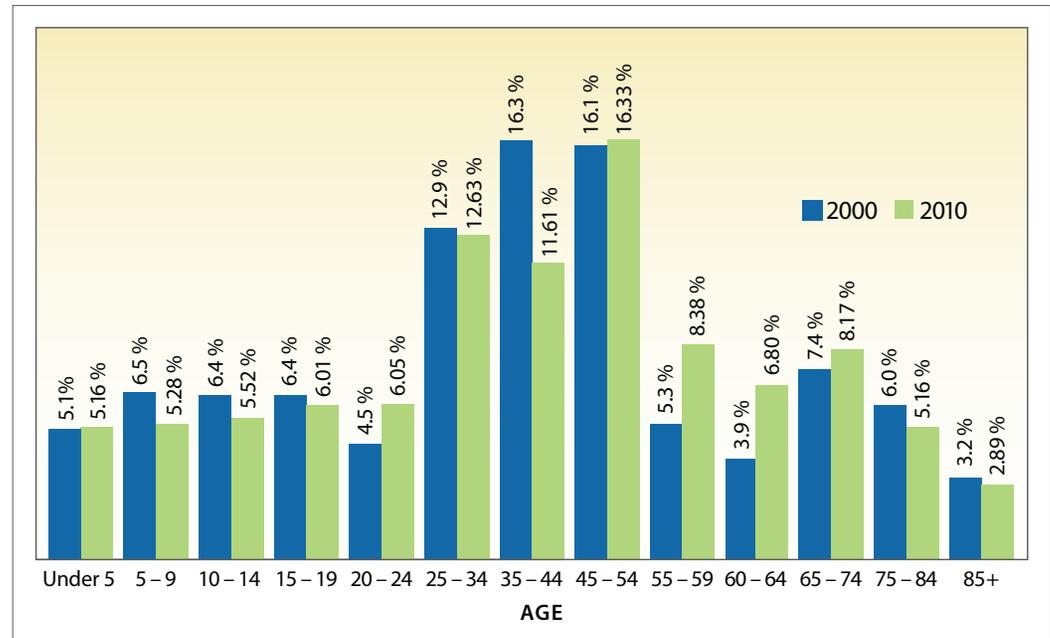
	Both Sexes	Male	Female
Brattleboro	43.2	41.4	44.7
Vermont	41.5	40.4	42.7

Source: U.S. Census, 2010

In 2010, 19.7% of Brattleboro’s population was under age 18, lower than 20.7% of the state’s population for the same age range. Individuals over age 65 constitute 16.2% of Brattleboro’s population, compared to 14.6% of the state’s population. The following observations can be made from this data, as well as the data shown in Figure A.2:

- As the 45–64 age population gets older, this cohort will have a significant impact on the increase in the proportion of seniors living in Brattleboro.
- Absent a significant increase in the 20–44 age population over the next five years, Brattleboro will see a decline in the number of school-aged children.
- Brattleboro experienced the greatest loss in the 35–44 age cohort, with a decline of 552 people. The economic impact of this loss could be significant as members of this age group fall in the middle of the prime working age of 25–54.

Figure A.2. Brattleboro Population by Age

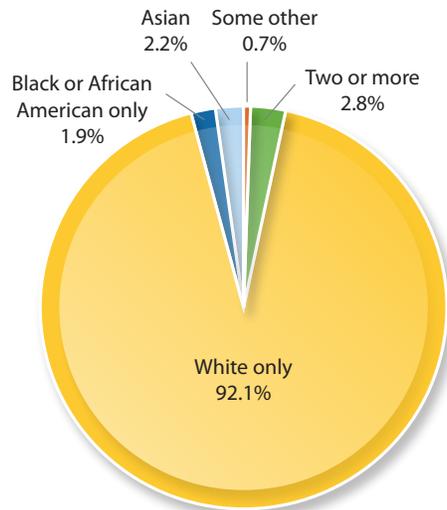


Source: U.S. Census, 2000–2010

Race and Ethnicity

According to the 2010 U.S. Census, approximately 92.1% of Brattleboro's population is White, 2.2% is Asian, 1.9% is Black or African American, and a small percentage of the population falls under other categories, such as Asian or two or more races.

Figure A.3: Brattleboro Race



Source: U.S. Census, 2010

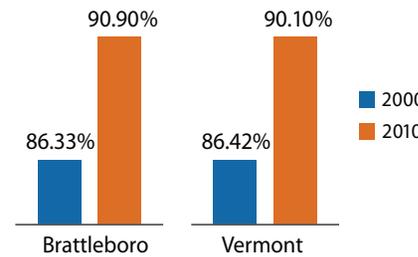
The Census does not include people of Hispanic or Latino origin as a racial category since people of Hispanic and Latino origin may be of any race. As of 2010, 2.7% of Brattleboro's population is of Hispanic or Latino origin. This is an increase of 121 people since 2000.

Historically, Vermont has been one of the least diverse states in the country. Based on the 2010 Census, Brattleboro ranked 6th in racial/ethnic diversity in Vermont.¹ Diversity is slightly higher in the school-age population. Vermont Department of Education data indicate that in the 2010–2011 school year, 89% of the school population was White, with 4% identifying as multi-racial, 3% as Hispanic, and 2% each as Asian and Black.

Educational Profile

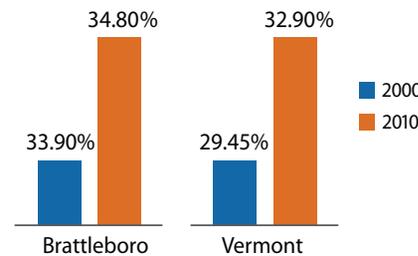
The 2005–2009 ACS indicates that while 90.9% of adults age 25 and older are high school graduates, only 34.8% have a bachelor's degree or higher. These percentages are similar to the state percentages where 90.1% are high school graduates and 32.9% have a bachelor's degree or higher. Figures A.4 and A.5 depict this data.

Figure A.4: Percent High School Graduate or Higher



Source: 2005–2009 American Community Survey

Figure A.5: Percent Bachelor's Degree or Higher



Source: 2005–2009 American Community Survey

Poverty

Poverty rates measure the percentage of individuals living at or below the poverty threshold, which is determined at the federal level. The poverty threshold is a predetermined monetary level that takes into account the age and number of family members.

Brattleboro has a higher poverty rate than the state and it is possible that the gap has widened since 2000. The 2000 U.S. Census reported that 13.1% of people fell below the poverty line while 9.4% of the state's population was below the poverty line. The 2006–2010 ACS estimates that the percentage of people whose income fell below the poverty level in the past 12 months ranges between 11.6% and 16.8%. This is higher than the State's range of 10.7%–11.5%.

The number of free and reduced lunches is another indicator of economic distress. Table A.2 depicts the situation at the Brattleboro Schools. Since the 2008–2009 school year, over 50% of students in the elementary schools in town have qualified for free and reduced lunches. The percentage goes down as students get older—because they don't register, not because there isn't a need.

Table A.2: Percentage of Students Eligible for Free and Reduced Lunch by School

	2007–2008	2008–2009	2009–2010	2010–2011
Academy	48	56	58	55
Green Street	50	52	56	56
Oak Grove	57	55	62	66
BAMS	35	41	34	46
BUHS	20	23	29	24

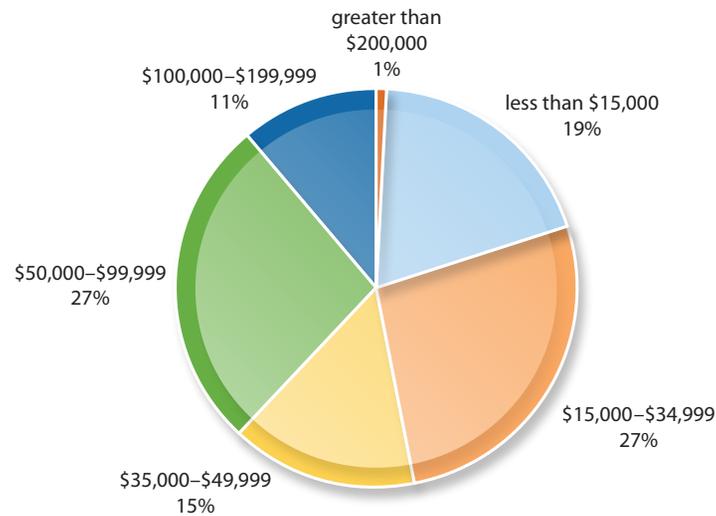
Source: Windham Southeast Supervisory Union School Reports, 2007–2011

Income

Median household income is an aggregate measure of all types of income and includes those in the household who do not earn any income. The median household income in Brattleboro is below the Vermont median income and the gap has likely increased since 2000. In 2000, the median household income in Brattleboro was \$31,997, \$8,859 below the state median income. The 2006–2010 ACS estimates that the median household income in Brattleboro is \$39,314 (+/- \$4,421) while the state median household income is \$51,841 (+/- \$447).

Figure A.5 shows the distribution of household income based on 2006–2010 ACS estimates. The estimates indicate that over 60% of Brattleboro households earn less than \$50,000.

Figure A.5: Brattleboro Income by Household



Source: ACS, 2006–2010

Arts & Culture Inventory

This inventory is intended to serve as an indication of the breadth of arts organizations in Brattleboro. It is not a complete list; it does not include for-profit artists nor does it capture all the organizations and businesses that contribute to Brattleboro’s artistic and cultural life.

Music

The Brattleboro Music Center, founded in 1952, annually presents a Chamber Music Series, the Windham Orchestra, the Blanche Moyse Chorale, and the Concert Choir. Its Music School, with 32 professional faculty, offers lessons for some 400 adults and children who perform student and faculty recitals, chamber music concerts, and an all-day Performathon each spring. The Center’s Music and Arts in the Schools program supplements public funds for local music education programs.

In 1975 the Vermont Jazz Center began presenting summer workshops and concerts with internationally recognized musicians. The Center offers year-round lessons, ensemble coaching, weekly open jam sessions, and summer workshops, in addition to concerts. Located at Cotton Mill Hill, the studio space includes a 170-seat performance hall at Cotton Mill Hill.

The neighboring Yellow Barn of Putney and the Friends of Music at Guilford (FOMAG) perform in Brattleboro. Each year FOMAG invites Vermont composers to perform their works, and their Messiah Sing receives annual recognition. Most of these classical music concerts occur at either the West Village Meeting House, at one of the downtown churches, or when a larger space is needed, at Brattleboro Union High School.

The Marlboro Music Festival in neighboring Marlboro is nationally and internationally renowned. Begun in 1951, the Festival features chamber music from all periods. They use the 650-seat Persons Auditorium at Marlboro College for their concerts.

There are many music groups that are under the radar, but important contributors to the arts and cultural scene. Several restaurants and bars provide performance space for live, local music.

Theater

The New England Youth Theatre (NEYT) has been serving the community since 1998. This youth theatre company offers an acting training program for young people that combines both classroom and performance work. NEYT also offers training in back-of-house functions—state managing, lighting, set design, costuming, and makeup.

Since 1998, a puppet theater has visited Brattleboro for two weeks each fall when the International Puppetry Festival is sponsored by the Sandglass Theater of Putney and the Brattleboro Museum & Art Center.

The Hooker Dunham Theater and Gallery contains a 99-seat theater and two-level gallery spaces. Managed by Twilight Music, this theater is used for a variety of visual, literary, and performing arts. Both the theater and gallery are available to rent. The theater and gallery are not handicapped accessible.

Two theater companies considered to be part of Brattleboro’s arts activity usually perform in venues in neighboring towns. The Actors Theater (1976) has winterized the West Chesterfield (NH) Grange to allow for year-round the-

ater productions. The Vermont Theater Company, which originated in Burlington in the 1970s as an authentic community theater, mounts a Shakespeare-in-the-Park production on the slopes of Memorial Park each spring, but also often rents the Dummerston Grange or other local spaces for its other productions.

The art-deco Latchis Theater, at the corner of Main and Flat Streets, houses 4 theaters. Built in 1937, this theater has undergone renovation and restoration over the last decade, and continues to serve as a movie house. The largest of its 4 theaters, with 750 seats, is also used throughout the year for live events; in addition, the theater hosts the Metropolitan Opera's Live in HD series. Latchis 4 is currently undergoing renovations and will contain an 84-seat multi-purpose venue for performance and cinema.

Dance

The Brattleboro School of Dance, founded in 1976, provides classes in ballet, modern, jazz, fitness, and tap to 400 children and adults each year. Their two yearly performances, usually in collaboration with professional troupes from outside Vermont, are held in the Landmark College Theater in Putney. The Marlboro Morris Dance Troupe invites a dozen other groups to the area during Memorial Day Weekend for the Morris Ale, with performances on greens in Brattleboro and surrounding towns all weekend. The Green Mountain Creative Dance Center offers creative movement classes and a venue for dance rehearsals and informal performances. The Vermont Performance Lab works with performing artists in developing and managing new projects.

Circus

Nimble Arts, a circus production company specializing in aerial acrobatics, is based in Brattleboro. Affiliated with Nimble Arts is the New England Center for Circus Arts (NECCA) which was founded in 2006. The school offers

classes, workshops, and camps in circus arts for people of all ages and abilities (from beginner to professional). Currently located at Cotton Mill Hill, NECCA has plans to build their own trapeze and circus arts facility.

Museums

Founded in 1972 and located in Brattleboro's historic Union Station, the Brattleboro Museum & Art Center (BMAC) is a non-collecting contemporary art museum whose mission is to present art and ideas in ways that inspire, educate, and engage people of all ages. In addition to approximately 15 exhibitions per year in its six galleries, BMAC hosts dozens of cultural events each year and is a venue for civic and community gatherings.

The Estey Organ Museum celebrates the history and contributions of Brattleboro's own Estey Organ Company, world renowned for manufacturing reed, pipe, and electronic organs. Located on Birge Street in one of the original factory buildings, the museum features exhibits and programs associated with organ manufacturing. The Museum has also partnered with the Esteyville Common Committee to create a summer music series at the bandstand at Esteyville Common.

The Brattleboro Historical Society showcases exhibits at the Municipal Center on Main Street. The Historical Society collects and preserves Historical artifacts, documents, and photographs about people, places, and events significant to Brattleboro's history.

The Tasha Tudor Collection is currently located at the Jeremiah Beal House in West Brattleboro. The Collection currently opens seasonally and the display is temporary, as the museum searches for a permanent space.



Visual Arts

Numerous visual artists continue to choose Brattleboro as their home. Although the limits of a regional market mandate the retailing of artwork in a larger metropolitan arena, artists here utilize a variety of exhibition sites—from banks and restaurants, to theaters, schools, galleries and their own studios.

The area is also rich in individual artists working in film and video. In 1995 Brattleboro became the home of VIV, the Vermont Independent Video festival, a statewide celebration of video-making and video-makers.

The Center for Digital Arts, founded in 1997, is an organization with an international collaborative focus, whose purpose is to create video works as a mode of personal expression. The InSight Photography Program, an after-school photography program for Brattleboro area teens, was founded in 1993, and VT Center for Photography, with gallery space devoted to the photographic arts, opened its doors in 1998 (previously under the name Flat Street Photography).

The River Gallery School, founded in 1976 on the belief that the arts are central to education, offers studio space for workshops and art classes for both youth and adults.

Festivals and Events

Gallery Walk, on the first Friday of each month, brings several hundred visitors to a dozen galleries, artist's studios, craft, and stores open specifically for the evening.

Founded in 2002, the Brattleboro Literary Festival has brought over 250 authors and illustrators to Brattleboro. The 4-day festival offers readings, panel discussions, and special events, featuring emerging and established authors.

The Women's Film Festival is the longest women's film festival in the U.S. Held annually in March, the festival screens

documentary and feature-length film, as well as guest speakers, filmmakers, panel discussions, and other community events highlighting women's issues and their place in the arts.

Arts Organizations

Since 1975, The Arts Council of Windham County has served this region as the Local Arts Service Organization (LASO) affiliated with the Vermont Arts Council. Its broad mission is to strengthen the environment of the artists and arts organizations of Windham County.



The recently formed Town Arts Committee (TAC) serves as an important bridge between the arts community, the community, and town government. TAC is an officially appointed Town Committee, whose members are appointed by the Selectboard. The Committee is working to enable an understanding and appreciation of the aesthetic and economic contributions of the arts to the community by communicating art issues, developing artistic components to municipal projects, providing counsel for public art, and promoting art as an industry.

Brattleboro-West Arts is an association of artists and craftspeople working in the villages of West Brattleboro and Marlboro that support the artistic and economic growth of its members and community. Signature events include a juried art show and an open studio weekend.

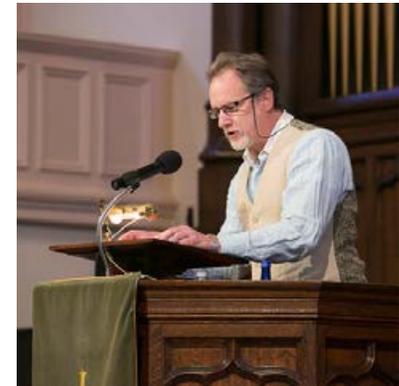
The Brattleboro Arts Initiative (BAI) is a nonprofit organization dedicated to the care and well-being of the for-profit Latchis Corporation. Recognizing that professional performance space was critical to the Town, BAI purchased the landmark Latchis building in 2003.

Literary Arts

Write Action is a writers' organization whose mission is to strengthen a community of local writers. Each year, Write Action partners with the Literary Festival, hosting a "Spotlight on Local Authors" and an open reading. The organization sponsors several Brattleboro Union High School writing awards, holds an annual literary contest for poetry and prose, sends out a weekly newsletter, and maintains a writers' emergency fund, from which small grants are given.

Brattleboro has three independent bookstores in its downtown area. Area cafes, galleries, and bookstores lend their spaces for readings by published and unpublished authors throughout the year. Downtown bookstores offer a schedule of special events, such as book signings, open readings, and talks by authors.

The Brooks Memorial Library's modern technology of on-line information and 70,000 volumes promote and serve the continuing education learning, information, personal enrichment, and leisure needs of local residents of all ages, with an annual circulation approaching 175,000. The library collects civic and historical materials, hosts public meetings, and provides activities and exhibits. Also housed here is a Fine Arts Collection, a legacy of art of national importance which has been gathered over the past 100 years, consisting of sculpture, ceramics, paintings, rare books, maps, photographs, and archeological objects.



Appendix C

Historic Sites and Districts Listed in the State and National Register

Date listed on National Register	Date of construction	Site name (number of buildings)	Location
		Baptist Church	971 Western Ave
2/17/1983, expanded 9/15/2004		Brattleboro Downtown Historic District (64)	
4/12/1984	1838–1938	Brattleboro Retreat (38)	496 Linden Street
2/01/1980	1871	Brooks House	High and Main Streets
8/19/1977	1892	Canal St. Schoolhouse	112 Canal Street
7/08/1993		Canal/Clark St. Historic District (66)	
		Cobblestone House	34 Canal Street
		Congregational Church	193 Main Street
8/28/1973	1879	Creamery Bridge	Guilford St at Western Ave
		Crosby Block	106–118 Main Street
3/19/1982	c. 1825	Deacon John Holbrook House	80 Linden St
4/17/1980, expanded 1/9/2007	1870–1873	Estey Organ Company Factory (21)	90–132 Birge Street, 68 Birge Street
4/3/2009	1840–1915	Homestead–Horton Neighborhood Historic District (25)	
		Italianate House	175 Western Ave
	c. 1805	Jeremiah Beal House	974 Western Ave
12/18/1978	1768	Joseph Caruso House	606 Western Ave
11/07/1996	c. 1880	Lewis Grout House	960 Western Ave
		Municipal Center	230 Main St
		Old Methodist Church	16–20 Elliot St
		Parley Starr House	147 Western Ave
		Peoples National Bank Building	2–6 Elliot St., at Main St
		Retreat Tower	off Route 30
7/20/2000	c. 1875	Samuel Gilbert Smith Farmhouse	375 Orchard St
		Union Block	101–105 Main St
6/07/1974	1915–1916	Union Station	10 Vernon St
		Van Doorn House/Culver Block	51 Main St
6/24/2002		West Brattleboro Green Historic District (18)	
		Whetstone Arch Bridge	off Bridge St
5/10/2005	1893–1894	Wyatt–Newell House	125 Putney Road



Natural Resources Inventory

Geology

Bedrock Geology

Bedrock geology is concerned with the underlying rock or ledge. Brattleboro's bedrock is dominated by sedimentary rock that shows evidence of having been subject to metamorphism. There are significant areas of Precambrian gneiss and igneous intrusions.¹ Sand and gravel are abundant in the river valleys. Alluvial deposits in the river valleys provide fertile soil for agriculture.

Surficial Geology

Surficial geology includes all of the deposits above bedrock, excluding soils. The surface deposits in Brattleboro are a result of glaciation. As the glaciers retreated, till and glacial outwash were deposited. Till is composed of a mixture of soil and rock fragments that were scoured loose by the moving ice, carried for a distance, and then deposited directly as the melting ice released its unsorted contents. Till contains a mix of grain sizes, from tiny particles to large boulders. Glacial outwash contains stratified deposits of sand and gravel transported by water from the melting glacial sheet. These deposits can be found in the river valleys.

Soils

Important Farmland Soils

The U.S. Department of Agriculture Natural Resources Conservation Service has identified soil types that are best suited to crop production based on soil quality, growing season, and moisture supply. Important Farmland inventories identify soil map units, including Prime Farmland and

Farmland of Statewide Importance. Prime agricultural soils are likely to produce the highest crop yields using the least amount of economic resources and causing the least environmental impact. Soils with an Important Farmland rating of 'prime' or 'statewide' have the potential to be Primary Agricultural Soils under Act 250.

The majority of prime agricultural soils in Brattleboro are located along the major watercourses such as the Connecticut River, West River, Whetstone Brook, Halladay Brook, and Ames Hill Brook. Much of it has already been developed and most that remains open is located in the floodplain. The majority of secondary agricultural soils have also been developed. In fact, most of Downtown and surrounding residential neighborhoods, and West Brattleboro were built of secondary agricultural soils. The remaining soils in this category that are still open to farming are located north of East Orchard Street and along Upper Dummerston Road. Figure D.1 shows the location of these farmland soils.

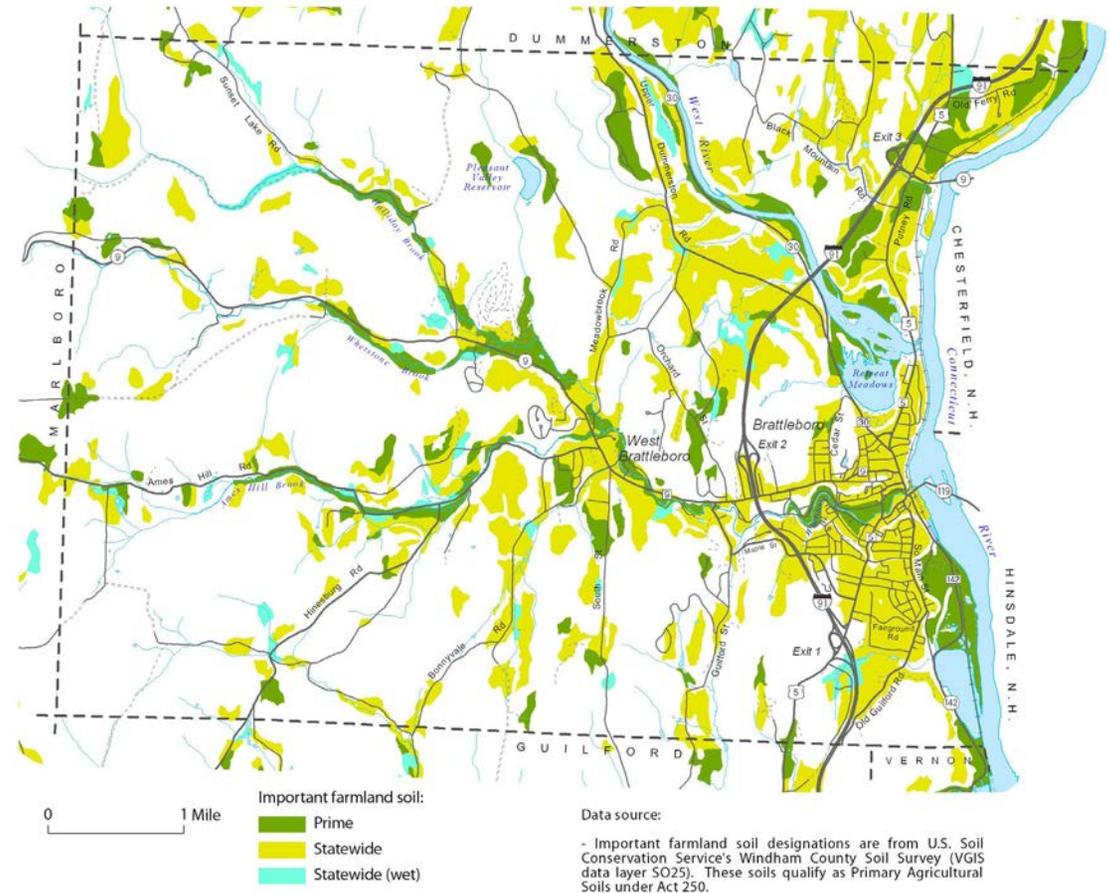
The characteristics of prime farmland make it particularly susceptible to development pressures. While the cost of producing a crop is low, so is the cost of developing these soils for residential or other nonagricultural uses. The need to conserve this soil resource is critical to the future of agriculture in Brattleboro. The economic viability of farming large contiguous tracts of prime farmland soils is degraded when these tracts are fragmented by development. Farming is recognized as an important part of the local and regional economy as well as part of the heritage of Brattleboro.

Soils with Major Limitations

The physical and chemical components of soils vary greatly and result in individual soil types that have different resource values and suitability for development. Soils that are chronically wet (hydric) or areas where the soil is too shallow pose significant problems for development. Although these problems may be partially overcome through sound engineering, the costs will be high and the results may be less than satisfactory. Soils that are shallow tend to be unstable and highly erodible.

In Brattleboro, these soils are generally located in areas with steep slopes and/or high elevations. Hydric soils are poorly drained and can result in failure of foundations or footings and septic systems, and can cause basement flooding. Hydric soils are shown on the Streams, Wetlands, and Wet Areas map.

Figure D.1: Important Farmland Soils

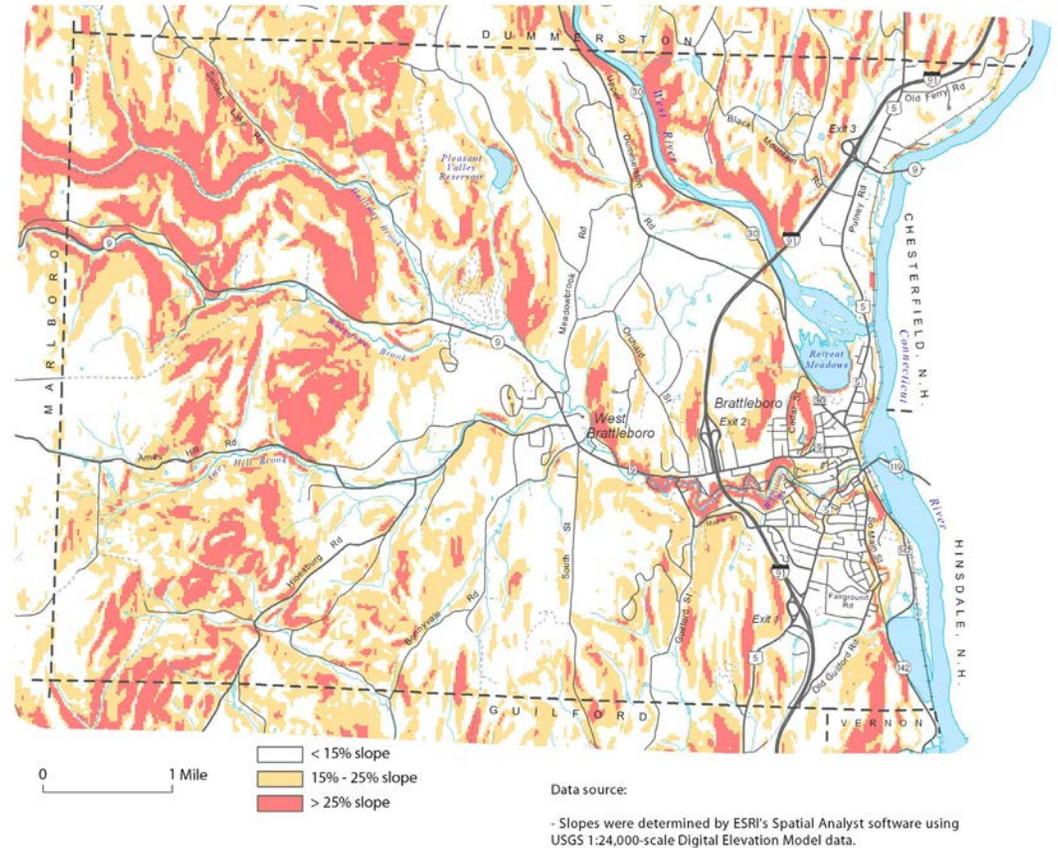


Topography

Brattleboro's western half has a hilly terrain compared with the relatively flat, clear land in the east along the Connecticut River. Steep slopes (greater than 25%) are a common feature in the western half. The overall change in topography ranges from a low of under 250 feet in the southeastern corner of town, to a high of 1,500 feet at Ginseng Hill. Other high points are Bear Hill (1,200 feet), Richmond Mountain (1,200 feet), and Round Mountain (1,450 feet).

Most of the lower slopes (0–8%) are located along watercourses such as the Connecticut River, West River, and Whetstone Brook. Areas along Putney Road and Downtown also have a large amount of lower slopes. Moderate slopes (8–15%) and moderately steep slopes (15–25%) are dispersed throughout Brattleboro. Most land uses on these slopes are low-density residential, farming, or forestry. The steeper slopes in Brattleboro are generally located in the higher elevations in the hilly areas of West Brattleboro. There are also steep slopes leading down to many of the watercourses that run through Town. Figure D.2 shows steep slopes.

Figure D.2: Steep Slopes



Water Resources

Watersheds

A watershed is a collection area for rainwater, snowmelt, and ground water seeps, drained via a network of small perennial and intermittent streams that move water to progressively larger streams. As water flows through a drainage area, physical, chemical, and biological changes occur. In a typical stream, most headwaters are steep, rocky, swift flowing, and low in nutrients. As one moves along the watercourse, the upland streams turn into “meadow streams” with higher flow volume, lower gradient, and slower movement. As a stream changes from upland to meadow classification, its rocky substrate often turns into a softer stream bottom, rich in organic material. As stream size and nutrient accumulation increase, there is typically an increase in species diversity and a shift in aquatic insects.

Brattleboro’s elevation and topography, and its unique position between two river systems, combine to create a unique situation in which the Town’s rivers and streams drain into two regional watersheds and into 5 sub-regional basins:

- Connecticut River Direct Basin (to the east)
- Connecticut River–Dummerston
- Whetstone Brook
- Broad Brook
- West River Watershed (to the center)
- Lower West River
- Green River Watershed (to the southwest)
- Green River

Most of Brattleboro’s watersheds cross political (both town and state) boundaries. The way in which one community manages its land and water can have a significant impact on the other communities in the watershed. Thus, land use changes taking place in the greater Brattleboro area

could affect surface water resources in Brattleboro. Intermunicipal land use issues are of particular importance with regard to the protection of Brattleboro’s municipal water supply. The watershed for the [Pleasant Valley Reservoir](#) crosses over into Dummerston and Marlboro. Land uses in this portion of the watershed are primarily second homes and summer camps, which may be a source of pollution if septic systems are not properly designed and fail.

Rivers and Streams

In total, there are about 30.4 miles of streams in Brattleboro, ranging in size from perennial streams to the Connecticut River.

Table D.1: Brattleboro Watercourses

Watercourse	Miles
Whetstone Brook	6.09
Connecticut River	6.03
Crosby Brook	3.13
Ames Hill Brook	4.95
Halladay Brook	4.32
West River	3.41
Pleasant Valley Brook	2.91
Bonneyvale Brook	2.30
Giles Brook	0.42

Brattleboro’s brooks and streams host only coldwater fish species. Native populations of brook, brown, and rainbow trout can be found in the brooks and streams. In addition to cold water species, the West River and Connecticut River have warm water sport fish, including smallmouth and largemouth bass, sunfish species, yellow perch, walleye, chain pickerel, northern pike, brown bullhead, and white perch. These rivers are also part of the Connecticut River Atlantic Salmon Restoration Program.

Surface Water

Brattleboro's largest standing water body is the Pleasant Valley Reservoir at approximately 25 acres in surface area. This is a man-made surface water supply with a 20-foot dam operated by the Town of Brattleboro. The watershed supplying Pleasant Valley Reservoir includes the drainage area of Sunset Lake, the upper reaches of Stickney Brook, all of Kelly Brook, and Langille Brook. Fishing, boating, and swimming are restricted at the Reservoir. A Public Water Supply Watershed Overlay District provides additional protection for the lands that drain into the Pleasant Valley Reservoir in order to maximize protection of the public water supply.

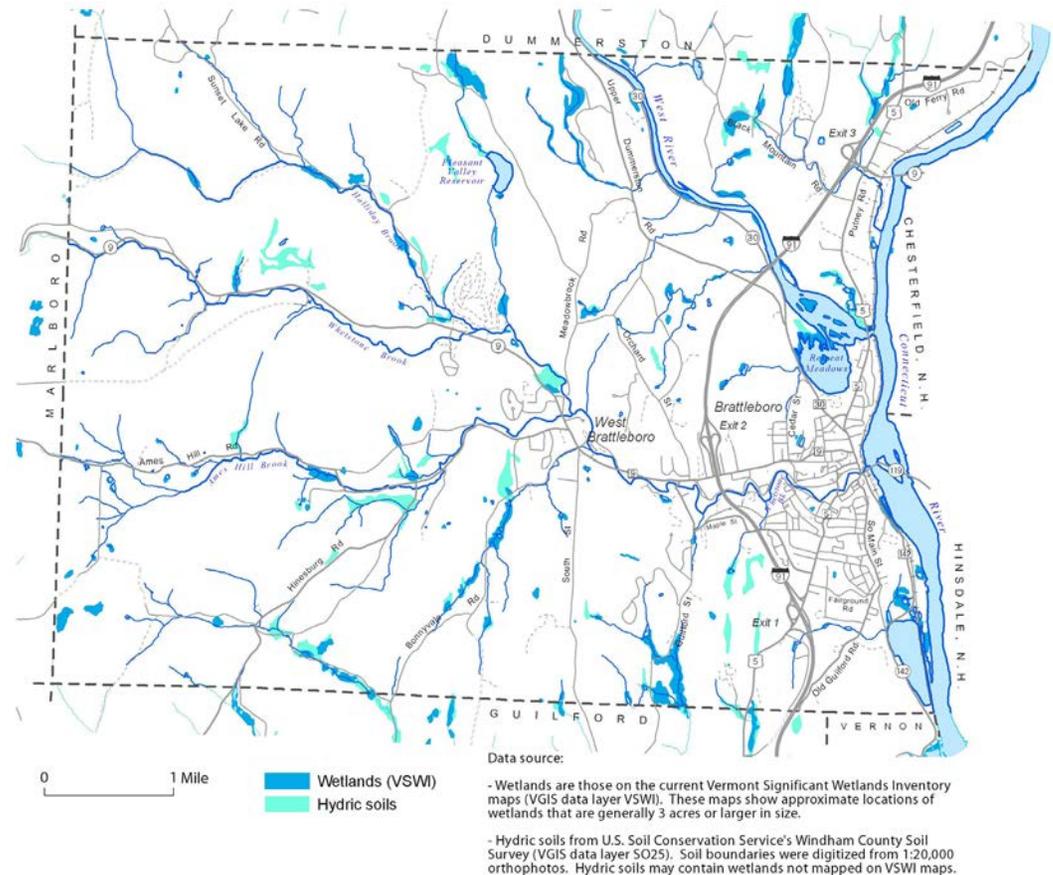
The Retreat Meadow is an approximately 55-acre shallow backwater area of the West River. Water flows into it from the West River and out of it back into the West River, just upstream of the confluence with the Connecticut River. Though connected by flow to the West River, the Retreat Meadow is a discrete entity. The area was a meadow in the West River floodplain prior to flooding caused by damming of the Connecticut River at Vernon. Water depths in the Retreat Meadows basin have ranged from 6 inches to approximately 8 to 10 feet in limited areas. Typical measurements of water depth have been approximately 2.5 to 5 feet. The Retreat Meadows is an actively used recreation area for canoeing, kayaking, bird watching, fishing, and skating.

Sensitive Areas

Wetlands

Wetlands provide wildlife habitat, special vegetation, and filtering of potential surface and groundwater contaminants. They are identified by three parameters: vegetation, soil, and hydrology. The Vermont Department of Fish & Wildlife has mapped all of these areas in the State as part of the National Wetlands Inventory. Brattleboro wetlands are shown in Figure D.3.

Figure D.3: Streams, Wetlands, and Wet Areas



Swamps and marshes are the most common types of wetland found in Brattleboro. Swamps are generally defined as wetlands dominated by trees and/or shrubs, while marshes are dominated by herbaceous vegetation. Some of the more significant wetlands are located around the Retreat Meadows (marshes) and adjacent to Guilford Street and Bonneyvale Road (swamps).

The Guilford Street Swamp has been listed as a significant hardwood swamp by Vermont's Nongame and Natural Heritage Program. At 10 acres, this forested wetland is significant as an example of a Red Maple–Black Ash Seepage swamp that is over 100 years old. The swamp lies in a low-elevation flat with a tributary stream of Broad Brook flowing through it.

Wetland values are as numerous as the vast array of types of wetlands themselves. Wetlands provide crucial life cycle habitats for fish and wildlife, economic benefits in the form of fish and wildlife harvests, breeding areas for an estimated 80% of America's bird population, peat harvest, critical habitats for a disproportionate number of threatened and endangered species, natural water purification by the removal of organic and inorganic nutrients and toxins, and the pleasure conferred by their natural beauty.

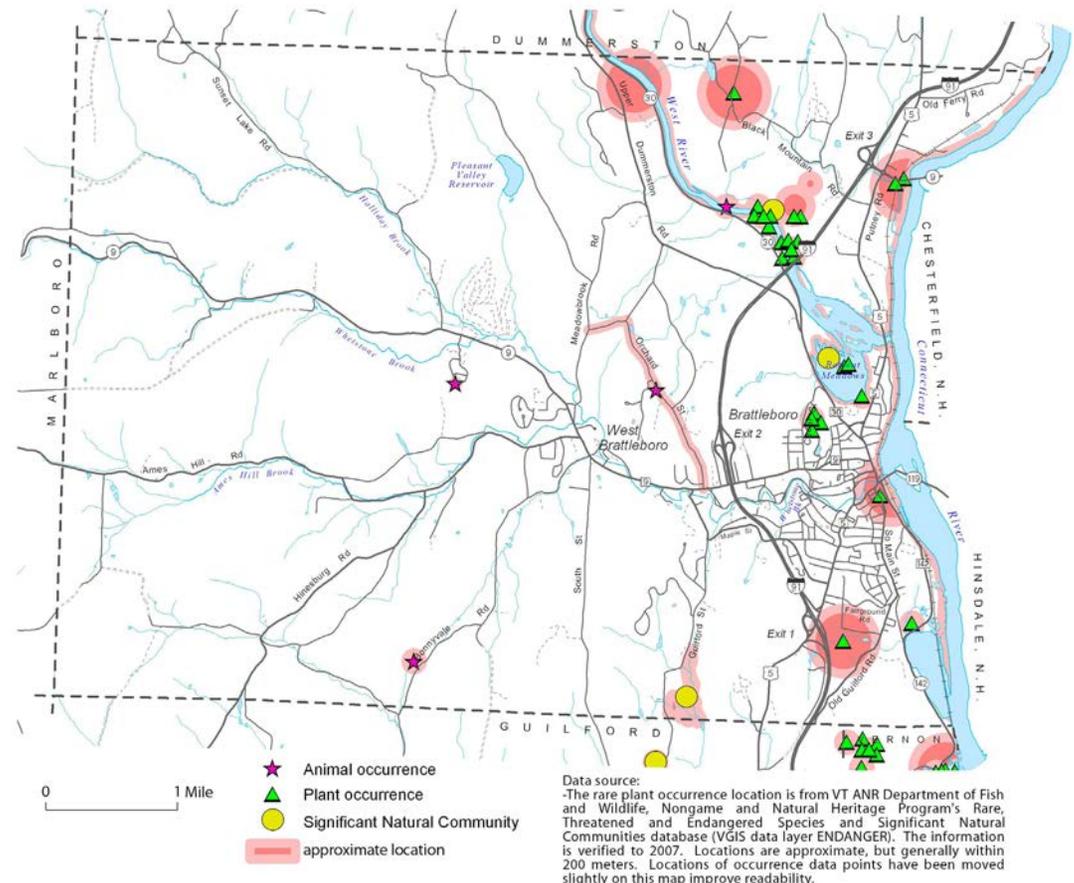
The most effective way to ensure the continuation of wetland values is to protect those areas that remain. Several state and federal laws and regulations (including U.S. Army Corps of Engineers permits) provide protection for wetlands. The [Vermont Wetland Rules](#) require state review (Conditional Use Determination) of Class 1 and 2 wetlands² prior to the issuance of a local zoning permit.

Natural Heritage Areas

The Vermont Nongame and Natural Heritage Program, a program of Vermont Fish and Wildlife Department's Wildlife Division, tracks rare plants and animals and exemplary natural communities in the State. Using a ranking system, the inventory assesses the rarity of species on a global and

statewide level. There are 25 plants, 4 animals, and 3 natural communities listed on the inventory. Included in the animal occurrences are three sightings of the Blue Spotted Salamander. This amphibian is rare in Vermont and is considered a species of greatest conservation need in Vermont's Wildlife Action Plan. Figure D.4 illustrates the distribution of Natural Heritage throughout Brattleboro.

Figure D.4: Natural Heritage



A natural community is defined as an interacting assemblage of organism, their physical environment, and the natural processes that affect them. Natural communities are important because they represent intact examples of Vermont native flora, fauna, and vegetation. There are three significant natural communities in Brattleboro:

- **Red Maple–Black Ash Swamp:** This hardwood swamp has both an overstory and an understory of red maple, black ash, and white pine.
- **Deep Bulrush Marsh:** These are marshes of open water along the shores of lakes and ponds. Water depths can range from one to six feet. Soft-stem bulrush and hard-stem bulrush dominate most of these marshes, although marsh spikerush and other bulrushes may be abundant. These common wetlands occur in open water along the shores of lakes and ponds and can be found throughout the state.
- **Rivershore Grassland:** Located where the West River makes its final bend before entering the Retreat Meadows, this is a widely distributed natural community that occurs in more sheltered, and hence more stable, portions of our larger rivers. Since the natural river processes needed to maintain their open condition occur less frequently, this community tends to have more of a woody component of shrubs and low trees mixed in with the more abundant grasses.³

Wildlife Corridors

Wildlife corridors are contiguous segments of land that create a link between animal habitats by providing transportation routes for animals to use to reach breeding grounds and forage areas. Many wildlife corridors include riparian zones that line rivers and streams and include both undeveloped and partially developed areas. In most cases, the land situated in a wildlife corridor is privately owned and vulnerable to development or activities destructive to wildlife and their ecology.

Open Space

Open space is land that has not been developed or built on. It can be vulnerable to development, depending on its ownership and legal status. There are three main categories, with various levels of protection: permanently protected open space, managed open space, and lands in Vermont’s Use Valuation Program (commonly referred to as Common Use).

Permanent open space is protected at the highest level, through a conservation easement or deed restriction. It is land on which development is limited or prohibited and can include properties with public access as well as properties for private use only. Conservation easements that limit development of a property offer the most enduring level of protection because the easement is transferred with the deed to each subsequent owner. Organizations, such as the Vermont Land Trust, that hold such easements are responsible for their enforcement. Although development rights are given up under conservation easements, the land itself remains the property of the owner.

In Brattleboro, owners of these lands include many private individuals, the Vermont Land Trust, and the Vermont River Conservancy. The land continues to produce economic value through timber harvest, public recreation, or reduced cost of Town services, and at the same time protects watersheds, air quality, many different types of habitat, and the rural character of Brattleboro.

Managed open space is land that is currently used as open space and will probably remain so, but which has no perma-



ment protection. This includes property belonging to the Town (e.g., Town Forest, Living Memorial Park, Pleasant Valley Reservoir and other watershed lands) and the State of Vermont (boat access).

Land in Current Use is tax abated, but not protected. The State of Vermont established the program to encourage the preservation of agricultural and forestry lands. Such land is taxed at a lower rate to reflect its current use, not its potential value as developed land. These lands have no protection beyond the intentions of the owner who can sell or develop it at any time, subject to a penalty.

FOOTNOTES

¹ Elizabeth H. Thompson and Eric R. Sorenson, *Wetland, Woodland, Wildland*, (2005), p. 48.

² As determined by the Vermont Wetland Rules, Class 1 Wetlands are determined to be exceptional or irreplaceable in their contribution to Vermont's natural heritage and therefore so merit the highest level of protection under the rules. Class 1 wetlands must be specifically designated by the Water Resources Panel of the Natural Resources Board. A 100-foot protected buffer zone is designated adjacent to Class 1 wetlands which helps protect the functions and values of the wetland. Class 2 Wetlands include most palustrine wetlands shown on the National Wetland Inventory (NWI) maps and those wetlands contiguous to mapped wetlands. A contiguous wetland is a wetland which shares a boundary with, or touches, a mapped wetland. A 50-foot protected buffer zone is designated adjacent to all Class 2 Wetlands.

³ Vermont Wildlife Action Plan, (2005).

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- p. 17 Greg Lesch
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- p. 149 Rod Francis
- p. 152 Amie Walter
- p. 154 Gary King
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- p. 158 Amie Walter
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- p. 165 Gary King

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Brattleboro Town Plan

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